August 27, 2014

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re:	**Notice of Exempt Modification** **Proposal to Add Three (3) Remote Radio Heads**
Property Address:	**151 Waterbury Road, Prospect, CT 06712 (the "Property")**
Applicant:	**New Cingular Wireless PCS, LLC ("AT&T")**

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 150-foot Monopole tower location on the Property, owned by Capstar Radio Operating Company (the "Tower"). AT&T's facility consists of nine (3) wireless telecommunication antennas at a height of 152'-feet.

The Connecticut Siting Council (the "Council) approved AT&T's use of the tower in the following prior decisions; EM-CING-115-120518, EM-CING-003-077-077-115-126-070726 & EM-AT&T-115-020923. In its decision dated June 6, 2012, (the "Decision"), the Council approved AT&T to install six (6) Remote Radio Heads ("RRUs"), but AT&T installed only three (3) RRUs. AT&T now intends to install the remaining RRUs to complete the installation. This exempt modification application is necessary because the Decision is over one year old. Please refer to Tab 1 for further specifications of the RRUs.

Please accept this correspondence as notification pursuant to R.C.S.A. §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. §16-50j-72(b)(2). In accordance with R.C.S.A. §16-50j-73, a copy of this letter is being sent to the Mayor of Prospect, CT. A copy of this letter is also being sent to Capstar Radio Operating Company, a Delaware corporation.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the Tower. AT&T's new RRUs will be installed at the 152-foot level of the 150-foot Monopole.

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2. The proposed modifications will not involve any changes to ground-mounted equipment and, therefore, will not require and extension of the site boundary.
3. The proposed modifications will not increase the noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A RF emissions calculation for AT&T's modified facility was provided in the application which led to the - Decision. See Tab 2 attached.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The Tower and its foundation can support AT&T's proposed modifications. (See Structural Analysis Report included in Tab 3).

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above referenced telecommunications facility constitutes an exempt modification under R.C.S.A. §16-50j-72(b)(2).

Sincerely,

Adam F. Braillard

cc:
Capstar Radio Operating Company, a Delaware corporation
400 North Ashley Drive Suite 3010
Tampa, FL 33602

Town of Prospect
Attention: Robert J. Chatfield
36 Center Street,
Prospect, CT 06712

TAB 1

PROJECT INFORMATION

SCOPE OF WORK:	ITEMS TO BE MOUNTED ON THE EXISTING TOWER: • NEW AT&T RRU'S: (1) RRU'S PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) RRU'S ITEMS TO BE INSTALLED INSIDE THE EXISTING AT&T EQUIPMENT AREA: • (1) (850) RXAIT AND (1) (850) LLC MOUNTED IN NEW EQUIPMENT RACK • (6) NEW AT&T DIPLEXERS TO REPLACE EXISTING (12) DIPLEXERS ITEMS TO REMAIN: • (6) GSM/UMTS ANTENNAS, (3) LTE ANTENNAS, (3) RRU'S, (6) TMAS, & (1) SURGE SUPRESSOR
SITE ADDRESS:	151 WATERBURY ROAD PROSPECT, CT 06712
LATITUDE: LONGITUDE:	41.52279 N 41° 31' 22.04" N −72.9978 W 72° 59' 52.08" W 26038
PROPERTY OWNER: USID:	RICHLAND TOWERS MANAGEMENT PARKVIEW LLC. 400 N ASHLEY DR. SUITE 3010 TAMPA, FL 33602
TYPE OF SITE:	MONOPOLE/INDOOR EQUIPMENT
TOWER HEIGHT: RAD CENTER:	150'−0"± 152'−0"±
CURRENT USE: PROPOSED USE:	TELECOMMUNICATIONS FACILITY TELECOMMUNICATIONS FACILITY

FA NUMBER: 10071211
SITE NUMBER: CT5626
SITE NAME: PROSPECT NORTH

PROJECT TEAM

CLIENT REPRESENTATIVE
COMPANY: SMARTLINK, LLC
ADDRESS: 1997 ANNAPOLIS EXCHANGE PARKWAY, SUITE 200
CITY, STATE, ZIP: ANNAPOLIS, MD 21401
CONTACT: TIM BOYCE
PHONE: (980) 333−3640
E−MAIL: tboyce@smartlinkllc.com

SITE ACQUISITION
COMPANY: SMARTLINK, LLC
ADDRESS: 33 BOSTON POST ROAD WEST, SUITE 210
CITY, STATE, ZIP: MARLBOROUGH, MA 01752
CONTACT: TODD OLIVER
PHONE: (774) 369−3618
E−MAIL: todd.oliver@smartlinkllc.com

ENGINEERING
COMPANY: HUDSON DESIGN GROUP, LLC.
ADDRESS: 1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 3090
CITY, STATE, ZIP: NORTH ANDOVER, MA 01845
CONTACT: DANIEL P. HAMM, PE
PHONE: (978) 557−5553
E−MAIL: info@hudsondesigngroupllc.com

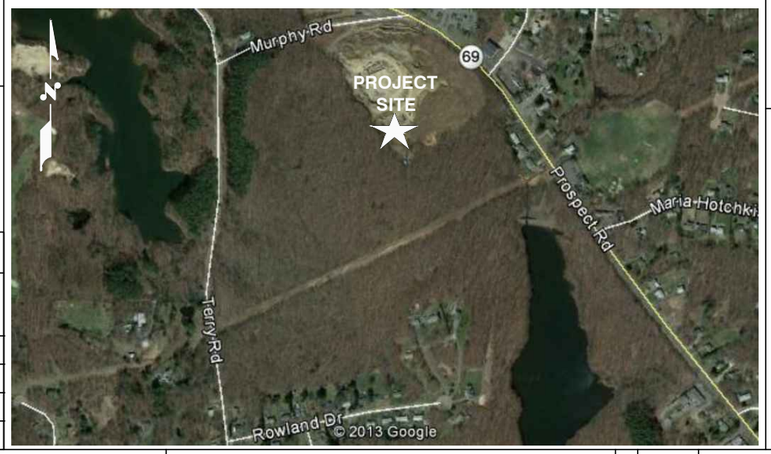
RF ENGINEER
COMPANY: AT&T MOBILITY −NEW ENGLAND
ADDRESS: 550 COCHITUATE ROAD SUITE 550 13 AND 14
CITY, STATE, ZIP: FRAMINGHAM, MA 01701
CONTACT: CAMERON SYME
PHONE: (508) 596−7146
E−MAIL: cs6970@att.com

CONSTRUCTION MANAGER
COMPANY: SMARTLINK, LLC.
ADDRESS: 33 BOSTON POST ROAD WEST SUITE 210
CITY, STATE, ZIP: MARLBOROUGH, MA 01752
CONTACT: MARK DONNELLY
PHONE: (617) 515−2080
E−MAIL: mark.donnelly@smartlinkllc.com

DRAWING INDEX

VICINITY MAP

DIRECTIONS TO SITE:
START OUT GOING SOUTHEAST ON BURR ST TOWARD COCHITUATE RD/RT−30 E. 0.01 MI. TAKE THE 1ST LEFT ONTO RT−30 E/COCHITUATE RD. 0.05 MI. TAKE THE RAMP TOWARD I−90/MASSPIKE/SPRINGFILED/BOSTON. 0.6 MI. MERGE ONTO I−90 W/MASS PIKE/MASSACHUSETTS TURNPIKE VIA THE RAMP ON THE LEFT TOWARD WORCESTER/SPRINGFIELD (PORTIONS TOLL). 38.3 MI. MERGE ONTO I−84 W VIA EXIT 9 TOWARD US−20/HARTFORD/NEW YORK CITY (PORTIONS TOLL) (CROSSING INTO CONNECTICUT). 41.7 MI. MERGE ONTO CT−15 S VIA EXIT 57 ON THE LEFT TOWARD I−91S/CHARTER OAK BR/N.Y. CITY. 1.9 MI. MERGE ONTO I−91 S VIA EXIT 86 TOWARD NEW HAVEN/N.Y. CITY. 16.6 MI. MERGE ONTO I−691 W VIA EXIT 18 TOWARD MERIDEN/WATERBURY. 7.9 MI. MERGE ONTO I−84 W VIA EXIT 1 ON THE LEFT TOWARD WATERBURY/DANBURY. 5.9 MI. TAKE EXIT 24 TOWARD HARPERS FERRY RD. 0.2 MI. STAY STRAIGHT TO GO ONTO PLANK RD. 0.2 MI. TAKE THE 1ST LEFT ONTO HARPERS FERRY RD. 0.5 MI. TURN LEFT ONTO HAMILTON AVE/CT−69/PROSPECT RD. CONTINUE TO FOLLOW CT−69. CT−69 IS 0.4 MILES PAST REIDVILLE DR. 1.6 MI. 151 WATERBURY RD IS ON THE RIGHT.



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.

DISCIPLINE:	SIGNATURE:	DATE:
SMARTLINK SITE ACQUISITION:		
SMARTLINK CONSTRUCTION MANAGER:		
AT&T PROJECT MANAGER:		

72 HOURS
BEFORE YOU DIG
CALL TOLL FREE 800−922−4455

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

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

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SCALE: AS SHOWN | DESIGNED BY: TH | DRAWN BY: SG

AT&T

TITLE SHEET
(LTE−2C)

JOB NUMBER	DRAWING NUMBER	REV
5626.01	T−1	Q

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.

