

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
A PETITION OF CELLCO PARTNERSHIP	:	SUB-PETITION NO. 1133
D/B/A VERIZON WIRELESS FOR	:	2132 MIDDLEBURY ROAD
MODIFICATIONS TO AN EXISTING	:	MIDDLEBURY, CT
WIRELESS TELECOMMUNICATIONS	:	
FACILITY AT 2132 MIDDLEBURY ROAD,	:	
MIDDLEBURY, CONNECTICUT	:	APRIL 24, 2024

SUB-PETITION FOR DECLARATORY RULING:
ELIGIBLE FACILITIES REQUEST FOR MODIFICATIONS
THAT WILL NOT SUBSTANTIALLY CHANGE THE
PHYSICAL DIMENSIONS OF AN EXISTING BASE STATION

I. Introduction

Pursuant to Section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012, codified at 47 U.S.C. § 1455(a) (“Section 6409(a)”) and the October 21, 2014 Report and Order (FCC-14-153) issued by the Federal Communications Commission (“FCC”) (the “FCC Order”), Cellco Partnership d/b/a Verizon Wireless (“Cellco”) hereby petitions the Connecticut Siting Council (the “Council”) for a declaratory ruling (“Sub-Petition”) that the installation of a new (replacement) antenna and a new remote radio head (“RRH”) at the existing wireless telecommunications base station at Quassy Amusement Park, 2132 Middlebury Road, in Middlebury, Connecticut (the “Property”) constitutes an Eligible Facilities Request (“EFR”) under the FCC Order. Cellco identifies this site as its Middlebury Quassy S SC CT Facility (the “Facility”). The Property is a 19.53-acre parcel owned by the Lake Quassapaug Amusement Park, Inc. (the “Property Owner”).

II. Factual Background

Cellco maintains an existing small cell wireless facility at the Property. The Facility,

approved by the Council in February 2016, (Petition No. 1213), consists of a single canister antenna at the top of a pipe mast, attached to an existing maintenance building in the northeasterly portion of the Property. A RRH is attached to an equipment rack on the ground, within the fenced enclosure adjacent to the maintenance building. Included in Attachment 1 is a copy of the Council's Petition No. 1213 decision letter and staff report.

III. Cellco's Proposed Facility Modifications

Cellco is licensed to provide wireless telecommunications services in Middlebury and throughout the State of Connecticut. The Facility will operate in Cellco's 700, 850, 1900 and 2100 frequency ranges. Cellco intends to replace the existing canister antenna and RRH with a new canister antenna (Model GQ2414-B6790) and two new RRHs (Model RF4439d-25A). The height of the top of the new canister antenna will be slightly lower than the existing antenna, reducing the height from approximately 31.7' above ground level (AGL), as approved in Petition No. 1213, to 31.2' AGL. The RRHs will be installed on Cellco's existing equipment rack on the ground, within the fenced enclosure. Project Plans and Specifications for Cellco's new canister antenna and RRHs at the Facility are included in Attachment 2. According to the February 7, 2024 report from Dewberry Engineers Inc. (the "Dewberry Report"), the existing building, antenna mast and antenna mounts can support Cellco's proposed modifications. A copy of the Dewberry Report is included in Attachment 3.

IV. Discussion

A. The Proposed Modification Will Not Cause a Substantial Change to the Physical Dimensions of the Existing Base Station

Section 6409(a) provides, in relevant part, that "a State or local government may not deny, and shall approve, any eligible facilities request for a modification of an existing wireless tower or base station that does not substantially change the physical dimensions of such tower or

base station.” Pursuant to the FCC Order, the proposed modifications do not substantially change the physical dimensions of the base station if the following criteria are satisfied.

1. *The proposed modified facility will not increase the height of the tower by more than ten (10) percent (%) of the height.* Cellco’s proposed antenna will be installed approximately 0.5 feet lower than the existing antenna.

2. *The proposed facility modification will not protrude from the edge of the structure more than six (6) feet.* Cellco’s new canister antenna will be attached to the existing pipe mast and extend above the top of the existing pipe mast. The new antenna will not protrude more than six (6) feet from the face of the mast.

3. *The proposed facility does not involve installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets.* All equipment associated with this facility will be attached to the pipe mast or the existing equipment rack on the ground adjacent to the maintenance building. No equipment cabinets are proposed to be added or removed as a part of these modifications.

4. *The proposed facility does not entail any excavation or deployment outside the current site of the base station.* Cellco’s proposed modifications will remain within the limits of the Property and the existing fenced compound.

5. *The proposed facility does not defeat the existing concealment elements of the base station.* The existing facility does not have any existing concealment elements.

6. *The proposed facility complies with conditions associated with the prior approval of construction or modification of the base station.* Cellco’s proposed modifications are consistent with the Siting Council’s approval in Petition No. 1213.

B. FCC Compliance

Included in Attachment 4 are far field tables for its proposed modified facility confirming that the Facility will operate well within the FCC safety standards for radio frequency emissions (13.8%).

C. Notice to the Town, Property Owner and Abutting Landowners

On April 24, 2024, notice of this filing was sent to Middlebury's First Selectman, Edward B. St. John, Curtis Bosco, Middlebury's Zoning Enforcement Officer, and Lake Quassapaug Amusement Park, Inc., the Property Owner. Copies of the letters sent to Mr. St. John, Mr. Bosco, and the Property Owner are included in Attachment 5. Notice of this filing was also sent to the owners of land that abuts the Property. A sample abutter's letter and the list of those abutting landowners who were sent notice and a copy of the plans is included in Attachment 6.

V. Conclusion

Based on the information provided above, Cellco respectfully submits that the proposed modification of the existing base station at the Property constitutes an "eligible facilities request" under Section 6409(a) and the FCC Order.

Respectfully submitted,

CELLCO PARTNERSHIP d/b/a VERIZON
WIRELESS

By 

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597
(860) 275-8200
Its Attorneys

ATTACHMENT 1



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

CERTIFIED MAIL RETURN RECEIPT REQUESTED

February 19, 2016

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597

RE: **PETITION NO. 1213** - Cellco Partnership d/b/a Verizon Wireless petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a small cell telecommunications facility on the side of the existing Quassy Amusement Park maintenance building located at 2132 Middlebury Road, Middlebury, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on February 18, 2016, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with the following conditions:

1. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;
2. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of Middlebury;
3. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
4. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by the Petitioner shall be removed within 60 days of the date the antenna ceased to function;
5. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;

6. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, limitations and conditions contained in the Declaratory Ruling, including timely payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v; and
7. If the facility owner/operator is a wholly owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated January 8, 2016.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

A handwritten signature in blue ink that reads "Robert Stein" with the initials "RAB" written to the right of the name.

Robert Stein
Chairman

RS/CH/lm

Enclosure: Staff Report dated February 18, 2016

c: The Honorable Edward B. St. John, First Selectman, Town of Middlebury
Curtis S. Bosco, Planning and Zoning Chairman, Town of Middlebury
Quassy Amusement Park Inc.



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

www.ct.gov/csc

Petition No. 1213

Cellco

2132 Middlebury Road, Middlebury

Small Cell Facility

Staff Report

February 18, 2016

On January 11, 2016, the Connecticut Siting Council (Council) received a petition from Cellco Partnership d/b/a Verizon Wireless (Cellco) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a small cell telecommunications facility at Quassy Amusement Park, 2132 Middlebury Road, Middlebury, Connecticut. This small cell facility would provide wireless service in Cellco's 700 MHz and 2100 MHz frequency ranges.

Specifically, Cellco would install a small tower attached to an existing maintenance building in the northeasterly portion of the property. The tower would support a single canister antenna and two remote radio heads. The tower and antenna would extend to a height of approximately 13.3 feet above the peak of the roof of the maintenance building; approximately 31.2 feet above ground level. Equipment associated with the proposed facility would be located on an approximately 7.75-foot by 7.75-foot concrete pad along the west side of the maintenance building, surrounded by a 7-foot tall stockade fence. Power and telephone service to the proposed facility would extend from existing service inside the building.

The property is a 19.53-acre parcel used for commercial/amusement park purposes. The property is surrounded by recreational and residential uses along Middlebury Road. Visual impact is not expected to be significant due to visibility being limited to immediate areas surrounding the maintenance building and northeast portions of the existing parking lot. An existing Wi-Fi antenna is mounted to a pipe mast to a height of 21.8 feet above ground level on the southwest corner of the building.

The site would have a cumulative worst-case power density of 2.63 percent of the applicable limit using a -10 dB off-beam adjustment.

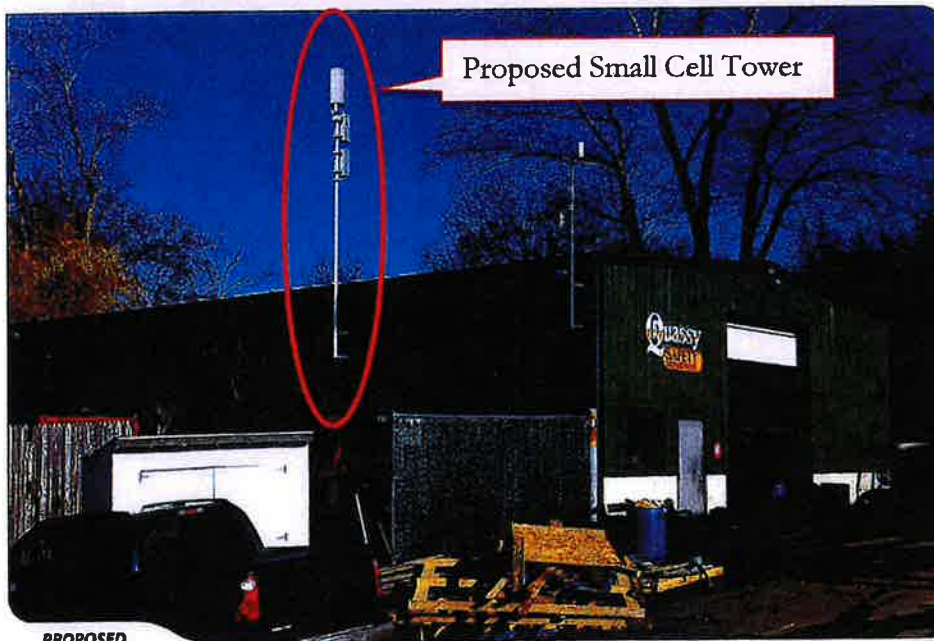
Notice was provided to the Town of Middlebury, the property owner, and abutting property owners on or about January 8, 2016. No comments have been received to date.

Cellco contends that this proposed project would not have a substantial adverse environmental impact.

Site Location



Photo-simulation as viewed from the host property



PROPOSED	LOCATION	ORIENTATION	DISTANCE TO SITE
PHOTO 2	HOST PROPERTY	NORTH	+/- 90 FEET

ATTACHMENT 2



MIDDLEBURY QUASSY S - NENG_SC_ESNAP

2132 MIDDLEBURY RD.
MIDDLEBURY, CT 06762

PROJECT ID: 16774051
PSLC: 467716

ENGINEERS
DAWBERRY ENGINEERS, INC.
59 SUMNER STREET
BOSTON, MA 02110
PHONE # (617) 531-0600
CONTACT: BENJAMIN BEVETTE, PE

CONSTRUCTION
VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

COORDINATES:
LATITUDE: N 41.5276669°
LONGITUDE: W 73.1493105°
*PER REFS

GROUND ELEVATIONS:
725±
*PER GOOGLE EARTH

PROJECT INFORMATION



VICINITY MAP

N.T.S.

BLANK PER REPORT
PROJECT NUMBER: N/A
VIEW LOCATION CODE (PSLC): 467716
PROJECT ID: 16774051

CONTRACTOR PMI REQUIREMENTS

THIS DOCUMENT WAS DEVELOPED TO PROVIDE A SPECIFIC SITE
DESCRIPTION AND CONSTRUCTION INFORMATION FOR
ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE
OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

L.O.A. COMPLIANCE:
FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

- EQUIPMENT TO BE REMOVED
- EXISTING (1) ANTENNA AND (1) RRH TO BE REMOVED FROM THE EXISTING SITE.
- EQUIPMENT TO BE INSTALLED
- INSTALL (1) NEW CONTENNA AND (1) RRH ON THE EXISTING TOWER AND (2) PLUS INSIDE THE EXISTING TENNIS AREA.
 - INSTALL RUMBERS AS REQUIRED BETWEEN SECTOR DIPS, RRH'S & ANTENNAS.
 - CAP AND WEATHERPROOF UNUSED ANTENNA PORTS.
 - SECURE EXISTING PPE MOUNTS PER VERIZON WIRELESS SPECIFICATIONS.
 - ADD (2) 20A/2P BREAKERS TO EXISTING POWER PANEL.

REUSE NOTE

WORK BASED ON ANTENNA REE FOR
SCENARIOS WITH WORKSHEET DATED
01/11/24. VERIFY SCOPE OF WORK WITH FINAL REFS
PRIOR TO CONSTRUCTION.

SCOPE OF WORK

SIT. NO.	DESCRIPTION
T-1	TITLE SHEET
0A-1	GENERAL NOTES
C-1	AERIAL MAP & KEY PLAN
C-2	EXISTING & PROPOSED EQUIPMENT PLANS
C-3	ELEVATION
C-4	CONSTRUCTION DETAILS

SHEET INDEX



MIDDLEBURY QUASSY
S - NENG SC_ESNAP
PROJECT ID:
16774051
LOCATION CODE:
467716

CONSTRUCTION DRAWINGS	DATE	FOR SUBMITTAL
5	03/19/24	FOR SUBMITTAL
4	02/27/24	FOR SUBMITTAL
3	02/13/24	FOR SUBMITTAL
2	07/31/23	FOR SUBMITTAL
1	09/19/22	FOR SUBMITTAL
0	09/12/22	FOR SUBMITTAL

Dewberry
Dawberry Engineers Inc.
96 SUMNER STREET
BOSTON, MA 02110
PHONE: (617) 531-0600
WWW.DEWBERRY.COM



DOWN BY: 03/19/2024 LT
REVIEWED BY: OAG
CHECKED BY: BRH
PROJECT NUMBER: 30121467
JOB NUMBER: 50170383
COORDINATES:
N 41.5276669°
W 73.1493105°
ADDRESS:
2132 MIDDLEBURY RD,
MIDDLEBURY, CT 06762
SHEET TITLE
TITLE SHEET
SHEET NUMBER
T-1



MIDDLEBURY QUASSY
S - NENG SC ESNAIP
PROJECT ID:
16774051
LOCATION CODE:
467716

CONSTRUCTION DRAWINGS	
5	03/19/24 FOR SUBMITTAL
4	02/07/24 FOR SUBMITTAL
3	02/12/24 FOR SUBMITTAL
2	07/21/23 FOR SUBMITTAL
1	09/19/22 FOR SUBMITTAL
0	09/12/22 FOR SUBMITTAL

Dewberry
Dewberry Engineers Inc.
100 SUDBURY STREET
SUITE 700, MA 02110
PHONE: 617.625.3300
FAX: 617.666.5316

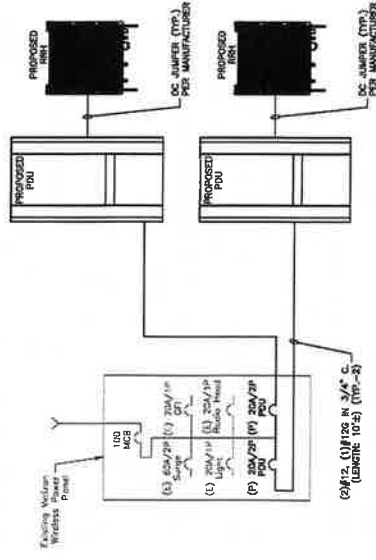


DATE: 03/19/2024 MR
REVIEWED BY: OAS
CHECKED BY: BEN
PROJECT NUMBER: 50121407
JOB NUMBER: 50170303
COORDINATES:
N 41.5276669°
W 73.1493105°
ADDRESS:
2132 MIDDLEBURY RD.
MIDDLEBURY, CT 06762
SHEET TITLE: AERIAL MAP & KEY PLAN
SHEET NUMBER: C-1



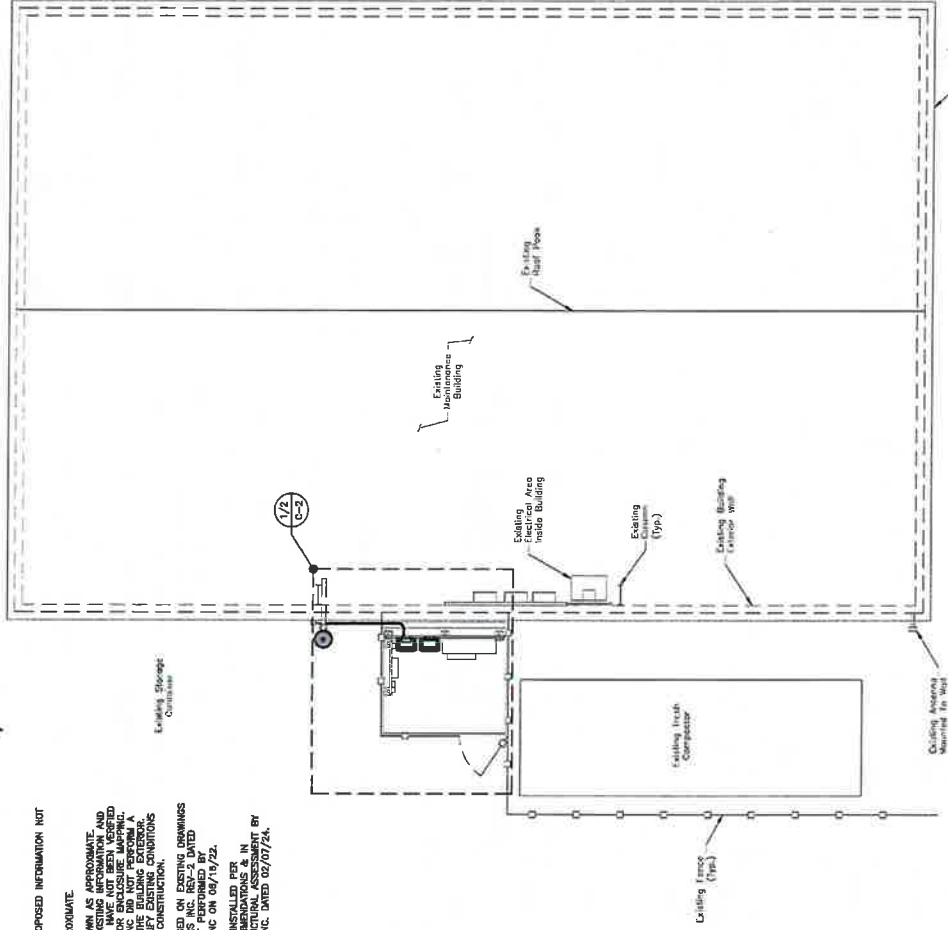
- NOTES:**
1. THIS DRAWING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
 2. NORTH SHOWN AS APPROXIMATE.
 3. EXISTING ANTENNAS SHOWN AS APPROXIMATE. VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED THROUGH AN ANTENNA OR GROUND SURVEY. FIELD VERIFICATION OF THE BUILDING EXTERIOR. OF BUILDING PRIOR TO CONSTRUCTION.
 4. DRAWING PREPARED BASED ON EXISTING DRAWINGS BY DEWBERRY ENGINEERS INC. REV-2 DATED 02/19/17, & SITE VISIT PERFORMED BY DEWBERRY ENGINEERS INC ON 06/19/24.
 5. ALL EQUIPMENT TO BE INSTALLED PER ACCORDANCE WITH STRUCTURAL ASSESSMENT BY DEWBERRY ENGINEERS INC. DATED 02/07/24.

