

SBA

EM-SPRINT-056-130709

July 8, 2013

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

ORIGINALRECEIVED
JUL - 9 2013CONNECTICUT
SITING COUNCIL

RE: Notice of Exempt Modification
15 North Granby Road
Granby, CT 06035
N 41° 57' 12.89"
W 72° 47' 37.44"

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 15 North Granby Road, Granby, CT.

The 15 North Granby Road facility consists of a 150' MONOPOLE Tower owned and operated by SBA 2012 TC Assets, 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 the 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,

A handwritten signature in blue ink, appearing to read "Rick Woods".

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@sbsite.com



Sprint Spectrum Equipment Modification

15 North Granby Road, Granby, CT
Site number CT33XC563

Tower Owner: SBA 2012 TC Assets, LLC

Equipment Configuration: MONOPOLE Tower

Current and/or approved:

- 4.0 Modcell
- BBU Cabinet
- CDMA Antennas and Coax
- GPS Unit
- Local Exchange Carrier Landline Backhaul Facilities

Planned Modifications:

- Replace existing 4.0 Modcell with another
- Replace existing BBU cabinet with another
- Install (1) Fiber Distribution Box
- Replace existing CDMA Antennas with (3) Network Vision Antennas
- Install (6) RRHs on proposed collar mount
- Install (3) Hybriflex cables (Remove Existing CDMA Coax Cables)
- Replace existing GPS unit with new GPS unit
- Replace existing local exchange carrier landline backhaul facilities with proposed alternative access vendor fiber optic facilities incl. proposed overhead/underground conduits and network interface device

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 15.801% of the allowable FCC established general public limit. The anticipated composite MPE value for this site assuming all carriers present is 76.861% of the allowable FCC established general public limit sampled at the ground level.

Site Composite MPE %	
Carrier	MPE %
Sprint	15.801%
AT&T	6.830%
Pocket	6.810%
Nextel	2.540%
T-Mobile	1.920%
Town	42.960%
Total Site MPE %	76.861%

July 8, 2013

Mr. William F. Smith, Jr.
Town Manager
Town of Granby
Granby Town Hall
15 North Granby Road
Granby, CT 06035

COPY

RE: Telecommunications Facility @ 15 North Granby Rd, Granby, CT

Dear Mr. Smith,

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@sbsite.com



FDH Engineering, Inc., 6521 Meriden Drive Raleigh, NC 27616, Ph. 919.755.1012

**Structural Analysis for
SBA Network Services, Inc.**

150' Monopole Tower

**SBA Site Name: Granby-N. Granby
SBA Site ID: CT46134-A-03
Sprint Site ID: CT33XC563
Sprint Site Name: Granby Monopole**

FDH Project Number 1331731400

Analysis Results

Tower Components	98.2%	Sufficient
Foundation	81.4%	Sufficient

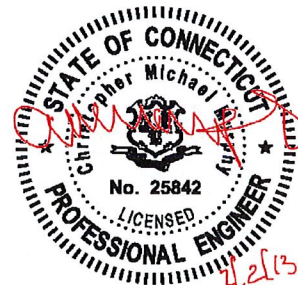
Prepared By:

David Zambrano, EI
Project Engineer

Reviewed By:

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

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



July 2, 2013

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

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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 Granby, 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, foundation dimensions, geotechnical data, and member sizes was obtained from:

- Seeman Engineering Solutions, LLC (Site No. CT2010) 150ft EEI Monopole Structural Analysis dated October 29, 2008
- Seeman Engineering Solutions, LLC (Site No. CT2010) Baseplate Modification Package dated February 6, 2009
- Engineered Endeavors, Inc. (Job No. 3934) 150' Monopole Structure & Foundation Design Calculations dated June 26, 1998
- Tectonic Engineering Solutions, P.C. (W.O No. 1170.C938) Subsurface Investigation Report dated June 18, 1998
- Vertical Solutions, Inc. (Project No. 121657 Rev. 0) Rigorous Structural Analysis dated September 7, 2012
- Vertical Solutions, Inc. (Site No. CT2010) Modification Drawings for a 150' Monopole dated September 7, 2012
- FDH Engineering, Inc. (Project No. 1331731400) Modification Drawings for a 150' Monopole Tower dated May 29, 2013
- SBA Network Services, Inc.

The *basic design wind speed* per the *TIA/EIA-222-F* standards and *2005 CBC* is 80 mph without ice and 38 mph with 1" radial ice. Ice is considered to increase in thickness with height.

Conclusions

With the existing and proposed antennas from Sprint in place at 126 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 Engineered Endeavors, Inc. Job No. 3934) and given the soil parameters (see Tectonic Engineering Solutions, P.C. W.O No. 1170.C938), the foundation should have the necessary capacity to support both the proposed and existing loading. For a more detailed description of the analysis of the tower, see the **Results** section of this report. 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 inside the pole's shaft.
2. RRU/RRH Stipulation: The proposed equipment may be installed in any arrangement as determined by the client.
3. Modifications listed in FDH Engineering, Inc. (Project No. 1331731400) Modification Drawings for a 150' Monopole Tower must be correctly installed in order 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
159	(1) 18' Omni	(3) 1/2"	Town of Granby	150	(1) Low Profile Platform
155	(1) 10' Omni				
150.7	(9) Andrew DB844H90E-XY	(9) 1-1/4"	Sprint/Nextel		
150	(1) 10' Dipole (1) 3' Yagi	(1) 7/8"	Town of Granby		
138 ²	(3) Powerwave P65-17-XLH-RR (6) Ericsson RRUS-11 RRUs (6) Powerwave 7770.00 (6) Powerwave LGP21401 TMAs (6) Powerwave LGP21903 Diplexers	(12) 1-1/4" (3) Fiber Cables	AT&T	138	(1) Low Profile Platform
126	(12) ALP 9011	(12) 1-5/8"	Sprint	126	(1) Low Profile Platform
115	(3) EMS RR65-18-02DP (3) TMAs	(6) 1-5/8"	T-Mobile	115	Flush Mounted
100	(3) Kathrein 742 213	(6) 1-5/8"	Pocket Communications	100	Flush Mounted
80	---	---	---	80	(1) Empty Standoff

1. Coax installed inside the pole's shaft unless otherwise noted.
2. AT&T has (3) Fiber Cables installed inside (1) 3" Conduit to 138 ft.

Proposed Loading:

Antenna Elevation (ft)	Description	Coax and Lines	Carrier	Mount Elevation (ft)	Mount Type
126	(3) RFS APXVSP18-C-A20 (3) Alcatel Lucent 1900 MHz RRUs (3) Alcatel Lucent 800 MHz RRUs (3) Alcatel Lucent 800 MHz Filters (4) RFS ACU-A20-N RETs	(3) 1-1/4" Fiber	Sprint	126	(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
Base Plate	60 ksi
Anchor Bolts	75 ksi
Flat Plate Modifications	50 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. *Note: Capacities up to 100% are considered acceptable.* **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	150 – 111.213	Pole	TP24.48x17.5x0.188	90.5	Pass
L2	111.213 – 98	Pole	TP30.29x23.4592x0.25	97.5	Pass
	98 – 76.836	Modified Pole	TP30.29x23.4592x0.25	97.5	Pass
L3	76.836 – 43.499	Modified Pole	TP35.79x29.0103x0.313	98.0	Pass
L4	43.499 – 0	Modified Pole	TP43x34.2641x0.375	79.8	Pass
		Anchor Bolts	(12) 2.25"Ø w/ BC=51"	81.1	Pass
			(3) 2.25"Ø w/ BC=58"	92.4	Pass
		Base Plate	57"Ø PL x 1.75" thk	98.2	Pass

*Capacities include a 1/3 allowable stress increase for wind.

Table 4 - Maximum Base Reactions

Base Reactions	Current Analysis* (TIA/EIA-222-F)	Original Design (TIA/EIA-222-F)
Axial	39 k	22 k
Shear	26 k	22 k
Moment	2,704 k-ft	2,128 k-ft

* Foundation determined to be adequate per independent analysis.

GENERAL COMMENTS

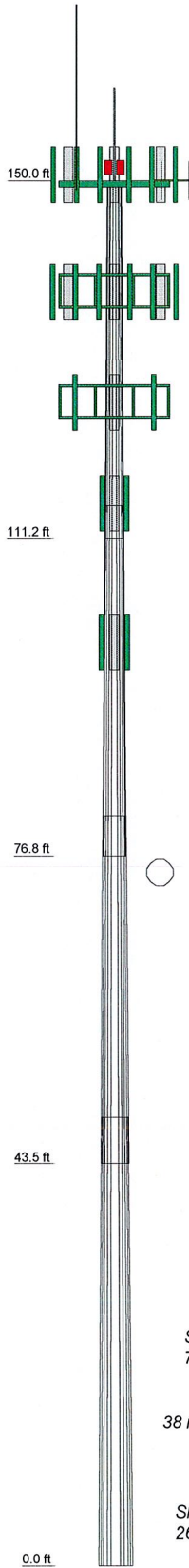
This engineering analysis is based upon the theoretical capacity of the structure. It is not a condition assessment of the tower and its foundation. It is the responsibility of SBA Network Services, Inc. to verify that the tower modeled and analyzed is the correct structure (with accurate antenna loading 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	A572-65	16.2
Length (ft)	38.79	37.96	37.67	48.50		7.6
Number of Sides	12	12	12	12		7.6
Thickness (in)	0.1875	0.2500	0.3125	0.3750		7.6
Socket Length (ft)	3.58	4.33	5.00	34.2895		7.6
Top Dia (in)	17.5000	23.4602	29.0636	34.2895		7.6
Bot Dia (in)	24.4800	30.3500	35.8100	43.0000		7.6
Grade						
Weight (K)	1.7	2.8	4.1	7.6		7.6



DESIGNED APPURTENANCE LOADING

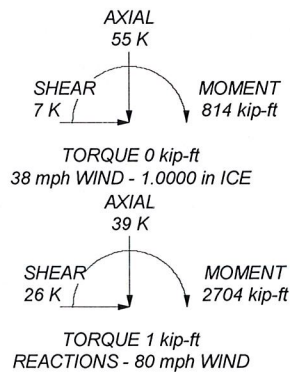
TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	150	APXVSP18-C-A20 w/Mount Pipe	126
Beacon	150	APXVSP18-C-A20 w/Mount Pipe	126
Beacon	150	APXVSP18-C-A20 w/Mount Pipe	126
(3) DB844H90E-XY w/ Mount Pipe	150	1900 MHz RRH	126
(3) DB844H90E-XY w/ Mount Pipe	150	1900 MHz RRH	126
(3) DB844H90E-XY w/ Mount Pipe	150	1900 MHz RRH	126
10' Dipole	150	800 MHz RRH	126
3' Yagi	150	800 MHz RRH	126
18' Omni	150	800 MHz RRH	126
10' Omni	150	800 MHz Filter	126
(1) Low Profile Platform	150	800 MHz Filter	126
P65-17-XLH-RR w/Mount Pipe	138	800 MHz Filter	126
P65-17-XLH-RR w/Mount Pipe	138	(2) ACU-A20-N RET	126
P65-17-XLH-RR w/Mount Pipe	138	ACU-A20-N RET	126
(2) RRUS-11	138	(1) Low Profile Platform	126
(2) RRUS-11	138	RR65-18-02DP w/Mount Pipe	115
(2) 7770.00 w/Mount Pipe	138	RR65-18-02DP w/Mount Pipe	115
(2) 7770.00 w/Mount Pipe	138	RR65-18-02DP w/Mount Pipe	115
(2) 7770.00 w/Mount Pipe	138	TMA	115
(2) LGP21401 TMA	138	TMA	115
(2) LGP21401 TMA	138	TMA	115
(2) LGP21903 Diplexer	138	742 213 w/ Mount Pipe	100
(2) LGP21903 Diplexer	138	742 213 w/ Mount Pipe	100
(2) LGP21903 Diplexer	138	742 213 w/ Mount Pipe	100
(2) LGP21903 Diplexer	138	(1) Standoff	80
(1) Low Profile Platform	138		


MATERIAL STRENGTH

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

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.



 Tower Analysis	FDH Engineering, Inc. 6521 Meridien Drive Raleigh, NC 27616 Phone: 9197551012 FAX: 9197551031		Job: Granby-N. Granby CT46134-A-03 Project: 1331731400		
	Client: SBA	Drawn by: David Zambrano	App'd:		
	Code: TIA/EIA-222-F	Date: 07/02/13	Scale: NTS		
	Path:		Dwg No. E-1		



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

Sprint Existing Facility

Site ID: CT33XC563

Granby Monopole
15 North Granby Road
Granby, CT 06035

October 31, 2012



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October 31, 2012

Sprint

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

Re: Emissions Values for Site: **CT33XC563 – Granby Monopole**

EBI Consulting was directed to analyze the proposed upgrades to the existing Sprint facility located at 15 North Granby Road, Granby, 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ 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 ($\mu\text{W}/\text{cm}^2$). The general population exposure limit for the cellular band is approximately $567 \mu\text{W}/\text{cm}^2$, and the general population exposure limit for the PCS band is $1000 \mu\text{W}/\text{cm}^2$. 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.



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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 15 North Granby Road, Granby, 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) 2 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 APXVSP18-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.



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- 6) The antenna mounting height centerline of the proposed antennas is **125 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	CT33XC563 - Granby Monopole
Site Address	15 North Granby Road, Granby, CT, 06035
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 (dBi)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
1a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	125	119	1/2"	0.5	0	1386.9474	35.21049	3.52105%
1a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	125	119	1/2"	0.5	0	389.96892	9.900156	1.74606%
Sector total Power Density Value:													5.267%				

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 (dBi)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
2a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	125	119	1/2"	0.5	0	1386.9474	35.21049	3.52105%
2a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	125	119	1/2"	0.5	0	389.96892	9.900156	1.74606%
Sector total Power Density Value:													5.267%				

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 (dBi)	Antenna Height (ft)	Antenna analysis height	Cable Size	Cable Loss (dB)	Additional Loss	ERP	Power Density Value	Power Density Percentage
3a	RFS	APXVSP18-C-A20	RRH	1900 MHz	CDMA / LTE	20	2	40	15.9	125	119	1/2"	0.5	0	1386.9474	35.21049	3.52105%
3a	RFS	APXVSP18-C-A20	RRH	850 MHz	CDMA / LTE	20	1	20	13.4	125	119	1/2"	0.5	0	389.96892	9.900156	1.74606%
Sector total Power Density Value:													5.267%				

Site Composite MPE %	
Carrier	MPE %
Sprint	15.801%
AT&T	6.830%
Pocket	6.810%
Nextel	2.540%
T-Mobile	1.920%
Town	42.960%
Total Site MPE %	76.8651%



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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 **15.801% (5.267% 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 **76.861%** 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

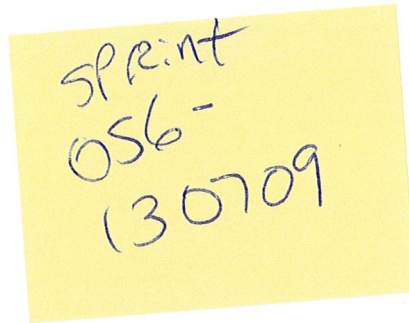



SBA

August 06, 2014

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

RE: Notice of Work Complete
15 North Granby Road
Granby, CT 06035
Sprint Site #: NV_CT33XC563



Dear 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 26, 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,

A handwritten signature in black ink, appearing to read "Peter Nute".

Peter Nute
SBA Communications Corporation
33 Boston Post Road West Suite 320
Marlborough, MA 01752
508-251-0720 x 3807 + T
508-251-1755 + F
pnute@sbsite.com



ENGINEERING INNOVATION

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

July 2, 2014

Stephen Roth
Regional Site Manager
SBA Network Services
5900 Broken Sound Pkwy
Boca Raton, FL 33487

Subject: Modification Inspection Report

SBA Designation: SBA Site Number: CT46134-A-03
SBA Site Name: Granby-N. Granby

Inspection Firm Designation: FDH Inc. Project Number: 1304711700

Site Data: 15 North Granby Road, Granby, CT 06035
Latitude: 41.9536° Longitude: -72.7937°
150' 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, Inc.	Joshua H. Walton 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 1331731400 Dated 9-11-2013	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.

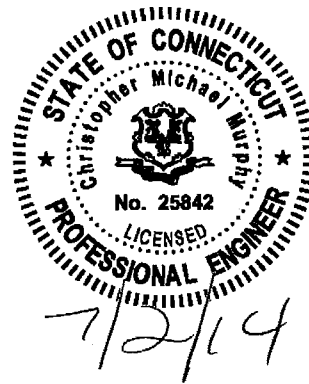
- Issues noted on the MI field notes were fixed by the GC with approved documentation.

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,


Christopher M. Murphy P.E.
Connecticut License #25842



Project Closeout Information - Table of Contents

PRE-CONSTRUCTION

- MI Checklist Drawing
- EOR Approved Shop Drawings
- Fabrication Inspection
- Fabricator Certified Welding Inspection (CWI)
- Material Testing Report (MTR)
- Fabricator NDE Inspection
- NDE Report of Monopole Base Plate
- Packing Slips

Reference Document

10
NA
NA
11
12-16
NA
NA
17-18

CONSTRUCTION

- Construction Inspections
- Foundation Inspections
- Concrete Compression Strength and Slump Tests
- Post Installed Anchor Rod Verification
- Base Plate Grout Verification
- Contractor's Certified Weld Inspection
- Earthwork: Lift and Density
- Galvanization Verification
- Guy Wire Tension Report
- GC As-Built Documents

19
NA
NA
Verified per Photos
NA
See page 11
NA
20
NA
21-29

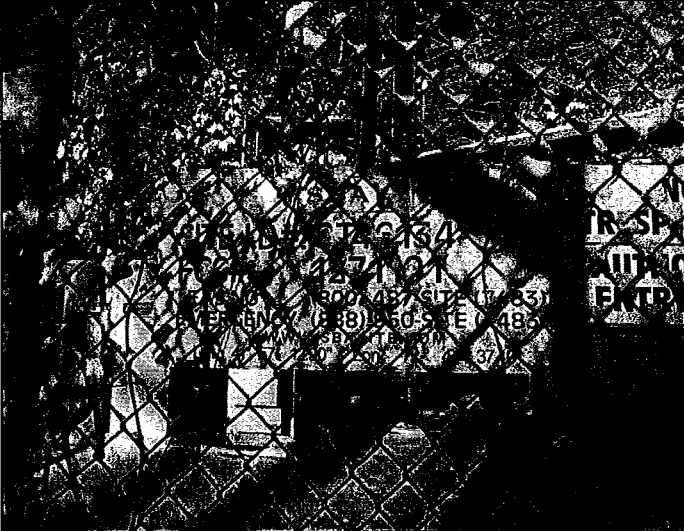
POST-CONSTRUCTION

- MI Inspector Redline/Record Drawings
- Engineer Approval
- Post Installed Anchor Rod Pull-out Testing
- On-Site Inspection Photographs

30-41
NA
42-45
See Table 3

Table 3.0 – On-Site Inspection Photographs

PH#01 Site Sign –



PH#02 Installation of Modification –
Verification of Flat Plate Placement



PH#03 Installation of Modification –
Verification of Flat Plate Size

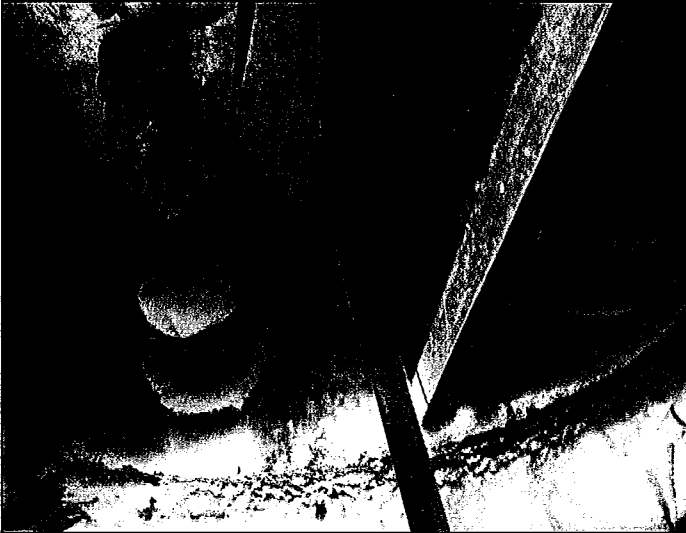


PH#04 Installation of Modification –
Verification of Stiffener Size

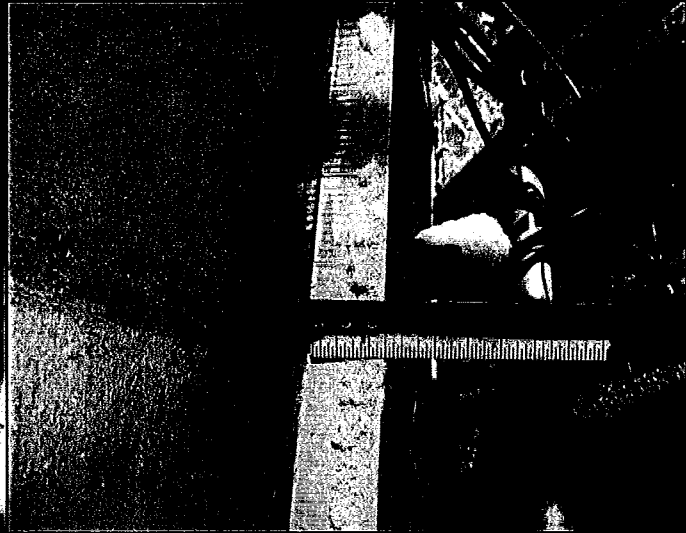


Table 3.1 – On-Site Inspection Photographs

PH#05 Installation of Modification –
Verification of Stiffener Size



PH#06 Installation of Modification –
Verification of Flat Plate Size



PH#07 Installation of Modification –
Verification of Anchor Rod Bracket Size



PH#08 Installation of Modification –
Verification of Anchor Rod Size



Table 3.2 – On-Site Inspection Photographs

PH#09 Installation of Modification –
Verification of Anchor Rod Projection



PH#10 Installation of Modification –



PH#11 Installation of Modification –
New Anchor Rod Hole Depth Verification



PH#12 Installation of Modification –
New Anchor Rod Hole Depth Verification



Table 3.3 – On-Site Inspection Photographs

PH#13 Installation of Modification –
New Anchor Rod Hole Depth Verification



PH#14 Installation of Modification –
New Flat Plate Reinforcement



PH#15 Installation of Modification –
Splice Weld Height Verification

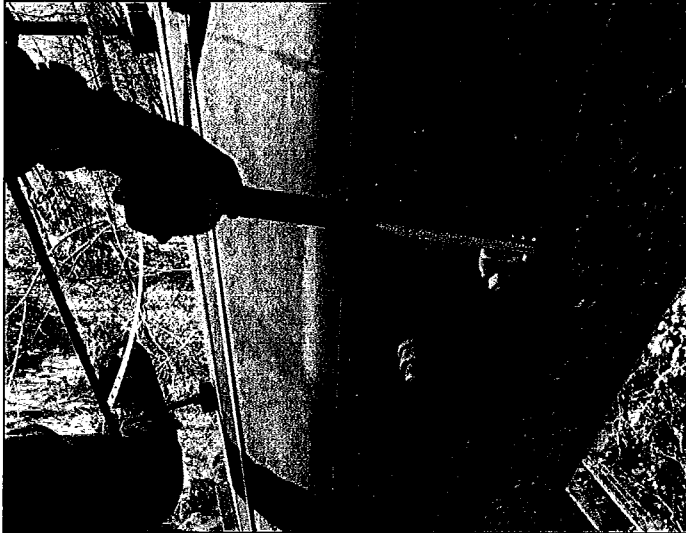


PH#16 Installation of Modification –
Verification of Flat Plate Size



Table 3.4 – On-Site Inspection Photographs

PH#17 Installation of Modification –
Verification of Flat Plate Size



PH#18 Installation of Modification –
Verification of Flat Plate Size



PH#19 Installation of Modification –
Verification of Ajax Bolt Spacing



PH#20 Installation of Modification –
Verification of Ajax Bolt Spacing

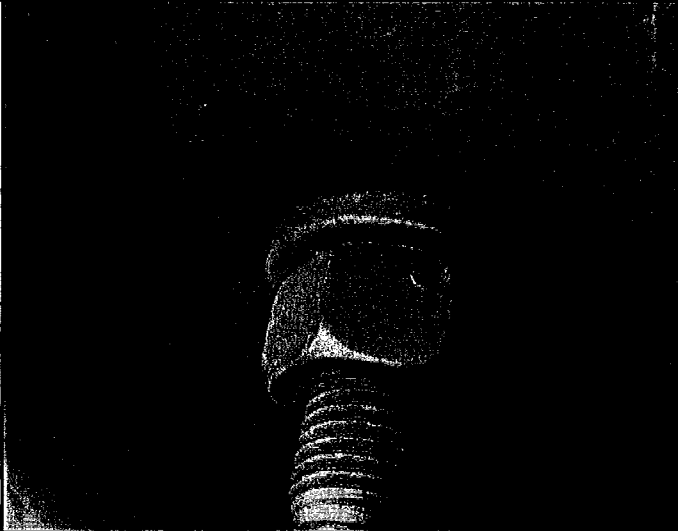


Table 3.5 – On-Site Inspection Photographs

PH#21 Installation of Modification –
Rust on New Ajax Bolts (Before)



PH#22 Installation of Modification –
Rust on New Ajax Bolts (Before)



PH#23 Installation of Modification –
Rust on New Flat Plate Reinforcement (Before)



PH#24 Installation of Modification –
Rust on New Flat Plate Reinforcement (After)



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. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. ALL PCIS 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 GC8-01 : CONTRACTOR CLOSURE 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 FALLING PCIS

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 CONTRACT DOCUMENTS
 - 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 INSPECTIONS
 - PHOTOS OF ALL CRITICAL DETAILS
 - FOUNDATION MODIFICATIONS
 - WELD PREPARATION AND TORQUE
 - BOLT INSTALLATION AND TORQUE
 - WELD INSTALLATION AND TORQUE
 - 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 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 RECORD 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:

 6201 WOODBURN DRIVE
 HALETHORP, MD 21058
 FAX: 410-751-0021

ENGINEERING INNOVATION

 5800 BROOKHOLM SQUARE
 ROCKFORD, IL 61107
 (815) 497-9416

PROFESIONAL ENGINEER

 09/11/13
 CONSTRUCTION LIC. NO. 15842
 CONDUCTOR LIC. NO. 15842

DRAWN BY: JFS
 CHECKED BY: DZ
 ENG. APPROV.: CHM
 PROJECT NO.: 1311731400

DATE	DESCRIPTION	REV
02/25/13	PRELIMINARY/REVISION	1
09/17/13	CONSTRUCTION	2

THE INFORMATION CONTAINED IN THIS STATEMENT OF WORK IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART THEREOF WITHOUT THE WRITTEN PERMISSION OF FDH ENGINEERING, INC. IS PROHIBITED.

SITE NAME:
GRANBY-N, GRANBY
 SITE NUMBER:
CT16134-A-03
 SITE ADDRESS:
**15 NORTH GRANBY ROAD
 GRANBY, CT 06035**

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

December 15, 2013

Reference # VW2013-95

Inspection Site: CT461144-A-03

Project Name: Granby

Contractor Name: Tower Solutions

Client Name: FDH Inc.