6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – SMARTLINK
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – AT&T MOBILITY

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.

16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY SITES."

17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

20. APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
   BUILDING CODE: 2003 IBC WITH 2005 CT SUPPLEMENT & 2009 CT AMENDMENTS
   ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
   LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE		
EGR	EQUIPMENT GROUND RING	REQ'D	REQUIRED	TYP	TYPICAL

Hudson Design Groupe LLC
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1	04/18/14	ISSUED FOR CONSTRUCTION	AP	TH	DPH

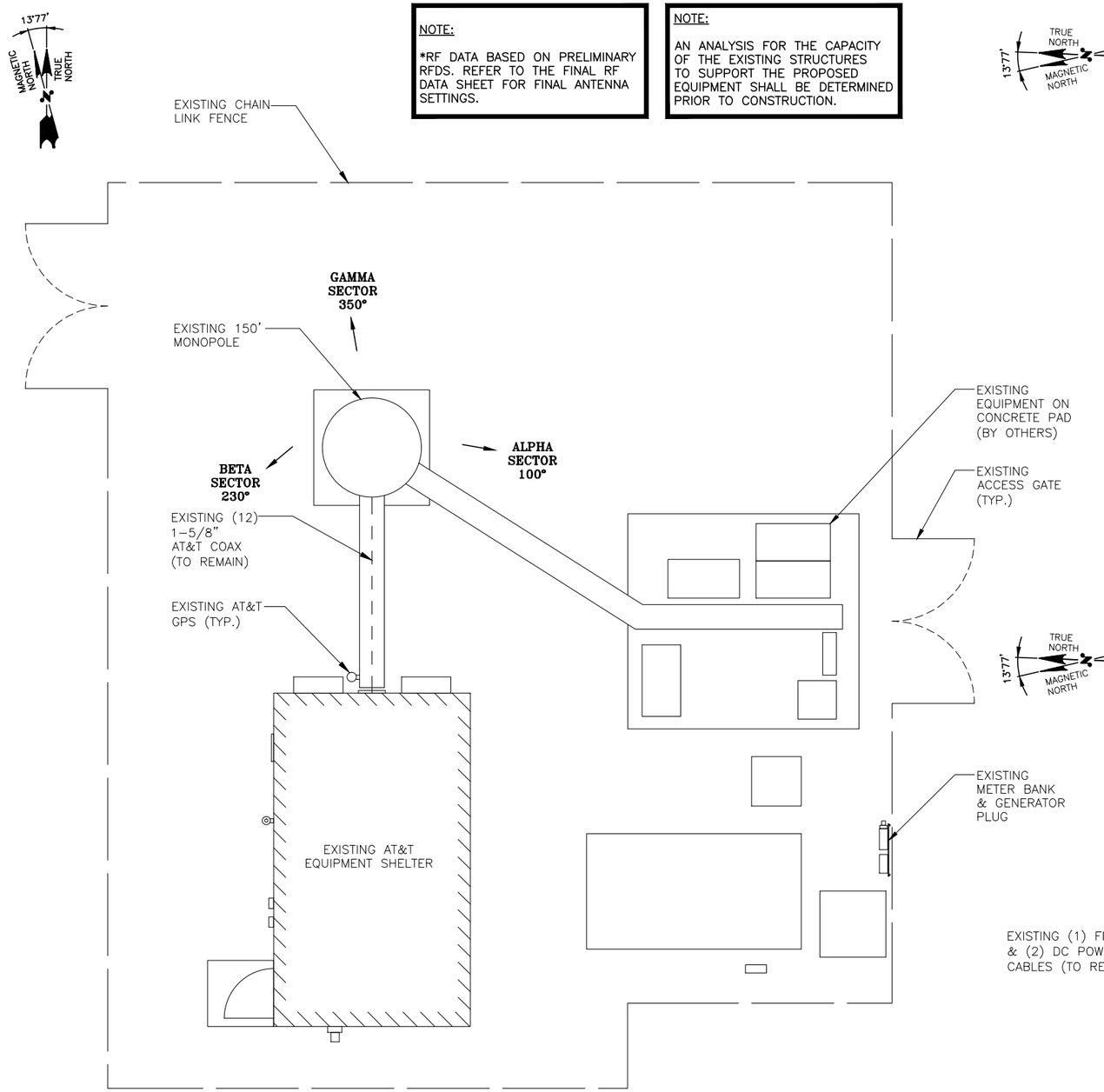
SCALE: AS SHOWN | DESIGNED BY: TH | DRAWN BY: SG

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

AT&T

GENERAL NOTES
(LTE-2C)

JOB NUMBER	DRAWING NUMBER	REV
5626.01	GN-1	Q



NOTE:

*RF DATA BASED ON PRELIMINARY RFDS. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

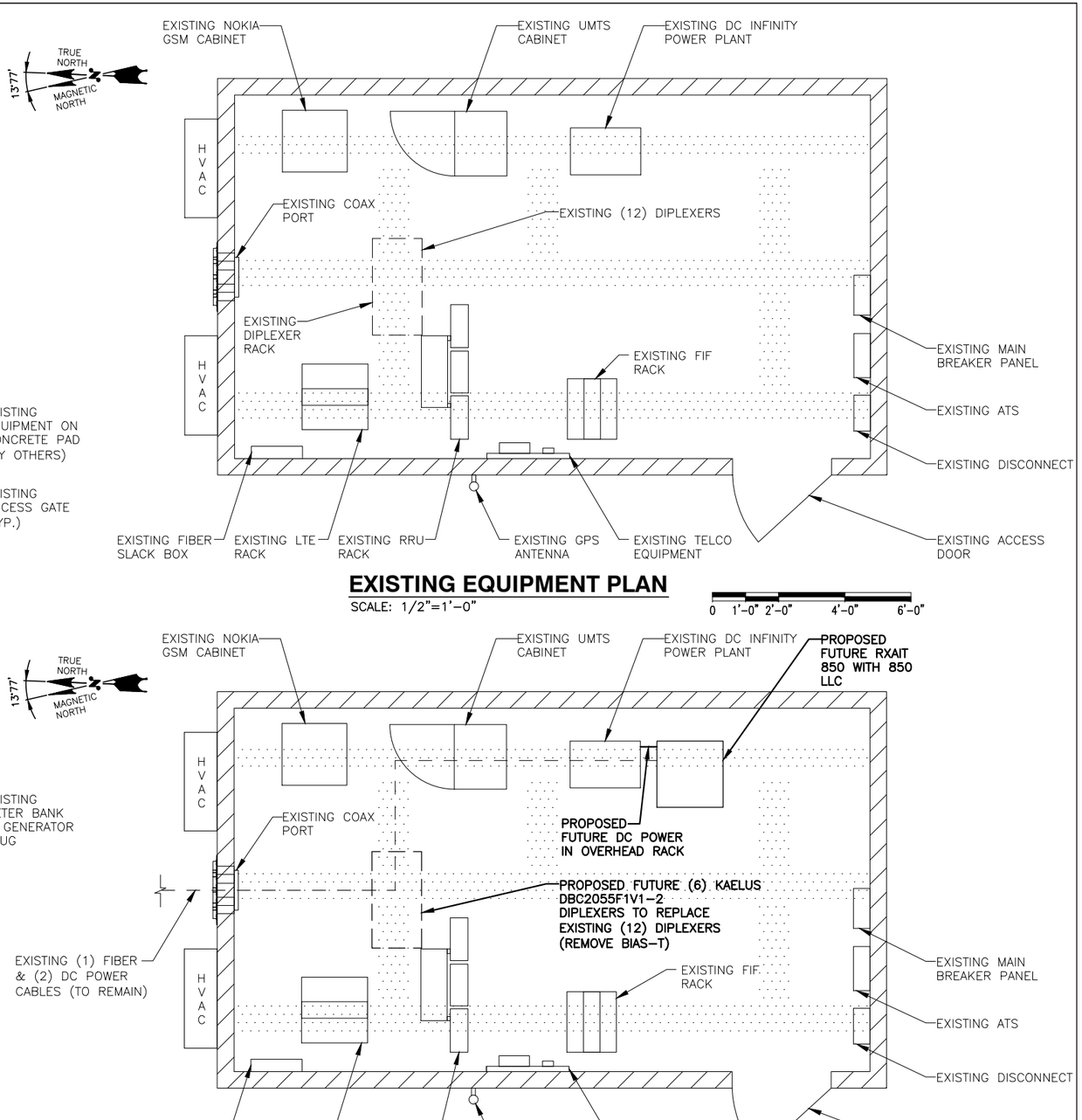
NOTE:

AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.