AERIAL MAP
SCALE: N.T.S.



- NOTES:**
1. COORDINATE ROUTING OF CONDUITS WITH BUILDING OWNER REPRESENTATIVES.
 2. COORDINATE POWER SHUT-DOWN WITH UTILITY COMPANY, BUILDING OWNER, & MANAGER.
 3. VERIFY PANEL, WIRE, & DISTRIBUTION JOINTS AS REQUIRED BY CODE AND JOB SITE CONDITIONS. ADDITIONALLY, PROVIDE EXPANSION FITTINGS FOR APPLICATIONS FOR THERMAL EXPANSION.
 4. INSTALL ALL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.
 5. ALL GROUNDING SHALL COMPLY WITH NEC ARTICLE 250.
 6. SEE SHEET C-2 FOR EQUIPMENT LAYOUT.
 7. VERIFY BEARING SIZE WITH THE OWNER MANUFACTURER AND VERIZON WIRELESS TEAM PRIOR TO CONSTRUCTION. PROVIDE CIRCUIT BREAKER TO MATCH EXISTING IN TYPE AND AC RATING.
 8. PROVIDE VERIZON WIRELESS PERMANENT LABELS ON PANEL.
 9. (P) = PROPOSED
(E) = EXISTING

PARTIAL ONE LINE DIAGRAM
SCALE: N.T.S.



KEY PLAN
SCALE: 1/8"=1' FOR 11'x14"
1/4"=1' FOR 25'x34"
0' 2' 4' 6'
2



VERIZON WIRELESS
 500 WEST STREET
 BEDFORD, MA 02825

MIDDLEBURY QUASSY
 S - NENG SC ESNAIP
 PROJECT ID:
 16774051
 LOCATION CODE:
 467716

CONSTRUCTION DRAWINGS	
5	03/19/24 FOR SUBMITTAL
4	02/27/24 FOR SUBMITTAL
3	02/12/24 FOR SUBMITTAL
2	07/21/23 FOR SUBMITTAL
1	06/16/22 FOR SUBMITTAL
0	06/12/22 FOR SUBMITTAL



Dewberry Engineers Inc.
 4500190
 STATE ST
 FREDERICK, MA 02150
 TEL: 978.653.3300
 FAX: 978.653.3300

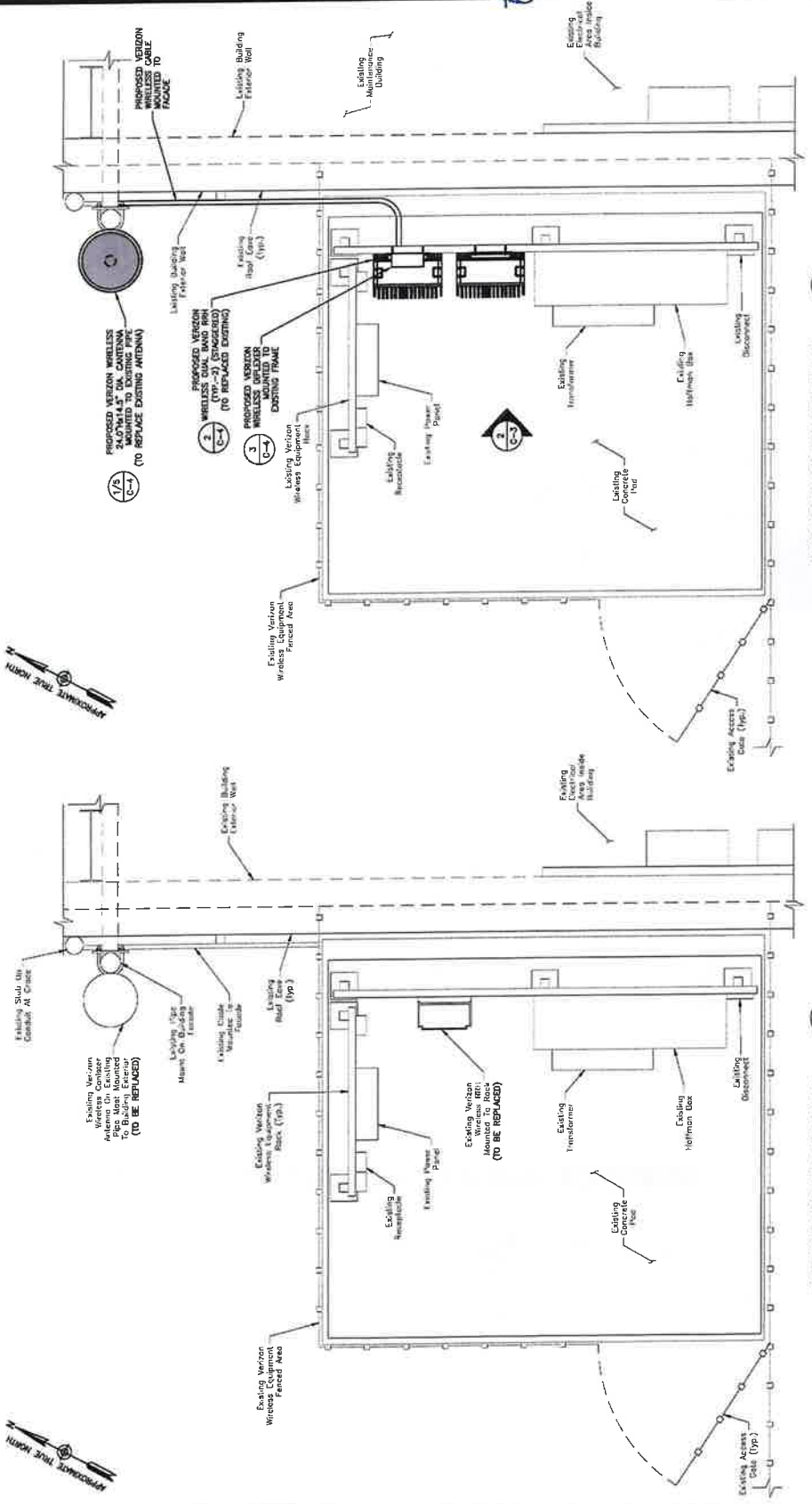


DRAWN BY: 03/19/2024 MR
 REVISION BY: GMS
 CHECKED BY: BRR
 PROJECT NUMBER: 50121467
 JOB NUMBER: 50170383

COORDINATES:
 N 41.5276669°
 W 73.1493105°
 ADDRESS:
 2132 MIDDLEBURY RD.
 MIDDLEBURY, CT 06762

SHEET TITLE
 EXISTING & PROPOSED
 EQUIPMENT PLANS
 SHEET NUMBER

C-2



PROPOSED EQUIPMENT PLAN
 SCALE: 1/8"=1' FOR 11'x17'
 1/8"=1' FOR 22'x34'

- NOTES:
- SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
 - NORTH SHOWN AS APPROXIMATE.
 - EXISTING ANTENNAS SHOWN AS APPROXIMATE ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE NOT BEEN VERIFIED. THE CONTRACTOR SHALL VERIFY THE LOCATION AND VERIFICATION OF THE BUILDING EXTERIOR CONTRACTOR SHALL VERIFY THE CONDITIONS OF BUILDING PRIOR TO CONSTRUCTION.
 - DRAWING PREPARED BASED ON EXISTING DRAWINGS BY DEWBERRY ENGINEERS INC. REV-2 DATED 02/10/17, & SITE VISIT PERFORMED BY DEWBERRY ENGINEERS INC ON 06/16/22.
 - ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION AND ASSESSMENT. THE CONTRACTOR SHALL OBTAIN AN ASSESSMENT BY DEWBERRY ENGINEERS INC. DATED 02/07/24.

EXISTING EQUIPMENT PLAN
 SCALE: 1/8"=1' FOR 11'x17'
 1/8"=1' FOR 22'x34'

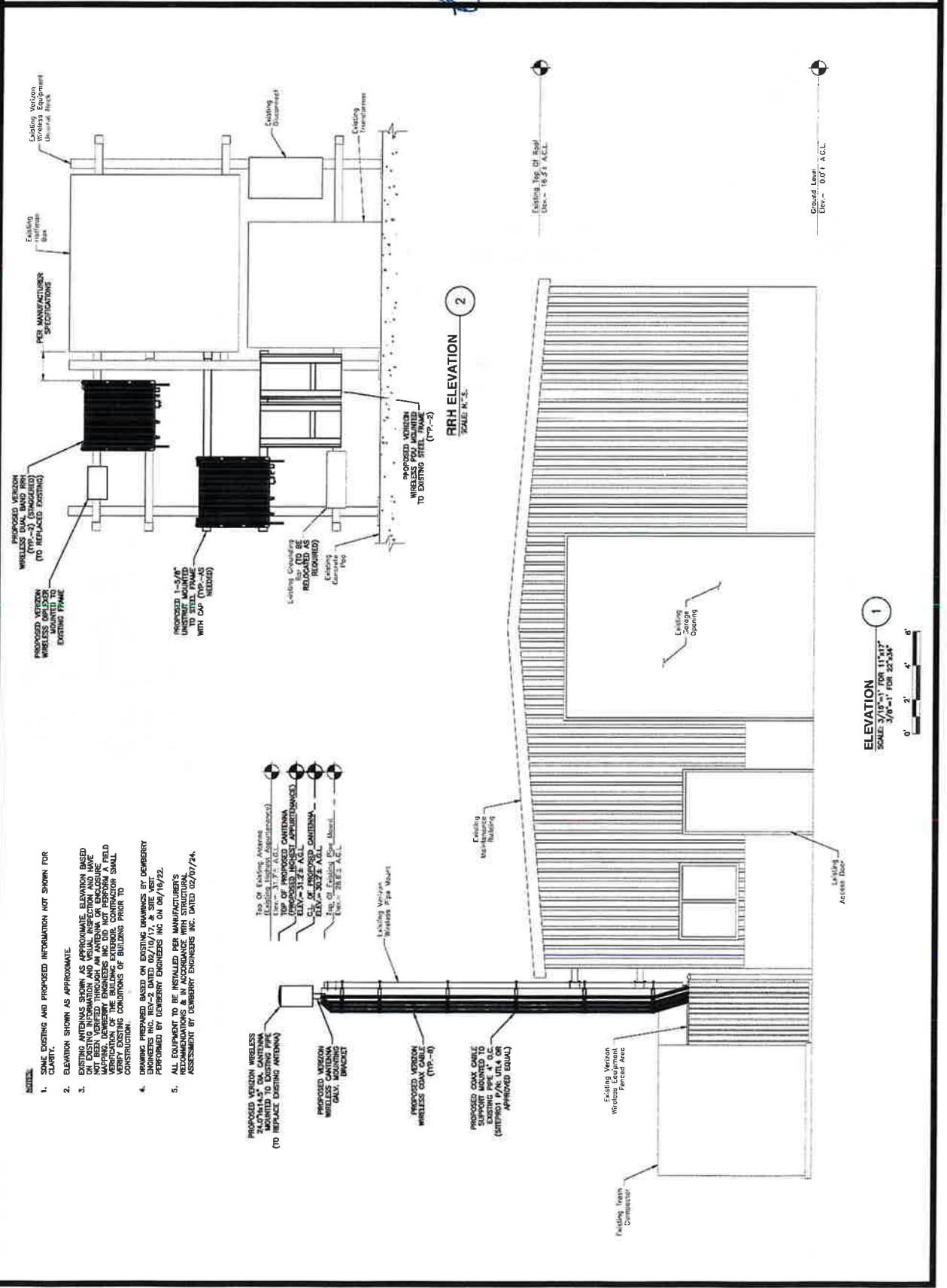
MIDDLEBURY QUASSY
S - NENG SC ESNAF
PROJECT ID:
16774051
LOCATION CODE:
467716

CONSTRUCTION DRAWINGS	
5	03/19/24 FOR SUBMITTAL
4	02/02/24 FOR SUBMITTAL
3	02/12/24 FOR SUBMITTAL
2	07/21/23 FOR SUBMITTAL
1	09/16/22 FOR SUBMITTAL
0	08/12/22 FOR SUBMITTAL

Dewberry
Dewberry Engineers Inc.
250 STATE ST
MIDDLEBURY, MA 02051
PHONE: 802.600.3400
FAX: 802.600.5010



ISSUED BY:	OAS
CHECKED BY:	BBR
PROJECT NUMBER:	50121487
JOB NUMBER:	50170383
COORDINATES:	N 41.5276669° W 73.1493105°
ADDRESS:	2132 MIDDLEBURY RD, MIDDLEBURY, CT 06762
SHEET TITLE:	ELEVATION
SHEET NUMBER:	C-3



- NOTES:**
1. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
 2. ELEVATION SHOWN AS APPROXIMATE.
 3. EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON FIELD SURVEY. ANTENNAS NOT BEEN VERIFIED THROUGH AN ANTENNA OR ENCLOSURE MAPPING. DEWBERRY ENGINEERS INC DID NOT PERFORM A FIELD SURVEY FOR THIS PROJECT. VERIFY EXISTING CONDITIONS OF BUILDING PRIOR TO CONSTRUCTION.
 4. DRAWING PREPARED BASED ON EXISTING DRAWINGS BY DEWBERRY ENGINEERS INC. ON 02/07/24. SEE VISIT REPORT FOR VERIFICATION OF ANTENNA POSITIONS AND RECOMMENDATIONS & IN SITUATION FOR MANUFACTURER'S ASSESSMENT BY DEWBERRY ENGINEERS INC. DATED 02/07/24.
 5. ALL SURVEYS TO BE PERFORMED PER MANUFACTURER'S RECOMMENDATIONS & IN SITUATION FOR MANUFACTURER'S ASSESSMENT BY DEWBERRY ENGINEERS INC. DATED 02/07/24.

Top of Existing Structure Elev. = 317.7' A.G.L.

Top of Proposed Antenna (Elev. = 317.7' A.G.L.)

Top of Proposed Antenna (Elev. = 317.7' A.G.L.)

Top of Proposed Antenna (Elev. = 317.7' A.G.L.)

Top of Proposed Antenna (Elev. = 317.7' A.G.L.)

Top of Proposed Antenna (Elev. = 317.7' A.G.L.)

Top of Proposed Antenna (Elev. = 317.7' A.G.L.)

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

ELEVATION
SCALE: 3/16" = 1' FOR 11'x17'
3/8" = 1' FOR 22'x34'



MIDDLEBURY QUASSY
S - NENG SC ESNAF
 PROJECT ID: 16774051
 LOCATION CODE: 467716

CONSTRUCTION DRAWINGS	
5	03/19/24 FOR SUBMITTAL
4	02/27/24 FOR SUBMITTAL
3	02/12/24 FOR SUBMITTAL
2	07/21/23 FOR SUBMITTAL
1	09/19/22 FOR SUBMITTAL
0	09/12/22 FOR SUBMITTAL

Dewberry
 Dewberry Engineers Inc.
 301 STATE ST. SUITE 200
 NEWTON, MA 02459
 PHONE: 617.553.1900
 FAX: 617.553.3300



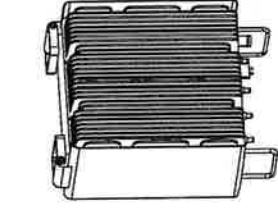
DRAWN BY: 03/19/2024 MR
 REVISIONS: 045
 CHECKED BY: BRK
 PROJECT NUMBER: 5012187
 JOB NUMBER: 50170333
 COORDINATES: N 41-52'76669"
 W 73.1493105"
 ADDRESS: 2132 MIDDLEBURY RD.
 MIDDLEBURY, CT 06762
 SHEET TITLE
 CONSTRUCTION DETAILS
 SHEET NUMBER
 C-4



NOTE:
 1. CONTRACTOR TO VERIFY WITH CONSTRUCTION WITH CONSTRUCTION MANUFACTURER'S SPECIFICATIONS PRIOR TO CONSTRUCTION.

ADDITIONAL INFO:
 DIMENSIONS: 4.2" x 6.0" x 3.0"
 WEIGHT: 6.1 LBS.
 QUANTITY: 1 TOTAL

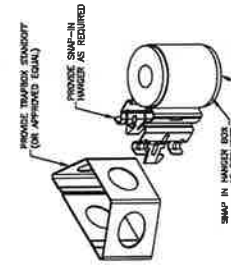
DIPLERX DETAIL 3
 SCALE: N.T.S.



ADDITIONAL INFO:
 DIMENSIONS: 14.0" x 14.0" x 8.1"
 WEIGHT: 79.2 LBS.
 QUANTITY: 1 TOTAL

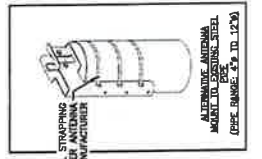
ADDITIONAL INFO:
 DIMENSIONS: 14.0" x 14.0" x 10.0"
 WEIGHT: 74.7 LBS.
 QUANTITY: 1 TOTAL

RRH DETAIL 2
 SCALE: N.T.S.