Specific Inspection Area: Tower Retrofit

Weldment Types: Transfer stiffeners/Anchor rods/Flat plate

Welder verified: Yes

Inspection Results:

In shop/on-site visual inspection of 2 transfer stiffeners with 1/4" welds and 3 Anchor rods with 3/16" welds were acceptable. Also flat plate reinforcement with CJP on splice welds is 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.



James M Claypool
CWI 10011081
QC1 EXP. 1/1/2016

Re inspection Required: No

Project Status (Continuing/Closed): Closed

Inspection results reported to: Tower Solutions Inc.

James M. Claypool, CWI #10011081



Project: Granby - N. Granby / CT 4654 - A - 03
Sheet _____ of _____
By: Tower Solutions
Checked By: Stepan

Date: 12/24/13
FDH Project #: _____
Drawing #: _____

1 - 1/4" THK Plate = ✓

2 - 1/4" Rod = ✓

4 XX-STR pipe = ✓

Pipe = A500 GR. B (42ksi)

Plate = A572-65 (65ksi)

Rod A615-75 (75ksi)

U
U



Fabricator/Supplier Material Statement
Form Number: MTR-01

Site Name:	Granby-N. Granby
Site ID:	CT46134-A-03
Proposed Carrier:	Sprint
Tower Type:	150' Monopole
Site Address:	15 North Granby Road Granby, CT 06035

FDH No.:	1304711700
Str. Analysis Date:	4/15/13
Drawing Date:	9/11/13
Drawing Issue:	Construction
Coordinates:	41.9536° -72.7937°

Material Statement:
This statement certifies that all materials and hardware bearing 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.

No.	Material Description	Project Use	Vendor	QTY	Heat No.	ASTM Spec
1	4.5" x .674 pipe anchor sleeve		BS	3	333356	A53
2	1.25" plate transfer plates and reinforcing plates		Burns Harbor		813A68370	A572
3	2 1/4" thread bar anchors		ESA	3		AG15-75
4	M20 x 95 bolts attach plates		ISA Ajax			

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 Logan
Authorized Signature

Clark Logan
Printed Name
State Of: New York

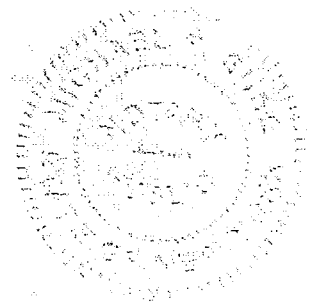
9/18/13
Date

President
Title

County Of: Monroe
I, Michael Suss, a Notary Public of Monroe County, NY, certify that Clark Logan 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 18 day of September, 20 13.

MICHAEL P. SUSS
Notary Public, State of New York
No. 01SU8284219
Qualified in Monroe County
Commission Expires June 17, 20 17

Michael Suss
Notary Public Signature and Printed Name
My Commission Expires: Jun 17 2017



(Notary Stamp or Seal)

Customer Name

Customer PO#

Shipper No

Heat Number

D & D Welding

Granby-N. Granby

487869

813A68370

2

Burns Harbor Plate
Quality Department
250 West US Highway 12
Burns Harbor, IN 46304

Report of tests and analyses

ArcelorMittal

Supplement: 803-06517 Date of report: 04-25-13 Case reference: CBS-CH90-BNSE LMC 200001 PAGE 6

SENTRY SUPPLY INC
DBA SUPERIOR SUPPLY & STEEL CO
PO BOX 2388
SULPHUR LA 70664

SUPERIOR SUPPLY & STEEL CO
C/O PICATOOSA
PORT OF CATOOSA
CATOOSA OK

Heat	Steel number	Pkg. no.	Heat number	Size and quantity			Length	Weight	Yield point	Tensile strength	Elong.	Red. l.
				No. pcs	Thickness	Width or dia.						
				INCHES	INCHES	INCHES	POUNDS	PSI	PSI	IN		

QUALITY STEEL MELTED & MANUFACTURED IN THE U. S. A.

PLATES - ASTM A572-12 OR 65 MOD S1.04 MAX AL
KLD FINE GRAIN PRAC TYPE 3, CH-V
A673 FREQ (P) L 15 FTLB AT -20F
PLT CONTROLLED FINISH TEST
CERTS ARE PREPARED IN ACCORD WITH
PROCEDURES OUTLINED IN EN
10204:2004 TYPE 3.1
CO# 85097-9 OH 816-4145A

P258166 (M55)MFST	813A68370 REF#: 02	1	1	1/4	96	480	16335	69900	83900	2	43
P258167 (M55)MFST	813A68370 REF#: 02	1	1	1/4	96	480	16335	69900	83900	2	43
P258172 (M55)MFST	813A72500 REF#: 02	1	1	1/4	96	480	16335	68900	84000	2	53
P258168 (M55)MFST	823A68370 REF#: 02	1	1	1/4	96	480	16335	69900	83900	2	43

Q-Quench temperature T-Tempering temperature M-Maximum temperature

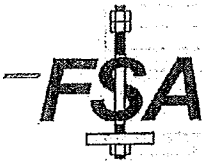
Heat number	Pkg. no.	Heat number	Hard	Hard	Charpy Impact										MTLS			
					Thickness	Type	Size	Dir.	Temp	Energy	FT	BS	1	2	3	1	2	3
P258166		813A68370			1.250	V	FULL	L	-20	111	148	130						
P258167		813A68370			1.250	V	FULL	L	-20	120	102	129						
P258172		813A72500			1.250	V	FULL	L	-20	155	132	161						
P258168		823A68370			1.250	V	FULL	L	-20	130	149	109						

UNRECORDED AND SPONSORED BY THE STATE OF MISSISSIPPI
THIS IS A COPY OF THE ORIGINAL RECORD
NOTARY PUBLIC DONALD L. BENERDY
PORTER COUNTY INDIANA
MY COMMISSION EXPIRES APRIL 17, 2015
SECURITY OF RESIDENCES PORTER

Heat number	Chemical analysis														Incl. grain size	
	C	Mn	P	S	B	Cu	W	Cr	Ni	V	Ti	Al	Si	O		
813A68370	.12	1.49	.013	.005	.011	.023	.01	.03	.008	.083		.036	.0002	.041	.006	
813A72500	.13	1.47	.013	.005	.010	.028	.02	.04	.010	.079		.023	.0002	.034	.007	
823A68370	.12	1.49	.013	.005	.011	.023	.01	.03	.008	.083		.036	.0002	.041	.006	

I certify that the above results are a true and correct copy of actual results contained in records maintained by ArcelorMittal steel USA and are in full compliance with the requirements of the specification cited above. This test report cannot be altered and must be used without contact with any subsequent third party test reports, if required.

Quality manager: Daniel W. Elwood



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

3

ACKNOWLEDGEMENT

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

SHIP TO: Phone: 585-265-1242 Fax: 585-265-1242

Attn:

Attn:

Sales Order	Ship No.	Cust No	Order Date	Tax	Promised	Salesman	Customer P. O. No.	Mark Shipment
0003150	0000	TOWSO	10/10/2013	E	11/1/2013	NoSalesman	10813	
F.O.B.	Ship Date	Shipped Via	Terms	Waybill Number	Ins			
			NET 30		N			

Item	T	Quantity			Unit	Part Number	Description	Unit Price \$
		Order	B/O	Ship				
001	S	3			EA	AT092251473H	A615-75 2-1/4" X 147" ALLTHREAD PART GALV 3(2H)HDG NUTS **THERE WILL BE UNUSABLE THREADS AFTER GALVANIZING Order SubTotal	
							Total Order Amount:	

④



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

*** PACKING LIST ***
ORDER
September 23, 2013 11:15 AM

Order # 00010322
Order Date 09/19/2013
Page 1 of 1

BILL TO: TOWRSOL
TOWER SOLUTIONS LLC
280 HEMLOCK TRAIL
WEBSTER, NY 14580

SHIP TO: D&D WELDING C/O: TWR SOLUTIONS
4710 ROUTE 104
WILLIAMSON, NY 14589

Confirmed With	
Customer PO#	WALTON FALLS & LIONS
BOL #	10826

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	PJS/DALLAS	YELLOW	708-570850-6	09/20/2013

Order Qty	Ship Qty	B/O Qty	Item # / Description	Customer Part Number	U/M:
23	23	0	458430 ONESIDE 3' M20 HIGH TENSILE SLEEVE		EA

Carton Qty: 1 Carton Amt: 23
Unit Weight: 5 Ext Weight: 123

PLS SHIP W/10321

Total Order Weight: 123

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



Contractor Due Diligence Form

Form Number: CDD-01

Site Name:	Granby-N. Granby
Site ID:	CT46134-A-03
Proposed Carrier:	Sprint
Tower Type:	150' Monopole
Site Address:	15 North Granby Road Granby, CT 06035

FDH No.:	1304711700
Str. Analysis Date:	4/15/13
Drawing Date:	9/11/13
Drawing Issue:	Construction
Coordinates:	41.9536° -72.7937°

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 associated 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 94549

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 MA

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 occurrence. 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:	<u>D+D Welding</u>	Contact:	<u>Matt David</u>	Telephone:	<u>585-259-4095</u>
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 Cojan

Signature: Clark Cojan

Date: 10/23/13



#: C746134

127191

(800) 487-SITE

MOY (888) 950-SITE

WWW.SBASITE.COM

57' 12.90"

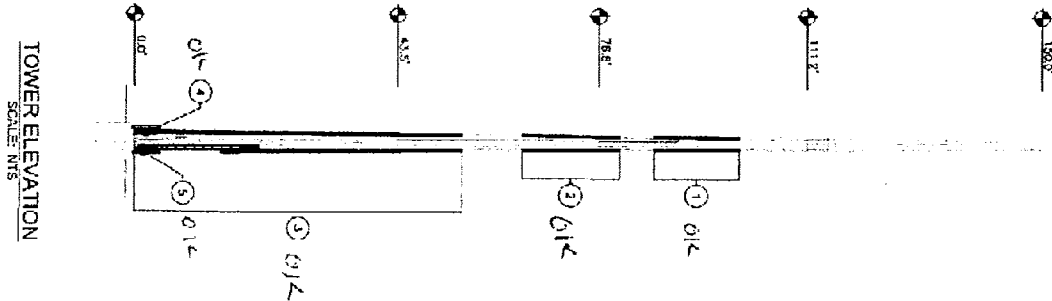
CON:

47

47

37.4

LENGTH (FT)	48.50	37.67	37.66	38.79
NUMBER OF SIDES		12		
THICKNESS (IN)	0.3750	0.3125	0.2500	0.1875
SOCKET LENGTH (FT)	N/A	5.00	4.33	3.58
TOP DIA (IN)	34.2685	29.0838	23.4602	17.5000
BOT DIA (IN)	43.0000	34.8100	30.3500	24.4500
TOWER FINISH	GALVANIZED			



TOWER ELEVATION
SCALE: NTS

- APPLICABLES ANY INTERFERE WITH PROPOSED MODIFICATIONS.
- ALL MODIFICATIONS TO BE INSTALLED CONCURRENTLY 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 LOADINGS.

TOWER MODIFICATION SCHEDULE			
NO.	TYPE OF MODIFICATION	BOTTOM ELEV. (FT)	TOP ELEV. (FT)
1	INSTALLATION OF NEW PLATE REINFORCEMENT. SEE S-2 THROUGH S-8 FOR DETAILS.	65.2E	100.0E
2	INSTALLATION OF NEW PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	64.2E	60.2E
3	INSTALLATION OF NEW PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	0.5E	54.2E
4	INSTALLATION OF NEW TOWER STRUTTERS. SEE S-7 FOR DETAILS.	0.0E	5.7E
5	INSTALLATION OF NEW ANCHOR BOLTS. SEE S-8 THROUGH S-8 FOR DETAILS.	-6.4E	4.8E

Class System

12/8/13

61.2



PROFESSIONAL ENGINEER
STATE OF CONNECTICUT
NO. 20842
12/11/13
CUSTOMER: M. MARSH, P.E.
CONNECTICUT, LIC. NO. 20842

OWNER:	GRANBY	DATE:	12/8/13
ENGINEER:	CONROY	CAD:	
DRAWN BY:		CHECKED BY:	
PROJECT NO.:	131171400		
SUBMITTALS:			
NO.	DESCRIPTION	NO.	
01/26/13	PRELIMINARY DESIGN	A	
02/17/13	CONSTRUCTION	B	

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PREPARED BY THE ENGINEER OR ARCHITECT AND IS NOT TO BE USED FOR ANY OTHER PROJECT WITHOUT THE PERMISSION OF F.H.I. ENGINEERING, INC. OR F.H.I. ARCHITECTURE.

SITE NAME:
GRANBY-N. GRANBY

SITL NUMBER:
CT48134-A-03

SITE ADDRESS:
15 NORTH GRANBY ROAD
GRANBY, CT 06035

SHEET TITLE:
MODIFICATION SCHEDULE

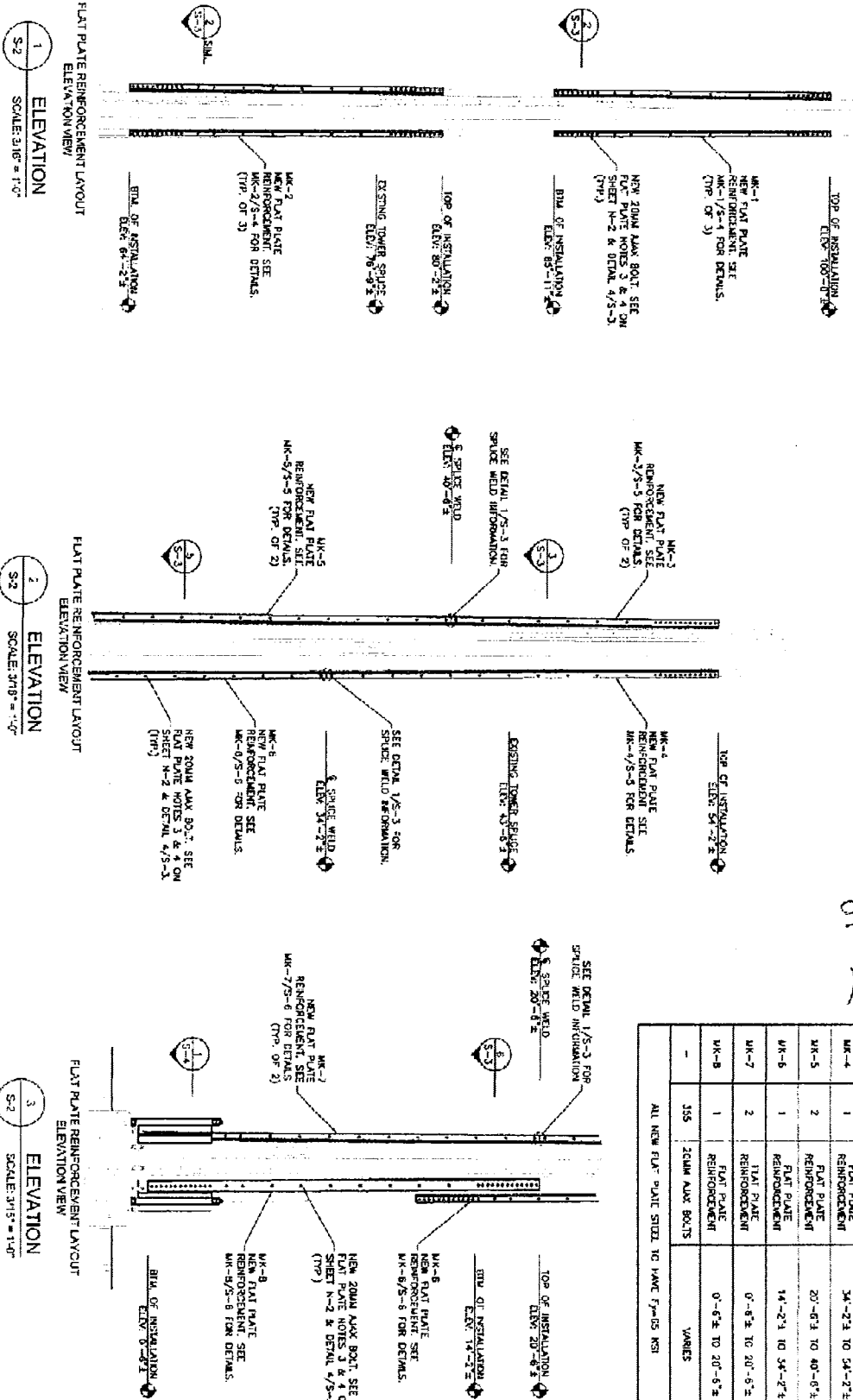
SHEET NUMBER:
S-1

01c C.C.

FLAT PLATE INSTALLATION SCHEDULE

PART #	QTY.	DESCRIPTION	ELEVATION
MK-1	3	FLAT PLATE REINFORCEMENT	85'-11 3/4" TO 100'-0 3/4"
MK-2	3	FLAT PLATE REINFORCEMENT	54'-2 3/4" TO 80'-2 3/4"
MK-3	2	FLAT PLATE REINFORCEMENT	40'-8 3/4" TO 54'-2 3/4"
MK-4	1	FLAT PLATE REINFORCEMENT	34'-2 3/4" TO 54'-2 3/4"
MK-5	2	FLAT PLATE REINFORCEMENT	20'-6 3/4" TO 40'-6 3/4"
MK-6	1	FLAT PLATE REINFORCEMENT	14'-2 3/4" TO 34'-2 3/4"
MK-7	2	FLAT PLATE REINFORCEMENT	0'-8 3/4" TO 30'-5 3/4"
MK-8	1	FLAT PLATE REINFORCEMENT	0'-6 3/4" TO 20'-5 3/4"
-	355	20MM AXI. BOLTS	VARIABLES

ALL NEW FLAT PLATE STEEL TO HAVE FPMDS NISI



01c

01c

01c

STATE OF CALIFORNIA
COUNTY OF LOS ANGELES
ENGINEERING

SBI
SBO ARCHITECTS
1000 WEST 24TH STREET
LOS ANGELES, CA 90057

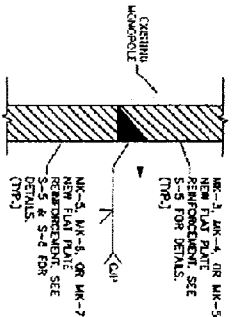
PROJECT: FLAT PLATE REINFORCEMENT LAYOUT

SHEET: S

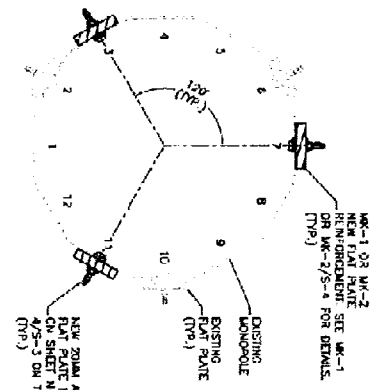
DATE: 06/20/12
DRAWN BY: [Name]
CHECKED BY: [Name]
DESIGNED BY: [Name]
PROJECT NO: [Number]

THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF SBI ARCHITECTS. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF SBI ARCHITECTS.

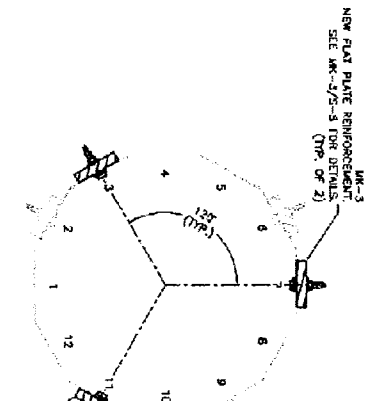
01c



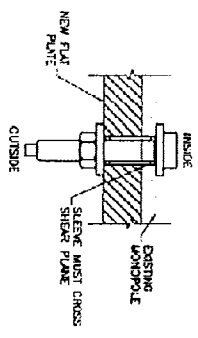
1 SECTION
SPURSE WELD ELEVATION VIEW
NTS
01c



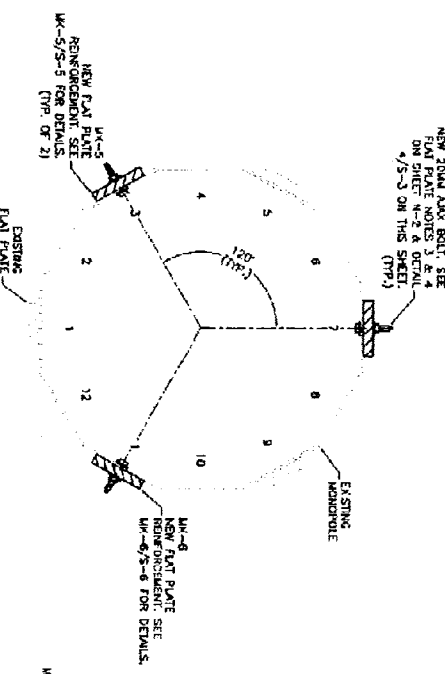
2 SECTION
FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW
SCALE: 3/4" = 1'-0"
01c



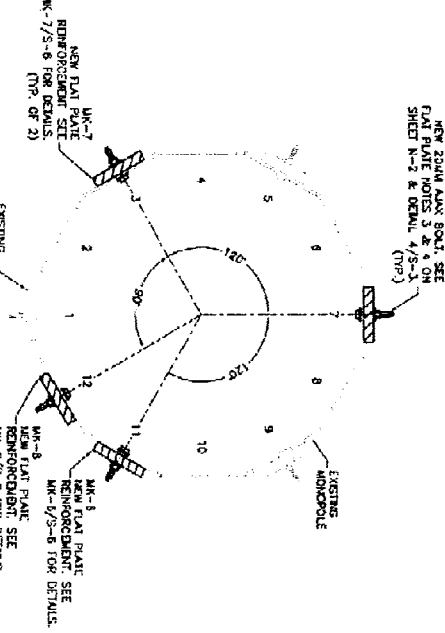
3 SECTION
FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW
SCALE: 3/4" = 1'-0"
01c



4 DETAIL
ALAX BOLT ASSEMBLY PLAN VIEW
NTS
01c



5 SECTION
FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW
SCALE: 3/4" = 1'-0"
01c



6 SECTION
FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW
SCALE: 3/4" = 1'-0"
01c

DESIGNED BY: [Signature]

ENGINEERING INNOVATION

SBA

Small Business Administration
800 457-7814

STATE OF CONNECTICUT
PROFESSIONAL ENGINEER
No. 25942
EXPIRES 12/31/13

CONTRACTOR: M. MURPHY, 09/11/13
CHECKED BY: [Signature]
DATE: 01/13/14
SHEET NO.: 133/131403

DATE	DESCRIPTION	BY
09/11/13	PRELIMINARY DESIGN	[Signature]
09/11/13	CONSTRUCTION	[Signature]

THE REPRODUCER GUARANTEES THAT THIS SET OF DRAWINGS IS PROPERTY OF ENGINEERING INNOVATION. NO PART OF THIS SET OF DRAWINGS IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF ENGINEERING INNOVATION.

SITE NAME: GRANBY, N. GRANBY

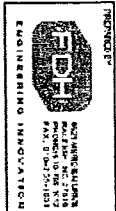
SITE NUMBER: C148134-A-03

SITE ADDRESS: 15 NORTH GRANBY ROAD, GRANBY, CT 06033

SHEET TITLE: FLAT PLATE REINFORCEMENT DETAILS II

SHEET NUMBER: S-3

OK C.C.



SBA
 5000 ROUTE 32 AND HIGHWAY 150
 SUITE 100
 WEST HAVEN, CT 06490
 (203) 487-5400

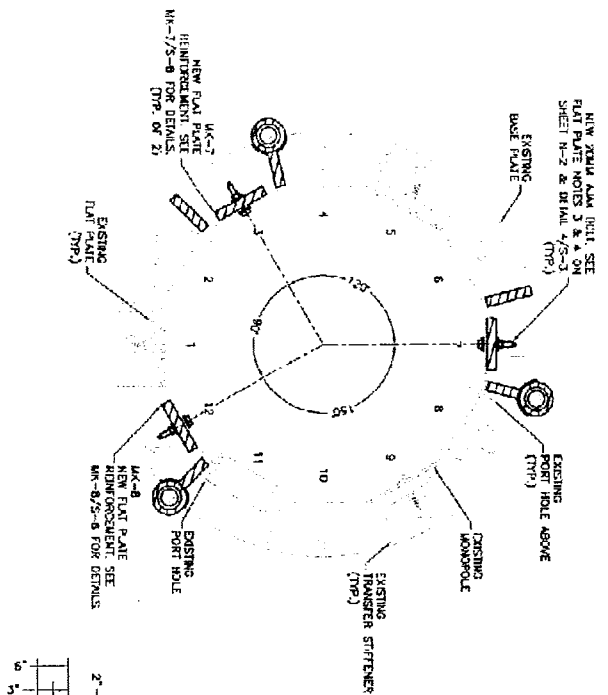
PROJNO: 02
 ENGINEERING INNOVATIONS

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PREPARED BY NATURE RECONSTRUCTION OR CARRYING TO BE MADE BY NATURE RECONSTRUCTION. NO PART OF THESE DRAWINGS IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE PERMISSION OF FTM ENGINEERING, INC. IS PROHIBITED.

