June 05, 2014

David Martin and
Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Work Complete
229 Cheshire Road,
Prospect, CT 06712
Sprint Site #: NV2.5_CT33XC512

Dear Mr. Martin and Members of the Siting Council:

On behalf of Sprint Spectrum, SBA Communications is hereby notifying the Connecticut Siting Council that work has been completed to the aforementioned telecommunications facility.

Pursuant to the Council's letter of acknowledgement dated July 12, 2013, please find the enclosed Post Modification Inspection Report confirming that the installation meets with the recommendations made in the structural analysis report.

Thank you,

Peter Nute
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3804 + T
508-251-1755 + F
pnute@sbasite.com

6521 Meridien Drive
Raleigh, NC 27616
(919) 755-1012 P
(919) 755-1031 F

January 29, 2014

Stephen Roth
Regional Site Manager
SBA Network Services
120 South White Cedar Drive
Milton, DE 19968

Subject:	Modification Inspection Report	
SBA Designation:	SBA Site Number: SBA Site Name:	CT02694-B-04 E-Prospect
Inspection Firm Designation:	FDH Inc. Project Number:	1302571700
Site Data:	229 Cheshire Road, Prospect, CT 06712-1746 Latitude: 41.5079° Longitude: -72.9510° 162' Monopole	

FDH Engineering, Inc. is pleased to submit this **"Modification Inspection Report"** (MI Report) to SBA Network Services for the modification/reinforcement to the subject structure. This Modification Inspection (MI) was performed in accordance with Contract Documents, and FDH Inspection Standards**.** The purpose of this MI is to confirm that the modification installation configuration and workmanship are in accordance with the contract document(s) listed in Table 1. The MI is not a review of the adequacy or effectiveness of the modification solution.

Table 1 – General Information

	Company	Contact
MI Inspector	FDH Engineering Inc.	James Mathewson III, P.E. 919-755-1012
~~Independent~~	**EOR**	~~Turnkey~~
Modification Design EOR	FDH Engineering Inc.	Christopher M. Murphy, P.E. 919-755-1012
General Contractor	Tower Solutions, LLC	Clark Cogan 952-906-5363
Sub to the General Contractor	NA	NA
Field CWI for the General Contractor	Veteran Welding & Consulting	James M. Claypool, CWI 585-233-8257
Field NDE for the General Contractor	NA	NA

Table 2 – Design Documents

Document(s)	Remarks	Source
Tower Modification Drawings	FDH Engineering 1320001400 Dated 06-13-13	FDH Engineering, Inc.

Based on our inspection, FDH Engineering determines this project:

X_PASSING MI

The configuration, materials and/or workmanship of the modifications are installed in accordance with the Contract Documents and no deficiencies were found.

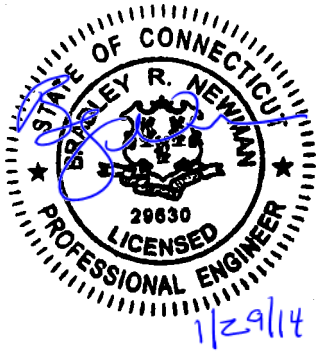
- Issues noted on the MI field notes were approved by the EOR

All observations were performed after the construction was complete and that FDH Engineering, Inc. was not present during the construction phase.

We at FDH Engineering, Inc. appreciate the opportunity of providing our continuing professional services to you and SBA Network Services. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted,

Bradley R. Newman, P.E.
Connecticut License #29630



Project Closeout Information - Table of Contents

Table 3.0 – On-Site Inspection Photographs

PH#01 Site Sign –	PH#02 Installation of Modification – Transfer Stiffener Reinforcement
	
PH#03 Installation of Modification – Verification of Stiffener Size	PH#04 Installation of Modification – Verification of Stiffener Size
	

Table 3.1 – On-Site Inspection Photographs

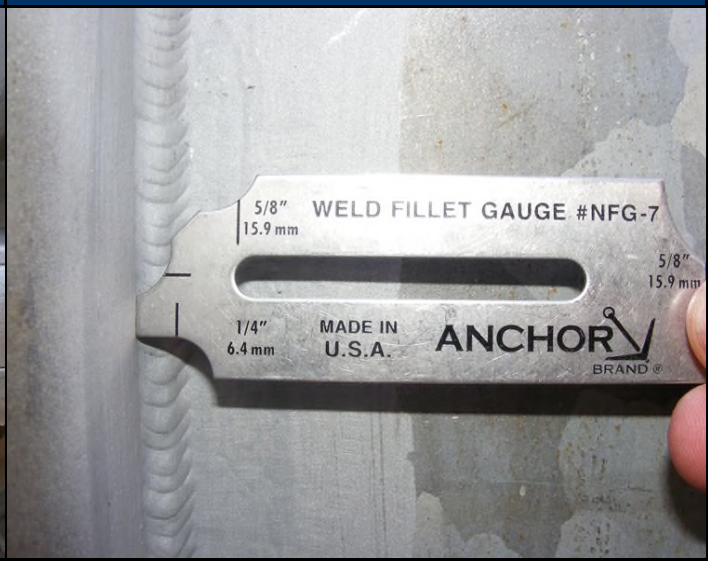
PH#05 Installation of Modification – Verification of Stiffener Size	PH#06 Installation of Modification – Verification of Stiffener Size
	
PH#07 Installation of Modification – Verification of Stiffener Size	PH#08 Installation of Modification – Verification of Weld Size
	

Table 3.2 – On-Site Inspection Photographs

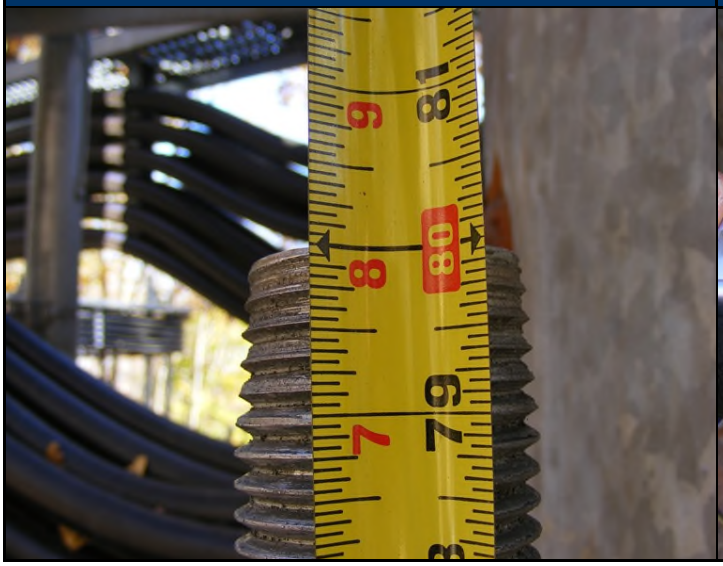
PH#09 Installation of Modification – Verification of Anchor Bracket Size	PH#10 Installation of Modification – Verification of Anchor Bracket Size
	
PH#11 Installation of Modification – Verification of Anchor Rod Size	**PH#12 Installation of Modification – Verification of Anchor Bracket Size**
	

Table 3.3 – On-Site Inspection Photographs

PH#13 Installation of Modification – Verification of Flat Plate Size	PH#14 Installation of Modification – Verification of Flat Plate Size
	
PH#15 Installation of Modification – Installation of Flat Plate Reinforcement	PH#16 Installation of Modification – Verification of Ajax Bolt Spacing
	

Table 3.4 – On-Site Inspection Photographs

PH#17 Installation of Modification – Verification of Flat Plate Reinforcement	PH#18 Installation of Modification – Verification of Washer Size
	
PH#19 Installation of Modification – Verification of Anchor Rod Size	**PH#20 Installation of Modification – Installation of Flat Plate Reinforcement**
	

POST CONSTRUCTION INSPECTION NOTES:

GENERAL

1. THE POST CONSTRUCTION INSPECTION (PCI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).
2. THE PCI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE PCI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. ALL PCI'S SHALL BE CONDUCTED BY A PCI INSPECTOR THAT IS APPROVED TO PERFORM ELEVATED WORK FOR FDH ENGINEERING, INC.
4. TO ENSURE THAT THE REQUIREMENTS OF THE PCI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE PCI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR FDH POINT OF CONTACT (POC).
5. REFER TO CCR–01 : CONTRACTOR CLOSEOUT REQUIREMENTS FOR FURTHER DETAILS AND REQUIREMENTS.

PCI INSPECTOR

1. THE PCI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE PCI TO, AT A MINIMUM:
   - REVIEW THE REQUIREMENTS OF THE PCI CHECKLIST
   - WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON–SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
2. THE PCI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN–FIELD INSPECTIONS, AND SUBMITTING THE PCI REPORT TO FDH.

CORRECTION OF FAILING PCI'S

1. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PCI ("FAILED PCI"), THE GC SHALL WORK WITH FDH TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
   - CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT PCI.
   - OR, WITH FDH'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE–ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS–BUILT CONDITION.

REQUIRED PHOTOS

1. BETWEEN THE GC AND THE PCI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE PCI REPORT:
   - PRE–CONSTRUCTION GENERAL SITE CONDITION
   - PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
     - RAW MATERIALS
     - PHOTOS OF ALL CRITICAL DETAILS
     - FOUNDATION MODIFICATIONS
     - WELD PREPARATION
     - BOLT INSTALLATION AND TORQUE
     - FINAL INSTALLED CONDITION
     - SURFACE COATING REPAIR
   - POST CONSTRUCTION PHOTOGRAPHS
     - FINAL INFIELD CONDITION
2. PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

PCI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED	REPORT ITEM
PRE-CONSTRUCTION	
X	PCI CHECKLIST DRAWING
N/A	EOR APPROVED SHOP DRAWINGS
N/A	FABRICATION INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
X	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
X	CONTRACTOR'S CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
X	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
X	GC AS–BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	PCI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	POST INSTALLED ANCHOR ROD PULL–OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PCI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PCI REPORT

PREPARED BY:

FDH ENGINEERING

6521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031

ENGINEERING INNOVATION

PREPARED FOR:

SBA

5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800) 487–SITE

STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED
PROFESSIONAL ENGINEER

06/13/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
POST CONSTRUCTION INSPECTION NOTES

SHEET NUMBER
N-1

Veteran Welding & Consulting

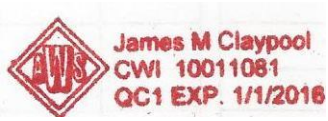
James M. Claypool, CWI
6935 N. Slocum Rd. - Ontario, NY - 14519
(585) 233-8257

October 21, 2013 Reference # VW2013-87

Inspection Site: CT 02694-B-04
Project Name: East Prospect
Contractor Name: Tower Solutions
Client Name: FDH Inc.
Specific Inspection Area: Tower Retrofit
Weldment Types: Transfer stiffeners/Anchor Rods
Welder verified: Yes

Inspection Results:

In shop/onsite visual inspection of the 3 anchor rod assemblies with 1/4" welds was acceptable. Also 3 transfer stiffeners with ¼" welds and flat plate with CJP were acceptable. No obvious weld deficiencies were noted. All weld sizes meet the requirements as noted in the drawings. All welding and Fabrication was to D.1.1.



Re inspection Required: No
Project Status (Continuing/Closed): Closed
Inspection results reported to: Tower Solutions Inc.

James M. Claypool, CWI #10011081

FDH ENGINEERING INNOVATION

Fabricator/Supplier Material Statement

Form Number: MTR-01

Site Name:	E-Prospect
Site ID:	CT02694-B-04
Proposed Carrier:	New Cingular / Sprint
Tower Type:	162' Monopole
Site Address:	229 Cheshire Road
	Prospect, CT 06712-1746

FDH No.:	1302571700
Str. Analysis Date:	3/1/13
Drawing Date	5/6/13
Drawing Issue:	Construction
Coordinates:	41.5079°
	-72.9510°

Material Statement

This statement certifies that all materials and hardware brearing the above listed descriptions were used in this project/order. The attached "mill test reports" (MTR) are specific to the site listed above only. The performing contractor must submit all MTRs in order to receive a passing Post Modification Inspection. Failure to provide these documents could result in nonpayment, PO deductions and/or additional scopes of work.

Material Information

No.	Material Description	Project Use	Vendor	QTY	Heat No.	ASTM Spec
1	4.5" OD pipe	Flange brackets	BS steel		333358	A53
2	1" plate	tranfer plate	Evraz		2G963	A572/65
3	M20x95 bolts		Ajax			
4	2 1/4" all thread	anchor rods	FSA		58013224	A153 grade 105
5	epoxy	anchors	Hilti			RE500
6	1.25" plate	reinforcement	Nucor		3502106	A572 65

ALL MTRS LISTED ABOVE MUST BE INCLUDED WITH THIS STATEMENT AND HEAT NO. INITIALED. DO NOT INCLUDE NON-APPLICABLE MTRS.

Notary Statement

Tower Solutions LLC
Subcontractor Company Name

Clark Cogan
Authorized Signature

8/26/13
Date

Clark Cogan
Printed Name

President
Title

State Of: New York

County Of: Monroe

I, Ismail Tunc, a Notary Public of Monroe County, I, certify that Clark Cogan personally appeared before me this day and acknowledged that he/she is the President (title) of Tower Solutions (subcontractor), a NY corporation, and as President (title), being authorized to do so, executed the foregoing instrument on behalf of the corporation. Witness my hand and official stamp or seal, this 30 day of May, 2013.

Ismail Tunc
Notary Public Signature and Printed Name

My Commission Expires: 6/11/2016

(Notary Stamp or Seal)

ISMAIL TUNC
Notary Public - State of New York
NO. 01TU6263750
Qualified in Monroe County
My Commission Expires 6/11/2016

Klein Steel Service Inc.

105 Vanguard Pkwy
Rochester, NY 14606
Phone: 585-328-4000 Fax: 585-328-0470
Website: www.kleinsteel.com

(2)

June 25, 2013
5:15:05AM

Shipper No. 470741

Bill To D & D Welding
4710 Rt 104
Williamson, NY 14589

Ship To D & D Welding
4710 Rt 104
Williamson, NY 14589

Attn: MATT 259-4075 315-589-4700

Terms: .5% 10 Net 30 Contract:
Customer P.O. Number: E. PROSPECT F.O.B.: Delivered Ship Via: Klein
Sales 1: Ron Pritchard Sales 2: Robert Corsaro Order No: 470741 Due Date: 6/24/13

Ship Qty	Order Qty	UM	Description	Width	Length	Weight
1	1	P	1" A572 GR 65 PLATE	48"	96"	1,306.88

BURN TO PRINTS
3PCS E. PROSPECT - MK-7
3PCS E. PROSPECT - P-2
PLUS SHIP DROPS
+
TOL: CKS
+
INCOMING

Heat Numbers: 2G963(1)

1 1 **Total Weight** **1,306.88**

Shipping Instructions:

Receiving Hours:
Max Bundle Weight: 0
Spacers:

Messages:

6000# MAX LIFT
MAX BUNDLE WEIGHT #6000

Test Certificates Required

Date 6/25/13

Driver Sig _____

Print Name Glenn

Consignee Sig _____

Print Name _____

Customer is responsible for unloading material upon delivery.

Customer Name	Customer PO#	Shipper No	Heat Number
D & D Welding	E. PROSPECT	470741	2G963

(2)

EVRAZ Claymont Steel, A Division of Evraz NC NA

4001 Philadelphia Pike, Claymont DE 19703

Material Test Report

B/L: 271825

08/18/2009

Sold To: LOVEMAN STEEL CORPORATION

5455 PERKINS ROAD, P.O. BOX 46430, BEDFORD, OH 44146-0430

Order 211979-01 Customer PO 0056212-01

Specifications:
ASTM A572/A572M-07 Grade 65(450) Type 2

Products Shipped for Order 211979-01 (sorted by Serial)

Serial	Heat-Slab Orig	R/R	Plate Size in Inches	Plate Size in MM	Lbs	Kg
990652-1	2G963-104 USA	7.8	1.2500 x 96.0000 x 480.0000	31.75 x 2438.40 x 12192.00	16,335	7,351
990653-1	2G963-103 USA	7.8	1.2500 x 96.0000 x 480.0000	31.75 x 2438.40 x 12192.00	16,335	7,351

Shipment Summary of Order 211979-01: 2 pieces 32,670 lbs (14,702 kg)

Chemical Analysis for Order 211979-01 (sorted by Heat)

HeatAnlys	Heat	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn
	2G963	0.12	1.30	0.014	0.010	0.03	0.28	0.18	0.13	0.06	0.021
		Al	V	Nb/Cb	N	Alsol	Ti	B			
		0.026	0.12	0.00	0.010	0.022	0.002	0.0000			

Tensile Tests for Order 211979-01 (sorted by Heat)

Serial	Heat-Slab	Gauge		Tensile		Yield		Elongation			Reduct Area %	Dir	Norm	Stress Rel	Test ID
		Inches	MM	KSI	MPA	KSI	MPA	%	In.	MM					
987505-1	2G963-902	1.0000	25.40	87	603	67	461	19	2	50		Tran			261128
987532-1	2G963-402	1.2500	31.75	86	590	67	461	22	2	50		Tran			261141

Other Information for Order 211979-01
Material is 100% melted and manufactured in the USA. No weld repair has been performed.

KLEIN STEEL SER, INC. - SO# 89879-001
CUST PO# MF 5671-OP
PT# A572-65 1.0
HEAT# 2G963 - SLAB# 102
A572-65
QTY-1; 1.0"x48"x96"

Order 211979-02 Customer PO 0056212-01

Specifications:
ASTM A572/A572M-07 Grade 65(450) Type 2

Products Shipped for Order 211979-02 (sorted by Serial)

Serial	Heat-Slab Orig	R/R	Plate Size in Inches	Plate Size in MM	Lbs	Kg
990651-1	2G963-102 USA	9.8	1.0000 x 96.0000 x 480.0000	25.40 x 2438.40 x 12192.00	13,068	5,881

Shipment Summary of Order 211979-02: 1 piece 13,068 lbs (5,881 kg)

Chemical Analysis for Order 211979-02 (sorted by Heat)

HeatAnlys	Heat	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Sn
	2G963	0.12	1.30	0.014	0.010	0.03	0.28	0.18	0.13	0.06	0.021
		Al	V	Nb/Cb	N	Alsol	Ti	B			
		0.026	0.12	0.00	0.010	0.022	0.002	0.0000			

Tensile Tests for Order 211979-02 (sorted by Heat)

Serial	Heat-Slab	Gauge		Tensile		Yield		Elongation			Reduct Area %	Dir	Norm	Stress Rel	Test ID
		Inches	MM	KSI	MPA	KSI	MPA	%	In.	MM					
987505-1	2G963-902	1.0000	25.40	87	603	67	461	19	2	50		Tran			261128
987532-1	2G963-402	1.2500	31.75	86	590	67	461	22	2	50		Tran			261141

Other Information for Order 211979-02
Material is 100% melted and manufactured in the USA. No weld repair has been performed.

Shipment Grand Totals of B/L 271825: 3 pieces 45,738 lbs (20,582 kg)

Unless otherwise specified, Mercury, radium or alpha source materials have not been used.

I certify the above results to be correct as contained in the records of the corporation.

Chief Metallurgist, David J. Cernava D. J. Cernava

Revision:

INSPECTION CERTIFICATE DIN EN 10204: 2005-01 3.1 / № 1-2767-1 /

Quality management system has been certified according to ISO 9001:2008 by Bureau Veritas Certification (Certificate Number UA 226868)
Environmental management system has been certified according to ISO 14001:2004 by Bureau Veritas Certification (Certificate Number UA 226869)
Occupational health and safety management system has been certified according to OHSAS 18001:2007 by Bureau Veritas Certification (Certificate Number UA 226339)

Open Joint-Stock Company "Byelorussian Steel Works – management company of "Byelorussian Metallurgical Company" holding"
37, Promyshlennaya street 247210 Zhlobin – Belarus
Tel. +375 (2334) 5-41-28, Fax +375 (2334) 5-60-42
www.belsteel.com qualdir@bmz.gomel.by

Spec 5L- 0634

Description of the goods: Hot strained seamless pipes for oil-and-gas industry.
Описание товара: Трубы бесшовные горячедеформированные для нефте- и газопроводов.
Final application: For pipeline transportation systems for petroleum and natural gas industries.
Конечное назначение: Для трубопроводных транспортных систем для нефтяной и газовой промышленности.
Deoxidation degree: fully deoxidized steel
Степень раскисления: полностью раскисленная сталь
Type of pipe: SMLS Plain End
тип трубы: бесшовная, с гладкими концами
Delivery Conditional: Normalized Technical specification level: PSL1
Условие поставки: Нормализована Уровень спецификации: PSL1

Contract № 12024329 appendix 1 LOT 3
Контракт № приложение
PO number 1040324400/61-18966
Wagon № 60776135
вагон
Country of destination: USA
Страна назначения:
Customer: Coutinho & Ferrostal Incorporated
Получатель: 16510 Northchase Dr.,
77060 Houston
USA

№ pos. № поз.	Number of heat Номер плавки	Number of lot Номер партии	
1	333358	124370	Marking / Paint mark: SPEC 5L-0634 <M/Y> 4.500 0.674 B/X42 PSL1 SMLS HEAT XXXXXX LOT YYYYYY TESTED 2970 <FL_FT> B ASTM A53/ASME SA53 B/C ASTM A106/ASME SA106 NDE 61-18966 BELARUS

маркировка/краской

№ pos. № поз.	Number of heat Номер плавки	Number of lot Номер партии	Grade steel /Standard Марка стали/Стандарт With the sphere of spreading (с областью распространения)	Chemical composition, % Химический состав, %	C	Si	Mn	P	S	Cr	Ni	Cu	Ti	Mo	V	Al	Nb	Nb+V	Nb+Ti +V	Cr+Ni+ Mo +Cu+V	CE IIW	Steel making process:
1	333358	124370	B/X42 acc. to API SPEC 5L(44ed.):2011 PSL1 B acc. to ASTM A53-2010 B acc. to ASME SA53-06 B/C acc. to ASTM A106-2011 B/C acc. to ASME SA106-2001 NACE MR 0175-2:2003, ISO 15156-2:2003 and PED 97/23/EC, NACE MR 0103-2010	Norm/норма	max .28	min .10	.29 - 1.06	max .030	max .030	max .40	max .40	max .40		max .15	max .08			max .06	max .35	max 1.00		E+ACD
				Ladle (fact) ковшевая (факт)	.23	.21	.56	.008	.019	.05	.10	.23	.004	.01	.034		.002	.036	.040	.42		
				Product (fact) п/с (факт)	.22	.21	.57	.007	.018	.05	.10	.22	.003	.01	.029		002	.031	.034	.42		
				Product (fact) п/с (факт)	.22	.21	.56	.007	.018	.06	.10	.22	.004	.01	026		.003	.029	.033	.42		

CPS 4.5 x .674

75-18966-12

INSPECTION CERTIFICATE DIN EN 10204: 2005-01 3.1 / № 1-2767-1 /

Quality management system has been certified according to ISO 9001:2008 by Bureau Veritas Certification (Certificate Number UA 226868)
Environmental management system has been certified according to ISO 14001:2004 by Bureau Veritas Certification (Certificate Number UA 226869)
Occupational health and safety management system has been certified according to OHSAS 18001:2007 by Bureau Veritas Certification (Certificate Number UA 226339)

№ pos. № поз.	Dimensions – Размеры						Quantity – Количество							Hardness . acc. to NACE MR 0175-2:2003 Твердость согласно NACE MR 0175-02:2003		Mechanical properties – Механические свойства							
	OD Диаметр		WT Тол.ст.		Length Длина		Number of packages Кол-во мест	Quantity of pipes in bundles pcs Кол-во труб в пакетах шт.	Weight, t (lb) Вес, т (фунт)				Total length Погонный метраж			Tensile Test – Испытание на растяжение Longitudinal direction продольное направление Longitudinal Strip Test Specimens Образец в виде полосы в продольном направлении dimension of specimen 0,75 in размер образца ASTM A370				CVN Impact Test , KV Работа удара				
	mm мм	inch дюйм	mm мм	inch дюйм	mm мм	ft фут			Net, t Нетто, т	Net, lb Нетто, фунт	Gross, t Брутто, т	Gross, lb Брутто, фунт	m м	ft фут		Tensile strength, Предел прочн. Rm	Yield strength, Предел текуч. Rt 0.5	Elongation Longitudinal Удлинение	Ratio Коэффи циент Rt 0.5 / Rm	Impact energy, KV, longitudinal , J Работа удара продольная , Дж				T °C
																				1	2	3	Average Средн.	
														ISO 6506-1										
														HB		psi	psi	A50 %						
																min 70000	min 42100	min 25						
1	114.3	4.500	17.12	0.674	10.5 (-0/+0.10)	34.4 (-0/+0.33)	2	14	6.160	13568.28	6.168	13585.90	147.00	481.60	152	156	75500	50800	42						
TOTAL							2	14	6.160	13568.28	6.168	13585.90	147.00	481.60											

Personal for NDT-methods EF and UT is qualified acc.to EN 473, level II Персонал по неразрушающему контролю – методам ВТК и УЗК имеет квалификацию II в соотв. с EN 473, уровень II	NDT / Метод испытаний: Eddy current test / рефлектометр по ASTM E 309 reference standard pipe with hole (Ø 2,20 mm) Эталонная труба с отверстием (Ø 2,20 mm)	Results: OK Результат:	Testing method UST Метод испытаний УЗК ASTM E 213	Results: — Результат:	Technological Test Технологические испытания ASTM A105/A105M	Results: OK Результат:	Hydrostatic testing according API 5L 44 th ed. Гидростатическое испытание согласно API 5L 44 th ed. P: 2970 psi Duration min 5 sec Продолжительность не менее 5 сек	Results: OK Результат:	Flattening test Тест расплющивания	Results: OK Результат:

- It is hereby certified that products covered by this certificate has been tested and is complied with the requirements of the contract.
- Подтверждаем, что продукция, указанная в настоящем сертификате, испытана и соответствует условиям контракта.
- Visually measuring test was performed with satisfactory result.
- Визуально- измерительный контроль проведен с удовлетворительным результатом.
- No weld repair. Free of mercury and mercury containing compounds.
- Без следов зачистки сварой. Без ртути и ртутьсодержащих элементов.
- Plastic caps on both ends of pipes with holed (to prevent internal corrosion of pipes walls during transportation).
- На торцах труб должны быть установлены пластиковые заглушки с отверстиями в них (для предотвращения коррозии внутренних стенок трубы во время транспортировки).
- Pipes supply with plain end, square cut.
- Трубы поставляются с гладкими концами, обрезанными под прямым углом.
- Rust-preventing coating: with transparent lacquer.
- Антикоррозионное покрытие: покрытие прозрачным лаком.

Technical Control Inspector: Milliuk
Отдел технического контроля:

On Behalf of BMZ, Zhlobin:
БМЗ, Жлобин

Date: 21.09.2012 02:00:00
Дата:

3

*** PACKING LIST ***

ORDER

August 20, 2013 10:18 AM

Order #	00009891
Order Date	05/20/2013
Page	1 of 2

Ira Svendsgaard & Associates
PO Box 1637
Placerville, CA 95667
P 530 647-8225 F 530 647-8229

BILL TO:
TOWRSOL
TOWER SOLUTIONS LLC
280 HEMLOCK TRAIL

WEBSTER, NY 14580

SHIP TO:
1
D&D WELDING C/O: TWR SOLUTIONS
4710 ROUTE 104

WILLIAMSON, NY 14589

Confirmed With	
Customer PO#	ROBBINS HILL & E. PROSPECT
BOL #	10729

Reference #	
Terms	PREPAYMENT OF INVOICE
Freight Charges	PPA

PrePaid _____ Collect _____ 3rd Party _____

Freight	F.O.B	Ship Via	Tracking Number	Req Ship Date
PREPAID ADD CLASS 50	PJS/DALLAS	YELLOW	708-548818-5	08/19/2013

Order Qty	Ship Qty	B/O Qty	Item # / Description	Customer Part Number	U/M:
480	480	0	463752 M20 X 95 ONESIDE ASSEMBLY		EA
			Carton Qty: 32	Carton Amt: 15	
			Unit Weight: 1	Ext Weight: 552	
22	22	0	458430 ONESIDE 3' M20 HIGH TENSILE SLEEVE		EA
			Carton Qty: 1	Carton Amt: 22	
			Unit Weight: 5	Ext Weight: 118	

PLS SHIP ON YRC QUOTE 98615654. YRC PHONE 1-800-610-6500
PLS PROVIDE AJAX REF #S FOR ALL 15 CARTONS AJAX # 463752
PLS PACK IN HD EXTERNAL BOXES AND STRAP TO PALLET
PLS PUT FOUR (4) "DO NOT STACK" LABELS ON EACH HD BOX
PLS PUT CONTACT ON BOL: CLARK COGAN 585-265-1242
PPA = 224.35

THANK YOU FOR PLACING YOUR ORDER WITH US!!
UNAUTHORIZED RETURNS WILL NOT BE ACCEPTED!

FOUNDATION SYSTEMS & ANCHORS INC.
2300 Allen Ave. S.E.
Canton, Ohio 44707
Ph. (330) 454-1700 Fax (330) 454-2336
www.fsaboll.com

PACKING LIST
002933

Special Instructions

☒ Cert Enclosed ☐ Partial Ship ☒ Complete Ship

Goods Received In Good Condition

By: _____

Date: _____

SOLD TO:
TOWER SOLUTIONS LLC
280 HEMLOCK TR
WEBSTER NY 14580
Phone: USA-585-265-1242 Fax: 585-265-1242

SHIP TO:
D&D WELDING
4710 ROUTE 104
WILLIAMSON NY 14589
Phone: 585-265-1242 Fax: 585-265-1242

Sales Order	Ship Num	Cust No	Order Date	Tax	Promised	Sales Rep	Customer P.O. Number	Mark Shipment
13- 0002710	0000	TOWSO	6/28/2013	E	7/23/2013	-NoSalesman	61413	

F.O.B. Point	Ship Date	Shipped Via	Cartons	Weight	Waybill Number	Ins
	8/21/2013	ONLINE FREIGHT FLAT	1.00	274.00	000001914	N

Item	T	QUANTITY Order	B/O	Ship	Unit	Part Number/Revision	Description
001	S	3		3	EA	AT032252104H	F1554-105 2.093" X 210" ALLTHREAD PART GALV 4(2H)HDG NUTS COARSE THREAD ***THERE WILL BE UNUSABLE THREADS AFTER GALVANIZING***

(4)

TC Industries Test Center
3703 South Route 31
Crystal Lake, IL 60012-1412
Telephone (815) 459-2400 Fax (815) 459-3419

TEST REPORT

REPORT NO: 166787
DATE: MARCH 18, 2013
PAGE 1 OF 1

BILL TO: FOUNDATION SYSTEMS & ANCH
2300 ALLEN AVENUE S.E.
CANTON, OH 44707

SHIP TO: FOUNDATION SYSTEMS & ANCH
2300 ALLEN AVENUE S.E.
CANTON, OH 44707

DESC: 165 PCS 2.093"RD X 24' HEAT: 58013224 GRADE: 4140R WT: 46836
PO: 0000954-00 MO: 249543 CO: 0000887-00 LOT: 86157

SPEC: QUENCH, TEMPER, STRAIGHTEN ASTM F1554 GRADE-105-07A S5
1 END RED

PROCESS: FURN TEMP: 1600 FURN TIME hh.mm: 1.25 QUENCH: OIL
TEMPER TEMP: 1250 TEMPER TIME hh.mm: 1.25
STRESS TEMP: STRESS TIME hh.mm:

PARAMETER	UNITS	LIMITS		TEST RESULTS *(See sampling plan on back)*					
TENSILE	KSI	125.0	150.0	131.0					
YIELD .2%	KSI	105.0	N/A	112.0					
ELONG 2"	%	16.0	N/A	20.0					
RED AREA	%	45.0	N/A	61.0					
CHARPY	FT-LB	15	N/A	19	15	20			
CVN TEMP	F	-20	-20	-20					
SURFACE HB	HBW	0	N/A	273	273	280	289	271	282

ACCREDITED
Testing Cert #1281.01

TC INDUSTRIES and SUBCONTRACTED LABS (A2LA ACCREDITED)

Tensile, Standard TC	Rockwell	Micro Analysis
Tensile, Full Size	Brinell TC	Decarb Measure
Charpy V Notch TC	Ultra Sonic*	Chemistry*
Microhardness,Knoop*	Bend Test*	

TC: TC Test Center	BE: Berg Eng.	EX: Exova	MSI: Metallurgical Ser.
Cert #1281.01	Cert #L1157-1	Cert #104.02	Cert #0510.01
4/30/13	2/4/14	8/30/14	12/31/14

Time 16:09 DATE IN: 3/13/13 *not included in our scope of accreditation FC 4.12.16F 7/15/10

NOTES:
CVN 10x10 MM

Phil Burgdorf
Test Center Tech II

3-26-2013

4

Certificate of Compliance

AZZ Galvanizing Company certifies that the material referenced below complies in all respects with the specification indicated.