COMPOUND PLAN

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

0 2'-0" 4'-0" 8'-0" 12'-0"



EXISTING EQUIPMENT PLAN

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

0 1'-0" 2'-0" 4'-0" 6'-0"

PROPOSED EQUIPMENT PLAN

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

0 1'-0" 2'-0" 4'-0" 6'-0"

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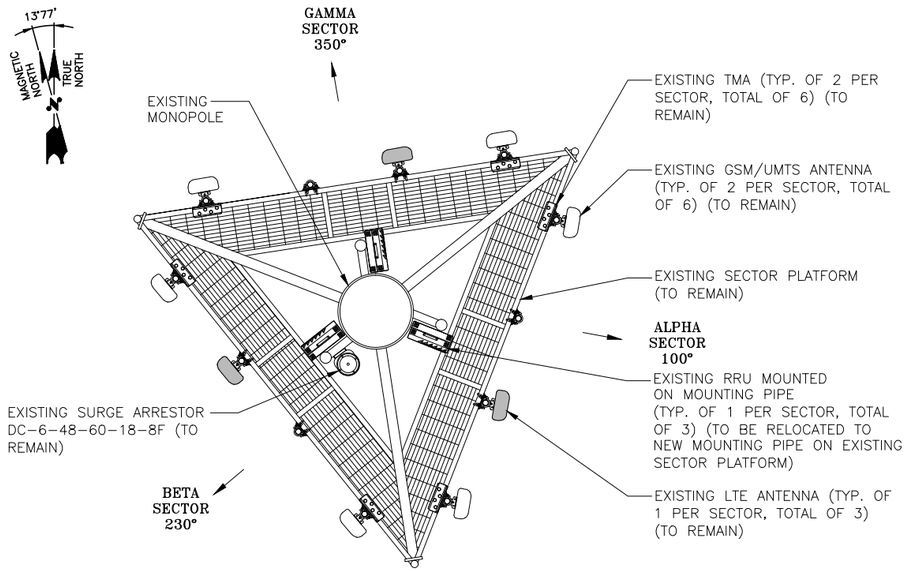
SCALE: AS SHOWN | DESIGNED BY: TH | DRAWN BY: SG

Daniel P. Hamm
No. 24178
LICENSED PROFESSIONAL ENGINEER
STATE OF CONNECTICUT

AT&T

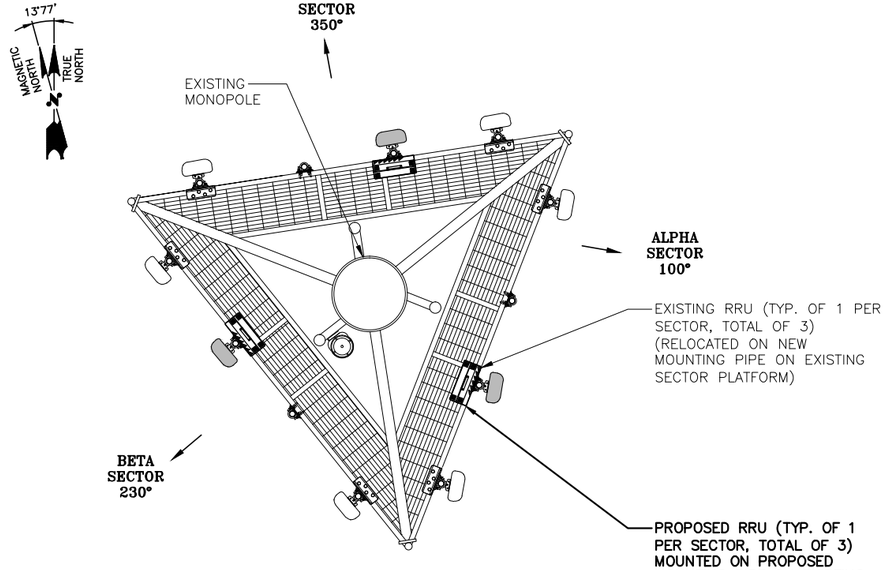
COMPOUND & SHELTER PLANS (LTE-2C)

JOB NUMBER	DRAWING NUMBER	REV
5626.01	A-1	Q



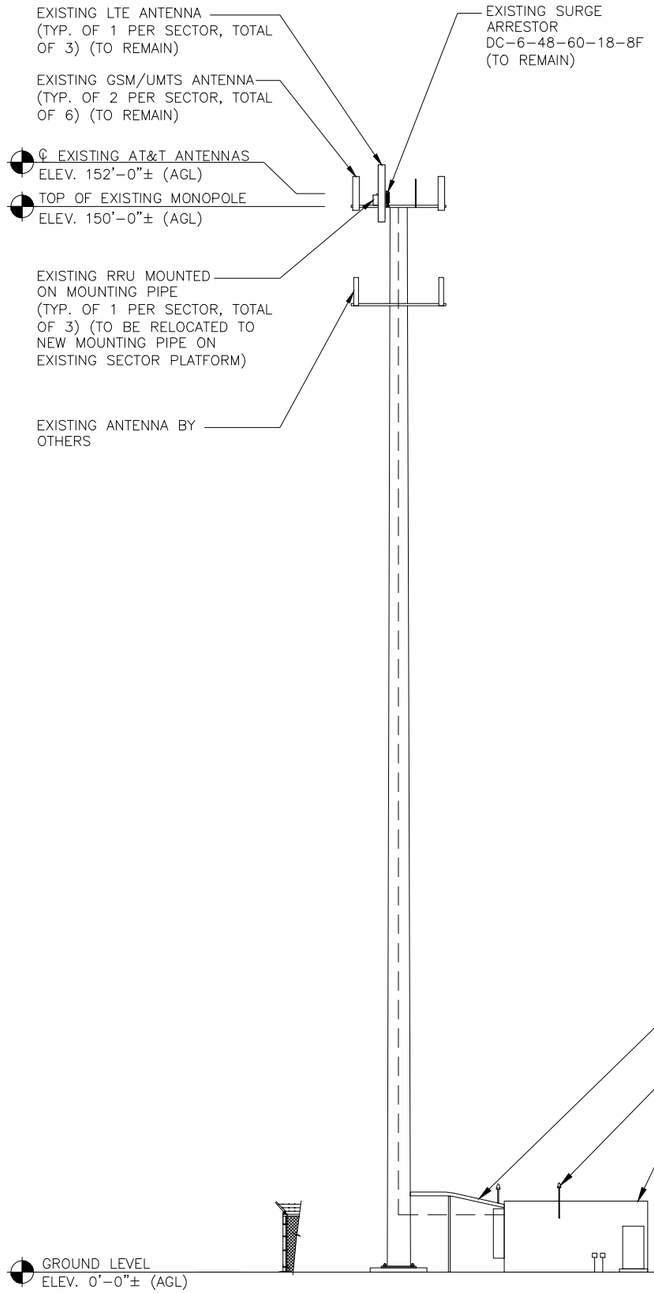
EXISTING ANTENNA LAYOUT

SCALE: N.T.S.



PROPOSED ANTENNA LAYOUT

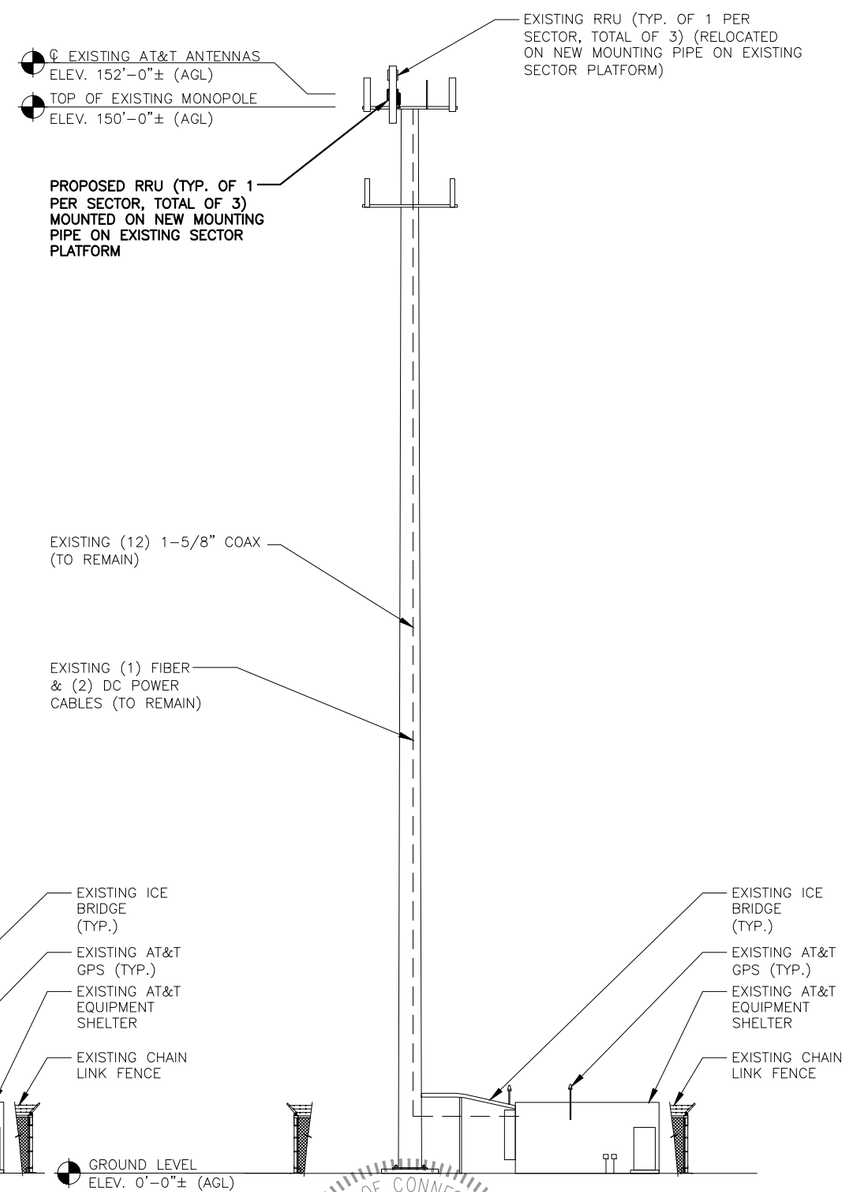
SCALE: N.T.S.