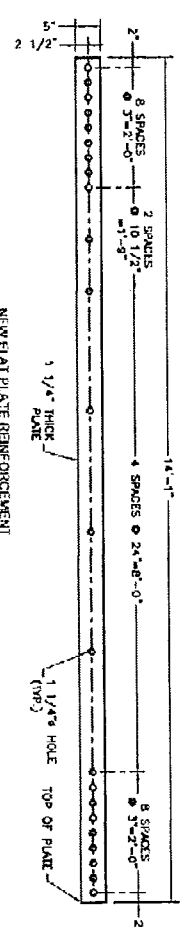
NO.	DATE	DESCRIPTION
1	09/17/13	CONSTRUCTION
2	09/17/13	CONSTRUCTION
3	09/17/13	CONSTRUCTION
4	09/17/13	CONSTRUCTION
5	09/17/13	CONSTRUCTION
6	09/17/13	CONSTRUCTION
7	09/17/13	CONSTRUCTION
8	09/17/13	CONSTRUCTION
9	09/17/13	CONSTRUCTION
10	09/17/13	CONSTRUCTION
11	09/17/13	CONSTRUCTION

SITE NAME: GRANBY-N, GRANBY
 SITE NUMBER: CT46134-A-03
 SITE ADDRESS: 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

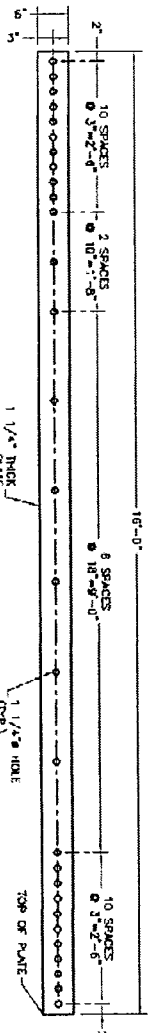
SHEET TITLE: FLAT PLATE REINFORCEMENT DETAILS III
 SHEET NUMBER: S-4



FLAT PLATE REINFORCEMENT LAYOUT
 SECTION VIEW
 1 SECTION
 S-4 SCALE 3/4" = 1'-0"
 OK



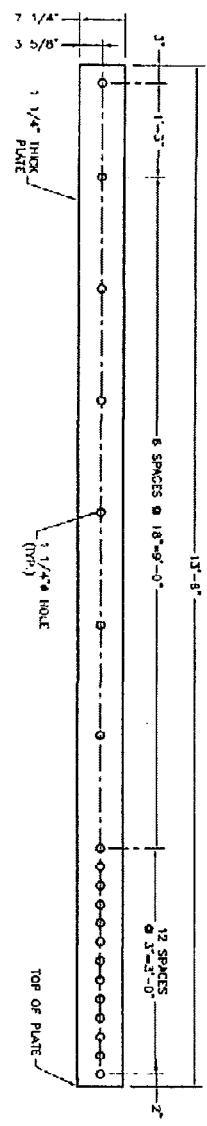
NEW FLAT PLATE REINFORCEMENT
 FRONT VIEW
 1/4\"/>



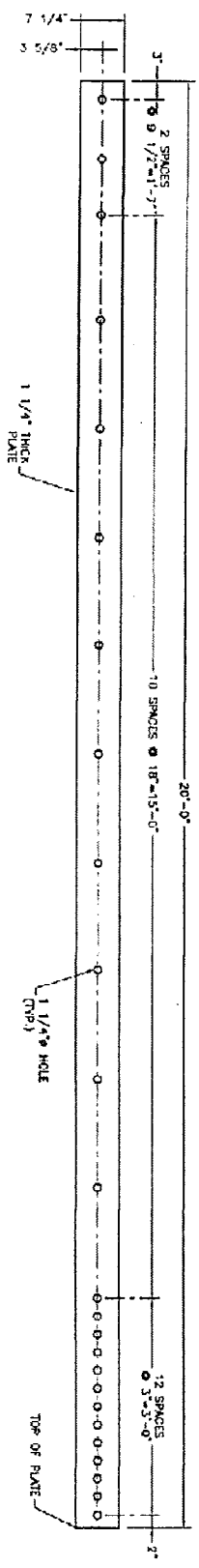
NEW FLAT PLATE REINFORCEMENT
 FRONT VIEW
 1/4\"/>

S-4

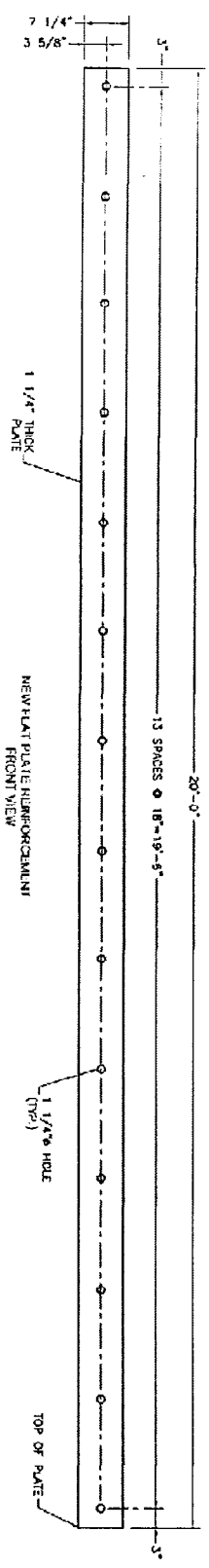
OIC C.C.




NEW FLAT PLATE REINFORCEMENT
FRONT VIEW
MK-3
S-6
DETAIL
SCALE: NTS OIC



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW
MK-4
S-5
DETAIL
SCALE: NTS OIC



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW
MK-5
S-5
DETAIL
SCALE: NTS OIC

REGISTERED

 SBA
 100 SOUTH GARDEN PARKWAY, 4F
 BOCA RATON, FL 33487
 (954) 401-2241

STATE OF CONNECTICUT
 PROFESSIONAL ENGINEER
 No. 25842
 REGISTERED 09/11/13
 CHRISTOPHER W. MARTIN, P.E.
 CONNECTIONS, INC. NO. 25842

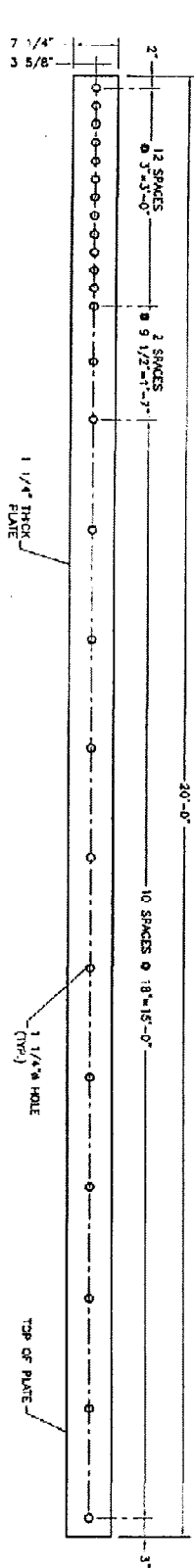
REVISIONS

NO.	DATE	DESCRIPTION	BY
1	07/20/13	PRELIMINARY DESIGN	A
2	08/11/13	CONSTRUCTION	O

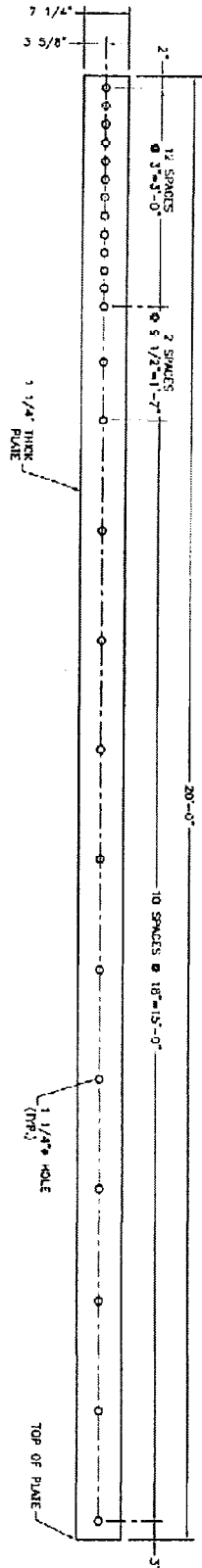
NOT INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PRESENTLY THE PROPERTY OF CONNECTIONS, INC. IT IS TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF CONNECTIONS, INC. (P. 08/18/13)

SITE NAME: GRANBY-N. GRANBY
 SITE NUMBER: CT49134-A-03
 SITE ADDRESS: 15 NORTH GRANBY ROAD GRANBY, CT 06033
 SHEET TITLE: FLAT PLATE REINFORCEMENT DIMENSION
 SHEET NUMBER: S-5

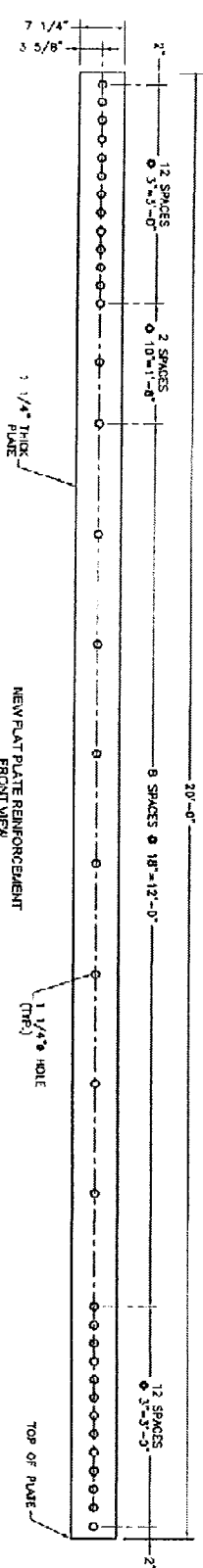
OK C.C.



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW
MK-6
S-6
DETAIL
SCALE: NTS
OK



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW
MK-7
S-5
DETAIL
SCALE: NTS
OK



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW
MK-8
S-6
DETAIL
SCALE: NTS
OK

PREPARED BY:
SBA
150 NORTH GRANBY ROAD
GRANBY, CT 06035
PHONE: 860-426-2142
FAX: 860-426-2143

REGISTERED PROFESSIONAL ENGINEER
STATE OF CONNECTICUT
No. 25842
EXPIRES 09/11/13
CHRISTOPHER M. WURDEN, P.E.
CONNECTICUT LIC. NO. 25842

DATE	DESCRIPTION	BY
02/26/13	REVISIONS/REVISED	A
09/17/12	CONSTRUCTION	0

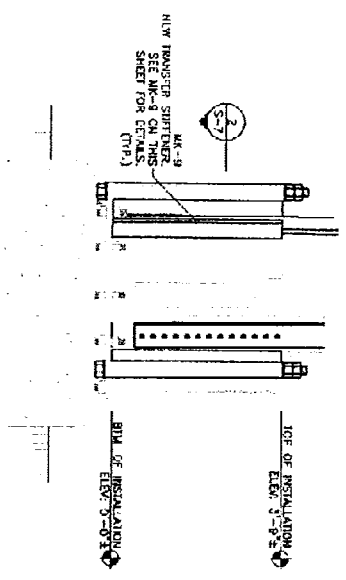
DATE: 02/26/13
BY: CMA
PROJECT NO: 133-231802
SUBMITTA: 5
THE INFORMATION CONTAINED IN THIS SET OF DRAWINGS IS PROVIDED FOR YOUR INFORMATION ONLY. IT IS NOT TO BE USED FOR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF FCH ENGINEERING, INC. IS FORWARDED.

SITE NAME: GRANBY-N. GRANBY
SITE NUMBER: CT-18134-A-103
SHEET TITLE: FLAT PLATE REINFORCEMENT DETAILS V
SHEET NUMBER: S-6

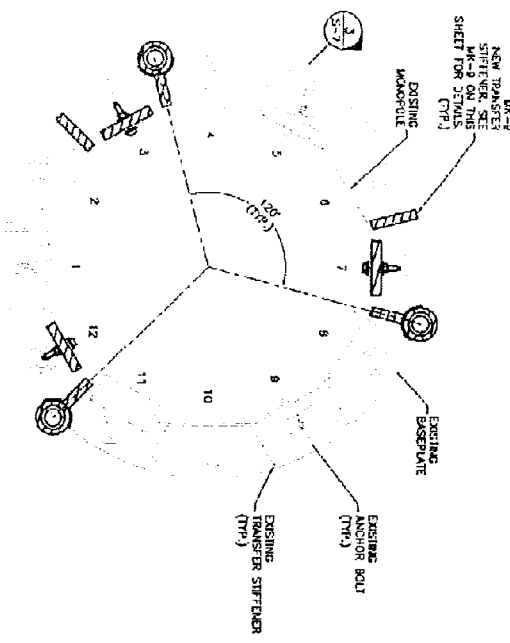
OK C.C.

TRANSFER STIFFENER INSTALLATION SCHEDULE			
PART. NO	QUANTITY	DESCRIPTION	ELEVATION
MR-9	2	TRANSFER STIFFENER	0'-0" TO 3'-9"

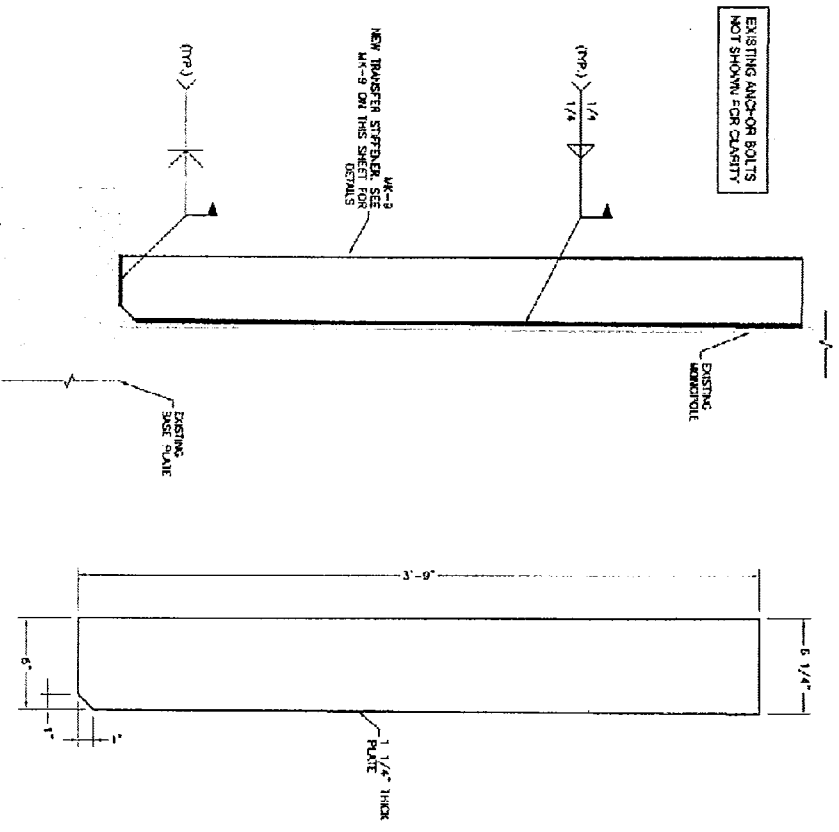
ALL NEW TRANSFER STIFFENER STEEL TO HAVE Fy=65 KSI



NEW TRANSFER STIFFENER LAYOUT
ELEVATION VIEW
SCALE: 3/8" = 1'-0"
OK



NEW TRANSFER STIFFENER LAYOUT
PLAN VIEW
SCALE: 3/8" = 1'-0"
OK



NEW TRANSFER STIFFENER WELD DETAIL
FRONT VIEW
SCALE: 3/8" = 1'-0"
OK

NEW TRANSFER STIFFENER
FRONT VIEW
SCALE: 3/8" = 1'-0"
OK



DESIGNED BY: JMS
CHECKED BY: DZ
DATE: 09/11/13
PROJECT NO: 130121100

DATE	DESCRIPTION	BY
09/11/13	CONSTRUCTION	D
09/26/13	PERMITS/REVISED	A
09/26/13	CONSTRUCTION	D

THE INFORMATION CONTAINED IN THIS SHEET IS THE PROPERTY OF GRANBY & GRANBY. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. ANY REPRODUCTION OR TRANSMISSION OF THIS SHEET WITHOUT THE WRITTEN PERMISSION OF GRANBY & GRANBY IS PROHIBITED.

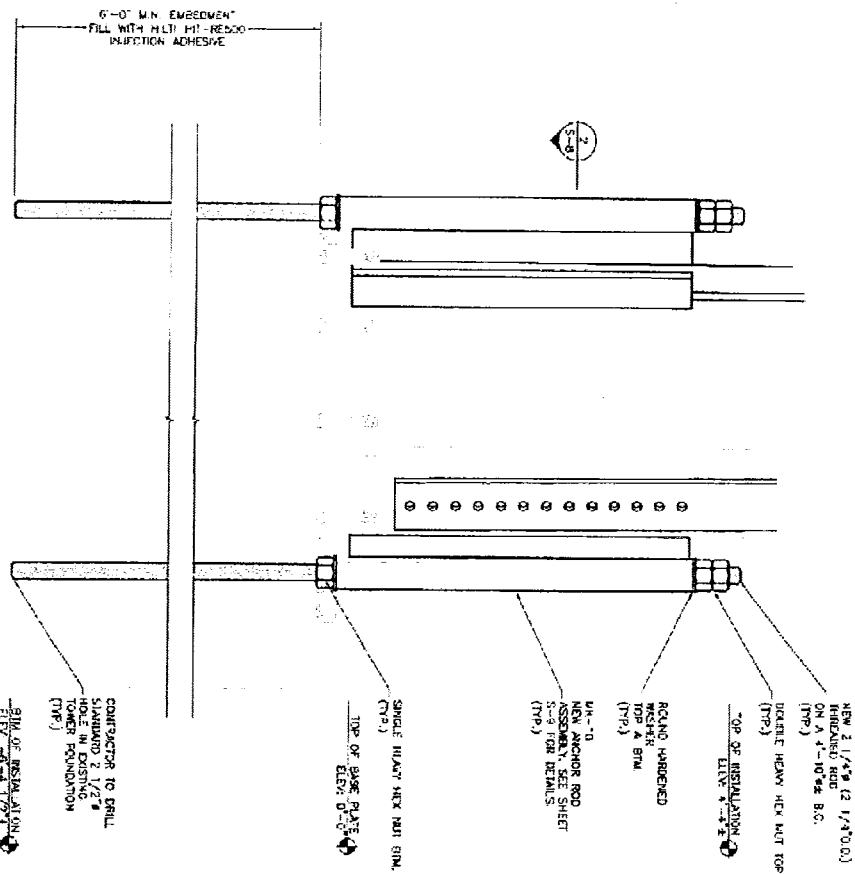
SITE NAME: GRANBY & GRANBY
SHEET NUMBER: CT16134-A-03
SHEET TITLE: TRANSFER STIFFENER INSTALLATION DETAILS

SITE ADDRESS: 15 NORTH GRANBY ROAD, GRANBY, CT 06036
SHEET NUMBER: S-7

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

PULL TEST SHOULD BE PERFORMED PER PULL TEST NOTES ON SHEET NO. 11. TARGET TENSION OF THIS PULL TEST IS 190K.

PULL TEST SHOULD BE PERFORMED PER PULL TEST NOTES ON SHEET NO. 11. TARGET TENSION OF THIS PULL TEST IS 190K.

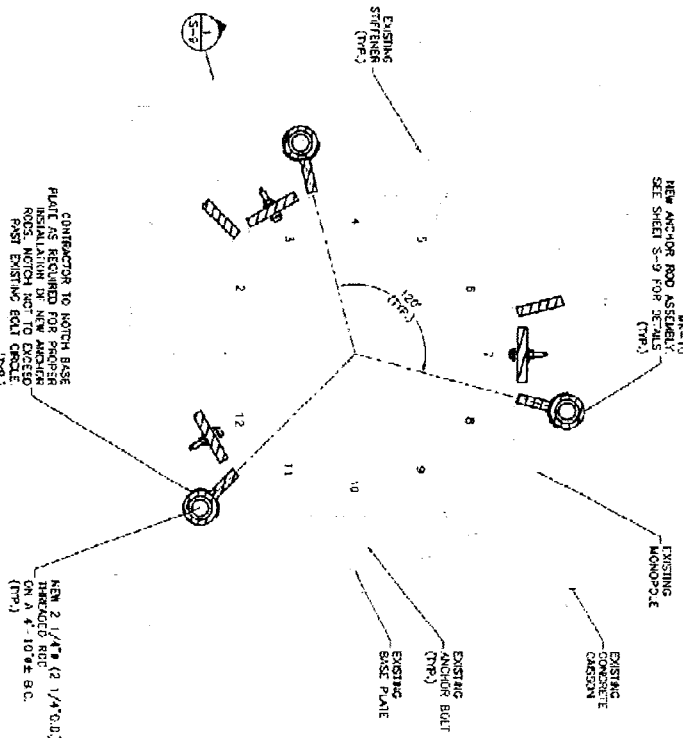


ANCHOR ROD INSTALLATION
ELEVATION VIEW
1
S-8
SCALE: 3/4" = 1'-0"

ANCHOR ROD MATERIAL LIST

PART #	QTY.	DESCRIPTION	ELEVATION
MR-10	3	ANCHOR ROD ASSEMBLY	-0'-1 3/4" TO 3'-9 1/2"
	3	2 1/4" (2 1/4" O.D.) ASTM A615-70 (17-220K) THREADED ROD X 10'-8 1/2"	-0'-1 1/2" TO 6'-4"
	6	ROUND WELDED WISHER	-
	9	HEAVY HEX NUT	-

CONTRACTOR TO REMOVE EXISTING STEPPERS FOR PROPER INSTALLATION OF ANCHOR ROD ASSEMBLIES AS SHOWN.



ANCHOR ROD INSTALLATION
SECTION VIEW
2
S-8
SCALE: 3/4" = 1'-0"

REGISTERED

SBA

2025 BIDDING DOCUMENTS
FOR THE
2025 BIDDING DOCUMENTS
FOR THE
2025 BIDDING DOCUMENTS

FOR BID ONLY

CHARLOTTE, N.C. 28202
CONTRACT NO. 2544-1

OWNER: JPS
CHECKED BY: DZ
DESIGNED BY: DMH
PROJECT NO: 132131400

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY TO THE ENGINEER AND SHALL BE KEPT IN CONFIDENCE. NO REPRODUCTION OR TRANSMISSION OF THE INFORMATION OF THE ENGINEER IS PROHIBITED.

DATE	DESCRIPTION	BY
02/20/25	ISSUED FOR BIDDING	DMH

SITE NAME: GRANBY-IN, GRANBY

SITE NUMBER: C145134-A-03

SITE ADDRESS: 15 NORTH GRANBY ROAD, GRANBY, CT 06035

SHEET TITLE: ANCHOR ROD INSTALLATION DETAILS

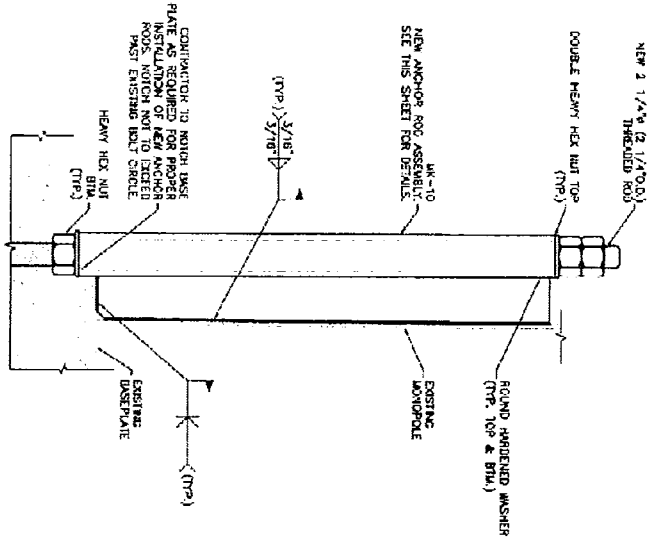
SHEET NUMBER: S-8

OK C.C.

MATERIAL LIST (MK-10)		
PART NO.	QTY.	DESCRIPTION
P-1	3	ANCHOR ROD SLEEVE
P-2	3	TRANSFER PLATE

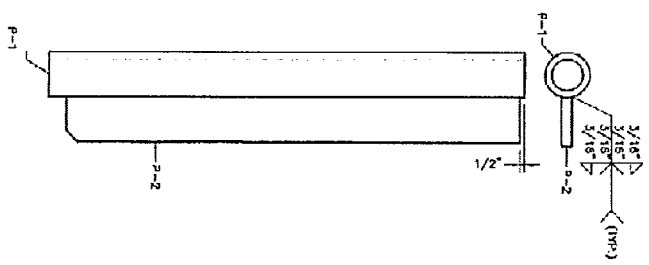
EXISTING ANCHOR BOLTS NOT SHOWN FOR CLARITY

OK



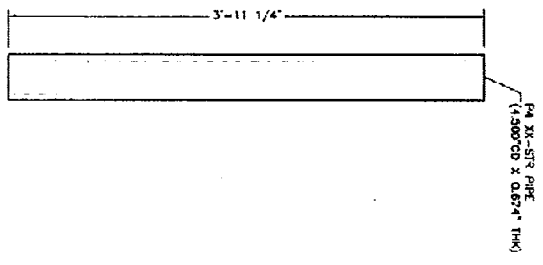
ANCHOR ROD ASSEMBLY WELD DETAIL
 ELEVATION VIEW
 1 ELEVATION
 S-9 SCALE: 1" = 1'-0"

OK



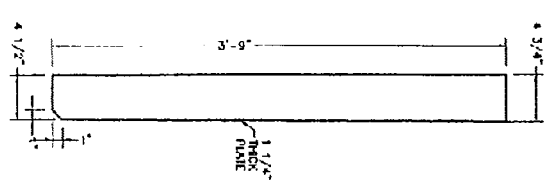
ANCHOR ROD ASSEMBLY TOP & SIDE VIEW
 SECTION
 MK-10
 S-9 SCALE: 1" = 1'-0"

OK



ANCHOR ROD SLEEVE SIDE VIEW
 DETAIL
 F-1
 S-9 SCALE: 1" = 1'-0"

OK



TRANSFER PLATE SIDE VIEW
 DETAIL
 P-2
 S-9 SCALE: 1" = 1'-0"

OK

REGISTERED PROFESSIONAL ENGINEER
 STATE OF CONNECTICUT
 No. 2884
 LICENSED 12/28/83
 CHRISTOPHER M. MURPHY, P.E.
 PROJECT NO. 1331731/001
 PROJECT DATE: 08/21/13

DRIVEN BY: J-S
 CHECKED BY: DZ
 DATE: 08/19/13
 PROJECT NO.: 1331731/001

SUBMITTALS
 NO. DATE DESCRIPTION BY
 01 08/19/13 SUBMITTALS DZ
 02 08/19/13 SUBMITTALS DZ
 03 08/19/13 SUBMITTALS DZ
 04 08/19/13 SUBMITTALS DZ
 05 08/19/13 SUBMITTALS DZ
 06 08/19/13 SUBMITTALS DZ
 07 08/19/13 SUBMITTALS DZ
 08 08/19/13 SUBMITTALS DZ
 09 08/19/13 SUBMITTALS DZ
 10 08/19/13 SUBMITTALS DZ

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SITE NAME:
 GRANBY-IN, GRANBY

SITE NUMBER:
 CT28134-A-03

SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

SHEET TITLE:
 ANCHOR ROD INSTALLATION DETAILS II

SHEET NUMBER:
 S9

PROFESSIONAL
SBA
 5000 BRADLEY SQUARE, GRANBY, CT 06035
 860.619.5212

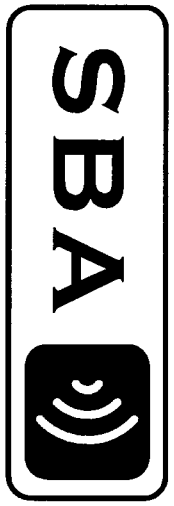
THE MODIFICATIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED BY FDH ENGINEERING, INC., PROJECT NO. 1321551400 DATED APRIL 15, 2013.

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) 735-1012

PROJECT DESCRIPTION:
**MODIFICATION DRAWINGS
 FOR A 150' MONOPOLE**

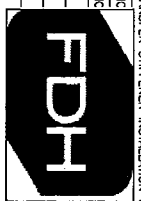


SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035
 COORDINATES:
 LATITUDE: 41.9536°
 LONGITUDE: -72.7937°

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 REINFORCEMENT DETAILS III
S-5	FLAT PLATE REINFORCEMENT DETAILS IV
S-6	FLAT PLATE REINFORCEMENT DETAILS V
S-7	TRANSFER STIFFENER INSTALLATION DETAILS I
S-8	ANC
S-9	ANC



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.

