

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

NEW CINGULAR WIRELESS PCS, LLC (AT&T)
PETITION FOR A DECLARATORY RULING,
PURSUANT TO CONNECTICUT GENERAL
STATUTES §4-176 AND §16-50K, FOR THE
INSTALLATION OF A WIRELESS
TELECOMMUNICATIONS FACILITY ON
PROPERTY LOCATED 50 BIDWELL STREET/
RAMER DRIVE, MANCHESTER, CONNECTICUT.

PETITION NO. 1512

June 21, 2022

RESPONSES OF NEW CINGULAR WIRELESS PCS, LLC (AT&T)
TO CONNECTICUT SITING COUNCIL INTERROGATORIES

Q1. What are the proposed hours of construction?

A1. The proposed hours of construction are Monday through Friday from 8am to 5pm.

Q2. Provide the distance and direction to the nearest residential property line and residential structure.

A2. The nearest residential property line is approximately 379' to the south of the proposed pole.

Q3. Could the construction or operation of the proposed facility impact or interfere with any existing Manchester Community College utilities or infrastructure within the project area? If so, identify any measures that would be employed to protect the existing utilities or infrastructure from impact or interference.

A3. No, the installation will not impact or interfere with any of the existing public utilities within the Manchester Community College campus and project area. To avoid any underground utilities, AT&T's contractor will obtain a Dig Safe number prior to any installation to confirm the location of any underground utilities.

Q4. Would the proposed facility be capable of providing 5G wireless service?

A4. AT&T delivers two methods of 5G service:

- *AT&T 5G, using low-band spectrum (700 MHZ, 850 MHz, 1900 MHz, 2100 MHz and 2300 MHz).*
- *AT&T 5G+, which is broadband 5G delivered via millimeter wave spectrum (24GHz to 39 GHz).*

The proposed antennas will support 5G in the low-band spectrum. The proposed antennas do not support the millimeter wave spectrum where broadband 5G+ operates.

Q5. Page 3 of the Radio Frequency Report provided in Attachment 5 of the Petition states the Maximum MPE% on the nearest rooftop is 0.03%. What is the horizontal distance from the proposed pole to the “nearest rooftop”?

A5. *The horizontal distance from the proposed pole to the nearest rooftop is approximately 208'.*

Q6. Please provide a site drawing showing the source for power and/or fiber (path of connection indicating distance/direction) and whether the connection is overhead or underground.

A6. *The final fiber and power path to be determined, the design is ongoing.*

Q7. What is the distance and direction of the nearest wetland area to the proposed facility?

A7. *The nearest wetland to the proposed facility is located approximately 600' (0.11 miles) away to the south.*

Q8. Would the proposed facility be located within a 100-year or 500-year flood zone?

A8. *No.*

Q9. Is the proposed facility located within a Natural Diversity Database buffer area?

A9. *No.*

Q10. The text of the Petition refers to the proposed facility as a utility pole, while the structural analysis and radio frequency analysis refers to it as a light pole. Please clarify.

A10. *The proposed pole will be a metal small cell pole.*

Q11. What material is the light pole made of? Would a light be installed on the pole?

A11. *The proposed pole will be made of galvanized steel and no light will be installed on it.*

Q12. The structural analysis “Field Photos” indicates the existing light pole in the area is to be removed and replaced; however, the photo simulations show the existing light pole and the proposed pole. Please clarify.

A12. *Please see the revised drawings included in Attachment 1; the photo simulations included in Attachment 2; and the updated structural analysis in Attachment 3.*

Q13. Would some portion of the proposed pole be buried under ground? If not, would a foundation be installed?

A13. *A foundation is added prior to the pole installation. The pole itself is not buried. The foundation is poured until it meets ground level, then bolted to the new pole.*

Q14. Would the proposed pole extend through the enclosure at the base?

A14. *No.*

Q15. The site plans and photo simulation in the petition state that the pole will be painted white; however, the photo simulation does not appear to depict a white pole. Please clarify. Would the antenna be painted to match the pole? Would the paint require maintenance/repainting over time?

A15. The proposed metal pole will be painted by the manufacturer using a powder coat paint application (like metal streetlights). This process generally does not require maintenance over time. The antenna is made of white fiberglass material to match the proposed pole.

CERTIFICATE OF SERVICE

I hereby certify that on this day, one original and fifteen (15) hard copies of the foregoing was sent via overnight Federal Express and electronically to the Connecticut Siting Council accordance with the Connecticut Siting Council directives.

June 21, 2022



Lucia Chiocchio, Esq.
Cuddy & Feder LLP
445 Hamilton Ave, 14th Floor
White Plains, NY 10601
(914)-761-1300
Attorney for the Applicant

cc: Centerline
AT&T

ATTACHMENT 1



at&t



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067



750 WEST CENTER STREET,
SUITE# 301
WEST BRIDGEWATER, MA 02379



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5555
FAX: (978) 336-5586

ISSUED FOR PERMITTING

AT&T SITE ID: CRAN_RCTB_MANC_003
50 BIDWELL ST.- RAMEY DR
MANCHESTER, CT 06040

SHEET INDEX			VICINITY MAP (NOT TO SCALE)	GENERAL NOTES
SHEET NO.	DESCRIPTION	REV.		
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GN-1	GENERAL NOTES	3		
C-1	SITE PLAN	3		
C-2	ABUTTERS LIST	3		
A-1	KEY PLAN AND ELEVATION	3		
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E-1	ELECTRICAL & GROUNDING DETAILS	3		
PROJECT DESCRIPTION				
1. INSTALLATION OF ANTENNA AND ASSOCIATED EQUIPMENT ON PROPOSED UTILITY POLE.				<p>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.</p> <p>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.</p> <p>3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.</p> <p>4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.</p>
2. THIS IS AN UNMANNED AND RESTRICTED ACCESS EQUIPMENT SITE AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNALS FOR THE PURPOSE OF IMPROVING CELLULAR AND WIRELESS INTERNET SERVICE.				
PROJECT SUMMARY			DRIVING DIRECTIONS	
SITE ADDRESS:	50 BIDWELL ST.- RAMEY DR MANCHESTER, CT 06040		FROM ROCKY HILL, CT: HEAD SOUTH TOWARD ENTERPRISE DR. TURN LEFT ONTO ENTERPRISE DR. TURN LEFT ONTO CAPITAL BLVD. TURN LEFT ONTO STATE HWY 411 TURN LEFT TO MERGE ONTO I-91 N. MERGE ONTO I-91 N. MERGE ONTO I-91 N. TAKE EXIT 29 TO MERGE ONTO CT-15 N/US-5 TOWARD I-84 E/E HARTFORD/BOSTON. CONTINUE ONTO CT-15 N/ TAKE EXIT ON THE LEFT ONTO I-84 E TOWARD BOSTON. TAKE EXIT 59 FOR I-384 E TOWARD PROVIDENCE. KEEP RIGHT TO CONTINUE ON EXIT 1, FOLLOW SIGNS FOR SPENCER ST. TURN LEFT ONTO STATE HWY 502/SPENCER ST. TURN RIGHT ONTO HILLSTOWN RD. TURN LEFT ONTO WETHERELL ST. TURN LEFT ONTO RAMEY DR.	
COUNTY:	HARTFORD			
LATITUDE:	41.760289° N			
LONGITUDE:	72.560078° W			
OWNER:	STATE OF CONNECTICUT C/O MANCHESTER COMMUNITY COLLEGE			
STRUCTURE TYPE:	METAL SMALL CELL POLE			
POLE NUMBER:	#44			
ARCHITECT/ENGINEER:	HUDSON DESIGN GROUP LLC 45 BEECHWOOD DRIVE NORTH ANDOVER MA 01845			
DO NOT SCALE DRAWINGS <small>CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE PROJECT OWNER'S REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.</small>				
72 HOURS CALL BEFORE YOU DIG   CALL TOLL FREE 1-800-922-4455 OR CALL 811 UNDERGROUND SERVICE ALERT				
<small>CLUSTER AND NODE NUMBER: CRAN_RCTB_MANC_003</small> <small>SITE ID: CRAN_RCTB_MANC_003</small> <small>SITE ADDRESS: 50 BIDWELL ST.- RAMEY DR MANCHESTER, CT 06040 HARTFORD COUNTY</small> <small>SHEET TITLE TITLE SHEET</small> <small>SHEET NUMBER T-1</small>				

GENERAL NOTES

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 - CONTRACTOR – CENTERLINE
 - SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 - OWNER – AT&T MOBILITY
- 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.
- 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.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- "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.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 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.
- 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.
- 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.
- 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.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- 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.
- 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.
- CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T SITES."
- 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.