EXISTING WEST ELEVATION

SCALE: 3/32"=1'-0"

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



PROPOSED WEST ELEVATION

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

NOTE:

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NOTE:
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1997 ANNAPOLIS EXCHANGE PKWY
SUITE 200
ANNAPOLIS, MD 21401

SITE NUMBER: CT5626
SITE NAME: PROSPECT NORTH

151 WATERBURY ROAD
PROSPECT, CT 06712
NEW HAVEN COUNTY

at&t
550 COCHITUATE RD.
FRAMINGHAM, MA, 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
Q	08/11/14	RE-DESIGN PER RFDS	VP	RP	DPH
1	04/18/14	ISSUED FOR CONSTRUCTION	AP	TH	DPH

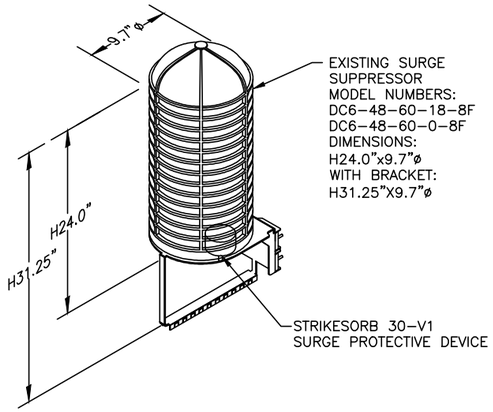
SCALE: AS SHOWN | DESIGNED BY: TH | DRAWN BY: SG

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

AT&T

ANTENNA LAYOUTS & ELEVATIONS (LTE-2C)

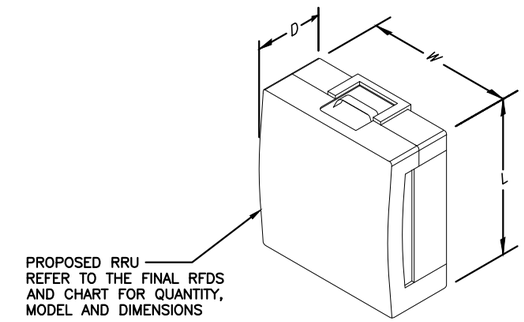
JOB NUMBER	DRAWING NUMBER	REV
5626.01	A-2	Q



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S.



	L	W	D
RRUS – 11	19.7"	17.0"	7.2"
RRUS – 12	20.4"	18.5"	7.5"
RRUS – 32	26.7"	12.1"	6.7"
RRUS – E2	20"	20.4"	9.5"
LTE – A2	16.4"	15.2"	3.4"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

RRU DETAIL

SCALE: N.T.S.

EXISTING & PROPOSED ANTENNA SCHEDULE

SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	POWERWAVE	7770	55x11x5
	ANDREW	SBNH-1D6565C	96.4x11.9x7.1
	POWERWAVE	7770	55x11x5
BETA:	POWERWAVE	7770	55x11x5
	ANDREW	SBNH-1D6565C	96.4x11.9x7.1
	POWERWAVE	7770	55x11x5
GAMMA:	POWERWAVE	7770	55x11x5
	ANDREW	AM-X-CD-16-65-00T-RET	72x11.8x5.9
	POWERWAVE	7770	55x11x4

EXISTING & PROPOSED RRU SCHEDULE

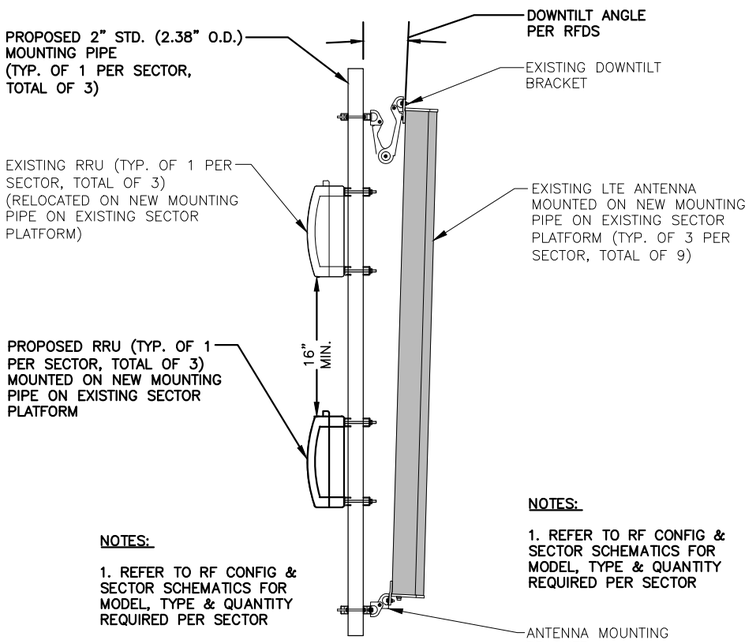
SECTOR	MAKE	MODEL#	SIZE (INCHES)
ALPHA:	ERICSSON	RRUS-12	20.4x18.5x7.5
	ERICSSON	RRUS-11	19.7x17.0x7.2
BETA:	ERICSSON	RRUS-12	20.4x18.5x7.5
	ERICSSON	RRUS-11	19.7x17.0x7.2
GAMMA:	ERICSSON	RRUS-12	20.4x18.5x7.5
	ERICSSON	RRUS-11	19.7x17.0x7.2

NOTE:

*RF DATA BASED ON PRELIMINARY RFDS. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

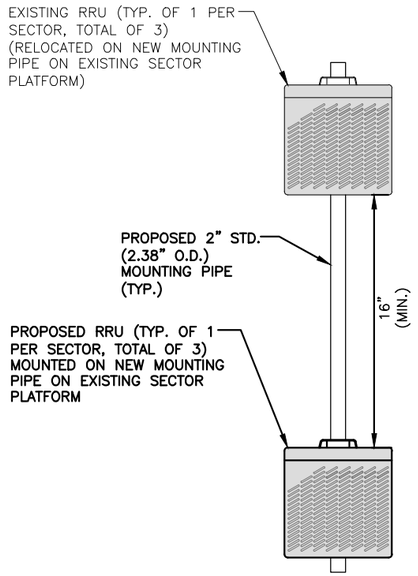
NOTE:

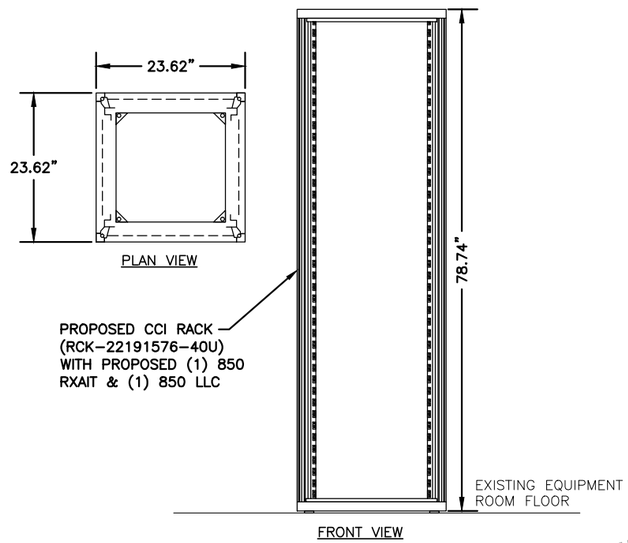
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE DETERMINED PRIOR TO CONSTRUCTION.



LTE ANTENNA, RRU, & SURGE ARRESTOR MOUNTING DETAIL

SCALE: N.T.S.





PROPOSED EQUIPMENT RACK DETAIL

SCALE: N.T.S.