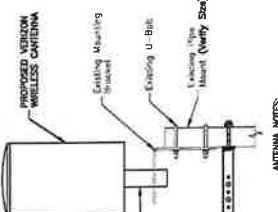
PROVIDE TOWER FLANGE, NUT, WASHER, SHIM-IN NUMBER AS REQUIRED
 SHIM IN NUMBER AS REQUIRED
 SINGLE BAND CUSHION AS REQUIRED

JUMPER MOUNT 6
 SCALE: N.T.S.



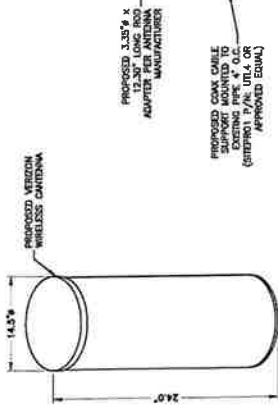
ADDITIONAL INFO:
 DIMENSIONS: 14.0" x 14.0" x 8.1"
 WEIGHT: 79.2 LBS.
 QUANTITY: 1 TOTAL

RRH DETAIL 2
 SCALE: N.T.S.



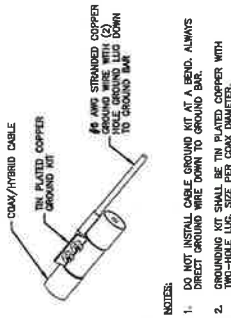
ADDITIONAL INFO:
 DIMENSIONS: 14.0" x 14.0" x 8.1"
 WEIGHT: 79.2 LBS.
 QUANTITY: 1 TOTAL

RRH DETAIL 2
 SCALE: N.T.S.



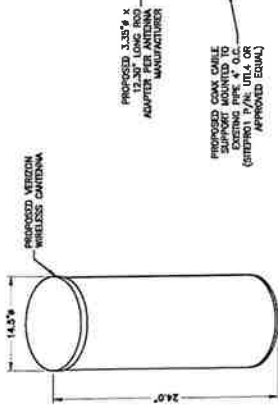
ADDITIONAL INFO:
 DIMENSIONS: 14.5" x 24.0"
 WEIGHT: 22.5 LBS.
 QUANTITY: 1 TOTAL

CANTENNA DETAIL 1
 SCALE: N.T.S.



COAX/HYBRID CABLE
 TIN PLATED COPPER GROUND KIT
 #6 AWG STRANDED COPPER GROUND WIRE

COAX/HYBRID GROUNDING DETAIL 4
 SCALE: N.T.S.



ADDITIONAL INFO:
 DIMENSIONS: 14.5" x 24.0"
 WEIGHT: 22.5 LBS.
 QUANTITY: 1 TOTAL

TYPICAL PANEL ANTENNA/RRH GROUNDING DETAIL 5
 SCALE: N.T.S.

FINAL EQUIPMENT CONFIGURATION

SECTION	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (RPT./MODEL)	CENTRELINE (AZ/EL)	AZIMUTH (DEGREES)	ANGLARY	FEED LINE LENGTH
ALPHA	A1	700/850/1900/WVS	CG2414-RRH90	COMPTON	(P) CG2414-RRH90	302.2°	0°	(P) 10' (P) 10' (P) 10'	40'

FINAL EQUIPMENT CONFIGURATION 8
 SCALE: N.T.S.

ANTENNA CONFIGURATION 7
 SCALE: N.T.S.

COAX/HYBRID GROUNDING DETAIL 4
 SCALE: N.T.S.

TYPICAL PANEL ANTENNA/RRH GROUNDING DETAIL 5
 SCALE: N.T.S.

NOTES:
 1. VERIFY EXISTING GROUNDING SYSTEM IS INSTALLED PER VERIZON WIRELESS STANDARDS.
 2. BOND NEW EQUIPMENT INTO EXISTING GROUND SYSTEM IN ACCORDANCE WITH VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

NOTES:
 1. DO NOT INSTALL CABLE GROUND KIT IF A BOLT ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. GROUNDING KIT SHALL BE TIN PLATED COPPER WITH TWO-HOLE LUG, SIZE PER COAX DIAMETER.
 3. WEATHER SEAL GROUND KIT PER CARRIER REQUIREMENTS.
 4. COAX CABLE GROUNDING KIT LENGTH QUANTITY SHALL BE PER CARRIER SPECIFICATIONS & STANDARDS.

CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE FENCED AREA AT GRADE TO ANTENNA WITH 15% BUFFER.
 (P) = Existing
 (N) = Proposed

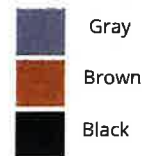
CONTRACTOR TO VERIFY WITH CONSTRUCTION WITH CONSTRUCTION MANUFACTURER'S SPECIFICATIONS PRIOR TO CONSTRUCTION.

2' 14-Port Quasi-Omni Pattern Canister Antenna [698-896, 1695-2690, 3300-4200 and 5150-5925 MHz]

GQ2414-B6790

Description:

- Quasi-Omni Pattern Canister Antenna for Outdoor DAS and Small Cells
- 4x ports for Low Band 698-896 MHz
- 4x ports for AWS/PCS/WCS Band 1695-2690 MHz
- 4x ports for C-Band 3300-4200 MHz
- 2x ports for U-NII Band 5150-5925 MHz*



698-896, 1695-2690, 3300-4200 and 5150-5925 MHz
14-Port Quasi-Omni Pattern Canister Antenna

*Compliant to 789033 D02 General U-NII Test Procedures New Rules v01r04: The antenna meets current U-NII-1 requirements for gain and upper side-lobe performance. Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices - Part 15, Sub-part E

Electrical Specifications

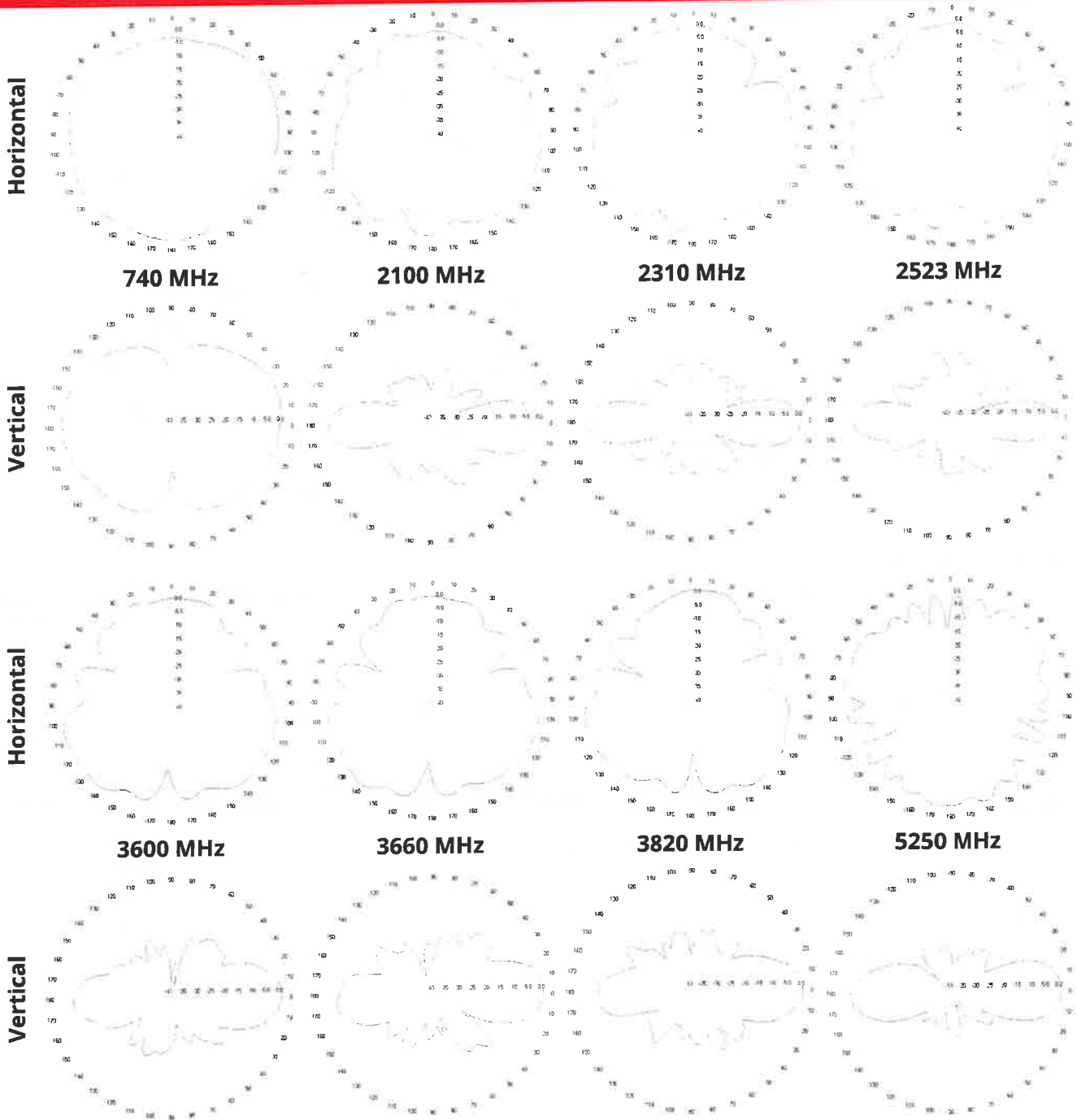
Frequency Band [MHz]	698-896	1695-2200	2305-2360	2496-2690	3300-3550	3550-3700	3700-4200	5150-5925
Input Connector Type	4x 4.3-10(F)	4x 4.3-10(F)			4x 4.3-10(F)		2x 4.3-10(F)	
Isolation (min.)	23 dB	20 dB	25 dB		20 dB		25 dB	
VSWR (max.) /RL (min.)	1.5:1 / 14.0 dB							
Impedance	50 Ω							
Polarization	Dual slant 45° (±45°)							
Horizontal Beamwidth	Omni (360°)							
Vertical Beamwidth	83.9°	22.6°	18.6°	16.6°	25.4°	25.8°	23.7°	21.3°
Gain (max.)	4.1 dBi	9.1 dBi	8.7 dBi	9.5 dBi	8.1 dBi	8.6 dBi	8.0 dBi	5.5 dBi
Gain (avg.)	3.4 dBi	8.0 dBi	8.1 dBi	8.6 dBi	7.3 dBi	7.5 dBi	7.2 dBi	4.3 dBi
Downtilt	0° Fixed							
Max Power / Port	100 Watts				100 Watts		1 Watt	
PIM @ 2x43 dBm	<-153 dBc				N/A		N/A	

Mechanical Specifications

Operating Temperature	-40° to 158°F (-40° to +70°C)
Antenna Weight	22.5 lbs (10.2 kg)
Antenna Diameter	14.5" (369 mm)
Antenna Height	24.0" (609.6 mm)
Radome Material	ASA
Radome Color	Gray, Brown and Black
Ingress Protection	Outdoor (IP65)
Wind Survival Rating	150 mph (241 km/h)

RFID#: B6790 ; Revision: R3 ; Release Date: November 23, 2021;

2D Antenna Patterns



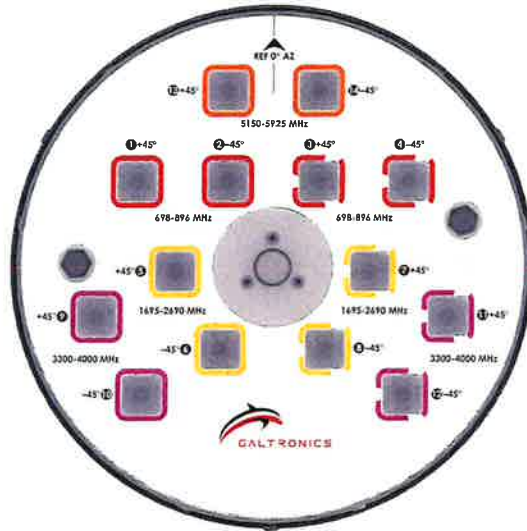
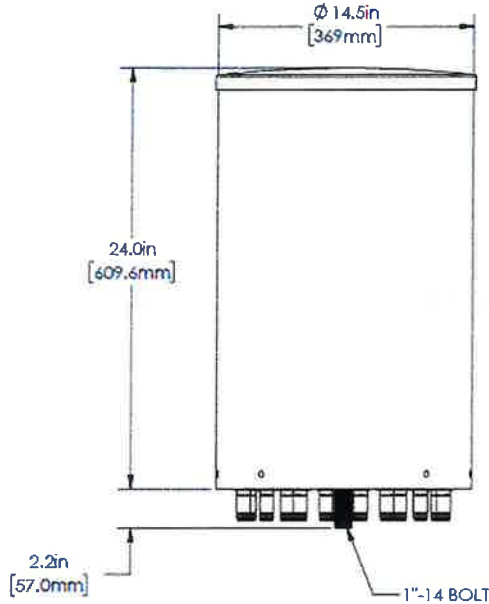
RFD#: B6790 ; Revision: R3 ; Release Date: November 23, 2021;

Mating Connector Torque:
4,3-10: 3,7 ft-lb (5 Nm)

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Additional Technical Information

Mechanical Dimensions



Mating Connector Torque:

4.3-10: 3.7 ft-lb (5 Nm)

Part Numbers & Ordering Options

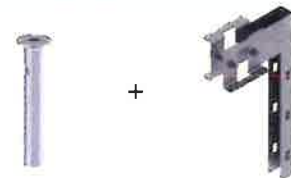
Description	Color	Mounting Kit	Part Number
Quasi-Omni Pattern Canister Antenna with 14x 4.3/10(F) Connectors	Gray	Including MK-06761 mounting kit assembly	GQ2414-B6790-1xx
	Brown		GQ2414-B6790-6xx
	Black		GQ2414-B6790-Bxx

Mounting Brackets & Optional Accessories

Mounting Kit Assembly, Canister, Pole Top (wind speed of 150 mph)

The assembly kit includes a 1" Mount Rod Adapter (MK-06678: universal interface for pole top installation) and a Pole Top Mounting Bracket (MK-06679: a bracket base attached directly to wood, metal and cement poles).

Note: 1" Rod Adapter (MK-06678) and Pole Top Mounting Bracket (MK-06679) may be ordered separately.



MK-06761

RFD#: B6790 ; Revision: R3 ; Release Date: November 23, 2021;

SAMSUNG

AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER
FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code RF4439d-25A



Homepage
samsungnetworks.com

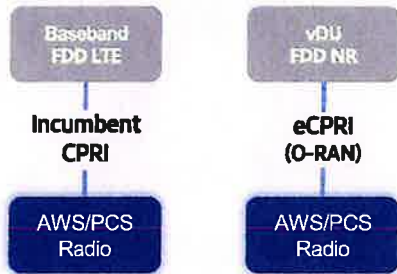


Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

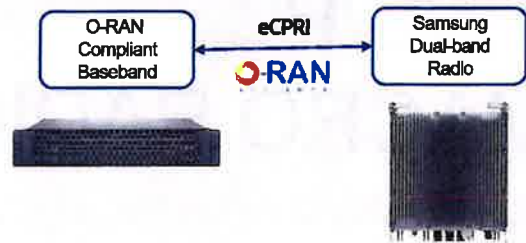
Samsung's AWS/PCS macro radio can support each Incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

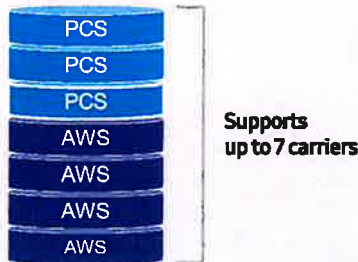
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

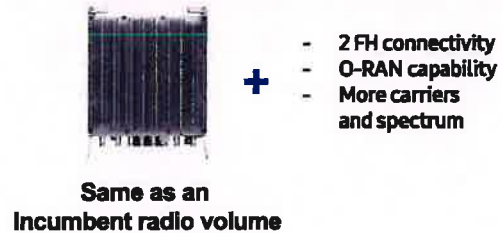
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.



Technical Specifications

Item	Specification
Tech	LTE/ NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz/ 30MHz (B66) DL 90MHz, UL 70MHz/ 60MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

SAMSUNG

Specifications



Item	Specification
Air Interface	LTE, NR(HW resource ready)
Band	Band13 (700MHz) DL: 869-894MHz UL: 824-849MHz 25MHz 25MHz
Frequency	Band5 (850MHz) DL: 869-894MHz UL: 824-849MHz 25MHz 25MHz
1BW	LTE 5/10MHz NR 5/10/15/20MHz
0BW	3C
Carrier Bandwidth	4C + B13 (SDL) 1C
# of carriers	4T4R/2T4R/2T2R/1T2R
Total # of carriers	2T2R-2T2R bi-sector
RF Chain	Total: 320W
RF Output Power	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX Support
RX Sensitivity	Typ. -104.5dBm @1Rx (25RBs 5MHz)
Modulation	256QAM support, (1024QAM with 1~2dB power back-off)
Input Power	-48VDC (-38VDC to -57VDC)
Power Consumption	1.165 Watt @ 100% RF load, room temperature
Size (WHD)	380 x 380 x 260 mm (14.96 x 14.96 x 10.23 inch)
Volume	37.5 L
Weight (W/o Solar Shield & finger guard)	35.9 kg (79.1 lb)
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (Without solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 FCC 47 CFR 27.53 (c), (f)
CPRI Cascade	3GPP 36.104 FCC 47 CFR 27.53 (c), (f)
Optic Interface	-69 dBm/100 kHz per path @ 896 ~901MHz
RET & TMA Interface	Not supported
Bias-T	AISG 3.0
Mounting Options	Not supported
NB-IoT	20km, 2 ports (9.6Gbps x 2), SFP+, single mode, Duplex (Option: Bi-dl)
PIM Cancellation	4 ports (2 ports per band)
# of antenna port	Pole, wall
External Alarm	Support
Fronthaul Interface	2GB-2IB or 4IB
CPRI compression	Opt: 8 CPRI / Opt. 7-2x selectable (not simultaneous support) Not Support

* 5MHz supporting in B13(700MHz) depends on 3Gpp std. and UE capability.
External filters in interferer and victim sides for Mexican boarder to support 5MHz service need to be considered
** Finger guard is not needed.