Customer: Foundation Systems Date: 1/4/2013

Purchase Order No: 2013 Yearly Blanket

Project or Job Reference: 61413

AZZC Shop Order No: All

AZZ Galvanizing Co. Processing Plant: Canton,Ohio

Processing Specification:

_____ ASTM A 123/ A 123M-00

__X__ ASTM A 153/ A 153M-00

_____ ASTM A 767/ A 767M-00

Description of Material Covered by this Certificate of Compliance:

X-All material processed on above indicated Purchase Order / Project:

1. _____
2. _____
3. _____
4. _____

Michael Eberling
Quality Tech
AZZ Galvanizing Company

NOTARIAL SEAL
STATE OF OHIO

VINCENT M. CODISPOTI
NOTARY PUBLIC
STATE OF OHIO
Comm. Expires
July 02, 2016

FOUNDATION SYSTEMS & ANCHORS, INC.

Threading • Fabricating • Special Anchoring Devices

2300 Allen Avenue S.E. • Canton, Ohio 44707
Phone: (330) 454-1700 • 800-776-7331 • Fax (330) 454-2336
www.fsabolt.com

(4)

CERTIFICATIONS

To Whom It May Concern:

This is to certify that the products supplied by Foundation Systems and Anchors on the project referenced below are made of steel produced in the United States Of America, and further, that the attached steel test reports represent the actual material used to manufacture the items listed below.

Customer Project / Order #	**61413**
FSA Work Order #	**13-2710**
Material Specification	**F1554 Grade 105**
Customer Name	**Tower Solutions LLC**
Destination	**D&D Welding**
	4710 Route 104
	Williamson, NY 14589

Item Description:
3pcs – 2-1/4 x 210 allthread

Foundation Systems & Anchors, Inc.
By: Marie C Bertram

Subscribed And Sworn To Before Me
This 21 **Day Of** August
2013.

My Commission Expires July 2, 2016

Vincent M Codispoti
Notary Public

NOTARIAL SEAL STATE OF OHIO

VINCENT M. CODISPOTI
NOTARY PUBLIC
STATE OF OHIO
Comm. Expires
July 02, 2016

ORIGINAL INVOICE

INVOICE NUMBER: 4603048737
INVOICE DATE: 08/26/2013
CUSTOMER P.O. NUMBER:
82213
CUSTOMER ACCT: 19494045

DUNS: 00-117-3525
FEDERAL ID: 06-0732334

5

TOWER SOLUTIONS LLC
280 HEMLOCK TRL
WEBSTER NY 14580-9155

Delivery Address:

TOWER SOLUTIONS LLC
4710 STATE ROUTE 104
WILLIAMSON NY 14589-9326
ATTN: CLARK COGAN
585-265-1242

813

HILTI SALES REP: PETER VELEPEC, TUS0310403
PAYMENT TERMS: 30 DAYS NET
INVOICE DUE DATE: 09/25/2013
ORDER NUMBER: 515567081
LOCATION ID: 19538492
SHIPMENT NUMBER APPEARS ON PACKING SLIP(S). USE TO MATCH ALL DOCUMENTS AND CONFIRM RECEIPT.

Material Number	Material Description	Quantity Invoiced	Quantity Shipped	Sell Price	Amount Due	*
	SHIPMENT NUMBER: 394238555					
369110	RE 500 16.9 FL OZ/500ML	2 BOX	2 BOX of 20 EA = 40 EA	625.30	1,250.60	A
	FREIGHT				28.00	
	FREIGHT FUEL SURCHARGE				6.40	

Taxes: State: NY 4.00 % $ 51.40 County: 4.00 % $ 51.40 City: 0.00 % $ 0.00

* A - Taxable B - Non-Taxable C - Limited Shelf Life D - Non-Domestic Source E - Non-Domestic Source NATO Exception

SUB TOTAL	TOTAL TAX	TOTAL AMOUNT (USD)
$1,285.00	$102.80	$1,387.80

Product Sales: 800-879-8000 Hilti Credit Dept: 800-950-6196 Mail all written inquiries to Hilti: Hilti Delivery Policy: www.us.hilti.com/transportation Fax certificate to Tax Dept or mail with payment to remit to address
Website: www.us.hilti.com Hilti Credit Fax: 918-252-3810 PO Box 21148 Tulsa, OK 74121-1148 Hilti Tax Fax: 800-950-5605

CUSTOMER ACCOUNT	INVOICE	INVOICE DATE	PREPAYMENT	AMOUNT DUE (USD)	PAYMENT ENCLOSED
19494045	4603048737	08/26/2013		$1,387.80	

BILL TO: **TOWER SOLUTIONS LLC**
280 HEMLOCK TRL
WEBSTER NY 14580-9155

Delivery Address: **TOWER SOLUTIONS LLC**
4710 STATE ROUTE 104
WILLIAMSON NY 14589-9326
ATTN: CLARK COGAN
585-265-1242

Please make checks payable to Hilti and remit in USD.
A fee of $ 25.00 is assessed for return checks.
Material returns after 90 days are subject to a $ 125 restocking fee. Chemicals returnable within 14 days by the case only. Standard Hilti terms and conditions apply. Visit www.us.hilti.com/terms for full terms.

REMIT TO

HILTI INC.
PO BOX 382002
PITTSBURGH PA 15250-8002

1 19494045 4603048737 08262013 0000138780

Customer Name D & D Welding

Customer PO# ~~NORTHERN FABRICATION~~ E. Prospect

Shipper No 470397 Heat Number 3502106

NUCOR
PLATE MILL

P.O.Box 279
Winton, NC 27986
(252) 356-3700

Mill Test Report

NUCOR It's our Nature.

Issuing Date : 03/22/2013 B/L No. : 352324 Load No. : 354894 Our Order No. : 109391/1 Cust. Order No. : TD043

Vehicle No: TTPX 805515

Specification : 1.2500" x 96.000" x 480.000"
ASTM A572 Grade 65-12 .05 Max Si

Sold To : LEECO STEEL PRODUCTS
1011 Warrenville Road
SUITE 500
LISLE,IL 60532

Ship To : LEECO STEEL PRODUCTS-
CHATTANOOGA
2605 EAST 39TH STREET
CHATTANOOGA,TN 37405

Marking : TD043

Heat No	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Al(tot)	V	Nb	Ti	N	Ca	B	Sn	CEQ	PCM
3502106	0.15	1.41	0.015	0.003	0.04	0.13	0.07	0.08	0.02	0.032	0.061	0.047	0.002		0.0013	0.0002	0.007	0.43	0.25

Tensile Test							Charpy Impacts										
Plate Serial No	Pieces	Tons	Dir.	Yield	Tensile	Elongation % in 2"	Elongation % in 8"	Dir.	1	(%) shear	2	(%) shear	3	(%) shear	Ave.	(%) shear	Size	Temp	Min Ave.
3502106-02	2	16.33																	

Manufactured to fully killed fine grain practice by Electric Arc Furnace. Welding or weld repair was not performed on this material. Mercury has not been used in the direct manufacturing of this material. Produced as continuous cast discrete plate as-rolled, unless otherwise noted in Specification.
Yield by 0.5EI/L method unless otherwise specified Ceq = C+(Mn/6)+((Cr+Mo+V)/5)+((Cu+Ni)/15)
Pcm = C+(Si/30)+(Mn/20)+(Cu/20)+(Ni/60)+(Cr/20)+(Mo/15)+(V/10)+5B
Melted and manufactured in the USA. ISO 9001:2008 certified (#008063) by SRI Quality System Registrar (#0985-09). PED 97/23/EC 7/2 Annex 1, Para. 4.3 Compliant. DIN 50049 3.1.B/EN 10204 3.1B(2004). DIN EN 10204 3.1(2005) compliant. For ABS grades only. Quality Assurance certificate 09-MNPQA-546

We hereby certify that the contents of this report are accurate and correct. All test results and operations performed by the material manufacturer are in compliance with the applicable specifications, including customer specifications.

T. A. Deprotis

T. A. Deprotis, Metallurgist

04/08/2013 3:23:02 PM

Klein Steel Service Inc.

105 Vanguard Pkwy
Rochester, NY 14606
Phone: 585-328-4000 Fax: 585-328-0470
Website: www.kleinsteel.com

June 13, 2013
5:45:14AM
Page 1 of 1

Shipper No. 467254

Bill To D & D Welding
4710 Rt 104
Williamson, NY 14589

Ship To D & D Welding
4710 Rt 104
Williamson, NY 14589

Attn: MATT 259-4095 315 589 4700

Terms: .5% 10 Net 30 Contract:
Customer P.O. Number: E PROSPECT F.O.B.: Delivered Ship Via: Klein
Sales 1: Ron Pritchard Sales 2: HOUSERR Order No: 467254 Due Date: 6/5/13

Ship Qty	Order Qty	UM	Description	Width	Length	Weight
3	3	P	1-1/4" A572 GR65 PLATE TOL: CKS WIDTH X STOCK LENGTH **Heat Numbers:** 3502106(3)	6.5"	240"	1,659.13
3	3	P	1-1/4" A572 GR65 PLATE TOL: CKS WIDTH X STOCK LENGTH **Heat Numbers:** 3502106(3)	6"	240"	1,531.50
3	3	P	1-1/4" A572 GR65 PLATE TOL: CKS WIDTH X STOCK LENGTH **Heat Numbers:** 3502106(3)	5.75"	240"	1,467.69
3	3	P	1-1/4" A572 GR65 PLATE TOL: CKS WIDTH X STOCK LENGTH **Heat Numbers:** 3502106(3)	5.25"	240"	1,340.06
3	3	P	1-1/4" A572 GR65 PLATE TOL: CKS WIDTH X STOCK LENGTH **Heat Numbers:** 3502106(3)	5"	240"	1,276.25
2	2	P	1-1/4" A572 GR65 PLATE TOL: CKS WIDTH Y STOCK LENGTH **Heat Numbers:** 3502106(2)	4.5"	240"	765.75
17	17			**Total Weight**		**8,040.38**

Shipping Instructions:

Receiving Hours:
Max Bundle Weight: 0
Spacers:

Messages:
E PROSPECT

Test Certificates Required

Date 6/13/13

Driver Sig _____

Print Name Glen

Consignee Sig _____

Print Name _____

Customer is responsible for unloading material upon delivery.

Applus RTD / Quality Inspection Services
Materials Test Laboratory
4400 Broadway · Depew, New York 14043
(716) 686-3710 · Fax (716) 686-3716
Visit Us At: www.applusrtd.com
E-Mail: contact.buffalo@applusrtd.com

Applus RTD

(6)

Attn: Mark Turek
Klein Steel Service Inc.
105 Vanguard Pkwy
Rochester, NY 14606

August 15, 2013

Description:
PO No. : MF6031-TEST
Two (2) Steel Plate Samples
7" x 4" x 1-1/4" thick
Specimens from 4" direction

Lab No.: 13-MET-0480-2

Date Submitted: 8-9-13

MECHANICAL TEST DATA

Sample Number	Diameter Inches	Area Square Inches	Yield Point LBS	Yield Strength PSI	Ultimate Load LBS	Tensile Strength PSI	Elong. On 1.4 Inch	Elong. %	Final Diameter Inches	Area Reduct. %
			@ 0.2 %							
# 1	0.345	0.0935	6,300	67,400	8,000	85,600	0.397	28.4	0.152	80.6
# 2	0.347	0.0946	6,700	70,800	8,200	86,700	0.407	29.1	0.160	78.7

Method: ASTM A370.

Sincerely,
QUALITY INSPECTION SERVICES, INC.

Eric Woolworth
Metallurgical Services Technician

FDH ENGINEERING INNOVATION

Contractor Due Diligence Form

Form Number: CDD-01

Site Name:	E-Prospect
Site ID:	CT02694-B-04
Proposed Carrier:	New Cingular / Sprint
Tower Type:	162' Monopole
Site Address:	229 Cheshire Road
	Prospect, CT 06712-1746

FDH No.:	1302571700
Str. Analysis Date:	3/1/13
Drawing Date	5/6/13
Drawing Issue:	Construction
Coordinates:	41.5079°
	-72.9510°

Safety Agreement

It is the responsibility of the foreman on-site to comply with all SBA mandated safety guidelines. Safety is a requirement for any on site employment. It is required that all crews on-site must follow all OSHA and SBA safety standards. Should a contractor deliberately violate any mandated safety standards, the general contractor along with all subcontractors associtated with job will be pulled from the job site immediately. The General Contractor is responsible for the actions of all subcontractors.

I have read the above statement and understand. Contractor's Initials C. C.

Permit Release

In accordance to paragraph 4.2 on page 3 of the master subcontractor agreement the contractor will obtain all permits and inspections necessary for the proper execution and completion of the project. Contractor is also responsible for all cost associated with obtaining permits. If the state or jurisdiction does not require any permits for the modification as detailed, contractor must submit a form of verification to the FDH construction manager prior to beginning any construction.

Is permit required. ☒ Yes ☐ No Contractor's Initials C. C.

Permit Number 6844

Utility Due Diligence

Contractor is responsible of obtaining utility locates for entire tower compound(a minimum of 500' radius around compound) 72 hours prior to start of construction. Any repairs resulting from the damage of said utilities shall be the sole responsibility of the contractor.

I have read the above statement and understand. Contractor's Initials C. C.

Pre-Construction Site Walk

A. Contractor has performed site visit to verify all dimensions and existing conditions prior to fabrication.

☒ Yes ☐ No Contractor's Initials C. C.

B. There are no deviations from specifications and drawings. Work can proceed as specified by FDH Engineering.

☒ Yes ☐ No Contractor's Initials C. C.

Scope and Design Deviation Notification

A. No deviation from the scope of work or operating standards in the Master Contractor Agreement will allowed. Any deviation will result will be corrected at the expense of the contractor and/or termination of the contractor from the work site.

I have read the above statement and understand. Contractor's Initials C. C.

B. If modifications are made to the original design during construction, red-line drawings will be provided by the contractor. Contractor must make FDH aware of their intended changes before said changes take place. If changes are made without consent of FDH in writing; the contractor will be responsible for all cost associated with corrected measures.

I have read the above statement and understand. Contractor's Initials C. C.

Steel and Concrete Certifications

A. Contractor must submit all documentation required for verification of proposed steel members and their grade of steel, this may include steel certification from steel mill. Contractor must submit a form of verification to FDH prior to beginning any construction.

I have read the above statement and understand. Contractor's Initials C. C.

B. Contractor must submit all batch reports for all concrete poured. If more than 8 yards of concrete are poured then a minimum of 3 cylinders will be made per truck of concrete.

I have read the above statement and understand. Contractor's Initials NA

Weather and Fabrication Delays

All delays caused by fabrication and weather must be brought to the attention of FDH in writing. Delays at the result of weather shall be sent to FDH immediately. Should there be any delays contractor must submit a written response detailing the delay within 24 hrs of the occurance. Each occurrence will be evaluated on a case by case basis.

I have read the above statement and understand. Contractor's Initials C. C.

Subcontractor Notification

Contractor will list all subcontractors that will be utilized below. All subcontractors must have all required local and federal certifications. It is the responsibility of the general contractor to handle all liens and payments of contracted subcontractors.

Contractor: D+D welding Contact: Matt David Telephone: 585-259-4095

Contractor: _____ Contact: _____ Telephone: _____

Contractor: _____ Contact: _____ Telephone: _____

Contractor has read and understands all aforementioned terms and conditions listed in this document and any preceding bid documents. Contractor also agrees to abide by these terms and conditions for the duration of this project.

Company's Name: Tower Solutions LLC

Contact(Print Name) Clark Cogan

Signature: Clark Cogan Date: 8/26/13


T.R.C.
COMPOUND
NET 6 LBS.
OWERS
CT02694
32865
(800) 487-SITE (7483)
(888) 950-SITE (7483)
WWW.SBASITE.COM

THE MODIFICATIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED BY FDH ENGINEERING, INC., PROJECT NO. 1312721400 DATED MARCH 1, 2013.

THIS REPORT WAS BASED ON A SPECIFIC ANTENNA AND COAX CONFIGURATION PROVIDED BY THE TOWER OWNER. ANY CHANGE TO THIS INFORMATION MUST BE REVIEWED BY FDH ENGINEERING, INC.

ALL DIMENSIONS, MEASUREMENTS, QUANTITIES, PART NUMBERS AND COAX/ANTENNA PLACEMENTS TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO MATERIAL ORDERS AND CONSTRUCTION.

FOR INQUIRIES REGARDING THE CONTENT OF THESE MODIFICATION DRAWINGS, PLEASE CONTACT STEVEN STRICKLAND WITH THE FDH CONSTRUCTION DEPARTMENT (919) 755-1012

PROJECT DESCRIPTION:

MODIFICATION DRAWINGS FOR A 162' MONOPOLE

SBA

SITE NAME:

E-PROSPECT

SITE NUMBER:

CT02694-B-04

SITE ADDRESS:

229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

COORDINATES:

LATITUDE: 41.5079°
LONGITUDE: -72.9510°

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STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED
PROFESSIONAL ENGINEER

10/25/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1
10/25/13	AS-BUILT	2

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

POST CONSTRUCTION INSPECTION NOTES:

GENERAL

1. THE POST CONSTRUCTION INSPECTION (PCI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).
2. THE PCI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE PCI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. ALL PCI'S SHALL BE CONDUCTED BY A PCI INSPECTOR THAT IS APPROVED TO PERFORM ELEVATED WORK FOR FDH ENGINEERING, INC.
4. TO ENSURE THAT THE REQUIREMENTS OF THE PCI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE PCI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR FDH POINT OF CONTACT (POC).
5. REFER TO CCR-01 : CONTRACTOR CLOSEOUT REQUIREMENTS FOR FURTHER DETAILS AND REQUIREMENTS.

PCI INSPECTOR

1. THE PCI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE PCI TO, AT A MINIMUM:
   - REVIEW THE REQUIREMENTS OF THE PCI CHECKLIST
   - WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
2. THE PCI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE PCI REPORT TO FDH.

CORRECTION OF FAILING PCI'S

1. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PCI ("FAILED PCI"), THE GC SHALL WORK WITH FDH TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
   - CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT PCI.
   - OR, WITH FDH'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.

REQUIRED PHOTOS

1. BETWEEN THE GC AND THE PCI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE PCI REPORT:
   - PRE-CONSTRUCTION GENERAL SITE CONDITION
   - PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
     - RAW MATERIALS
     - PHOTOS OF ALL CRITICAL DETAILS
     - FOUNDATION MODIFICATIONS
     - WELD PREPARATION
     - BOLT INSTALLATION AND TORQUE
     - FINAL INSTALLED CONDITION
     - SURFACE COATING REPAIR
   - POST CONSTRUCTION PHOTOGRAPHS
     - FINAL INFIELD CONDITION
2. PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

PCI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED	REPORT ITEM
PRE-CONSTRUCTION	
X	PCI CHECKLIST DRAWING
N/A	EOR APPROVED SHOP DRAWINGS
N/A	FABRICATION INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
X	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
X	CONTRACTOR'S CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
X	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	PCI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PCI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PCI REPORT

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POST CONSTRUCTION INSPECTION NOTES

SHEET NUMBER
N-1

GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL PERMITS NECESSARY TO COMPLETE THE PROJECT AND ABIDE BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO FDH ENGINEERING FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
3. INCORRECTLY FABRICATED, DAMAGED, OTHERWISE MISFITTING, OR NON-CONFORMING MATERIALS AND CONDITIONS SHALL BE REPORTED TO FDH ENGINEERING PRIOR TO ANY REMEDIAL OR CORRECTIVE ACTION. ALL ACTIONS SHALL REQUIRE FDH ENGINEERING APPROVAL.
4. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AFTER THE COMPLETION OF THE PROJECT.
5. CONTRACTOR SHALL PROMPTLY REMOVE ANY & ALL DEBRIS FROM SITE AND RESTORE AS BEST AS POSSIBLE TO PRECONSTRUCTION CONDITION.

CONTRACTOR QUALIFICATION NOTES:

1. ALL REPAIRS SHALL BE PERFORMED BY A TOWER CONTRACTOR WITH A MINIMUM 5 YEARS EXPERIENCE IN TOWER ERECTION AND RETROFIT AND WITH WORKING KNOWLEDGE OF THE TIA/EIA 222-F "STRUCTURAL STANDARD FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES".
2. CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. SHOULD THE CONTRACTOR REQUIRE DIRECT CONSULTATION, FDH ENGINEERING, INC. IS WILLING TO OFFER SERVICES BASED UPON AN AGREED FEE FOR THE WORK REQUIRED.
3. ALL SUBMITTAL INFORMATION MUST BE SENT TO FDH ENGINEERING, INC. 6521 MERIDIEN DRIVE, RALEIGH NC, 27616, TEL. (919) 755-1012, FAX. (919) 755-1031, E-MAIL INFO@FDH-INC.COM. ANY VARIATION OF THESE SPECIFICATIONS OR DRAWINGS WITHOUT CONSENT FROM FDH ENGINEERING, INC. WILL VOID ANY RESPONSIBILITY OR LIABILITY FOR DAMAGE (MATERIAL OR PHYSICAL) TOWARDS FDH ENGINEERING, INC.
4. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE TIA-1019-A STANDARD.

JOB SITE SAFETY & NOTES:

1. NEITHER THE PROFESSIONAL ACTIVITIES OF FDH ENGINEERING, INC. NOR THE PRESENCE OF FDH ENGINEERING, INC. OR EMPLOYEES AND SUB-CONSULTANTS AT THE CONSTRUCTION SITE, SHALL RELIEVE THE GENERAL CONTRACTOR AND OR SUBCONTRACTORS AND ANY OTHER ENTITY OF THEIR OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THE GENERAL CONTRACTOR AND OR SUBCONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SAFETY, AND WARRANTS THAT THIS INTENT IS EVIDENT BY ACCEPTING THIS WORK.

STEEL:

1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE AND ASTM SPECIFICATIONS.

   *ALL PLATE STEEL SHALL BE ASTM A572-65 (Fy=65KSI) UNLESS OTHERWISE SPECIFIED.

   *ALL PIPE STEEL SHALL BE ASTM A500 GR. B (Fy=42KSI) UNLESS OTHERWISE SPECIFIED.

   *ALL THREADED ROD SHALL BE ASTM A193 B7 (Fu=125 KSI) UNLESS OTHERWISE SPECIFIED.
2. ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE USING SPECIFIED WELDS WITH WELDING ELECTRODES E-70XX OR SPECIFIED HIGH STRENGTH BOLTS TO BE ASTM A325N, THREAD INCLUDED WITH SHEAR PLANE (UNLESS OTHERWISE NOTED).
3. ALL BOLTED CONNECTIONS TO BE INSTALLED TO A SNUG-TIGHTENED CONDITION IN ACCORDANCE WITH AISC 13 PART 16.2, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", SECTION 8.1, UNLESS OTHERWISE SPECIFIED. WHEN "X" TYPE BOLTS ARE USED, CONTRACTOR MAY BE REQUIRED TO STACK ADDITIONAL WASHERS TO OBTAIN PROPER SNUG TIGHT INSTALLATION. ALL NUTS SHALL BE HEAVY HEX UNLESS OTHERWISE NOTED.
4. ALL STEEL, AFTER FABRICATION, SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. ALL DAMAGED SURFACES, WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS OR PARTS (EXISTING OR NEW) SHALL BE PAINTED WITH MULTIPLE COATS OF ZRC COLD GALVANIZING COMPOUND ACHEIVING A MINIMUM OF 4 MILS DRY FILM PER ASTM A 780.
5. ALL SHOP AND FIELD WELDING SHALL BE DONE BY WELDERS QUALIFIED AS DESCRIBED IN THE "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" TO PERFORM THE TYPE OF WORK REQUIRED. CONTRACTOR IS REQUIRED TO PROVIDE FDH ENGINEERING, INC. WITH A PASSING CERTIFIED WELDING INSPECTION FOR ALL WELDS.
6. STRUCTURAL STEEL MAY NOT BE TORCH CUT FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC STANDARDS.

MISC. NOTES:

1. ALL MODIFICATIONS ARE ASSUMED TO BE MADE ON AN EMPTY TOWER. CONTRACTOR IS RESPONSIBLE TO MAKE PROVISIONS TO SUPPORT OR WORK AROUND EXISTING ANTENNAS AND TRANSMISSION LINES. MODIFICATIONS MUST BE CONTINUOUS THROUGH ALL AREAS SHOWN.
2. CONTRACTOR FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

FABRICATION NOTES:

1. ALL DIMENSIONS ARE PRELIMINARY UNTIL FIELD VERIFIED BY CONTRACTOR. ANY CHANGES MUST BE APPROVED BY ENGINEER OF RECORD IN WRITING PRIOR TO FABRICATION AND INSTALLATION.
2. NEW STEEL MEMBERS MUST HAVE SINGLE DRILLED HOLES. SLOTTED AND DOUBLE DRILLED HOLES ARE NOT ACCEPTABLE MEANS OF FABRICATION.

SUBSTITUTES AND/OR EQUALS:

1. IF CONTRACTOR WISHES TO FURNISH OR USE A SUBSTITUTE ITEM OF MATERIAL OR EQUIPMENT, CONTRACTOR SHALL FIRST MAKE WRITTEN APPLICATION TO ENGINEER OF RECORD FOR ACCEPTANCE THEREOF, CERTIFYING THAT THE PROPOSED SUBSTITUTE WILL PERFORM ADEQUATELY THE FUNCTIONS AND ACHIEVE THE RESULTS CALLED FOR BY THE GENERAL DESIGN, BE SIMILAR IN SUBSTANCE TO THAT SPECIFIED AND SUITED TO THE SAME USE AS THAT SPECIFIED. ALL VARIATIONS OF THE PROPOSED SUBSTITUTE FROM THAT SPECIFIED WILL BE IDENTIFIED IN THE APPLICATION AND AVAILABLE MAINTENANCE, REPAIR AND REPLACEMENT SERVICE WILL BE INDICATED. THE APPLICATION WILL ALSO CONTAIN AN ITEMIZED ESTIMATE OF ALL COSTS OR CREDITS THAT WILL RESULT DIRECTLY OR INDIRECTLY FROM ACCEPTANCE OF SUCH SUBSTITUTE INCLUDING COSTS OF REDESIGN AND CLAIMS OF OTHER CONTRACTORS AFFECTED BY THE RESULTING CHANGE, ALL OF WHICH WILL BE CONSIDERED BY ENGINEER OF RECORD IN EVALUATION OF THE PROPOSED SUBSTITUTE. ENGINEER OF RECORD MAY REQUIRE CONTRACTOR TO FURNISH ADDITIONAL DATA ABOUT THE PROPOSED SUBSTITUTE.

SURFACE PREPARATION:

1. PREPARE SURFACE TO BE WELDED BY REMOVING PAINT OR GALVANIZATION TO BARE METAL USING POWER WIRE BRUSHING IN ACCORDANCE WITH SSPC-SP11, (STEEL STRUCTURES PAINTING COUNCIL). FOLLOWING POWER WIRE BRUSHING CONTRACTOR SHALL POLISH METAL SURFACE WITH HIGH SPEED GRINDER WITH 400+ GRIT SANDPAPER.
2. AFTER NEW STEEL INSTALLATION CONTRACTOR TO BRUSH PAINT (2) COATS OF ZRC OR ZINGA COLD GALVANIZATION COMPOUND PER MANUFACTURER'S SPECIFICATIONS.

WELDING NOTES:

1. ALL WELDING TO THE EXISTING TOWER SHALL BE PERFORMED BY CERTIFIED WELDERS UTILIZING PROCEDURES QUALIFIED IN ACCORDANCE WITH AWS D1.1 AND AWS C5.4.
2. CONTRACTOR SHALL COMPLY WITH AWS D1.1 FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". CONTRACTOR SHALL SUBMIT CERTIFICATION OF WELDERS TO THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK.
3. CONTRACTOR RESPONSIBLE FOR TEMPORARY HEAT SHIELDING AS REQUIRED DURING WELDING.
4. CONTRACTOR RESPONSIBLE FOR VIEWING EXISTING TOWER FOR LOOSE AND FLAMMABLE MATERIAL PRIOR TO WELDING FLAT PLATE.
5. ALL WELDS TO BE VISUALLY INSPECTED BY A CERTIFIED WELD INSPECTOR PER AWS D1.1.

EPOXY/HILTI NOTES:

1. EPOXY AGENTS SHOULD BE ALLOWED TO CURE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
2. ALL HARDWARE ASSEMBLY AND MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED; ANY CONTRADICTION BETWEEN THE MANUFACTURER'S RECOMMENDATIONS AND THESE DRAWINGS ARE TO BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER AND OWNER.
3. ANY CONTRACTOR INSTALLING ADHESIVE ANCHORING SYSTEMS SHALL BE TRAINED, IN PERSON BY A MANUFACTURER'S REPRESENTATIVE, ON THE PROPER INSTALLATION TECHNIQUES. THIS TRAINING SHALL INCLUDE PROPER DRILLING, HOLE CLEANING, AND INSTALLATION METHODS FOR THE ADHESIVE ANCHORING SYSTEM AND CONSTRUCTION CONDITIONS ON THIS PROJECT. ALL TRAINING TO BE CONDUCTED PRIOR TO CREWS STEPPING ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT MANUFACTURER REPRESENTATIVE TO SET UP TRAINING. FDH IS NOT RESPONSIBLE FOR ANY COST OCCURRED FOR OR DURING ADHESIVE ANCHORING SYSTEM TRAINING.

ANCHOR ROD INSTALLATION NOTES:

1. CONTRACTOR TO PROVIDE PHOTOS OF THE ANCHOR ROD HOLES TO FDH CONSTRUCTION MANAGER PRIOR TO INSTALLING NEW ANCHOR RODS. PHOTOS MUST SHOW THE DEPTH AND DIAMETER OF ANCHOR ROD HOLES.

PULLOUT TESTING OF POST INSTALLED ANCHOR RODS:

1. EPOXY AGENTS SHOULD BE ALLOWED TO CURE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
2. CONTRACTOR SHALL ENSURE THAT CONSTRUCTION DOES NOT GO BEYOND POINT WHERE THE ANCHOR RODS CAN BE EFFECTIVELY TESTED. THE ANCHOR ROD SLEEVES AND TRANSFER PLATES SHOULD BE INSTALLED AFTER PULL-TESTING IS PERFORMED. CONTRUCTION MAY PROCEED AFTER TESTING IS COMPLETED.
3. 50% OF POST INSTALLED ANCHOR RODS SHALL BE TESTED OR A TOTAL OF 4, WHICHEVER IS GREATER.
4. THE ANCHOR ROD SHALL BE TESTED TO A TARGET TENSION OF 80% OF THE MATERIAL MINIMUM YIELD (Fy) STRENGTH ON THE NET AREA THROUGH THREADS. THE TARGET TENSION FOR THIS PULL TEST IS 256K.
5. MAINTAIN COMPLETE LOAD-DISPLACEMENT RECORDS THROUGHOUT THE TEST. LOAD THE ANCHOR IN INCREMENTS OF UP TO 15% OF THE TARGET TENSION.
6. STATIC LOAD TEST SHALL BE PERFORMED PER ASTM E488-96 (REAPPROVED 2003).
7. IF A DISPLACEMENT GREATER THAN 0.010" REMAINS AFTER THE INITIAL TEST CYCLE, ADDITIONAL TEST SHALL BE PERFORMED UP TO A MAXIMUM OF 4 TEST CYCLES TO DETERMINE IF THE MOVEMENT CONTINUES TO ACCUMULATE. INCREMENTAL RESIDUAL MOVEMENT RECORDED FROM EACH TEST CYCLE MUST BE DECREASING IN VALUE AND STABILIZE TO A VALUE NO MORE THAN 0.010", OTHERWISE THE ANCHOR SHALL BE CONSIDERED TO FAIL THE TEST. TOTAL RESIDUAL MOVEMENT SHALL NOT BE GREATER THAN 0.10" OR THE ANCHOR SHALL BE CONSIDERED TO FAIL THE TEST.
8. THIS INFORMATION SHALL BE DOCUMENTED AND INCLUDED IN THE POST MODIFICATION INSPECTION REPORT.
9. CONTACT FDH ENGINEERING, INC. IF ANY OF THE ANCHORS FAIL THE PULL TEST.
10. ALL HARDWARE ASSEMBLY AND MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED; ANY CONTRADICTION BETWEEN THE MANUFACTURER'S RECOMMENDATIONS AND THESE DRAWINGS ARE TO BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER AND OWNER.
11. ANY CONTRACTOR INSTALLING ADHESIVE ANCHORING SYSTEMS SHALL BE TRAINED, IN PERSON BY A MANUFACTURER'S REPRESENTATIVE, ON THE PROPER INSTALLATION TECHNIQUES. THIS TRAINING SHALL INCLUDE PROPER DRILLING, HOLE CLEANING, AND INSTALLATION METHODS FOR THE ADHESIVE ANCHORING SYSTEM AND CONSTRUCTION CONDITIONS ON THIS PROJECT. ALL TRAINING TO BE CONDUCTED PRIOR TO CREWS STEPPING ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT MANUFACTURER REPRESENTATIVE TO SET UP TRAINING. FDH IS NOT RESPONSIBLE FOR ANY COST OCCURRED FOR OR DURING ADHESIVE ANCHORING SYSTEM TRAINING.