GROUNDING NOTES

- 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: IBC 2015 WITH 2018 CT SUPPLEMENT
ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE (NFPA 70-2017)
- 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, FOURTEENTH EDITION;
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-H, STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

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.
- CONSTRUCTION TO BE COMPLETED IN ACCORDANCE WITH THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION'S LOW RISK HANDBOOK FOR EROSION PROTECTION AND SEDIMENT CONTROL
- CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY REQUIRED RIGHT OF WAY PERMITS FOR INSTALLATION IN PUBLIC RIGHT OF WAY.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- 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



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067



750 WEST CENTER STREET,
SUITE # 301
WEST BRIDGEWATER, MA 02379



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



Daniel P. Hamm
No. 24178
LICENSED
PROFESSIONAL ENGINEER

CHECKED BY: AT

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
3	05/04/22	ISSUED FOR PERMITTING	SG
2	12/21/21	ISSUED FOR PERMITTING	MR
1	12/10/20	ISSUED FOR PERMITTING	MR
A	05/26/20	ISSUED FOR REVIEW	MR

CLUSTER AND NODE NUMBER:
CRAN_RCTB_MANC_003

SITE ID:
CRAN_RCTB_MANC_003

SITE ADDRESS:
50 BIDWELL ST.– RAMEY DR
MANCHESTER, CT 06040
HARTFORD COUNTY

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

IMMEDIATE ADJOINING PROPERTY OWNER INFORMATION

PARCEL	OWNER	PHYSICAL ADDRESS	MAILING ADDRESS
047000060	STATE OF CONNECTICUT COMMUNITY COLLEGE	60 BIDWELL STREET MANCHESTER, CT 06040	165 CAPITOL AVE. UNIT DPW HARTFORD, CT 06106

APPROXIMATE COORDINATES:
LAT: 41.760289° N
LONG: 72.560078° W



INFORMATION SHOWN HEREON IS BASED ON EXISTING INFORMATION OBTAINED FROM TAX MAPS, MUNICIPAL GIS WEBSITE, & AERIAL IMAGERY. THE INFORMATION SHOWN IS NOT A RIGHT OF WAY OR BOUNDARY SURVEY AND DOES NOT SATISFY THE REQUIREMENTS FOR A BOUNDARY SURVEY. A SITE SURVEY WAS NOT PERFORMED BY HUDSON DESIGN GROUP, LLC

SITE PLAN

22x34 SCALE: 1"=200'
11x17 SCALE: 1"=400'

1
C-1

GRAPHIC SCALE
0 100 200 400 600 FEET



CHECKED BY: AT

APPROVED BY: DPH

SUBMITTALS

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CLUSTER AND NODE NUMBER:
CRAN_RCTB_MANC_003

SITE ID:
CRAN_RCTB_MANC_003

SITE ADDRESS:
50 BIDWELL ST.- RAMYE DR
MANCHESTER, CT 06040
HARTFORD COUNTY

SHEET TITLE

SITE PLAN

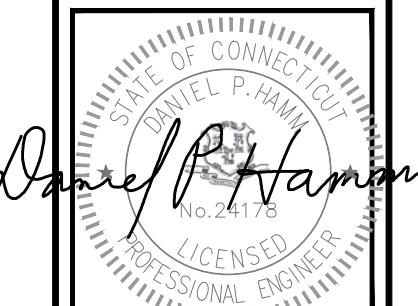
SHEET NUMBER

C-1

IMMEDIATE ADJOINING PROPERTY OWNER INFORMATION

PARCEL	OWNER	PHYSICAL ADDRESS	MAILING ADDRESS
047000060	STATE OF CONNECTICUT COMMUNITY COLLEGE	60 BIDWELL STREET MANCHESTER, CT 06040	165 CAPITOL AVE. UNIT DPW HARTFORD, CT 06106

APPROXIMATE COORDINATES: LAT: 41.760289° N
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SITE ID:
CRAN_RCTB_MANC_003

SITE ADDRESS:
50 BIDWELL ST.— RAMEY DR
MANCHESTER, CT 06040
HARTFORD COUNTY

SHEET TITLE
ABUTTERS LIST

SHEET NUMBER
C-2

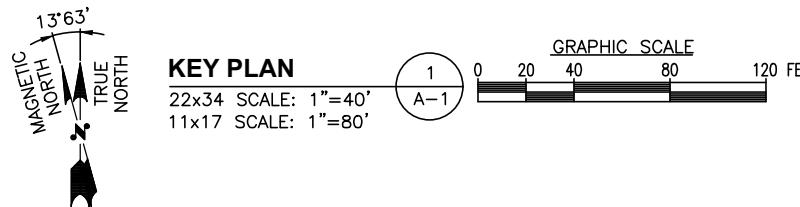
Owner Name	Owner Address	Owner City	Owner Stat	Owner Zip Cod	RPKEY	Parcel Address
PALMA, HEMONTO F	642 WETHERELL ST	MANCHESTER	CT	06040	598000642	642 WETHERELL ST
SMITH, LISA B	636 WETHERELL ST	MANCHESTER	CT	06040-6351	598000636	636 WETHERELL ST
FOX, NATHAN P	626 WETHERELL ST	MANCHESTER	CT	06040-6351	598000626	626 WETHERELL ST
VILGA, HELEN S	618 WETHERELL ST	MANCHESTER	CT	06040-6351	598000618	618 WETHERELL ST
BUCKLAND, LINDA J	610 WETHERELL ST	MANCHESTER	CT	06040	598000610	610 WETHERELL ST
ARMETTA, ANTHONY	8 WOODSIDE ST	MANCHESTER	CT	06040	614000008	8 WOODSIDE ST
WARD, THOMAS W	674 WETHERELL ST	MANCHESTER	CT	06040-6351	598000674	674 WETHERELL ST
GEER, SHIRLEY D	668 WETHERELL ST	MANCHESTER	CT	06040	598000668	668 WETHERELL ST
STOEVEN, JAMES E III	658 WETHERELL ST	MANCHESTER	CT	06040-6351	598000658	658 WETHERELL ST
PALMA, HERMONTA	652 WETHERELL ST	MANCHESTER	CT	06040-6351	598000652	652 WETHERELL ST
HENAUT, LISA M	70 ROLLINGVIEW DR	VERNON	CT	06066	598000602	602 WETHERELL ST
BOYNTON, KENNETH J	100 DOBSON RD UNIT 25	VERNON	CT	06066	039500240R	240R BAYBERRY RD
MENDITTO, MICHAEL F	596 WETHERELL ST	MANCHESTER	CT	06040	598000596	596 WETHERELL ST
HINDS, MIRIAM A	448 WETHERELL ST	MANCHESTER	CT	06040	598000448	448 WETHERELL ST
SCHNEIDER, JOHN	580 WETHERELL ST	MANCHESTER	CT	06040-6351	598000580	580 WETHERELL ST
ALVARADO, KITSCHA O	572 WETHERELL ST	MANCHESTER	CT	06040	598000572	572 WETHERELL ST
THERRIEN, LINDA J	450 WETHERELL ST	MANCHESTER	CT	06040	598000450	450 WETHERELL ST
SIROIS, RYAN A	564 WETHERELL ST	MANCHESTER	CT	06040	598000564	564 WETHERELL ST
FOURNIER, GARY	556 WETHERELL ST	MANCHESTER	CT	06040	598000556	556 WETHERELL ST
GENT, JACQUELINE R	548 WETHERELL ST	MANCHESTER	CT	06040	598000548	548 WETHERELL ST
OKWUAZI, ANGELA D	454 WETHERELL ST	MANCHESTER	CT	06040	598000454	454 WETHERELL ST
STONE, MARK S	540 WETHERELL ST	MANCHESTER	CT	06040	598000540	540 WETHERELL ST
PRASSER, GEORGE R JR	528 WETHERELL ST	MANCHESTER	CT	06040-6351	598000528	528 WETHERELL ST
FIRST BAPTIST CHURCH OF MANCHESTER	240 HILLSTOWN RD	MANCHESTER	CT	06040	295000240	240 HILLSTOWN RD
CYR, DANIEL D	458 WETHERELL ST	MANCHESTER	CT	06040	598000458	458 WETHERELL ST
RETTBURG, GRACE	522 WETHERELL ST	MANCHESTER	CT	06040	598000522	522 WETHERELL ST
MADORE, SHARON R	514 WETHERELL ST	MANCHESTER	CT	06040-6351	598000514	514 WETHERELL ST
MILLER, CHANTEE	506 WETHERELL ST	MANCHESTER	CT	06040	598000506	506 WETHERELL ST
BLANCHARD, ROBERT F	37 PONDVIEW DR	MANCHESTER	CT	06040	295000287	287 HILLSTOWN RD
CHAMP, CAROL L	468 WETHERELL ST	MANCHESTER	CT	06040	598000468	468 WETHERELL ST
LUMPKIN, KAREN D	494 WETHERELL ST	MANCHESTER	CT	06040	598000494	494 WETHERELL ST
BRUNO, STEPHEN D	476 WETHERELL ST	MANCHESTER	CT	06040-6346	598000476	476 WETHERELL ST
MANAGER, THOMAS	484 WETHERELL ST	MANCHESTER	CT	06040-6346	598000484	484 WETHERELL ST
STATE OF CONNECTICUT	165 CAPITOL AVE -DPW	HARTFORD	CT	06106	598000411	411 WETHERELL ST
CANNON, DOROTHY C	215 HILLSTOWN RD	MANCHESTER	CT	06040	295000215	215 HILLSTOWN RD
TOWN OF MANCHESTER	41 CENTER ST	MANCHESTER	CT	06040-5096	295000237	237 HILLSTOWN RD
BOTTICELLO PROPERTIES LLC	209 HILLSTOWN RD	MANCHESTER	CT	06040-6309	295000224	224 HILLSTOWN RD
BOTTICELLO, HENRY L EST	103 LEVITA RD	LEBANON	CT	06249	295000209	209 HILLSTOWN RD
BOTTICELLO, HENRY L	209 HILLSTOWN RD	MANCHESTER	CT	06040	295000195	195 HILLSTOWN RD
SCHAUB, DIANE M	188 HILLSTOWN RD	MANCHESTER	CT	06040	295000188	188 HILLSTOWN RD
STRINGFELLOW, THOMAS L	183 HILLSTOWN RD	MANCHESTER	CT	06040-6308	295000183	183 HILLSTOWN RD
CONNECTICUT LIGHT & POWER CO	PO BOX 270	HARTFORD	CT	06141-0270	598000409	409 WETHERELL ST
TOWN OF MANCHESTER	41 CENTER ST	MANCHESTER	CT	06040	295000156	156 HILLSTOWN RD
CONNECTICUT LIGHT & POWER COMPANY	PO BOX 270	HARTFORD	CT	06141-0270	47000134	134 BIDWELL ST
TOWN OF MANCHESTER	41 CENTER ST	MANCHESTER	CT	06040-5096	295000180	180 HILLSTOWN RD
THE ANDREW ANSALDI COMPANY	186 BIDWELL ST	MANCHESTER	CT	06040-6412	47000186	186 BIDWELL ST
CONNECTICUT LIGHT & POWER COMPANY	PO BOX 270	HARTFORD	CT	06141-0270	47000133	133 BIDWELL ST
TOWN OF MANCHESTER	41 CENTER ST	MANCHESTER	CT	06040	295000130	130 HILLSTOWN RD
THE ANDREW ANSALDI COMPANY	186 BIDWELL ST	MANCHESTER	CT	06040-6412	47000101	101 BIDWELL ST
STATE OF CONNECTICUT COMMUNITY COLLEGE	165 CAPITOL AVE UNIT DPW	HARTFORD	CT	06106	47000060	60 BIDWELL ST
MENDEZ, ALDRED	66 WILFRED RD	MANCHESTER	CT	06040-4719	602000066	66 WILFRED RD
BEGUM, HOSNE A	352 HACKMATACK ST	MANCHESTER	CT	06040	602000068	68 WILFRED RD
ALAM, SHAFI	68-70 WILFRED RD	MANCHESTER	CT	06040	602000070	70 WILFRED RD
BAIDOO, PETER BOTSE	116 H JEFFERSON AVE	CLEARWATER	FL	33755	602000074	74 WILFRED RD
THOMAS, MILLICENT	76 WILFRED RD	MANCHESTER	CT	06040	602000076	76 WILFRED RD
IDRISSOU, MOUSTAPHA	80 WILFRED RD	MANCHESTER	CT	06040	602000080	80 WILFRED RD
ELAMIN, WINSOME	66 WILFRED RD	MANCHESTER	CT	06040	602000064	64 WILFRED RD
CHOWDHURY, SHAHIDUL A	31 WILFRED RD	MANCHESTER	CT	06040	602000062	62 WILFRED RD
D'CRUZE, MARY	60 WILFRED RD	MANCHESTER	CT	06040	602000060	60 WILFRED RD
ALL, SYED MOHAMMAD	58 WILFRED RD	MANCHESTER	CT	06040	602000058	58 WILFRED RD
ANDRUSIS, NANCY	34 BIDWELL ST	MANCHESTER	CT	06040	47000034	34 BIDWELL ST
CROSSROADS COMMUNITY CATHEDRAL	1492 SILVER LN	EAST HARTFORD	CT	06118	519000206	206 SPENCER ST
KUPPURAJ, HARIHARAN	77 CHAPONIS WAY	SOUTH WINDSOR	CT	06074	47000030	30 BIDWELL ST
CONNECTICUT LIGHT & POWER CO	PO BOX 270	HARTFORD	CT	06141-0270	271000750	750 HARTFORD RD
MCG MANCHESTER LLC	59 FIELD ST UNIT 108	TORRINGTON	CT	06790	519000130R	130R SPENCER ST
BASSEER-KAUFMAN 216 LLC	151 IRVING PL C/O BASSEER-KAUFMAN	WOODMERE	NY	11598	519000210	210 SPENCER ST
RM19 HOLDINGS LLC	3949 FOREST PKWY UNIT 100	WHEATFIELD	NY	14120	519000140	140 SPENCER ST
RAHF SQUIRE PRESERVATION LLC	551 FIFTH AVE 23RD FLR	NEW YORK	NY	10176	519000048	48 SPENCER ST