ATTACHMENT 3



Dewberry Engineers Inc. | 617.695.3400
99 Summer Street, Suite 700 | 617.695.3310 fax
Boston, MA 02110-1200 | www.dewberry.com

February 7, 2024

Andrew Leone
Verizon Wireless
51 Alder Street
Medway, MA 02053

Re: Middlebury Quassy S – Quassy Maintenance (Rev.2)
PLSC: 467716
Fuze #: 16774051
2132 Middlebury Road
Middlebury, CT 06762

Dear Mr. Leone:

Verizon Wireless has proposed to remove (1) existing cannister antenna and (1) B13 4x30 RRH with (1) new GQ2414-B6790 antenna, (1) new SDX1926Q-43 diplexer, (1) Samsung RF4439d-13A RRH and (1) Samsung RF4461d-13A RRH at the site referenced above. The proposed antenna is on an existing cantilever pipe mount and the proposed radios and diplexers are to be installed on an H-frame at grade.

Dewberry Engineers Inc. (Dewberry) has reviewed the antenna design sheets (dated 01/11/24) provided by Verizon Wireless and has determined that the existing pipe mount and existing building have adequate capacity to support the proposed equipment configuration. The existing pipe mount with a maximum utilization of 63.4%. Dewberry assumes that the new antenna, RRHs and associated equipment are installed per the latest Construction Drawings by Dewberry.

This assessment is based on our visual inspection that the existing mount and building structure are in good condition and were constructed in conformance with all applicable state and local building codes. If, during construction, any damage, deterioration, and/or discrepancies are noticed, Dewberry is to be notified to assess any deviation from the assumed condition. Any alteration in equipment loading described above and on the associated plans will void any conclusions expressed herein and will require further analysis and design. No structural qualification is made or implied by this structural letter for existing structural members not supporting the proposed installation.

If you have any questions, please do not hesitate to call me at 617-531-0744.

Sincerely,

Dewberry Engineers Inc.



Brandon Kelsey, P.E.
Structural Project Engineer



Dewberry Engineers Inc. | 617.695.3400
99 Summer Street, Suite 700 | 617.695.3310 fax
Boston, MA 02110-1200 | www.dewberry.com

Dewberry Engineers, Inc.
Structural Analysis Summary Sheet

Job No.: 50121487/50170383 **By:** AMD **Date:** 02/02/24
Job Name: Middlebury Quassy **Checked:** BGK **Date:** 02/05/24

Location: 2132 Middlebury Road, Middlebury, CT 06762
Client: Verizon Wireless

Scope of Work:

- Removal of (1) existing cannister antenna and (1) existing Remote Radio Head
- Proposed installation of (1) new cannister antenna, (2) new Remote Radio Heads (RRHs), and (1) new diplexer.

Codes / Standards / References:

- 2022 Connecticut State Building Code – Amendments to IBC 2021
- TIA-222-H
- ASCE 7-16
- AISC 15th Ed.
- RFDS dated 01/11/24
- Latest Construction Drawings by Dewberry Engineers

Design & Analysis Assumptions:

- Assume new cantenna is installed on existing mounting pipe with RRHs mounted inside the existing fenced area.
- Design and analysis are based on dead and wind loads. The analysis checks for normal bending and shear stresses.

Conclusion / Recommendations:

- The existing structure has sufficient capacity to support the proposed installation.



V 1.3

Job Number 50170383

Made by: AMD

Date: 02/01/24

Checked by: BGK

Date: 02/02/24

(Middlebury) - Design Wind Load

\\dewberry.dewberryroot.local\Enterprise\DEI\Telecom\EV\Projects\WZ\W50121487-NE\50170383 - Middlebury Quassy S NENG ESNAP4 Eng\Struct\Rev 2\Calcs\Site Name 1 sided Sec

Wind Load Design Criteria

Site Name: Middlebury

General Information & Design Input from TIA-222-H

Item	Value	Description	Reference
V_{ult}	125.00	Ultimate Design Wind Speed (mph)	Appendix P, 2022 CT Building Code
V_i	50.00	Design Ice Wind Speed (mph)	ASCE 7-16 - Hazard Tool
K_d	0.95	Wind Direction Probability Factor	Sect. 16.6, TIA
Class	II	Risk Category	Table 2-1, TIA
I	1.00	Importance Factor (Ice Thickness)	Table 2-3, TIA
$z = h$	30.60	ft. (A.G.L.)	Max. Center of Appurtenance
Exp. Cat.	C	Exposure Category	Sect. 2.6.5.1.2, TIA
z_g	900.00	Exposure Category Coeff.	Table 2-4, TIA
α'	9.50	Exposure Category Coeff.	Table 2-4, TIA
$K_{z(min)}$	0.85	Exposure Category Coeff.	Table 2-4, TIA
K_z	0.99	$= 2.01(z/z_g)^{(2/\alpha')}$	Sect. 2.6.5.2, TIA
e	2.72	Natural Logarithmic base	
K_{zt}	1.00	$= [1+K_1*K_2*K_3]^2$	Sect. 2.6.6.2.2, TIA
K_s	N/A	Rooftop Wind Speed-Up Factor	Sect. 2.6.7, TIA
K_e	1.00	Ground Elevation Factor	Sect. 2.6.8, TIA
K_{iz}	0.99	$= (z/33)^{0.10} \leq 1.4$ (Height escalation factor)	Sect. 2.6.10, TIA
G_h	1.10	Gust Effect Factor	Sect. 16.6, TIA
K_a	0.90	Shielding Factor	Sect. 16.6.1.2, TIA
t_i	1.00	Design Ice Thickness	ASCE 7-16, Hazard Tool
t_z	0.99	$= t_i(K_{zt})(K_d)^{0.35}$	Sect. 2.6.10, TIA
$q_{z design}$	37.5 psf	$= 0.00256(K_z)(K_{zt})(K_s)(K_e)(K_a)(V_i^2)$	Sect. 2.6.11.6, TIA
$q_{z ice}$	6.0 psf	$= 0.00256(K_z)(K_{zt})(K_s)(K_e)(K_a)(V_i^2)$	Sect. 2.6.11.6, TIA

Design Wind Forces:

Section 2.6.11.2

$$F_A = q_{z design} G_h (EPA)_A$$

(where $(EPA)_A$ = effective projected area of the appurtenance = $C_a A_a$)

$$F_{Ai} = q_{z ice} G_h (EPA)_{Ai}$$

(see calculation tables on following pages)

Design Ice Weight:

Section 2.6.10

$$F_i = [\pi(t_{iz})(D_c + t_{iz})] * 56 \text{ lb/ft}^3$$

(where D_c = largest out to out dimension of member)

(see calculation tables on following pages)



V 1.3

Job Number 50170383

Made by: AMD

Date: 02/01/24

Checked by: BGK

Date: 02/02/24

(Middlebury) - Design Wind Load

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Element Definition

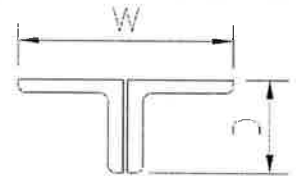
Description	Dimensions (in.)			Weight (lb)	Length / # Supports
	W	D	H		
GQ2414-B6790	14.50	14.50	24.00	22.50	1.00
STRUCTURAL MEMBERS					
Pipe 3.5 Std.	4.00	4.00	240.00	STAAD	Pipe
Pipe 3.5 Std. (w/ 8 banded cables)	6.00	6.00	240.00	STAAD	Pipe

(Mounting Pipe)

(See Note 2)

Note:

1) For Double Angles assume the following:



2) For mounting pipes that **do not** support equipment or portions which are not shielded by equipment, create an additional entry below.



V 1.3

Job Number 50170383
 Made by: AMD
 Date: 02/01/24
 Checked by: BGK
 Date: 02/02/24

(Middlebury) - Design Wind Load

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Design Wind Load

Members	Dimensions (ft.)			Area (A _a) _n (normal) (sf)	Area (A _a) _t (tangent) (sf)	Aspect Ratio (normal)	Aspect Ratio (tangent)	C _{an} (normal) Table 2-9	C _{at} (tangent) Table 2-9
	Width (Normal)	Depth (Tangent)	Height (or span)						
GQ2414-B6790	1.21	1.21	2.00	2.42	2.42	1.65	1.65	1.20	1.20
STRUCTURAL MEMBERS									
Pipe 3.5 Std.	0.33	0.33	20.00	0.33	0.33	60.61	60.61	1.20	1.20
Pipe 3.5 Std. (w/ 8 banded cables)	0.50	0.50	20.00	0.50	0.50	40.00	40.00	1.20	1.20

Design Effective Projected Area & Wind Loads

Members	EPA _a @ 0.0° (sf)	EPA _a @ 30.0° (sf)	EPA _a @ 60.0° (sf)	EPA _a @ 90.0° (sf)	F _a @ 0.0° (lb)	F _a @ 30.0° (lb)	F _a @ 60.0° (lb)	F _a @ 90.0° (lb)	Gravity Load @ Support (lb)
GQ2414-B6790	2.61	2.61	2.61	2.61	107.8	107.8	107.8	107.8	22.5
STRUCTURAL MEMBERS									
Pipe 3.5 Std.	0.36	-	-	-	14.7	-	-	-	-
Pipe 3.5 Std. (w/ 8 banded cables)	0.54	-	-	-	22.3	-	-	-	-



V 1.3

Job Number 50170383

Made by: AMD

Date: 02/01/24

Checked by: BGK

Date: 02/02/24

(Middlebury) - Design Wind Load

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Design Ice Wind Load

- Design ice thickness included in tabulated dimensions below.

Members	Dimensions (ft.)			Area (A _a) _{nl} (normal) (sf)	Area (A _a) _{tl} (tangent) (sf)	Aspect Ratio (normal)	Aspect Ratio (tangent)	C _{ani} (normal) Table 2-9	C _{ati} (tangent) Table 2-9
	Width (Normal)	Depth (Tangent)	Height (or span)						
GQ2414-B6790	1.37	1.37	2.17	2.97	2.97	1.58	1.58	1.20	1.20
STRUCTURAL MEMBERS									
Pipe 3.5 Std.	0.50	0.50	20.00	0.50	0.50	40.00	40.00	1.20	1.20
Pipe 3.5 Std. (w/ 8 banded cables)	0.67	0.67	20.00	0.67	0.67	29.85	29.85	1.20	1.20

Design Effective Projected Area & Wind Loads with Ice

Members	EPA _{al} @ 0.0° (sf)	EPA _{al} @ 30.0° (sf)	EPA _{al} @ 60.0° (sf)	EPA _{al} @ 90.0° (sf)	F _{al} @ 0.0° (lb)	F _{al} @ 30.0° (lb)	F _{al} @ 60.0° (lb)	F _{al} @ 90.0° (lb)	Ice Load F _i @ Support (lb)
	GQ2414-B6790	3.21	3.21	3.21	3.21	21.2	21.2	21.2	21.2
STRUCTURAL MEMBERS									
Pipe 3.5 Std.	0.54	-	-	-	3.6	-	-	-	6.0
Pipe 3.5 Std. (w/ 8 banded cables)	0.72	-	-	-	4.8	-	-	-	8.5



V 1.3

Job Number 50170383
 Made by: AMD
 Date: 02/01/24
 Checked by: BGK
 Date: 02/02/24

(Middlebury) - Serviceability Wind Load

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Serviceability Wind Load Design Criteria

General Information & Design Input from TIA-222-H

Item	Value	Description	Reference
$V_s =$	60.00	Service Wind Speed (mph)	Sect. 2.8.3, TIA
$V_m =$	30.00	Maintenance Wind Speed (mph)	Sect. 16.3, TIA
$K_d =$	0.95	Wind Direction Probability Factor	Sect. 16.6, TIA
Class	II	Risk Category	Table 2-1, TIA
$z = h =$	30.60	ft. (A.G.L.)	Max. Center of Appurtenance
Exp. Cat.	C	Exposure Category	Sect. 2.6.5.1.2, TIA
$Z_g =$	900.00	Exposure Category Coeff.	Table 2-4, TIA
$\alpha' =$	9.50	Exposure Category Coeff.	Table 2-4, TIA
$K_{z (min)} =$	0.85	Exposure Category Coeff.	Table 2-4, TIA
$K_z =$	0.99	$= 2.01(z/Z_g)^{(2/\alpha')}$	Sect. 2.6.6.2.2, TIA
$K_{zt} =$	1.00	$= [1+K_1*K_2*K_3]^2$	Sect. 2.6.11.6, TIA
$K_s =$	N/A	Rooftop Wind Speed-Up Factor	Sect. 2.6.7, TIA
$K_e =$	1.00	Ground Elevation Factor	Sect. 2.6.8, TIA
$G_h =$	1.10	Gust Effect Factor	Sect. 16.6, TIA
$K_a =$	0.90	Shielding Factor	Sect. 16.6.1.2, TIA
$q_{z service} =$	8.7 psf	$= 0.00256(K_z)(K_{zt})(K_s)(K_e)(K_d)(V_s^2)$	Sect. 2.6.11.6, TIA
$q_{z maint} =$	2.2 psf	$= 0.00256(K_z)(K_{zt})(K_s)(K_e)(K_d)(V_m^2)$	Sect. 2.6.11.6, TIA

Design Serviceability and Maintenance Wind Forces:

Section 2.6.11.2

$$F_{As} = q_{z service} G_h (EPA)_A$$

(where $(EPA)_A = \text{effective projected area of the appurtenance} = C_a A_a$)

$$F_{Am} = q_{z maint} G_h (EPA)_A$$

(see calculation tables on following pages)



V 1.3

Job Number 50170383
 Made by: AMD
 Date: 02/01/24
 Checked by: BGK
 Date: 02/02/24

(Middlebury) - Seismic Parameters

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Seismic Load Design Criteria

General Information & Design Input from TIA-222-H

Item	Value	Description	Reference
Soil Class =	D	Seismic Soil Class	Web Soil Survey Site, TIA Table 2-10
S _{DS} =	0.207	Design Spectral Response Acceleration Parameter at Short Periods	ASCE 7-16 - Hazard Tool
A _s =	3	Amplification Factor For the Structure	Section 2.7.8.1, TIA
Class	II	Risk Category	Table 2-1, TIA
I =	1.00	Importance Factor (Seismic)	Table 2-3, TIA
R =	2	Response Modification Coefficient	Section 16.7, TIA
S ₁ =	0.0540	Spectral Response Acceleration Parameter at a Period of 1 Second	ASCE 7-16 - Hazard Tool
C _{s1} =	0.1035	(I*S _{DS})/R	Section 2.7.7.1.1, TIA
C _{s2} =	0.0091	Minimum Value of C _s 0.044*S _{DS} *I	Section 2.7.7.1.1, TIA
C _{s3} =	0.03	Minimum Value of C _s	Section 2.7.7.1.1, TIA
C _{s4} =	N/A	Minimum Value of C _s if S ₁ > 0.6	Section 2.7.7.1.1, TIA
C _s =	0.1035	Design Spectral Response Acceleration Parameter at Short Periods	Section 2.7.7.1.1, TIA
p =	1.0	Redundancy Factor	Section 2.7.7, TIA
E _h (w/o Weight) =	0.3105	= p*A _s *C _s	Section 2.7.7, TIA
E _v (w/o DL) =	0.0414	= 0.2* S _{DS}	Section 2.7.6, TIA

Horizontal Seismic Load Effect

Section 2.7.7

$E_h = pQ_E$

$E_h = pA_s C_s$ (Weight)

*Total weight from structure is applied in STAAD

Vertical Seismic Load Effect

Section 2.7.6

$E_v = 0.2S_{DS} (D + D_g)$

$E_v = 0.2S_{DS} (DL)$

*Dead load from structural is applied in STAAD



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(Middlebury) - Load Input for STAAD Model

\\dewberryroot\local\Enterprise\DEIT\telecom\EV\Projects\ZW\50121487-NE\50170383 - Middlebury Quassy S NENG ESNAP\4 Eng\Struct\Rev.2\Calc\Site Name_1 sided Sector Mount Loading STAAD XX-XX-XX (Rev.H, V1.3).xlsx

STAAD Gravity Load Input

Equipment	Dead Load <i>(lb per support)</i>	Ice Load <i>(lb per support)</i>
GQ2414-B6790	22.5	52

STAAD Wind Load Calculation

Equipment	Axis	Case #1	Case #2	Case #3	Case #4	Case #5	Case #6	Case #7	Case #8	Case #9	Case #10	Case #11	Case #12
Not Shielded	Z	0°	30°	60°	90°	120°	150°	180°	210°	240°	270°	300°	330°
	X	-F ₀	-0.87F ₃₀	-0.50F ₆₀	-	0.50F ₆₀	0.87F ₃₀	Inverse of Case #1	Inverse of Case #2	Inverse of Case #3	Inverse of Case #4	Inverse of Case #5	Inverse of Case #6



V 1.3

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(Middlebury) - Load Input for STAAD Model

\\dewberryroot.local\Enterprise\DEIT\elec\omEV\Projects\VZW\60121487-NE\50170383 - Middlebury Quassy S NENG ESNAP14 Eng\Struct\Rev.2\Calcs\Site Name_1 sided Sector Mount Loading STAAD XX-XX-XX (RevH, V1.3).xlsx

STAAD Load Input (Service Wind Load)

Equipment	Axis	Case #1 0°	Case #2 30°	Case #3 60°	Case #4 90°	Case #5 120°	Case #6 150°	Case #7 180°	Case #8 210°	Case #9 240°	Case #10 270°	Case #11 300°	Case #12 330°
GQ2414-B6790	Z	-25.0	-21.8	-12.5	-	12.5	21.8						
	X	-	12.5	21.8	25.0	21.8	12.5						
		Inverse of Case #1											
		Inverse of Case #2											
		Inverse of Case #3											
		Inverse of Case #4											
		Inverse of Case #5											
		Inverse of Case #6											



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By AMD

Date 2/1/2024

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Client VZW

File Middlebury.STD

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Job Information

	Engineer	Checked	Approved
Name:	AMD	BGK	BGK
Date:	2/1/2024	2/1/2024	2/2/2024

Project ID	
Project Name	

Structure Type	SPACE FRAME
-----------------------	-------------

Number of Nodes	7	Highest Node	7
Number of Elements	6	Highest Beam	6

Number of Basic Load Cases	23
Number of Combination Load Cases	44

Included in this printout are data for:

All	The Whole Structure
------------	---------------------

Included in this printout are results for load cases:

Type	L/C	Name
Primary	1	DEAD
Primary	2	WL#1
Primary	3	WL#2
Primary	4	WL#3
Primary	5	WL#4
Primary	6	WL#5
Primary	7	WL#6
Primary	8	DI
Primary	9	WLI#1
Primary	10	WLI#2
Primary	11	WLI#3
Primary	12	WLI#4
Primary	13	WLI#5
Primary	14	WLI#6
Primary	15	WLS#1
Primary	16	WLS#2
Primary	17	WLS#3
Primary	18	WLS#4
Primary	19	WLS#5
Primary	20	WLS#6
Primary	29	EH (X)
Primary	30	EH (Z)
Primary	31	EV
Combination	32	1.2D+1.0WL#1
Combination	33	1.2D+1.0WL#2



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Job Information Cont...