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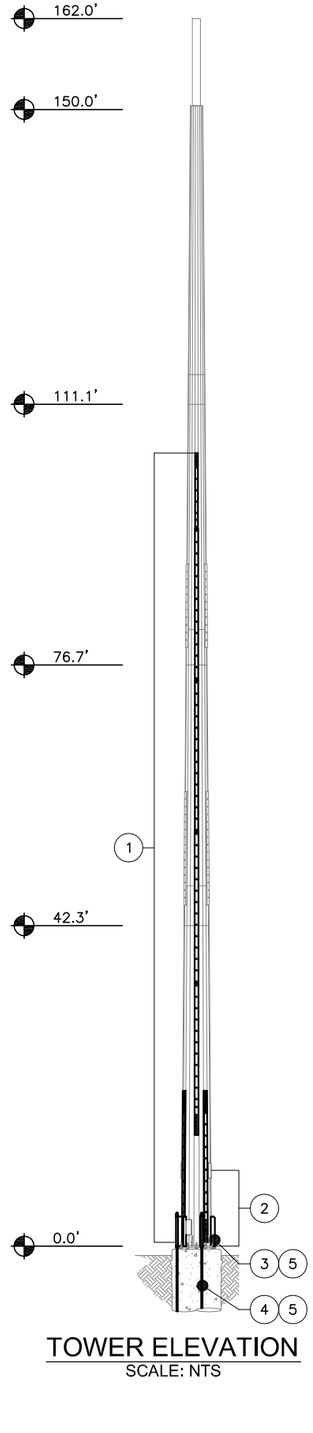
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
N-2

SECTION	TOWER								EXTENSION
LENGTH (FT)	47.57	39.05	38.82	38.28					12.00
# OF SIDES					18				N/A
THICKNESS (IN)	0.3750	0.3125	0.1875	0.2500					0.3750
SOCKET LENGTH (FT)	N/A	5.43	3.89	4.67					12.7500
TOP DIAMETER (IN)	37.8116	31.9620	19.5000	25.9777					12.7500
BOT. DIAMETER (IN)	47.0000	39.4834	27.1160	33.3629					
TOWER FINISH	GALVANIZED								



TOWER ELEVATION
SCALE: NTS

- APPURTENANCES MAY INTERFERE WITH PROPOSED MODIFICATIONS.
- ALL MODIFICATIONS TO BE INSTALLED CONTINUOUSLY THROUGH EXISTING EQUIPMENT. ALL EXISTING EQUIPMENT NOT TO BE DAMAGED OR TAKEN OFF AIR DURING INSTALLATION.
- ANTENNA GRAPHICS NOT SHOWN FOR CLARITY. SEE STRUCTURAL ANALYSIS REPORT FOR EXISTING ANTENNA LOADING.

TOWER MODIFICATION SCHEDULE

NO.	TYPE OF MODIFICATION	BOTTOM ELEV. (FT)	TOP ELEV. (FT)
1	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-5 FOR DETAILS.	0.5±	104.7±
2	REMOVAL OF EXISTING CHANNEL MONOPOLE REINFORCEMENT. SEE S-3 FOR DETAILS.	0.0±	10.0±
3	INSTALLATION OF NEW TRANSFER STIFFENER REINFORCEMENT. SEE S-6 FOR DETAILS.	0.0±	3.8±
4	INSTALLATION OF NEW ANCHOR RODS. SEE S-7 & S-8 FOR DETAILS.	2 -7.4±	4.3±
5	REMOVAL OF EXISTING STIFFENERS. SEE S-6 & S-7 FOR DETAILS.	0.0±	1.5±

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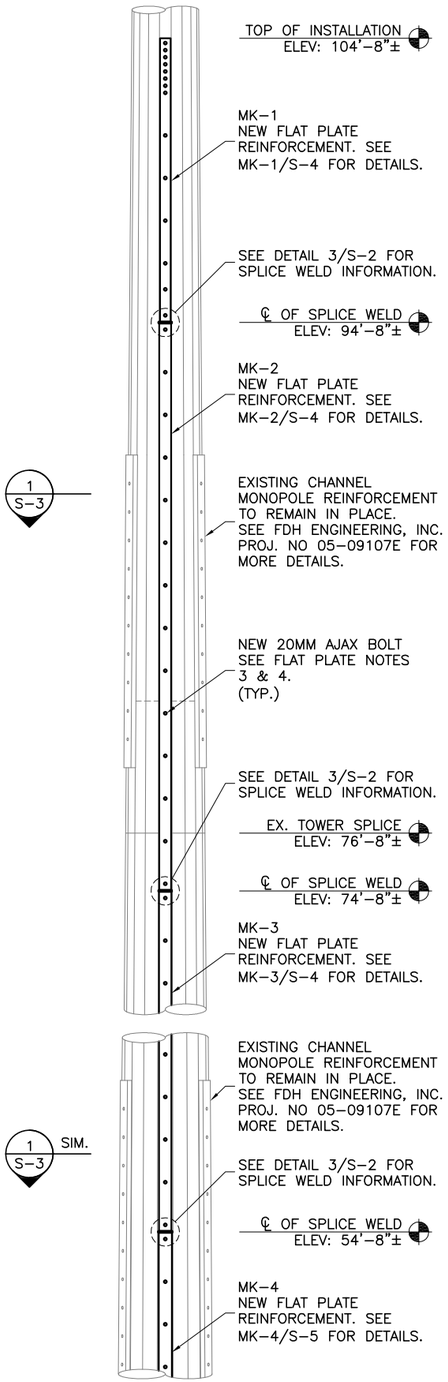
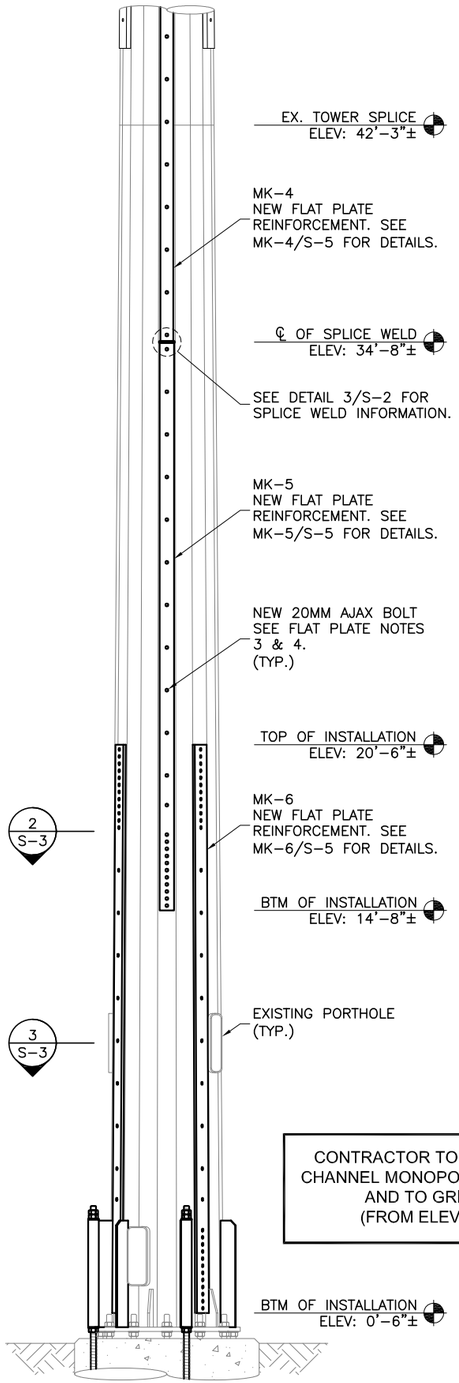


FLAT PLATE REINFORCEMENT LAYOUT
ELEVATION VIEW

1 S-2 ELEVATION
SCALE: 3/16" = 1'-0"



FLAT PLATE REINFORCEMENT LAYOUT
ELEVATION VIEW

2 S-2 ELEVATION
SCALE: 3/16" = 1'-0"

CONTRACTOR TO REMOVE EXISTING CHANNEL MONOPOLE REINFORCEMENT AND TO GRIND SMOOTH. (FROM ELEV: 0.0' TO 10.0')

FLAT PLATE INSTALLATION SCHEDULE

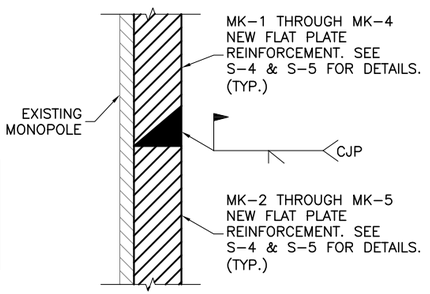
PART #	QTY.	DESCRIPTION	ELEVATION
MK-1	3	FLAT PLATE REINFORCEMENT	94'-8"± TO 104'-8"±
MK-2	3	FLAT PLATE REINFORCEMENT	74'-8"± TO 94'-8"±
MK-3	3	FLAT PLATE REINFORCEMENT	54'-8"± TO 74'-8"±
MK-4	3	FLAT PLATE REINFORCEMENT	34'-8"± TO 54'-8"±
MK-5	3	FLAT PLATE REINFORCEMENT	14'-8"± TO 34'-8"±
MK-6	3	FLAT PLATE REINFORCEMENT	0'-6"± TO 20'-6"±
–	336	20MM AJAX BOLTS	VARIES
ALL NEW FLAT PLATE STEEL TO HAVE Fy=65 KSI			

NEW FLAT PLATE REINFORCEMENT NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED LOCATION OF FLAT PLATE TO ENSURE THAT PROPER SPACING CAN BE MET.
2. CONTRACTOR TO REPLACE AND/OR RELOCATE ANY CLIMBING PEGS THAT INTERFERE WITH THE INSTALLATION OF FLAT PLATE.
3. ALL AJAX CONNECTIONS TO USE HIGH TENSILE SLEEVE PROVIDED BY MANUFACTURER. AJAX BOLT ASSEMBLY TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS. SEE AJAX BOLT ASSEMBLY DETAIL 4/S-2.
4. ALL SHEAR SLEEVES TO BE HOT DIPPED GALVANIZED PRIOR TO INSTALLATION.

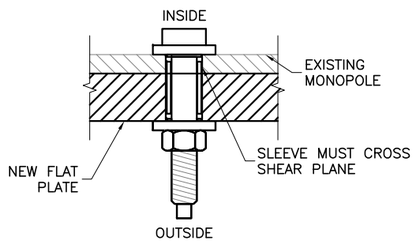
CONSTRUCTION NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED FLAT PLATE LAYOUT PRIOR TO CONSTRUCTION. IF ISSUES ARE PRESENT IN THE FIT OF THE FLAT PLATE, CONTRACTOR TO CONTACT ENGINEER OF RECORD OR FDH ENGINEERING PROJECT MANAGER PRIOR TO PROCEEDING WITH PROPOSED MODIFICATION OR FABRICATION.



SPLICE WELDING
ELEVATION VIEW

3 S-2 SECTION
NTS



AJAX BOLT ASSEMBLY
PLAN VIEW

4 S-2 DETAIL
NTS

PREPARED BY:
FDH
6521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031
ENGINEERING INNOVATION

PREPARED FOR:
SBA
5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800) 487-SITE

STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED
PROFESSIONAL ENGINEER

10/25/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1
10/25/13	AS-BUILT	2

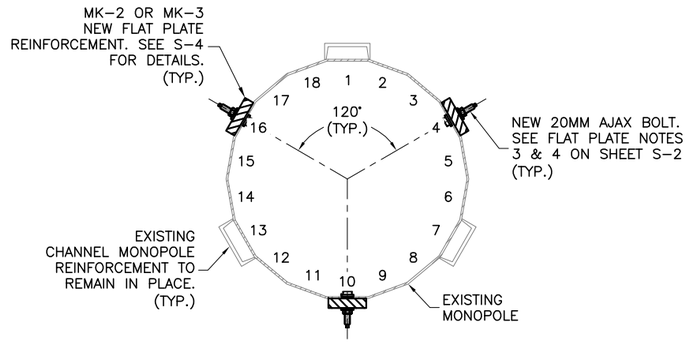
SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

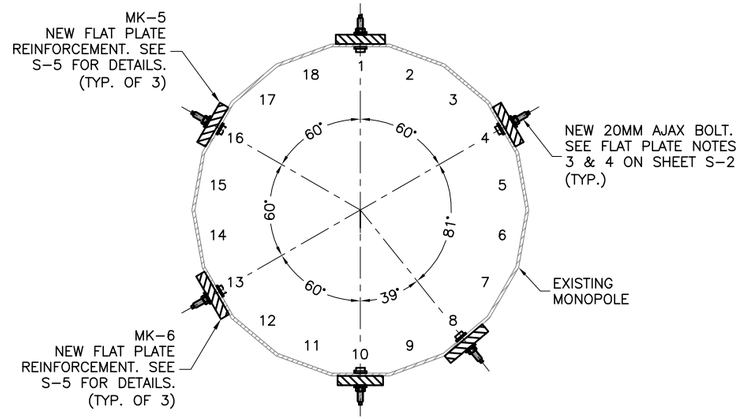
SHEET TITLE
FLAT PLATE REINFORCEMENT DETAILS I

SHEET NUMBER
S-2



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

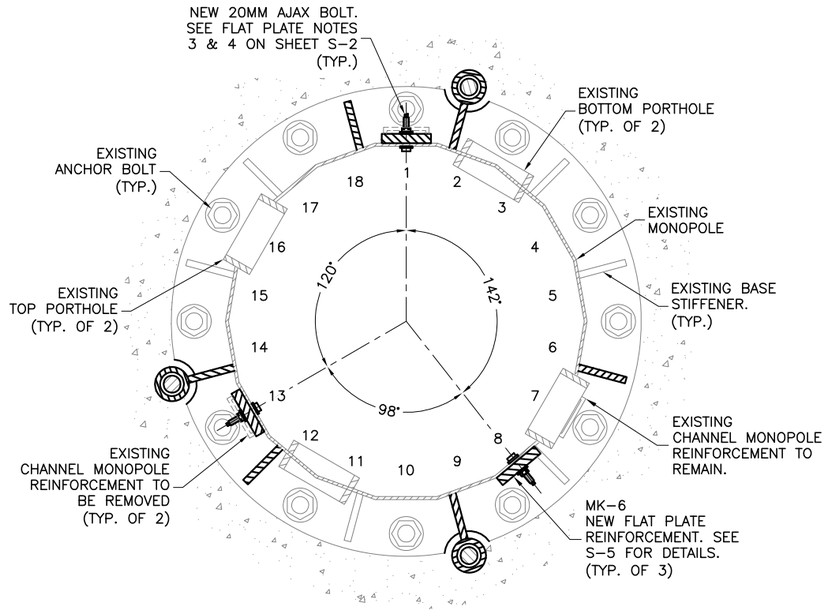
1 / S-3 SECTION
NTS



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

2 / S-3 SECTION
NTS

CONTRACTOR TO REMOVE EXISTING
CHANNEL MONOPOLE REINFORCEMENT
AND TO GRIND SMOOTH.
(FROM ELEV: 0.0' TO 10.0')



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

3 / S-3 SECTION
NTS

PREPARED BY:
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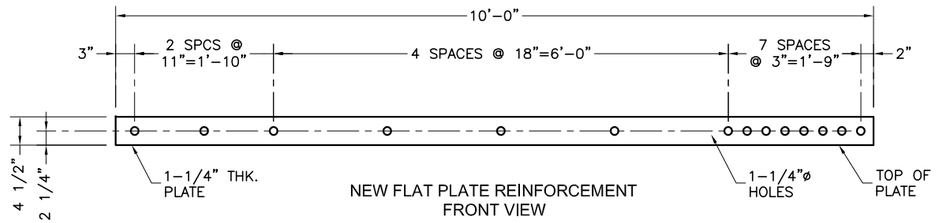
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
FLAT PLATE REINFORCEMENT DETAILS II

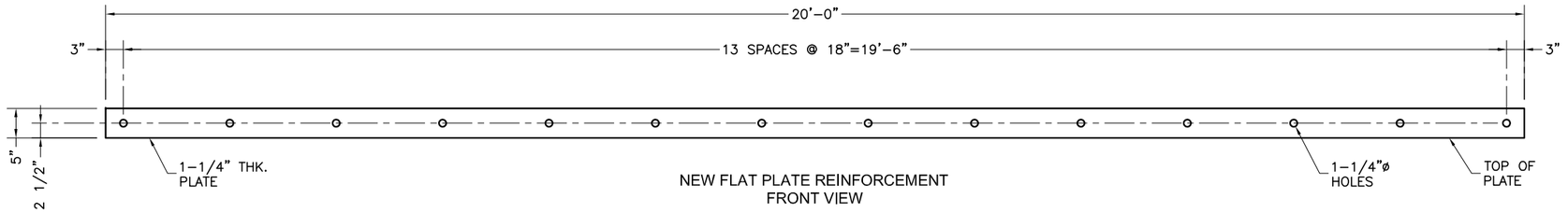
SHEET NUMBER
S-3



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-1 / S-4 **DETAIL**

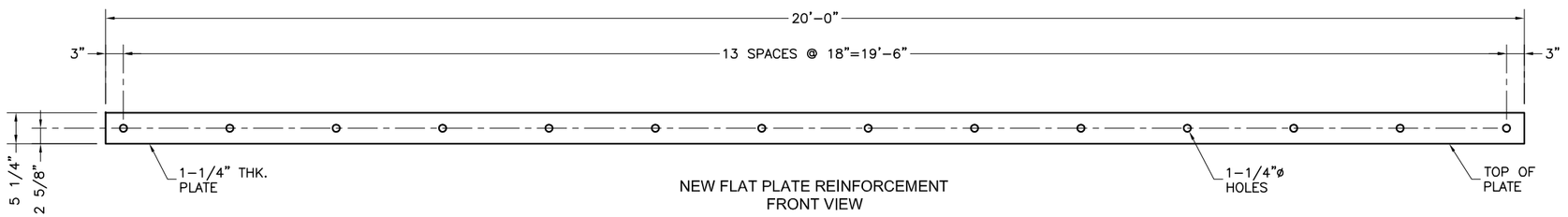
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-2 / S-4 **DETAIL**

SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-3 / S-4 **DETAIL**

SCALE: 1/2" = 1'-0"

PREPARED BY:

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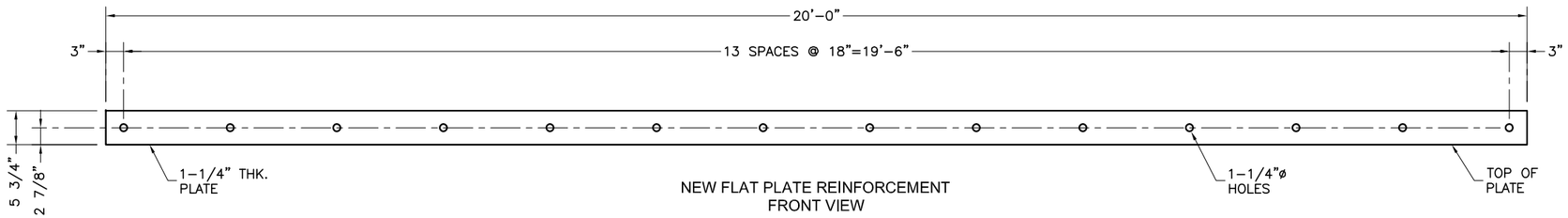
PROSPECT, CT 06712-1746

SHEET TITLE
FLAT PLATE
DETAILS I

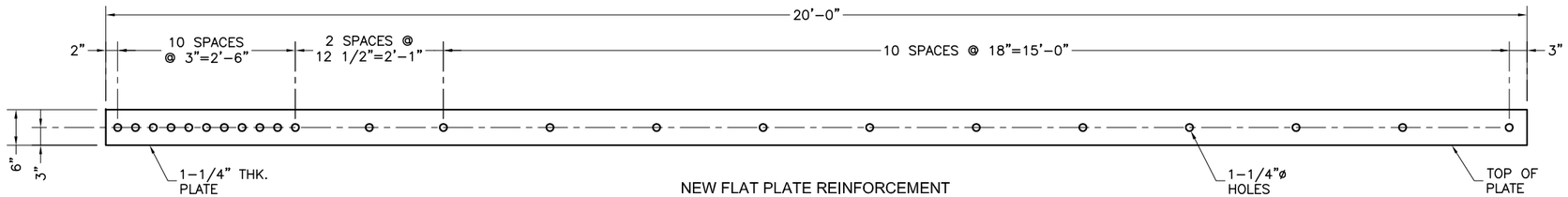
SHEET NUMBER
S-4



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-4 / S-5 **DETAIL**

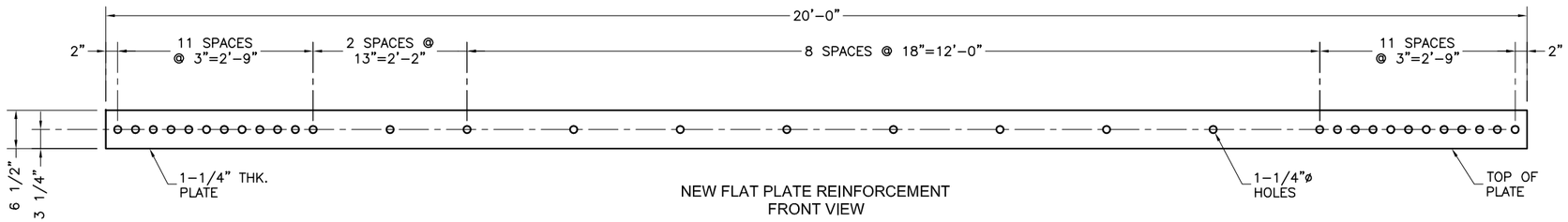
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-5 / S-5 **DETAIL**

SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-6 / S-5 **DETAIL**

SCALE: 1/2" = 1'-0"

PREPARED BY:

FDH

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ENGINEERING INNOVATION

PREPARED FOR:

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STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED
PROFESSIONAL ENGINEER

10/25/13

CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
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06/13/13	CONSTRUCTION	1
10/25/13	AS–BUILT	2

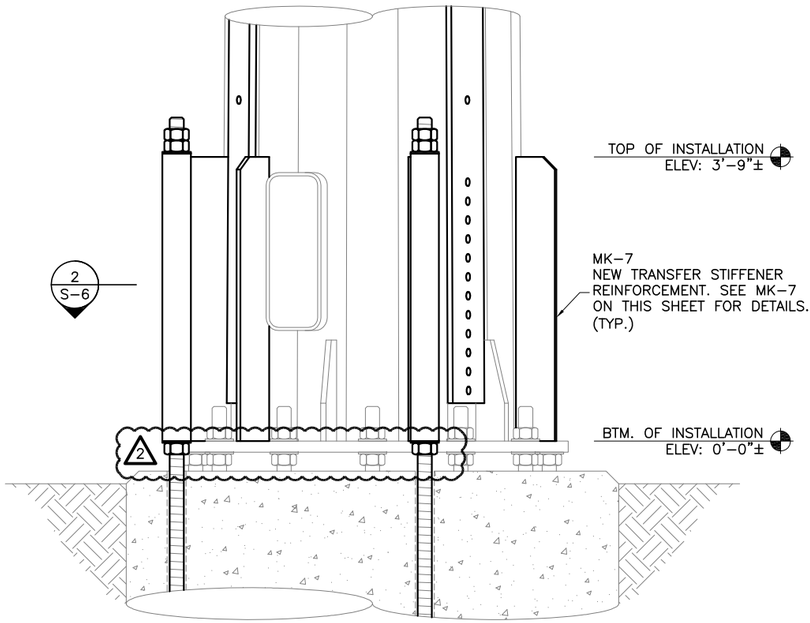
SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

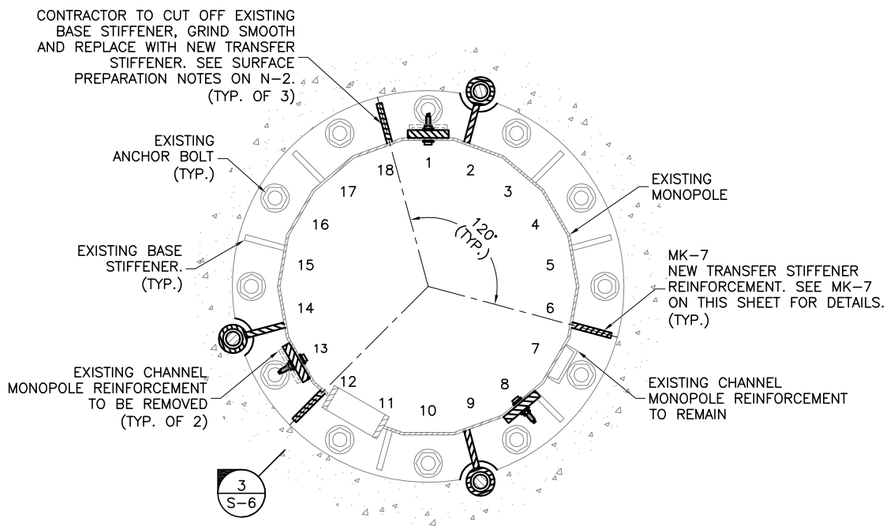
SHEET TITLE
FLAT PLATE
DETAILS II

SHEET NUMBER
S-5



NEW TRANSFER STIFFENER LAYOUT
ELEVATION VIEW

1 / S-6 — ELEVATION
SCALE: 1/2" = 1'-0"



NEW TRANSFER STIFFENER LAYOUT
PLAN VIEW

2 / S-6 — SECTION
SCALE: 1/2" = 1'-0"

TRANSFER STIFFENER INSTALLATION SCHEDULE

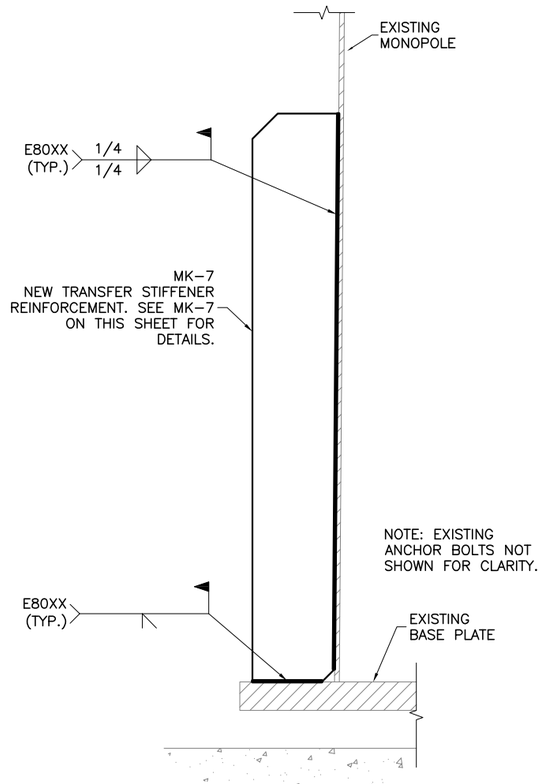
PART. NO	QUANTITY	DESCRIPTION	ELEVATION
MK-7	3	TRANSFER STIFFENER	0'-0"± TO 3'-9"±
ALL NEW TRANSFER STIFFENER STEEL TO HAVE Fy=65 KSI			

NEW TRANSFER STIFFENER REINFORCEMENT NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED LOCATION OF TRANSFER STIFFENER TO ENSURE THAT PROPER SPACING CAN BE MET.
2. CONTRACTOR TO REPLACE AND/OR RELOCATE ANY CLIMBING PEGS THAT INTERFERE WITH THE INSTALLATION OF TRANSFER STIFFENER.

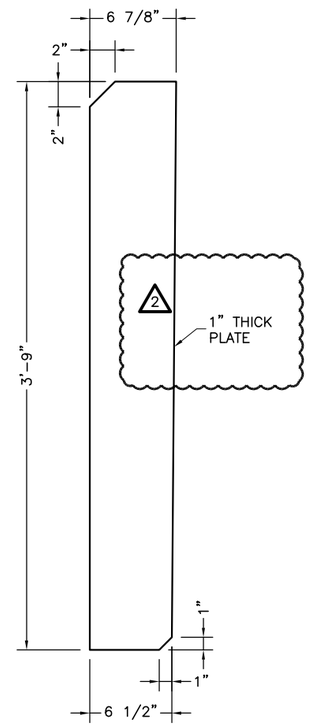
CONSTRUCTION NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED TRANSFER STIFFENER LAYOUT PRIOR TO CONSTRUCTION. IF ISSUES ARE PRESENT IN THE FIT OF THE TRANSFER STIFFENER, CONTRACTOR TO CONTACT ENGINEER OF RECORD OR FDH ENGINEERING PROJECT MANAGER PRIOR TO PROCEEDING WITH PROPOSED MODIFICATION OR FABRICATION.



NEW TRANSFER STIFFENER WELD DETAIL
FRONT VIEW

3 / S-6 — DETAIL
NTS



NEW TRANSFER STIFFENER
FRONT VIEW

MK-7 / S-6 — DETAIL
SCALE: 1" = 1'-0"

PREPARED BY:
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6521 MERIDIEN DRIVE
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ENGINEERING INNOVATION

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STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED
PROFESSIONAL ENGINEER

10/25/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

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06/13/13	CONSTRUCTION	1
10/25/13	AS-BUILT	2

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

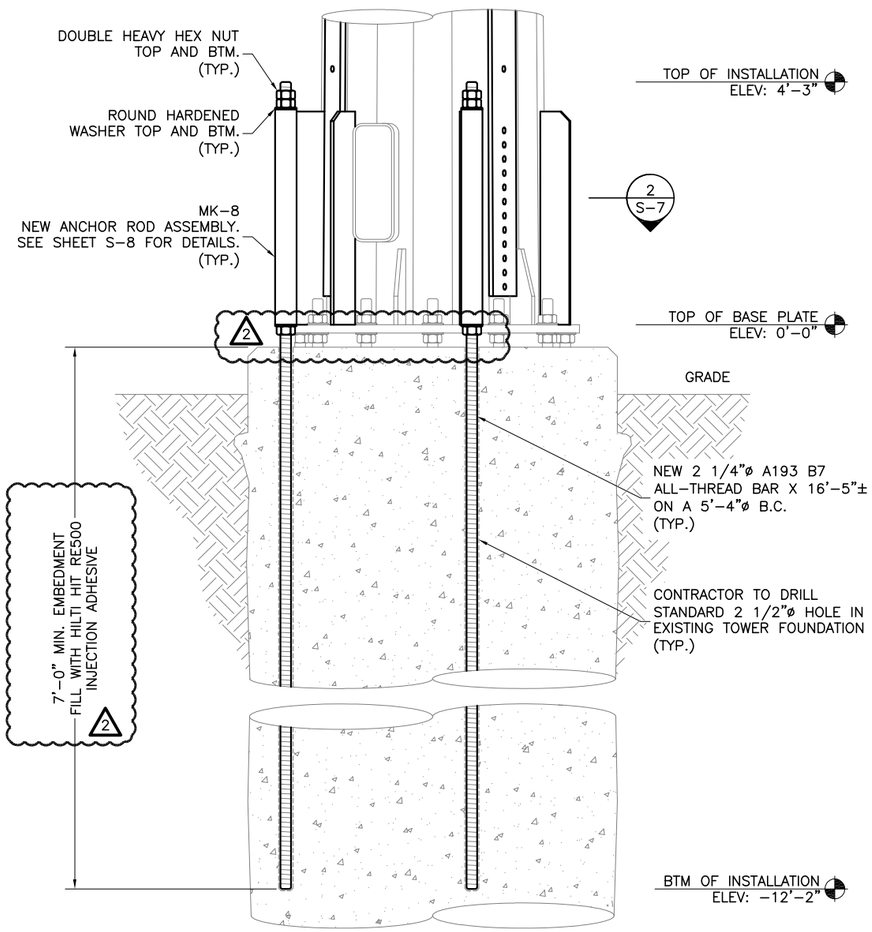
SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
TRANSFER STIFFENER
REINFORCEMENT
DETAILS

SHEET NUMBER
S-6

CONTRACTOR TO PROVIDE PHOTOS OF THE ANCHOR ROD HOLES TO FDH CONSTRUCTION MANAGER PRIOR TO INSTALLING NEW ANCHOR RODS. PHOTOS MUST SHOW THE DEPTH AND DIAMETER OF ANCHOR ROD HOLES.