INFORMATION SHOWN HEREON IS BASED ON EXISTING INFORMATION OBTAINED FROM TAX MAPS, MUNICIPAL GIS WEBSITE, & AERIAL IMAGERY. THE INFORMATION SHOWN IS NOT A RIGHT OF WAY OR BOUNDARY SURVEY AND DOES NOT SATISFY THE REQUIREMENTS FOR A BOUNDARY SURVEY. A SITE SURVEY WAS NOT PERFORMED BY HUDSON DESIGN GROUP, LLC

ABUTTERS LIST

SCALE: N.T.S.

1
C-2



EXISTING CONDITIONS PHOTO DETAIL

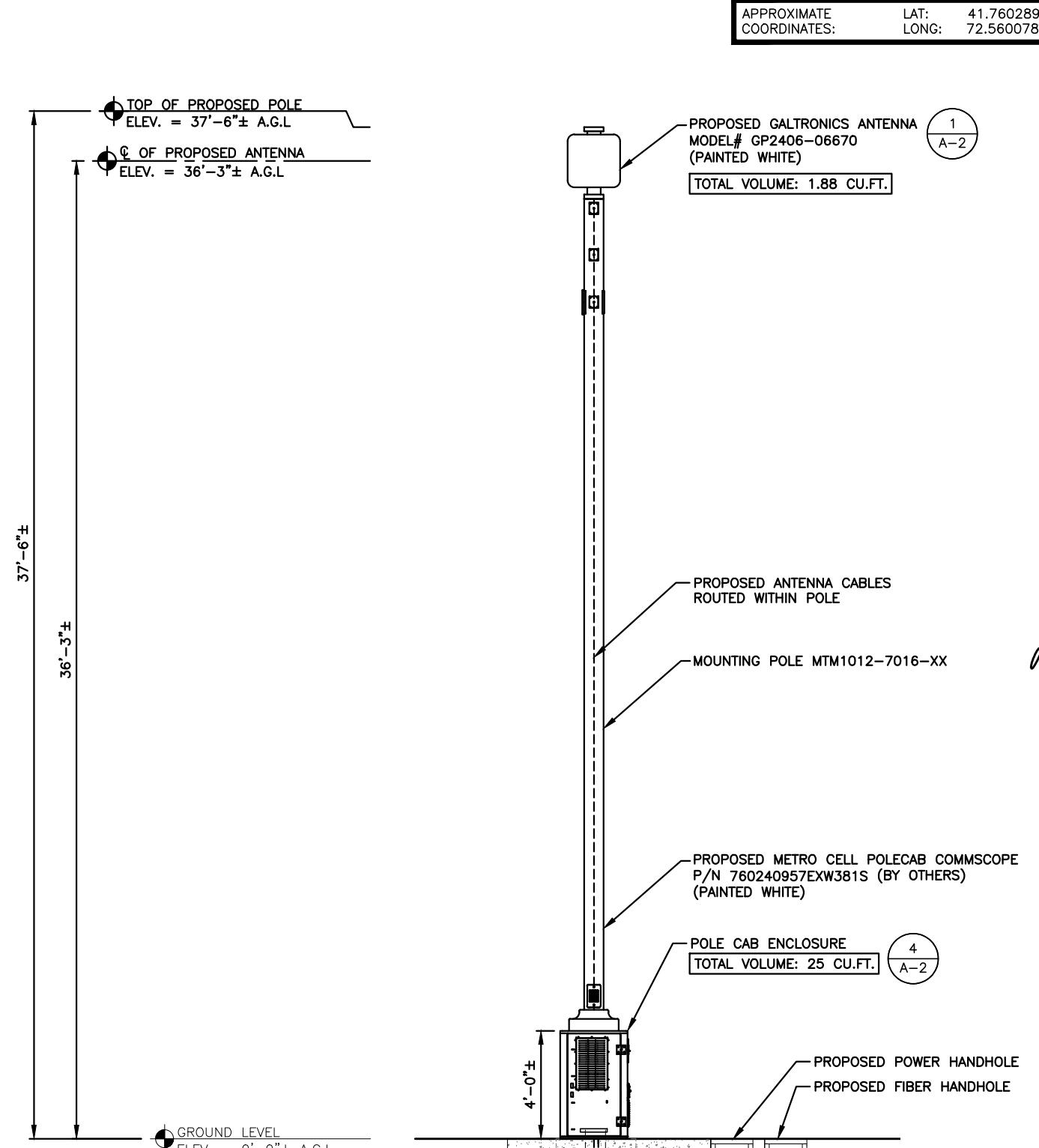
SCALE: N.T.S

2
A-1

PARTIES MUST PRIORITIZE LAYING CONDUIT WHENEVER INSTALLING FIBER FOR PERSONAL WIRELESS SERVICE FACILITIES AND SMALL WIRELESS FACILITIES. IF A PARTY HAS A REASON TO NOT UTILIZE CONDUIT FOR AN INSTALLATION, THEY MUST PROVIDE THE 5G COUNCIL WITH AN ADEQUATE ENGINEERING EXPLANATION.