Type	L/C	Name
Combination	34	1.2D+1.0WL#3
Combination	35	1.2D+1.0WL#4
Combination	36	1.2D+1.0WL#5
Combination	37	1.2D+1.0WL#6
Combination	38	1.2D+1.0WL#7
Combination	39	1.2D+1.0WL#8
Combination	40	1.2D+1.0WL#9
Combination	41	1.2D+1.0WL#10
Combination	42	1.2D+1.0WL#11
Combination	43	1.2D+1.0WL#12
Combination	44	1.2D+1.0DI+1.0WI#1
Combination	45	1.2D+1.0DI+1.0WI#2
Combination	46	1.2D+1.0DI+1.0WI#3
Combination	47	1.2D+1.0DI+1.0WI#4
Combination	48	1.2D+1.0DI+1.0WI#5
Combination	49	1.2D+1.0DI+1.0WI#6
Combination	50	1.2D+1.0DI+1.0WI#7
Combination	51	1.2D+1.0DI+1.0WI#8
Combination	52	1.2D+1.0DI+1.0WI#9
Combination	53	1.2D+1.0DI+1.0WI#10
Combination	54	1.2D+1.0DI+1.0WI#11
Combination	55	1.2D+1.0DI+1.0WI#12
Combination	56	1.0D+1.0WLS#1
Combination	57	1.0D+1.0WLS#2
Combination	58	1.0D+1.0WLS#3
Combination	59	1.0D+1.0WLS#4
Combination	60	1.0D+1.0WLS#5
Combination	61	1.0D+1.0WLS#6
Combination	62	1.0D+1.0WLS#7
Combination	63	1.0D+1.0WLS#8
Combination	64	1.0D+1.0WLS#9
Combination	65	1.0D+1.0WLS#10
Combination	66	1.0D+1.0WLS#11
Combination	67	1.0D+1.0WLS#12
Combination	82	1.2D+1.0EV+1.0EH(X)
Combination	83	1.2D+1.0EV-1.0EH(X)
Combination	84	1.2D+1.0EV+1.0EH(Z)
Combination	85	1.2D+1.0EV-1.0EH(Z)
Combination	86	1.2D-1.0EV+1.0EH(X)
Combination	87	1.2D-1.0EV-1.0EH(X)
Combination	88	1.2D-1.0EV+1.0EH(Z)
Combination	89	1.2D-1.0EV-1.0EH(Z)

Bentley

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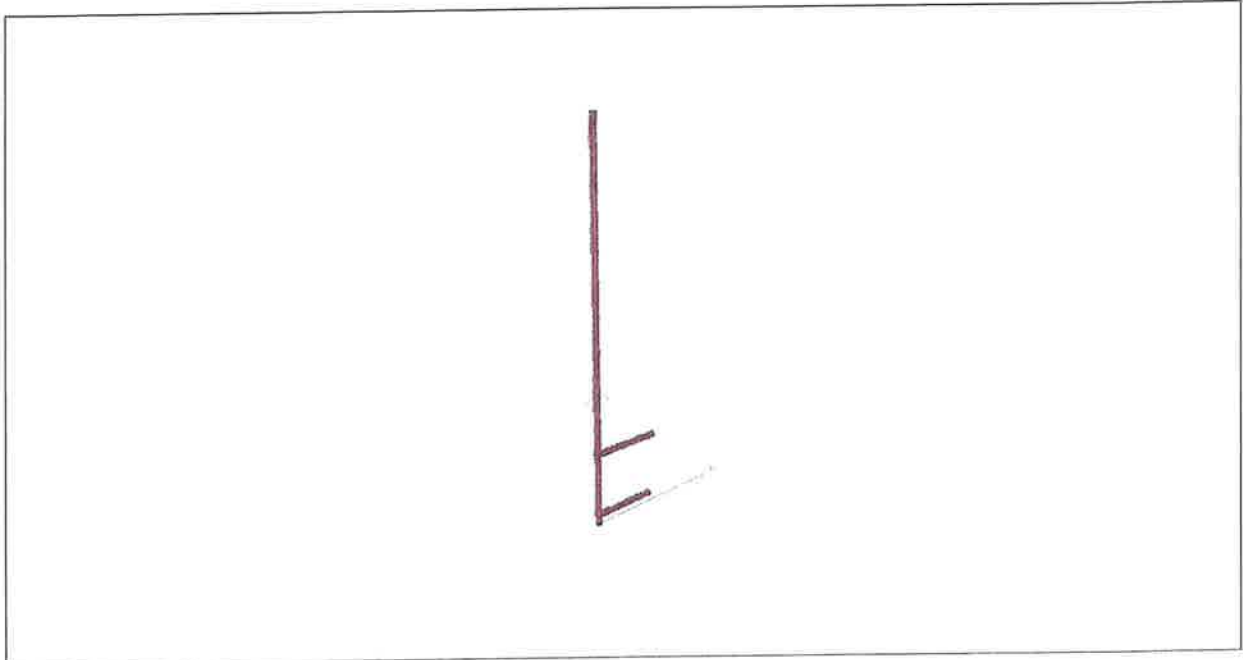
Chd BGK

Job Title Middlebury

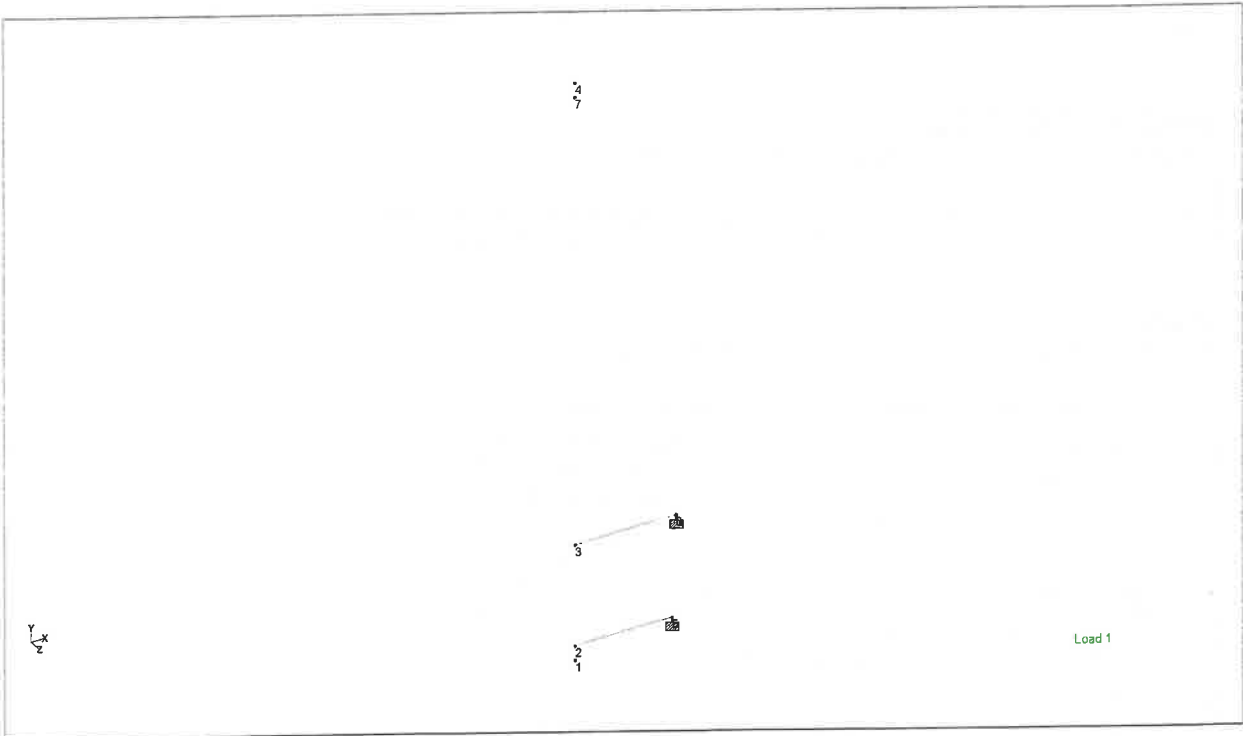
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3D Rendered View



Node Numbers



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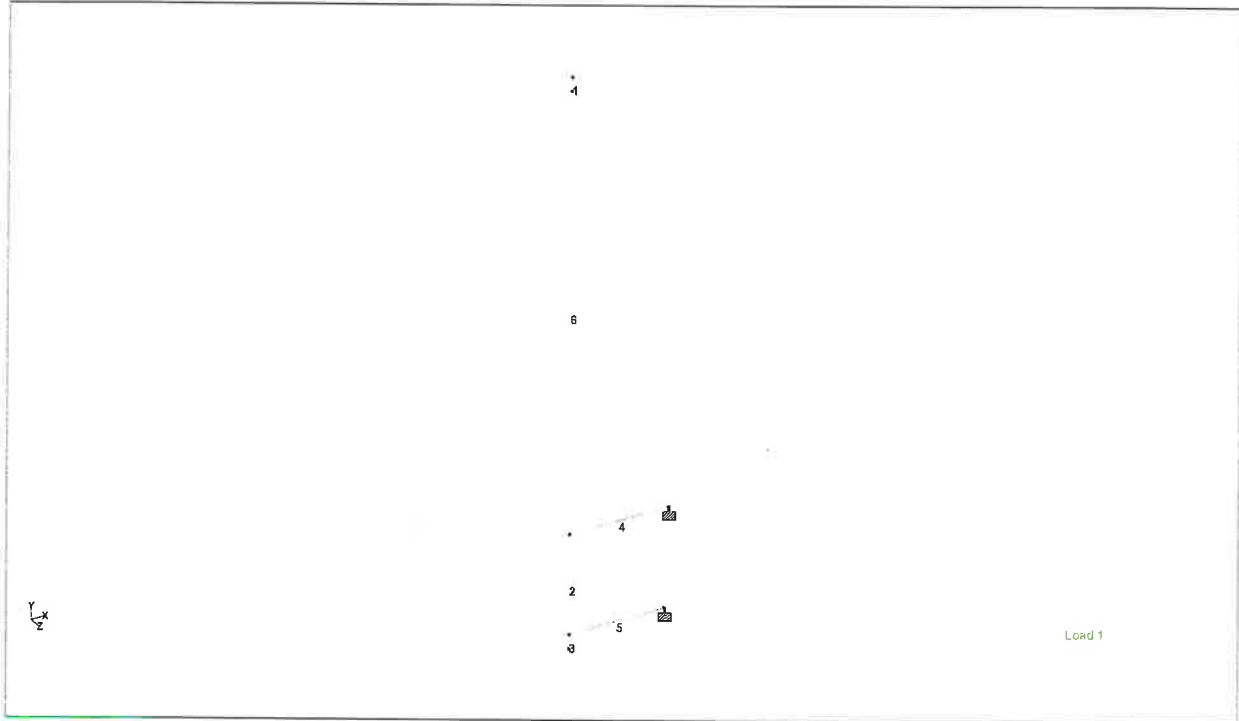
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Beam Numbers

Section Properties

Prop	Section	Area (in ²)	I _{yy} (in ⁴)	I _{zz} (in ⁴)	J (in ⁴)	Material
1	PIPS35	2.500	4.520	4.520	9.043	STEEL

Materials

Mat	Name	E (kip/in ²)	v	Density (kip/in ³)	α (/°F)
1	STEEL	29E+3	0.300	0.000	6.5E-6
2	CONCRETE	3.15E+3	0.170	8.68e-05	5.5E-6
3	ALUMINUM	10E+3	0.330	9.8e-05	12.8E-6
4	STAINLESSSTEEL	28E+3	0.300	0.000	9.9E-6
5	STEEL_36_KSI	29E+3	0.300	0.000	6.5E-6
6	STEEL_50_KSI	29E+3	0.300	0.000	6.5E-6
7	STEEL_275_NMM2	29.7E+3	0.300	0.000	6.67E-6
8	STEEL_355_NMM2	29.7E+3	0.300	0.000	6.67E-6
9	Q235	29.9E+3	0.300	0.000	6.67E-6
10	Q345	29.9E+3	0.300	0.000	6.67E-6
11	Q355	29.9E+3	0.300	0.000	6.67E-6
12	Q390	29.9E+3	0.300	0.000	6.67E-6
13	Q420	29.9E+3	0.300	0.000	6.67E-6



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Materials Cont...

Mat	Name	E (kip/in ²)	ν	Density (kip/in ³)	α (/°F)
1	STEEL	29E+3	0.300	0.000	6.5E -6
2	CONCRETE	3.15E+3	0.170	8.68e-05	5.5E -6

Supports

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip ft/deg)	rY (kip ft/deg)	rZ (kip ft/deg)
5	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
6	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Releases

There is no data of this type.

Primary Load Cases

Number	Name	Type
1	DEAD	Dead
2	WL#1	Wind
3	WL#2	Wind
4	WL#3	Wind
5	WL#4	Wind
6	WL#5	Wind
7	WL#6	Wind
8	DI	Ice
9	WLI#1	Wind on Ice
10	WLI#2	Wind on Ice
11	WLI#3	Wind on Ice
12	WLI#4	Wind on Ice
13	WLI#5	Wind on Ice
14	WLI#6	Wind on Ice
15	WLS#1	Wind
16	WLS#2	Wind
17	WLS#3	Wind
18	WLS#4	Wind
19	WLS#5	Wind
20	WLS#6	Wind
29	EH (X)	Seismic-H
30	EH (Z)	Seismic-H
31	EV	Seismic-H



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Combination Load Cases

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
32	1.2D+1.0WL#1	1	DEAD	1.20
		2	WL#1	1.00
33	1.2D+1.0WL#2	1	DEAD	1.20
		3	WL#2	1.00
34	1.2D+1.0WL#3	1	DEAD	1.20
		4	WL#3	1.00
35	1.2D+1.0WL#4	1	DEAD	1.20
		5	WL#4	1.00
36	1.2D+1.0WL#5	1	DEAD	1.20
		6	WL#5	1.00
37	1.2D+1.0WL#6	1	DEAD	1.20
		7	WL#6	1.00
38	1.2D+1.0WL#7	1	DEAD	1.20
		2	WL#1	-1.00
39	1.2D+1.0WL#8	1	DEAD	1.20
		3	WL#2	-1.00
40	1.2D+1.0WL#9	1	DEAD	1.20
		4	WL#3	-1.00
41	1.2D+1.0WL#10	1	DEAD	1.20
		5	WL#4	-1.00
42	1.2D+1.0WL#11	1	DEAD	1.20
		6	WL#5	-1.00
43	1.2D+1.0WL#12	1	DEAD	1.20
		7	WL#6	-1.00
44	1.2D+1.0DI+1.0WI#1	1	DEAD	1.20
		9	WL#1	1.00
45	1.2D+1.0DI+1.0WI#2	8	DI	1.00
		1	DEAD	1.20
46	1.2D+1.0DI+1.0WI#3	10	WL#2	1.00
		8	DI	1.00
47	1.2D+1.0DI+1.0WI#4	1	DEAD	1.20
		11	WL#3	1.00
48	1.2D+1.0DI+1.0WI#5	8	DI	1.00
		1	DEAD	1.20
49	1.2D+1.0DI+1.0WI#6	13	WL#5	1.00
		8	DI	1.00
50	1.2D+1.0DI+1.0WI#7	1	DEAD	1.20
		14	WL#6	1.00
		8	DI	1.00
		9	WL#1	-1.00
		8	DI	1.00



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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
51	1.2D+1.0DI+1.0WI#8	1	DEAD	1.20
		10	WLI#2	-1.00
		8	DI	1.00
52	1.2D+1.0DI+1.0WI#9	1	DEAD	1.20
		11	WLI#3	-1.00
		8	DI	1.00
53	1.2D+1.0DI+1.0WI#10	1	DEAD	1.20
		12	WLI#4	-1.00
		8	DI	1.00
54	1.2D+1.0DI+1.0WI#11	1	DEAD	1.20
		13	WLI#5	-1.00
		8	DI	1.00
55	1.2D+1.0DI+1.0WI#12	1	DEAD	1.20
		14	WLI#6	-1.00
		8	DI	1.00
56	1.0D+1.0WLS#1	1	DEAD	1.00
		15	WLS#1	1.00
57	1.0D+1.0WLS#2	1	DEAD	1.00
		16	WLS#2	1.00
58	1.0D+1.0WLS#3	1	DEAD	1.00
		17	WLS#3	1.00
59	1.0D+1.0WLS#4	1	DEAD	1.00
		18	WLS#4	1.00
60	1.0D+1.0WLS#5	1	DEAD	1.00
		19	WLS#5	1.00
61	1.0D+1.0WLS#6	1	DEAD	1.00
		20	WLS#6	1.00
62	1.0D+1.0WLS#7	1	DEAD	1.00
		15	WLS#1	-1.00
63	1.0D+1.0WLS#8	1	DEAD	1.00
		16	WLS#2	-1.00
64	1.0D+1.0WLS#9	1	DEAD	1.00
		17	WLS#3	-1.00
65	1.0D+1.0WLS#10	1	DEAD	1.00
		18	WLS#4	-1.00
66	1.0D+1.0WLS#11	1	DEAD	1.00
		19	WLS#5	-1.00
67	1.0D+1.0WLS#12	1	DEAD	1.00
		20	WLS#6	-1.00
82	1.2D+1.0EV+1.0EH(X)	1	DEAD	1.20
		31	EV	1.00
		29	EH (X)	1.00
83	1.2D+1.0EV-1.0EH(X)	1	DEAD	1.20
		31	EV	1.00
		29	EH (X)	-1.00