SECONDARY INSPECTION

SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

SITE NAME:
 GRANBY-N. GRANBY

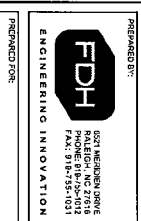
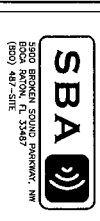
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 CT46134-A-03

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DATE	DESCRIPTION	REV
09/20/13	PRELIMINARY/ISSUE	A
09/17/13	CONSTRUCTION	0

DRAWN BY: JFS
 CHECKED BY: DZ
 ENG. APPROV: CMW
 PROJECT NO. 1331731400

CHRISTOPHER W. MORSE, P.E.
 LICENSED PROFESSIONAL ENGINEER
 LICENSE NO. 45842
 EXPIRES 09/11/13



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. OWNERSHIP OF THE STRUCTURAL TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.
3. ALL PCIS 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) CONTACT THE PCI INSPECTOR PRIOR TO COMMENCING 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 COR-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
 - REVIEW 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 PCIS

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-EVALUATE 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
 - PHOTOS OF ALL CRITICAL DETAILS
 - FOUNDATION MODIFICATIONS
 - WELD PREPARATION AND TORQUE
 - BOLT INSTALLATION AND TORQUE
 - SURFACE COATING PREPARE
 - 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
X	PRE-CONSTRUCTION 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:

 507 HARTSHORN LANE
 RALEIGH, NC 27616
 PHONE 919-253-0152
 FAX 919-253-0151
 ENGINEERING INNOVATION

PROPOSED FOR:

 500 BORDEN SOUND PARKWAY, NW
 BOON RAVEN, IL 62607
 (800) 487-5752

CHRISTOPHER M. WILSON, P.E.
 REGISTERED PROFESSIONAL ENGINEER
 PROJECT NO. 1331731000
 DRAWN BY: JFS
 CHECKED BY: GML
 ENG. APP'D: GML
 PROJECT NO. 1331731000

DATE	DESCRIPTION	REV
05/26/13	PRELIMINARY/REVIEW	A
09/11/13	CONSTRUCTION	0

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SITE NAME:
GRANBY-N, GRANBY
 SITE NUMBER:
CT48134-A-03

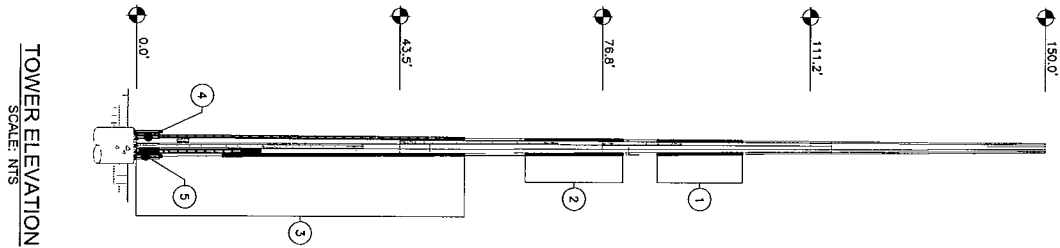
SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06033



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.

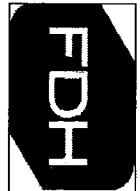
SHEET NUMBER
N-1

LENGTH (FT)	48.50	37.67	37.96	38.79
NUMBER OF SIDES	12			
THICKNESS (IN)	0.3750	0.3125	0.2500	0.1875
SOCKET LENGTH (FT)	N.A.	5.00	4.33	3.58
TOP DIA (IN)	34.2895	29.0636	23.4602	17.5000
BOT DIA (IN)	43.0000	35.8100	30.3500	24.4800
TOWER FINISH	GALVANIZED			



- 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-6 FOR DETAILS.	85.94	100.0
2	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	64.2	80.2
3	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	0.5	54.2
4	INSTALLATION OF NEW TRANSFER STIFFENERS. SEE S-7 FOR DETAILS.	0.0	3.7
5	INSTALLATION OF NEW ANCHOR RODS. SEE S-8 THROUGH S-9 FOR DETAILS.	-6.4	4.6



SECONDARY INSPECTION

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

GC has reviewed the site and corrected the punch list items. All drawings showing these corrections has been received by the EOR.

SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
15 NORTH GRANBY ROAD

PREPARED BY:
GRANBY CONSULTING

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DATE	DESCRIPTION	REV
02/26/13	PRELIMINARY/REVIEW	A
09/11/13	CONSTRUCTION	0

DRAWN BY: JFS
CHECKED BY: DE
ENG APP'D: CMW
PROJECT NO: 1331731400

CHRISTOPHER M. MURPHY, P.E.
REGISTERED PROFESSIONAL ENGINEER
CONNECTICUT LIC. NO. 25842

PREPARED BY:
FDH
6021 HERRING DRIVE
PHOENIX, AZ 85044-1012
FAX: 602-952-1021

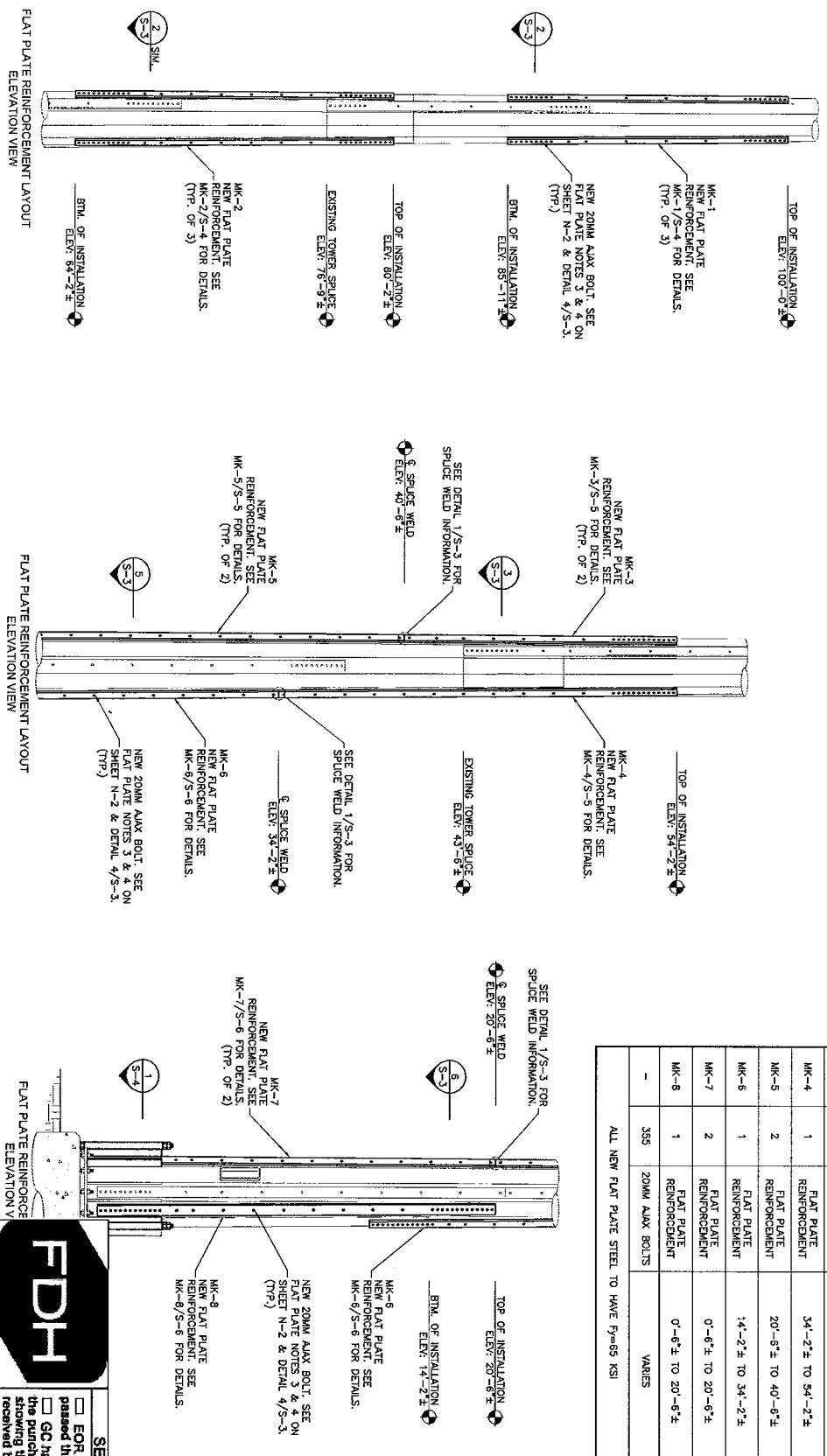
ENGINEERING INNOVATION

PREPARED FOR:
SBA
SBA REGIONAL ECONOMIC DEVELOPMENT CENTER
800 N. CENTRAL AVENUE
SUITE 400
PHOENIX, AZ 85004
(602) 497-5111

FLAT PLATE INSTALLATION SCHEDULE

PART #	QTY.	DESCRIPTION	ELEVATION
MK-1	3	FLAT PLATE REINFORCEMENT	85'-11" ± TO 100'-0" ±
MK-2	3	FLAT PLATE REINFORCEMENT	64'-2" ± TO 80'-2" ±
MK-3	2	FLAT PLATE REINFORCEMENT	40'-6" ± TO 54'-2" ±
MK-4	1	FLAT PLATE REINFORCEMENT	34'-2" ± TO 54'-2" ±
MK-5	2	FLAT PLATE REINFORCEMENT	20'-6" ± TO 40'-6" ±
MK-6	1	FLAT PLATE REINFORCEMENT	14'-2" ± TO 34'-2" ±
MK-7	2	FLAT PLATE REINFORCEMENT	0'-6" ± TO 20'-6" ±
MK-8	1	FLAT PLATE REINFORCEMENT	0'-6" ± TO 20'-6" ±
-	355	20MM AXIAL BOLTS	VARIABLES

ALL NEW FLAT PLATE STEEL TO HAVE Fy=65 KSI



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

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

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



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.

SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT16134-A-03

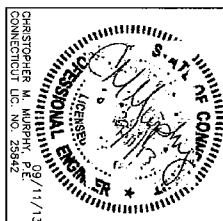
SITE ADDRESS:
15 NORTH GRANBY ROAD
GRANBY, CT 06035

DATE: 09/29/13
DESCRIPTION: PRELIMINARY REVIEW
BY: A
DATE: 09/11/13
DESCRIPTION: CONSTRUCTION
BY: 0

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CONSTRUCTOR: M. MORPH
DATE: 09/11/13
CONSULTED: DR. NO. 65967

DRAWN BY: JFS
CHECKED BY: DM
ENG. APPROV: DM
PROJECT NO: 131731400



PREPARED FOR:
FDH
ENGINEERING INNOVATION

5571 WILSON DRIVE
RALEIGH, NC 27615
TEL: 919-286-8000
FAX: 919-286-1031

PREPARED BY:
FDH
 1520 WILSON ROAD
 RALEIGH, NC 27615
 PHONE: 919-255-0921
 FAX: 919-255-0921
 ENGINEERING INNOVATION

PREPARED FOR:
SBA
 3200 BRIDGE SQUARE PARKWAY, NW
 BOCA RATON, FL 33487
 (800) 487-5818

DESIGNED BY:
 CHRISTOPHER W. KURPHY, P.E.
 CONNECTION, L.C. NO. 22842
 09/11/13

DATE: 09/29/13
 DESCRIPTION: PRELIMINARY REVIEW
 CHECKED BY: DZ
 ENG. PART NO.: CMM
 PROJECT NO.: 1331721400

DATE	DESCRIPTION	REV.
09/29/13	PRELIMINARY REVIEW	A
09/11/13	CONSTRUCTION	0

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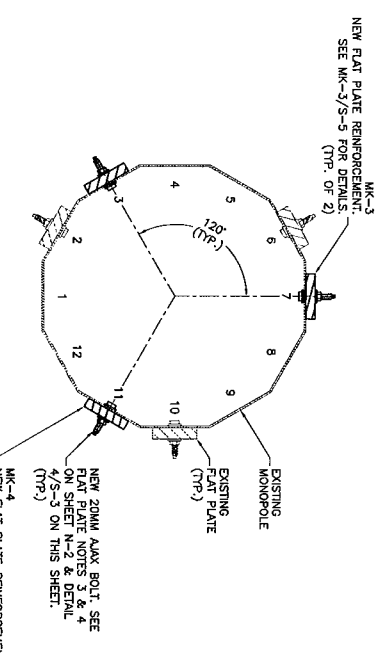
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GRANBY-N, GRANBY
 SITE NUMBER:
CT6134-A-03
 SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

SHEET NUMBER:
S-3

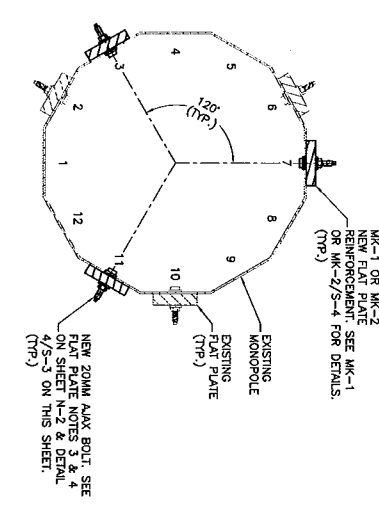
FDH

SECONDARY INSPECTION

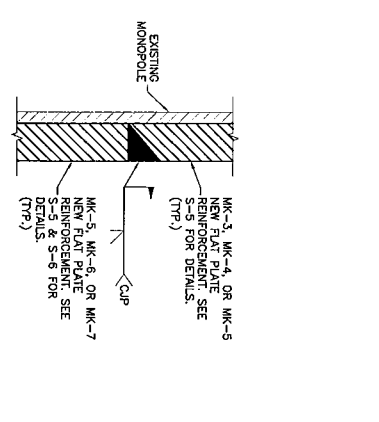
EOR has reviewed the issues noted and passed the as-built condition(s).
 GC has reviewed the site and concurred the punchlist items shown. Documentation showing these corrections has been received by the EOR.



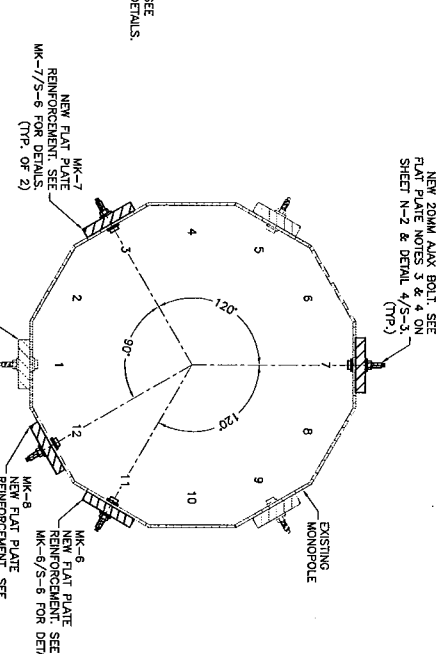
3 SECTION
 SCALE: 3/4" = 1'-0"



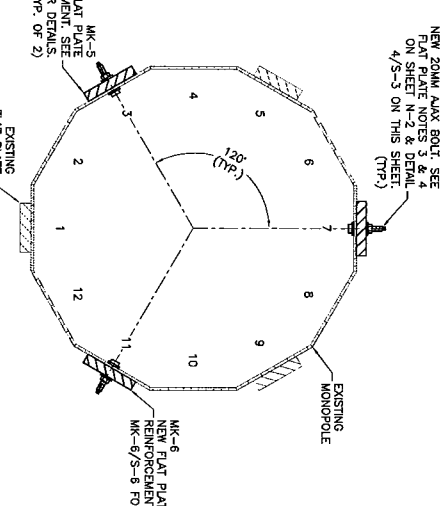
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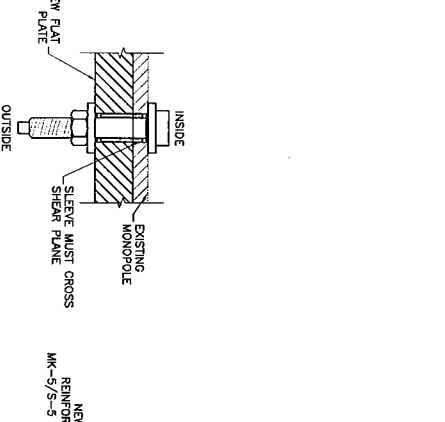
1 SECTION
 SCALE: 3/4" = 1'-0"



6 SECTION
 SCALE: 3/4" = 1'-0"



5 SECTION
 SCALE: 3/4" = 1'-0"



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

PREPARED BY:
FDH
 501 NORTHERN AVENUE
 SUITE 200
 PHOENIX, AZ 85004
 PHONE: 602-998-1012
 FAX: 602-998-1031
 ENGINEERING INNOVATION

PREPARED FOR:
SBA
 800 SOUTH SECOND PARKWAY, NW
 SUITE 200
 BOCA RATON, FL 33497
 (800) 487-8578

CHRISTOPHER M. MURPHY, P.E.
 LICENSED PROFESSIONAL ENGINEER
 09/11/13
 CONNECTION LIC. NO. 28842

DATE: 09/15/13
 DESCRIPTION: PRELIMINARY/REVIEW
 DRAWN BY: JJS
 CHECKED BY: DZ
 ENG APPROV: CMM
 PROJECT NO.: 1331751400

DATE	DESCRIPTION	BY
09/15/13	PRELIMINARY/REVIEW	JJS
09/11/13	CONSTRUCTION	DZ

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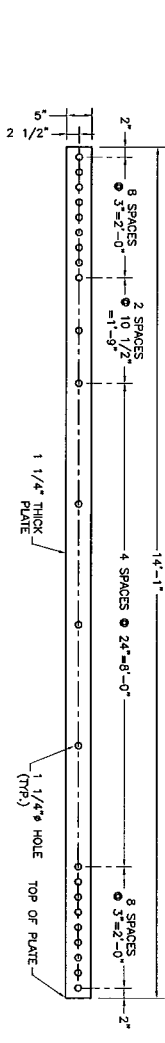
SITE NAME:
 GRANBY-N. GRANBY
 SITE NUMBER:
 CT46134-A-03
 SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06033

FDH

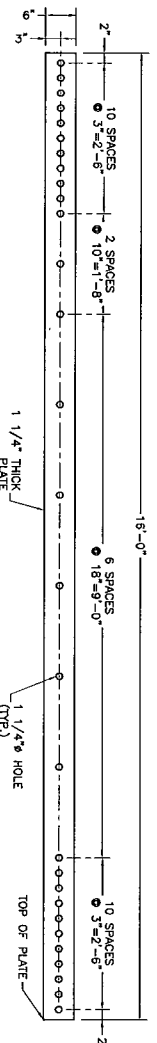
SECONDARY INSPECTION

EOR has reviewed the issues noted and passed the as-built condition(s).
 GC has reviewed the site and corrected the punch list items and confirmation showing these corrections has been received by the EOR.

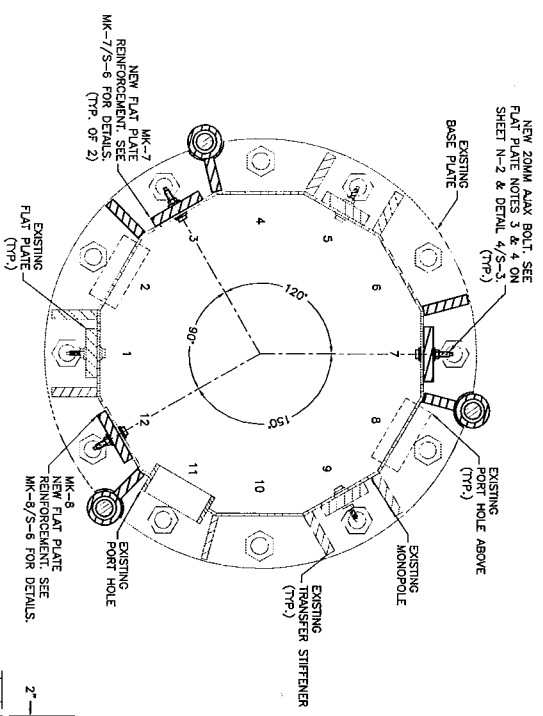
SHEET NUMBER
S-4



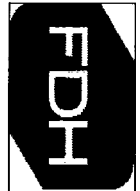
MK-1
 S-4
 SCALE: NTS



MK-2
 S-4
 SCALE: NTS



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




PROPOSED BY:




6021 HUNTERS TRACE
 3000 BAYVIEW BLVD
 FARMINGTON, CT 06030
 PHONE: 860-278-8888
 FAX: 860-278-1231

ENGINEERING INNOVATION

PROPOSED FOR:



8000 BOSTON SQUARE PARKWAY, 2ND
 3000 BAYVIEW, CT 06030
 (800) 487-5176



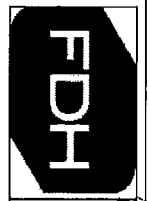
CHRISTOPHER M. MURPHY, P.E.
 LICENSED PROFESSIONAL ENGINEER
 CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
 CHECKED BY: DZ
 ENGINEER: CMM
 PROJECT NO: 1317131002

DATE	DESCRIPTION	REV
06/20/13	PRELIMINARY/REVIEW	A
09/11/13	CONSTRUCTION	0

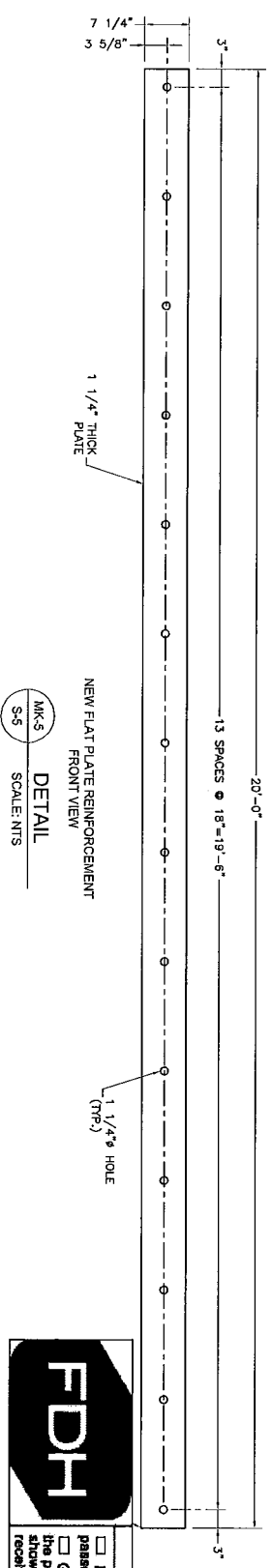
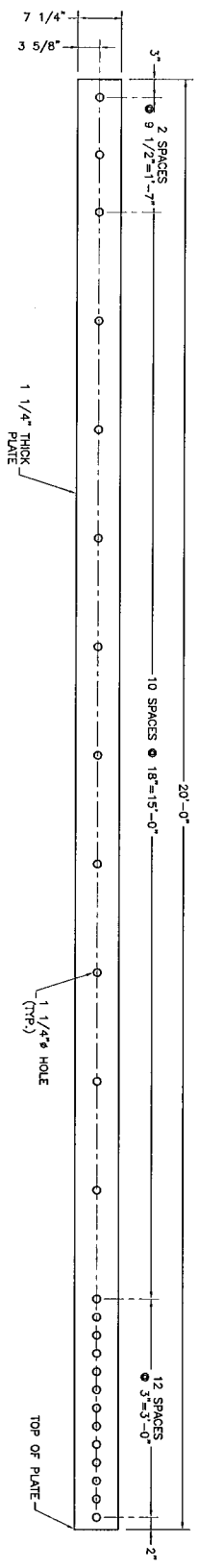
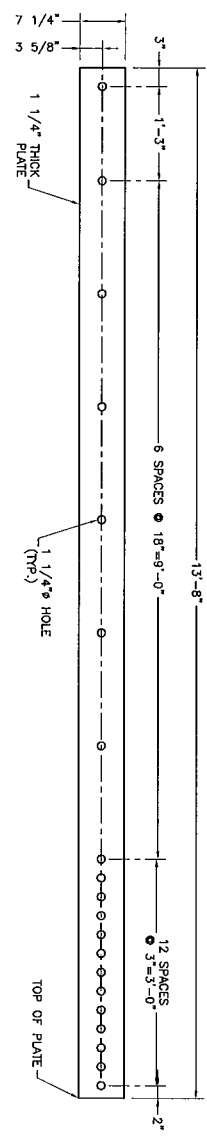
THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY TO GRANBY-N. GRANBY AND IS TO BE REPRODUCED IN WHOLE OR IN PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF FDH ENGINEERING, INC. IS PROHIBITED.

SITE NAME: GRANBY-N. GRANBY
 SITE NUMBER: CT46134A-03
 SITE ADDRESS: 15 NORTH GRANBY ROAD
 SHEET NUMBER: S-5




SECONDARY INSPECTION
 GRANBY-N. GRANBY


EOR has reviewed the issues noted and passed the as-built condition(s).
 GC has notified the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.



PREPARED BY:

 FDL ENGINEERING, INC.
 RALEIGH, NC 27615
 PHONE: 919-253-0012
 FAX: 919-253-1531

REGISTERED FOR:

 SBA REGIONAL SOUND REINFORCEMENT, INC.
 BOX 800N, F. 33457
 (800) 487-5116

PROFESSIONAL ENGINEER

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

DATE: 05/20/13
 DESCRIPTION: PRELIMINARY/REVIEW
 DRAWN BY: JFS
 CHECKED BY: OZ
 ENG. APP'D: CMM
 PROJECT NO.: 13317331000

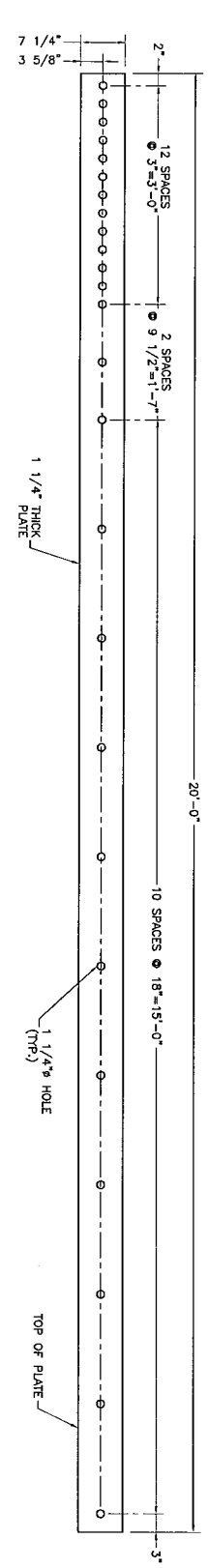
DATE	DESCRIPTION	REV
05/20/13	PRELIMINARY/REVIEW	A
09/11/13	CONSTRUCTION	0

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY TO GRANBY-N, GRANBY AND IS NOT TO BE REPRODUCED OR PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF FDH ENGINEERING, INC. (S-6/11/13).

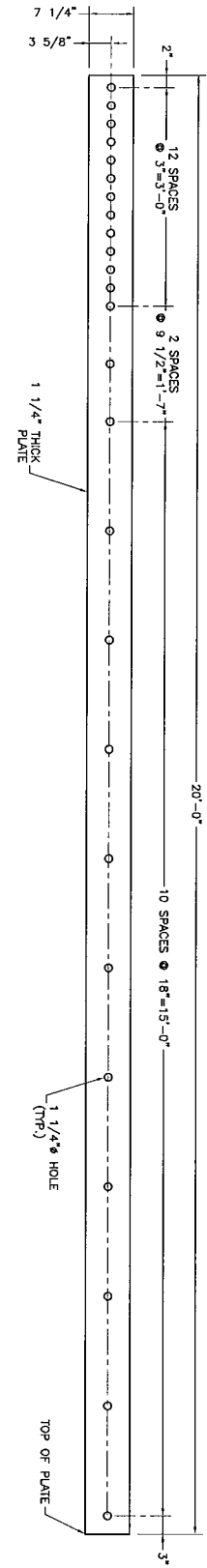
SITE NAME:
 GRANBY-N, GRANBY
 SITE NUMBER:
 C146134A-03

SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06033
 SECONDARY INSPECTION
 EOR has reviewed the issues noted and passed the as-built condition(s).
 GFC has reviewed the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.