NOTE:

1. THE WIRELESS COMMUNICATIONS OPERATOR IS RESPONSIBLE FOR PLACING A WARNING SIGN ON THE POWER SUPPLY COMMUNICATING THE RF EMISSIONS IN COMPLIANCE WITH THE CURRENT EDITION OF IEEE STANDARD C95.2. THIS SIGN MUST ALSO HAVE A 24-HOUR CONTACT PHONE NUMBER IN CASE OF EMERGENCY. THIS NUMBER MUST BE VISIBLE FROM THE GROUND.



ELEVATION

22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"

3
A-1

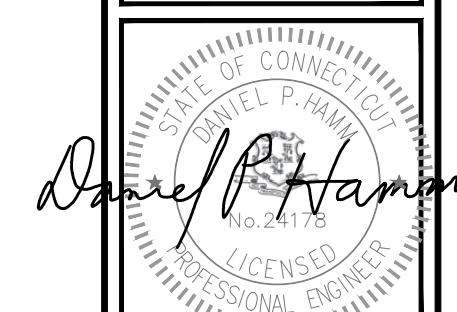
GRAPHIC SCALE
0 1'-4" 2'-8" 5'-4" 8'-0"

APPROXIMATE COORDINATES:
LAT: 41.760289° N
LONG: 72.560078° W

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

CENTERLINE
COMMUNICATIONS
750 WEST CENTER STREET,
SUITE# 301
WEST BRIDGEWATER, MA 02379

HDG
HUDSON
Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



Daniel P. Hamm
No. 24178
LICENSED
PROFESSIONAL ENGINEER

CHECKED BY: AT

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
3	05/04/22	ISSUED FOR PERMITTING	SG
2	12/21/21	ISSUED FOR PERMITTING	MR
1	12/10/20	ISSUED FOR PERMITTING	MR
A	05/26/20	ISSUED FOR REVIEW	MR

CLUSTER AND NODE NUMBER:
CRAN_RCTB_MANC_003

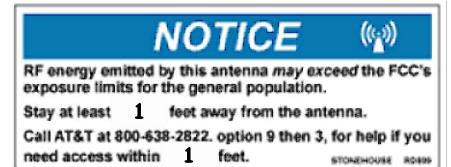
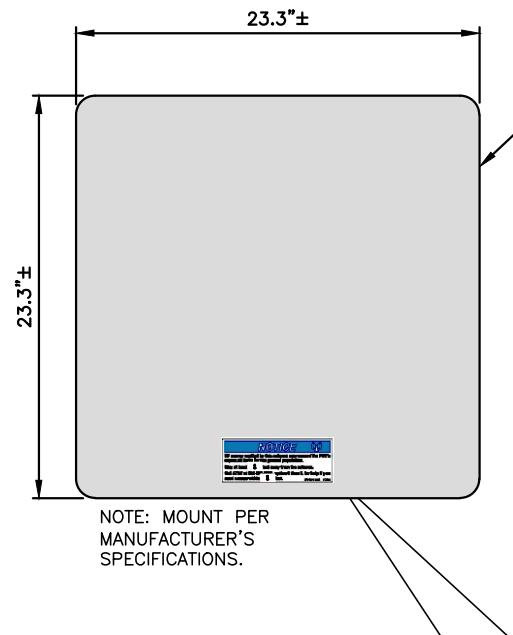
SITE ID:
CRAN_RCTB_MANC_003

SITE ADDRESS:
50 BIDWELL ST.— RAMEY DR
MANCHESTER, CT 06040
HARTFORD COUNTY

SHEET TITLE
KEY PLAN AND
ELEVATION

SHEET NUMBER

A-1

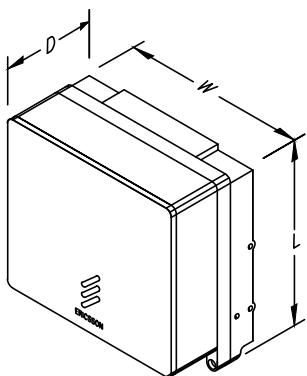


STONEHOUSE SIGNS INC. P/N RD899
SIGN DIMENSIONS 2.5"x6.5"
TWO NOTICE STICKERS MUST BE PLACED OPPOSITE EACH OTHER ON THE ANTENNA

ANTENNA DETAIL

SCALE: N.T.S

1
A-2



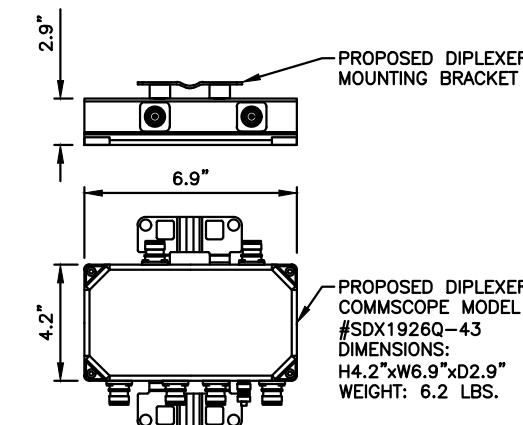
MODEL	QTY.	L	W	D	WGT.
8843	1	18.1"	13.4"	8.3"	72 LBS
4449	1	8.0"	8.0"	4.0"	11 LBS

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

RRH DETAIL

SCALE: N.T.S

2
A-2

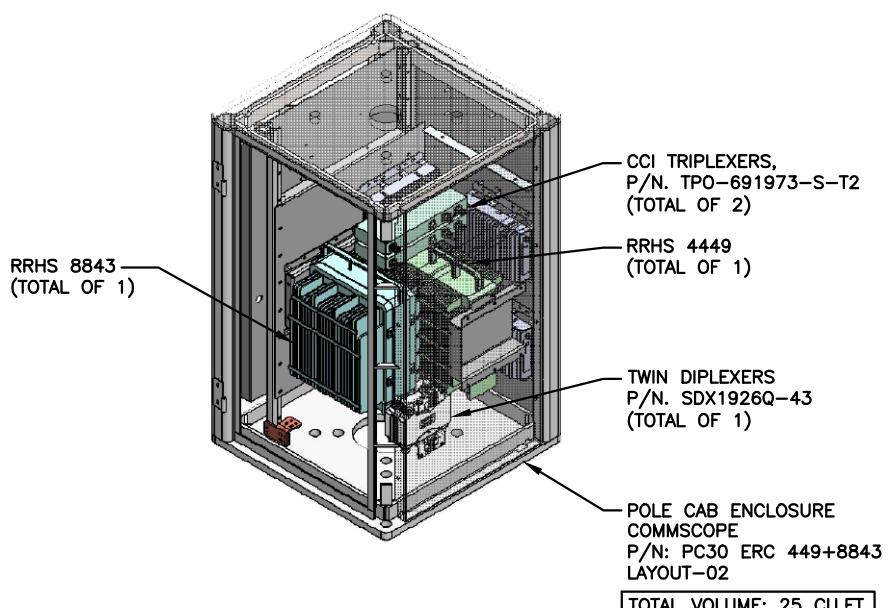


NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

DIPLEXER DETAIL (AS REQUIRED)

SCALE: N.T.S

3
A-2



NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS.

EQUIPMENT CABINET DETAIL

SCALE: N.T.S

4
A-2



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

CHECKED BY: AT

APPROVED BY: DPH

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
3	05/04/22	ISSUED FOR PERMITTING	SG
2	12/21/21	ISSUED FOR PERMITTING	MR
1	12/10/20	ISSUED FOR PERMITTING	MR
A	05/26/20	ISSUED FOR REVIEW	MR

CLUSTER AND NODE NUMBER:
CRAN_RCTB_MANC_003

SITE ID:
CRAN_RCTB_MANC_003

SITE ADDRESS:
50 BIDWELL ST.- RAMEY DR
MANCHESTER, CT 06040
HARTFORD COUNTY

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-2



500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

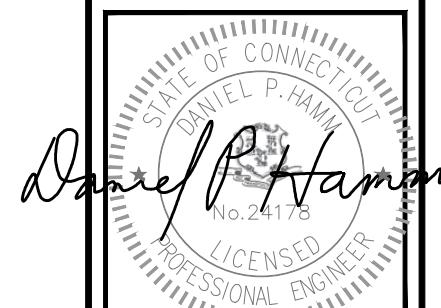


750 WEST CENTER STREET,
SUITE # 301
WEST BRIDGEWATER, MA 02379



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845

TEL: (978) 557-5553
FAX: (978) 336-5586



Checked By: AT

Approved By: DPH

Submittals

Rev.	Date	Description	By
3	05/04/22	ISSUED FOR PERMITTING	SG
2	12/21/21	ISSUED FOR PERMITTING	MR
1	12/10/20	ISSUED FOR PERMITTING	MR
A	05/26/20	ISSUED FOR REVIEW	MR