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

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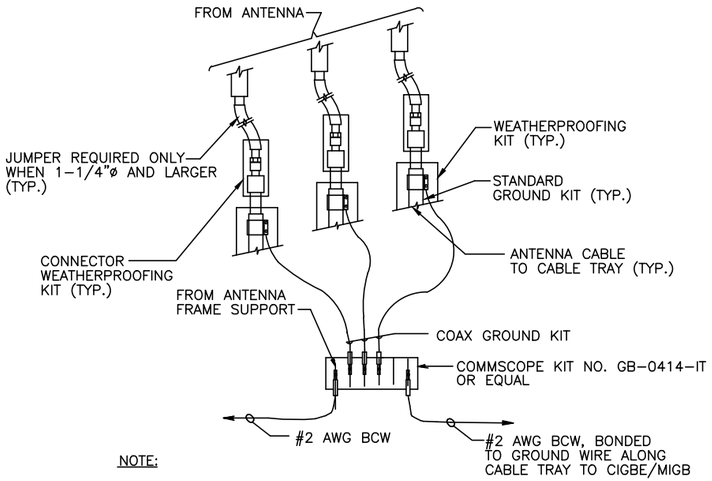
STATE OF CONNECTICUT
DANIEL P. HAMM
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

DETAILS
(LTE-2C)

JOB NUMBER	DRAWING NUMBER	REV
5626.01	A-3	Q

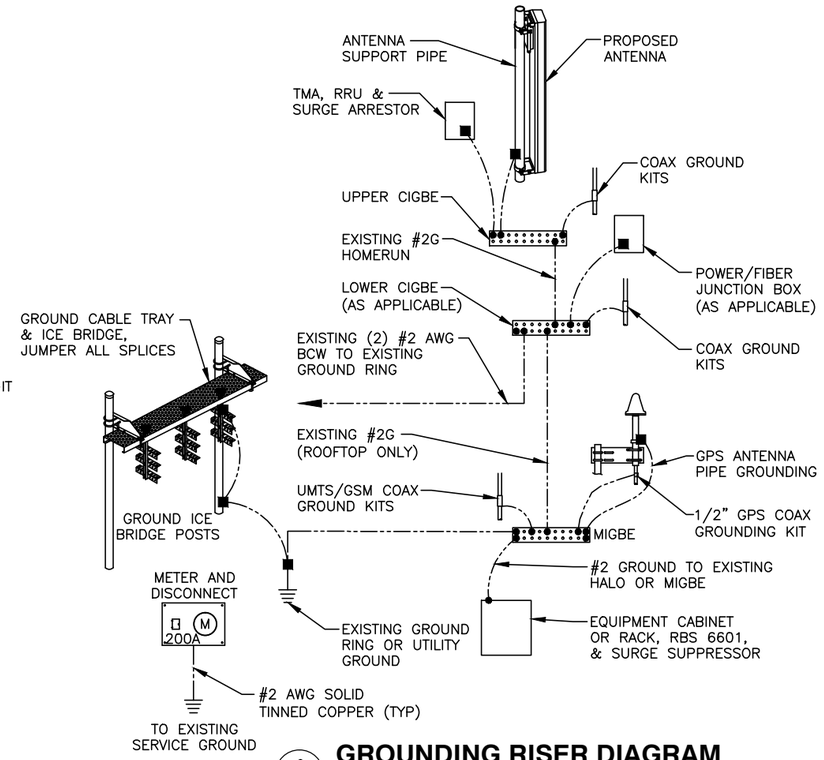


NOTE:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

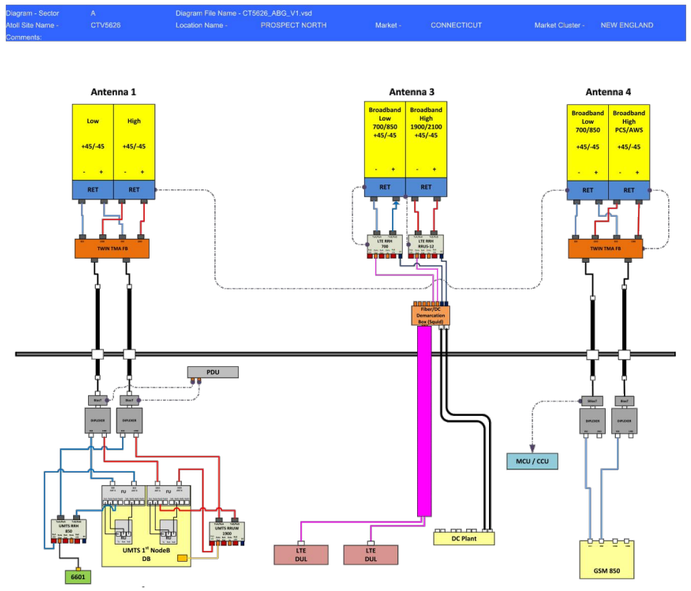
GROUND WIRE TO GROUND BAR CONNECTION DETAIL

1 — N.T.S.



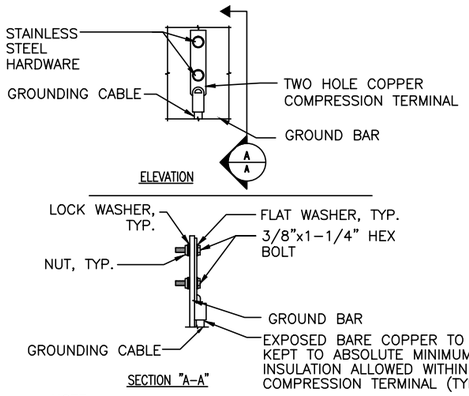
GROUNDING RISER DIAGRAM

2 — N.T.S.



PLUMBING DIAGRAM

3 — N.T.S.

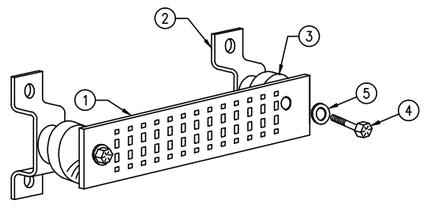


NOTE:
1. "DOUBLING UP" OR "STACKING " OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.

TYPICAL GROUND BAR CONNECTION DETAIL

4 — N.T.S.

WIRELESS SOLUTIONS INC.			
NO.	REQ.	PART NO.	DESCRIPTION
1	1	HLGB-0420-IS	SOLID GND. BAR (20"x4"x1/4")
2	2	———	WALL MTG. BRKT.
3	2	———	INSULATORS
4	4	———	5/8"-11x1" H.H.C.S.
5	4	———	5/8 LOCKWASHER



GROUND BAR - DETAIL

5 — N.T.S.

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" – SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
TELCO GROUND BAR
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
+24V POWER SUPPLY RETURN BAR (#2)
-48V POWER SUPPLY RETURN BAR (#2)
RECTIFIER FRAMES.

SECTION "A" – SURGE ABSORBERS

INTERIOR GROUND RING (#2)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
BUILDING STEEL (IF AVAILABLE) (#2)

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
TEL: (978) 557-5553
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STATE OF CONNECTICUT — DANIEL P. HAMM — No. 24178 — LICENSED PROFESSIONAL ENGINEER

AT&T

PLUMBING DIAGRAM & GROUNDING DETAILS (LTE-2C)

JOB NUMBER	DRAWING NUMBER	REV
5626.01	G-1	Q

TAB 2

POWER DENSITY

EM-CING-115-120518	Prospect - 151 Waterbury Road	AT&T UMTS	2	649	154	0.0197	880	0.5867	3.35%	
EM-CING-115-120518	Prospect - 151 Waterbury Road	AT&T UMTS	2	1387	154	0.0421	1900	1.0000	4.21%	
EM-CING-115-120518	Prospect - 151 Waterbury Road	AT&T GSM	1	324	154	0.0049	880	0.5867	0.84%	
EM-CING-115-120518	Prospect - 151 Waterbury Road	AT&T GSM	4	832	154	0.0505	1900	1.0000	5.05%	
EM-CING-115-120518	Prospect - 151 Waterbury Road	AT&T LTE	1	1375	152	0.0214	734	0.4893	4.37%	
EM-ClearChannel-115-091208	**Prospect - 151 Waterbury Road**	**T-Mobile GSM**	**8**	**183**	**136**	**0.0285**	**1945**	**1.0000**	**2.85%**	
EM-ClearChannel-115-091208	**Prospect - 151 Waterbury Road**	**T-Mobile UMTS**	**2**	**730**	**136**	**0.0284**	**2100**	**1.0000**	**2.84%**	**23.50%**

TAB 3

Dewberry
600 Parisppany Road
Parsippany, NJ 07054
(973) 576-8653

Brian Peterson
520 S. Main Street; Suite 2531
Akron, OH 44311
(330) 572-2100
bpeterson@gpdgroup.com

GPD# 2012702.35
May 17, 2012

STRUCTURAL ANALYSIS REPORT

SITE DESIGNATION:	**Site USID:**	**26038**
	Site FA:	**10071211**
	Site Name:	**PROSPECT NORTH**
ANALYSIS CRITERIA:	**Codes:**	**TIA-222-G, 2009 IBC & 2005 CBC** **100-mph 3 second gust with 0" ice** **50-mph 3 second gust with 3/4" ice**
SITE DATA:		**151 Waterbury Road, Prospect, CT 06712, New Haven County** **Latitude 41° 31' 22.051" N, Longitude 72° 59' 52.076" W** **Market: New England** **150′ ERI Monopole**

Mr. Greg Nawrotzki,

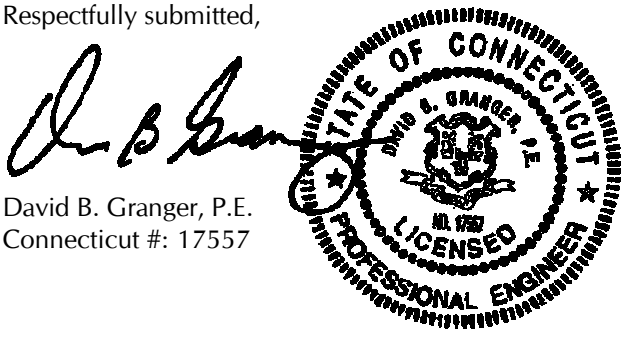
GPD is pleased to submit this Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the existing and proposed loading configuration detailed in the analysis report.

Analysis Results

Tower Stress Level with Proposed Equipment:	52.3%	Pass
Foundation Ratio with Proposed Equipment:	51.4%	Pass

We at GPD appreciate the opportunity of providing our continuing professional services to you and Dewberry. If you have any questions or need further assistance on this or any other projects please do not hesitate to call.