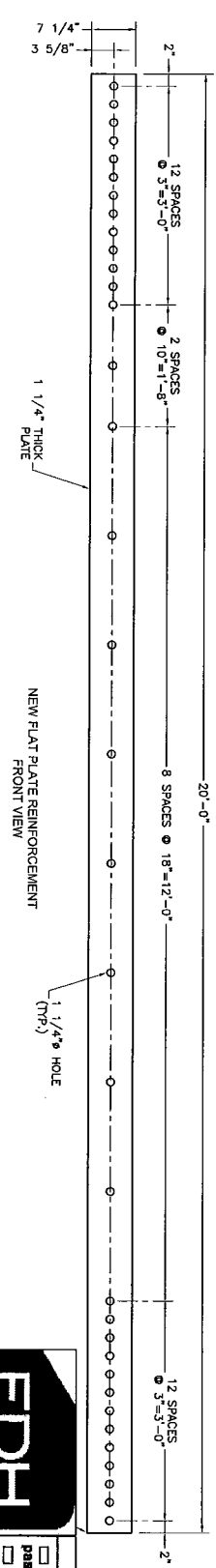
SHEET NUMBER
S-6



NEW FLAT PLATE REINFORCEMENT
 FRONT VIEW
 MK-8
 S-6
 DETAIL
 SCALE: NTS



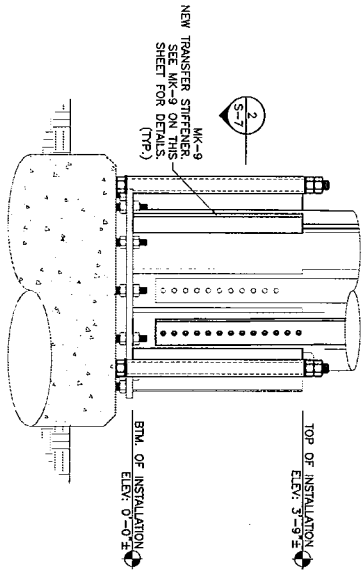
NEW FLAT PLATE REINFORCEMENT
 FRONT VIEW
 MK-7
 S-6
 DETAIL
 SCALE: NTS



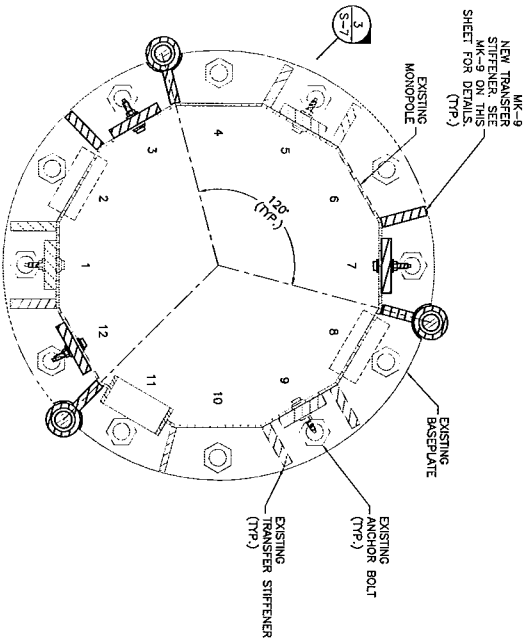
NEW FLAT PLATE REINFORCEMENT
 FRONT VIEW
 MK-8
 S-6
 DETAIL
 SCALE: NTS

TRANSFER STIFFENER INSTALLATION SCHEDULE			
PART NO	QUANTITY	DESCRIPTION	ELEVATION
MK-9	2	TRANSFER STIFFENER	0'-0" ± TO 3'-9" ±

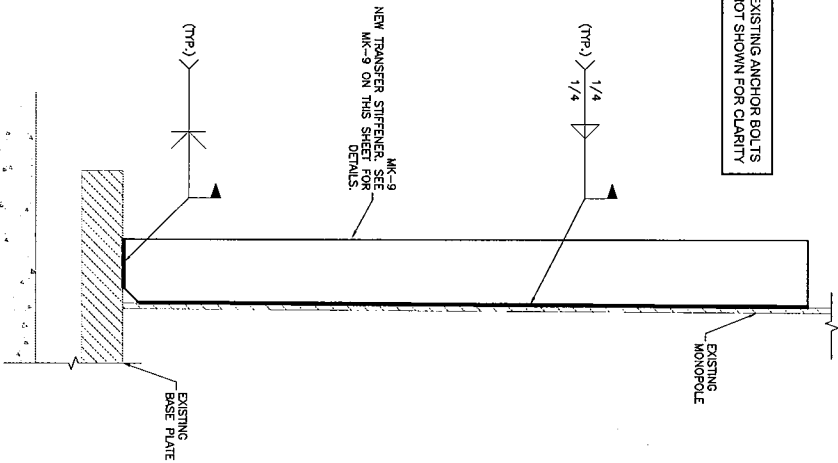
ALL NEW TRANSFER STIFFENER STEEL TO HAVE F_y=65 KSI



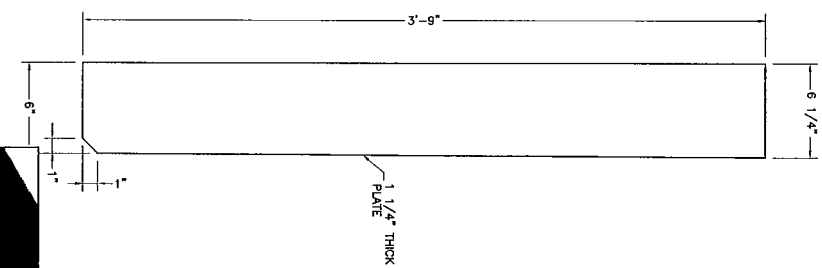
1 ELEVATION
SCALE: 3/8" = 1'-0"



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



3 DETAIL
NTS



MK-9 DETAIL
NTS

PROVIDED BY:
FDH
1021 MAIN STREET
BLOOMINGTON, CT 06032
PHONE: 860-254-2072
FAX: 860-254-1031

ENGINEERING INNOVATION

REGISTERED FOR:
SBA
800 GORP SOUND PARKWAY, NW
SUITE 3000, BOSTON, IL 63087
(800) 487-5151

PROFESSIONAL ENGINEER
CHRISTOPHER M. KURPEK, P.E.
CONNECTICUT LIC. NO. 25944Z
09/11/13

DRAWN BY: JJS
CHECKED BY: OZ
ENGLAPP'D: CMM
PROJECT NO: 1331731400

DATE	DESCRIPTION	REV
05/20/13	PRELIMINARY/REVIEW	A
09/11/13	CONSTRUCTION	0

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SITE NAME:
GRANBY, N. GRANBY
SITE NUMBER:
CT46134-A-03
SITE ADDRESS:
15 NORTH GRANBY ROAD
GRANBY, CT 06033

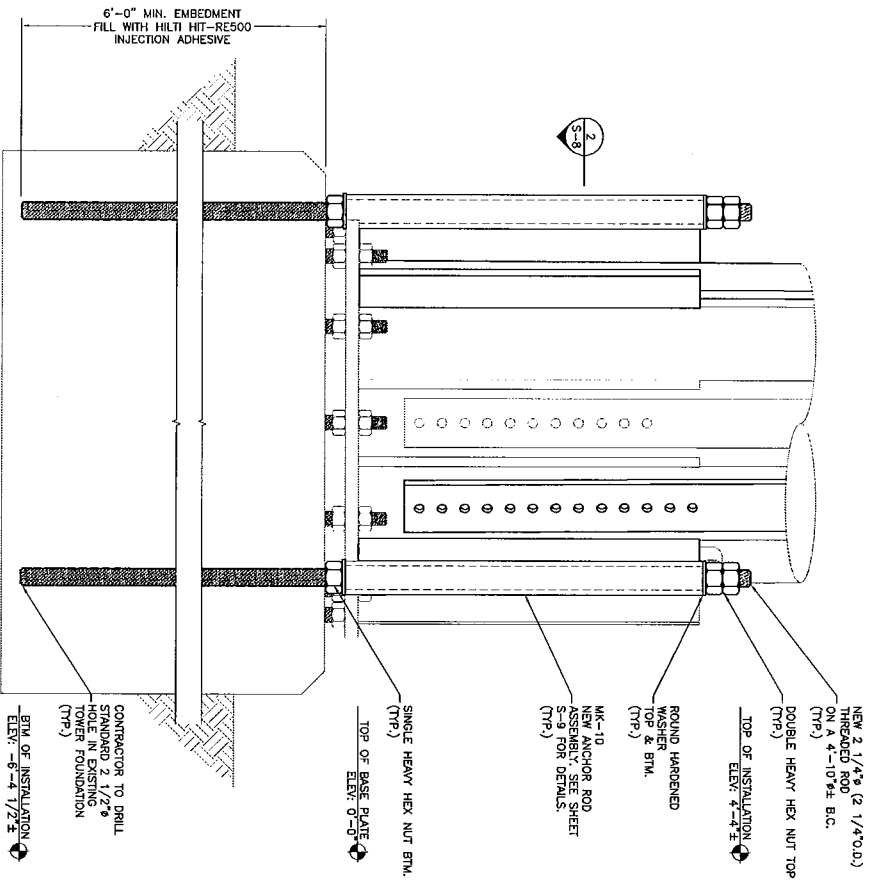
FDH
SECONDARY INSPECTION
 EOR has reviewed the issues noted and passed the as-built condition(s).
 GC has replied the site and corrected the punchlist items shown. Documentation showing these corrections has been received by the EOR.

SHEET NUMBER
S-7

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

PULL TEST SHOULD BE PERFORMED PER PULL TEST NOTES ON SHEET N-2. THE TARGET TENSION OF THIS PULL TEST IS 199K.

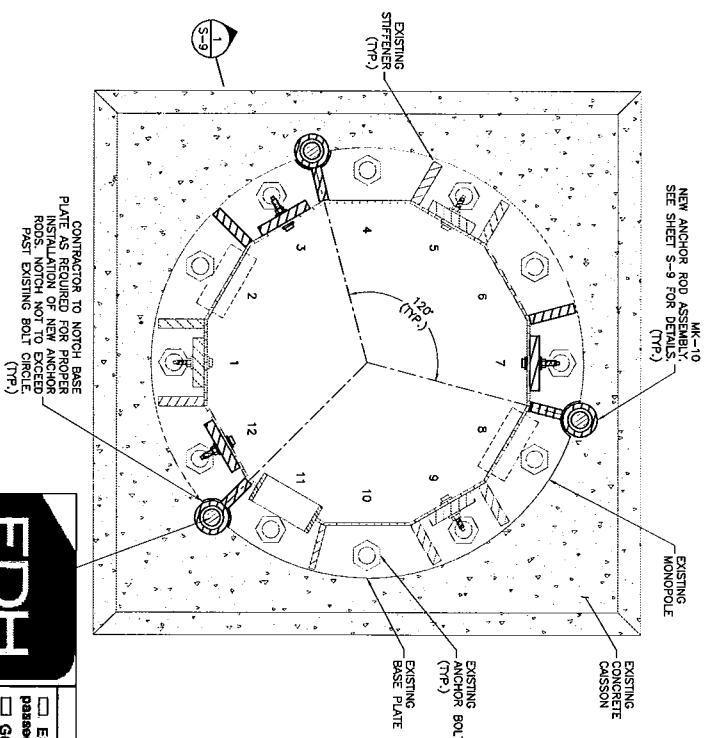


1 ANCHOR ROD INSTALLATION
ELEVATION VIEW
SCALE: 3/4" = 1'-0"

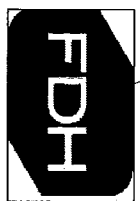
ANCHOR ROD MATERIAL LIST

PART #	QTY.	DESCRIPTION	ELEVATION
MK-10	3	ANCHOR ROD ASSEMBLY	-0'-1 3/4" ± TO 3'-9 1/2" ±
-	3	2 1/4" (2 1/4" O.D.) ASTM A615-73 (Fy=75KSI) THREADED ROD X 10'-8 1/2" ±	-6'-4 1/2" ± TO 4'-4" ±
-	6	ROUND HARDENED WASHER	-
-	9	HEAVY HEX NUT	-

CONTRACTOR TO REMOVE EXISTING STIFFENERS FOR PROPER INSTALLATION OF ANCHOR ROD ASSEMBLIES AS SHOWN.



2 ANCHOR ROD INSTALLATION
SECTION VIEW
SCALE: 3/4" = 1'-0"



SECONDARY INSPECTION

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

GC has revisited the site and corrected the punch items shown. Documentation of these items has been received by the EDR.

SHEET NUMBER
S-8

REGISTERED BY:

FDH

2021 REGISTERED PROFESSIONAL ENGINEER
PHONE: 973-963-0012
FAX: 973-963-0011

ENGINEERING INNOVATION

REGISTERED 206

SBA

2020 BROOKLYN SECTOR PARTNER, NY
800-487-5439
(800) 487-SITE

STATE OF CONNECTICUT

REGISTERED PROFESSIONAL ENGINEER

CHRISTOPHER M. MURPHY, P.E.

CONNECTIONS, LLC, NO. 22942

1/1/13

DRAWN BY: JTS

CHECKED BY: DZ

ENG. APPROV.: GMM

PROJECT NO.: 13312314400

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DATE	DESCRIPTION	BY
06/20/13	PRELIMINARY/REVISE	A
09/11/13	CONSTRUCTION	0

SITE NAME:
GRANBY-N. GRANBY

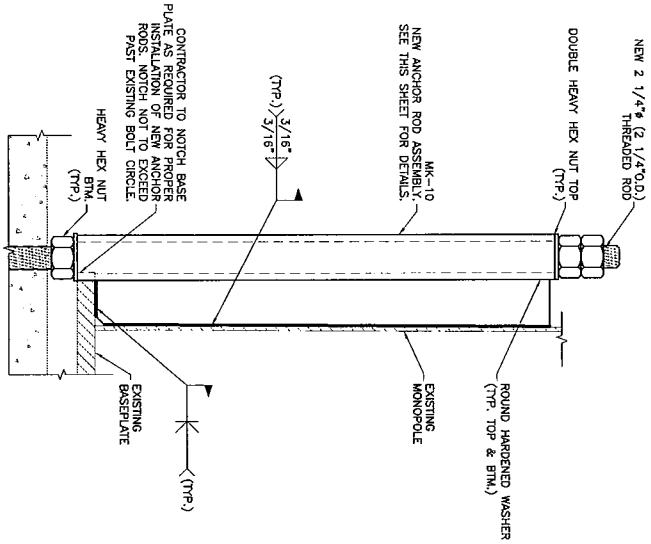
SITE NUMBER:
CT146134-A-03

SITE ADDRESS:
15 NORTH GRANBY ROAD

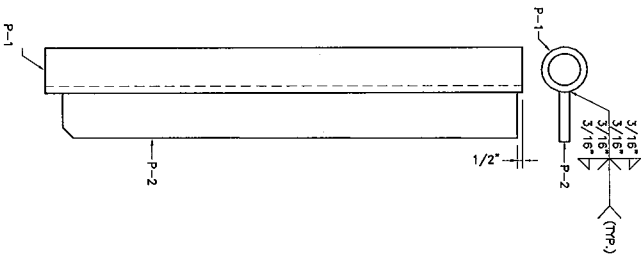
REGISTERED BY:
GEORGE CLARKE

MATERIAL LIST (MK-10)		
PART NO.	QTY.	DESCRIPTION
P-1	3	ANCHOR ROD SLEEVE
P-2	3	TRANSFER PLATE

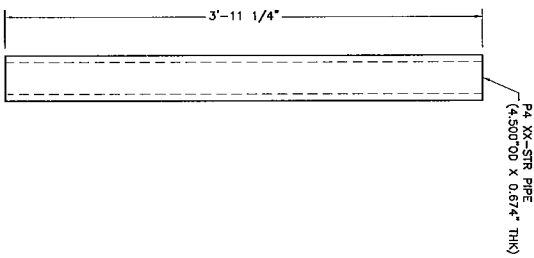
EXISTING ANCHOR BOLTS
NOT SHOWN FOR CLARITY



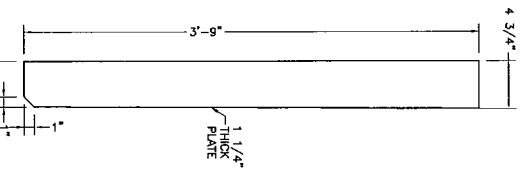
ANCHOR ROD ASSEMBLY WELD DETAIL
ELEVATION VIEW
1
SCALE: 1" = 1'-0"



ANCHOR ROD ASSEMBLY
TOP & SIDE VIEW
MK-10
SCALE: 1" = 1'-0"



ANCHOR ROD SLEEVE
SIDE VIEW
P-1
SCALE: 1" = 1'-0"



TRANSFER PLATE
P-2
SCALE: 1" = 1'-0"

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.

SHEET NUMBER
S-9

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SITE NAME:
GRANBY-N, GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
**15 NORTH GRANBY ROAD
GRANBY, CT 06805**

DATE: 09/29/13
PREPARED BY: 09/11/13
CONSTRUCTION: 0

DATE: 09/29/13
CHECKED BY: DJM
ENG. APPROV.: DJM

PROJECT NO.: 1311731-400

DESIGNED BY: JFS
DRAWN BY: DJM
PROJECT NO.: 1311731-400

CHRISTOPHER M. WANNY, P.E.
CONNECTION LIC. NO. 25842
09/11/13

PROFESSIONAL ENGINEER

SBA

5510 BROWN SOUND PARKWAY, NW
BIRMINGHAM, AL 35247
(205) 481-9416

PREPARED BY:

FDH

5221 MEMPHIS DRIVE
RALEIGH, NC 27615
FAX: 919-255-1031

ENGINEERING INNOVATION



FDH Engineering, Inc., 6521 Meridien Dr. Suite 170, Raleigh, NC, 27616, Ph. 919.755.1012, Fax 919.755.1031

June 30, 2014

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

RE: Inspection and Anchor Pull Test
SBA Site Name: Granby-N. Granby
SBA Site ID: CT46134-A-03
FDH Job #1467V11500

Dear Steven:

The modification anchor rods installed at the Granby-N. Granby (CT46134-A-03) in Granby, CT pass the acceptance criteria set forth by FDH Engineering Project 1331731400 Dated 9/11/2013. All three (3) anchors were tested and passed the test criteria.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Grady A. McCollum". The signature is fluid and cursive.

Grady A. McCollum, PE
Project Manager
Engineering Investigative Services



Project, Anchor, and Test Equipment Information

Project Information	
Project	Granby-N. Granby
Site ID	CT43134-A-03
Location	Granby, CT
FDH Job #	1467VA11500
Test Date	6/26/2014
Test Company	FDH Engineering, Inc.
Technician	Scott Ferry
Weather	80°F, Partly Cloudy
Jack Information	
Hydraulic Area	16.21 in ²
Gauge Information	
Pressure Gauge ID	1042097A
Calibration Date	5/12/2014
Displacement Gauge ID	5926
Calibration Date	2/20/2014

Load Test Field Data

Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	1	30%	58.4	3600	0.041
2	1	60%	116.7	7200	0.095
3	1	100%	197.8	12200	0.186
Residual		0%	0.0	0	0.017

Load Test 1 Field Data

Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	2	5%	9.7	600	0.005
2	2	15%	29.2	1800	0.020
3	2	30%	58.4	3600	0.035
4	2	45%	87.5	5400	0.072
5	2	60%	116.7	7200	0.099
6	2	75%	145.9	9000	0.125
7	2	90%	175.1	10800	0.154
8	2	100%	197.8	12200	0.172
		0%	0.0	0	0.005

Summary of Results

Anchor Information	
Anchor ID	1
Anchor Location	Northeast
Anchor Size	2.25 in
Anchor Grade	75 ksi
Anchor Proof Load	195 kips
Residual Displacement (in)	
Pre-Test	0.017
Test 1	0.005
Test 2	-
Test 3	-
Result Summary Comments	
PASS	
Refer to FDH Engineering, Inc. Project 1331731400 Dated 9/11/2013 for passing criteria.	



Project, Anchor, and Test Equipment Information	
Project Information	
Project	Granby-N. Granby
Site ID	CT43134-A-03
Location	Granby, CT
FDH Job #	146/V11500
Test Date	6/26/2014
Test Company	FDH Engineering, Inc.
Technician	Scott Ferry
Weather	80°F, Partly Cloudy
Jack Information	
Hydraulic Area	16.21 in ²
Gauge Information	
Pressure Gauge ID	1042097A
Calibration Date	5/12/2014
Displacement Gauge ID	5926
Calibration Date	2/20/2014

Load Test Field Data					
			Pre-Test Field Data		
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	1	30%	58.4	3600	0.041
2	1	60%	116.7	7200	0.088
3	1	100%	197.8	12200	0.172
Residual		0%	0.0	0	0.021
Load Test 1 Field Data					
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	2	5%	9.7	600	0.005
2	2	15%	29.2	1800	0.018
3	2	30%	58.4	3600	0.037
4	2	45%	87.5	5400	0.059
5	2	60%	116.7	7200	0.085
6	2	75%	145.9	9000	0.113
7	2	90%	175.1	10800	0.139
8	2	100%	197.8	12200	0.164
		0%	0.0	0	0.006

Summary of Results	
Anchor Information	
Anchor ID	2
Anchor Location	South
Anchor Size	2.25 in
Anchor Grade	75 ksi
Anchor Proof Load	195 kips
Residual Displacement (in)	0.021
Pre-Test	0.006
Test 1	-
Test 2	-
Test 3	-
Result Summary Comments	PASS
Refer to FDH Engineering, Inc. Project 1331731400 Dated 9/11/2013 for passing criteria.	



Project, Anchor, and Test Equipment Information

Project Information	
Project	Granby-N, Granby
Site ID	CT43134-A-03
Location	Granby, CT
FDH Job #	1467V11500
Test Date	6/26/2014
Test Company	FDH Engineering, Inc.
Technician	Scott Ferry
Weather	80°F, Partly Cloudy
Jack Information	
Hydraulic Areal	16.21 in ²
Gauge Information	
Pressure Gauge ID	1042097A
Calibration Date	5/12/2014
Displacement Gauge ID	5926
Calibration Date	2/20/2014

Load Test Field Data

Load Test Field Data		Pre-Test Field Data			
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	1	30%	58.4	3600	0.043
2	1	60%	116.7	7200	0.094
3	1	100%	197.8	12200	0.172
Residual		0%	0.0	0	0.015

Load Test 1 Field Data

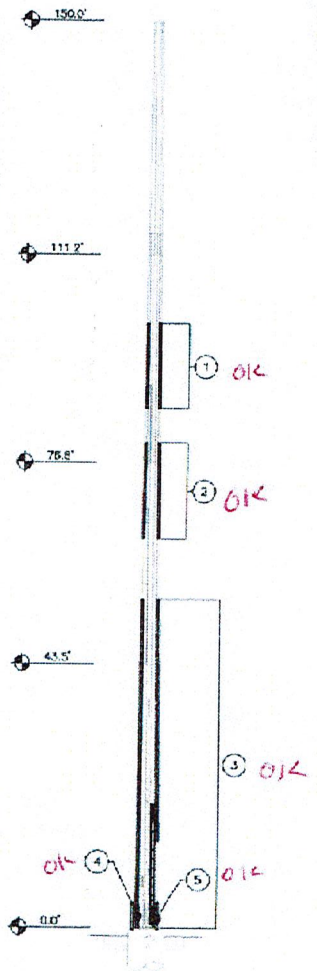
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	2	5%	9.7	600	0.007
2	2	15%	29.2	1800	0.019
3	2	30%	58.4	3600	0.037
4	2	45%	87.5	5400	0.073
5	2	60%	116.7	7200	0.093
6	2	75%	145.9	9000	0.117
7	2	90%	175.1	10800	0.144
8	2	100%	197.8	12200	0.167
		0%	0.0	0	0.003

Summary of Results

Anchor Information	
Anchor ID	3
Anchor Location	West
Anchor Size	2.25 in
Anchor Grade	75 ksi
Anchor Proof Load	195 kips
Residual Displacement (in)	0.015
Pre-Test	0.003
Test 1	-
Test 2	-
Test 3	-
Result Summary Comments	
PASS	
Refer to FDH Engineering, Inc. Project 1331731400 Dated 9/11/2013 for passing criteria.	

Clark Cozen 12/8/13

LENGTH (FT)	48.80	37.87	37.55	38.79
NUMBER OF SIDES				
THICKNESS (IN)	0.3750	0.3125	0.2500	0.1875
SOCKET LENGTH (FT)	N/A	5.00	4.30	3.55
TOP DIA. (IN)	34.7085	33.0636	30.9602	27.5000
BOT DIA. (IN)	43.0000	35.8100	30.3500	24.4000
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.

NO.	TYPE OF MODIFICATION	BOTTOM ELEV. (FT)	TOP ELEV. (FT)
1	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	85.9±	100.0±
2	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	64.2±	80.2±
3	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	0.5±	54.2±
4	INSTALLATION OF NEW TRANSFER STIFFENERS. SEE S-7 FOR DETAILS.	0.0±	3.7±
5	INSTALLATION OF NEW ANCHOR RODS. SEE S-8 THROUGH S-9 FOR DETAILS.	-6.4±	4.6±

1
OK

PROVIDED BY

 4371 WINDSORDALE
 BELLFLOE, NC 27616
 PHONE: 818-2206 T
 FAX: 818-2206 F

PROVIDED BY

 2500 BROKEN SOUND PARKWAY, NW
 BOCA RATON, FL 33487
 (800) 487-5817

STATE OF CONNECTICUT

 LICENSED PROFESSIONAL ENGINEER
 No. 25842
 06/11/13
 CHRISTOPHER M. MURPHY, P.E.
 CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
 CHECKED BY: DZ
 ENG APP'D: CMM
 PROJECT NO: 1331721400

DATE	DESCRIPTION	REV
05/30/12	PRELIMINARY REVIEW	A
09/11/13	CONSTRUCTION	B

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SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
15 NORTH GRANBY ROAD
GRANBY, CT 06035

SHEET TITLE:
MODIFICATION SCHEDULE

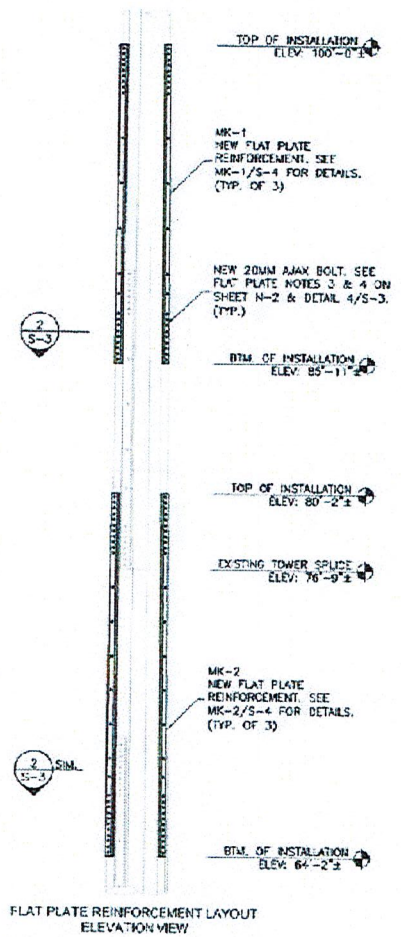
SHEET NUMBER:
S-1

OK C.C.