Cluster and Node Number:
CRAN_RCTB_MANC_003

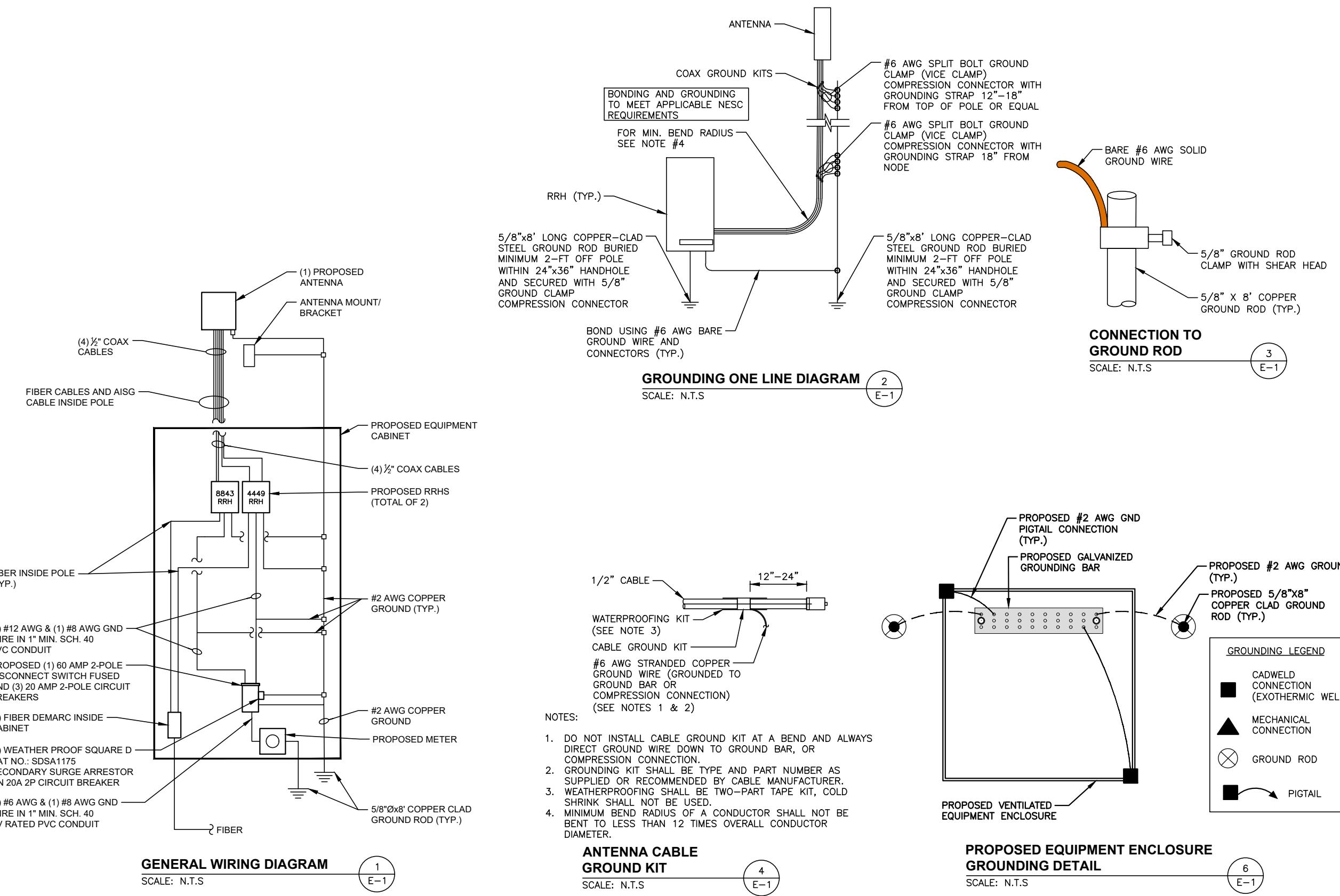
Site ID:
CRAN_RCTB_MANC_003

Site Address:
50 BIDWELL ST. - RAMEY DR
MANCHESTER, CT 06040
HARTFORD COUNTY

Sheet Title:
ELECTRICAL &
GROUNDING DETAILS

Sheet Number

E-1



ATTACHMENT 2

Prepared For:
CENTERLINE-AT&T
Site Number:
CRAN_RCTB_MANC_003
Site Name:
CRAN_RCTB_MANC_003
50 BIDWELL ST.- RAMEY DR
MANCHESTER, CT 06040



SITE NO: CRAN_RCTB_MANC_003
SITE NAME: CRAN_RCTB_MANC_003
ADDRESS: 50 BIDWELL ST.- RAMEY DR
MANCHESTER, CT 06040



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

PREPARED FOR:
 **CENTERLINE**
COMMUNICATIONS
750 WEST CENTER STREET
SUITE #301
WEST BRIDGEWATER, MA 02379

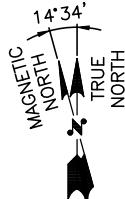
HDG
HUDSON
Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SITE TYPE: METAL SMALL
CELL POLE
DATE: 06/16/2022 | REV: 1
DRAWN BY: AM
SCALE: N.T.S.

THIS STUDY DOES NOT CLAIM IN ANY WAY
TO SHOW THE ONLY AREAS OF VISIBILITY.
IT IS MEANT TO SHOW A BROAD
REPRESENTATION OF AREAS WHERE THE
PROPOSED INSTALLATION MAY BE VISIBLE
BASED UPON THE BEST INFORMATION FOR
TOPOGRAPHY AND VEGETATION
LOCATIONS AVAILABLE TO DATE.

LOCUS MAP

TAKEN FROM GOOGLE.COM ON 07-20-21



SITE NO: CRAN_RCTB_MANC_003

SITE NAME: CRAN_RCTB_MANC_003

ADDRESS: 50 BIDWELL ST.– RAMEY DR
MANCHESTER, CT 06040



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

PREPARED FOR:



750 WEST CENTER STREET
SUITE #301
WEST BRIDGEWATER, MA 02379



45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SITE TYPE: METAL SMALL
CELL POLE

DATE: 06/16/2022 **REV:** 1

DRAWN BY: AM

SCALE: N.T.S.

PHOTO LOCATION

THIS STUDY DOES NOT CLAIM IN ANY WAY
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BASED UPON THE BEST INFORMATION FOR
TOPOGRAPHY AND VEGETATION
LOCATIONS AVAILABLE TO DATE.

EXISTING CONDITIONSLOCATION # 1DATE OF PHOTO: 12/27/2021

VIEW EAST FROM FOUNDERS DR S.

SITE NO: CRAN_RCTB_MANC_003**SITE NAME:** CRAN_RCTB_MANC_003**ADDRESS:** 50 BIDWELL ST.– RAMEY DR
MANCHESTER, CT 06040550 COCHITIATE ROAD
FRAMINGHAM, MA 01701

PREPARED FOR:

750 WEST CENTER STREET
SUITE #301
WEST BRIDGEWATER, MA 0237945 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586**SITE TYPE:** METAL SMALL
CELL POLE

DATE: 06/16/2022 | REV: 1

DRAWN BY: AM

SCALE: N.T.S.

THIS STUDY DOES NOT CLAIM IN ANY WAY
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BASED UPON THE BEST INFORMATION FOR
TOPOGRAPHY AND VEGETATION
LOCATIONS AVAILABLE TO DATE.

PROPOSED CONDITIONS

LOCATION # 1

DATE OF PHOTO: 12/27/2021



VIEW EAST FROM FOUNDERS DR S.

SITE NO: CRAN_RCTB_MANC_003
SITE NAME: CRAN_RCTB_MANC_003
ADDRESS: 50 BIDWELL ST.– RAMEY DR
MANCHESTER, CT 06040



550 COCHITUATE ROAD
FRAMINGHAM, MA 01701

PREPARED FOR:
 **CENTERLINE**
COMMUNICATIONS
750 WEST CENTER STREET
SUITE #301
WEST BRIDGEWATER, MA 02379

HDG
HUDSON
Design Group LLC
45 BEECHWOOD DRIVE
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SITE TYPE: METAL SMALL CELL POLE	
DATE: 06/16/2022	REV: 1
DRAWN BY: AM	
SCALE: N.T.S.	

THIS STUDY DOES NOT CLAIM IN ANY WAY TO SHOW THE ONLY AREAS OF VISIBILITY. IT IS MEANT TO SHOW A BROAD REPRESENTATION OF AREAS WHERE THE PROPOSED INSTALLATION MAY BE VISIBLE BASED UPON THE BEST INFORMATION FOR TOPOGRAPHY AND VEGETATION LOCATIONS AVAILABLE TO DATE.