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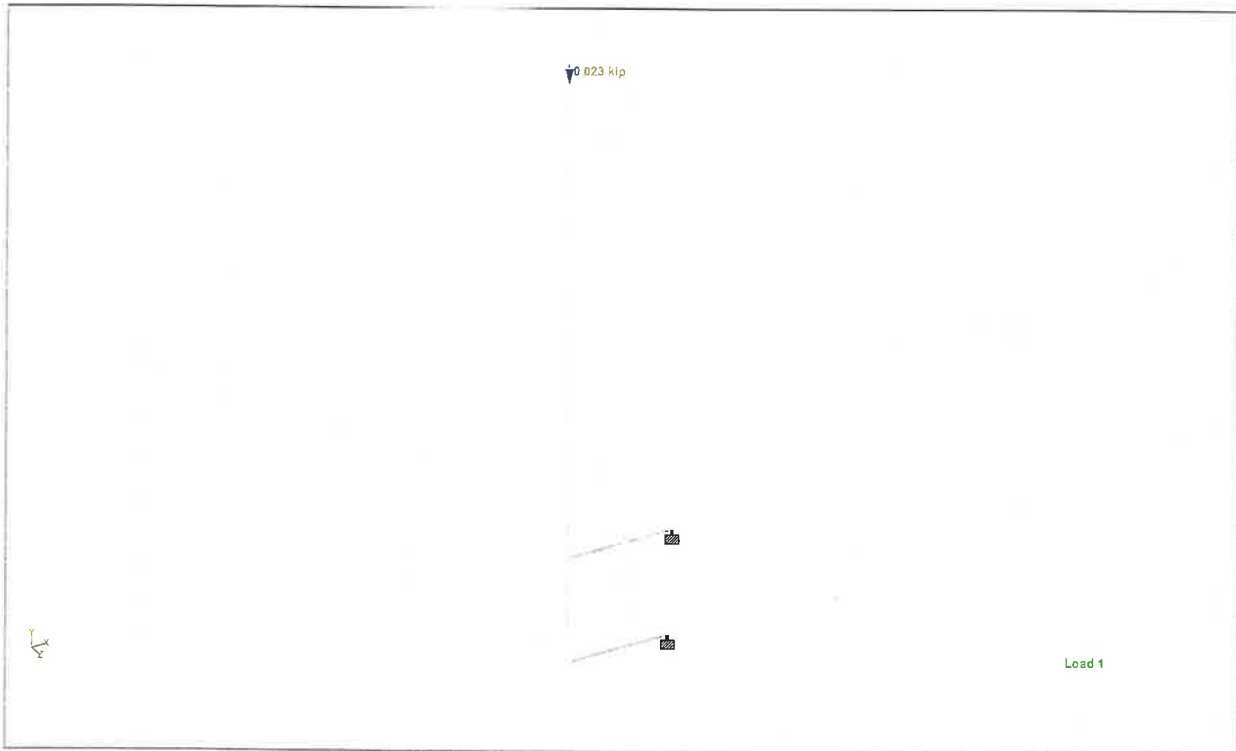
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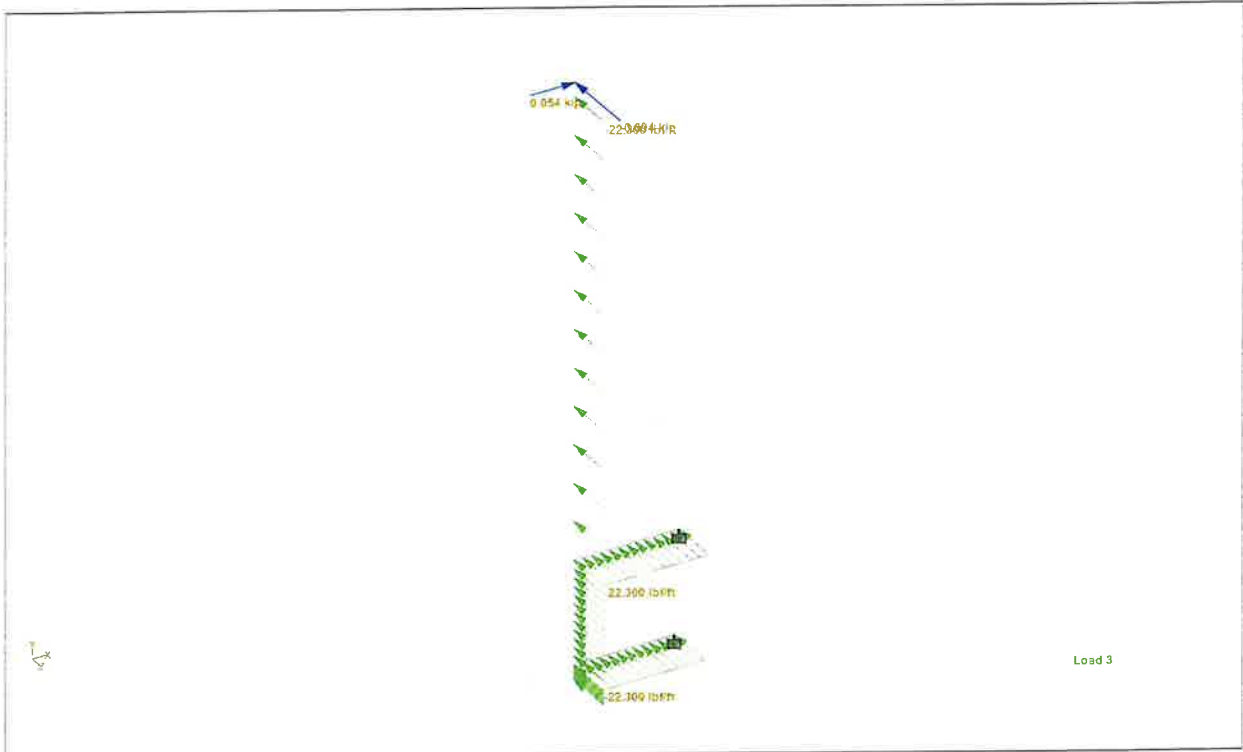
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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
84	1.2D+1.0EV+1.0EH(Z)	1	DEAD	1.20
		31	EV	1.00
		30	EH (Z)	1.00
85	1.2D+1.0EV-1.0EH(Z)	1	DEAD	1.20
		31	EV	1.00
		30	EH (Z)	-1.00
86	1.2D-1.0EV+1.0EH(X)	1	DEAD	1.20
		31	EV	-1.00
		29	EH (X)	1.00
87	1.2D-1.0EV-1.0EH(X)	1	DEAD	1.20
		31	EV	-1.00
		29	EH (X)	-1.00
88	1.2D-1.0EV+1.0EH(Z)	1	DEAD	1.20
		31	EV	-1.00
		30	EH (Z)	1.00
89	1.2D-1.0EV-1.0EH(Z)	1	DEAD	1.20
		31	EV	-1.00
		30	EH (Z)	-1.00





Wind Load

Utilization Ratio

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in ²)	Iz (in ⁴)	Iy (in ⁴)	Ix (in ⁴)
1	PIPS35	PIPS35	0.009	1.000	0.009	Eq.H1-1b	34	2.500	4.520	4.520	9.040
2	PIPS35	PIPS35	0.406	1.000	0.406	Eq.H1-1b	39	2.500	4.520	4.520	9.040
3	PIPS35	PIPS35	0.000	1.000	0.000	Cl.G1	4	2.500	4.520	4.520	9.040
4	PIPS35	PIPS35	0.467	1.000	0.467	Eq.H3-6	32	2.500	4.520	4.520	9.040
5	PIPS35	PIPS35	0.197	1.000	0.197	Eq.H1-1b	40	2.500	4.520	4.520	9.040
6	PIPS35	PIPS35	0.634	1.000	0.634	Eq.H1-1b	34	2.500	4.520	4.520	9.040

Failed Members

There is no data of this type.



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2

Part

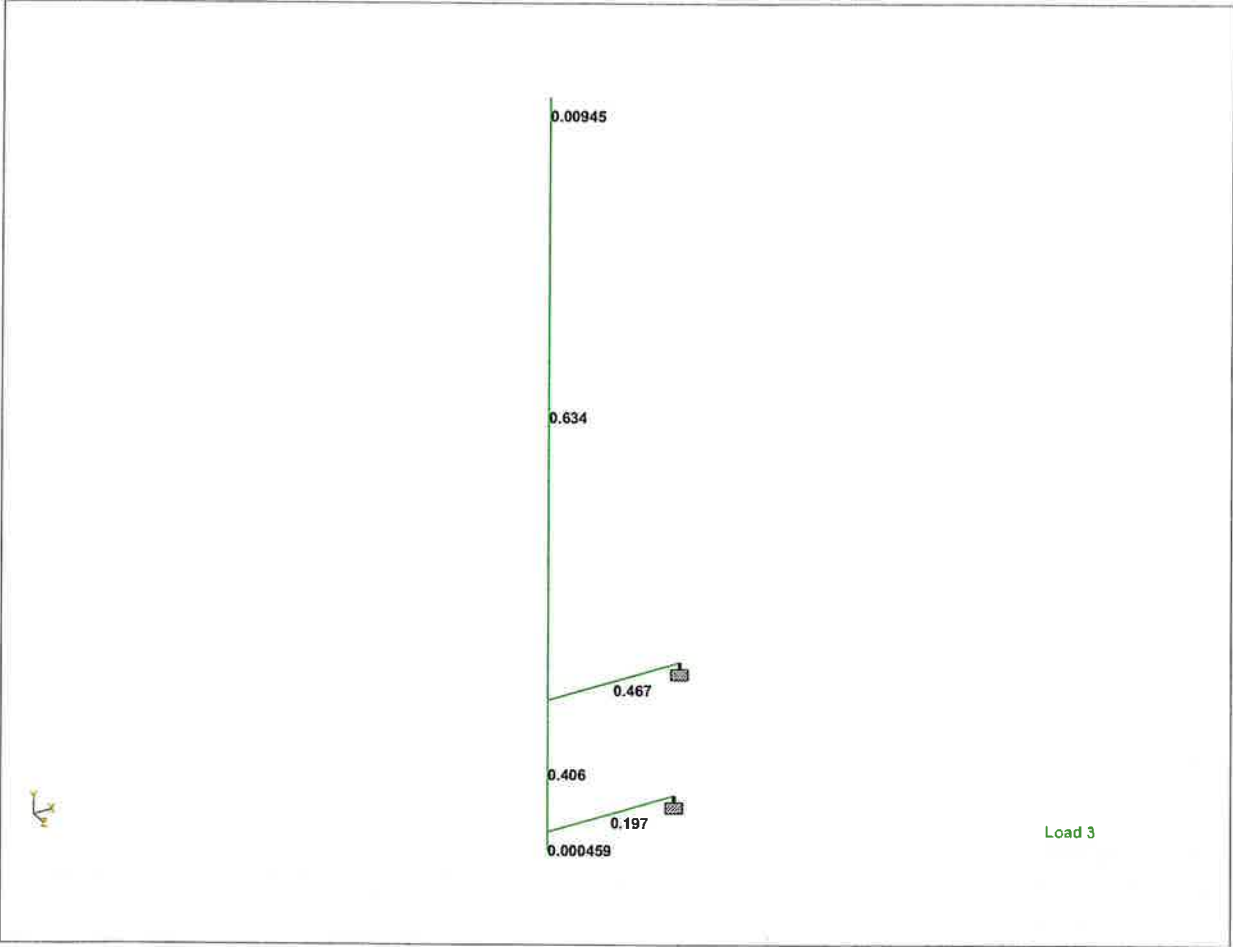
Job Title Middlebury

Ref

By AMD Date 2/1/2024 Chd BGK

Client VZW

File Middlebury.STD Date/Time 01-Feb-2024 22:14



Utilization Ratio



Software licensed to Dewberry Engineers Inc.
CONNECTED User: Ashley Deuschle

Job No
50170383

Sheet No
1

Rev
2

Job Title **Middlebury**

Part

Ref

By **AMD**

Date **2/1/2024**

Chd **BGK**

Client **VZW**

File **Middlebury.STD**

Date/Time **01-Feb-2024 22:14**

Node Displacement Summary

	Node	L/C	X (in)	Y (in)	Z (in)	Resultant (in)	rX (rad)	rY (rad)	rZ (rad)
Max X	4	59:1.0D+1.0WL	1.095	-0.002	0	1.095	0	0	-0.008
Min X	4	65:1.0D+1.0WL	-1.134	-0.014	0	1.134	0	0	0.008
Max Y	5	56:1.0D+1.0WL	0	0	0	0	0	0	0
Min Y	4	65:1.0D+1.0WL	-1.134	-0.014	0	1.134	0	0	0.008
Max Z	4	62:1.0D+1.0WL	-0.019	-0.008	1.356	1.356	0.009	0.001	0.000
Min Z	4	56:1.0D+1.0WL	-0.019	-0.008	-1.356	1.356	-0.009	-0.001	0.000
Max rX	4	62:1.0D+1.0WL	-0.019	-0.008	1.356	1.356	0.009	0.001	0.000
Min rX	4	56:1.0D+1.0WL	-0.019	-0.008	-1.356	1.356	-0.009	-0.001	0.000
Max rY	3	62:1.0D+1.0WL	-0.000	-0.007	0.035	0.035	0.002	0.001	0.000
Min rY	3	56:1.0D+1.0WL	-0.000	-0.007	-0.035	0.035	-0.002	-0.001	0.000
Max rZ	4	65:1.0D+1.0WL	-1.134	-0.014	0	1.134	0	0	0.008
Min rZ	4	59:1.0D+1.0WL	1.095	-0.002	0	1.095	0	0	-0.008
Max Rst	4	56:1.0D+1.0WL	-0.019	-0.008	-1.356	1.356	-0.009	-0.001	0.000

Maximum displacement: $192" \times 0.015 = 2.88" > 1.356"$ OK



NORTHEAST > North East > New England > Wallingford-1 > MIDDLEBURY QUASSY S - Quassy Maintenance
 GADASU, SHIVA - shiva.gadasu@verizonwireless.com - 20240111_165122

Project Details		Location Information	
Carrier Aggregation	N	Site Id	3071611
Ecip	N	Search Ring#	
Project Name	RADIO SWAP	E-NodeB ID#	064512
Project Alt Name	MIDDLEBURY QUASSY S - NENG_SC_ESNAP	PSLC#	467716
Project Id	16774051	Switch Name	Wallingford-1
Designed Sector Carrier 4G	5	Tower Type	
Designed Sector Carrier 5G	0	Site Type	SMALL-CELL
Additional Sector Carrier 4G	0	Street Address	2132 Middlebury Road
Additional Sector Carrier 5G	0	City	Middlebury
Suffix	Rev4_01.11.2024	State	CT
FP Solution Type & Tech Type	MODIFICATION;4G_850;4G_AWS;4G_PCS; 4G_Radio Swap	Zip Code	06762
		County	New Haven
		Latitude	41.52766694/ 41° 31' 39.601"
		Longitude	-73.14931055/ 73° 8' 57.518"

Project Scope
<p>RFDS SOW: eSNAP, 850/ AWS/ PCS carrier add, Samsung dual band RRRH swap, antenna change</p> <p>Rev4_01.11.2024 : Corrected RRRH and diplexer location to shelter Rev3_01.11.2024 : Antenna change, Lowband RRRH to Gen2, CL update REV2 (9/23/22): Updates the C/L to revised CDs REV1 (7/12/22): Updates the C/L to match the LE</p>

Antenna Summary

Added Antenna

700	850	1900	AWS	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
LTE	LTE	LTE	LTE	Galltronics	GQ2414-B6790	30.6	31.6	0(A)	PHYSICAL	1

Removed Antenna

700	850	1900	AWS	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
LTE				ANDREW	NH360QS-DG-F0M	30.8	32	0(1)	PHYSICAL	1

Retained Antenna

700	850	1900	AWS	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity

Added: 1	Removed: 1	Retained: 0
----------	------------	-------------

Non Antenna Summary

Added Non Antenna

Equipment Type	Location	700	850	1900	AWS	Make	Model	Install Type	Quantity
RRU	Shelter			LTE	LTE	Samsung	B2/B66A RRH ORAN (RF4439d-25A)	PHYSICAL	1
RRU	Shelter	LTE	LTE			Samsung	RF4461d-13A	PHYSICAL	1
Diplexer	Shelter			LTE	LTE	Commscope	SDX1926Q-43	PHYSICAL	1

Removed Non Antenna

Equipment Type	Location	700	850	1900	AWS	Make	Model	Install Type	Quantity
RRU	Tower	LTE				Nokia	UHBA B13 RRH 4x30	PHYSICAL	1

Retained Non Antenna

Equipment Type	Location	700	850	1900	AWS	Make	Model	Install Type	Quantity
----------------	----------	-----	-----	------	-----	------	-------	--------------	----------

Added: 3	Removed: 1	Retained: 0
----------	------------	-------------

700 LTE		Services	
0000 (309192)		0002 (8273530)	
Sector	01	01	
Azimuth	0	0	
Cell/NodeB-Id	064512	064512	
Antenna Model	NH360QS-DG-FOM	GQ2414-B6790	
Antenna Make	ANDREW	Galtronics	
Centerline	30.8	30.6	
DLEARFCN	5230	5230	
Mech Down-tilt	0	0	
Elect Down-tilt	0	0	
Tip Height	32	31.6	
Regulatory Power	8.09 (W/MHz) ERP	8.72 (W/MHz) ERP	
Transmitter Max Power	47.8 dBm	47.8 dBm	
TMA Make			
TMA Model			
RRU Make	Nokia	Samsung	
RRU Model	UHBA B13 RRH 4x30	RF4461d-13A	
Number of Tx,Rx	2, 2	2, 4	
Operational Port Count	null	null	
Position		1	
Transmitter Id	1961671	12644910	
Source	VZNPP	VZNPP	
Bandwidth	10	10	
Ant. Dimensions H x W x D(inch)	28.69 x 11.99 x 11.99	24.0 x 14.5 x 14.5	
Weight(lb)	43.97	19.0	