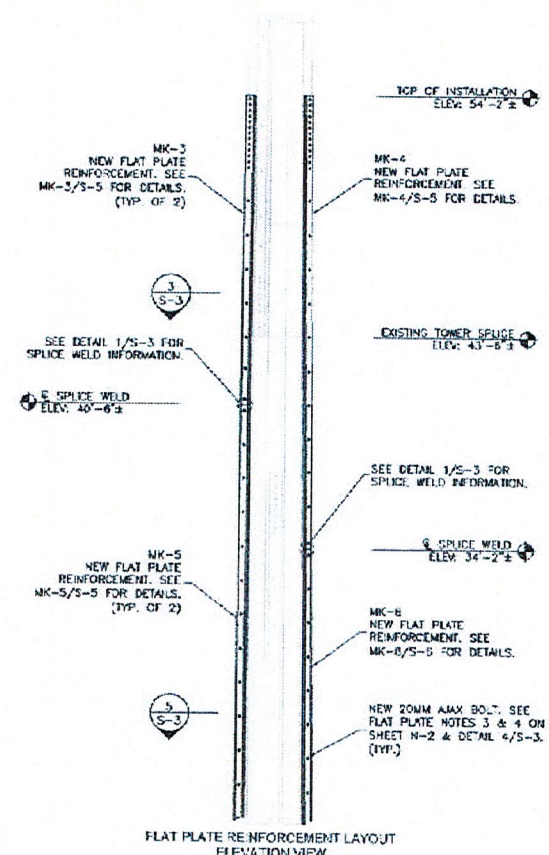
FLAT PLATE INSTALLATION SCHEDULE

PART #	QTY.	DESCRIPTION	ELEVATION
MK-1	3	FLAT PLATE REINFORCEMENT	85'-11"± TO 100'-0"±
MK-2	3	FLAT PLATE REINFORCEMENT	54'-2"± TO 80'-2"±
MK-3	2	FLAT PLATE REINFORCEMENT	40'-8"± TO 54'-2"±
MK-4	1	FLAT PLATE REINFORCEMENT	34'-2"± TO 54'-2"±
MK-5	2	FLAT PLATE REINFORCEMENT	20'-6"± TO 40'-6"±
MK-6	1	FLAT PLATE REINFORCEMENT	14'-2"± TO 34'-2"±
MK-7	2	FLAT PLATE REINFORCEMENT	0'-6"± TO 20'-6"±
MK-8	1	FLAT PLATE REINFORCEMENT	0'-6"± TO 20'-6"±
-	355	20MM AJAX BOLTS	VARIES

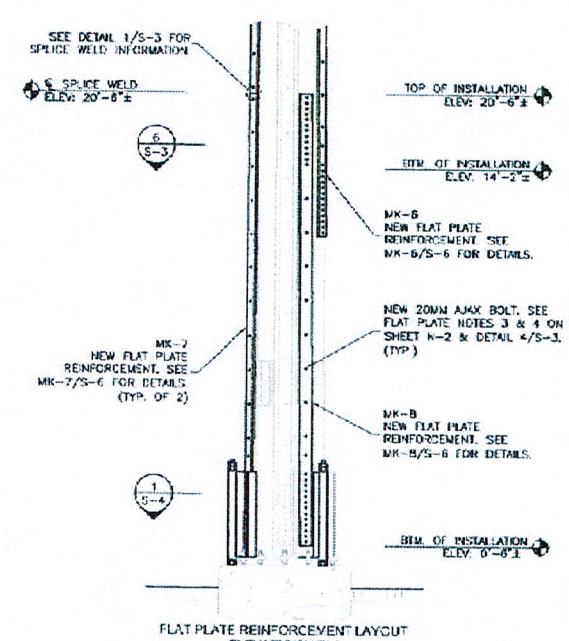
ALL NEW FLAT PLATE STEEL TO HAVE $F_y=65$ KSI



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



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



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

OK

OK

OK

PREPARED BY: **FDH ENGINEERING**

DESIGNED BY: **SBA**
5300 BROWNHILL ROAD
 BOCA RATON, FL 33493
 (561) 467-5300

PROFESSIONAL ENGINEER
 STATE OF FLORIDA
 No. 2
 LICENSE
 CHRISTOPHER M. MULLER
 CONNECTICUT LIC. NO.

DRAWN BY:
 CHECKED BY:
 INCHARGE:
 PROJECT NO.:

DATE	REVISION
05/20/13	1
08/14/13	2

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SITE: **GRANBY-N**

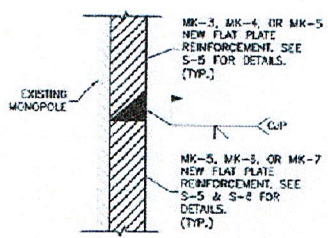
SHEET NO: **CT461C**

SITE ADDRESS: **15 NORTH GRANBY, GRANBY, CT**

SHEET TITLE: **FLAT PLATE REINFORCEMENT DETAILS**

SHEET NO: **S**

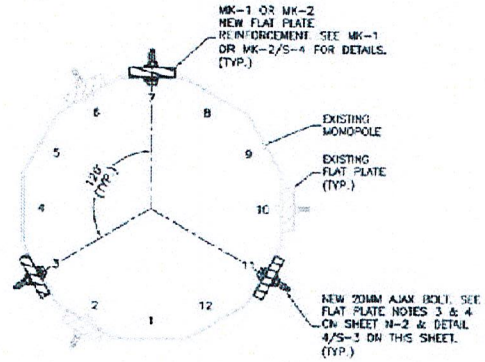
OK C.C.



SPLICE WELD ELEVATION VIEW

1 SECTION
S-3 NTS

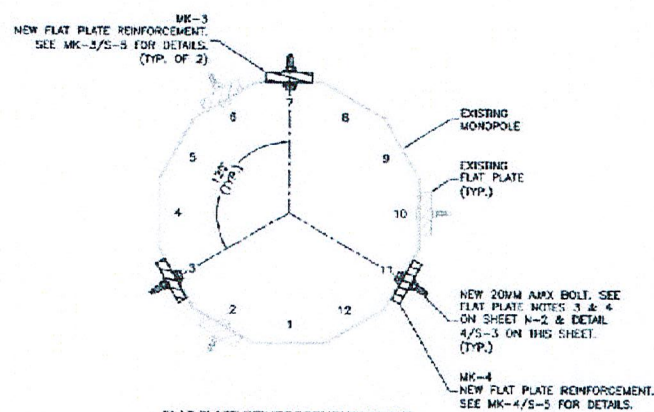
OK



FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW

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

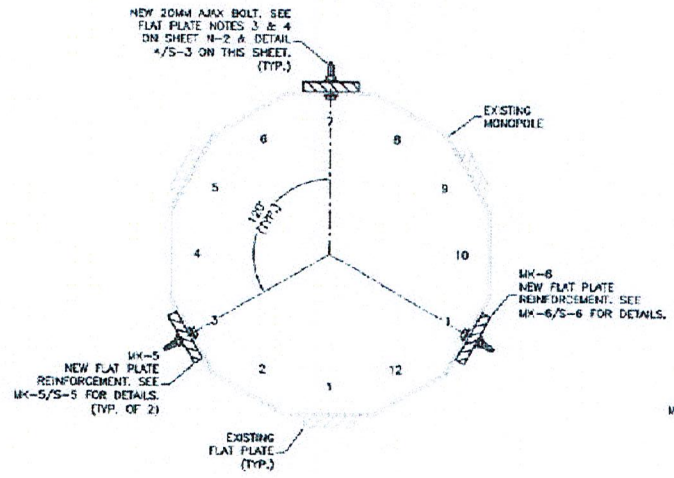
OK



FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW

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

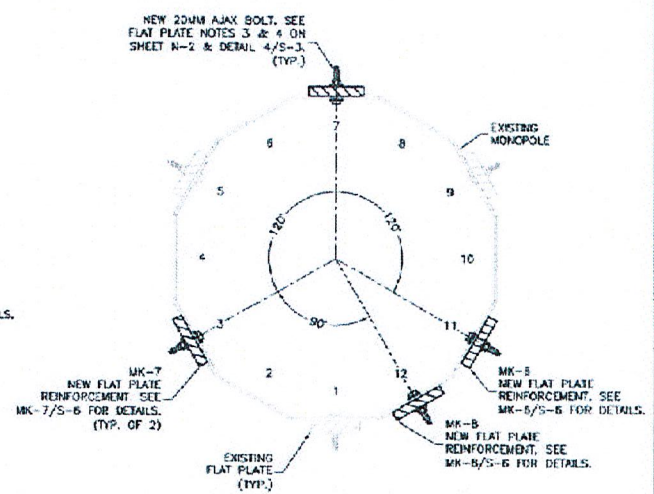
OK



FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW

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

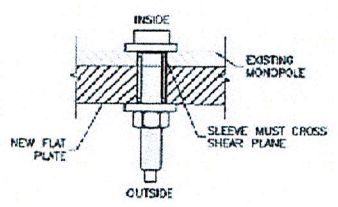
OK



FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW

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

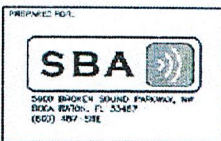
OK



AXI BOLT ASSEMBLY PLAN VIEW

4 DETAIL
S-3 NTS

OK



09/11/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
CHECKED BY: DZ
ENG APPR'D: CMU
PROJECT NO: 1331731400

SUBMITTALS		
DATE	DESCRIPTION	REV
05/20/13	PROVISIONAL REVIEW	A
09/11/13	CONSTRUCTION	B

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SITE NAME:
GRANBY-N. GRANBY

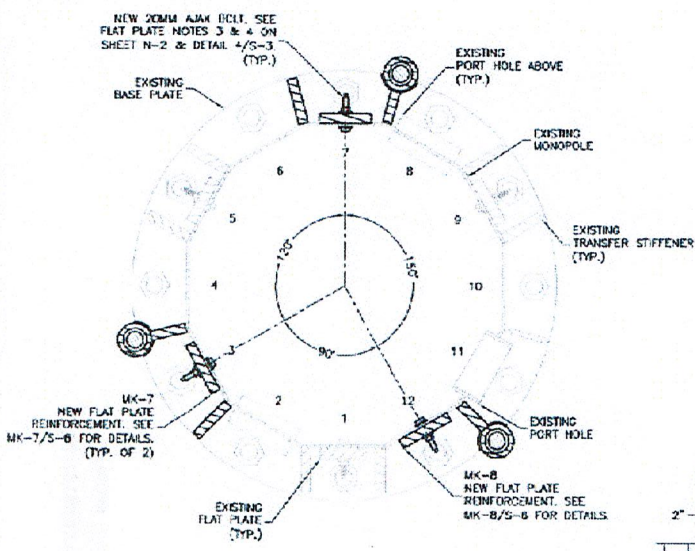
SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
15 NORTH GRANBY ROAD
GRANBY, CT 06035

SHEET TITLE
FLAT PLATE REINFORCEMENT
DETAILS II

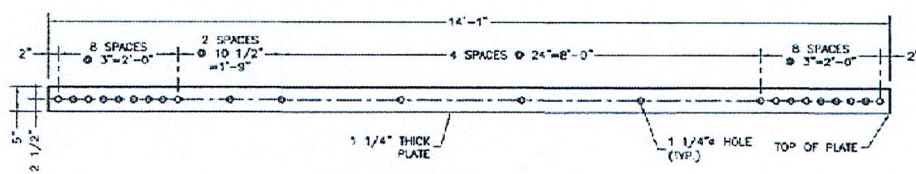
SHEET NUMBER
S-3

OK C.C



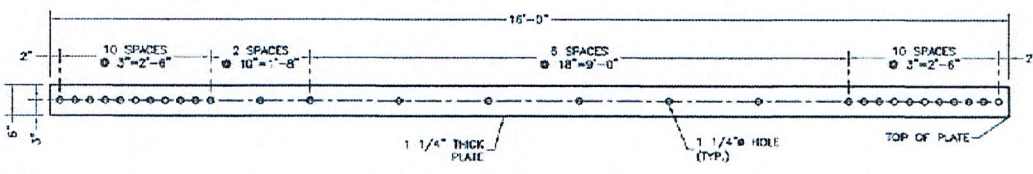
FLAT PLATE REINFORCEMENT LAYOUT SECTION VIEW
 1 SECTION
 S-4 SCALE: 3/4" = 1'-0"

OK



NEW FLAT PLATE REINFORCEMENT FRONT VIEW
 MK-1 DETAIL
 S-4 SCALE: NTS

OK



NEW FLAT PLATE REINFORCEMENT FRONT VIEW
 MK-2 DETAIL
 S-4 SCALE: NTS

OK

PREPARED BY:
FDH
 801 WILSON AVENUE
 WILMINGTON, DE 19810
 PHONEX 302-739-1113
 FAX: 302-739-1133
 ENGINEERING INNOVATION

PREPARED FOR:
SBA
 5000 BROKEN SOUND EXPRESSWAY, NW
 BOCA RATON, FL 33487
 (904) 487-5916

STATE OF CONNECTICUT
 Christopher M. Murphy, P.E.
 No. 25842
 LICENSED PROFESSIONAL ENGINEER
 09/11/13
 CHRISTOPHER M. MURPHY, P.E.
 CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
 CHECKED BY: DZ
 ENG APPVD: CMM
 PROJECT NO: 1531731402

SUBMITTALS		
DATE	DESCRIPTION	REV
05/30/13	PRELIMINARY REVIEW	A
09/11/13	CONSTRUCTION	B

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SITE NAME:
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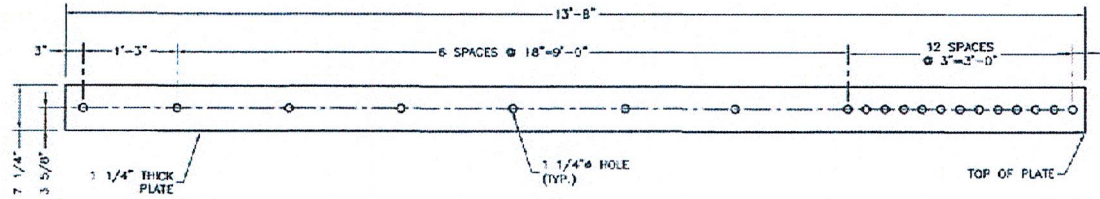
SITE NUMBER:
 CT46134-A-03

SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

SHEET TITLE
 FLAT PLATE REINFORCEMENT
 DETAILS III

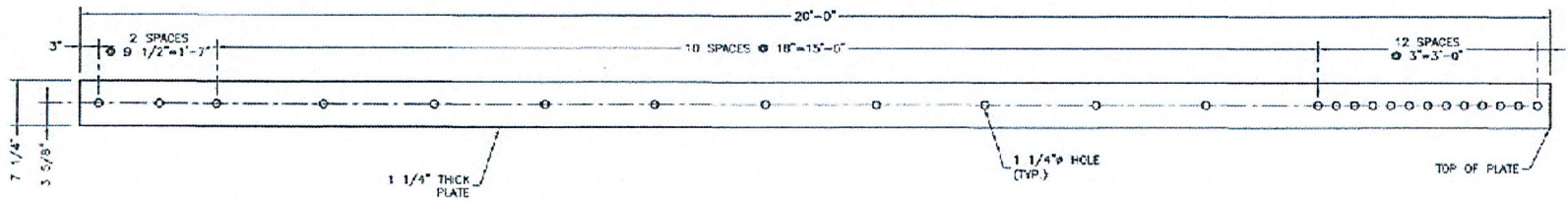
SHEET NUMBER
 S-4

O.K. C.C.



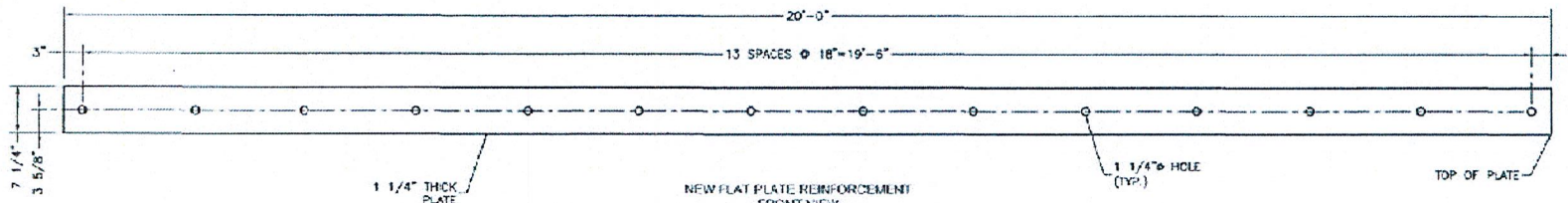
NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-3
S-5
DETAIL
SCALE: NTS
O.K.



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-4
S-5
DETAIL
SCALE: NTS
O.K.



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-5
S-5
DETAIL
SCALE: NTS
O.K.

PREPARED BY

2021 MAINE REGISTRATION
NUMBER: NO. 22018
LICENSED PROFESSIONAL ENGINEER
ENGINEERING INNOVATION

PREPARED FOR

3906 BROOKHOUND PARKWAY, NW
BOCA RATON, FL 33487
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09/11/13
CHRISTOPHER V. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
CHECKED BY: DZ
ENG APP'D: CUM
PROJECT NO.: 1331731400

SUBMITTALS		
DATE	DESCRIPTION	REV
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SITE NAME:
GRANBY-N. GRANBY

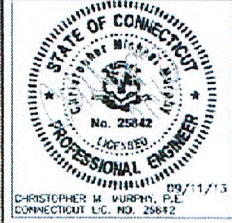
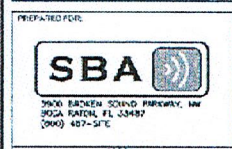
SITE NUMBER:
CT48134-A-03

SITE ADDRESS:
15 NORTH GRANBY ROAD
GRANBY, CT 06035

SHEET TITLE
FLAT PLATE REINFORCEMENT
DETAILS IN

SHEET NUMBER
S-5

OK C.C.



CH-CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT L.C. NO. 25842

SUBMITTALS		
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05/26/13	PRELIMINARY REVIEW	A
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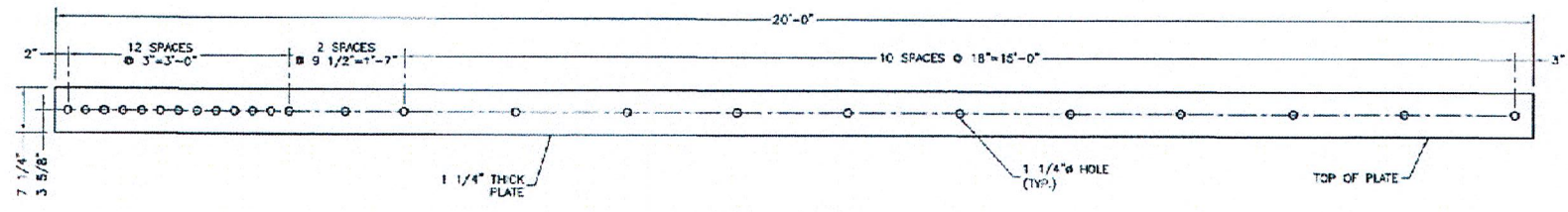
SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT48134-A-03

SITE ADDRESS:
15 NORTH GRANBY ROAD
GRANBY, CT 06035

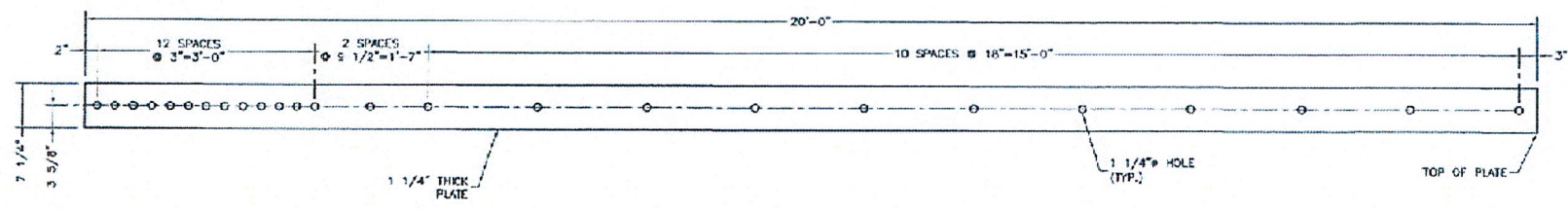
SHEET TITLE
FLAT PLATE REINFORCEMENT
DETAIL S-V

SHEET NUMBER
S-6



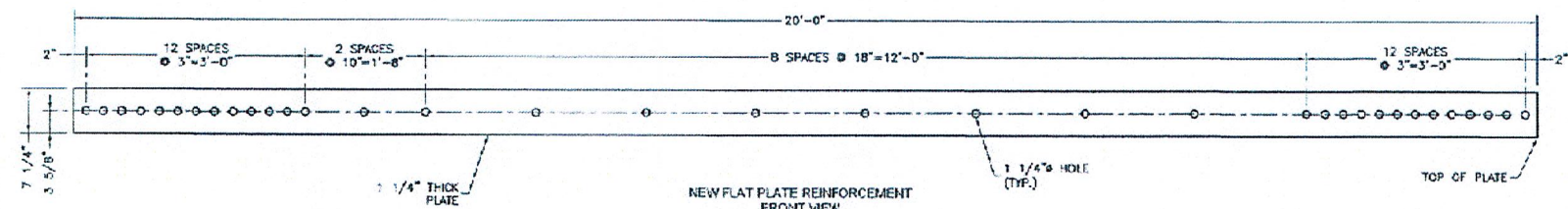
NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-6
S-6
DETAIL SCALE: NTS OK



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

MK-7
S-6
DETAIL SCALE: NTS OK



NEW FLAT PLATE REINFORCEMENT
FRONT VIEW

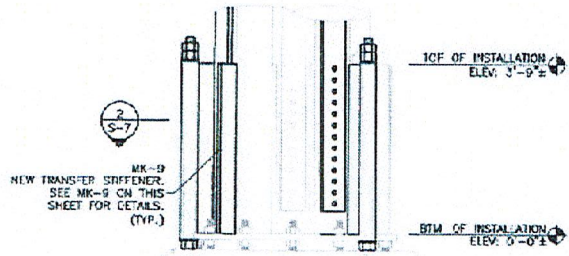
MK-8
S-6
DETAIL SCALE: NTS OK

OK C.C.

TRANSFER STIFFENER INSTALLATION SCHEDULE			
PART NO	QUANTITY	DESCRIPTION	ELEVATION
MK-9	2	TRANSFER STIFFENER	0'-0"± TO 3'-9"±

ALL NEW TRANSFER STIFFENER STEEL TO HAVE $F_y=65$ KSI

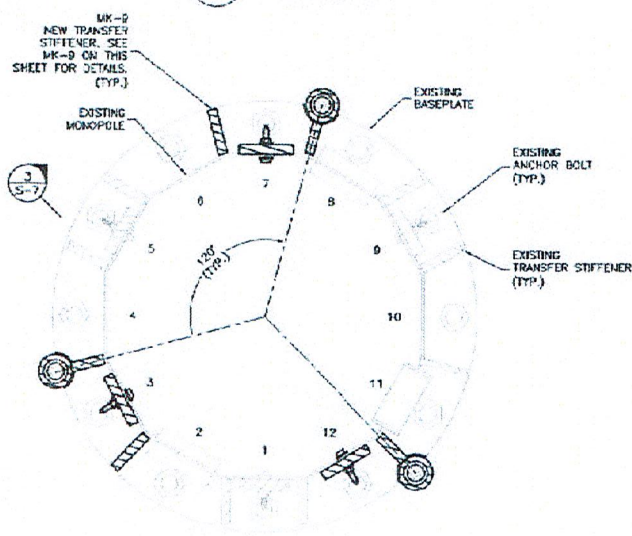
OK



NEW TRANSFER STIFFENER LAYOUT
ELEVATION VIEW

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

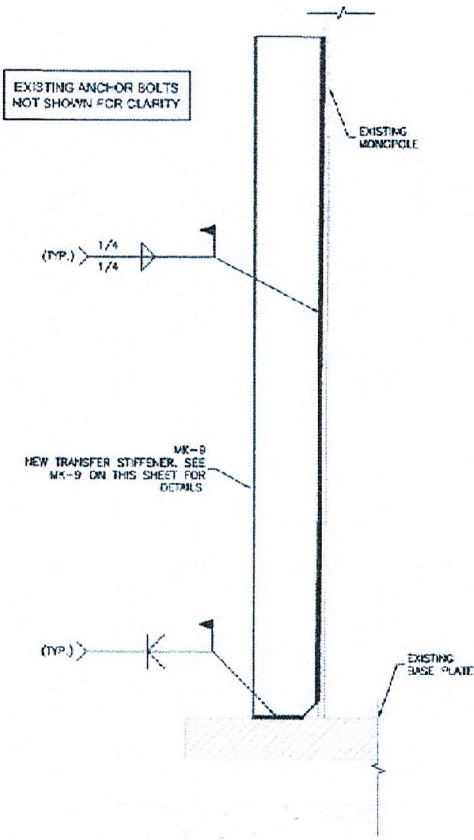
OK



NEW TRANSFER STIFFENER LAYOUT
PLAN VIEW

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

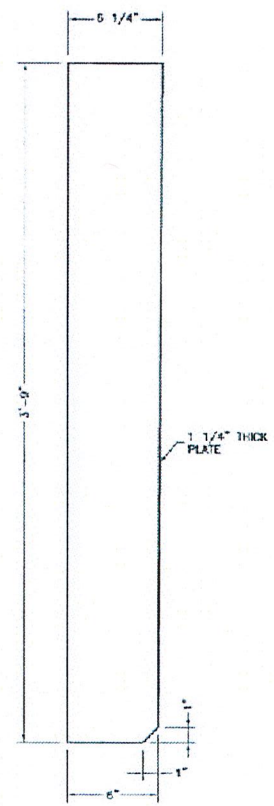
OK



NEW TRANSFER STIFFENER WELD DETAIL
FRONT VIEW

3 DETAIL
S-7 NTS

OK



NEW TRANSFER STIFFENER
FRONT VIEW

MK-9 DETAIL
S-7 NTS

OK

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PREPARED FOR:

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SUITE 200
BOSTON, MA 02118
(617) 487-5100

09/11/13

CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT J.C. NO. 25842

DRAWN BY: JFS
CHECKED BY: DZ
EAC APPROV: CMH
PROJECT NO: 1331731400

SUBMITTALS		
DATE	DESCRIPTION	REV
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09/11/13	CONSTRUCTION	B

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SITE NAME
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS
15 NORTH GRANBY ROAD
GRANBY, CT 06035

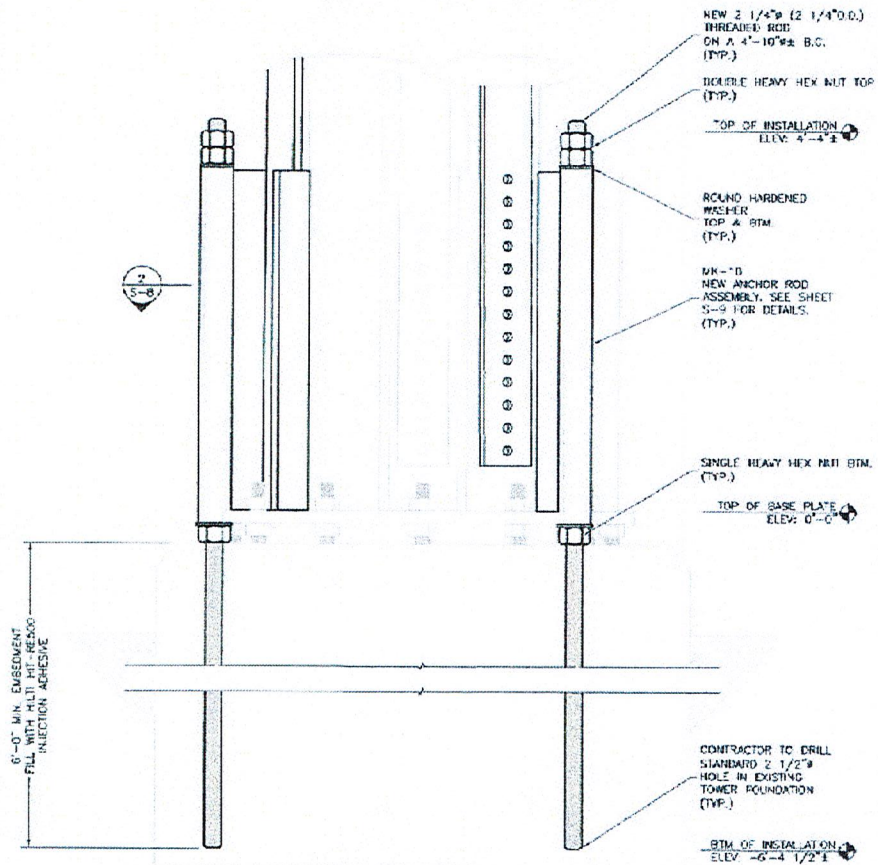
SHEET TITLE
TRANSFER STIFFENER
INSTALLATION
DETAILS

SHEET NUMBER
S-7

CONTRACTOR TO PROVIDE PHOTOS OF THE ANCHOR ROD HOLES TO PDH 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

PULL TEST SHOULD BE PERFORMED PER PULL TEST NOTES ON SHEET N-2. THE TARGET TENSION OF THIS PULL TEST IS 195K.