PISTON PLUGS TO BE USED IN ALL INJECTION ADHESIVE APPLICATIONS



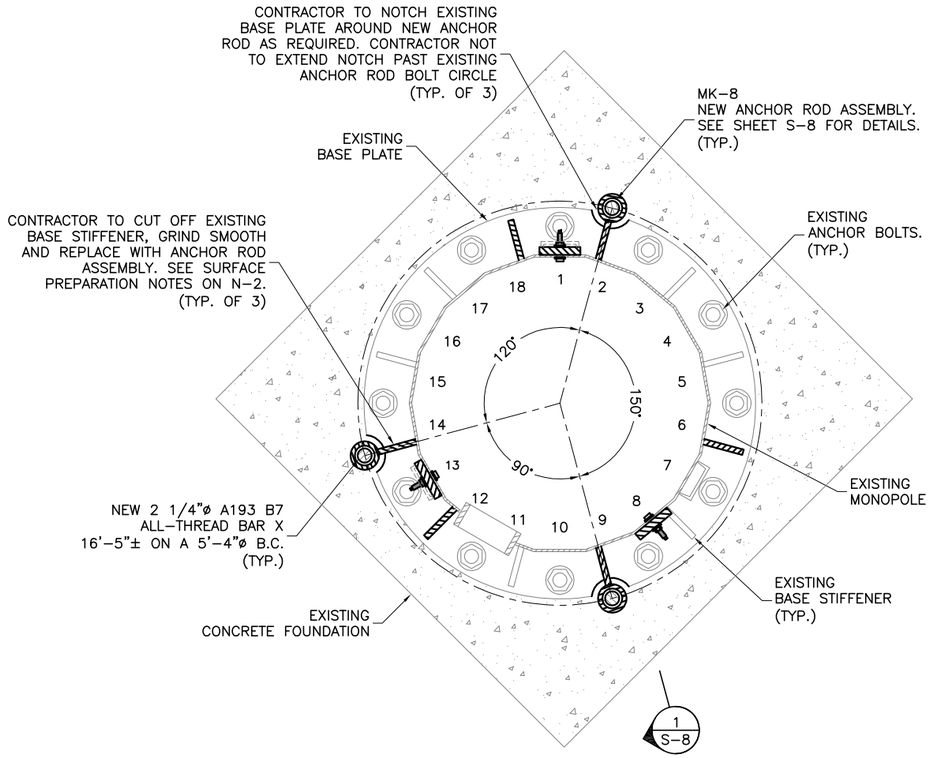
ANCHOR ROD LAYOUT
FRONT VIEW

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

ANCHOR ROD MATERIAL LIST

PART. NO	QTY.	DESCRIPTION	ELEVATION
MK-8	3	ANCHOR ROD ASSEMBLY	0'-0"± TO 3'-9"±
–	3	NEW 2 1/4"ø A193 B7 ALL THREADBAR X 11'-8"±	-7'-4 1/2"± TO 4'-3"±
–	6	ROUND HARDENED WASHER	–
–	9	HEAVY HEX NUT	–

2 2



ANCHOR ROD LAYOUT
PLAN VIEW

2 S-7 **SECTION**
SCALE: 1/2" = 1'-0"

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SUBMITTALS

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E-PROSPECT

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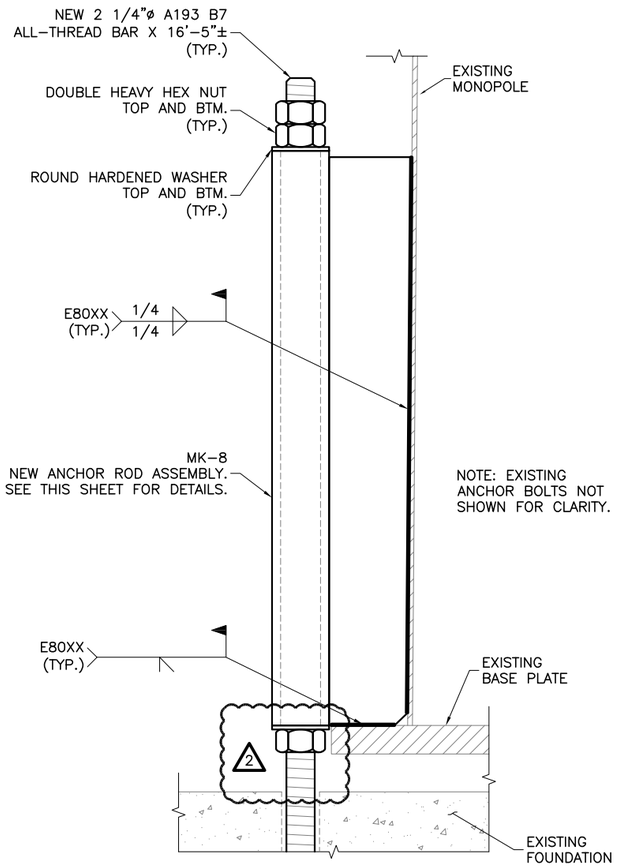
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
ANCHOR ROD
INSTALLATION DETAILS I

SHEET NUMBER
S-7

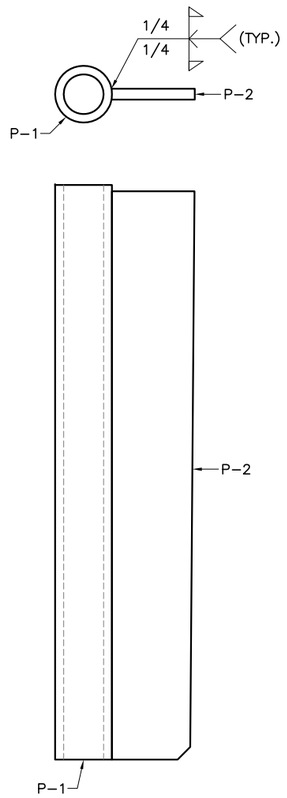


ANCHOR ROD ASSEMBLY WELD DETAIL
ELEVATION VIEW

1 / S-8 — ELEVATION

SCALE: 1-1/2" = 1'-0"

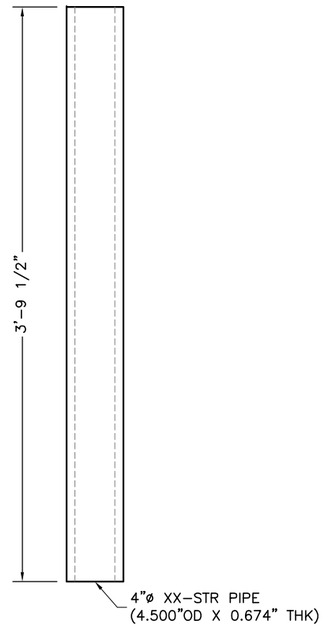
MATERIAL LIST (MK-8)		
PART. NO.	QTY.	DESCRIPTION
P-1	3	ANCHOR ROD SLEEVE
P-2	3	TRANSFER PLATE



ANCHOR ROD ASSEMBLY
TOP & SIDE VIEW

MK-8 / S-8 — SECTION

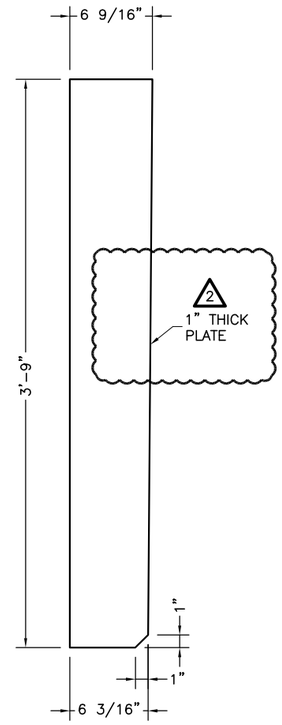
SCALE: 1-1/2" = 1'-0"



ANCHOR ROD SLEEVE
SIDE VIEW

P-1 / S-8 — DETAIL

SCALE: 1-1/2" = 1'-0"



TRANSFER PLATE
SIDE VIEW

P-2 / S-8 — DETAIL

SCALE: 1-1/2" = 1'-0"

PREPARED BY:

FDH

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FAX: 919-755-1031

ENGINEERING INNOVATION

PREPARED FOR:

SBA

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SUBMITTALS		
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SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
ANCHOR ROD
INSTALLATION DETAILS II

SHEET NUMBER
S-8

BUILDING PERMIT

TOWN OF PROSPECT

No. 6844

Location: 229 Cheshire Rd

Use: Reinforcement of existing communication tower

Date: 6/19/13 William B Seegal

BY BUILDING OFFICIAL

MINIMUM OF THREE CALL INSPECTIONS REQUIRED FOR ALL CONSTRUCTION WORK: 1. FOUNDATIONS OR FOOTINGS 2. PRIOR TO COVERING STRUCTURAL MEMBERS (READY TO DRYWALL .) 3. FINAL INSPECTION BEFORE OCCUPANCY	APPROVED PLANS MUST BE RETAINED ON JOB AND THIS CARD KEPT POSTED UNTIL FINAL INSPECTION HAS BEEN MADE. WHERE A CERTIFICATE OF OCCUPANCY IS REQUIRED, SUCH BUILDING SHALL NOT BE OCCUPIED UNTIL FINAL INSPECTION HAS BEEN MADE.	WHERE APPLICABLE SEPARATE PERMITS ARE REQUIRED FOR ELECTICAL, PLUMBING AND MECHANICAL INSTALLATIONS

POST THIS CARD SO IT IS VISIBLE FROM STREET

BUILDING PERMIT APPROVALS	PLUMBING INSPECTION APPROVALS	ELECTRICAL INSPECTION APPROVALS
1.	1.	1.
2.	2.	2.
3.	1.HEATING INSPECTING APPROVALS	1.REFRIGERATION INSPECTION APPROVALS
OTHER	2.	2.
WORK SHALL NOT PROCEED UNTIL THE INSPECTOR HAS APPROVED THE VARIOUS STAGES OF CONSTRUCITON	PERMIT WILL BECOME NULL AND VOID IF CONSTRUCTION WORK IS NOT STARTED WITHIN 180 DAYS OF DATE THE PERMIT IS ISSUED AS NOTED ABOVE.	INSPECTION INDICATED ON THIS CARD CAN BE ARRANGED FOR BY TELEPHONE OR WRITTEN NOTIFICATION

L. James

10/27/2013

THE MODIFICATIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED BY FDH ENGINEERING, INC., PROJECT NO. 1312721400 DATED MARCH 1, 2013.

THIS REPORT WAS BASED ON A SPECIFIC ANTENNA AND COAX CONFIGURATION PROVIDED BY THE TOWER OWNER. ANY CHANGE TO THIS INFORMATION MUST BE REVIEWED BY FDH ENGINEERING, INC.

ALL DIMENSIONS, MEASUREMENTS, QUANTITIES, PART NUMBERS AND COAX/ANTENNA PLACEMENTS TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO MATERIAL ORDERS AND CONSTRUCTION.

FOR INQUIRIES REGARDING THE CONTENT OF THESE MODIFICATION DRAWINGS, PLEASE CONTACT STEVEN STRICKLAND WITH THE FDH CONSTRUCTION DEPARTMENT (919) 755-1012

FIELD ISSUES:

1. ALL FLAT PLATES START 7" ABOVE BASE PLATE
* APPROVED BY EOR
2. TRANSFER STIFFENERS AND ANCHOR ROD ASSEMBLY 1" TK
* APPROVED BY EOR
3. NOT ALL C-CHANNEL REMOVED
* APPROVED BY EOR
4. ANCHOR ROD ASSEMBLIES ONLY HAVE (1) HEX NUT
* APPROVED BY EOR
5. THREADED RODS EXTEND ABOVE HEIGHT SPECIFIED
*APPROVED BY EOR

PROJECT DESCRIPTION:

MODIFICATION DRAWINGS FOR A 162' MONOPOLE

SBA

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

COORDINATES:
LATITUDE: 41.5079°
LONGITUDE: -72.9510°

SHEET INDEX

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STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED PROFESSIONAL ENGINEER
06/13/13

CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

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SECONDARY INSPECTION

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B. PATE

L. Jones

PCI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED	REPORT ITEM
PRE-CONSTRUCTION	
X	PCI CHECKLIST DRAWING
N/A	EOR APPROVED SHOP DRAWINGS
N/A	FABRICATION INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
X	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
X	CONTRACTOR'S CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
X	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	PCI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PCI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PCI REPORT

POST CONSTRUCTION INSPECTION NOTES:

GENERAL

1. THE POST CONSTRUCTION INSPECTION (PCI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).
2. THE PCI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE PCI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. ALL PCI'S SHALL BE CONDUCTED BY A PCI INSPECTOR THAT IS APPROVED TO PERFORM ELEVATED WORK FOR FDH ENGINEERING, INC.
4. TO ENSURE THAT THE REQUIREMENTS OF THE PCI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE PCI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR FDH POINT OF CONTACT (POC).
5. REFER TO CCR-01 : CONTRACTOR CLOSEOUT REQUIREMENTS FOR FURTHER DETAILS AND REQUIREMENTS.

PCI INSPECTOR

1. THE PCI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE PCI TO, AT A MINIMUM:
   - REVIEW THE REQUIREMENTS OF THE PCI CHECKLIST
   - WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
2. THE PCI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE PCI REPORT TO FDH.

CORRECTION OF FAILING PCI'S

1. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PCI ("FAILED PCI"), THE GC SHALL WORK WITH FDH TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
   - CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT PCI.
   - OR, WITH FDH'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.

REQUIRED PHOTOS

1. BETWEEN THE GC AND THE PCI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE PCI REPORT:
   - PRE-CONSTRUCTION GENERAL SITE CONDITION
   - PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
     - RAW MATERIALS
     - PHOTOS OF ALL CRITICAL DETAILS
     - FOUNDATION MODIFICATIONS
     - WELD PREPARATION
     - BOLT INSTALLATION AND TORQUE
     - FINAL INSTALLED CONDITION
     - SURFACE COATING REPAIR
   - POST CONSTRUCTION PHOTOGRAPHS
     - FINAL INFIELD CONDITION
2. PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

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SECONDARY INSPECTION

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GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL PERMITS NECESSARY TO COMPLETE THE PROJECT AND ABIDE BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO FDH ENGINEERING FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
3. INCORRECTLY FABRICATED, DAMAGED, OTHERWISE MISFITTING, OR NON-CONFORMING MATERIALS AND CONDITIONS SHALL BE REPORTED TO FDH ENGINEERING PRIOR TO ANY REMEDIAL OR CORRECTIVE ACTION. ALL ACTIONS SHALL REQUIRE FDH ENGINEERING APPROVAL.
4. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AFTER THE COMPLETION OF THE PROJECT.
5. CONTRACTOR SHALL PROMPTLY REMOVE ANY & ALL DEBRIS FROM SITE AND RESTORE AS BEST AS POSSIBLE TO PRECONSTRUCTION CONDITION.

CONTRACTOR QUALIFICATION NOTES:

1. ALL REPAIRS SHALL BE PERFORMED BY A TOWER CONTRACTOR WITH A MINIMUM 5 YEARS EXPERIENCE IN TOWER ERECTION AND RETROFIT AND WITH WORKING KNOWLEDGE OF THE TIA/EIA 222-F "STRUCTURAL STANDARD FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES".
2. CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. SHOULD THE CONTRACTOR REQUIRE DIRECT CONSULTATION, FDH ENGINEERING, INC. IS WILLING TO OFFER SERVICES BASED UPON AN AGREED FEE FOR THE WORK REQUIRED.
3. ALL SUBMITTAL INFORMATION MUST BE SENT TO FDH ENGINEERING, INC. 6521 MERIDIEN DRIVE, RALEIGH NC, 27616, TEL. (919) 755-1012, FAX. (919) 755-1031, E-MAIL INFO@FDH-INC.COM. ANY VARIATION OF THESE SPECIFICATIONS OR DRAWINGS WITHOUT CONSENT FROM FDH ENGINEERING, INC. WILL VOID ANY RESPONSIBILITY OR LIABILITY FOR DAMAGE (MATERIAL OR PHYSICAL) TOWARDS FDH ENGINEERING, INC.
4. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE TIA-1019-A STANDARD.

JOB SITE SAFETY & NOTES:

1. NEITHER THE PROFESSIONAL ACTIVITIES OF FDH ENGINEERING, INC. NOR THE PRESENCE OF FDH ENGINEERING, INC. OR EMPLOYEES AND SUB-CONSULTANTS AT THE CONSTRUCTION SITE, SHALL RELIEVE THE GENERAL CONTRACTOR AND OR SUBCONTRACTORS AND ANY OTHER ENTITY OF THEIR OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THE GENERAL CONTRACTOR AND OR SUBCONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SAFETY, AND WARRANTS THAT THIS INTENT IS EVIDENT BY ACCEPTING THIS WORK.

STEEL:

1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE AND ASTM SPECIFICATIONS.

   *ALL PLATE STEEL SHALL BE ASTM A572-65 (Fy=65KSI) UNLESS OTHERWISE SPECIFIED.

   *ALL PIPE STEEL SHALL BE ASTM A500 GR. B (Fy=42KSI) UNLESS OTHERWISE SPECIFIED.

   *ALL THREADED ROD SHALL BE ASTM A193 B7 (Fu=125 KSI) UNLESS OTHERWISE SPECIFIED.
2. ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE USING SPECIFIED WELDS WITH WELDING ELECTRODES E-70XX OR SPECIFIED HIGH STRENGTH BOLTS TO BE ASTM A325N, THREAD INCLUDED WITH SHEAR PLANE (UNLESS OTHERWISE NOTED).
3. ALL BOLTED CONNECTIONS TO BE INSTALLED TO A SNUG-TIGHTENED CONDITION IN ACCORDANCE WITH AISC 13 PART 16.2, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", SECTION 8.1, UNLESS OTHERWISE SPECIFIED. WHEN "X" TYPE BOLTS ARE USED, CONTRACTOR MAY BE REQUIRED TO STACK ADDITIONAL WASHERS TO OBTAIN PROPER SNUG TIGHT INSTALLATION. ALL NUTS SHALL BE HEAVY HEX UNLESS OTHERWISE NOTED.
4. ALL STEEL, AFTER FABRICATION, SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. ALL DAMAGED SURFACES, WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS OR PARTS (EXISTING OR NEW) SHALL BE PAINTED WITH MULTIPLE COATS OF ZRC COLD GALVANIZING COMPOUND ACHEIVING A MINIMUM OF 4 MILS DRY FILM PER ASTM A 780.
5. ALL SHOP AND FIELD WELDING SHALL BE DONE BY WELDERS QUALIFIED AS DESCRIBED IN THE "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" TO PERFORM THE TYPE OF WORK REQUIRED. CONTRACTOR IS REQUIRED TO PROVIDE FDH ENGINEERING, INC. WITH A PASSING CERTIFIED WELDING INSPECTION FOR ALL WELDS.
6. STRUCTURAL STEEL MAY NOT BE TORCH CUT FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC STANDARDS.

MISC. NOTES:

1. ALL MODIFICATIONS ARE ASSUMED TO BE MADE ON AN EMPTY TOWER. CONTRACTOR IS RESPONSIBLE TO MAKE PROVISIONS TO SUPPORT OR WORK AROUND EXISTING ANTENNAS AND TRANSMISSION LINES. MODIFICATIONS MUST BE CONTINUOUS THROUGH ALL AREAS SHOWN.
2. CONTRACTOR FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

FABRICATION NOTES:

1. ALL DIMENSIONS ARE PRELIMINARY UNTIL FIELD VERIFIED BY CONTRACTOR. ANY CHANGES MUST BE APPROVED BY ENGINEER OF RECORD IN WRITING PRIOR TO FABRICATION AND INSTALLATION.
2. NEW STEEL MEMBERS MUST HAVE SINGLE DRILLED HOLES. SLOTTED AND DOUBLE DRILLED HOLES ARE NOT ACCEPTABLE MEANS OF FABRICATION.

SUBSTITUTES AND/OR EQUALS:

1. IF CONTRACTOR WISHES TO FURNISH OR USE A SUBSTITUTE ITEM OF MATERIAL OR EQUIPMENT, CONTRACTOR SHALL FIRST MAKE WRITTEN APPLICATION TO ENGINEER OF RECORD FOR ACCEPTANCE THEREOF, CERTIFYING THAT THE PROPOSED SUBSTITUTE WILL PERFORM ADEQUATELY THE FUNCTIONS AND ACHIEVE THE RESULTS CALLED FOR BY THE GENERAL DESIGN, BE SIMILAR IN SUBSTANCE TO THAT SPECIFIED AND SUITED TO THE SAME USE AS THAT SPECIFIED. ALL VARIATIONS OF THE PROPOSED SUBSTITUTE FROM THAT SPECIFIED WILL BE IDENTIFIED IN THE APPLICATION AND AVAILABLE MAINTENANCE, REPAIR AND REPLACEMENT SERVICE WILL BE INDICATED. THE APPLICATION WILL ALSO CONTAIN AN ITEMIZED ESTIMATE OF ALL COSTS OR CREDITS THAT WILL RESULT DIRECTLY OR INDIRECTLY FROM ACCEPTANCE OF SUCH SUBSTITUTE INCLUDING COSTS OF REDESIGN AND CLAIMS OF OTHER CONTRACTORS AFFECTED BY THE RESULTING CHANGE, ALL OF WHICH WILL BE CONSIDERED BY ENGINEER OF RECORD IN EVALUATION OF THE PROPOSED SUBSTITUTE. ENGINEER OF RECORD MAY REQUIRE CONTRACTOR TO FURNISH ADDITIONAL DATA ABOUT THE PROPOSED SUBSTITUTE.

SURFACE PREPARATION:

1. PREPARE SURFACE TO BE WELDED BY REMOVING PAINT OR GALVANIZATION TO BARE METAL USING POWER WIRE BRUSHING IN ACCORDANCE WITH SSPC-SP11, (STEEL STRUCTURES PAINTING COUNCIL). FOLLOWING POWER WIRE BRUSHING CONTRACTOR SHALL POLISH METAL SURFACE WITH HIGH SPEED GRINDER WITH 400+ GRIT SANDPAPER.
2. AFTER NEW STEEL INSTALLATION CONTRACTOR TO BRUSH PAINT (2) COATS OF ZRC OR ZINGA COLD GALVANIZATION COMPOUND PER MANUFACTURER'S SPECIFICATIONS.

WELDING NOTES:

1. ALL WELDING TO THE EXISTING TOWER SHALL BE PERFORMED BY CERTIFIED WELDERS UTILIZING PROCEDURES QUALIFIED IN ACCORDANCE WITH AWS D1.1 AND AWS C5.4.
2. CONTRACTOR SHALL COMPLY WITH AWS D1.1 FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". CONTRACTOR SHALL SUBMIT CERTIFICATION OF WELDERS TO THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK.
3. CONTRACTOR RESPONSIBLE FOR TEMPORARY HEAT SHIELDING AS REQUIRED DURING WELDING.
4. CONTRACTOR RESPONSIBLE FOR VIEWING EXISTING TOWER FOR LOOSE AND FLAMMABLE MATERIAL PRIOR TO WELDING FLAT PLATE.
5. ALL WELDS TO BE VISUALLY INSPECTED BY A CERTIFIED WELD INSPECTOR PER AWS D1.1.

EPOXY/HILTI NOTES:

1. EPOXY AGENTS SHOULD BE ALLOWED TO CURE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
2. ALL HARDWARE ASSEMBLY AND MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED; ANY CONTRADICTION BETWEEN THE MANUFACTURER'S RECOMMENDATIONS AND THESE DRAWINGS ARE TO BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER AND OWNER.
3. ANY CONTRACTOR INSTALLING ADHESIVE ANCHORING SYSTEMS SHALL BE TRAINED, IN PERSON BY A MANUFACTURER'S REPRESENTATIVE, ON THE PROPER INSTALLATION TECHNIQUES. THIS TRAINING SHALL INCLUDE PROPER DRILLING, HOLE CLEANING, AND INSTALLATION METHODS FOR THE ADHESIVE ANCHORING SYSTEM AND CONSTRUCTION CONDITIONS ON THIS PROJECT. ALL TRAINING TO BE CONDUCTED PRIOR TO CREWS STEPPING ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT MANUFACTURER REPRESENTATIVE TO SET UP TRAINING. FDH IS NOT RESPONSIBLE FOR ANY COST OCCURRED FOR OR DURING ADHESIVE ANCHORING SYSTEM TRAINING.

ANCHOR ROD INSTALLATION NOTES:

1. CONTRACTOR TO PROVIDE PHOTOS OF THE ANCHOR ROD HOLES TO FDH CONSTRUCTION MANAGER PRIOR TO INSTALLING NEW ANCHOR RODS. PHOTOS MUST SHOW THE DEPTH AND DIAMETER OF ANCHOR ROD HOLES.

PULLOUT TESTING OF POST INSTALLED ANCHOR RODS:

1. EPOXY AGENTS SHOULD BE ALLOWED TO CURE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
2. CONTRACTOR SHALL ENSURE THAT CONSTRUCTION DOES NOT GO BEYOND POINT WHERE THE ANCHOR RODS CAN BE EFFECTIVELY TESTED. THE ANCHOR ROD SLEEVES AND TRANSFER PLATES SHOULD BE INSTALLED AFTER PULL-TESTING IS PERFORMED. CONTRUCTION MAY PROCEED AFTER TESTING IS COMPLETED.
3. 50% OF POST INSTALLED ANCHOR RODS SHALL BE TESTED OR A TOTAL OF 4, WHICHEVER IS GREATER.
4. THE ANCHOR ROD SHALL BE TESTED TO A TARGET TENSION OF 80% OF THE MATERIAL MINIMUM YIELD (Fy) STRENGTH ON THE NET AREA THROUGH THREADS. THE TARGET TENSION FOR THIS PULL TEST IS 256K.
5. MAINTAIN COMPLETE LOAD-DISPLACEMENT RECORDS THROUGHOUT THE TEST. LOAD THE ANCHOR IN INCREMENTS OF UP TO 15% OF THE TARGET TENSION.
6. STATIC LOAD TEST SHALL BE PERFORMED PER ASTM E488-96 (REAPPROVED 2003).
7. IF A DISPLACEMENT GREATER THAN 0.010" REMAINS AFTER THE INITIAL TEST CYCLE, ADDITIONAL TEST SHALL BE PERFORMED UP TO A MAXIMUM OF 4 TEST CYCLES TO DETERMINE IF THE MOVEMENT CONTINUES TO ACCUMULATE. INCREMENTAL RESIDUAL MOVEMENT RECORDED FROM EACH TEST CYCLE MUST BE DECREASING IN VALUE AND STABILIZE TO A VALUE NO MORE THAN 0.010", OTHERWISE THE ANCHOR SHALL BE CONSIDERED TO FAIL THE TEST. TOTAL RESIDUAL MOVEMENT SHALL NOT BE GREATER THAN 0.10" OR THE ANCHOR SHALL BE CONSIDERED TO FAIL THE TEST.
8. THIS INFORMATION SHALL BE DOCUMENTED AND INCLUDED IN THE POST MODIFICATION INSPECTION REPORT.
9. CONTACT FDH ENGINEERING, INC. IF ANY OF THE ANCHORS FAIL THE PULL TEST.
10. ALL HARDWARE ASSEMBLY AND MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED; ANY CONTRADICTION BETWEEN THE MANUFACTURER'S RECOMMENDATIONS AND THESE DRAWINGS ARE TO BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER AND OWNER.
11. ANY CONTRACTOR INSTALLING ADHESIVE ANCHORING SYSTEMS SHALL BE TRAINED, IN PERSON BY A MANUFACTURER'S REPRESENTATIVE, ON THE PROPER INSTALLATION TECHNIQUES. THIS TRAINING SHALL INCLUDE PROPER DRILLING, HOLE CLEANING, AND INSTALLATION METHODS FOR THE ADHESIVE ANCHORING SYSTEM AND CONSTRUCTION CONDITIONS ON THIS PROJECT. ALL TRAINING TO BE CONDUCTED PRIOR TO CREWS STEPPING ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT MANUFACTURER REPRESENTATIVE TO SET UP TRAINING. FDH IS NOT RESPONSIBLE FOR ANY COST OCCURRED FOR OR DURING ADHESIVE ANCHORING SYSTEM TRAINING.

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STATE OF CONNECTICUT — Christopher Michael Murphy — No. 25842 — LICENSED PROFESSIONAL ENGINEER — 06/13/13

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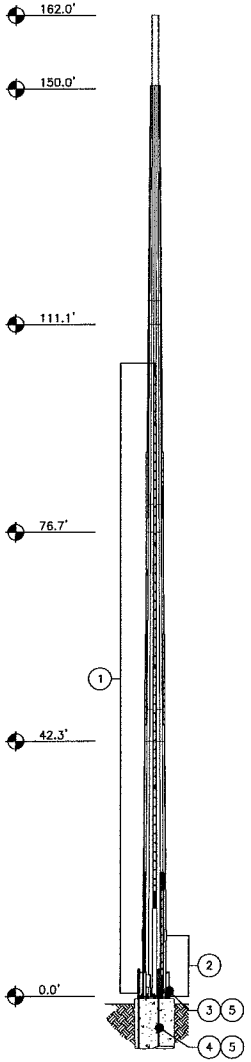
SECTION	TOWER								EXTENSION
LENGTH (FT)	47.57	39.05	38.28	38.82					12.00
# OF SIDES			18						N/A
THICKNESS (IN)	0.3750	0.3125	0.2500	0.1875					0.3750
SOCKET LENGTH (FT)	N/A	5.43	4.67	3.89					12.7500
TOP DIAMETER (IN)	37.8116	31.9620	25.9777	19.5000					12.7500
BOT. DIAMETER (IN)	47.0000	39.4834	33.3629	27.1160					12.7500
TOWER FINISH	GALVANIZED								



TOWER ELEVATION
SCALE: NTS

- APPURTENANCES MAY INTERFERE WITH PROPOSED MODIFICATIONS.
- ALL MODIFICATIONS TO BE INSTALLED CONTINUOUSLY THROUGH EXISTING EQUIPMENT. ALL EXISTING EQUIPMENT NOT TO BE DAMAGED OR TAKEN OFF AIR DURING INSTALLATION.
- ANTENNA GRAPHICS NOT SHOWN FOR CLARITY. SEE STRUCTURAL ANALYSIS REPORT FOR EXISTING ANTENNA LOADING.