Services

850 LTE

0000 (309192)

0002 (8273530)

Sector	01
Azimuth	0
Cell/Enodeb-Id	064512
Antenna Model	GQ2414-B6790
Antenna Make	Galtronics
Centerline	30.6
DLEARFCN	2450
Mech Down-tilt	0
Elect Down-tilt	0
Tip Height	31.6
Regulatory Power	17.45 (W/MHz) ERPSD
Transmitter Max Power	47.8 dBm
TMA Make	
TMA Model	
RRU Make	Samsung
RRU Model	RF4461d-13A
Number of Tx,Rx	2 , 4
Operational Port Count	null
Position	1
Transmitter Id	12644920
Source	VZNPP
Bandwidth	10
Ant. Dimensions H x W x D(inch)	24.0 x 14.5 x 14.5
Weight(lb)	19.0

1900 LTE		Services	
		0000 (309192)	0002 (8273530)
Sector		01	
Azimuth		0	
Cell/Enodeb-Id		064512	
Antenna Model		GQ2414-B6790	
Antenna Make		Galtronics	
Centerline		30.6	
DLEAFON		1050, 1175	
Mech Down-tilt		0	
Elect Down-tilt		0, 0	
Tip Height		31.6	
Regulatory Power		26.05 (W/MHz) EIRP, 26.11 (W/MHz) EIRP	
Transmitter Max Power		46.0, 43.0 dBm	
TMA Make			
TMA Model			
RRU Make		Samsung	
RRU Model		B2/B66A RRH ORAN (RF4439d-25A)	
Number of Tx,Rx		2, 4	
Operational Port Count		0	
Position		1	
Transmitter Id		12644927, 12644928	
Source		VZNPP	
Bandwidth		10, 5	
Ant. Dimensions H x W x D(inch)		24.0 x 14.5 x 14.5	
Weight(lb)		19.0	

AWS LTE		Services	
		0000 (309192)	0002 (8273530)
Sector			01
Azimuth			0
Cell/Enodeb-Id			064512
Antenna Model			GQ2414-B6790
Antenna Make			Galtronics
Centerline			30.6
DLEARFCN			2050
Mech Down-tilt			0
Elect Down-tilt			0
Tip Height			31.6
Regulatory Power			23.16 (W/MHz) EIRP
Transmitter Max Power			47.8 dBm
TMA Make			
TMA Model			
RRU Make			Samsung
RRU Model			B2/B66A RRH ORAN (RF4439d-25A)
Number of Tx/Rx			2, 4
Operational Port Count			null
Position			1
Transmitter Id			12644926
Source			VZNPP
Bandwidth			20
Ant. Dimensions H x W x D(inch)			24.0 x 14.5 x 14.5
Weight(lb)			19.0

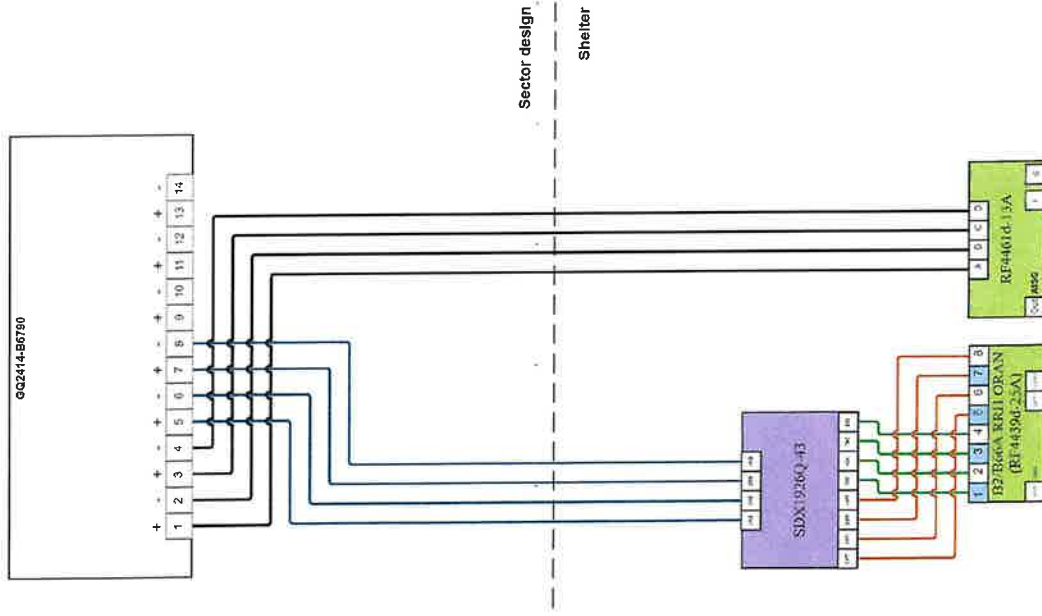
Call Signs Per Antenna

Sector	Make	Model	Ant. CL Height AG	Ant. Tip Height	Azimuth	Elect Down-tilt	Mech Down-tilt	Gain	Bandwidth	Regulatory Power	700	850	1900	2100	2B GHz	31 GHz	3B GHz	LSUB-6	GBRS
01	Galtronics	GQ2414-B67 90	30.6	31.6	0	0	0	1.35	360	8.72	WQJQ889								
01	Galtronics	GQ2414-B67 90	30.6	31.6	0	0	0	1.35	360	17.45		KNKA313							
01	Galtronics	GQ2414-B67 90	30.6	31.6	0	0	0	5.75	360	26.05			KNLH962, WQ EM653						
01	Galtronics	GQ2414-B67 90	30.6	31.6	0	0	0	5.75	360	26.11			WQCS396						
01	Galtronics	GQ2414-B67 90	30.6	31.6	0	0	0	6.45	360	23.16				WQGA606, WQ GB280					

CellSight	Market	Radio Code	Market #	Block	State	County	License Name	Wholly Owner	Total MHz	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	pOPs/Sq. mil	Status	Action	Approve for Insvc
WQJG889	Northeast	WU	REA001	C	CT	9009	Cellico Partnershp Ip	Yes	22.000	746.000 - 757.000/ .000 - .000	776.000 - 787.000/ .000 - .000	746.000 - 757.000/ .000 - .000	776.000 - 787.000/ .000 - .000	8.72	1000	1430.62	proposed	added	1
KNKA313	New Haven-Wes Haven-Wat erbury-Me rlden, CT	CL	CMA049	A	CT	9009	Cellico Partnershp Ip	Yes	25.000	824.000 - 835.000/8 45.000 - 846.500	869.000 - 880.000/8 90.000 - 891.500	824.000 - 835.000/8 45.000 - 846.500	869.000 - 880.000/8 90.000 - 891.500	17.45	400	1430.62	proposed	added	1
WQEN953	New Haven-Wat erbury-Me rlden, CT	CW	BTA318	C	CT	9009	Cellico Partnershp Ip	Yes	10.000	1895.000 - 1900.000/ .000 - .000	1975.000 - 1980.000/ .000 - .000	1895.000 - 1900.000/ .000 - .000	1975.000 - 1980.000/ .000 - .000	26.05	1640	1430.62	proposed	added	1
WQCS396	New Haven-Wat erbury-Me rlden, CT	CW	BTA318	C	CT	9009	Cellico Partnershp Ip	Yes	10.000	1905.000 - 1910.000/ .000 - .000	1985.000 - 1990.000/ .000 - .000	1905.000 - 1910.000/ .000 - .000	1985.000 - 1990.000/ .000 - .000	26.11	1640	1430.62	proposed	added	1
KNLH262	New Haven-Wat erbury-Me rlden, CT	CW	BTA318	F	CT	9009	Cellico Partnershp Ip	Yes	10.000	1880.000 - 1895.000/ .000 - .000	1970.000 - 1975.000/ .000 - .000	1880.000 - 1895.000/ .000 - .000	1970.000 - 1975.000/ .000 - .000	26.05	1640	1430.62	proposed	added	1
WQGB280	New Haven-Wes Haven-Wat erbury-Me rlden, CT	AW	CMA049	A	CT	9009	Cellico Partnershp Ip	Yes	20.000	1710.000 - 1720.000/ .000 - .000	210.000 - 2120.000/ .000 - .000	1710.000 - 1720.000/ .000 - .000	210.000 - 2120.000/ .000 - .000	23.16	1640	1430.62	proposed	added	1
WQGA906	New York-No. New Jer.-Long Island, NY-NJ-CT-PA-MA	AW	BEA010	B	CT	9009	Cellico Partnershp Ip	Yes	20.000	1720.000 - 1730.000/ .000 - .000	2120.000 - 2130.000/ .000 - .000	1720.000 - 1730.000/ .000 - .000	2120.000 - 2130.000/ .000 - .000	23.16	1640	1430.62	proposed	added	1

Alpha (Proposed)

Position 1



Legends	
RET dc signal capable port	—
700/850(LB)	—
700(LT)	—
850(CB)	—
AWS(AW)	—
PCS(PC)	—
AWS/PCS(HB)	—
28GHz(U28)	—
39GHz(U39)	—
L-Sub6(S6)	—
CBRS(RS)	—
LAA(LA)	—
Fiber	—
AISG	—
DC	—
Coax	—
Coax Jumper	—
Sectors Shared Equipments	—

Notes:

- Antenna view is from the back of the antennas
- Colors of connections are just for clarification
- Size of objects in drawing doesn't reflect equipment true dimensions

ATTACHMENT 4

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.1310 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

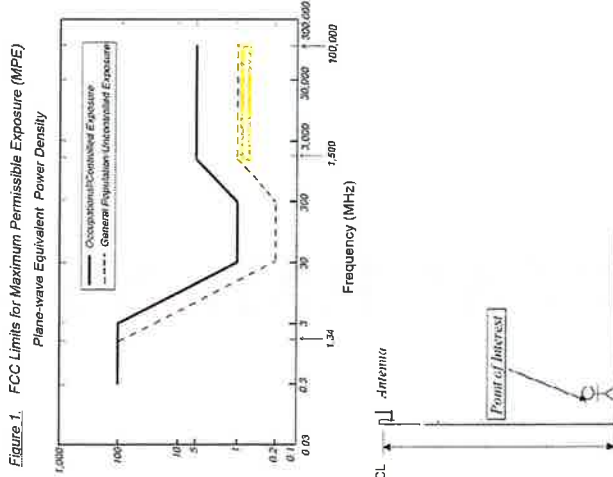
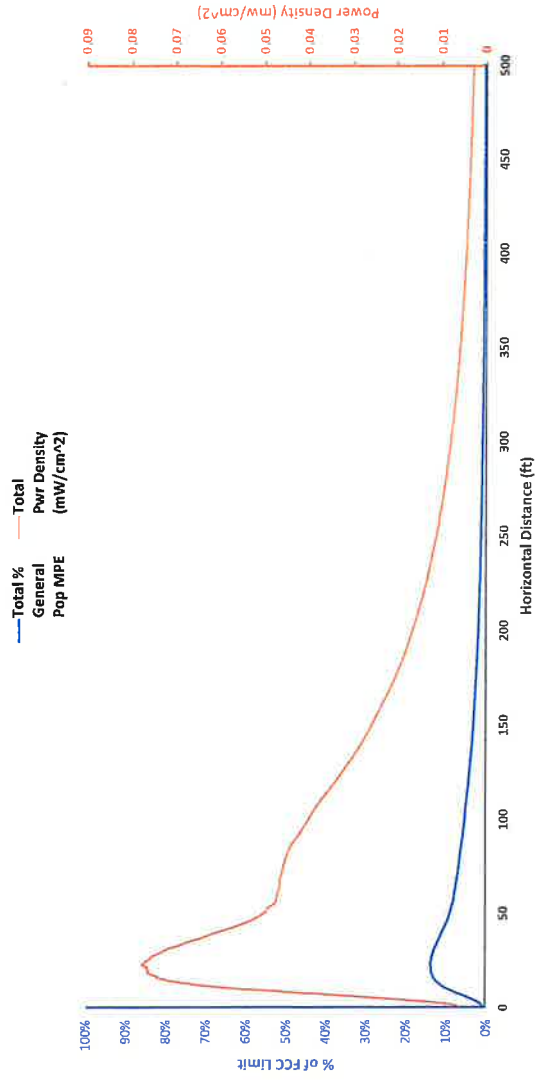
MHz = Megahertz
 mW/cm² = milliwatts per square centimeter
 ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:

1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period;
3. calculation takes into account a point of interest of 2m or 6.56ft

Location	MIDDLEBURY QUASSY SC CT			
Date	4/17/2024			
Band	AWS	PCS	850	700
Operating Frequency (MHz)	2,145	1,970	880	746
General Population MPE (mW/cm ²)	0.58666667 0.49733333			
ERP Per Transmitter (Watts)	793	793	251	251
Number of Transmitters	1	1	1	1
Antenna Centerline (CL) (feet)	30.6	30.6	30.6	30.6
Total ERP (Watts)	793	793	251	251
Total ERP (dBm)	59	59	54	54
Maximum % of General Population Limit	0.1%			

RF Exposure 6.56ft Above Ground Level Far Field Formula (per FCC OET65)



Angle Below Horizon	AWS	PCS	850-LTE	700 MHz	Power Density (mW/cm ²)	MPE	Pop MPE	Total % General Pop MPE	Distance	Total Pwr Density (mW/cm ²)	Total % General Pop MPE
90	0.001964495	0.001750858	0.001297928	0.001104716	0.0000	0.0000	0.0000	0.0000	0	0.006117995	0.81%
89	0.0019319165	0.001596292	0.001524446	0.001104363	0.0000	0.0000	0.0000	0.0000	0.426394597	0.006144266	0.83%
88	0.001917329	0.001488321	0.001831033	0.001266766	0.0000	0.0000	0.0000	0.0000	0.859050929	0.006509449	0.91%
87	0.001870698	0.001355201	0.002355067	0.001592221	0.0000	0.0000	0.0000	0.0000	1.289531317	0.007173186	1.04%
86	0.001824034	0.001233198	0.003027214	0.002145051	0.0000	0.0000	0.0000	0.0000	1.720199574	0.008227422	1.25%
85	0.001777394	0.001147582	0.003888512	0.002816978	0.0000	0.0000	0.0000	0.0000	2.152221123	0.009630467	1.52%
84	0.001730936	0.001092084	0.004878155	0.003616226	0.0000	0.0000	0.0000	0.0000	2.585564188	0.011317301	1.84%
83	0.001684412	0.00103886	0.005976515	0.00453365	0.0000	0.0000	0.0000	0.0000	3.020500198	0.013233177	2.20%
82	0.001646432	0.00101009	0.007150884	0.005550853	0.0000	0.0000	0.0000	0.0000	3.457390434	0.015388616	2.60%
81	0.001616925	0.000959379	0.008355832	0.006791876	0.0000	0.0000	0.0000	0.0000	3.896257232	0.017813313	3.06%
80	0.001593746	0.000924896	0.011127537	0.009044602	0.0000	0.0000	0.0000	0.0000	4.337643725	0.021995431	3.53%
79	0.001576353	0.000897973	0.014661638	0.011739884	0.0000	0.0000	0.0000	0.0000	4.781755605	0.027491091	3.99%
78	0.001562417	0.000876155	0.019141445	0.015305751	0.0000	0.0000	0.0000	0.0000	5.228691417	0.034873066	4.52%
77	0.001550533	0.000865687	0.025698653	0.020305751	0.0000	0.0000	0.0000	0.0000	5.679357502	0.04398419	5.07%
76	0.001540505	0.000864637	0.034705173	0.027051753	0.0000	0.0000	0.0000	0.0000	6.133468887	0.05584001	5.62%
75	0.001531437	0.000863304	0.046808933	0.035159506	0.0000	0.0000	0.0000	0.0000	6.591550134	0.070695227	6.10%
74	0.001523137	0.000862029	0.0620076912	0.046699248	0.0000	0.0000	0.0000	0.0000	7.05939649	0.089656007	6.62%
73	0.001515452	0.000860829	0.08020076912	0.0616699248	0.0000	0.0000	0.0000	0.0000	7.520947464	0.113233177	7.19%

ATTACHMENT 5

April 24, 2024

Via Certificate of Mailing

Edward B. St. John, First Selectman
Town of Middlebury
1212 Whittemore Road
Middlebury, CT 06762

Re: **Proposed Modifications to an Existing Telecommunications Facility at 2123 Middlebury Road in Middlebury, Connecticut**

Dear First Selectman St. John:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to modify its existing wireless telecommunications facility at Quassy Amusement Park, 2123 Middlebury Road in Middlebury, Connecticut (the “Property”). The existing facility consists of a single canister antenna on the top of an antenna mast, attached to the maintenance building in the northeasterly portion of the Property. Cellco intends to remove the existing cannister antenna and one remote radio head (“RRH”) and install a new cannister antenna on the antenna mast and two (2) new RRHs on the ground. The overall height of the antenna on the pipe mast will decrease by approximately 0.5 inches, from 31.7’ to 31.2’ above ground level.

As presented in the attached Sub-Petition, the proposed facility modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-153). Landowners whose property abuts the Property were also sent notice of this filing along with a copy of the project plans.

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the attached Sub-Petition.

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

25788523-v1

April 24, 2024

Via Certificate of Mailing

Curtis Bosco, Zoning Enforcement Officer
Town of Middlebury
1212 Whittemore Road
Middlebury, CT 06762

Re: **Proposed Modifications to an Existing Telecommunications Facility at 2123 Middlebury Road in Middlebury, Connecticut**

Dear Mr. Bosco:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to modify its existing wireless telecommunications facility at Quassy Amusement Park, 2123 Middlebury Road in Middlebury, Connecticut (the “Property”). The existing facility consists of a single canister antenna on the top of an antenna mast, attached to the maintenance building in the northeasterly portion of the Property. Cellco intends to remove the existing cannister antenna and one remote radio head (“RRH”) and install a new cannister antenna on the antenna mast and two (2) new RRHs on the ground. The overall height of the antenna on the pipe mast will decrease by approximately 0.5 inches, from 31.7’ to 31.2’ above ground level.