Respectfully submitted,



David B. Granger, P.E.
Connecticut #: 17557

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T Mobility to Dewberry. This report was commissioned by Mr. Greg Nawrotzki of Dewberry.

The proposed coax shall be installed internal to the monopole for the analysis results to be valid.

No intermediate flange or bolt information was available or provided for this report. However, based on the reserve capacity of the tower sections, it is our opinion that the intermediate flange plate and flange bolt information will be adequate for the proposed loading configuration. A more thorough and accurate assessment of intermediate flange plate and flange bolt capacity will require a mapping of the tower be performed.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Monopole	52.3%	Pass
Anchor Rods	43.1%	Pass
Base Plate	43.3%	Pass
Foundation	51.4%	Pass

ANALYSIS METHOD

tnxTower (Version 6.0.4.0), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being completed without the benefit of a detailed site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
Equipment Modification Form	Not Provided	N/A
RF Data Sheet	AT&T Loading Document V01, dated 03/30/2012	Dewberry
Construction Drawings	Dewberry Job #: 50048347, dated 03/02/2012	Dewberry
Tower Design	ERI Project #: 25148/001, dated 11/13/2009	Dewberry
Foundation Design	ERI Project #: 25148/001, dated 11/13/2009	Dewberry
Geotechnical Report	FDH Project #: 09-10144E G1, dated 11/09/2009	Dewberry

ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower shaft sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/available and to have been properly installed.
10. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserve.
11. All existing loading was obtained from the Construction Drawings by Dewberry Job #: 50048347, dated 03/02/2012, site photos, and the provided RF Data Sheet and is assumed to be accurate.
12. The existing loading elevation found in site photos was found to vary from the listed elevation within the provided RF Data Sheet. The existing and proposed elevations have been modeled based on the elevation reflected within the site photos.
13. The models of the proposed Demark and RRUs and the sizes of the proposed Power and Fiber Cables have been assumed based on experience with LTE projects.
14. The proposed coax shall be installed internal to the monopole for the analysis results to be valid.
15. Tower geometry has been determined through the tower design by ERI Project #: 25148/001, dated 11/13/2009 as well as email correspondence with Mr. John Robinson of ERI.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Group should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD GROUP has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD GROUP in connection with this Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

GPD GROUP does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD GROUP provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD GROUP, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

GPD GROUP makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD GROUP will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD GROUP pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

Tower Analysis Summary Form

General Info

Site Name	PROSPECT NORTH
Site Number	CT5626 (26038)
FA Number	10071211
Date of Analysis	5/17/2012
Company Performing Analysis	GPD

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	MP	
Tower Height (top of steel AGL)	150'	
Tower Manufacturer	ERI	
Tower Model	n/a	
Tower Design	ERI Project #: 25148/001	11/13/2009
Foundation Design	ERI Project #: 25148/001	11/13/2009
Geotech Report	FDH Project #: 09-10144E G1	11/9/2009
Tower Mapping	n/a	
Previous Structural Analysis	n/a	

Design Parameters	
Design Code Used	TIA-222-G 2009 IBC & 2005 CBC
Location of Tower (County, State)	New Haven, CT
Basic Wind Speed (mph)	100
Ice Thickness (in)	0.75
Structure Classification (I, II, III)	II
Exposure Category (B, C, D)	C
Topographic Category (1 to 5)	1

Analysis Results (% Maximum Usage)	
Existing/Reserved + Future + Proposed Condition	
Tower (%)	52.3%
Tower Base (%)	43.3%
Foundation (%)	51.4%
Foundation Adequate?	Yes

Steel Yield Strength (ksi)

Pole	45
Base Plate	36
Anchor Rods (Ultimate)	105

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Internal/External
AT&T Mobility	148	154	6	Panel	Powerwave	7750.00 w/ RETs	100/230/350	1	Unknown	13' LP Platform	12	Unknown	1-5/8"	Internal
AT&T Mobility	148	154	6	TMA	Powerwave	TT08-19DB111-001				on the same mount	1	RET Cable	3/8"	Internal
T-Mobile	138	140	6	Panel	Unknown	4' Panel	20/140/260	1	Unknown	13' LP Platform	6	Unknown	1-5/8"	Internal
T-Mobile	138	140	6	TMA	Unknown	TMA				on the same mount				

Note: All existing loading shall remain.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Internal/External
AT&T Mobility	148	152.25	2	Panel	Andrew	SBNH-1D6565C	100/230			on the existing mount	2	Power Cable	7/8"	Internal
AT&T Mobility	148	153.25	1	Panel	KMW	AM-X-CD-16-65-00T-RET	350			on the existing mount	1	Fiber Cable	1/2"	Internal
AT&T Mobility	149	149	6	RRU	Ericsson	RRUS 11		1	Valmont	Tri-Bracket	1	Flex Conduit	3"	Internal
AT&T Mobility	149	147	1	Demark	Raycap	DC6-48-60-18-8F				on the same mount				

Note: Proposed loading is in addition to the remaining loading at the same elevation.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Internal/External

APPENDIX B

tnxTower Output File

Tower Input Data

There is a pole section.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in New Haven County, Connecticut.
Basic wind speed of 100 mph.
Structure Class II.
Exposure Category C.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
Climbing Pegs	C	Surface Ar (CaAa)	150.00 - 8.00	1	1	0.000 0.000	0.1500		0.31
Safety Line 3/8	C	Surface Ar (CaAa)	150.00 - 8.00	1	1	0.000 0.000	0.3750		0.22

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	148.00 - 8.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
RET Cable	C	No	Inside Pole	148.00 - 8.00	1	No Ice	0.00	0.08
						1/2" Ice	0.00	0.08
						1" Ice	0.00	0.08
7/8" DC Power Cable	C	No	Inside Pole	148.00 - 8.00	2	No Ice	0.00	0.60
						1/2" Ice	0.00	0.60
						1" Ice	0.00	0.60
1/2" Fiber Cable	C	No	Inside Pole	148.00 - 8.00	1	No Ice	0.00	0.15
						1/2" Ice	0.00	0.15
						1" Ice	0.00	0.15
3" Flex Conduit	C	No	Inside Pole	148.00 - 8.00	1	No Ice	0.00	0.48
						1/2" Ice	0.00	0.48
						1" Ice	0.00	0.48
LDF7-50A (1-5/8 FOAM)	C	No	Inside Pole	138.00 - 8.00	6	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
						1" Ice	0.00	0.82

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
PiROD 13' Low Profile Platform (Monopole)	C	From Centroid-Leg	0.00 0.00 0.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	15.70 20.10 24.50	15.70 20.10 24.50	1300.00 1765.00 2230.00
(2) 7750.00 w/ mount pipe	A	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	6.58 7.21 7.80	4.94 5.86 6.64	75.53 127.72 188.97
(2) 7750.00 w/ mount pipe	B	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	6.58 7.21 7.80	4.94 5.86 6.64	75.53 127.72 188.97
(2) 7750.00 w/ mount pipe	C	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	6.58 7.21 7.80	4.94 5.86 6.64	75.53 127.72 188.97
SBNH-1D6565C w/ Mount Pipe	A	From Leg	4.00 0.00 4.25	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	11.45 12.06 12.69	9.12 10.21 11.18	82.70 162.03 254.15
SBNH-1D6565C w/ Mount Pipe	B	From Leg	4.00 0.00 4.25	-20.0000	148.00	No Ice 1/2" Ice 1" Ice	11.45 12.06 12.69	9.12 10.21 11.18	82.70 162.03 254.15
AM-X-CD-16-65-00T-RET w/ Mount Pipe	C	From Leg	4.00 0.00 5.25	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	7.33 7.98 8.57	6.14 7.13 7.97	73.53 134.57 204.89
(2) TT08-19DB111-001	A	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	0.92 1.06 1.20	0.74 0.87 1.01	22.00 29.57 39.04
(2) TT08-19DB111-001	B	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	0.92 1.06 1.20	0.74 0.87 1.01	22.00 29.57 39.04
(2) TT08-19DB111-001	C	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	0.92 1.06 1.20	0.74 0.87 1.01	22.00 29.57 39.04
(2) RET	A	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	0.24 0.31 0.39	0.15 0.20 0.27	2.20 4.44 7.71
(2) RET	B	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	0.24 0.31 0.39	0.15 0.20 0.27	2.20 4.44 7.71
(2) RET	C	From Leg	4.00 0.00 6.00	-10.0000	148.00	No Ice 1/2" Ice 1" Ice	0.24 0.31 0.39	0.15 0.20 0.27	2.20 4.44 7.71
Valmont Light Duty Tri-Bracket (1)	C	None		0.0000	149.00	No Ice 1/2" Ice 1" Ice	1.76 2.08 2.40	1.76 2.08 2.40	54.00 70.00 86.00
(2) RRUS 11	A	From Leg	1.00 0.00 0.00	-10.0000	149.00	No Ice 1/2" Ice 1" Ice	2.94 3.17 3.41	1.25 1.41 1.59	55.00 74.32 96.56
(2) RRUS 11	B	From Leg	1.00 0.00 0.00	-10.0000	149.00	No Ice 1/2" Ice 1" Ice	2.94 3.17 3.41	1.25 1.41 1.59	55.00 74.32 96.56