TOWER MODIFICATION SCHEDULE

NO.	TYPE OF MODIFICATION	BOTTOM ELEV. (FT)	TOP ELEV. (FT)
1	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-5 FOR DETAILS.	0.5±	104.7±
2	REMOVAL OF EXISTING CHANNEL MONOPOLE REINFORCEMENT. SEE S-3 FOR DETAILS.	0.0±	10.0±
3	INSTALLATION OF NEW TRANSFER STIFFENER REINFORCEMENT. SEE S-6 FOR DETAILS.	0.0±	3.8±
4	INSTALLATION OF NEW ANCHOR RODS. SEE S-7 & S-8 FOR DETAILS.	-12.2±	4.3±
5	REMOVAL OF EXISTING STIFFENERS. SEE S-6 & S-7 FOR DETAILS.	0.0±	1.5±

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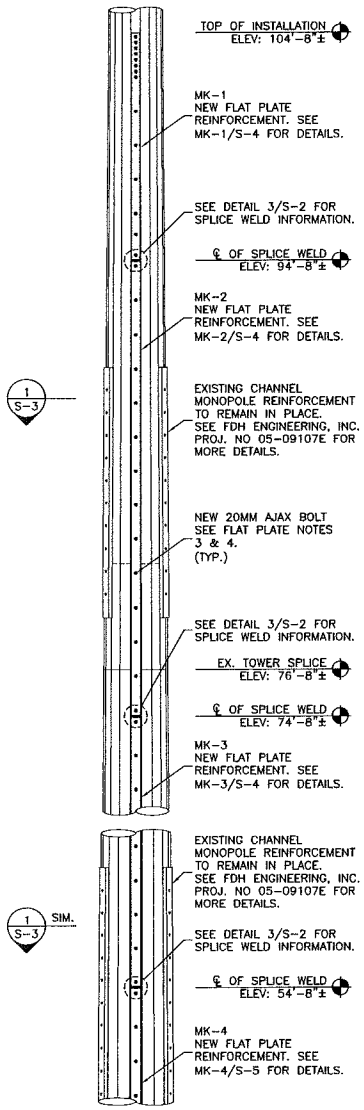
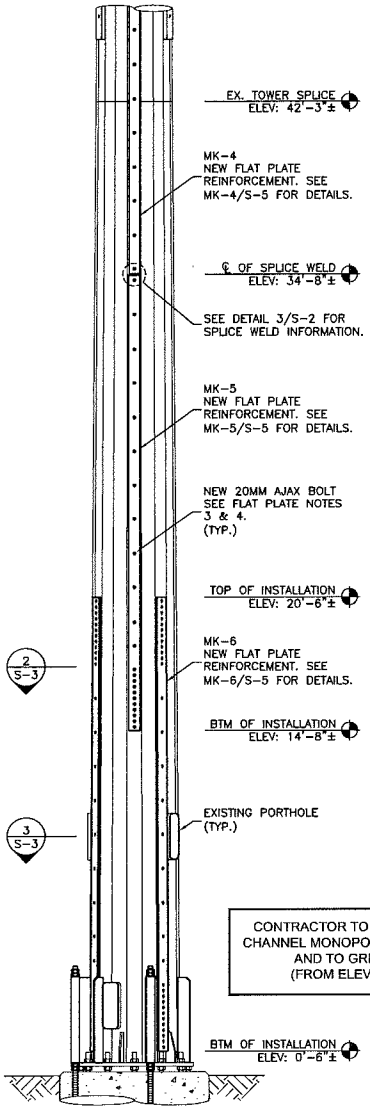


FLAT PLATE REINFORCEMENT LAYOUT
ELEVATION VIEW

1 S-2 ELEVATION
SCALE: 3/16" = 1'-0"



FLAT PLATE REINFORCEMENT LAYOUT
ELEVATION VIEW

2 S-2 ELEVATION
SCALE: 3/16" = 1'-0"

CONTRACTOR TO REMOVE EXISTING CHANNEL MONOPOLE REINFORCEMENT AND TO GRIND SMOOTH. (FROM ELEV: 0.0' TO 10.0')

FLAT PLATE INSTALLATION SCHEDULE

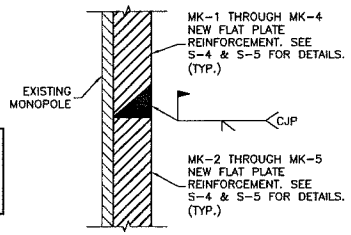
PART #	QTY.	DESCRIPTION	ELEVATION
MK-1	3	FLAT PLATE REINFORCEMENT	94'-8"± TO 104'-8"±
MK-2	3	FLAT PLATE REINFORCEMENT	74'-8"± TO 94'-8"±
MK-3	3	FLAT PLATE REINFORCEMENT	54'-8"± TO 74'-8"±
MK-4	3	FLAT PLATE REINFORCEMENT	34'-8"± TO 54'-8"±
MK-5	3	FLAT PLATE REINFORCEMENT	14'-8"± TO 34'-8"±
MK-6	3	FLAT PLATE REINFORCEMENT	0'-6"± TO 20'-6"±
–	336	20MM AJAX BOLTS	VARIES
ALL NEW FLAT PLATE STEEL TO HAVE Fy=65 KSI			

NEW FLAT PLATE REINFORCEMENT NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED LOCATION OF FLAT PLATE TO ENSURE THAT PROPER SPACING CAN BE MET.
2. CONTRACTOR TO REPLACE AND/OR RELOCATE ANY CLIMBING PEGS THAT INTERFERE WITH THE INSTALLATION OF FLAT PLATE.
3. ALL AJAX CONNECTIONS TO USE HIGH TENSILE SLEEVE PROVIDED BY MANUFACTURER. AJAX BOLT ASSEMBLY TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS. SEE AJAX BOLT ASSEMBLY DETAIL 4/S-2.
4. ALL SHEAR SLEEVES TO BE HOT DIPPED GALVANIZED PRIOR TO INSTALLATION.

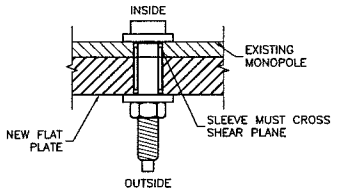
CONSTRUCTION NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED FLAT PLATE LAYOUT PRIOR TO CONSTRUCTION. IF ISSUES ARE PRESENT IN THE FIT OF THE FLAT PLATE, CONTRACTOR TO CONTACT ENGINEER OF RECORD OR FDH ENGINEERING PROJECT MANAGER PRIOR TO PROCEEDING WITH PROPOSED MODIFICATION OR FABRICATION.



SPLICE WELDING
ELEVATION VIEW

3 S-2 SECTION
NTS



AJAX BOLT ASSEMBLY
PLAN VIEW

4 S-2 DETAIL

PREPARED BY:
FDH ENGINEERING INNOVATION
8521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031

PREPARED FOR:
SBA
5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800) 487-SITE

STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED PROFESSIONAL ENGINEER
06/13/13

CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/18/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

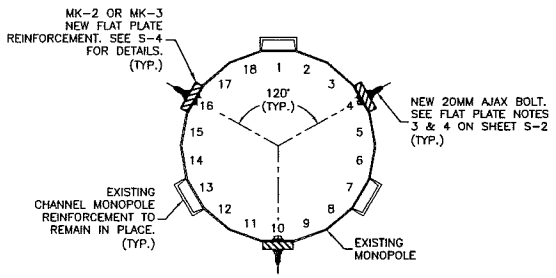
SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
FLAT PLATE REINFORCEMENT
DETAILS

SECONDARY INSPECTION

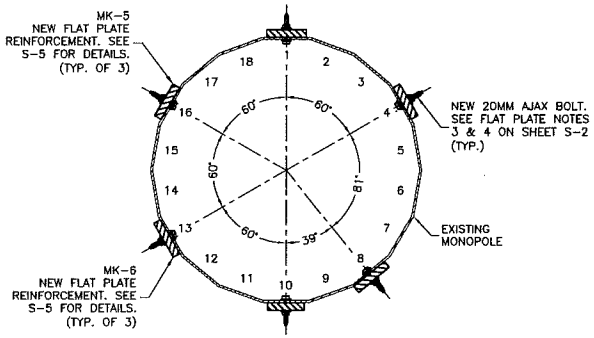
☒ EOR has reviewed the issues noted and passed the as-built condition(s).

☐ GC has revisited the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

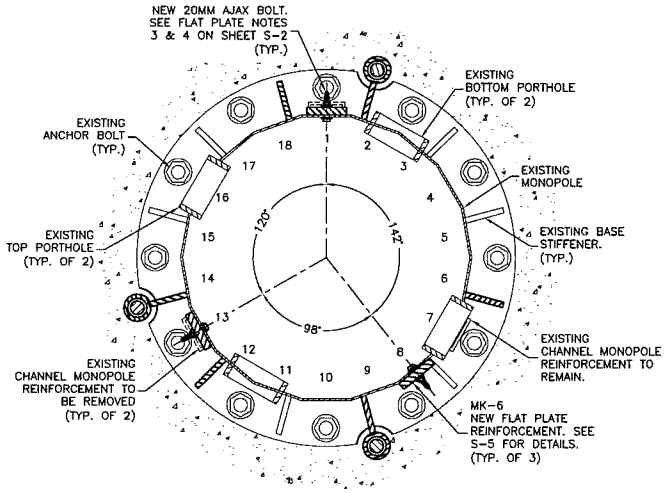
1 / S-3 SECTION NTS



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

2 / S-3 SECTION NTS

CONTRACTOR TO REMOVE EXISTING
CHANNEL MONOPOLE REINFORCEMENT
AND TO GRIND SMOOTH.
(FROM ELEV: 0.0' TO 10.0')



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

3 / S-3 SECTION NTS

PREPARED BY:
FDH ENGINEERING INNOVATION
6521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031

PREPARED FOR:
SBA
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BOCA RATON, FL 33487
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STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED PROFESSIONAL ENGINEER
06/13/13

CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	13200001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

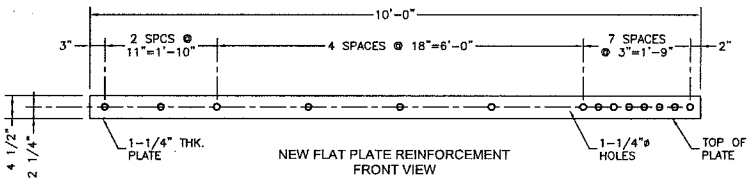
SHEET TITLE
FLAT PLATE REINFORCEMENT
DETAILS

FDH

SECONDARY INSPECTION

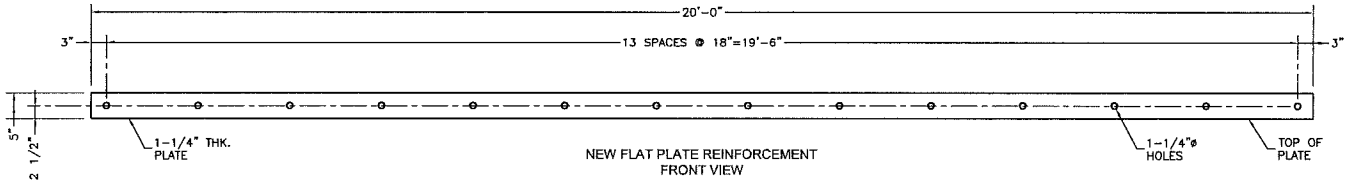
☐ EOR has reviewed the issues noted and passed the as-built condition(s).

☐ GC has revisited the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.



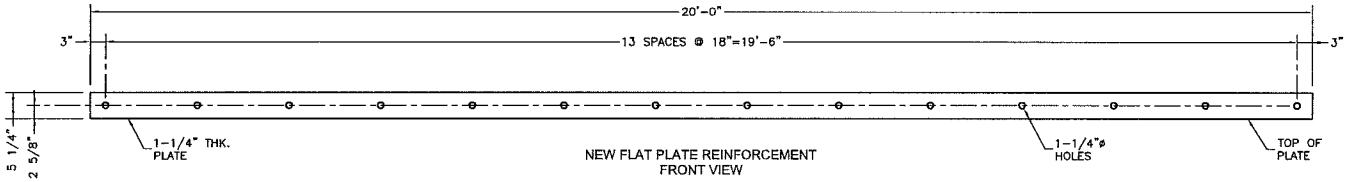
NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-1 / S-4 DETAIL
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-2 / S-4 DETAIL
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-3 / S-4 DETAIL
SCALE: 1/2" = 1'-0"

PREPARED BY:
FDH ENGINEERING INNOVATION
6521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031

PREPARED FOR:
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BOCA RATON, FL 33487
(800) 487-SITE

STATE OF CONNECTICUT — Christopher Michael Murphy — No. 25842 — LICENSED PROFESSIONAL ENGINEER

06/13/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
FLAT PLATE DETAILS

FDH

SECONDARY INSPECTION

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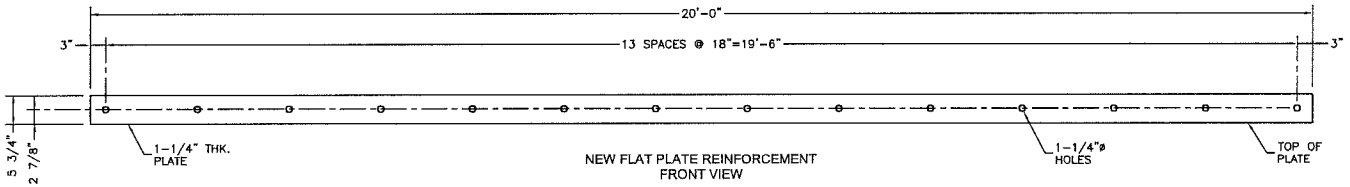
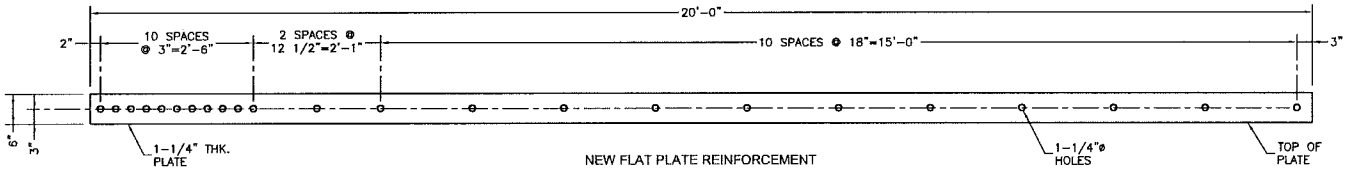
☐ GC has revisited the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.



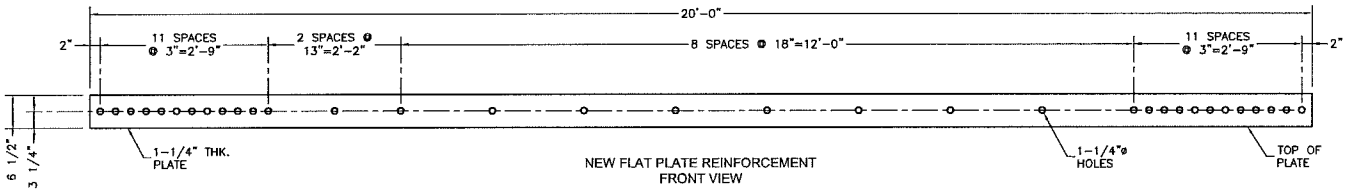
NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-4 / S-5 DETAIL
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-5 / S-5 DETAIL
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-6 / S-5 DETAIL
SCALE: 1/2" = 1'-0"

PREPARED BY:
FDH
ENGINEERING INNOVATION
6521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031

PREPARED FOR:
SBA
5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800) 487-SITE

STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED PROFESSIONAL ENGINEER
06/13/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
FLAT PLATE DETAILS

FDH

SECONDARY INSPECTION

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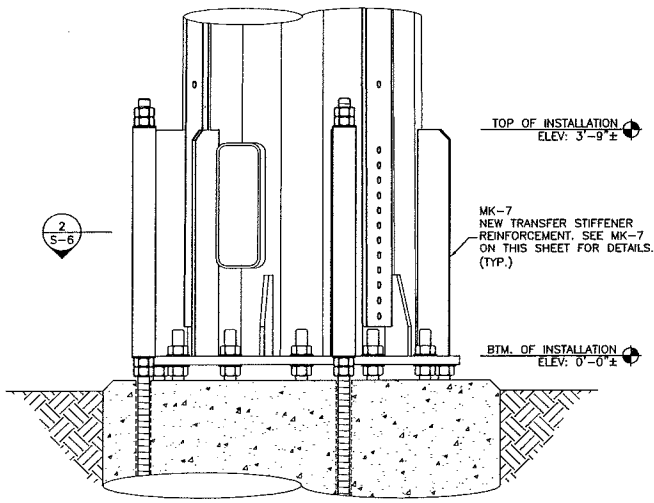
☐ GC has revisited the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.

L. James



NEW TRANSFER STIFFENER LAYOUT
ELEVATION VIEW

1 / S-6 ELEVATION
SCALE: 1/2" = 1'-0"

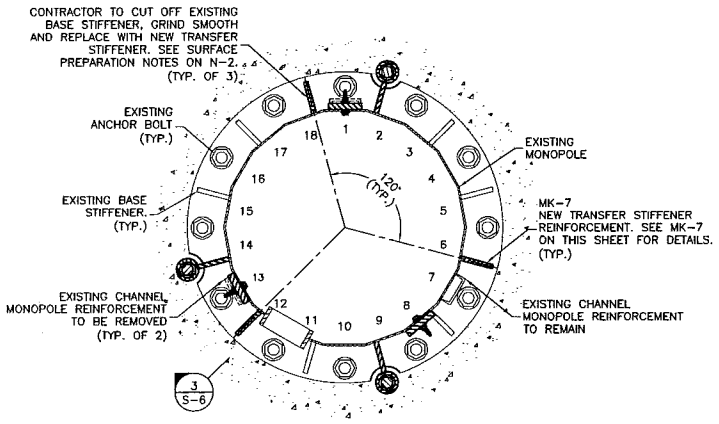
TRANSFER STIFFENER INSTALLATION SCHEDULE			
PART. NO	QUANTITY	DESCRIPTION	ELEVATION
MK-7	3	TRANSFER STIFFENER	0'-0"± TO 3'-9"±
ALL NEW TRANSFER STIFFENER STEEL TO HAVE Fy=65 KSI			

NEW TRANSFER STIFFENER REINFORCEMENT NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED LOCATION OF TRANSFER STIFFENER TO ENSURE THAT PROPER SPACING CAN BE MET.
2. CONTRACTOR TO REPLACE AND/OR RELOCATE ANY CLIMBING PEGS THAT INTERFERE WITH THE INSTALLATION OF TRANSFER STIFFENER.

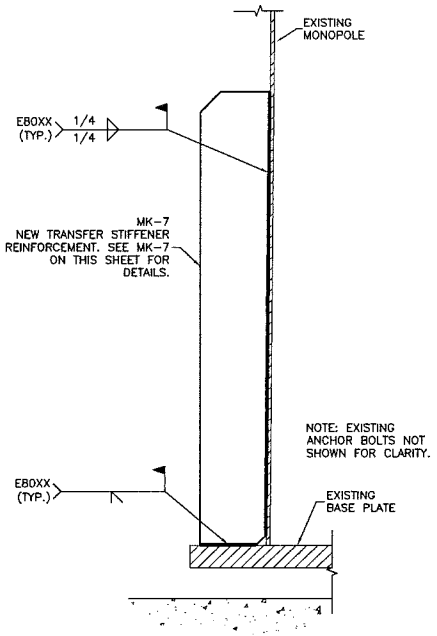
CONSTRUCTION NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED TRANSFER STIFFENER LAYOUT PRIOR TO CONSTRUCTION. IF ISSUES ARE PRESENT IN THE FIT OF THE TRANSFER STIFFENER, CONTRACTOR TO CONTACT ENGINEER OF RECORD OR FDH ENGINEERING PROJECT MANAGER PRIOR TO PROCEEDING WITH PROPOSED MODIFICATION OR FABRICATION.



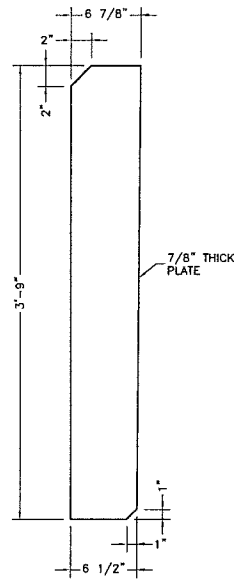
NEW TRANSFER STIFFENER LAYOUT
PLAN VIEW

2 / S-6 SECTION
SCALE: 1/2" = 1'-0"



NEW TRANSFER STIFFENER WELD DETAIL
FRONT VIEW

3 / S-6 DETAIL
NTS



NEW TRANS
FRO

MK-7 / S-6

PREPARED BY:
FDH ENGINEERING INNOVATION
6521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031

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(800) 487-SITE

STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED PROFESSIONAL ENGINEER
06/13/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS		
DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
TRANSFER STIFFENER
REINFORCEMENT

FDH

SECONDARY INSPECTION

☐ EOR has reviewed the issues noted and passed the as-built condition(s).

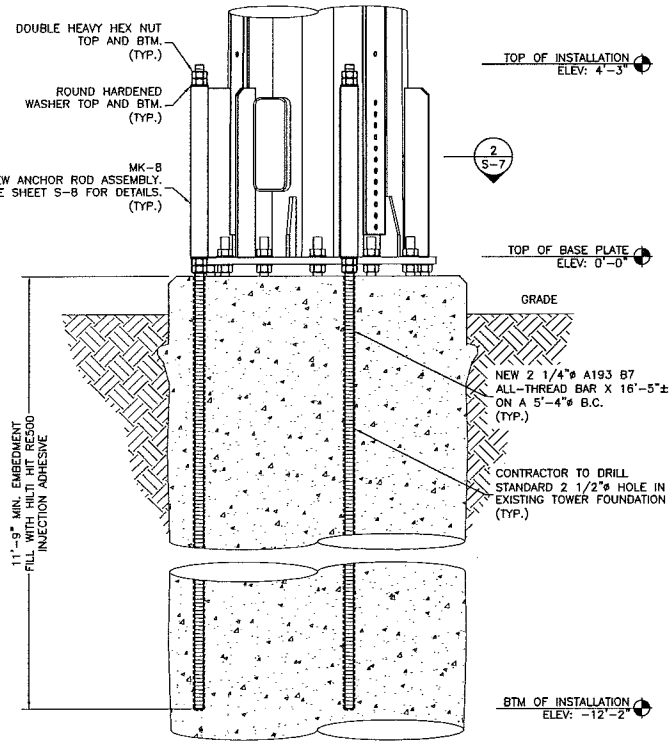
☐ GC has revisited the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.

L. Jones

CONTRACTOR TO PROVIDE PHOTOS OF THE ANCHOR ROD HOLES TO FDH CONSTRUCTION MANAGER PRIOR TO INSTALLING NEW ANCHOR RODS. PHOTOS MUST SHOW THE DEPTH AND DIAMETER OF ANCHOR ROD HOLES.

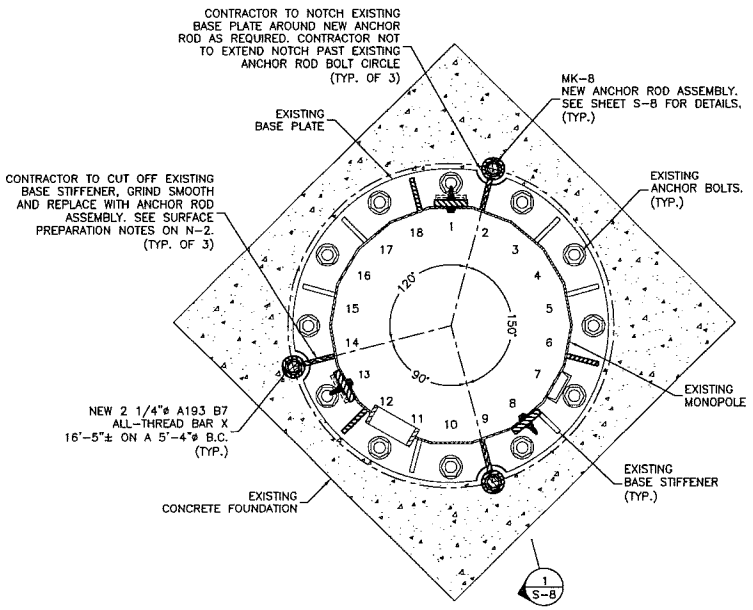
PISTON PLUGS TO BE USED IN ALL INJECTION ADHESIVE APPLICATIONS

ANCHOR ROD MATERIAL LIST			
PART. NO	QTY.	DESCRIPTION	ELEVATION
MK-8	3	ANCHOR ROD ASSEMBLY	0'-0"± TO 3'-9"±
-	3	NEW 2 1/4"ø A193 B7 ALL THREADBAR X 16'-5"±	-12'-2"± TO 4'-3"±
-	6	ROUND HARDENED WASHER	-
-	12	HEAVY HEX NUT	-



ANCHOR ROD LAYOUT
FRONT VIEW

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



ANCHOR ROD LAYOUT
PLAN VIEW

2 / S-7 SECTION
SCALE: 1/2" = 1'-0"

PREPARED BY:
FDH
8521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031
ENGINEERING INNOVATION

PREPARED FOR:
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5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
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STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
LICENSED
PROFESSIONAL ENGINEER
06/13/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS		
DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
ANCHOR ROD

FDH

SECONDARY INSPECTION

☐ EOR has reviewed the issues noted and passed the as-built condition(s).

☐ GC has revisited the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.

From: Heather Jones
Sent: Tuesday, January 21, 2014 2:44 PM
To: Steven Strickland
Cc: Bradley Newman; John Wood
Subject: RE: CT02694-B (E. Prospect) NCN

Steven,

Please see my responses below:

- All flat plates start 7" above base plate. (4544) – Looks like this was done due to the height of the anchor bolt, OK
- All transfer stiffeners and anchor rod assembly transfer plates are 1" thick rather than 7/8". (4525-4529) OK
- Not all existing C-channel reinforcement was removed as required, channel in flat #7. (4517-4520) OK
- Anchor rod assemblies have only (1) heavy hex nut on the bottom rather than (2) specified. (4509,4515) – Looks like only one would fit. OK
- Threaded rods extend above height specified, 73", 79", and 80" above base plate. (4508,4510,4513,4538) Structurally, there is no problem with the rods extending above the specified heights in the drawings. The rods structural capacity is achieved and is OK as is.

Approved.

Thanks,

Heather W. Jones, EI
Project Engineer II

FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, NC 27616
Office: 919-755-1012
Direct: 919-367-5345
Email: hjones@fdh-inc.com

www.fdh-inc.com
Raleigh * St. Louis * Baton Rouge * Irvine

From: Steven Strickland
Sent: Tuesday, January 21, 2014 12:21 PM
To: Heather Jones
Cc: Bradley Newman; John Wood
Subject: FW: CT02694-B (E. Prospect) NCN

Heather,

Did you ever respond to this email? I could not find a response. Thank you

Steven R. Strickland
Project Manager II - Construction Department

FDH, Inc.
6521 Meridien Drive
Raleigh, NC 27616
Direct: 919.367.5240 • Mobile:336.432.4943
Office : 919.755.1012 • Fax: 919.755.1031
Email: steven@fdh-inc.com

www.fdh-inc.com
Raleigh•St. Louis•Baton Rouge

From: Steven Strickland
Sent: Wednesday, November 06, 2013 9:00 AM
To: Heather Jones
Cc: Bradley Newman; Blake Bartok
Subject: FW: CT02694-B (E. Prospect) NCN

Heather,

Please review this PCI. Thank you.

- All flat plates start 7" above base plate. (4544) – Looks like this was done due to the height of the anchor bolt
- All transfer stiffeners and anchor rod assembly transfer plates are 1" thick rather than 7/8". (4525-4529) ?
- Not all existing C-channel reinforcement was removed as required, channel in flat #7. (4517-4520) ?
- Anchor rod assemblies have only (1) heavy hex nut on the bottom rather than (2) specified. (4509,4515) – Looks like only one would fit.
- Threaded rods extend above height specified, 73", 79", and 80" above base plate. (4508,4510,4513,4538) ?

Obtain engineering approval of discrepancies and/or have contractor repair issues noted.

\\fdh-server\Projects\2013 Effective - Client Jobs\SBANET_SBA Network Services, Inc\CT\CT02694-B_E-Prospect-CT\1320001400 - CON\E-Prospect (New Cingular)\PCI\FDH\PCI

Steven R. Strickland
Project Manager II - Construction Department

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6521 Meridien Drive
Raleigh, NC 27616
Direct: 919.367.5240 • Mobile:336.432.4943

Office : 919.755.1012 • Fax: 919.755.1031
Email: steven@fdh-inc.com

www.fdh-inc.com
Raleigh•St. Louis•Baton Rouge

From: Joshua Walton
Sent: Wednesday, October 30, 2013 4:27 PM
To: Steven Strickland
Cc: Brandon Grover; James Mathewson
Subject: CT02694-B (E. Prospect) NCN

Steven,

Please see below the issues noted. The actions needed are in red. In order to receive a passing sealed MI report and avoid a re-inspection, consequently charging a re-inspection fee, we will need before and after photos to be taken of each item in the punch list. In the "before" photos, write on the tower in marker at each item the following: height, leg, face, issue. Then, photograph the writing and the issue in the same picture, if possible. If it is not possible to capture the issue and writing in the same photo, a picture of the writing is to be taken followed by a picture of the issue. Next, the "after" photos should have the same writing along with the word "fixed" and the fixed item shown from several angles. Also, please provide a photo log describing each photo. If there are any questions please let us know.

- All flat plates start 7" above base plate. (4544)
- All transfer stiffeners and anchor rod assembly transfer plates are 1" thick rather than 7/8". (4525-4529)
- Not all existing C-channel reinforcement was removed as required, channel in flat #7. (4517-4520)
- Anchor rod assemblies have only (1) heavy hex nut on the bottom rather than (2) specified. (4509,4515)
- Threaded rods extend above height specified, 73", 79", and 80" above base plate. (4508,4510,4513,4538)

Obtain engineering approval of discrepancies and/or have contractor repair issues noted.

Thanks,

Josh Walton
Project Manager
FDH, Inc.
6521 Meridien Drive
Raleigh, NC 27616

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JWalton@fdh-inc.com
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6521 Meridien Drive
Raleigh, NC 27616
(919) 755-1012 P
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November 15, 2013

Mr. Steven Strickland
FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, NC 27616

RE: Anchor Pull Test
SBA Site Name: E-Prospect
SBA Site ID: CT02694-B-04
FDH Job #1307501500

Dear Steven:

The modification anchor rods installed at the E-Prospect tower (CT02694-B-04) in Prospect, CT were tested per the criteria set forth by FDH Engineering Project #1320001400 Sheet N-2 dated April 16, 2013 and ASTM E488-96, to an approved target tension of 132 kips. The reduced target tension approval was received via email on November 14, 2013. All three (3) anchor rods tested passed the acceptance criteria.

Should you require additional information, please do not hesitate to contact our office.

Sincerely,

Chad P. Smith, EI
Project Manager
Engineering Investigative Services

Reviewed By:

Jeremy D. Piner, PE
Director
Engineering Investigative Services

Project, Anchor, and Test Equipment Information	
Project Information	
Project	E-Prospect
Site ID	CT02694-B-04
Location	Prospect, CT
FDH Job #	1307501500
Test Date	11/14/2013
Test Company	FDH Engineering, Inc.
Technician	Travis Ferguson
Weather	Clear
Anchor Information	
Anchor ID	Anchor Bolt 1
Anchor Location	Flat 2
Anchor Size	2-1/4" Diameter
Anchor Grade	A193 B7
Anchor Proof Load	132 kips
Jack Information	
Hydraulic Area	15.16 in^2
Gauge Information	
Pressure Gauge ID	1028301A
Calibration Date	7/29/2013
Displacement Gauge ID	2273
Calibration Date	5/13/2013

Load Test Field Data				
Pre-Test 1 Field Data				
Reading	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
1	30%	39.4	2600	0.074
2	65%	84.9	5600	0.165
3	100%	109.2	7200	0.212
Residual	0%	0.0	0	0.140

Pre-Test 2 Field Data				
Reading	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
1	30%	39.4	2600	0.176
2	65%	84.9	5600	0.224
3	100%	130.4	8600	0.294
Residual	0%	0.0	0	0.164

Load Test 1 Field Data				
Reading	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
1	5%	6.1	400	0.175
2	15%	21.2	1400	0.187
3	30%	39.4	2600	0.202
4	45%	60.6	4000	0.224
5	60%	78.8	5200	0.242
6	75%	100.1	6600	0.265
7	90%	118.2	7800	0.285
8	100%	130.4	8600	0.300
Residual	0%	0.0	0	0.172

Summary of Results		
Residual Reading	Displacement (in)	Elongation (in)
Baseline 1	0.14	0.000
Baseline 2	0.164	0.024
Test 1	0.172	0.008
Test 2	N/A	N/A

Result Summary Comments

The elongation from the baseline 2 to load test 1 was 0.008" and the total elongation was 0.032", passing the acceptance criteria.