ATTACHMENT 3

STRUCTURAL ANALYSIS REPORT

For

CRAN_RCTB_MANC_003

60 Bidwell Street
Manchester, CT 06040

Equipment Mounted on Proposed Light Pole



Prepared for:



CENTERLINE
COMMUNICATIONS



at&t

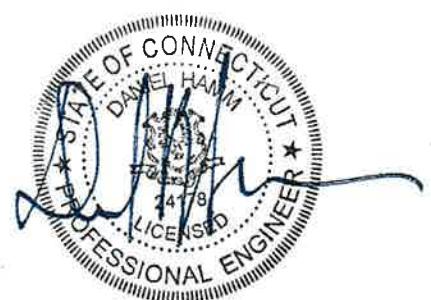
Dated: December 14, 2020

Prepared by:



HUDSON
Design Group LLC

45 Beechwood Drive
North Andover, MA 01845
Phone: (978) 557-5553
www.hudsondesigngroupllc.com





SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the proposed light pole supporting the proposed AT&T equipment.

This report represents this office's findings, conclusions and recommendations pertaining to the support of the proposed AT&T equipment listed below.

This office conducted an on-site visual survey of the above areas on May 21, 2020. Attendees included Patrick Barrett (HDG – Field Technician).

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the proposed pole **is in conformance** with the National Electric Safety Code 2017 (NESC). The proposed light pole structure is rated at 3.0%.

APPURTEANCES CONFIGURATION:

Appurtenances	Elev.	Mount
(1) GQ2410-06670 Antenna	29'-3"	Top of Light Pole
(1) Load Center	3'-6"	Equipment Enclosure
(1) Main Disconnect	3'-6"	Equipment Enclosure
(1) CBC1923Q-43 Dplexers	3'-0"	Equipment Enclosure
(1) 8843B2/B66A RRH	2'-4"	Equipment Enclosure
(1) 4449 RRH	2'-4"	Equipment Enclosure
(1) Power Meter	2'-0"	Equipment Enclosure

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft.)	Pass/Fail
8.0" Light Pole (Proposed)	3.0%	0 – 27.8	PASS



DESIGN CRITERIA:

National Electric Safety Code 2017 (NESC) and the 2018 Connecticut State Building Code Amendments		
Wind		
City/Town:	Manchester	
County:	Hartford	
NESC Rule	Rule 250B	NESC Section 25
Construction Grade	C	NESC Section 25
Wind Load:	39.53 mph	NESC Table 230-2
Ice		
Loading District	Heavy	NESC Figure 250-1
Radial Ice Thickness:	0.50 in	NESC Table 250-1

1. Approximate height above grade to center of the proposed antenna: 29'-3" +/-

***Calculations and referenced documents are attached.**



PROPOSED STRUCTURE:

The proposed 27'- 10" +/- light pole is assumed to have an 8.0" diameter installed on a 2'- 6"x4'-0" tall square equipment enclosure base. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.

ANTENNA SUPPORT RECOMMENDATIONS

The new antenna is proposed to be installed on a top mount kit secured to the new light pole using thru bolts.

EQUIPMENT SUPPORT RECOMMENDATIONS:

The new equipment is proposed to be installed within the new equipment enclosure base with unistrut components.

Limitations and assumptions:

1. Reference the latest HDG construction drawings for all the equipment locations details.
2. Mount all equipment per manufacturer's specifications.
3. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities. Contractor to perform pre-inspection prior to construction.
4. All antennas and waveguide cables are assumed to be properly installed and supported as per the manufacturer requirements.
5. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
6. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.
7. HDG did not perform any geotechnical analysis / or / investigation. Soil Information is unknown.

FIELD PHOTOS:



Photo 1: Sample photo illustrating the existing light pole.



Calculations

Date: 12/11/2020
 Project Name: CRAN_RCTB_MANC_003
 Designed By: RL Checked By: MSC



2.6.5.2 Velocity Pressure Coeff:

$$K_z = 2.01 (z/z_g)^{2/\alpha}$$

K_z=

0.977

$z =$	29.25 (ft)
$z_g =$	900 (ft)
$\alpha =$	9.5

$K_{zmin} \leq K_z \leq 2.01$

Table 2-4

Exposure	Z_g	α	K_{zmin}	K_e
B	1200 ft	7.0	0.70	0.9
C	900 ft	9.5	0.85	1.0
D	700 ft	11.5	1.03	1.1

2.6.6.4 Topographic Factor:

Table 2-5

Topo. Category	K_t	f
2	0.43	1.25
3	0.53	2.0
4	0.72	1.5

$$K_{zt} = [1 + (K_e K_t / K_h)]^2$$

$$K_h = e^{(f^* z / H)}$$

K_{zt}=

1

K_h=

1

K_e=

1.0 (from Table 2-4)

K_t=

(from Table 2-5)

f=

(from Table 2-5)

z=

29.25

H=

(Ht. of the crest above surrounding terrain)

K_{zt}=

1.00

K_{iz}=

0.99 (from Sec. 2.6.8)

2.6.8 Design Ice Thickness

Max Ice Thickness =

t_i=

0.50 in

Importance Factor, I_{ice} =

I_{ice}=

1.00 (from Table 2-3)

$$t_{iz} = 2.0 * t_i * I_{ice} * K_{iz} * (K_{zt})^{0.35}$$

t_{iz}=

0.99 in

2.6.7 Gust Effect Factor

2.6.7.1 Self Supporting Lattice Structures

Gh = 1.0 Latticed Structures > 600 ft

Gh = 0.85 Latticed Structures 450 ft or less

Gh = 0.85 + 0.15 [h/150 - 3.0] h= ht. of structure

h= 28

Gh= 0.85

2.6.7.2 Guyed Masts

Gh= 0.85

2.6.7.3 Pole Structures

Gh= 1.1

2.6.9 Appurtenances

Gh= 1.0

2.6.7.4 Structures Supported on Other Structures

(Cantilevered tubular or latticed spines, pole, structures on buildings (ht. : width ratio > 5)

Gh= 1.35

Gh= 1.00

2.6.9.2 Design Wind Force on Appurtenances

$$F = q_z * Gh * (EPA)_A$$

$$q_z = 0.00256 * K_z * K_{zt} * K_d * V_{max}^2 * l$$

$$K_z = 0.977$$

$$K_{zt} = 1.0$$

$$q_z = 3.71$$

$$K_d = 0.95 \text{ (from Table 2-2)}$$

$$q_z (ice) = 2.14$$

$$V_{max} = 39.53$$

$$V_{max (ice)} = 30$$

$$l = 1.0 \text{ (from Table 2-3)}$$

$$l_{wice} = 1.0 \text{ (from Table 2-3)}$$

Table 2-2

Structure Type	Wind Direction Probability Factor, Kd
Latticed structures with triangular, square or rectangular cross sections	0.85
Tubular pole structures, latticed structures with other cross sections, appurtenances	0.95

Determine Ca:

Table 2-8

Force Coefficients (Ca) for Appurtenances				
Member Type	Aspect Ratio \leq 2.5		Aspect Ratio = 7	
	Ca	Ca	Ca	Ca
Flat	1.2		1.4	2.0
Round	C < 32 (Subcritical)	0.7	0.8	1.2
	32 \leq C \leq 64 (Transitional)	$3.76/(C^{0.485})$	$3.37/(C^{0.415})$	$38.4/(C^{1.0})$
	C > 64 (Supercritical)	0.5	0.6	0.6

Aspect Ratio is the overall length/width ratio in the plane normal to the wind direction.
 (Aspect ratio is independent of the spacing between support points of a linear appurtenance, and the section length considered to have uniform wind load).

Note: Linear interpolation may be used for aspect ratios other than those shown.

Ice Thickness = 0.99 in

<u>Appurtenances</u>	<u>Height</u>	<u>Width</u>	<u>Depth</u>	<u>Flat Area</u>	<u>Aspect Ratio</u>	<u>Ca</u>	<u>Force (lbs)</u>	<u>Force (lbs) (w/Ice)</u>
GQ2410-06670 Antenna	23.3	23.3	6.0	3.77	1.00	1.20	17	11
GQ2410-06670 Antenna (Side)	23.3	6.0	23.3	0.97	3.88	1.26	5	4
8" Light Pole	8.6	12.0	-	0.72	0.72	1.20	3	

Wind Analysis → Equipment Enclosure

Reference Codes:

- National Electric Safety Code 2017 (NESC 2017)
- Minimum Design Loads for Buildings and Other Structures (ASCE 7-10)

Structure Classification	II	(ASCE 7-10 Table 1.5-1)
Basic Wind Speed, V	39.53 mph	(ASCE 7-10 Table 1.5-1)
Importance Factor, I	1	(ASCE 7-10 Table 1.5-2)
Exposure Category	C	(ASCE 7-10 Section 26.7)
Height Above Ground Level, z	4 ft	(Top of Enclosure)
Exposure Coefficient, K_z	0.85	(ASCE 7-10 Table 29-3.1)
Wind Directionality Coef., K_d	0.90	(ASCE 7-10 Table 26.6-1)
Topographic Factor, K_{zt}	1.00	(ASCE 7-10 Section 26.8.2)
Velocity Pressure, q_z	$= 0.00256 K_z K_{zt} K_d V^2$ $= 3.06 \text{ psf}$	(ASCE 7-10 Equation 29.3-1)
Gust Factor, G	1.00	(ASCE 7-10 Section 26.9)
Enclosure Shape:	Square	
Net Force Coefficient, C_f	1.90	(ASCE 7-10 Figure 29.5-1)
Area Wind Force, F	$= q_z G C_f$ $= 5.81 \text{ psf}$	(ASCE 7-10 Equation 29.5-2)