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
(2) RRUS 11	C	From Leg	1.00 0.00 0.00	-10.0000	149.00	No Ice 1/2" Ice 1" Ice	2.94 3.17 3.41	1.25 1.41 1.59	55.00 74.32 96.56
DC6-48-60-18-8F Surge Suppression Unit	A	From Leg	4.00 0.00 -2.00	-10.0000	149.00	No Ice 1/2" Ice 1" Ice	1.47 1.67 1.88	1.47 1.67 1.88	32.80 50.52 70.72
PiROD 13' Low Profile Platform (Monopole)	C	From Centroid-Leg	0.00 0.00 0.00	20.0000	138.00	No Ice 1/2" Ice 1" Ice	15.70 20.10 24.50	15.70 20.10 24.50	1300.00 1765.00 2230.00
(2) 4' x 2.5' Panel w/ Mount Pipe	A	From Centroid-Leg	4.00 0.00 2.00	20.0000	138.00	No Ice 1/2" Ice 1" Ice	14.00 14.51 15.03	3.73 4.29 4.88	64.60 138.23 221.09
(2) 4' x 2.5' Panel w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 2.00	20.0000	138.00	No Ice 1/2" Ice 1" Ice	14.00 14.51 15.03	3.73 4.29 4.88	64.60 138.23 221.09
(2) 4' x 2.5' Panel w/ Mount Pipe	C	From Centroid-Leg	4.00 0.00 2.00	20.0000	138.00	No Ice 1/2" Ice 1" Ice	14.00 14.51 15.03	3.73 4.29 4.88	64.60 138.23 221.09
(2) TMA	A	From Centroid-Leg	4.00 0.00 2.00	20.0000	138.00	No Ice 1/2" Ice 1" Ice	0.23 0.30 0.38	0.12 0.17 0.24	1.20 3.05 5.87
(2) TMA	B	From Centroid-Leg	4.00 0.00 2.00	20.0000	138.00	No Ice 1/2" Ice 1" Ice	0.23 0.30 0.38	0.12 0.17 0.24	1.20 3.05 5.87
(2) TMA	C	From Centroid-Leg	4.00 0.00 2.00	20.0000	138.00	No Ice 1/2" Ice 1" Ice	0.23 0.30 0.38	0.12 0.17 0.24	1.20 3.05 5.87

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
149.00	Valmont Light Duty Tri-Bracket (1)	50	7.427	0.4474	0.0011	75303
148.00	PiROD 13' Low Profile Platform (Monopole)	50	7.333	0.4452	0.0011	75303
147.50	(2) RRUS 11	50	7.286	0.4441	0.0011	75303
146.00	(2) RRUS 11	50	7.146	0.4408	0.0010	75303
138.00	PiROD 13' Low Profile Platform (Monopole)	49	6.407	0.4238	0.0008	31376

Section Capacity Table

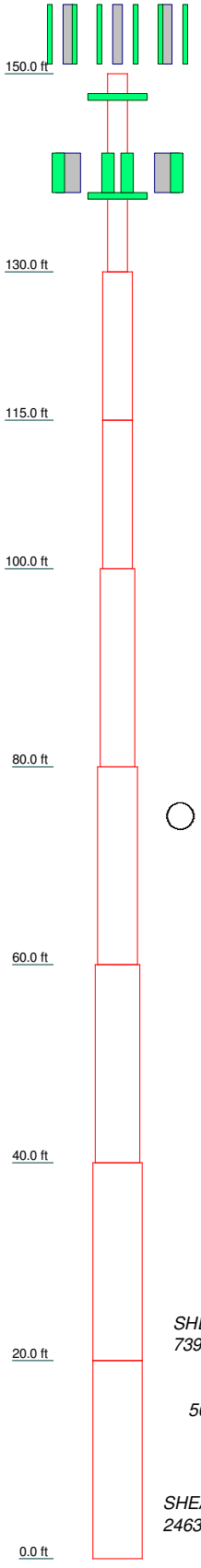
Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	150 - 130	Pole	P24x3/8	1	-7332.33	1127220.00	24.4	Pass
L2	130 - 115	Pole	P36x3/8	2	-10187.50	1565640.00	23.1	Pass
L3	115 - 100	Pole	P36x3/8	3	-13076.60	1565640.00	36.3	Pass
L4	100 - 80	Pole	P42x3/8	4	-17521.80	1757140.00	42.4	Pass
L5	80 - 60	Pole	P48x3/8	5	-22567.40	1948480.00	46.6	Pass
L6	60 - 40	Pole	P54x3/8	6	-28213.30	2139710.00	49.8	Pass
L7	40 - 20	Pole	P60x3/8	7	-34459.10	2330870.00	52.3	Pass
L8	20 - 0	Pole	P60x1/2	8	-42456.50	3293920.00	47.8	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
						Summary	ELC:	Proposed
						Pole (L7)	52.3	Pass
						RATING =	**52.3**	**Pass**

APPENDIX C

Tower Elevation Drawing

Section	Size	Length (ft)	Grade	Weight (lb)
1	P24x3/8	20.00	A139-45	1894.2
2	P36x3/8	15.00		2142.2
3	P36x3/8	15.00		2142.2
4	P42x3/8	20.00		3337.3
5	P48x3/8	20.00		3818.4
6	P54x3/8	20.00		4299.5
7	P60x3/8	20.00		4780.5
8	P60x1/2	20.00		6360.7
				28775.0



ALL REACTIONS ARE FACTORED

AXIAL 65260 lb

SHEAR 7397 lb

MOMENT 693772 lb-ft

TORQUE 181 lb-ft
50 mph WIND - 0.7500 in ICE

AXIAL 42460 lb

SHEAR 24636 lb

MOMENT 2403524 lb-ft

TORQUE 835 lb-ft
REACTIONS - 100 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Valmont Light Duty Tri-Bracket (1)	149	PiROD 13' Low Profile Platform (Monopole)	148
(2) RRUS 11	149		
(2) RRUS 11	149 - 146	(2) 7750.00 w/ mount pipe	148
(2) RRUS 11	149	(2) 7750.00 w/ mount pipe	148
DC6-48-60-18-8F Surge Suppression Unit	149	(2) 7750.00 w/ mount pipe	148
		SBNH-1D6565C w/ Mount Pipe	148
SBNH-1D6565C w/ Mount Pipe	148	PiROD 13' Low Profile Platform (Monopole)	138
AM-X-CD-16-65-00T-RET w/ Mount Pipe	148		
		(2) 4' x 2.5' Panel w/ Mount Pipe	138
(2) TT08-19DB111-001	148	(2) 4' x 2.5' Panel w/ Mount Pipe	138
(2) TT08-19DB111-001	148	(2) 4' x 2.5' Panel w/ Mount Pipe	138
(2) TT08-19DB111-001	148	(2) TMA	138
(2) RET	148	(2) TMA	138
(2) RET	148	(2) TMA	138
(2) RET	148		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A139-45	45 ksi	60 ksi			

TOWER DESIGN NOTES

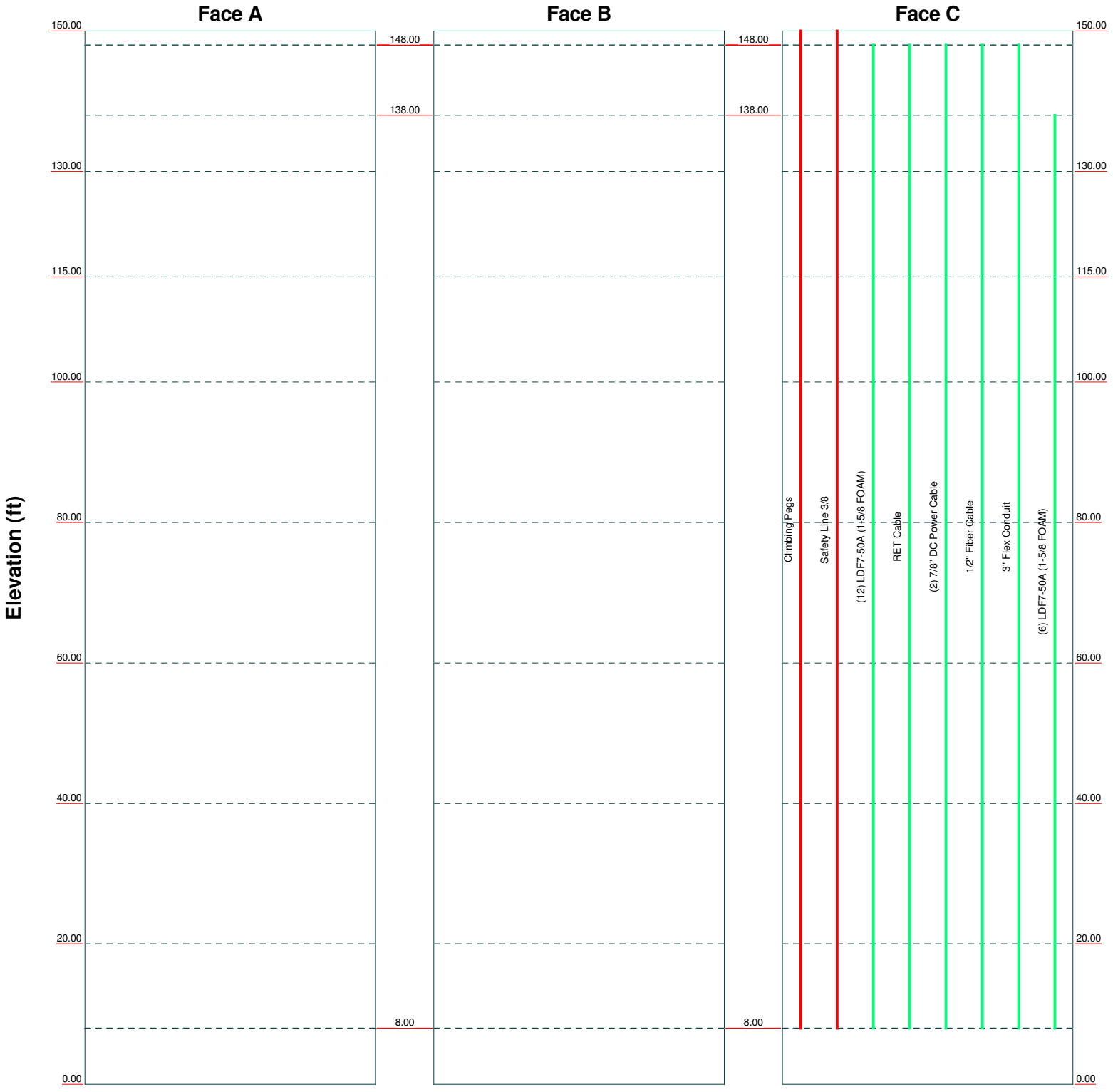
1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 100 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 52.3%