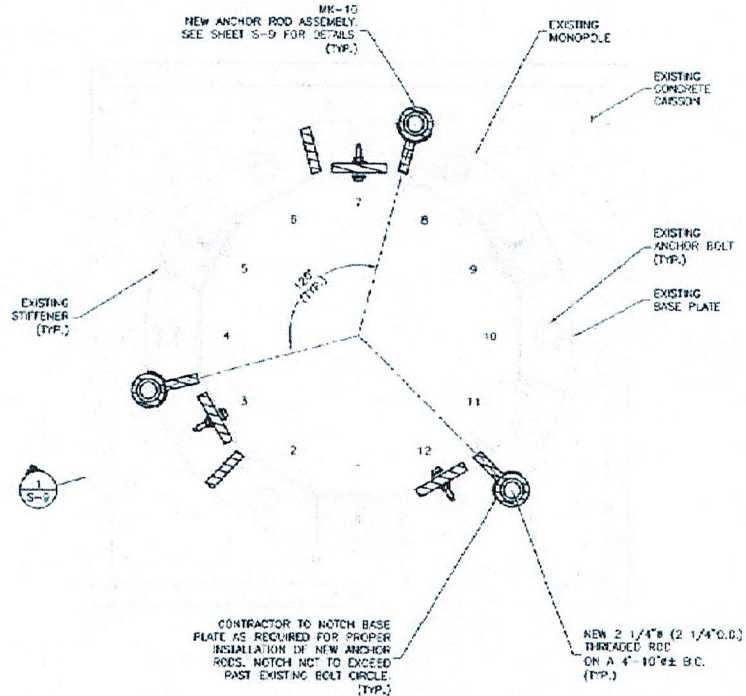
ANCHOR ROD INSTALLATION ELEVATION VIEW

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

ANCHOR ROD MATERIAL LIST

PART #	QTY.	DESCRIPTION	ELEVATION
MK-10	3	ANCHOR ROD ASSEMBLY	-0'-1 3/4"± TO 3'-9 1/2"±
-	3	2 1/4" (2 1/4" O.D.) ASTM A615-25 (1y-28K5) THREADED ROD X 10"-5 1/2"±	-6'-4 1/2"± TO 4'-4"
-	6	ROUND HARDENED WASHER	-
-	9	HEAVY HEX NUT	-

CONTRACTOR TO REMOVE EXISTING STIFFENERS FOR PROPER INSTALLATION OF ANCHOR ROD ASSEMBLIES AS SHOWN.



ANCHOR ROD INSTALLATION SECTION VIEW

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

PREPARED BY: **FDB** ENGINEERING INNOVATION
103 BRIDGEWAY DRIVE
FABRIC, LLC 2716
PO BOX 180-115 015
KAY, VT. 05451

PREPARED FOR: **SBA**
592 BROAD SOUND PARKWAY, NW
SUITE 200A, FL 33407
(888) 487-5111

FOR BID ONLY

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

DRAWN BY: JFS
CHECKED BY: DZ
ENG APPR: GMM
PROJECT NO: 1331731400

SUBMITTALS		
DATE	DESCRIPTION	REV.
05/30/13	PRELIMINARY REVIEW	A

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SITE NAME
GRANBY-N, GRANBY

SITE NUMBER
CT46134-A-03

SITE ADDRESS
15 NORTH GRANBY ROAD
GRANBY, CT 06035

SHEET TITLE
ANCHOR ROD
INSTALLATION
DETAILS I

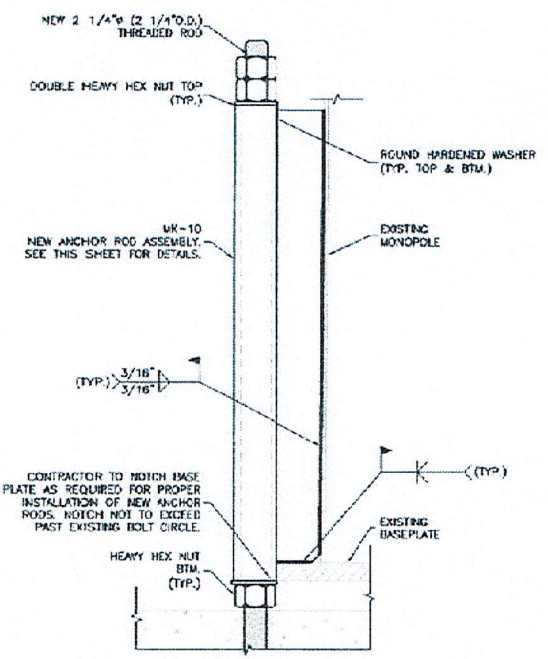
SHEET NUMBER
S-8


OK C.C.

MATERIAL LIST (MK-10)		
PART NO.	QTY.	DESCRIPTION
P-1	3	ANCHOR ROD SLEEVE
P-2	3	TRANSFER PLATE

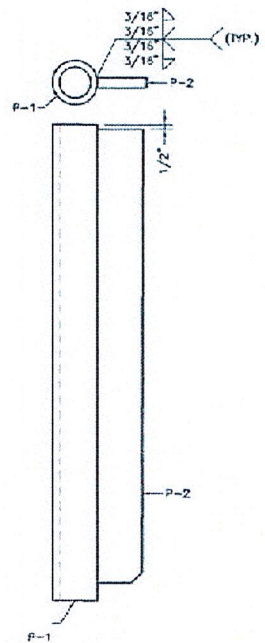
OK


EXISTING ANCHOR BOLTS NOT SHOWN FOR CLARITY



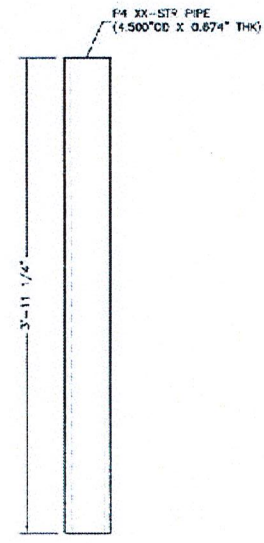
ANCHOR ROD ASSEMBLY WELD DETAIL ELEVATION VIEW
 **ELEVATION**
 SCALE: 1" = 1'-0"


OK



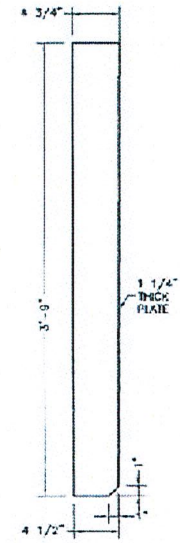
ANCHOR ROD ASSEMBLY TOP & SIDE VIEW
 **SECTION**
 SCALE: 1" = 1'-0"


OK



ANCHOR ROD SLEEVE SIDE VIEW
 **DETAIL**
 SCALE: 1" = 1'-0"


OK



TRANSFER PLATE SIDE VIEW
 **DETAIL**
 SCALE: 1" = 1'-0"

OK

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 **FDH**
 221 HERRING DRIVE
 WALEGA, CT 06495
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 FAX: 860-295-9811
 ENGINEERING INNOVATION

PREPARED FOR:
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 5001 BROOKFIELD AVENUE, SUITE 100
 WYOMING, CT 06498
 (860) 487-5212

STATE OF CONNECTICUT
 REGISTERED PROFESSIONAL ENGINEER
 No. 25843
 LICENSED
 09/11/13
 CHRISTOPHER M. MURPHY, P.E.
 CONNECTICUT LIC. NO. 25843

DRAWN BY: JPS
 CHECKED BY: DZ
 ENG APPR: CHM
 PROJECT NO: 1331731400

SUBMITTALS		
DATE	DESCRIPTION	REV
05/23/13	PRELIMINARY REVIEW	A
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SITE NAME:
 GRANBY-N. GRANBY
 SITE NUMBER:
 CT45134-A-03
 SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

SHEET TITLE
 ANCHOR ROD INSTALLATION DETAILS II

SHEET NUMBER
 S-9

CTION NOTES:

INSPECTION OF TOWER
IONS AND OTHER REPORTS
ORDANCE WITH THE CONTRACT
IGNED BY THE ENGINEER OF

D WORKMANSHIP ONLY AND IS
DOES THE PCI INSPECTOR
SHIP OF THE STRUCTURAL
DES WITH THE EOR AT ALL

HAT IS APPROVED TO

ET, IT IS VITAL THAT THE
IN COMMUNICATING AND
PECTED THAT EACH PARTY
TY. IF CONTACT
OF CONTACT (POC).

ITS FOR FURTHER DETAILS

S SOON AS RECEIVING A PO

DUCT ON-SITE INSPECTIONS,

- GENERAL CONTRACTOR (GC)
ITS FOR ADHERENCE TO THE
CTIONS, AND SUBMITTING THE

'FAILED PCI'), THE GC
LAN IN ONE OF TWO WAYS:
CATIONS CONTAINED IN THE
PPLEMENT PCI.
HE EOR TO RE-ANALYZE
T CONDITION.

G PHOTOGRAPHS, AT A
REPORT:

IN CONSTRUCTION/ERECTION

ROUND SHALL BE

PREPARED BY:



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

ENGINEERING INNOVATION

PREPARED FOR:



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BOCA RATON, FL 33487
(800) 487-SITE



CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842
09/11/13

DRAWN BY: JFS
CHECKED BY: DZ
ENG APPVD: CMM
PROJECT NO: 1331731400

SUBMITTALS		
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SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
**15 NORTH GRANBY ROAD
GRANBY, CT 06035**

SHEET TITLE
**POST CONSTRUCTION
INSPECTION NOTES**

SHEET NUMBER
N-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:




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 FAX: 919-755-1031

ENGINEERING INNOVATION

PREPARED FOR:



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

DRAWN BY: JFS
 CHECKED BY: DZ
 ENG APP'VD: CMM
 PROJECT NO: 1331731400

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SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
**15 NORTH GRANBY ROAD
 GRANBY, CT 06035**

SHEET TITLE
**POST CONSTRUCTION
 INSPECTION NOTES**

SHEET NUMBER
N-1

THE MODIFICATIONS DEPICTED ON THESE DRAWINGS ARE BASED ON THE RECOMMENDATIONS OUTLINED IN THE STRUCTURAL ANALYSIS COMPLETED BY FDH ENGINEERING, INC., PROJECT NO. 1321551400 DATED APRIL 15, 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

PREPARED BY:

 6521 MERIDIEN DRIVE
 RALEIGH, NC 27616
 PHONE: 919-755-1012
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 ENGINEERING INNOVATION

PREPARED FOR:

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


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

DRAWN BY: JFS
 CHECKED BY: DZ
 ENG APPVD: CMM
 PROJECT NO: 1331731400

SUBMITTALS		
DATE	DESCRIPTION	REV
05/30/13	PRELIMINARY/REVIEW	A
09/11/13	CONSTRUCTION	0

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SITE NAME:
 GRANBY-N. GRANBY

 SITE NUMBER:
 CT46134-A-03

 SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

PROJECT DESCRIPTION:
**MODIFICATION DRAWINGS
 FOR A 150' MONOPOLE**



SITE NAME:
GRANBY-N. GRANBY


SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

COORDINATES:
 LATITUDE: 41.9536°
 LONGITUDE: -72.7937°

1) Rust on New Ajax Bolts
CORRECTED BY THE GC

1) Rust on New Flat Plate Reinforcement
CORRECTED BY THE GC

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S-9	ANC

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.

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09/11/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
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ENG APP'D: CMM
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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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GENERAL NOTES:

- 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.
- 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.
- 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. THIS PROJECT CONTAINS A SERIES OF DETAILS CONSIDERED "TYPICAL DETAILS". THESE SHALL APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR AS THESE DETAILS. THESE "TYPICAL DETAILS" SHALL APPLY WHETHER OR NOT THEY ARE INDICATED OR CUT AT EACH LOCATION. USE OF STRUCTURAL DRAWINGS FOR SHOP DRAWINGS IS NOT PERMITTED.
- 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.
- CONTRACTOR SHALL PROMPTLY REMOVE ANY & ALL DEBRIS FROM SITE AND RESTORE AS BEST AS POSSIBLE TO PRECONSTRUCTION CONDITION.

CONTRACTOR QUALIFICATION NOTES:

- 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".
- 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.
- 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.
- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THE TIA-1019-A STANDARD.

JOB SITE SAFETY & NOTES:

- 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:

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

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

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

*ALL THREADED ROD SHALL BE ASTM A615-75 (Fy=75 KSI) UNLESS OTHERWISE SPECIFIED.
- ALL CONNECTIONS OF STRUCTURAL STEEL MEMBERS SHALL BE MADE USING SPECIFIED WELDS WITH WELDING ELECTRODES E-80XX OR SPECIFIED HIGH STRENGTH BOLTS TO BE ASTM A325N, THREAD INCLUDED WITH SHEAR PLANE (UNLESS OTHERWISE NOTED).
- 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.
- 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 ACHIEVING A MINIMUM OF 4 MILS DRY FILM PER ASTM A 780.
- 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.
- STRUCTURAL STEEL MAY NOT BE TORCH CUT FOR FABRICATION. ALL STEEL FABRICATION MUST FOLLOW AISC STANDARDS.

MISC. NOTES:

- 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.
- CONTRACTOR FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

FABRICATION NOTES:

- 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.
- NEW STEEL MEMBERS MUST HAVE SINGLE DRILLED HOLES. SLOTTED AND DOUBLE DRILLED HOLES ARE NOT ACCEPTABLE MEANS OF FABRICATION.

SUBSTITUTES AND/OR EQUALS:

- 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.

TRANSFER PLATE NOTES:

- NEW TRANSFER PLATES TO BE PLACED EQUALLY BETWEEN EXISTING ANCHOR BOLTS.
- INSIDE POLE SHAFT TO BE SPRAYED WITH (2) COATS COLD GALVANIZATION PAINT WHERE ALL WELDED CONNECTIONS ARE PERFORMED.
- AFTER TRANSFER PLATE INSTALLATION CONTRACTOR TO BRUSH PAINT (2) COATS OF COLD GALVANIZATION PAINT THEN FINISH WITH (1) COAT OF COLD GALVANIZATION SPRAY.

SURFACE PREPARATION:

- 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.
- AFTER NEW STEEL INSTALLATION CONTRACTOR TO BRUSH PAINT (2) COATS OF ZRC OR ZINGA COLD GALVANIZATION COMPOUND PER MANUFACTURER'S SPECIFICATIONS.

TRANSFER PLATE WELDING:

- 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.
- 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.
- CONTRACTOR RESPONSIBLE FOR TEMPORARY HEAT SHIELDING AS REQUIRED DURING WELDING.
- ALL WELDS TO BE VISUALLY INSPECTED BY A CERTIFIED WELD INSPECTOR PER AWS D1.1.
- CONTRACTOR RESPONSIBLE FOR VIEWING EXISTING POLE FOR LOOSE AND FLAMMABLE MATERIAL PRIOR TO WELDING FLAT PLATE.
- CONTRACTOR TO VERIFY LOCATION OF ENTRY PORTHOLES PRIOR TO BASE TRANSFER PLATE INSTALLATION.

NEW FLAT PLATE REINFORCEMENT NOTES:

- CONTRACTOR TO FIELD VERIFY PROPOSED LOCATION OF FLAT PLATE TO ENSURE THAT PROPER SPACING CAN BE MET.
- CONTRACTOR TO REPLACE AND/OR RELOCATE ANY CLIMBING PEGS THAT INTERFERE WITH THE INSTALLATION OF FLAT PLATE.
- 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 3/S-2.
- ALL SHEAR SLEEVES TO BE HOT DIPPED GALVANIZED PRIOR TO INSTALLATION.
- PRIOR TO FLAT PLATE INSTALLATION, SLIP JOINTS MUST BE TIGHTENED WITH A MINIMUM JACKING FORCE OF 6000 LBS.
- NEW FLAT PLATES TO BE INSTALLED ON THE CENTER OF PROPOSED SIDE UNLESS OTHERWISE NOTED.
- EXISTING COAX BANDS TO BE REPLACED AFTER FLAT PLATE INSTALLATION. NEW FLAT PLATE TO BE INSTALLED BENEATH EXISTING COAX BANDS.

CONSTRUCTION NOTES:

- 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.

ANCHOR ROD INSTALLATION NOTES:

- 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:

- EPOXY AGENTS SHOULD BE ALLOWED TO CURE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
- 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. CONSTRUCTION MAY PROCEED AFTER TESTING IS COMPLETED.
- 50% OF POST INSTALLED ANCHOR RODS SHALL BE TESTED OR A TOTAL OF 4, WHICHEVER IS GREATER.
- 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 195K.
- MAINTAIN COMPLETE LOAD-DISPLACEMENT RECORDS THROUGHOUT THE TEST. LOAD THE ANCHOR IN INCREMENTS OF UP TO 15% OF THE TARGET TENSION.
- STATIC LOAD TEST SHALL BE PERFORMED PER ASTM E488-96 (REAPPROVED 2003).
- 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.
- THIS INFORMATION SHALL BE DOCUMENTED AND INCLUDED IN THE POST MODIFICATION INSPECTION REPORT.
- CONTACT FDH ENGINEERING, INC. IF ANY OF THE ANCHORS FAIL THE PULL TEST.
- 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.
- 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.

EPOXY/HILTI NOTES:

- EPOXY AGENTS SHOULD BE ALLOWED TO CURE ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
- 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.
- ANY CONTRACTOR SHALL BE TRAINED REPRESENTATIVE, 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.



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.

PREPARED BY:

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

ENGINEERING INNOVATION

PREPARED FOR:

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

09/11/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
CHECKED BY: DZ
ENG APP'VD: CMM
PROJECT NO: 1331731400

SUBMITTALS		
DATE	DESCRIPTION	REV
05/30/13	PRELIMINARY/REVIEW	A
09/11/13	CONSTRUCTION	0

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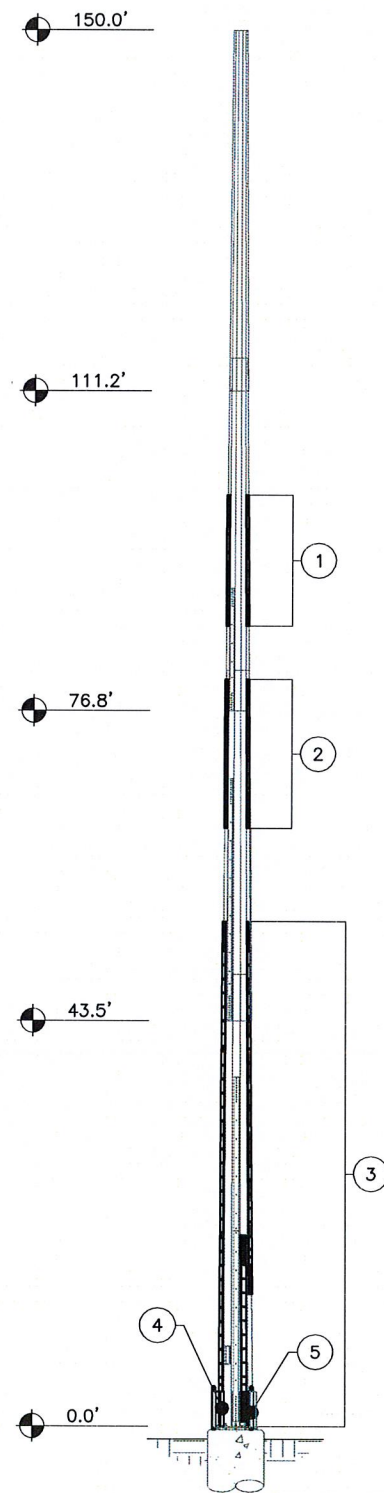
SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
**15 NORTH GRANBY ROAD
GRANBY CT 06035**

SHEET NUMBER
N-2

LENGTH (FT)	48.50	37.67	12	37.96	38.79
NUMBER OF SIDES					
THICKNESS (IN)	0.3750	0.3125	5.00	0.2500	0.1875
SOCKET LENGTH (FT)	N.A.	5.00	4.33	4.33	3.58
TOP DIA (IN)	34.2895	29.0636	23.4602	17.5000	17.5000
BOT DIA (IN)	43.0000	35.8100	30.3500	24.4800	24.4800
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

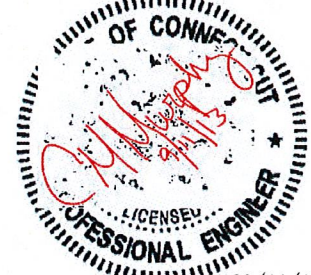
NO.	TYPE OF MODIFICATION	BOTTOM ELEV. (FT)	TOP ELEV. (FT)
1	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	85.9±	100.0±
2	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	64.2±	80.2±
3	INSTALLATION OF NEW FLAT PLATE REINFORCEMENT. SEE S-2 THROUGH S-6 FOR DETAILS.	0.5±	54.2±
4	INSTALLATION OF NEW TRANSFER STIFFENERS. SEE S-7 FOR DETAILS.	0.0±	3.7±
5	INSTALLATION OF NEW ANCHOR RODS. SEE S-8 THROUGH S-9 FOR DETAILS.	-6.4±	4.6±

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 BOCA RATON, FL 33487
 (800) 487-SITE


 CHRISTOPHER M. MURPHY, P.E.
 CONNECTICUT LIC. NO. 25842
 09/11/13

DRAWN BY: JFS
 CHECKED BY: DZ
 ENG APPV'D: CMM
 PROJECT NO: 1331731400

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SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
15 NORTH GRANBY ROAD
GRANBY, CT 06035



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.

SHEET NUMBER

S-1

FLAT PLATE INSTALLATION SCHEDULE

PART #	QTY.	DESCRIPTION	ELEVATION
MK-1	3	FLAT PLATE REINFORCEMENT	85'-11"± TO 100'-0"±
MK-2	3	FLAT PLATE REINFORCEMENT	64'-2"± TO 80'-2"±
MK-3	2	FLAT PLATE REINFORCEMENT	40'-6"± TO 54'-2"±
MK-4	1	FLAT PLATE REINFORCEMENT	34'-2"± TO 54'-2"±
MK-5	2	FLAT PLATE REINFORCEMENT	20'-6"± TO 40'-6"±
MK-6	1	FLAT PLATE REINFORCEMENT	14'-2"± TO 34'-2"±
MK-7	2	FLAT PLATE REINFORCEMENT	0'-6"± TO 20'-6"±
MK-8	1	FLAT PLATE REINFORCEMENT	0'-6"± TO 20'-6"±
-	355	20MM AJAX BOLTS	VARIES


ALL NEW FLAT PLATE STEEL TO HAVE Fy=65 KSI

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


 09/11/13
 CHRISTOPHER M. MURPHY, P.E.
 CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
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 ENG APP'VD: CMM
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SITE NAME:
GRANBY-N. GRANBY

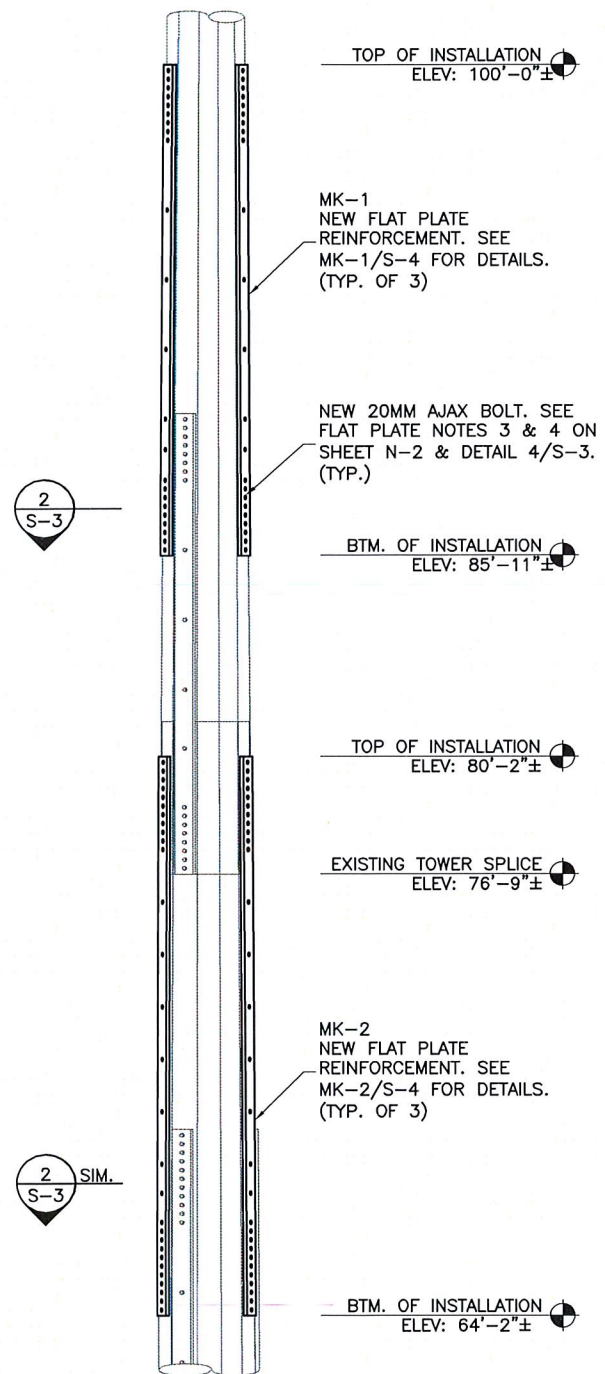
SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