First pre-test was unable to be completed due to the testing setup, therefore a second pre-test was performed.

Reference FDH Engineering Project 1320001400 Dated 04/16/13 Sheet N-2 and ASTM E488-96

Project, Anchor, and Test Equipment Information	
Project Information	
Project	E-Prospect
Site ID	CT02694-B-04
Location	Prospect, CT
FDH Job #	1307501500
Test Date	11/14/2013
Test Company	FDH Engineering, Inc.
Technician	Travis Ferguson
Weather	Clear
Anchor Information	
Anchor ID	Anchor Bolt 2
Anchor Location	Flat 9
Anchor Size	2-1/4" Diameter
Anchor Grade	A193 B7
Anchor Proof Load	132 kips
Jack Information	
Hydraulic Area	15.16 in^2
Gauge Information	
Pressure Gauge ID	1028301A
Calibration Date	7/29/2013
Displacement Gauge ID	2273
Calibration Date	5/13/2013

Load Test Field Data

Pre-Test Field Data

Reading	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
1	30%	39.4	2600	0.035
2	65%	84.9	5600	0.072
3	100%	130.4	8600	0.112
Residual	0%	0.0	0	0.005

Load Test 1 Field Data

Reading	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
1	5%	6.1	400	0.011
2	15%	21.2	1400	0.024
3	30%	39.4	2600	0.039
4	45%	60.6	4000	0.056
5	60%	78.8	5200	0.074
6	75%	100.1	6600	0.088
7	90%	118.2	7800	0.103
8	100%	130.4	8600	0.116
Residual	0%	0.0	0	0.007

Summary of Results

Residual Reading	Displacement (in)	Elongation (in)
Baseline	0.005	0.000
Test 1	0.007	0.002
Test 2	N/A	N/A
Test 3	N/A	N/A

Result Summary Comments

The elongation from the baseline to load test 1 was 0.002" therefore only one load test was performed

Reference FDH Engineering Project 1320001400 Dated 04/16/13 Sheet N-2 and ASTM E488-96

Project, Anchor, and Test Equipment Information	
Project Information	
Project	E-Prospect
Site ID	CT02694-B-04
Location	Prospect, CT
FDH Job #	1307501500
Test Date	11/14/2013
Test Company	FDH Engineering, Inc.
Technician	Travis Ferguson
Weather	Clear
Anchor Information	
Anchor ID	Anchor Bolt 3
Anchor Location	Flat 14
Anchor Size	2-1/4" Diameter
Anchor Grade	A193 B7
Anchor Proof Load	132 kips
Jack Information	
Hydraulic Area	15.16 in^2
Gauge Information	
Pressure Gauge ID	1028301A
Calibration Date	7/29/2013
Displacement Gauge ID	2273
Calibration Date	5/13/2013

Load Test Field Data

Pre-Test Field Data

Reading	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
1	30%	39.4	2600	0.029
2	65%	84.9	5600	0.065
3	100%	130.4	8600	0.109
Residual	0%	0.0	0	0.001

Load Test 1 Field Data

Reading	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
1	5%	6.1	400	0.008
2	15%	21.2	1400	0.018
3	30%	39.4	2600	0.033
4	45%	60.6	4000	0.050
5	60%	78.8	5200	0.064
6	75%	100.1	6600	0.084
7	90%	118.2	7800	0.103
8	100%	130.4	8600	0.114
Residual	0%	0.0	0	0.001

Summary of Results

Residual Reading	Displacement (in)	Elongation (in)
Baseline	0.001	0.000
Test 1	0.001	0.000
Test 2	N/A	N/A
Test 3	N/A	N/A

Result Summary Comments

The elongation from the baseline to load test 1 was 0.000" therefore only one load test was performed

Reference FDH Engineering Project 1320001400 Dated 04/16/13 Sheet N-2 and ASTM E488-96

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
www.ct.gov/csc

July 12, 2013

Rick Woods
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752

RE: **EM-SPRINT-115-130625** – Sprint Spectrum notice of intent to modify an existing telecommunications facility located at 229 Cheshire Road, Prospect, Connecticut.

Dear Mr. Woods:

The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies with the following conditions:

- Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;
- Any material changes to this modification as proposed shall require the filing of a new notice with the Council;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration;
- Prior to antenna installation, the tower modifications depicted in the *Modifications Drawings for a 162' Monopole* prepared by FDH Engineering dated June 13, 2013, and stamped by Christopher Murphy shall be implemented; and
- Within 45 days following completion of the antenna installation, a signed letter from a Professional Engineer duly licensed in the State of Connecticut shall be submitted to the Council to certify that the recommended modifications have been completed and the structure and foundation do not exceed 100 percent of the post-construction structural rating.

The proposed modifications including the placement of all necessary equipment and shelters within the tower compound are to be implemented as specified here and in your notice dated June 24, 2013. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73.

Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Thank you for your attention and cooperation.

Very truly yours,

Melanie A. Bachman
Acting Executive Director

MAB/CDM/cm

c: The Honorable Robert J. Chatfield, Mayor, Town of Prospect
William J. Donovan, Zoning Enforcement Officer, Town of Prospect

EM-SPRINT-115-130625

June 24, 2013

David Martin and
Members of the Siting Council
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: Notice of Exempt Modification
229 Cheshire Road
Prospect, CT 06712
N 41° 30' 28.37"
W 71° 57' 03.69"

Dear Mr. Martin and Members of the Siting Council:

On behalf of Sprint Spectrum, SBA Communications is submitting an exempt modification application to the Connecticut Siting council for modification of existing equipment at a tower facility located at 229 Cheshire Road, Prospect, CT.

The 229 Cheshire Road facility consists of a 150' MONOPOLE Tower with 12' Extension owned and operated by SBA Towers, LLC. In order to accommodate technological changes and enhance system performance in the State of Connecticut, Sprint Spectrum plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

As part of Sprint's Network Vision modification project, Sprint desires to upgrade their equipment to meet the new standards of 4G technology. The new equipment will allow customers to download files and browse the internet at a high rate of speed while also allowing their phones to be compatible with the latest 4G technology.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in Sprint's operations at the site along with the required fee of $625.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be

significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The overall height of the structure will be unaffected.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than the new equipment cabinets.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. The changes in radio frequency power density will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, SBA Communications on behalf of Sprint Spectrum, respectfully submits that he proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (508) 614-0389 with any questions you may have concerning this matter.

Thank you,

Rick Woods
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-1691 x 319 + T
508-251-1755 + F
508-614-0389 + C
rwoods@sbasite.com

Sprint Spectrum
Equipment Modification

229 Cheshire Road, Prospect, CT
Site number CT33XC512

Tower Owner: SBA Towers, LLC

Equipment Configuration: MONOPOLE Tower

Current and/or approved:

- (6) Decibel DB980H90 Antennas
- (6) lines of 1-5/8" coax
- (1) Mod cell
- (2) Battery Cabinets
- (1) GPS antenna
- Local exchange carrier landline backhaul facilities

Planned Modifications:

- Install fiber distribution box
- Replace existing (6) CDMA Antennas with (3) Network Vision Antennas and (6) RRHs
- Remove existing CDMA coax cables and install (3) Hybriflex cables (1-1/4" Fiber)
- Replace existing mod cell and battery cabinets with (1) MM-BTS and (2) BBU cabinets
- Replace existing GPS antenna with newer GPS antenna
- Replace existing local exchange carrier landline backhaul facilities with proposed AAV fiber optic facilities incl. overhead/underground conduits and NID

Structural Information:

The attached structural analysis demonstrates that the tower and foundation will have adequate structural capacity to accommodate the proposed modifications.

Power Density:

The anticipated Maximum Composite contributions from the Sprint facility are 15.017% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 41.317% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE %	
Carrier	MPE %
Sprint	15.017%
T-Mobile	1.810%
Pocket	4.220%
Verizon Wireless	13.940%
AT&T	6.330%
Total Site MPE %	41.317%

June 24, 2013

Mayor Robert J. Chatfield
Town of Prospect
Prospect Town Hall
36 Center Street
Prospect, CT 06712

COPY

RE: Telecommunications Facility @ 229 Cheshire Road, Prospect, CT

Dear Mayor Chatfield,

In order to accommodate technological changes and enhance system performance in the State of Connecticut, Sprint Spectrum will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies (R.C.S.A.) Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review Sprint's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The accompanying letter to the Siting Council fully describes Sprint's proposal for the referenced cell site. However, if you have any questions or require any further information on our plans or the Siting Council's procedures, please call me at (508) 614-0389.

Thank you,

Rick Woods
SBA Communications Company
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-1691 x 319 + T
508-251-1755 + F
508-614-0389 + C
rwoods@sbasite.com

FDH Engineering, Inc., 6521 Meridien Dr. Raleigh, NC 27616, Ph. 919.755.1012, Fax 919.755.1031

Structural Analysis for SBA Network Services, Inc.

150' Monopole Tower w/ 12' Extension

SBA Site Name: E-Prospect
SBA Site ID: CT02694-B
Sprint Site ID: CT33XC512
Sprint Site Name: Prospect/Kathan Property

FDH Project Number 12-05180E S4

Analysis Results

Tower Components	**96.8%**	**Sufficient**
Foundation	**91.2%**	**Sufficient**

Prepared By:

Tyler Mora, EI
Project Engineer

Reviewed By:

Christopher M Murphy, PE
President
CT PE License No. 25842

FDH Engineering, Inc.
6521 Meridien Dr.
Raleigh, NC 27616
(919) 755-1012
info@fdh-inc.com

May 6, 2013

Prepared pursuant to TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures & 2005 Connecticut Building Code

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EXECUTIVE SUMMARY

At the request of SBA Network Services, Inc., FDH Engineering, Inc. performed a structural analysis of the monopole located in Prospect, CT to determine whether the tower is structurally adequate to support both the existing and proposed loads pursuant to the *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures, TIA/EIA-222-F and 2005 Connecticut Building Code (CBC)*. Information pertaining to the existing/proposed antenna loading, current tower geometry, geotechnical data, and member sizes was obtained from:

- Engineered Endeavors, Inc. (Job No. 5816) original tower and foundation design dated October 15, 1999
- FDH, Inc. (Job No. 05-09107E) Modification Drawings for 150' Monopole with 12' Extension dated September 30, 2005
- URS Greiner (Site No. CT33XC512) Geotechnical Study for Proposed Sprint Telecommunications Tower dated October 14, 1999
- FDH Engineering, Inc. (Job No. 12-05180E S4) Modification Drawings for 150' Monopole with 12' Extension dated May 6, 2013
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and *2005 CBC* is 85 mph without ice and 38 mph with 3/4" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from Sprint in place at 147 ft, the tower meets the requirements of the *TIA/EIA-222-F* standards and *2005 CBC* provided the **Recommendations** listed below are satisfied. Furthermore, provided the foundation was constructed per the original design drawings (see EEI Job No. 5816), and given the existing soil parameters (see URS Site No. CT33XC512), the foundation has the necessary capacity to support the existing and proposed loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report.

Our structural analysis has been performed assuming all information provided to FDH Engineering, Inc. is accurate (i.e., the steel data, tower layout, existing antenna loading, and proposed antenna loading) and that the tower has been properly erected and maintained per the original design drawings.

Recommendations

To ensure the requirements of the *TIA/EIA-222-F* standards and *2005 CBC* are met with the existing and proposed loading in place, we have the following recommendations:

1. The proposed coax should be installed on the inside of the pole shaft.
2. RRU/RRH Stipulation: The equipment may be installed in any arrangement as determined by the client.
3. The tower modifications outlined in the FDH Engineering, Inc. (Job No. 12-05180E S4) Modification Drawings for a 150' Monopole w/ 12' Extension dated May 6, 2013 must be installed correctly per the referenced drawings for this analysis to be valid.

APPURTENANCE LISTING

The proposed and existing antennas with their corresponding cables/coax lines are shown in **Table 1**. *If the actual layout determined in the field deviates from the layout, FDH Engineering, Inc. should be contacted to perform a revised analysis.*

Table 1 - Appurtenance Loading

Existing Loading:

Antenna Elevation (ft)	Description	Coax and Lines [1]	Carrier	Mount Elevation (ft)	Mount Type
160	(3) 54"x12"x7" Panels (6) TMAs	(12) 1-5/8 [2]	T-Mobile	160	(3) 5' Standoffs
147	(6) Decibel DB980H90	(6) 1-5/8	Sprint	147	(1) Low Profile Platform
137	(2) Antel LPA-80063/4CF (3) Andrew LNX-6514DS-T4M (3) Rymsa wireless MG D3-800TV (4) Wwedcom SC-E 6014 rev2 (6) RFS FD9R6004/2C-3L Diplexers	(12) 1-5/8	Verizon	137	(1) Low Profile Platform
127	(3) RFS APXV18-206517S-C	(6) 1-5/8	Pocket	127	(3) Pipe Mounts
117	(6) Andrew SBNH-1D6565C (6) KMW AM-X-CD-16-6500T (6) CCI DTMABP 7819VG12A TMAs (6) Kathrein 860-10025 RETs (3) CSS DBC-750 Diplexers (3) Powerwave LGP13519 Diplexers	(12) 1-5/8 (1) Rosenberger 10mm FB-L98B-002 fiber (2) Roseberger WR-VG122ST-BRDA DC cables	AT&T	117	(1) Low Profile Platform
114.5	(6) Ericsson RRUS-11 RRUs (1) Raycap DC6-48-60-18-8-F Surge Arrestor			114.5	(1) Valmont Ring Mount (assumed CaAa = 3 ft²)

1. Coax installed inside the pole shaft unless otherwise noted.
2. Coax installed double stacked outside the pole shaft.

Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
147	(3) RFS APXVSPP18-C-A20 (3) ALU 1900 MHz RRH RRUs (3) ALU 800 MHz RRH RRUs (3) ALU 800 MHz Filters (4) RFS ACU-A20-N RETs	(3) 1-1/4 Fiber	Sprint	147	(1) Low Profile Platform

RESULTS

The following yield strength of steel for individual members was used for analysis:

Table 2 - Material Strength

Member Type	Yield Strength
Tower Shaft Sections	65 ksi
Flange Plate	50 ksi
Flange Bolts	92 ksi
Base Plate	60 ksi
Anchor Bolts	75 ksi

Table 3 displays the summary of the ratio (as a percentage) of force in the member to their capacities. Values greater than 100% indicate locations where the maximum force in the member exceeds its capacity. **Table 4** displays the maximum foundation reactions.

If the assumptions outlined in this report differ from actual field conditions, FDH Engineering, Inc. should be contacted to perform a revised analysis. Furthermore, as no information pertaining to the allowable twist and sway requirements for the existing or proposed appurtenances was provided, deflection and rotation were not taken into consideration when performing this analysis.

See the **Appendix** for detailed modeling information

Table 3 - Summary of Working Percentage of Structural Components

Section No.	Elevation ft	Component Type	Size	% Capacity**	Pass Fail
L1	162 - 150.5	Pole	TP12.75x12.75x0.375	9.6	Pass
L2	150.5 - 149.875	Pole	TP19.5x12.75x0.375	9.6	Pass
L3	149.875 - 111.055	Pole	TP27.116x19.5x0.1875	78.7	Pass
L4	111.055 – 104.7	Pole	TP33.3629x25.9777x0.25	88.0	Pass
	104.7 – 76.666	Pole w/ Modifications	TP33.3629x25.9777x0.25 w/ Modifications	87.6	Pass
L5	76.6666 - 42.2838	Pole w/ Modifications	TP39.4834x31.962x0.3125 w/ Modifications	95.6	Pass
L6	42.2838 - 0.1458	Pole w/ Modifications	TP47x37.8116x0.375 w/ Modifications	96.8	Pass
	150	Flange Bolts	(12) 1" Ø w/ BC = 24.75"	5.2	Pass
	150	Flange Plate	28.5" Ø x 1.5" thk.	12.4	Pass
	0	Anchor Bolts	(12) 2.25" Ø w/ BC = 56"	90.4	Pass
	0	Anchor Bolts	(3) 2" Ø w/ BC = 68"	92.1	Pass
	0	Base Plate	62" Ø x 1.75" thk	88.8	Pass

*Capacities include a 1/3 allowable stress increase for wind.
**Existing channel reinforcement found to be ineffective, and is therefore neglected in this analysis.

Table 4 - Maximum Base Reactions

Base Reactions	Current Analysis* *(TIA/EIA-222-F)*	Original Design *(TIA/EIA-222-F)*
Axial	37 k	23 k
Shear	29 k	20 k
Moment	3,143 k-ft	2,152 k-ft

*Foundation determined inadequate per independent analysis.

GENERAL COMMENTS

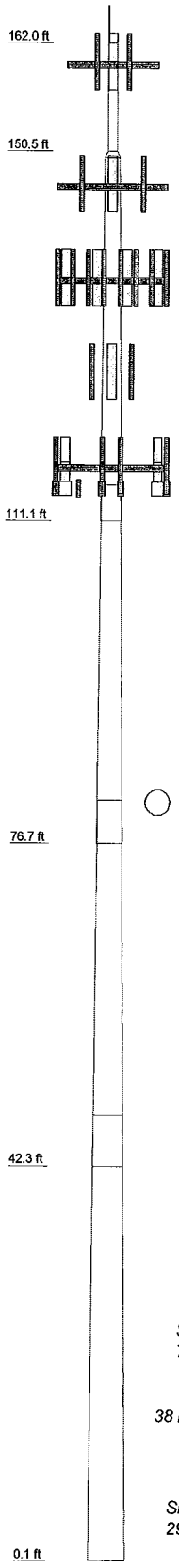
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading information) modeled. If there are substantial modifications to be made or the assumptions made in this analysis are not accurate, FDH Engineering, Inc. should be notified immediately to perform a revised analysis.

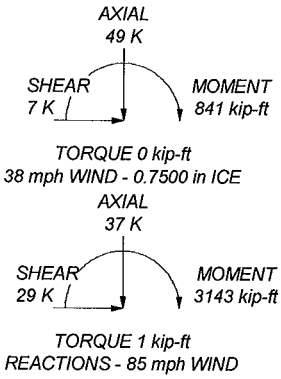
LIMITATIONS

All opinions and conclusions are considered accurate to a reasonable degree of engineering certainty based upon the evidence available at the time of this report. All opinions and conclusions are subject to revision based upon receipt of new or additional/updated information. All services are provided exercising a level of care and diligence equivalent to the standard and care of our profession. No other warranty or guarantee, expressed or implied, is offered. Our services are confidential in nature and we will not release this report to any other party without the client's consent. The use of this engineering work is limited to the express purpose for which it was commissioned and it may not be reused, copied, or distributed for any other purpose without the written consent of FDH Engineering, Inc.

APPENDIX

Section	1	2	3	4	5	6
Length (ft)	11.50	0.63	38.82	38.28	39.05	47.57
Number of Sides	1	1	18	18	18	18
Thickness (in)	0.3750	0.3750	0.1875	0.2500	0.3125	0.3750
Socket Length (ft)			3.89	4.67	5.43	
Top Dia (in)	12.7500	12.7500	19.5000	25.9777	31.9620	37.8116
Bot Dia (in)	12.7500	19.5000	27.1160	33.3629	39.4834	47.0000
Grade	A572-50	A572-50	A572-50	A572-65	A572-65	A572-65
Weight (K)	0.6	0.0	1.8	3.0	4.7	8.1





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	162	(2) FD9R6004/2C-3L Diplexer	137
54"x12"x7" w/Mount Pipe	160	(2) FD9R6004/2C-3L Diplexer	137
54"x12"x7" w/Mount Pipe	160	Low Profile Platform	137
54"x12"x7" w/Mount Pipe	160	APXV18-206517S-C w/Mount Pipe	127
(2) TMA	160	APXV18-206517S-C w/Mount Pipe	127
(2) TMA	160	APXV18-206517S-C w/Mount Pipe	127
(2) TMA	160	DBC-750 Diplexer	117
(3) 5' Standoffs	160	LGP13519 Diplexer	117
APXVSPP18-C-A20 w/Mount Pipe	147	LGP13519 Diplexer	117
APXVSPP18-C-A20 w/Mount Pipe	147	LGP13519 Diplexer	117
APXVSPP18-C-A20 w/Mount Pipe	147	Low Profile Platform	117
1900 MHz RRH	147	DBC-750 Diplexer	117
1900 MHz RRH	147	DBC-750 Diplexer	117
1900 MHz RRH	147	(2) SBNH-1D6565C w/ Mount Pipe	117
800 MHz RRH	147	(2) SBNH-1D6565C w/ Mount Pipe	117
800 MHz RRH	147	(2) SBNH-1D6565C w/ Mount Pipe	117
800 MHz RRH	147	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	117
800 MHz Filter	147		
800 MHz Filter	147	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	117
800 MHz Filter	147		
(2) ACU-A20-N RET	147	(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	117
ACU-A20-N RET	147		
ACU-A20-N RET	147	(2) DTMABP7819VG12A	117
Low Profile Platform	147	(2) DTMABP7819VG12A	117
LNX-6514DS-T4M w/ Mount Pipe	137	(2) DTMABP7819VG12A	117
LNX-6514DS-T4M w/ Mount Pipe	137	(2) 860 10025 RET	117
LNX-6514DS-T4M w/ Mount Pipe	137	(2) 860 10025 RET	117
MG D3-800TV w/ Mount Pipe	137	(2) 860 10025 RET	117
MG D3-800TV w/ Mount Pipe	137	(2) RRUS-11	114.5
MG D3-800TV w/ Mount Pipe	137	(2) RRUS-11	114.5
(2) LPA-80063/4CF w/ Mount Pipe	137	(2) RRUS-11	114.5
(2) SC-E 6014 rev2 w/Mount Pipe	137	DC6-48-60-18-8F Surge Arrestor	114.5
(2) SC-E 6014 rev2 w/Mount Pipe	137	(1) Valmont Ring Mount mnt	114.5
(2) FD9R6004/2C-3L Diplexer	137		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for a 85 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.

FDH Engineering, Inc.
6521 Meridien Drive
Raleigh, NC 27616
Phone: (919) 755-1012
FAX: (919) 755-1031
Tower Analysis

Job: E-Prospect, CT02694-B		
Project: 12-05180E S4		
Client: SBA Network Services, Inc.	Drawn by: Tyler Mora, E	App'd:
Code: TIA/EIA-222-F	Date: 05/06/13	Scale: NTS
Path: \\fdh-server\Projects\2012 Projects\05 - Mxp\12-05180E\E-Prospect_CT\S4 - Mod drawings\Analysis\E-Prospect_CT02694-B (S4).eri		Dwg No. E-1

EBI Consulting
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RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

Sprint Existing Facility

Site ID: CT33XC512

Prospect / Kathan Property
229 Cheshire Road
Prospect, CT 06712

August 23, 2012

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

August 23, 2012

Sprint
Attn: RF Engineering Manager
1 International Boulevard, Suite 800
Mahwah, NJ 07495

Re: Emissions Values for Site **CT33XC512 – Prospect / Kathan Property**

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 229 Cheshire Road, Prospect, CT, for the purpose of determining whether the emissions from the proposed Sprint equipment upgrades on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of μW/cm2 calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for the cellular band is approximately 567 $\mu W/cm^2$, and the general population exposure limit for the PCS band is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed upgrades to the existing Sprint Wireless antenna facility located at 229 Cheshire Road, Prospect, CT, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario. Actual values seen from this site will be dramatically less than those shown in this report. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

For all calculations, all emissions were calculated using the following assumptions:

1) 3 CDMA Carriers (1900 MHz) were considered for each sector of the proposed installation.
2) 1 CDMA Carrier (850 MHz) was considered for each sector of the proposed installation
3) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
4) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The actual gain in this direction was used per the manufactures supplied specifications.
5) The antenna used in this modeling is the RFS APXVSPP18-C-A20. This is based on feedback from the carrier with regards to anticipated antenna selection. This antenna has a 15.9 dBd gain value at its main lobe at 1900 MHz and 13.4 dBd at its main lobe for 850 MHz. All calculations were performed assuming the main lobe of the antenna was focused at the base of the tower to present a worst case scenario.

6) The antenna mounting height centerline of the proposed antennas is **147 feet** above ground level (AGL)
7) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculation were done with respect to uncontrolled / general public threshold limits

Site ID	CT33XC512 - Prospect / Kathan Propoert
Site Addresss	229 Cheshire Road, Prospect, CT 06712
Site Type	Monopole

Sector 1

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	147	141	1/2 "	0.5	0	2080.4211	37.62002	3.76200%
1a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	147	141	1/2 "	0.5	0	389.96892	7.051764	1.24370%
														Sector total Power Density Value:		5.006%	

Sector 2

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
2a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	147	141	1/2 "	0.5	0	2080.4211	37.62002	3.76200%
2a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	147	141	1/2 "	0.5	0	389.96892	7.051764	1.24370%
														Sector total Power Density Value:		5.006%	

Sector 3

Antenna Number	Antenna Make	Antenna Model	Radio Type	Frequency Band	Technology	Power Out Per Channel (Watts)	Number of Channels	Composite Power	Antenna Gain in direction of sample point (dBd)	Antenna Height (ft)	analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
3a	RFS	APXVSPP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	3	60	15.9	147	141	1/2 "	0.5	0	2080.4211	37.62002	3.76200%
3a	RFS	APXVSPP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	147	141	1/2 "	0.5	0	389.96892	7.051764	1.24370%
														Sector total Power Density Value:		5.006%	

Site Composite MPE %	
Carrier	MPE %
Sprint	15.017%
T-Mobile	1.810%
Pocket	4.220%
Verizon Wireless	13.940%
AT&T	6.330%
Total Site MPE %	**41.317%**

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Summary

All calculations performed for this analysis yielded results that were well within the allowable limits for general public exposure to RF Emissions.

The anticipated Maximum Composite contributions from the Sprint facility are **15.017% (5.006% from each sector)** of the allowable FCC established general public limit considering all three sectors simultaneously sampled at the ground level.

The anticipated composite MPE value for this site assuming all carriers present is **41.317%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

STRUCTURAL NOTE:

COORDINATE REQUIRED TOWER MODIFICATIONS BY OTHERS WITH TOWER OWNER PRIOR TO CONSTRUCTION.

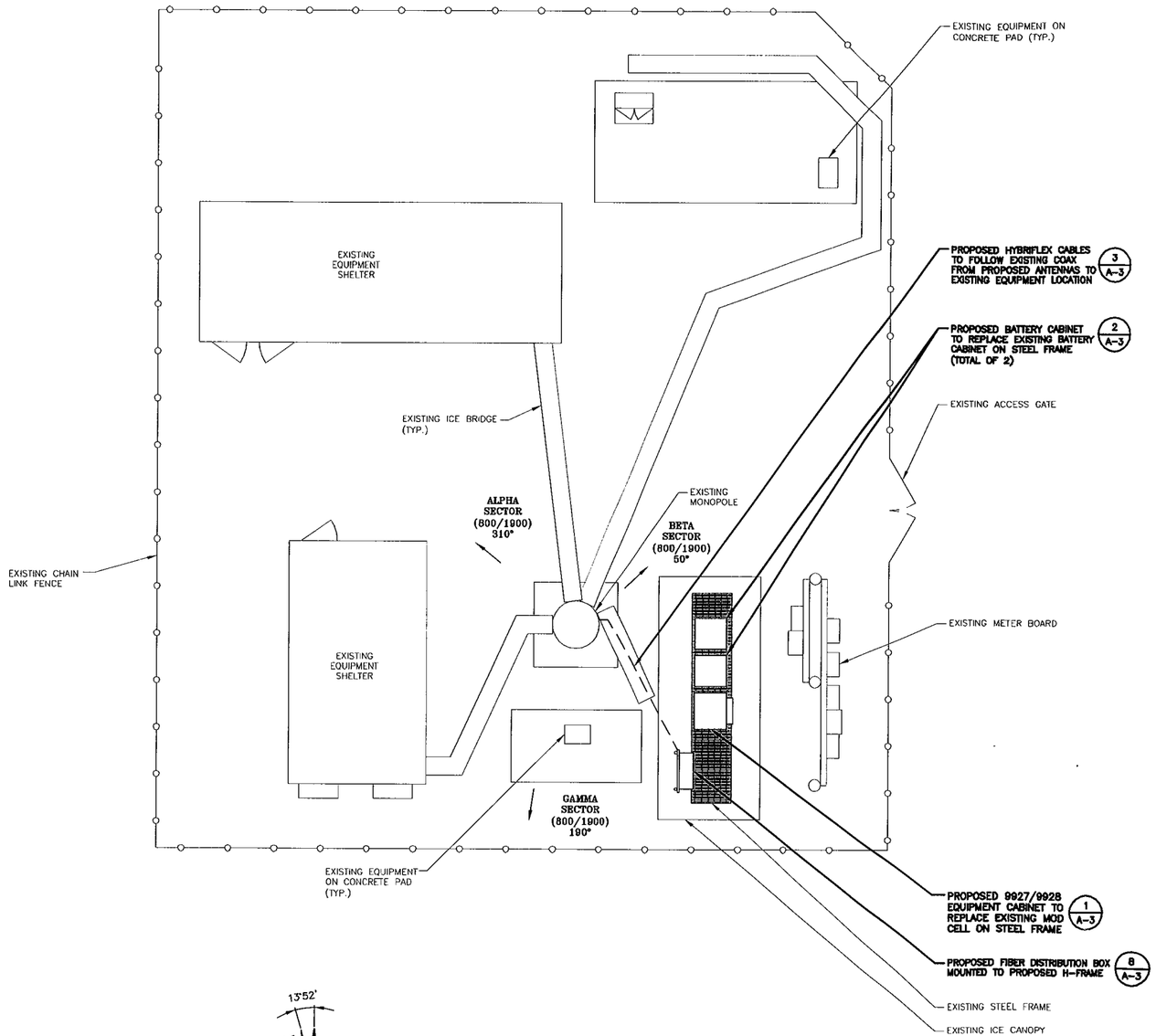
NOTE:

(**) NETWORK VISION ANTENNA RADIATION CENTERLINE AGL (FT) BASED ON SBA EQUIPMENT DATABASE AND SBA TOWER STRUCTURAL ANALYSIS AND WILL SUPERSEDE ANY CONFLICTING INFORMATION DERIVED FROM THE ALU/SPRINT DATABASE

NOTES:

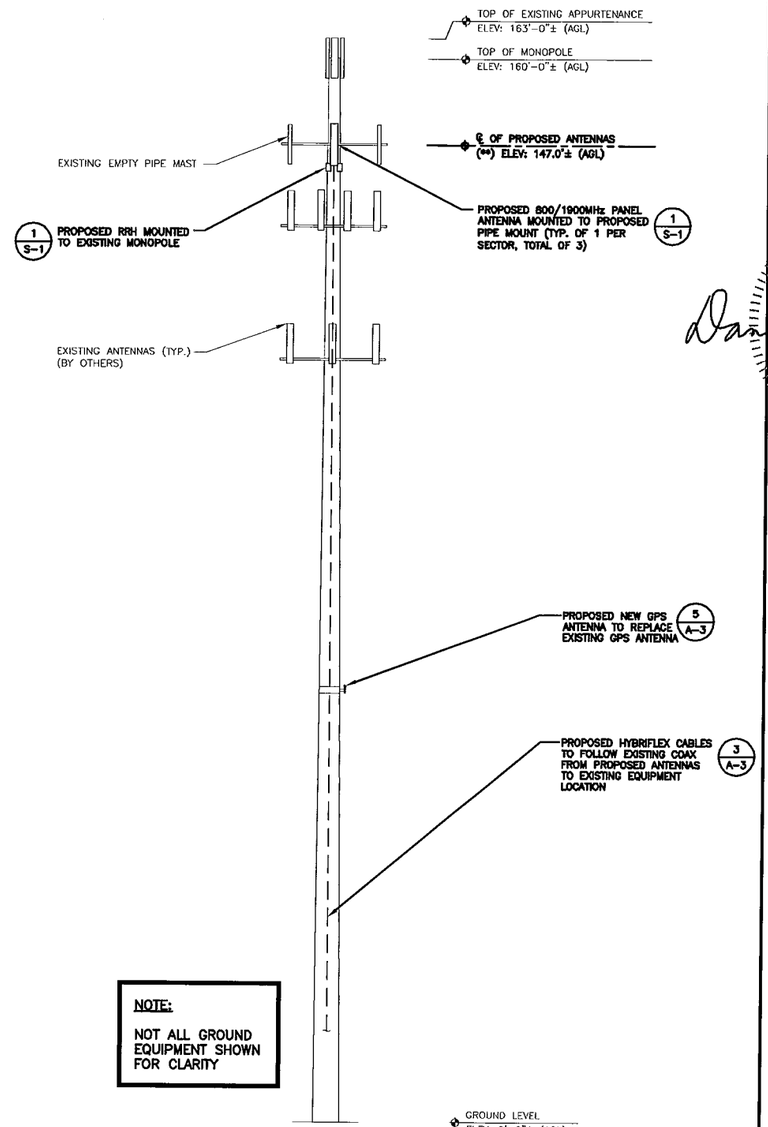
1) VERIFY EXACT ANTENNA MODEL & AZIMUTHS WITH RF ENGINEER PRIOR TO INSTALLATION.