GPD GROUP
GPD Group
520 S. Main Street, Suite 2531
Akron, OH
Phone: (330) 572-2100
FAX: (330) 572-2101

Job: ***CT5626 (26038) PROSPECT NORTH***			
Project: ***2012702.35***			
Client: Dewberry	Drawn by: kfraleigh		App'd:
Code: TIA-222-G	Date: 05/17/12		Scale: NTS
Path: O:\2012\2012702\35 - Dewberry site\TNX\CT5626 26038 PROSPECT NORTH.eri			Dwg No. E-1

Feedline Distribution Chart
0' - 150'

Round | Flat | App In Face | App Out Face | Truss Leg



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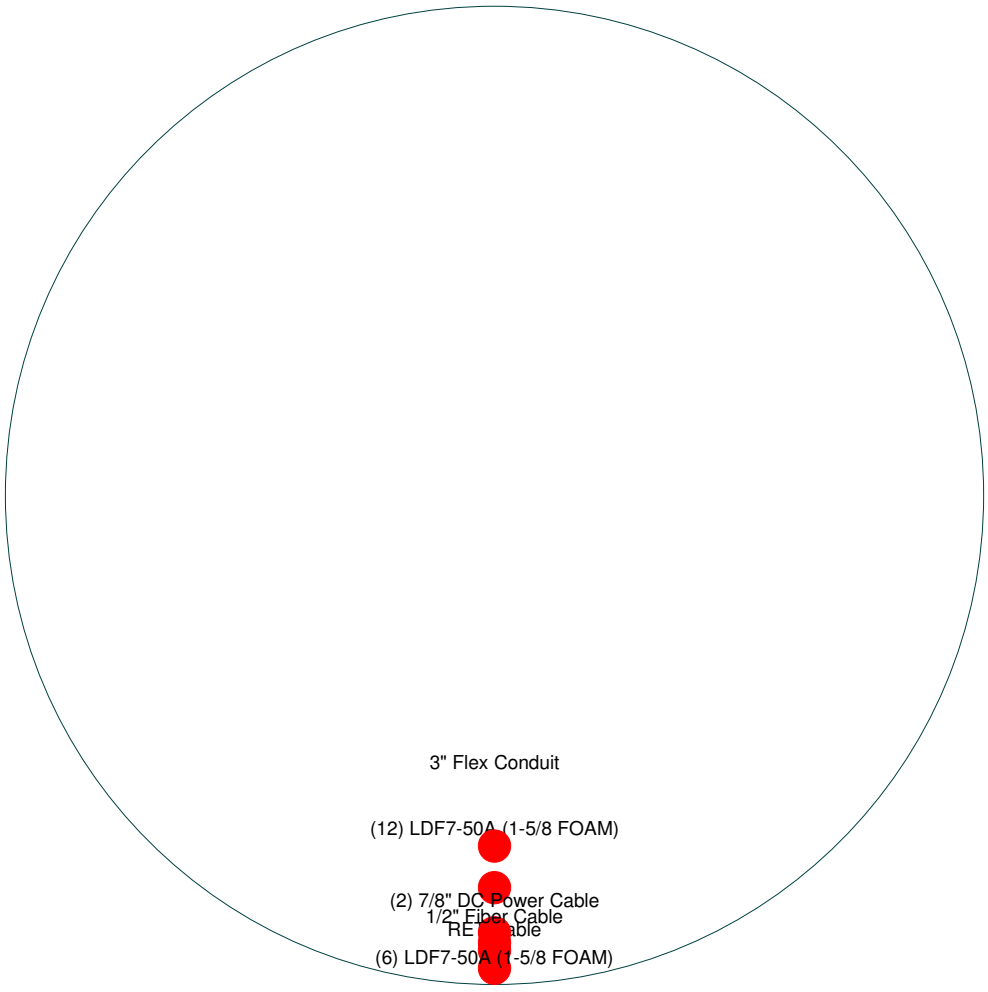
Code: TIA-222-G	Date: 05/17/12	Scale: NTS	
Path: O:\2012\2012702\35 - Dewberry site\TNX\CT5626 26038 PROSPECT NORTH.er		Dwg No. E-7	

Feedline Plan

Round Flat App In Face App Out Face



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Code: TIA-222-G	Date: 05/17/12	Scale: NTS	
Path: O:\2012\2012702\35 - Dewberry site\TNX\CT5626 26038 PROSPECT NORTH.er		Dwg No. E-7	

APPENDIX D

Base Plate & Anchor Rod Calculations

Anchor Rod and Base Plate Stresses, TIA-222-G-1
CT5626 PROSPECT NORTH
2012702.35

Overturning Moment =	2403.52	k*ft
Axial Force =	42.46	k
Shear Force =	24.64	k

Acceptable Stress Ratio =	105.0%

Anchor Rods *(Section 4.9.9, TIA-222-G-1)*		
Number of Rods =	36	
ϕ =	0.8	
Rod Ultimate Strength (F_u) =	105	ksi
Base Plate Detail Type* =	d	
Rod Circle =	66	in
Rod Diameter =	1.5	in
Net Tensile Area =	1.41	in^2
Max Tension on Rod =	47.36	kips
Max Compression on Rod =	49.72	kips
P_u =	49.72	kips
V_u =	0.68	kips
η =	0.50	
φR_{nt} =	118.44	kips
Anchor Rod Capacity =	**43.1%**	**OK**

Base Plate		
Location =	External	
Plate Strength (Fy) =	36	ksi
ϕ =	0.9	
Outside Diameter =	72	in
Plate Thickness =	2.25	in
wcalc =	27.50	in
wmax =	45.07	in
w =	27.50	in
Z =	34.80	in^3
M_u =	488.48	k-in
φM_n =	1127.49	k-in
BP Capacity =	**43.3%**	**OK**

Pole		
Pole Diameter =	60	in
Number of Sides =	Round	
Thickness =	0.5	in
Pole Yield Strength =	45	ksi

***This analysis assumes the clear distance from the top of the concrete to the bottom of the leveling nut is less than the diameter of the anchor rod. Notify GPD Group immediately if existing field conditions do not meet this assumption.**

Stiffeners		
Configuration =	None	

APPENDIX E

Foundation Analysis

Mat Foundation Analysis
CT5626 PROSPECT NORTH
2012702.35

General Info	
Code	TIA-222-G
Bearing On	Soil
Foundation Type	Mono Pad
Pier Type	Square
Reinforcing Known	Yes
Max Capacity	1.05

Tower Reactions		
Moment, M	2403.52	k-ft
Axial, P	42.46	k
Shear, V	24.64	k

Pad & Pier Geometry		
Pier Width, ø	7	ft
Pad Length, L	25	ft
Pad Width, W	25	ft
Pad Thickness, t	2	ft
Depth, D	4	ft
Height Above Grade, HG	1	ft

Pad & Pier Reinforcing		
Rebar Fy	60	ksi
Concrete Fc'	4	ksi
Clear Cover	6	in
Reinforced Top & Bottom?	Yes	
Pad Reinforcing Size	# 9	
Pad Quantity Per Layer	27	
Pier Rebar Size	# 7	
Pier Quantity of Rebar	60	

Soil Properties		
Soil Type	Granular	
Soil Unit Weight	130	pcf
Angle of Friction, ø	40	°
Bearing Type	Net	
Ultimate Bearing	50	ksf
Water Table Depth	999	ft
Frost Depth	3.33	ft

Bearing Summary			Load Case
Qxmax	1.24	ksf	1.2D+1.6W
Qymax	1.24	ksf	1.2D+1.6W
Qmax @ 45°	1.39	ksf	1.2D+1.6W
$Q_{(all)\ Gross}$	37.89	ksf	
Controlling Capacity	**3.7%**	**Pass**	

Overturning Summary (Required FS=1.0)			Load Case
FS(ot)x	1.94	≥1.0	0.9D+1.6W
FS(ot)y	1.94	≥1.0	0.9D+1.6W
Controlling Capacity	**51.4%**	**Pass**