SECONDARY INSPECTION

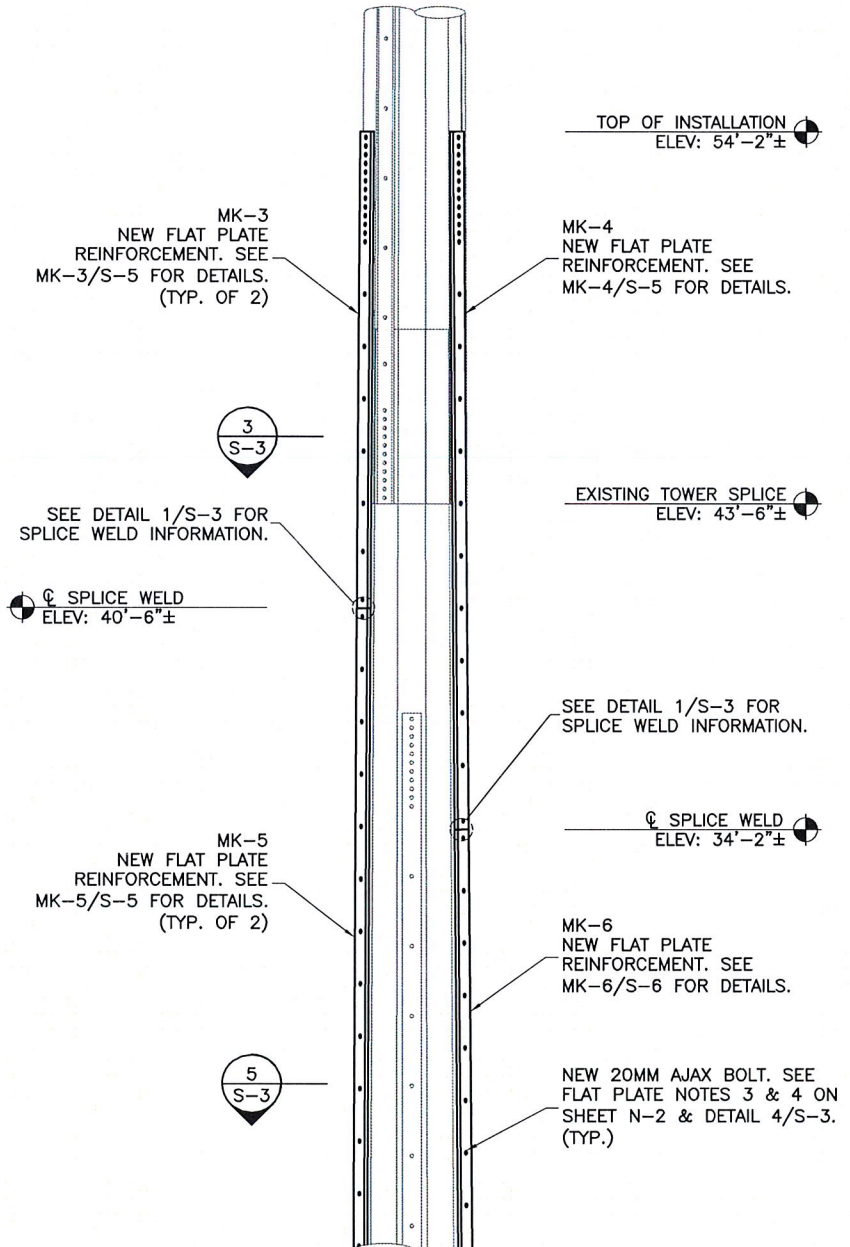
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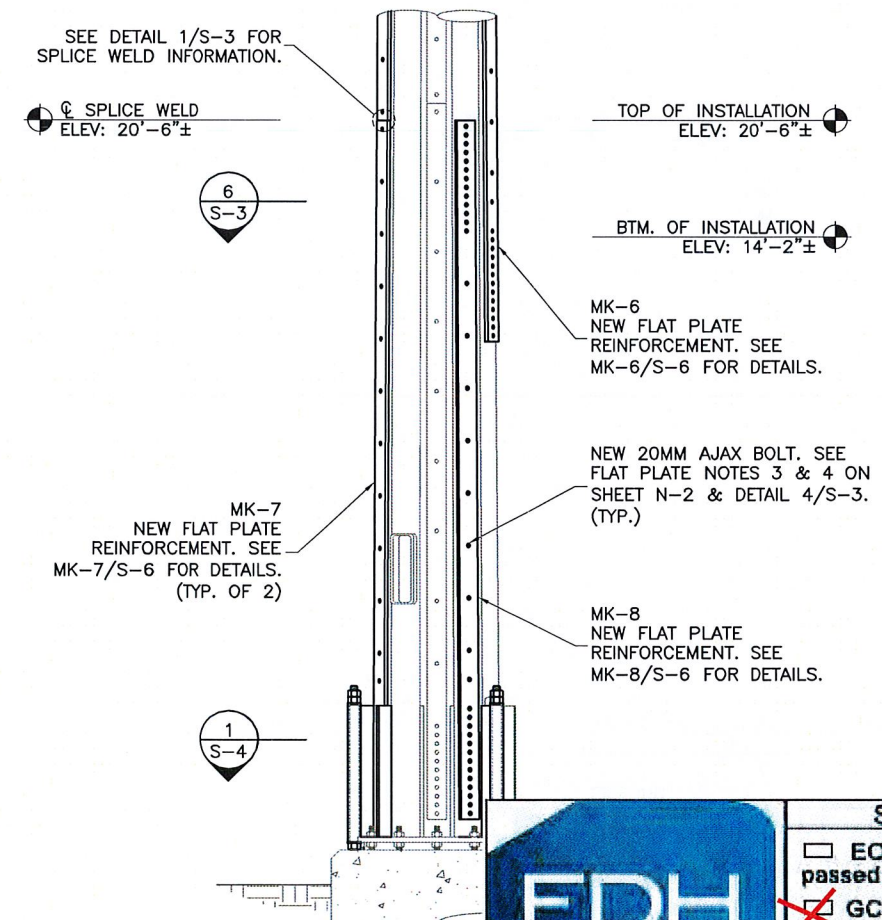
FLAT PLATE REINFORCEMENT LAYOUT
 ELEVATION VIEW

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



FLAT PLATE REINFORCEMENT LAYOUT
 ELEVATION VIEW

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



FLAT PLATE REINFORCEMENT LAYOUT
 ELEVATION VIEW

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

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.

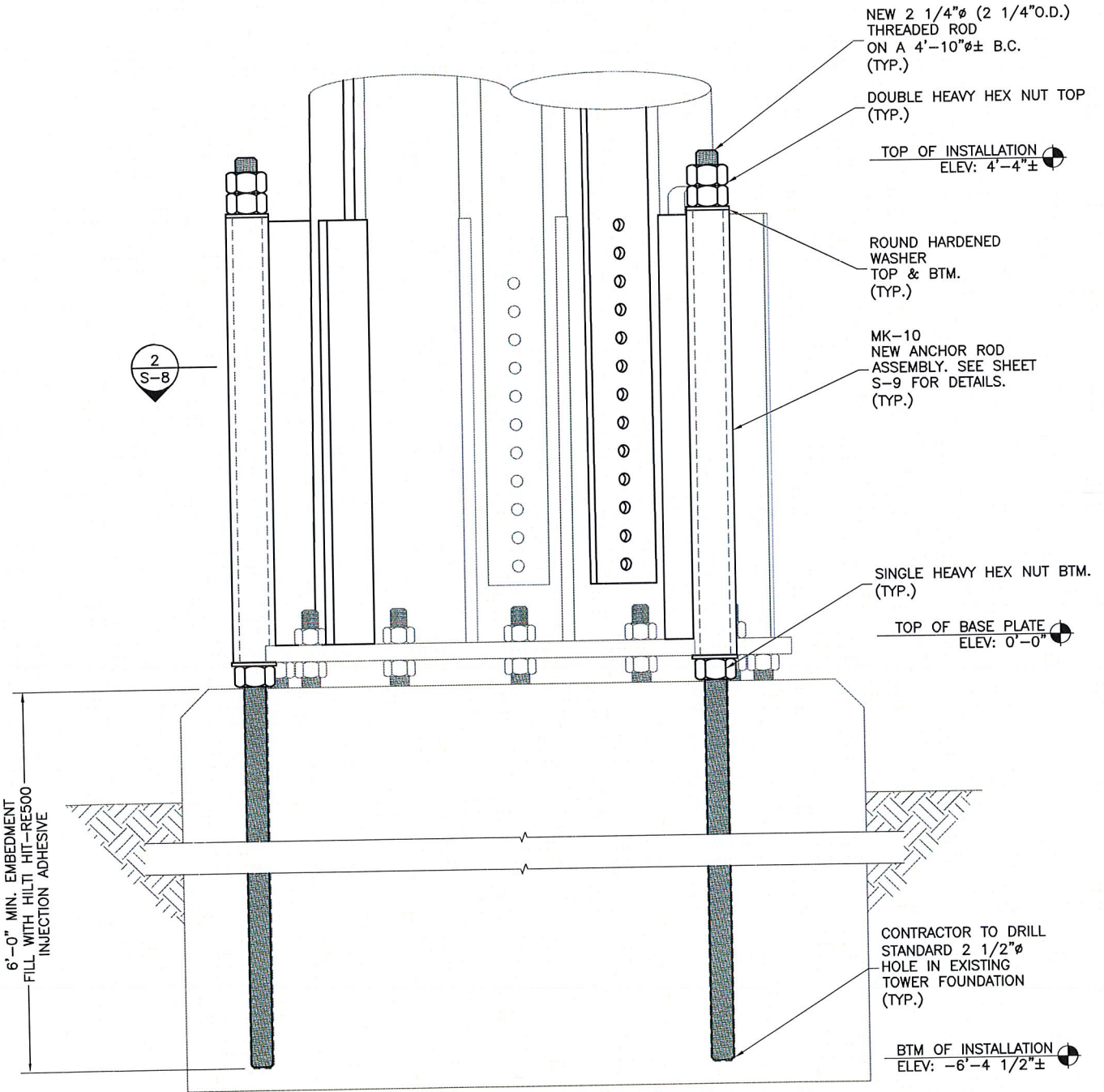
PISTON PLUGS TO BE USED IN ALL INJECTION ADHESIVE APPLICATIONS

PULL TEST SHOULD BE PERFORMED PER PULL TEST NOTES ON SHEET N-2. THE TARGET TENSION OF THIS PULL TEST IS 195K.

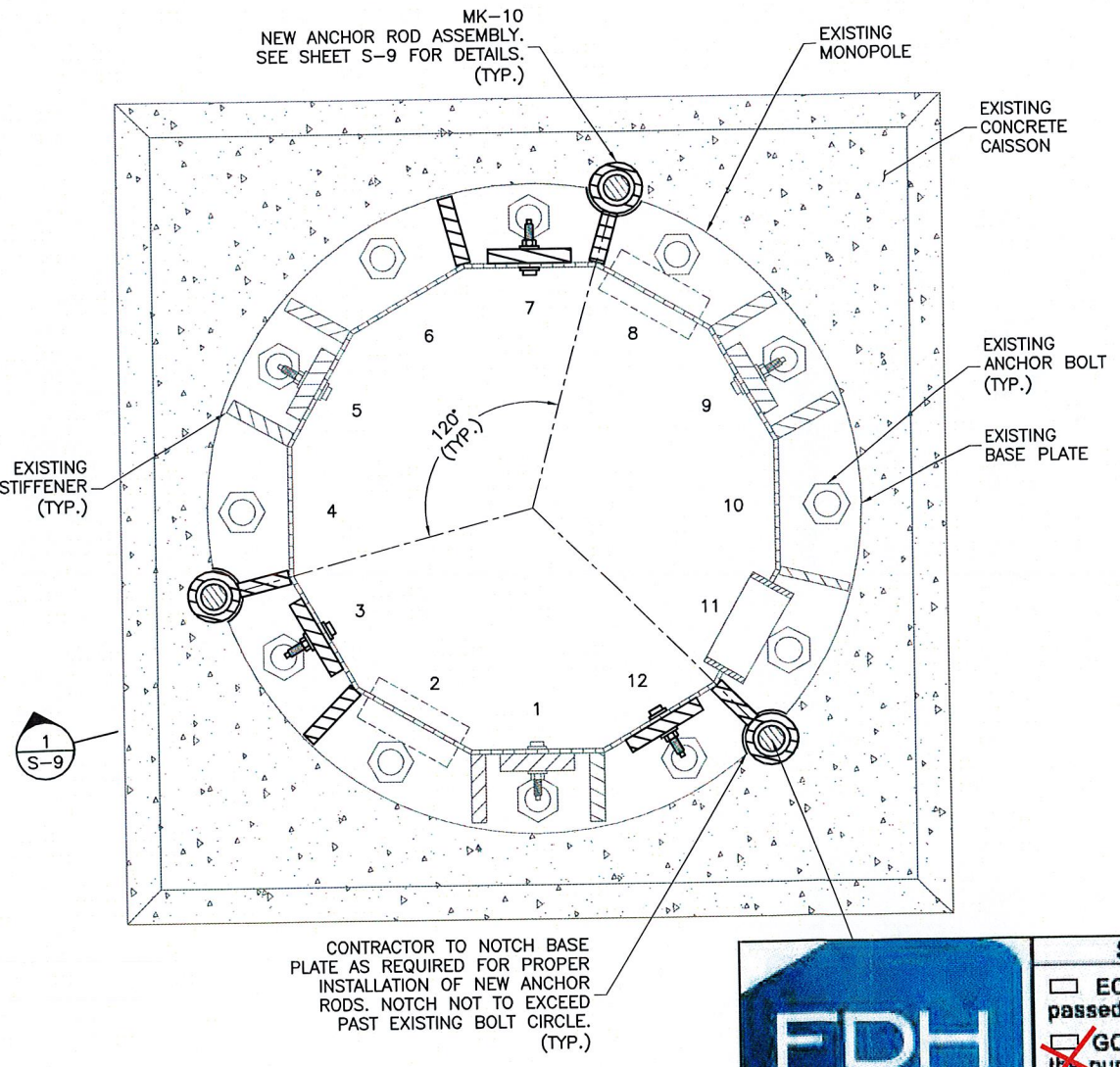
ANCHOR ROD MATERIAL LIST

PART #	QTY.	DESCRIPTION	ELEVATION
MK-10	3	ANCHOR ROD ASSEMBLY	-0'-1 3/4"± TO 3'-9 1/2"±
-	3	2 1/4"Ø (2 1/4"O.D.) ASTM A615-75 (Fy=75KSI) THREADED ROD X 10'-8 1/2"±	-6'-4 1/2"± TO 4'-4"±
-	6	ROUND HARDENED WASHER	-
-	9	HEAVY HEX NUT	-

CONTRACTOR TO REMOVE EXISTING STIFFENERS FOR PROPER INSTALLATION OF ANCHOR ROD ASSEMBLIES AS SHOWN.



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



2 SECTION
S-8 SCALE: 3/4" = 1'-0"

PREPARED BY:

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

PREPARED FOR:

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BOCA RATON, FL 33487
(800) 487-SITE

09/11/13
CHRISTOPHER M. MURPHY, P.E.
CONNECTICUT LIC. NO. 25842

DRAWN BY: JFS
CHECKED BY: DZ
ENG APP'VD: CMM
PROJECT NO: 1331731400

SUBMITTALS		
DATE	DESCRIPTION	REV
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SITE NAME:
GRANBY-N. GRANBY

SITE NUMBER:
CT46134-A-03

SITE ADDRESS:
**15 NORTH GRANBY ROAD
GRANBY, CT 06035**



SECONDARY INSPECTION

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SHEET NUMBER
S-8

SUBMITTALS		
DATE	DESCRIPTION	REV
05/30/13	PRELIMINARY/REVIEW	A
09/11/13	CONSTRUCTION	0

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 GRANBY-N. GRANBY

SITE NUMBER:
 CT46134-A-03

SITE ADDRESS:
 15 NORTH GRANBY ROAD
 GRANBY, CT 06035

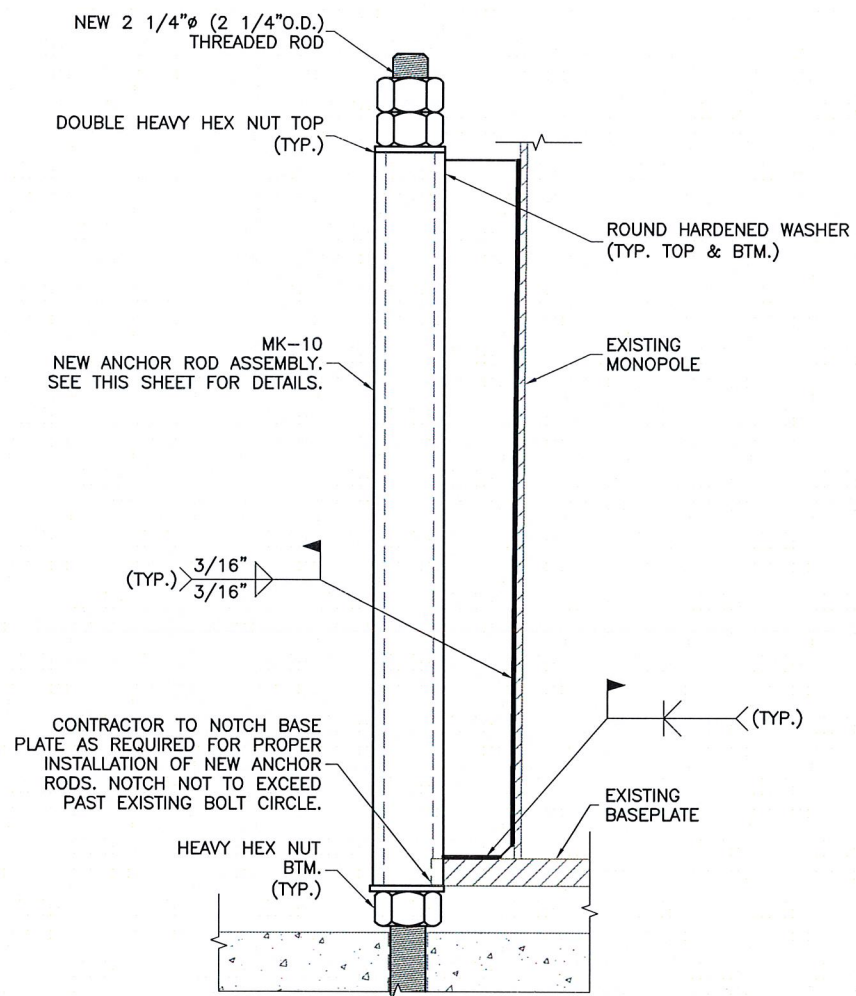
SECONDARY INSPECTION

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SHEET NUMBER
S-9

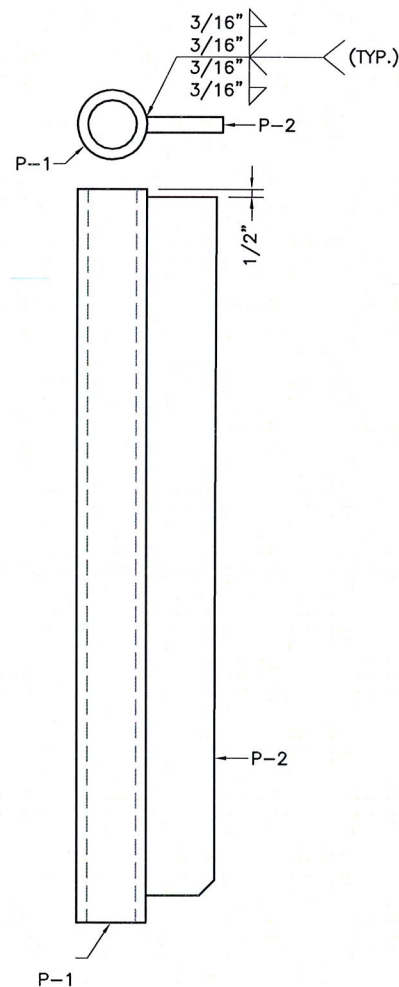
MATERIAL LIST (MK-10)		
PART. NO.	QTY.	DESCRIPTION
P-1	3	ANCHOR ROD SLEEVE
P-2	3	TRANSFER PLATE

EXISTING ANCHOR BOLTS
 NOT SHOWN FOR CLARITY



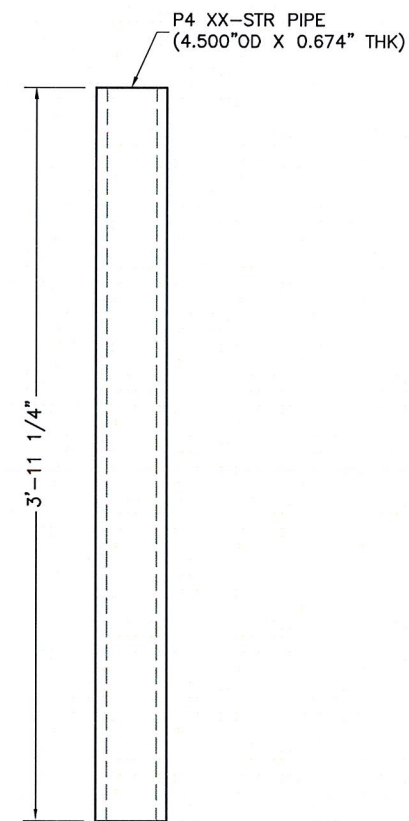
ANCHOR ROD ASSEMBLY WELD DETAIL
 ELEVATION VIEW

1
 S-9 ELEVATION
 SCALE: 1" = 1'-0"



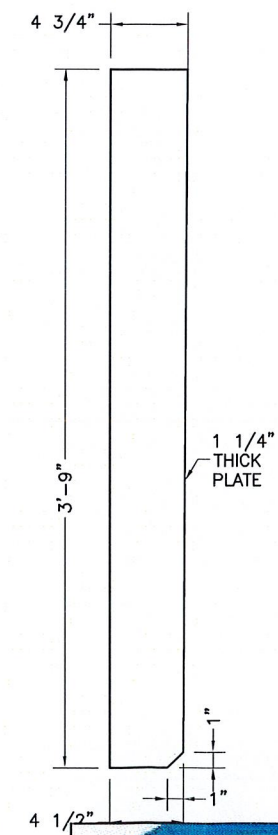
ANCHOR ROD ASSEMBLY
 TOP & SIDE VIEW

MK-10
 S-9 SECTION
 SCALE: 1" = 1'-0"



ANCHOR ROD SLEEVE
 SIDE VIEW

P-1
 S-9 DETAIL
 SCALE: 1" = 1'-0"



TRANSFER PLATE
 SIDE VIEW

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





Project, Anchor, and Test Equipment Information	
Project Information	
Project	Granby-N. Granby
Site ID	CT43134-A-03
Location	Granby, CT
FDH Job #	1467V11500
Test Date	6/26/2014
Test Company	FDH Engineering, Inc.
Technician	Scott Ferry
Weather	80°F, Partly Cloudy
Jack Information	
Hydraulic Area	16.21 in ²
Gauge Information	
Pressure Gauge ID	1042097A
Calibration Date	5/12/2014
Displacement Gauge ID	5926
Calibration Date	2/20/2014

Load Test Field Data					
Pre-Test Field Data					
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	1	30%	58.4	3600	0.041
2	1	60%	116.7	7200	0.095
3	1	100%	197.8	12200	0.186
Residual		0%	0.0	0	0.017

Load Test 1 Field Data					
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	2	5%	9.7	600	0.005
2	2	15%	29.2	1800	0.020
3	2	30%	58.4	3600	0.035
4	2	45%	87.5	5400	0.072
5	2	60%	116.7	7200	0.099
6	2	75%	145.9	9000	0.125
7	2	90%	175.1	10800	0.154
8	2	100%	197.8	12200	0.172
		0%	0.0	0	0.005

Summary of Results	
Anchor Information	
Anchor ID	1
Anchor Location	Northeast
Anchor Size	2.25 in
Anchor Grade	75 ksi
Anchor Proof Load	195 kips
Residual Displacement (in)	
Pre-Test	0.017
Test 1	0.005
Test 2	-
Test 3	-
PASS	
Result Summary Comments	
Refer to FDH Engineering, Inc. Project 1331731400 Dated 9/11/2013 for passing criteria.	



Project, Anchor, and Test Equipment Information	
Project Information	
Project	Granby-N. Granby
Site ID	CT43134-A-03
Location	Granby, CT
FDH Job #	1467V11500
Test Date	6/26/2014
Test Company	FDH Engineering, Inc.
Technician	Scott Ferry
Weather	80°F, Partly Cloudy
Jack Information	
Hydraulic Area	16.21 in ²
Gauge Information	
Pressure Gauge ID	1042097A
Calibration Date	5/12/2014
Displacement Gauge ID	5926
Calibration Date	2/20/2014

Load Test Field Data					
Pre-Test Field Data					
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	1	30%	58.4	3600	0.041
2	1	60%	116.7	7200	0.088
3	1	100%	197.8	12200	0.172
Residual		0%	0.0	0	0.021

Load Test 1 Field Data					
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	2	5%	9.7	600	0.005
2	2	15%	29.2	1800	0.018
3	2	30%	58.4	3600	0.037
4	2	45%	87.5	5400	0.059
5	2	60%	116.7	7200	0.085
6	2	75%	145.9	9000	0.113
7	2	90%	175.1	10800	0.139
8	2	100%	197.8	12200	0.161
		0%	0.0	0	0.006

Summary of Results	
Anchor Information	
Anchor ID	2
Anchor Location	South
Anchor Size	2.25 in
Anchor Grade	75 ksi
Anchor Proof Load	195 kips
Residual Displacement (in)	
Pre-Test	0.021
Test 1	0.006
Test 2	-
Test 3	-
PASS	
Result Summary Comments	
Refer to FDH Engineering, Inc. Project 1331731400 Dated 9/11/2013 for passing criteria.	



Project, Anchor, and Test Equipment Information	
Project Information	
Project	Granby-N. Granby
Site ID	CT43134-A-03
Location	Granby, CT
FDH Job #	1467V11500
Test Date	6/26/2014
Test Company	FDH Engineering, Inc.
Technician	Scott Ferry
Weather	80°F, Partly Cloudy
Jack Information	
Hydraulic Area	16.21 in ²
Gauge Information	
Pressure Gauge ID	1042097A
Calibration Date	5/12/2014
Displacement Gauge ID	5926
Calibration Date	2/20/2014

Load Test Field Data					
Pre-Test Field Data					
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	1	30%	58.4	3600	0.043
2	1	60%	116.7	7200	0.094
3	1	100%	197.8	12200	0.172
Residual		0%	0.0	0	0.015

Load Test 1 Field Data					
Reading	Duration (min)	Load Percentage	Load Applied (kips)	Gauge Pressure (psi)	Gauge Displacement (in)
		0%	0.0	0	0.000
1	2	5%	9.7	600	0.007
2	2	15%	29.2	1800	0.019
3	2	30%	58.4	3600	0.037
4	2	45%	87.5	5400	0.073
5	2	60%	116.7	7200	0.093
6	2	75%	145.9	9000	0.117
7	2	90%	175.1	10800	0.144
8	2	100%	197.8	12200	0.167
		0%	0.0	0	0.003

Summary of Results	
Anchor Information	
Anchor ID	3
Anchor Location	West
Anchor Size	2.25 in
Anchor Grade	75 ksi
Anchor Proof Load	195 kips
Residual Displacement (in)	
Pre-Test	0.015
Test 1	0.003
Test 2	-
Test 3	-
PASS	
Result Summary Comments	
Refer to FDH Engineering, Inc. Project 1331731400 Dated 9/11/2013 for passing criteria.	