2) REMOVE EXISTING GPS ANTENNA AND REPLACE WITH NEW GPS ANTENNA.



COMPOUND PLAN 1 A-1
SCALE: 3/16"=1'-0"

GRAPHIC SCALE
0 2'-8" 5'-4" 10'-8" 16'-0"



NOTE:

NOT ALL GROUND EQUIPMENT SHOWN FOR CLARITY

ELEVATION 2 A-1
SCALE: 3/32"=1'-0"

GRAPHIC SCALE
0 5'-4" 10'-8" 21'-4" 32'-0"

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1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
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SBA COMMUNICATIONS CORP.
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BOCA RATON, FL 33487-2797
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FAX: (561) 226-3572

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 21178
LICENSED PROFESSIONAL ENGINEER

Daniel P. Hamm

CHECKED BY: JX

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	12/17/12	FOR CONSTRUCTION	RH
1	04/09/12	ISSUED FOR REVIEW	DD

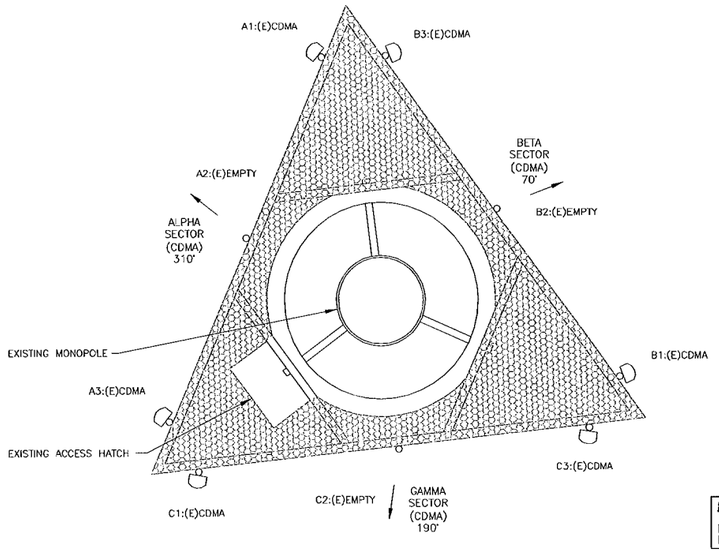
SITE NUMBER:
CT33XC512

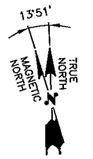
SITE NAME:
PROSPECT/KATHAN PROPERTY

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712

SHEET TITLE
COMPOUND PLAN AND ELEVATION

SHEET NUMBER
A-1



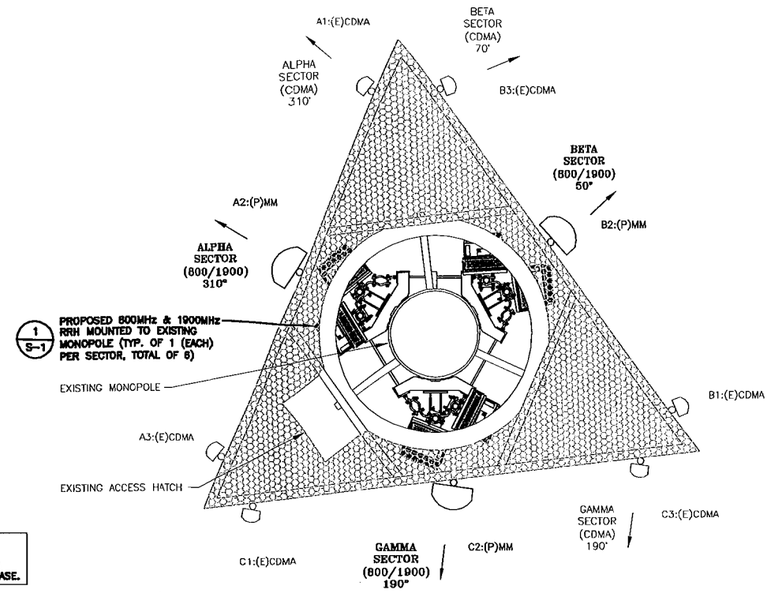


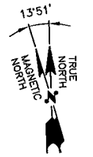
EXISTING ANTENNA PLAN (1 / A-2)

SCALE: N.T.S.

NOTE:

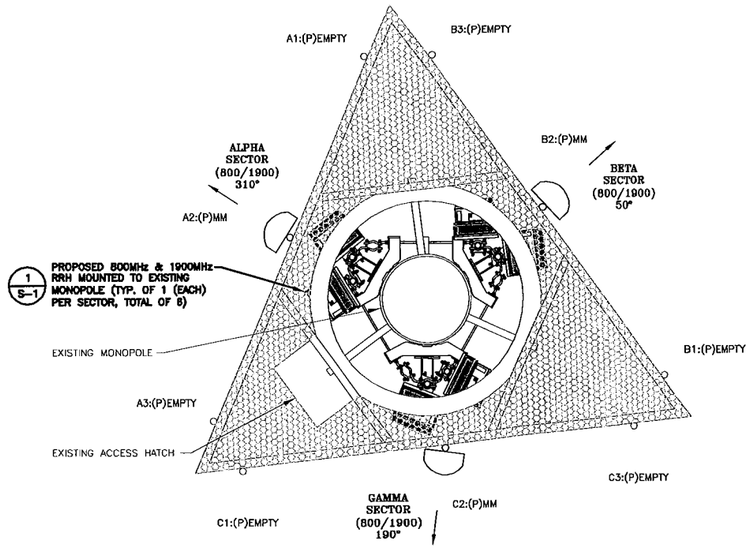
EXISTING SPRINT ANTENNA AZIMUTHS FROM ALU-SPRINT PLAYBOOK DATABASE.





INTERMEDIATE ANTENNA PLAN (2 / A-2)

SCALE: N.T.S.



FINAL ANTENNA PLAN (3 / A-2)

SCALE: N.T.S.

ANTENNA STATUS LEGEND:

(E) – EXISTING

(P) – PROPOSED

CDMA – SPRINT ANTENNA

EMPTY – EMPTY PIPE MAST

MM – MULTIMEDIA ANTENNA

Sprint VISION
1 INTERNATIONAL BLVD, SUITE 800
MAHWAH, NJ 07495
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SBA COMMUNICATIONS CORP.
5900 BROKEN SOUND PARKWAY
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1600 OSGOOD STREET
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TEL: (978) 557-5553
FAX: (978) 336-5586

STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: JX

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
2	12/17/12	FOR CONSTRUCTION	RH
1	04/09/12	ISSUED FOR REVIEW	DD

SITE NUMBER:
CT33XC512

SITE NAME:
PROSPECT/KATHAN PROPERTY

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712

SHEET TITLE
ANTENNA SCENARIO & EQUIPMENT LAYOUT

SHEET NUMBER
A-2

THE MODIFICATIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED BY FDH ENGINEERING, INC., PROJECT NO. 1312721400 DATED MARCH 1, 2013.

THIS REPORT WAS BASED ON A SPECIFIC ANTENNA AND COAX CONFIGURATION PROVIDED BY THE TOWER OWNER. ANY CHANGE TO THIS INFORMATION MUST BE REVIEWED BY FDH ENGINEERING, INC.

ALL DIMENSIONS, MEASUREMENTS, QUANTITIES, PART NUMBERS AND COAX/ANTENNA PLACEMENTS TO BE FIELD VERIFIED BY CONTRACTOR PRIOR TO MATERIAL ORDERS AND CONSTRUCTION.

FOR INQUIRIES REGARDING THE CONTENT OF THESE MODIFICATION DRAWINGS, PLEASE CONTACT STEVEN STRICKLAND WITH THE FDH CONSTRUCTION DEPARTMENT (919) 755-1012

PROJECT DESCRIPTION:

MODIFICATION DRAWINGS FOR A 162' MONOPOLE

SBA

SITE NAME:

E-PROSPECT

SITE NUMBER:

CT02694-B-04

SITE ADDRESS:

229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

COORDINATES:

LATITUDE: 41.5079°
LONGITUDE: -72.9510°

SHEET INDEX	
SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
N-1	POST CONSTRUCTION INSPECTION NOTES
N-2	GENERAL NOTES
S-1	MODIFICATION SCHEDULE
S-2	FLAT PLATE REINFORCEMENT DETAILS I
S-3	FLAT PLATE REINFORCEMENT DETAILS II
S-4	FLAT PLATE DETAILS I
S-5	FLAT PLATE DETAILS II
S-6	TRANSFER STIFFENER REINFORCEMENT DETAILS
S-7	ANCHOR ROD INSTALLATION DETAILS I
S-8	ANCHOR ROD INSTALLATION DETAILS II

PREPARED BY:

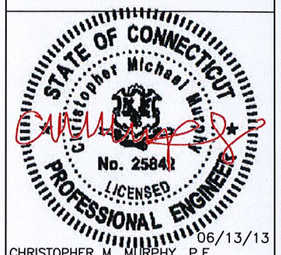
FDH
ENGINEERING INNOVATION

6521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031

PREPARED FOR:

SBA

5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800) 487-SITE



06/13/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

PCI CHECKLIST

CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED	REPORT ITEM
PRE-CONSTRUCTION	
X	PCI CHECKLIST DRAWING
N/A	EOR APPROVED SHOP DRAWINGS
N/A	FABRICATION INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
X	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE GROUT VERIFICATION
X	CONTRACTOR'S CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
X	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	PCI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	POST INSTALLED ANCHOR ROD PULL-OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT NEEDED FOR THE PCI REPORT
N/A DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE PCI REPORT

POST CONSTRUCTION INSPECTION NOTES:

GENERAL

1. THE POST CONSTRUCTION INSPECTION (PCI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).
2. THE PCI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE PCI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. ALL PCI'S SHALL BE CONDUCTED BY A PCI INSPECTOR THAT IS APPROVED TO PERFORM ELEVATED WORK FOR FDH ENGINEERING, INC.
4. TO ENSURE THAT THE REQUIREMENTS OF THE PCI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE PCI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR FDH POINT OF CONTACT (POC).
5. REFER TO CCR-01 : CONTRACTOR CLOSEOUT REQUIREMENTS FOR FURTHER DETAILS AND REQUIREMENTS.

PCI INSPECTOR

1. THE PCI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE PCI TO, AT A MINIMUM:
   - REVIEW THE REQUIREMENTS OF THE PCI CHECKLIST
   - WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
2. THE PCI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE PCI REPORT TO FDH.

CORRECTION OF FAILING PCI'S

1. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PCI ("FAILED PCI"), THE GC SHALL WORK WITH FDH TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
   - CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT PCI.
   - OR, WITH FDH'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.

REQUIRED PHOTOS

1. BETWEEN THE GC AND THE PCI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE PCI REPORT:
   - PRE-CONSTRUCTION GENERAL SITE CONDITION
   - PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
     - RAW MATERIALS
     - PHOTOS OF ALL CRITICAL DETAILS
     - FOUNDATION MODIFICATIONS
     - WELD PREPARATION
     - BOLT INSTALLATION AND TORQUE
     - FINAL INSTALLED CONDITION
     - SURFACE COATING REPAIR
   - POST CONSTRUCTION PHOTOGRAPHS
     - FINAL INFIELD CONDITION
2. PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

PREPARED BY:
FDH
6521 MERIDIEN DRIVE
RALEIGH, NC 27616
PHONE: 919-755-1012
FAX: 919-755-1031
ENGINEERING INNOVATION

PREPARED FOR:
SBA
5900 BROKEN SOUND PARKWAY, NW
BOCA RATON, FL 33487
(800) 487-SITE

06/13/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY:	OP
CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS

DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
POST CONSTRUCTION INSPECTION NOTES

SHEET NUMBER
N-1

GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL PERMITS NECESSARY TO COMPLETE THE PROJECT AND ABIDE BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY BE FOUND SHALL BE SUBMITTED TO FDH ENGINEERING FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED AREAS.
3. INCORRECTLY FABRICATED, DAMAGED, OTHERWISE MISFITTING, OR NON-CONFORMING MATERIALS AND CONDITIONS SHALL BE REPORTED TO FDH ENGINEERING PRIOR TO ANY REMEDIAL OR CORRECTIVE ACTION. ALL ACTIONS SHALL REQUIRE FDH ENGINEERING APPROVAL.
4. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AFTER THE COMPLETION OF THE PROJECT.
5. CONTRACTOR SHALL PROMPTLY REMOVE ANY & ALL DEBRIS FROM SITE AND RESTORE AS BEST AS POSSIBLE TO PRECONSTRUCTION CONDITION.

CONTRACTOR QUALIFICATION NOTES:

1. ALL REPAIRS SHALL BE PERFORMED BY A TOWER CONTRACTOR WITH A MINIMUM 5 YEARS EXPERIENCE IN TOWER ERECTION AND RETROFIT AND WITH WORKING KNOWLEDGE OF THE TIA/EIA 222-F "STRUCTURAL STANDARD FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES".
2. CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS. SHOULD THE CONTRACTOR REQUIRE DIRECT CONSULTATION, FDH ENGINEERING, INC. IS WILLING TO OFFER SERVICES BASED UPON AN AGREED FEE FOR THE WORK REQUIRED.
3. ALL SUBMITTAL INFORMATION MUST BE SENT TO FDH ENGINEERING, INC. 6521 MERIDIEN DRIVE, RALEIGH NC, 27616, TEL. (919) 755-1012, FAX. (919) 755-1031, E-MAIL INFO@FDH-INC.COM. ANY VARIATION OF THESE SPECIFICATIONS OR DRAWINGS WITHOUT CONSENT FROM FDH ENGINEERING, INC. WILL VOID ANY RESPONSIBILITY OR LIABILITY FOR DAMAGE (MATERIAL OR PHYSICAL) TOWARDS FDH ENGINEERING, INC.
4. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE TIA-1019-A STANDARD.

JOB SITE SAFETY & NOTES:

1. NEITHER THE PROFESSIONAL ACTIVITIES OF FDH ENGINEERING, INC. NOR THE PRESENCE OF FDH ENGINEERING, INC. OR EMPLOYEES AND SUB-CONSULTANTS AT THE CONSTRUCTION SITE, SHALL RELIEVE THE GENERAL CONTRACTOR AND OR SUBCONTRACTORS AND ANY OTHER ENTITY OF THEIR OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THE GENERAL CONTRACTOR AND OR SUBCONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SAFETY, AND WARRANTS THAT THIS INTENT IS EVIDENT BY ACCEPTING THIS WORK.

STEEL:

1. ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST AISC CODE AND ASTM SPECIFICATIONS.

   *ALL PLATE STEEL SHALL BE ASTM A572-65 (Fy=65KSI) UNLESS OTHERWISE SPECIFIED.

   *ALL PIPE STEEL SHALL BE ASTM A500 GR. B (Fy=42KSI) UNLESS OTHERWISE SPECIFIED.

   *ALL THREADED ROD SHALL BE ASTM A193 B7 (Fu=125 KSI) UNLESS OTHERWISE SPECIFIED.
2. ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE USING SPECIFIED WELDS WITH WELDING ELECTRODES E-70XX OR SPECIFIED HIGH STRENGTH BOLTS TO BE ASTM A325N, THREAD INCLUDED WITH SHEAR PLANE (UNLESS OTHERWISE NOTED).
3. ALL BOLTED CONNECTIONS TO BE INSTALLED TO A SNUG-TIGHTENED CONDITION IN ACCORDANCE WITH AISC 13 PART 16.2, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", SECTION 8.1, UNLESS OTHERWISE SPECIFIED. WHEN "X" TYPE BOLTS ARE USED, CONTRACTOR MAY BE REQUIRED TO STACK ADDITIONAL WASHERS TO OBTAIN PROPER SNUG TIGHT INSTALLATION. ALL NUTS SHALL BE HEAVY HEX UNLESS OTHERWISE NOTED.
4. ALL STEEL, AFTER FABRICATION, SHALL BE HOT DIPPED GALVANIZED PER ASTM A-123. ALL DAMAGED SURFACES, WELDED AREAS AND AUTHORIZED NON-GALVANIZED MEMBERS OR PARTS (EXISTING OR NEW) SHALL BE PAINTED WITH MULTIPLE COATS OF ZRC COLD GALVANIZING COMPOUND ACHEIVING A MINIMUM OF 4 MILS DRY FILM PER ASTM A 780.
5. ALL SHOP AND FIELD WELDING SHALL BE DONE BY WELDERS QUALIFIED AS DESCRIBED IN THE "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" TO PERFORM THE TYPE OF WORK REQUIRED. CONTRACTOR IS REQUIRED TO PROVIDE FDH ENGINEERING, INC. WITH A PASSING CERTIFIED WELDING INSPECTION FOR ALL WELDS.
6. STRUCTURAL STEEL MAY NOT BE TORCH CUT FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC STANDARDS.

MISC. NOTES:

1. ALL MODIFICATIONS ARE ASSUMED TO BE MADE ON AN EMPTY TOWER. CONTRACTOR IS RESPONSIBLE TO MAKE PROVISIONS TO SUPPORT OR WORK AROUND EXISTING ANTENNAS AND TRANSMISSION LINES. MODIFICATIONS MUST BE CONTINUOUS THROUGH ALL AREAS SHOWN.
2. CONTRACTOR FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

FABRICATION NOTES:

1. ALL DIMENSIONS ARE PRELIMINARY UNTIL FIELD VERIFIED BY CONTRACTOR. ANY CHANGES MUST BE APPROVED BY ENGINEER OF RECORD IN WRITING PRIOR TO FABRICATION AND INSTALLATION.
2. NEW STEEL MEMBERS MUST HAVE SINGLE DRILLED HOLES. SLOTTED AND DOUBLE DRILLED HOLES ARE NOT ACCEPTABLE MEANS OF FABRICATION.

SUBSTITUTES AND/OR EQUALS:

1. IF CONTRACTOR WISHES TO FURNISH OR USE A SUBSTITUTE ITEM OF MATERIAL OR EQUIPMENT, CONTRACTOR SHALL FIRST MAKE WRITTEN APPLICATION TO ENGINEER OF RECORD FOR ACCEPTANCE THEREOF, CERTIFYING THAT THE PROPOSED SUBSTITUTE WILL PERFORM ADEQUATELY THE FUNCTIONS AND ACHIEVE THE RESULTS CALLED FOR BY THE GENERAL DESIGN, BE SIMILAR IN SUBSTANCE TO THAT SPECIFIED AND SUITED TO THE SAME USE AS THAT SPECIFIED. ALL VARIATIONS OF THE PROPOSED SUBSTITUTE FROM THAT SPECIFIED WILL BE IDENTIFIED IN THE APPLICATION AND AVAILABLE MAINTENANCE, REPAIR AND REPLACEMENT SERVICE WILL BE INDICATED. THE APPLICATION WILL ALSO CONTAIN AN ITEMIZED ESTIMATE OF ALL COSTS OR CREDITS THAT WILL RESULT DIRECTLY OR INDIRECTLY FROM ACCEPTANCE OF SUCH SUBSTITUTE INCLUDING COSTS OF REDESIGN AND CLAIMS OF OTHER CONTRACTORS AFFECTED BY THE RESULTING CHANGE, ALL OF WHICH WILL BE CONSIDERED BY ENGINEER OF RECORD IN EVALUATION OF THE PROPOSED SUBSTITUTE. ENGINEER OF RECORD MAY REQUIRE CONTRACTOR TO FURNISH ADDITIONAL DATA ABOUT THE PROPOSED SUBSTITUTE.

SURFACE PREPARATION:

1. PREPARE SURFACE TO BE WELDED BY REMOVING PAINT OR GALVANIZATION TO BARE METAL USING POWER WIRE BRUSHING IN ACCORDANCE WITH SSPC-SP11, (STEEL STRUCTURES PAINTING COUNCIL). FOLLOWING POWER WIRE BRUSHING CONTRACTOR SHALL POLISH METAL SURFACE WITH HIGH SPEED GRINDER WITH 400+ GRIT SANDPAPER.
2. AFTER NEW STEEL INSTALLATION CONTRACTOR TO BRUSH PAINT (2) COATS OF ZRC OR ZINGA COLD GALVANIZATION COMPOUND PER MANUFACTURER'S SPECIFICATIONS.

WELDING NOTES:

1. ALL WELDING TO THE EXISTING TOWER SHALL BE PERFORMED BY CERTIFIED WELDERS UTILIZING PROCEDURES QUALIFIED IN ACCORDANCE WITH AWS D1.1 AND AWS C5.4.
2. CONTRACTOR SHALL COMPLY WITH AWS D1.1 FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". CONTRACTOR SHALL SUBMIT CERTIFICATION OF WELDERS TO THE ENGINEER PRIOR TO COMMENCEMENT OF THE WORK.
3. CONTRACTOR RESPONSIBLE FOR TEMPORARY HEAT SHIELDING AS REQUIRED DURING WELDING.
4. CONTRACTOR RESPONSIBLE FOR VIEWING EXISTING TOWER FOR LOOSE AND FLAMMABLE MATERIAL PRIOR TO WELDING FLAT PLATE.
5. ALL WELDS TO BE VISUALLY INSPECTED BY A CERTIFIED WELD INSPECTOR PER AWS D1.1.

EPOXY/HILTI NOTES:

1. EPOXY AGENTS SHOULD BE ALLOWED TO CURE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
2. ALL HARDWARE ASSEMBLY AND MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED; ANY CONTRADICTION BETWEEN THE MANUFACTURER'S RECOMMENDATIONS AND THESE DRAWINGS ARE TO BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER AND OWNER.
3. ANY CONTRACTOR INSTALLING ADHESIVE ANCHORING SYSTEMS SHALL BE TRAINED, IN PERSON BY A MANUFACTURER'S REPRESENTATIVE, ON THE PROPER INSTALLATION TECHNIQUES. THIS TRAINING SHALL INCLUDE PROPER DRILLING, HOLE CLEANING, AND INSTALLATION METHODS FOR THE ADHESIVE ANCHORING SYSTEM AND CONSTRUCTION CONDITIONS ON THIS PROJECT. ALL TRAINING TO BE CONDUCTED PRIOR TO CREWS STEPPING ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT MANUFACTURER REPRESENTATIVE TO SET UP TRAINING. FDH IS NOT RESPONSIBLE FOR ANY COST OCCURRED FOR OR DURING ADHESIVE ANCHORING SYSTEM TRAINING.

ANCHOR ROD INSTALLATION NOTES:

1. CONTRACTOR TO PROVIDE PHOTOS OF THE ANCHOR ROD HOLES TO FDH CONSTRUCTION MANAGER PRIOR TO INSTALLING NEW ANCHOR RODS. PHOTOS MUST SHOW THE DEPTH AND DIAMETER OF ANCHOR ROD HOLES.

PULLOUT TESTING OF POST INSTALLED ANCHOR RODS:

1. EPOXY AGENTS SHOULD BE ALLOWED TO CURE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
2. CONTRACTOR SHALL ENSURE THAT CONSTRUCTION DOES NOT GO BEYOND POINT WHERE THE ANCHOR RODS CAN BE EFFECTIVELY TESTED. THE ANCHOR ROD SLEEVES AND TRANSFER PLATES SHOULD BE INSTALLED AFTER PULL-TESTING IS PERFORMED. CONTRUCTION MAY PROCEED AFTER TESTING IS COMPLETED.
3. 50% OF POST INSTALLED ANCHOR RODS SHALL BE TESTED OR A TOTAL OF 4, WHICHEVER IS GREATER.
4. THE ANCHOR ROD SHALL BE TESTED TO A TARGET TENSION OF 80% OF THE MATERIAL MINIMUM YIELD (Fy) STRENGTH ON THE NET AREA THROUGH THREADS. THE TARGET TENSION FOR THIS PULL TEST IS 256K.
5. MAINTAIN COMPLETE LOAD-DISPLACEMENT RECORDS THROUGHOUT THE TEST. LOAD THE ANCHOR IN INCREMENTS OF UP TO 15% OF THE TARGET TENSION.
6. STATIC LOAD TEST SHALL BE PERFORMED PER ASTM E488-96 (REAPPROVED 2003).
7. IF A DISPLACEMENT GREATER THAN 0.010" REMAINS AFTER THE INITIAL TEST CYCLE, ADDITIONAL TEST SHALL BE PERFORMED UP TO A MAXIMUM OF 4 TEST CYCLES TO DETERMINE IF THE MOVEMENT CONTINUES TO ACCUMULATE. INCREMENTAL RESIDUAL MOVEMENT RECORDED FROM EACH TEST CYCLE MUST BE DECREASING IN VALUE AND STABILIZE TO A VALUE NO MORE THAN 0.010", OTHERWISE THE ANCHOR SHALL BE CONSIDERED TO FAIL THE TEST. TOTAL RESIDUAL MOVEMENT SHALL NOT BE GREATER THAN 0.10" OR THE ANCHOR SHALL BE CONSIDERED TO FAIL THE TEST.
8. THIS INFORMATION SHALL BE DOCUMENTED AND INCLUDED IN THE POST MODIFICATION INSPECTION REPORT.
9. CONTACT FDH ENGINEERING, INC. IF ANY OF THE ANCHORS FAIL THE PULL TEST.
10. ALL HARDWARE ASSEMBLY AND MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED; ANY CONTRADICTION BETWEEN THE MANUFACTURER'S RECOMMENDATIONS AND THESE DRAWINGS ARE TO BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER AND OWNER.
11. ANY CONTRACTOR INSTALLING ADHESIVE ANCHORING SYSTEMS SHALL BE TRAINED, IN PERSON BY A MANUFACTURER'S REPRESENTATIVE, ON THE PROPER INSTALLATION TECHNIQUES. THIS TRAINING SHALL INCLUDE PROPER DRILLING, HOLE CLEANING, AND INSTALLATION METHODS FOR THE ADHESIVE ANCHORING SYSTEM AND CONSTRUCTION CONDITIONS ON THIS PROJECT. ALL TRAINING TO BE CONDUCTED PRIOR TO CREWS STEPPING ON SITE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT MANUFACTURER REPRESENTATIVE TO SET UP TRAINING. FDH IS NOT RESPONSIBLE FOR ANY COST OCCURRED FOR OR DURING ADHESIVE ANCHORING SYSTEM TRAINING.

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LICENSED PROFESSIONAL ENGINEER

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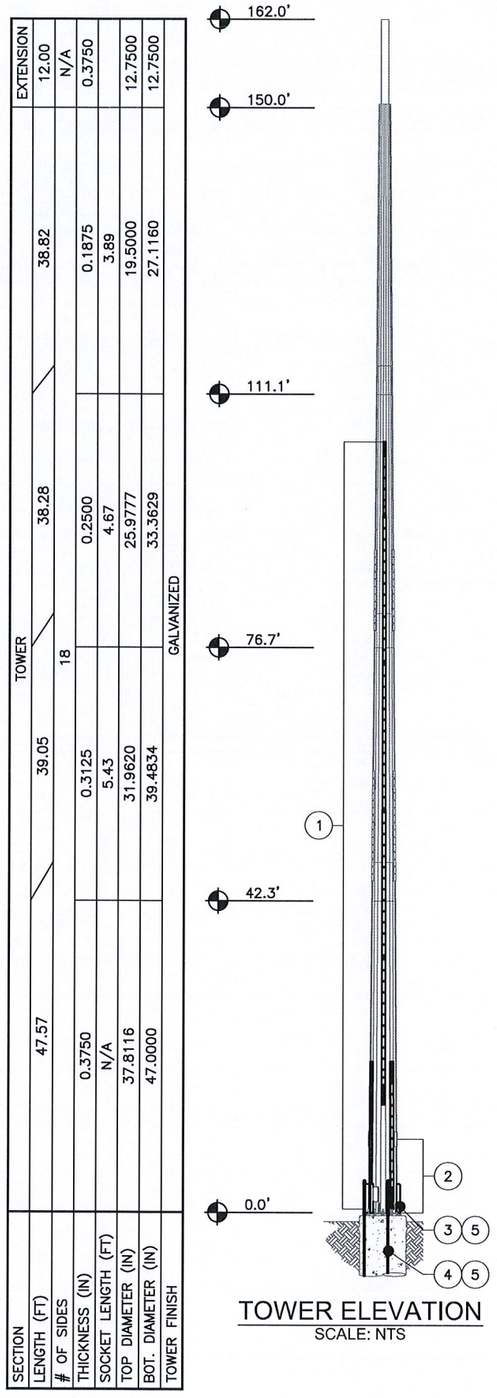
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
N-2



TOWER ELEVATION
SCALE: NTS

- APPURTENANCES MAY INTERFERE WITH PROPOSED MODIFICATIONS.
- ALL MODIFICATIONS TO BE INSTALLED CONTINUOUSLY THROUGH EXISTING EQUIPMENT. ALL EXISTING EQUIPMENT NOT TO BE DAMAGED OR TAKEN OFF AIR DURING INSTALLATION.
- ANTENNA GRAPHICS NOT SHOWN FOR CLARITY. SEE STRUCTURAL ANALYSIS REPORT FOR EXISTING ANTENNA LOADING.