Date: 12/14/2020
Project Name: CRAN_RCTB_MANC_003
Designed By: RL **Checked By:** MSC



ICE WEIGHT CALCULATIONS

Thickness of ice: 0.99 in.
Density of ice: 56 pcf

GQ2410-06670 Antenna

Weight of ice based on total radial SF area:
Height (in): 23.3
Width (in): 23.3
Depth (in): 6.0
Total weight of ice on object: 59 lbs
Weight of object: 26.0 lbs
Combined weight of ice and object: 85 lbs

8" Light Pole

Per foot weight of ice:
diameter (in): 8.63
Per foot weight of ice on object: 12 plf

Pole Cab Enclosure

Weight of ice based on total radial SF area:
Height (in): 12
Width (in): 12
Per foot weight of ice on object: 22 plf

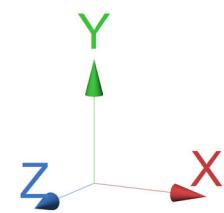
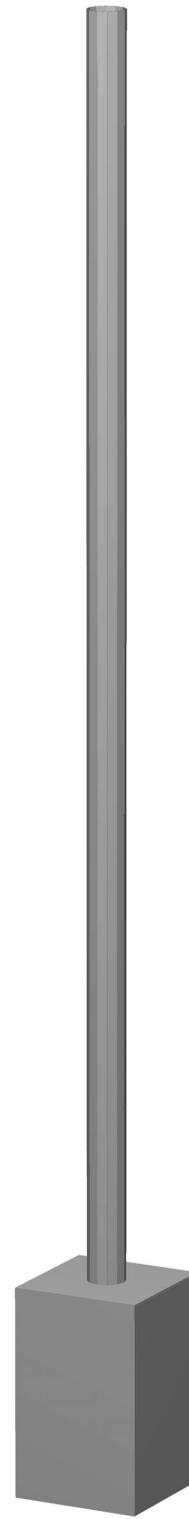


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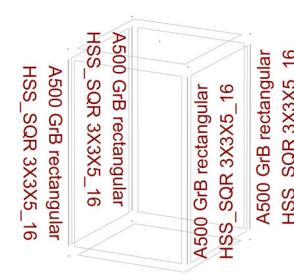


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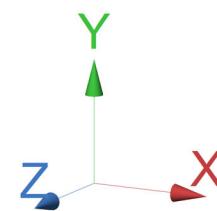
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A53 GrB
PIPE 8x0.322



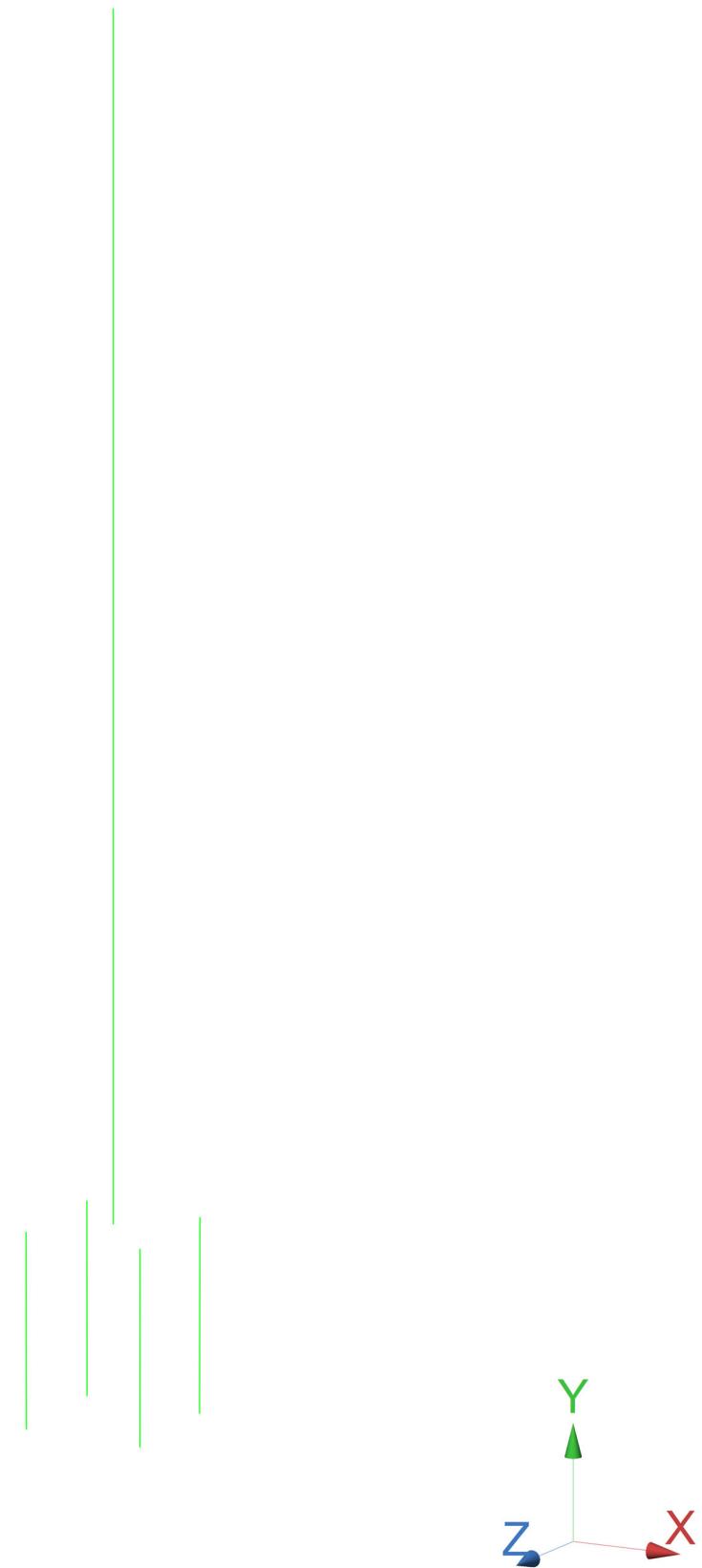


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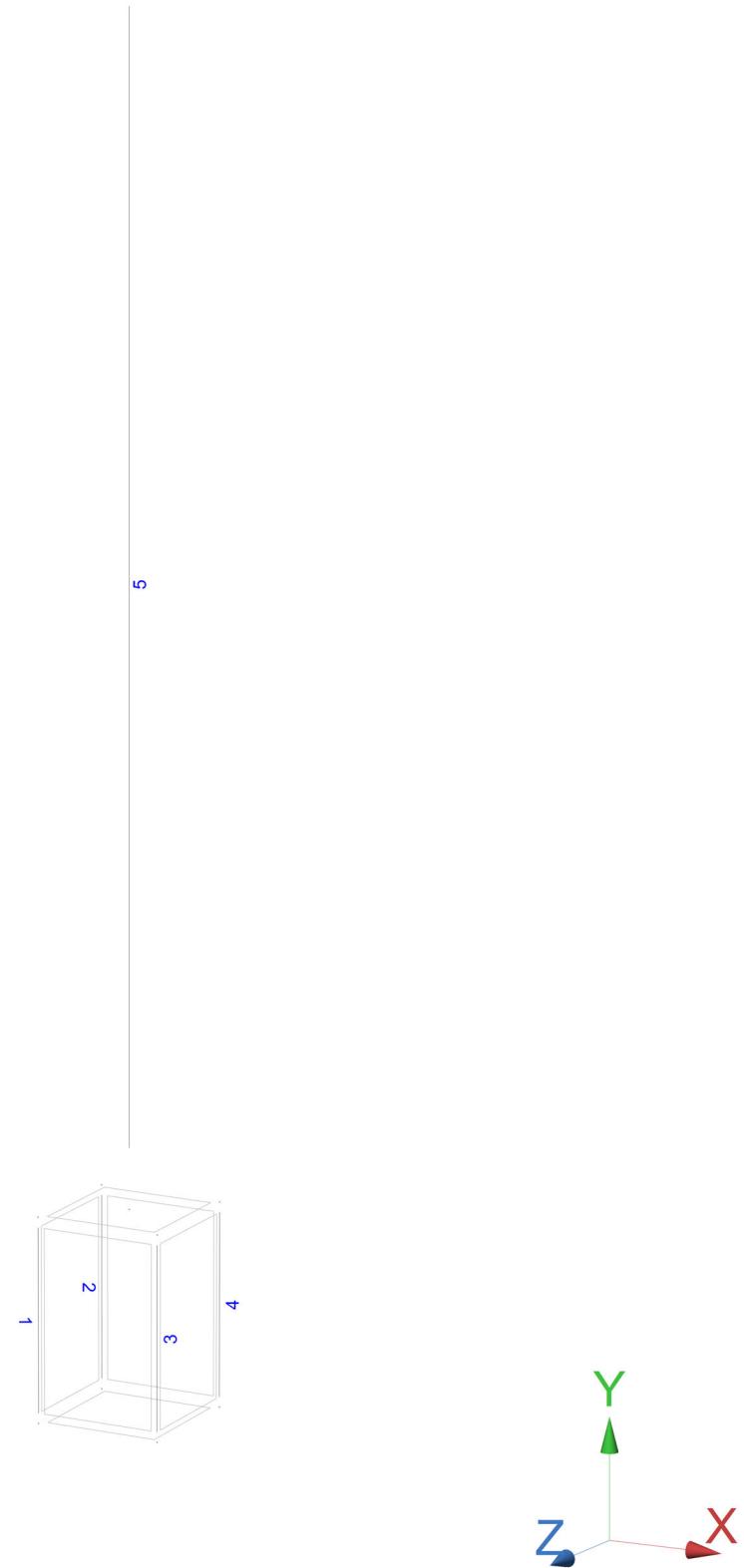


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Load data

GLOSSARY

Comb : Indicates if load condition is a load combination

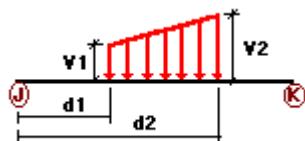
Load Conditions

Condition	Description	Comb.	Category
DL	Dead Load	No	DL
WL1	Wind Load (Side 1)	No	WIND
WL2	Wind Load (Side 2)	No	WIND
WL3	Wind Load (Side 3)	No	WIND
WL4	Wind Load (Side 4)	No	WIND
DI	Ice Load	No	LL

Load on nodes

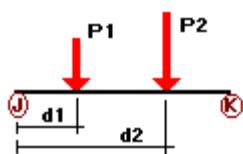
Condition	Node	FX [Kip]	FY [Kip]	FZ [Kip]	MX [Kip*ft]	MY [Kip*ft]	MZ [Kip*ft]
WL1	11	0.00	0.00	0.00	-0.024	0.00	0.00
WL2	11	0.00	0.00	0.00	0.00	0.00	0.006
WL3	11	0.00	0.00	0.00	0.024	0.00	0.00
WL4	11	0.00	0.00	0.00	0.00	0.00	-0.006

Distributed force on members



Condition	Member	Dir1	Val1 [Kip/ft]	Val2 [Kip/ft]	Dist1 [ft]	%	Dist2 [ft]	%
WL1	5	z	-0.003	-0.003	0.00	No	100.00	Yes
WL2	5	x	-0.003	-0.003	0.00	No	100.00	Yes
WL3	5	z	0.003	0.003	0.00	No	100.00	Yes
WL4	5	x	0.003	0.003	0.00	No	100.00	Yes
DI	5	y	-0.012	-0.012	0.00	No	100.00	Yes

Concentrated forces on members



Condition	Member	Dir1	Value1 [Kip]	Dist1 [ft]	%
DL	5	y	-0.026	0.00	No
WL1	5	z	-0.017	0.00	No
WL2	5	x	-0.005	0.00	No
WL3	5	z	0.017	0.00	No
WL4	5	x	0.005	0.00	No
DI	5	y	-0.059	0.00	No

Load on shells

Condition	Shell	Pressure [Kip/ft ²]	Temp. [F]
WL1	3	-0.006	0.00
WL2	4	-0.006	0.00
WL3	5	-0.006	0.00
WL4	6	-0.006	0.00
DI	2	-0.022	0.00

Self weight multipliers for load conditions

Condition	Description	Self weight multiplier			
		Comb.	MultX	MultY	MultZ
DL	Dead Load	No	0.00	-1.00	0.00
WL1	Wind Load (Side 1)	No	0.00	0.00	0.00
WL2	Wind Load (Side 2)	No	0.00	0.00	0.00
WL3	Wind Load (Side 3)	No	0.00	0.00	0.00
WL4	Wind Load (Side 4)	No	0.00	0.00	0.00
DI	Ice Load	No	0.00	0.00	0.00

Earthquake (Dynamic analysis only)

Condition	a/g	Ang. [Deg]	Damp. [%]
DL	0.00	0.00	0.00
WL1	0.00	0.00	0.00
WL2	0.00	0.00	0.00
WL3	0.00	0.00	0.00
WL4	0.00	0.00	0.00
DI	0.00	0.00	0.00

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Steel Code Check

Report: Summary - Group by member

Load conditions to be included in design :

LC1=1.4DL
LC2=1.2DL+1.6DI
LC3=1.2DL+0.5WL1
LC4=1.2DL+0.5WL2
LC5=1.2DL+0.5WL3
LC6=1.2DL+0.5WL4
LC7=1.2DL+WL1
LC8=1.2DL+WL2
LC9=1.2DL+WL3
LC10=1.2DL+WL4
LC11=1.2DL+WL1+DI
LC12=1.2DL+WL2+DI
LC13=1.2DL+WL3+DI
LC14=1.2DL+WL4+DI
LC15=0.9DL+WL1
LC16=0.9DL+WL2
LC17=0.9DL+WL3
LC18=0.9DL+WL4

Description	Section	Member	Ctrl Eq.	Ratio	Status	Reference
	HSS_SQR 3X3X5_16	1	LC11 at 100.00%	0.01	OK	
		2	LC13 at 100.00%	0.01	OK	
		3	LC11 at 100.00%	0.01	OK	
		4	LC13 at 100.00%	0.01	OK	
	PIPE 8x0.322	5	LC11 at 100.00%	0.03	OK	

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Geometry data

GLOSSARY

Cb22, Cb33	: Moment gradient coefficients
Cm22, Cm33	: Coefficients applied to bending term in interaction formula
d0	: Tapered member section depth at J end of member
DJX	: Rigid end offset distance measured from J node in axis X
DJY	: Rigid end offset distance measured from J node in axis Y
DJZ	: Rigid end offset distance measured from J node in axis Z
DKX	: Rigid end offset distance measured from K node in axis X
DKY	: Rigid end offset distance measured from K node in axis Y
DKZ	: Rigid end offset distance measured from K node in axis Z
dL	: Tapered member section depth at K end of member
Ig factor	: Inertia reduction factor (Effective Inertia/Gross Inertia) for reinforced concrete members
K22	: Effective length factor about axis 2
K33	: Effective length factor about axis 3
L22	: Member length for calculation of axial capacity
L33	: Member length for calculation of axial capacity
LB pos	: Lateral unbraced length of the compression flange in the positive side of local axis 2
LB neg	: Lateral unbraced length of the compression flange in the negative side of local axis 2
RX	: Rotation about X
RY	: Rotation about Y
RZ	: Rotation about Z
TO	: 1 = Tension only member 0 = Normal member
TX	: Translation in X
TY	: Translation in Y
TZ	: Translation in Z

Nodes

Node	X [ft]	Y [ft]	Z [ft]	Rigid Floor
2	-1.25	0.00	1.25	0
3	1.25	0.00	1.25	0
4	-1.25	0.00	-1.25	0
5	1.25	0.00	-1.25	0
6	-1.25	4.00	1.25	0
7	1.25	4.00	1.25	0
8	-1.25	4.00	-1.25	0
9	1.25	4.00	-1.25	0
10	0.00	4.00	0.00	0
11	0.00	27.8333	0.00	0

Restraints

Node	TX	TY	TZ	RX	RY	RZ
2	1	1	1	0	0	0
3	1	1	1	0	0	0
4	1	1	1	0	0	0
5	1	1	1	0	0	0

Members

Member	NJ	NK	Description	Section	Material	d0 [in]	dL [in]	Ig factor
1	2	6		HSS_SQR 3X3X5_16	A500 GrB rectangular	0.00	0.00	0.00
2	4	8		HSS_SQR 3X3X5_16	A500 GrB rectangular	0.00	0.00	0.00
3	3	7		HSS_SQR 3X3X5_16	A500 GrB rectangular	0.00	0.00	0.00
4	5	9		HSS_SQR 3X3X5_16	A500 GrB rectangular	0.00	0.00	0.00
5	11	10		PIPE 8x0.322	A53 GrB	0.00	0.00	0.00

Rigid end offsets

Member	DJX [in]	DJY [in]	DJZ [in]	DKX [in]	DKY [in]	DKZ [in]
1	1.50	0.00	-1.50	1.50	0.00	-1.50
2	1.50	0.00	1.50	1.50	0.00	1.50
3	-1.50	0.00	-1.50	-1.50	0.00	-1.50
4	-1.50	0.00	1.50	-1.50	0.00	1.50

Shells

Shell	Description	Material	Thickness [in]	Center of gravity [ft]	Area [ft ²]	N1, N2, ..., Nn
1		A36 (weightless)	0.75	(0.00, 0.00, 0.00)	6.25	2, 3, 5, 4
2		A36 (weightless)	0.75	(0.00, 4.00, 0.00)	6.25	6, 7, 9, 8
3		A36 (weightless)	0.13	(0.00, 2.00, 1.25)	10.00	3, 7, 6, 2
4		A36 (weightless)	0.13	(1.25, 2.00, 0.00)	10.00	5, 9, 7, 3
5		A36 (weightless)	0.13	(0.00, 2.00, -1.25)	10.00	4, 8, 9, 5
6		A36 (weightless)	0.13	(-1.25, 2.00, 0.00)	10.00	2, 6, 8, 4