TOWER MODIFICATION SCHEDULE

NO.	TYPE OF MODIFICATION	BOTTOM ELEV. (FT)	TOP ELEV. (FT)
1	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-5 FOR DETAILS.	0.5±	104.7±
2	REMOVAL OF EXISTING CHANNEL MONOPOLE REINFORCEMENT. SEE S-3 FOR DETAILS.	0.0±	10.0±
3	INSTALLATION OF NEW TRANSFER STIFFENER REINFORCEMENT. SEE S-6 FOR DETAILS.	0.0±	3.8±
4	INSTALLATION OF NEW ANCHOR RODS. SEE S-7 & S-8 FOR DETAILS.	-12.2±	4.3±
5	REMOVAL OF EXISTING STIFFENERS. SEE S-6 & S-7 FOR DETAILS.	0.0±	1.5±

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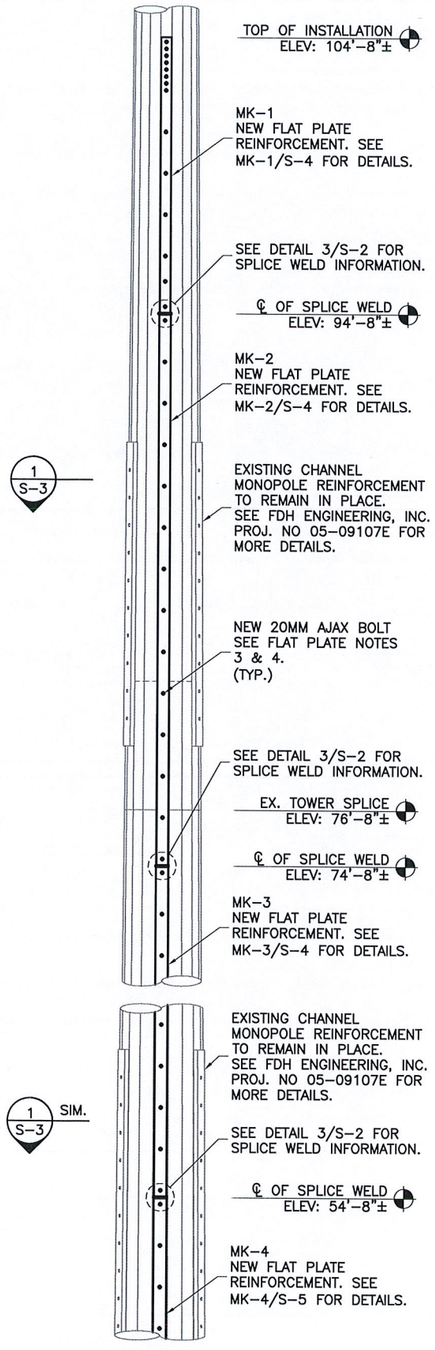
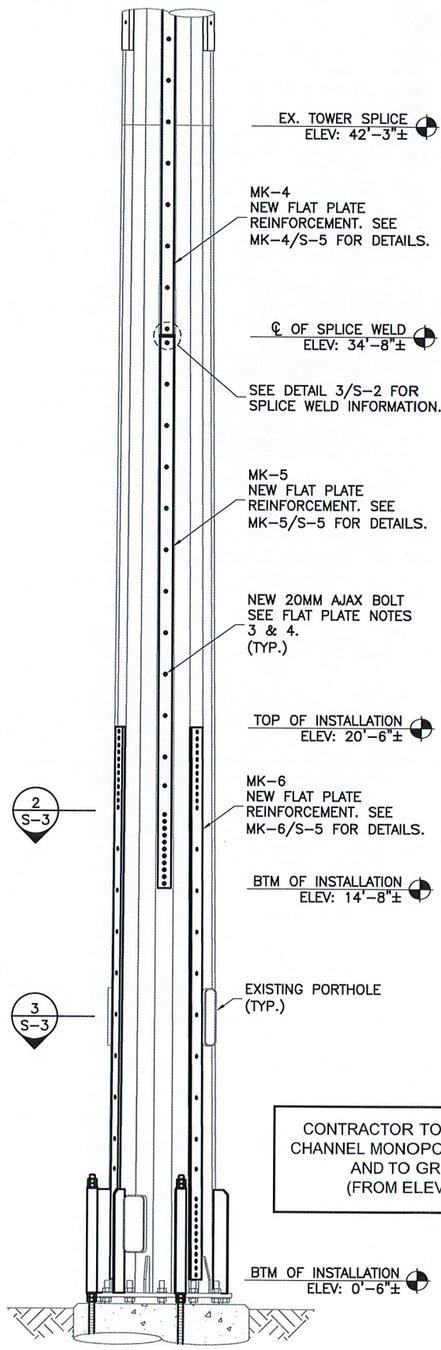
SHEET TITLE
MODIFICATION SCHEDULE

SHEET NUMBER
S-1



FLAT PLATE REINFORCEMENT LAYOUT
ELEVATION VIEW

1 S-2 **ELEVATION**
SCALE: 3/16" = 1'-0"



CONTRACTOR TO REMOVE EXISTING CHANNEL MONOPOLE REINFORCEMENT AND TO GRIND SMOOTH. (FROM ELEV: 0.0' TO 10.0')

FLAT PLATE REINFORCEMENT LAYOUT
ELEVATION VIEW

2 S-2 **ELEVATION**
SCALE: 3/16" = 1'-0"

FLAT PLATE INSTALLATION SCHEDULE

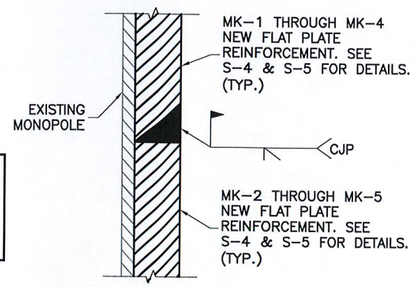
PART #	QTY.	DESCRIPTION	ELEVATION
MK-1	3	FLAT PLATE REINFORCEMENT	94'-8"± TO 104'-8"±
MK-2	3	FLAT PLATE REINFORCEMENT	74'-8"± TO 94'-8"±
MK-3	3	FLAT PLATE REINFORCEMENT	54'-8"± TO 74'-8"±
MK-4	3	FLAT PLATE REINFORCEMENT	34'-8"± TO 54'-8"±
MK-5	3	FLAT PLATE REINFORCEMENT	14'-8"± TO 34'-8"±
MK-6	3	FLAT PLATE REINFORCEMENT	0'-6"± TO 20'-6"±
–	336	20MM AJAX BOLTS	VARIES
ALL NEW FLAT PLATE STEEL TO HAVE Fy=65 KSI			

NEW FLAT PLATE REINFORCEMENT NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED LOCATION OF FLAT PLATE TO ENSURE THAT PROPER SPACING CAN BE MET.
2. CONTRACTOR TO REPLACE AND/OR RELOCATE ANY CLIMBING PEGS THAT INTERFERE WITH THE INSTALLATION OF FLAT PLATE.
3. ALL AJAX CONNECTIONS TO USE HIGH TENSILE SLEEVE PROVIDED BY MANUFACTURER. AJAX BOLT ASSEMBLY TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS. SEE AJAX BOLT ASSEMBLY DETAIL 4/S-2.
4. ALL SHEAR SLEEVES TO BE HOT DIPPED GALVANIZED PRIOR TO INSTALLATION.

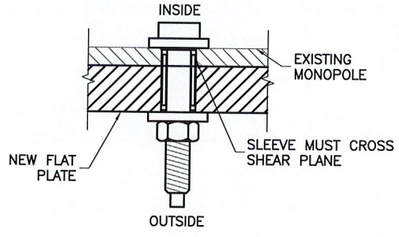
CONSTRUCTION NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED FLAT PLATE LAYOUT PRIOR TO CONSTRUCTION. IF ISSUES ARE PRESENT IN THE FIT OF THE FLAT PLATE, CONTRACTOR TO CONTACT ENGINEER OF RECORD OR FDH ENGINEERING PROJECT MANAGER PRIOR TO PROCEEDING WITH PROPOSED MODIFICATION OR FABRICATION.



SPLICE WELDING
ELEVATION VIEW

3 S-2 **SECTION**
NTS



AJAX BOLT ASSEMBLY
PLAN VIEW

4 S-2 **DETAIL**
NTS

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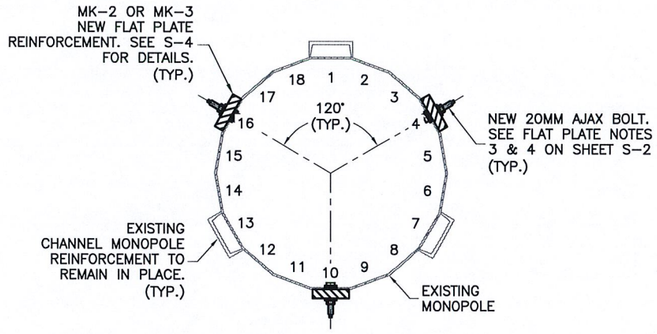
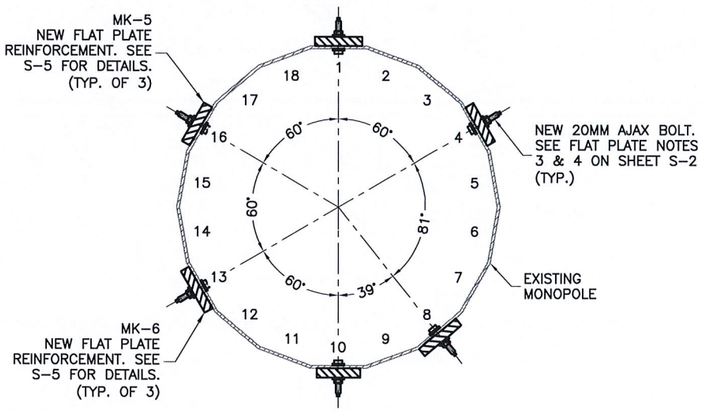
FLAT PLATE REINFORCEMENT DETAILS I

SHEET NUMBER
S-2



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

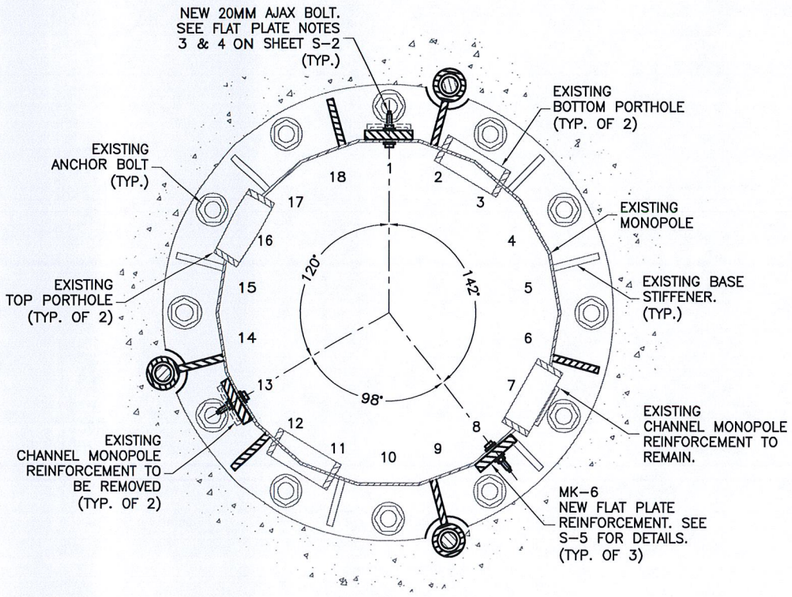
1 / S-3 SECTION
NTS



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

2 / S-3 SECTION
NTS

CONTRACTOR TO REMOVE EXISTING
CHANNEL MONOPOLE REINFORCEMENT
AND TO GRIND SMOOTH.
(FROM ELEV: 0.0' TO 10.0')



NEW FLAT PLATE REINFORCEMENT LAYOUT
SECTION VIEW

3 / S-3 SECTION
NTS

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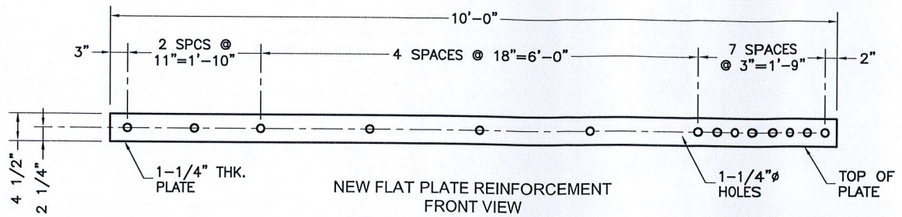
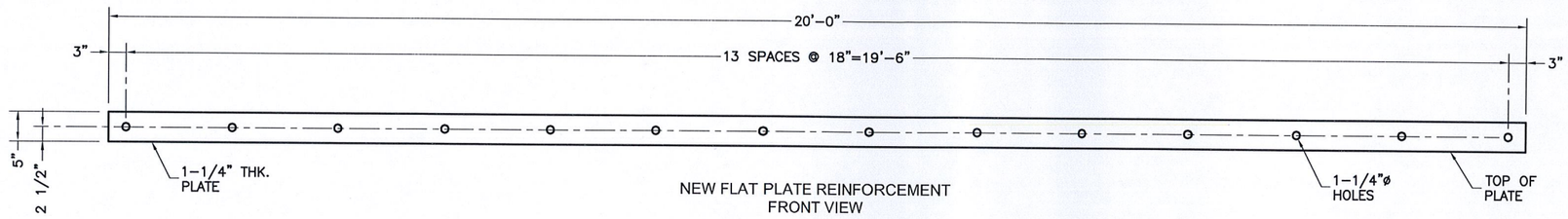
FLAT PLATE REINFORCEMENT
DETAILS II

SHEET NUMBER
S-3



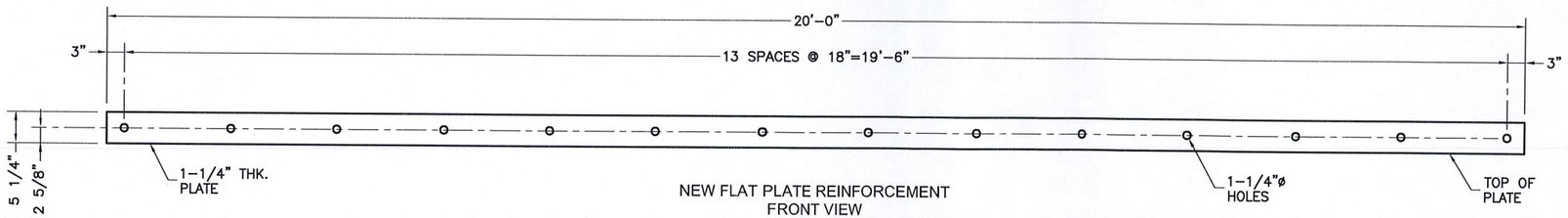
NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-1 / S-4 **DETAIL**
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-2 / S-4 **DETAIL**
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-3 / S-4 **DETAIL**
SCALE: 1/2" = 1'-0"

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STATE OF CONNECTICUT
Christopher Michael Murphy
No. 25842
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06/13/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

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CHECKED BY:	HWJ
ENG APPV'D:	CMM
PROJECT NO:	1320001400

SUBMITTALS		
DATE	DESCRIPTION	REV
04/16/13	PRELIMINARY/REVIEW	A
06/13/13	CONSTRUCTION	1

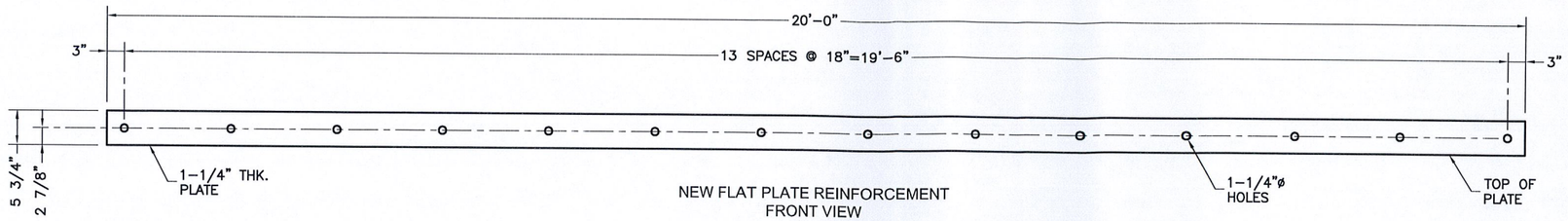
SITE NAME:
E-PROSPECT

SITE NUMBER:
CT02694-B-04

SITE ADDRESS:
229 CHESHIRE ROAD
PROSPECT, CT 06712-1746

SHEET TITLE
FLAT PLATE
DETAILS I

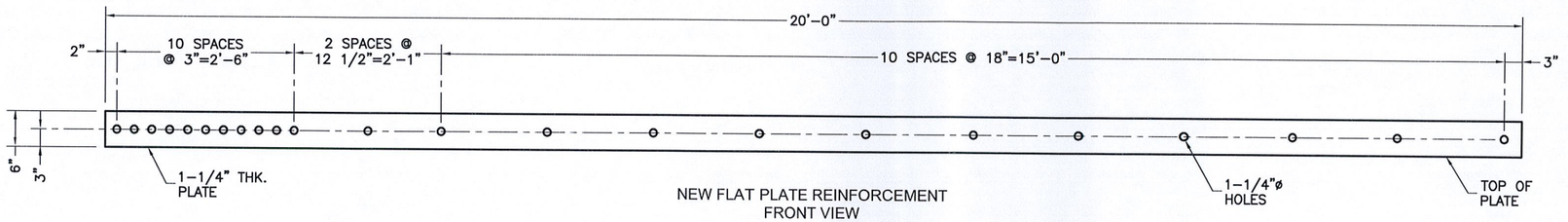
SHEET NUMBER
S-4



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-4 / S-5 **DETAIL**

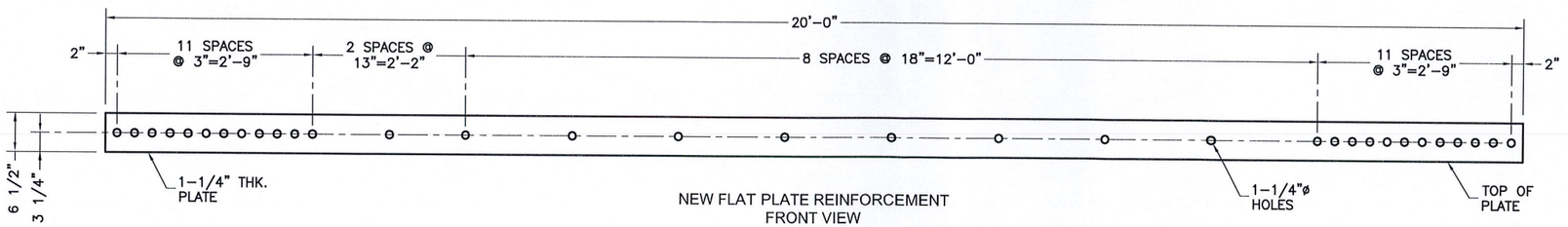
SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-5 / S-5 **DETAIL**

SCALE: 1/2" = 1'-0"



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-6 / S-5 **DETAIL**

SCALE: 1/2" = 1'-0"

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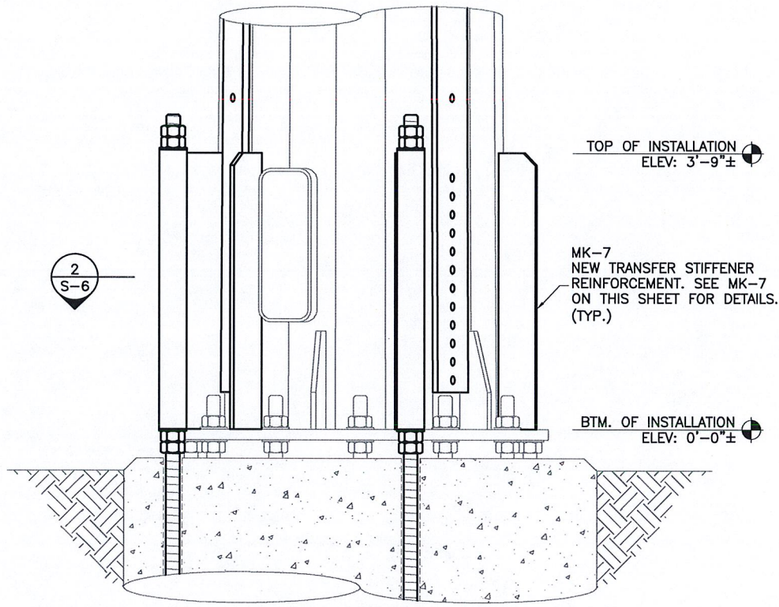
SHEET TITLE
FLAT PLATE
DETAILS II

SHEET NUMBER
S-5



NEW TRANSFER STIFFENER LAYOUT
ELEVATION VIEW

1 / S-6 — ELEVATION
SCALE: 1/2" = 1'-0"

TRANSFER STIFFENER INSTALLATION SCHEDULE

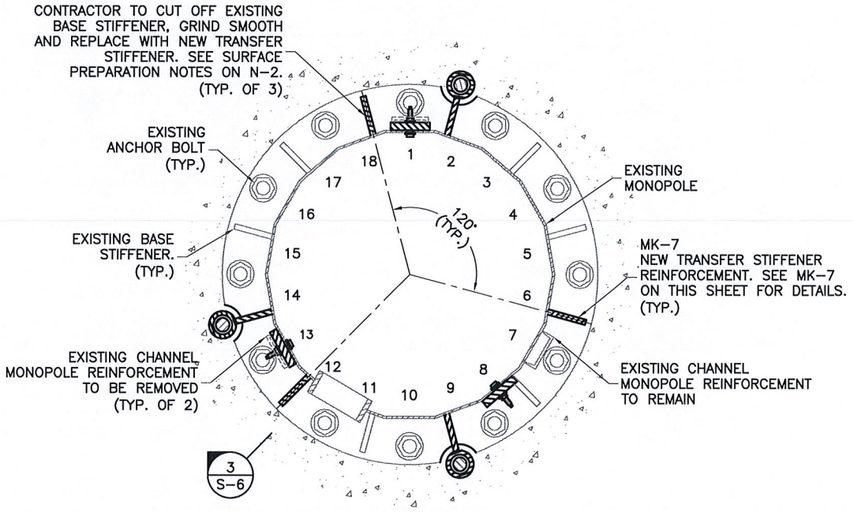
PART. NO	QUANTITY	DESCRIPTION	ELEVATION
MK-7	3	TRANSFER STIFFENER	0'-0"± TO 3'-9"±
ALL NEW TRANSFER STIFFENER STEEL TO HAVE Fy=65 KSI			

NEW TRANSFER STIFFENER REINFORCEMENT NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED LOCATION OF TRANSFER STIFFENER TO ENSURE THAT PROPER SPACING CAN BE MET.
2. CONTRACTOR TO REPLACE AND/OR RELOCATE ANY CLIMBING PEGS THAT INTERFERE WITH THE INSTALLATION OF TRANSFER STIFFENER.

CONSTRUCTION NOTES:

1. CONTRACTOR TO FIELD VERIFY PROPOSED TRANSFER STIFFENER LAYOUT PRIOR TO CONSTRUCTION. IF ISSUES ARE PRESENT IN THE FIT OF THE TRANSFER STIFFENER, CONTRACTOR TO CONTACT ENGINEER OF RECORD OR FDH ENGINEERING PROJECT MANAGER PRIOR TO PROCEEDING WITH PROPOSED MODIFICATION OR FABRICATION.



NEW TRANSFER STIFFENER LAYOUT
PLAN VIEW

2 / S-6 — SECTION
SCALE: 1/2" = 1'-0"

NEW TRANSFER STIFFENER WELD DETAIL
FRONT VIEW

3 / S-6 — DETAIL
NTS

NEW TRANSFER STIFFENER
FRONT VIEW

MK-7 / S-6 — DETAIL
SCALE: 1" = 1'-0"

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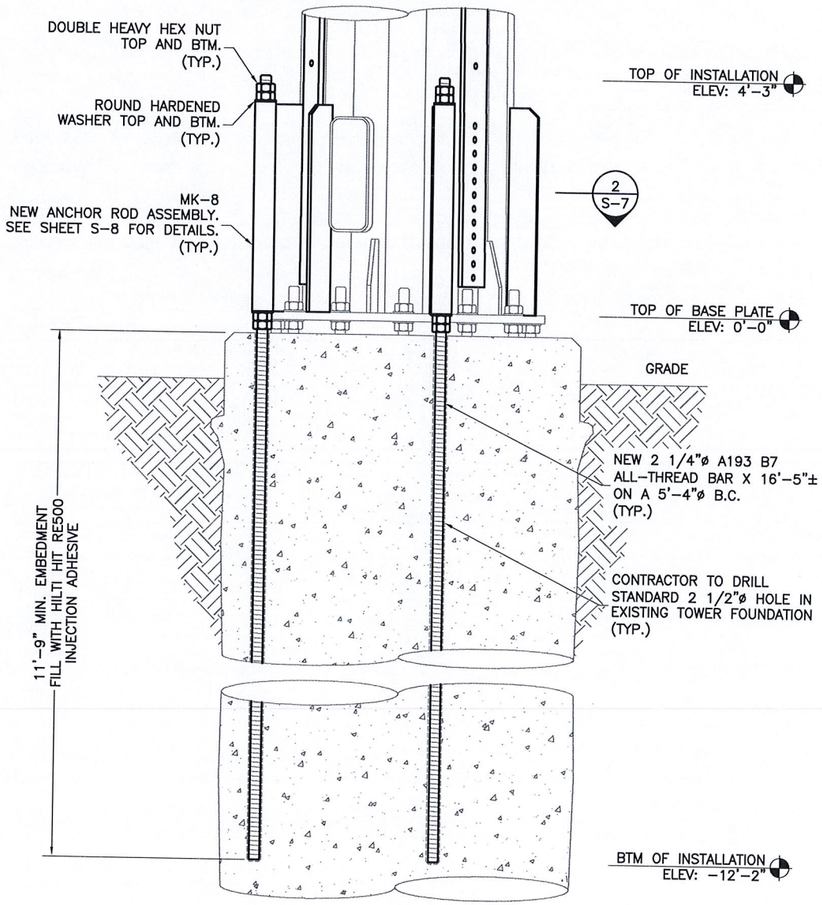
SHEET TITLE
TRANSFER STIFFENER
REINFORCEMENT
DETAILS

SHEET NUMBER
S-6

CONTRACTOR TO PROVIDE PHOTOS OF THE ANCHOR ROD HOLES TO FDH CONSTRUCTION MANAGER PRIOR TO INSTALLING NEW ANCHOR RODS. PHOTOS MUST SHOW THE DEPTH AND DIAMETER OF ANCHOR ROD HOLES.

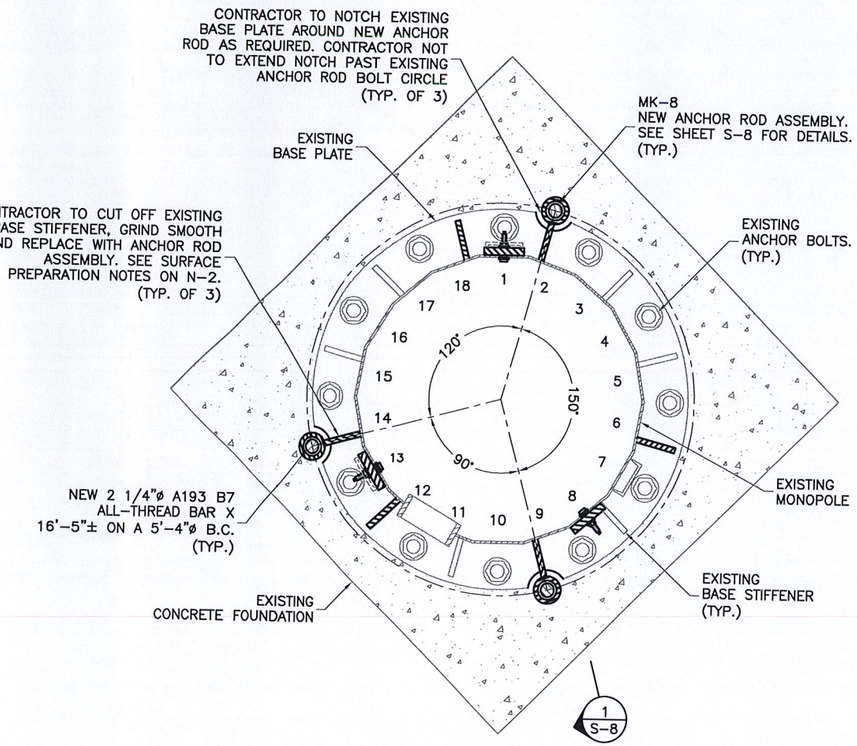
PISTON PLUGS TO BE USED IN ALL INJECTION ADHESIVE APPLICATIONS



ANCHOR ROD LAYOUT
FRONT VIEW

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

ANCHOR ROD MATERIAL LIST			
PART. NO	QTY.	DESCRIPTION	ELEVATION
MK-8	3	ANCHOR ROD ASSEMBLY	0'-0"± TO 3'-9"±
–	3	NEW 2 1/4"ø A193 B7 ALL THREADBAR X 16'-5"±	-12'-2"± TO 4'-3"±
–	6	ROUND HARDENED WASHER	–
–	12	HEAVY HEX NUT	–



ANCHOR ROD LAYOUT
PLAN VIEW

2 S-7 **SECTION**
SCALE: 1/2" = 1'-0"

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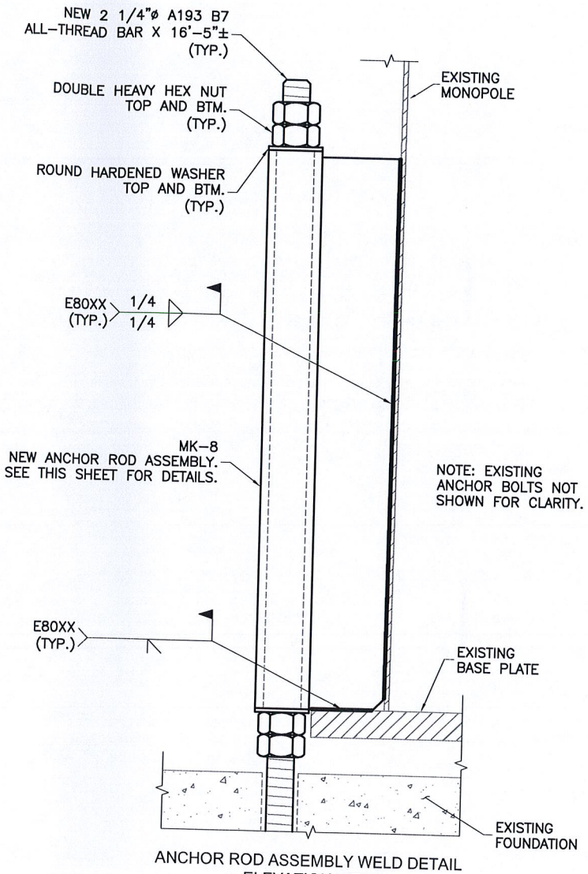
SHEET TITLE
ANCHOR ROD
INSTALLATION DETAILS I

SHEET NUMBER
S-7

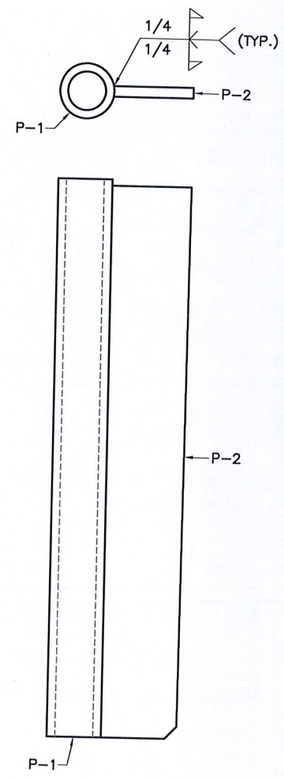


ANCHOR ROD ASSEMBLY WELD DETAIL
ELEVATION VIEW

1 / S-8 ELEVATION

SCALE: 1-1/2" = 1'-0"

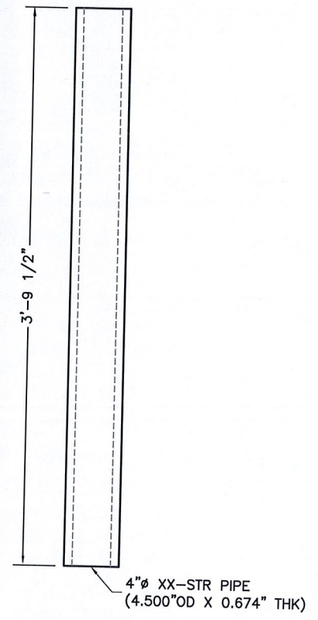
MATERIAL LIST (MK-8)		
PART. NO.	QTY.	DESCRIPTION
P-1	3	ANCHOR ROD SLEEVE
P-2	3	TRANSFER PLATE



ANCHOR ROD ASSEMBLY
TOP & SIDE VIEW

MK-8 / S-8 SECTION

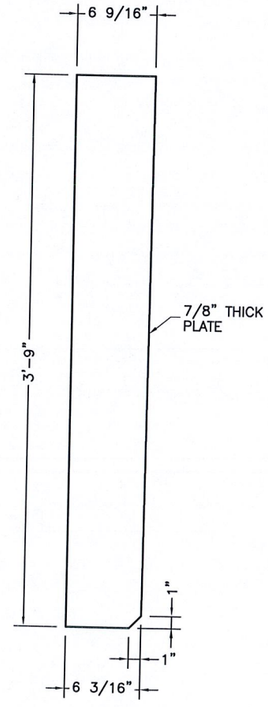
SCALE: 1-1/2" = 1'-0"



ANCHOR ROD SLEEVE
SIDE VIEW

P-1 / S-8 DETAIL

SCALE: 1-1/2" = 1'-0"



TRANSFER PLATE
SIDE VIEW

P-2 / S-8 DETAIL

SCALE: 1-1/2" = 1'-0"

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SHEET TITLE
ANCHOR ROD
INSTALLATION DETAILS II

SHEET NUMBER
S-8