As presented in the attached Sub-Petition, the proposed facility modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-153). Landowners whose property abuts the Property were also sent notice of this filing along with a copy of the project plans.

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the attached Sub-Petition.

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

25788523-v1

April 24, 2024

Via Certificate of Mailing

Lake Quassapaug Amusement Park, Inc.
P.O. Box 887
Middlebury, CT 06762

Re: **Proposed Modifications to an Existing Telecommunications Facility at 2123 Middlebury Road in Middlebury, Connecticut**

Dear Sir or Madam:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to modify its existing wireless telecommunications facility at Quassy Amusement Park, 2123 Middlebury Road in Middlebury, Connecticut (the “Property”). The existing facility consists of a single canister antenna on the top of an antenna mast, attached to the maintenance building in the northeasterly portion of the Property. Cellco intends to remove the existing cannister antenna and one remote radio head (“RRH”) and install a new cannister antenna on the antenna mast and two (2) new RRHs on the ground. The overall height of the antenna on the pipe mast will decrease by approximately 0.5 inches, from 31.7’ to 31.2’ above ground level.

As presented in the attached Sub-Petition, the proposed facility modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-153). Landowners whose property abuts the Property were also sent notice of this filing along with a copy of the project plans.

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the attached Sub-Petition.

Please contact me if you have any questions regarding this proposal.

Sincerely,



Kenneth C. Baldwin

Attachment

27536210-v1

ATTACHMENT 6

April 24, 2024

Via Certificate of Mailing

«Name_and_Address»

Re: **Proposed Modifications to an Existing Telecommunications Facility at 2123 Middlebury Road in Middlebury, Connecticut**

Abutters Notice Letter

Dear «Salutation»:

This firm represents Cellco Partnership d/b/a Verizon Wireless (“Cellco”). Today, Cellco filed a Sub-Petition for Declaratory Ruling (“Sub-Petition”) with the Connecticut Siting Council (“Council”) seeking approval to modify its existing wireless telecommunications facility at Quassy Amusement Park, 2123 Middlebury Road in Middlebury, Connecticut (the “Property”). The existing facility consists of a single canister antenna and related equipment attached to a pipe mast, attached to an existing maintenance building in the northeasterly portion of the Property. Cellco intends to remove the existing cannister antenna and one remote radio head (“RRH”) and install a new cannister antenna and two (2) new RRHs on the ground. The overall height of the cannister antenna on the pipe mast will decrease by approximately 0.5 inches, from 31.7’ to 31.2’ above ground level.

The proposed facility modifications constitute an eligible facility request pursuant to Section 6409(a) of the Federal Middle Class Tax Relief and Job Creation act of 2012 (47 U.S.C. § 1455(a)) and the October 21, 2014 Order of the Federal Communications Commission (FCC-14-153).

Pursuant to its decision in Petition No. 1133, comments or concerns regarding this proposal should be submitted to the Council within thirty (30) days of the date of the attached Sub-Petition.

April 24, 2024

Page 2

This notice is being sent to you because you are listed as an owner of land that abuts the Property. If you have any questions regarding the Sub-Petition, the Council's process for reviewing the Sub-Petition or the details of the filing itself, please feel free to contact me at the number listed above. You may also contact the Council directly at 860-827-2935.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth C. Baldwin". The signature is fluid and cursive, with a long horizontal stroke at the end.

Kenneth C. Baldwin

Attachment



MIDDLEBURY QUASSY S - NENG _SC_ESNAP

2132 MIDDLEBURY RD.
MIDDLEBURY, CT 06762

PROJECT ID: 16774051
PSLC: 467716



VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

MIDDLEBURY QUASSY
S - NENG_SC_ESNAP
PROJECT ID:
16774051
LOCATION CODE:
467716

CONSTRUCTION DRAWINGS	
5	03/19/24 FOR SUBMITTAL
4	02/27/24 FOR SUBMITTAL
3	02/12/24 FOR SUBMITTAL
2	07/21/23 FOR SUBMITTAL
1	09/16/22 FOR SUBMITTAL
0	09/12/22 FOR SUBMITTAL

Dewberry
Dewberry Engineers Inc.
100 WASHINGTON STREET
DORSET, MA 01918
TEL: 508.263.2200
FAX: 508.263.2310



ISSUANCE BY: 03/19/2024 MR.
REVIEWED BY: OAS
CHECKED BY: BBR
PROJECT NUMBER: 80121487
JOB NUMBER: 50770383
COORDINATES:

N 41.5276669°
W 73.1493105°

ADDRESS:
2132 MIDDLEBURY RD.
MIDDLEBURY, CT 06762

SHEET TITLE
TITLE SHEET
SHEET NUMBER

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES
C-1	ADIAL MAP & KEY PLAN
C-2	EXISTING & PROPOSED EQUIPMENT PLANS
C-3	ELEVATION
C-4	CONSTRUCTION DETAILS

EQUIPMENT TO BE REMOVED:
• EXISTING (1) ANTENNA AND (1) RRH TO BE REMOVED FROM THE EXISTING SITE.

EQUIPMENT TO BE INSTALLED:
• INSTALL (3) NEW ANTENNAS AND (3) RRH'S ON THE EXISTING PILE DRIVEN FOUNDATIONS AND (2) PILES IN THE EXISTING FENCED AREA.

• INSTALL JUMPERS AS REQUIRED BETWEEN SECTOR DRYS, RRH'S & ANTENNAS.

• CAP AND WEATHERPROOF UNUSED ANTENNA PORTS.

• GROUND EXISTING PIPE MOUNTS PER VERIZON WIRELESS SPECIFICATIONS.

• ADD (3) 20A/2P BREAKERS TO EXISTING POWER PANEL.

REMARKS:
1. DO NOT WORK UNDER AN ANTENNA RRH FOR MIDDLEBURY QUASSY S - QUASSY MAINTENANCE DATED 07/17/24. VERIFY SCOPE OF WORK WITH FINAL RFS PLAN TO CONSTRUCTION.

SMART TOOL VENDOR PROJECT NUMBER: N/A
NEW LOCATION CODE (PSLC): 467716
PROJECT ID: 16774051

CONTRACTOR PMI REQUIREMENTS

THIS DOCUMENT WAS DEVELOPED TO PERFORM A SPECIFIC SITE SURVEY AND IS NOT VALID FOR ANY OTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

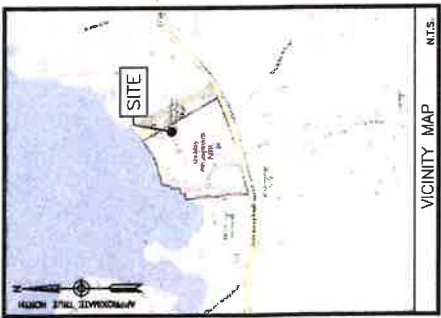
S.O.A. COMPLIANCE FACILITY IS UNMANNED AND NOT FOR HUMAN INhabITATION.

ENGINEER
DEWBERRY ENGINEERS INC.
88 SUMNER ST.
BOSTON, MA 02110
PHONE # (617) 531-0800
CONTACT: BOJANNA REVETTE, PE

CONSTRUCTION
VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

COORDINATES:
LATITUDE: N 41.5276669°
LONGITUDE: W 73.1493105°
*PER RFS

GROUND ELEVATIONS:
795'S
*PER GOOGLE EARTH



SHEET INDEX



VERIZON WIRELESS
 VERIZON WIRELESS
 51 AUBER STREET
 MEDWAY, MA 02053

MIDDLEBURY QUASSY
 S - NEING, SJC, ENVAP
 PROJECT ID:
 16774051
 LOCATION CODE:
 467716

Dewberry
 Dewberry Engineers Inc.
 80 SUMNER STREET
 BOSTON, MA 02118
 PHONE: 617 603 3949



DATE: 03/19/2024, MR
 REVIEWED BY: OAS
 CHECKED BY: BRE
 PROJECT NUMBER: 50121487
 JOB NUMBER: 5012030
 COORDINATOR:
 N 41.5276669
 W 73.1493105
 ADDRESS:

2132 MIDDLEBURY RD.
 MIDDLEBURY, CT 06782

GENERAL NOTES
 SHEET NUMBER

GN-1

GENERAL ELECTRICAL NOTES:

- SUBMITTAL OF BID INDICATES CONTRACTOR IS COORDINATOR OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- CONTRACTOR SHALL PERFORM ALL VERIFICATION, OBSERVATION TESTS, AND EXAMINATION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR SHALL NOTIFY THE ARCHITECT LISTING ALL MATERIALS, EQUIPMENT, AND SUBSTITUTIONS.
- CONTRACTOR SHALL VERIFY WITH OWNER PRIOR TO INSTALLATION.
- THESE PLANS ARE SUPPLEMENTARY ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
- EACH CONDUIT OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANEL BOARD, HOLLOW CONDUIT, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).
- ALL WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE ALARM AND SIGNALING CODE (NFPA), NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA), NATIONAL ELECTRICAL TRAINING CENTER (NETC), AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND PAY ALL REQUIRED FEES.
- CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES.
- COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY OR DEFECTIVE SHALL BE CORRECTED AT ONCE UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR WIRE.
- PREPARE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL AS-BUILT DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, BUILDINGS, AND CIRCUITS OVER TO OWNER AT JOB COMPLETION.
- USE 1-1/2" CONDUIT ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LAMPING FIXTURES.
- ALL BUILDING WIRING SHALL BE STAMPED COPPER TYPE THIN-THICK CONDUCTORS.
- ALL CONDUIT RUNS, PIPES, AND ELECTRICAL EQUIPMENT SHALL HAVE ALL IDENTIFICATION TAGS NOT LESS THAN 1/2" X 1/2" UNLESS OTHERWISE INDICATED. WHEN THEY MAY BE SUBSTITUTED AND A MINIMUM OF 25,000 ALC UNLESS OTHERWISE INDICATED.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE OBTAINED AS REQUIRED BY ALL APPLICABLE ELECTRICAL CODES AND SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE ALARM AND SIGNALING CODE (NFPA), NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA), NATIONAL ELECTRICAL TRAINING CENTER (NETC), AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
- IN DRILLING HOLES FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, ETC., IT MUST BE DONE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS AND ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
- LOCATION OF TANKS AND/OR REINFORCING STEEL, ARE NOT SOLEMELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHOD AND EQUIPMENT. NO X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDON SHALL BE USED.
- ALL DIMENSIONS IN THE FIELD SHALL BE TIME STAMPED IN ACCORDANCE WITH PRESTO SPECIALLY STAMPED DIMENSIONS ON DRAWINGS.
- VERIFY ALL CONDUIT ROUTING W/OWNER REP. & VERIZON WIRELESS C.A. NO OTHER SURFACE MOUNTED CONDUITS WILL BE ALLOWED OTHER THAN IN CHASES AND ABOVE CEILING.
- ALL MATERIALS SHALL BE U.L. LISTED.
- CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE INSTALLED IN UNDRY CONCRETE SLABS. IN CONTACT WITH THE EARTH SURFACE, CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE INSTALLED IN CONTACT WITH EARTH SHALL BE 1/2" LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
- ALL METALS THINGS SHALL HAVE U.L. LABEL ATTACHED SHALL BE CLAMP RING.
- FLUORESCENT METALIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAMES" OR "SLOTTED" TYPE, SEAL TIGHT FLAREABLE TYPE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL BE FULL SIZE DRUMMING.
- CONDUIT RUNS MAY BE SURFACE MOUNTED IN CEILING OR WALLS UNLESS INDICATED OTHERWISE. VERIFY EXISTING CONDUIT RUNS PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR WALLS. VERIFY EXISTING CONDUIT RUNS PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR WALLS.
- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
- CONDUIT SHALL BE U.L. LISTED, EXCEPT WITH BUILDING WIRING.
- GROUNDING SYSTEM (RESISTANCE SHALL NOT EXCEED 5 OHMS). IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE COMPLETE SET OF PRINTS SHOWING INSTALLED WORK.
- UPON COMPLETION OF WORK, CONTRACTOR SHALL PROVIDE CLEAN OPERATING RECORDS TO OWNER. CONTRACTOR SHALL TEST REPORTS TO PROJECT MANAGER. CLEAN RECORDS OF ALL WORK SHALL BE PROVIDED TO PROJECT MANAGER. CLEAN RECORDS OF ALL WORK SHALL BE PROVIDED TO PROJECT MANAGER.
- ALL WIRING AND FLOOR PENETRATIONS SHALL BE REPAIR OR APPROVED EQUAL PER ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

GROUNDING NOTES:

- GROUNDING SHALL COMPLY WITH NEC ART. 250.
- GROUNDING CONDUCTORS SHALL BE #8 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR INDOOR USE.
- ALL GROUNDING CONDUITS TO BE BURIED HYDRONIC COMPRESSION TYPE CONNECTIONS OR COVERED EXTERIOR CONDUITS SHALL NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH UNPAINTED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE EXCEPT AS OTHERWISE NOTED. ALL GROUNDING CONDUITS SHALL BE BENT AT RIGHT ANGLES. ALWAYS BEND 12" RADIUS BEND. IN WIRE CHASES TO GROUNDING ON ALL LOCATIONS.
- CONDUITS TO GROUNDING SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LIDS. APPLY ODE WRAPPING COMPART TO ALL LOCATIONS.
- TEST COMPLETED GROUNDING SYSTEM AND RECORD RESISTANCE VALUES FOR PROJECT CLOSE-OUT DOCUMENTATION.
- GROUNDING CONDUCTORS BETWEEN RISE AND WATERMAIN SHALL BE #2/0 BONDING ALUMINUM FROM METALLO WATERMAIN TO WATERMAIN. ALL WATERMAIN SHALL BE #2/0 BONDING ALUMINUM FROM METALLO WATERMAIN TO WATERMAIN. ALL WATERMAIN SHALL BE #2/0 BONDING ALUMINUM FROM METALLO WATERMAIN TO WATERMAIN.
- GROUNDING CONDUCTORS SHALL BE U.L. LISTED COPPER OR COPPER ALLOY. ALL GROUNDING CONDUITS SHALL BE U.L. LISTED COPPER OR COPPER ALLOY. ALL GROUNDING CONDUITS SHALL BE U.L. LISTED COPPER OR COPPER ALLOY.

STRUCTURAL STEEL NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- STRUCTURAL STEEL WELDED SHEAR PLATES, INLET, AND WAYS SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
 ALL OTHER WELDED SHEAR PLATES, INLET, AND WAYS UNLESS NOTED OTHERWISE:
 ASTM A572-50
 ALL WELDS SHALL BE IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
 ALL WELDS SHALL BE IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- ALL WELDS SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WELDED BUTT WELD JOINTS. ALL WELDS SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WELDED BUTT WELD JOINTS. ALL WELDS SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1 WELDED BUTT WELD JOINTS.
- ROSTER CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A505 BOLTS (1/4" DIA) SUPPLIED WITH A NUT AND WASHER. ALL BOLTS SHALL BE GALVANIZED. USE FULL TENSILE RATED. AT THE COMPLETION OF ALL WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
- DO NOT SPILL OILS THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
- NON-STRUCTURAL CONNECTIONS FOR STEEL CEILING MAY USE 1/4" DIA GALVANIZED WITH A 307 BOLTS UNLESS NOTED OTHERWISE.
- USE PRECAUTIONS & PROCEDURES PER AWS D1.1 WHEN WELDING GALVANIZED METALS.
- ALL EXISTING RIVETS AND BOLTS DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
- CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.
- ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A153/A153M-00 HOT-DIP GALVANIZED STEEL. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A153/A153M-00 HOT-DIP GALVANIZED STEEL. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A153/A153M-00 HOT-DIP GALVANIZED STEEL.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING STRUCTURE. ALL DIMENSIONS SHALL BE FIELD VERIFY BY CONTRACTOR PRIOR TO FABRICATION. ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THESE SHOWN SHALL BE REPORTED TO DEWBERRY ENGINEER IMMEDIATELY.
- DO NOT CHANGE SIZE NOR SPACING OF STRUCTURAL ELEMENTS.
- DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDING DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- ALL UTILITIES SHALL BE MARKED. ALL UTILITIES SHALL BE MARKED. ALL UTILITIES SHALL BE MARKED.
- ALL UTILITIES SHALL BE MARKED. ALL UTILITIES SHALL BE MARKED. ALL UTILITIES SHALL BE MARKED.
- EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE AND COORDINATE THEIR WORK WITH THE WORK OF OTHERS.
- REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.
- ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- THINK OVER ALL SALVAGEABLE BUILDING MATERIAL TO BUILDING MATERIAL.
- ALL CONSTRUCTION WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.
- ALL ROOF PENETRATIONS SHALL BE REPAIR TO MAINTAIN ALL ROOF WARRANTIES AND OBTAIN A PERMANENT WATERPROOF SEALANT.
- CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START. MORE SPECIFICALLY FOR STRUCTURAL CONCRETE THE BUILDING (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

GENERAL CONSTRUCTION NOTES:

- ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND COMPLY WITH VERIZON WIRELESS SPECIFICATIONS.
- CONTRACTOR SHALL CONTACT THE STATE (860-344-7243) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
- ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, EXISTING STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE OWNER.
- DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
- DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START. MORE SPECIFICALLY FOR STRUCTURAL CONCRETE THE BUILDING (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- SEAL PENETRATIONS THROUGH THE FIELD AREAS WITH U.L. LISTED 0 FINE GRADE APPROVED MATERIALS.
- ALL DIMENSIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.

CODE SPECIFICATIONS:

- ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:
 2009 CONNECTICUT STATE BUILDING CODE WITH THE FOLLOWING APPLICABLE CODES:
 2021 INTERNATIONAL RESIDENTIAL CODE (IRC)
 2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
 2021 INTERNATIONAL MECHANICAL CODE (IMC)
 2021 INTERNATIONAL ELECTRICAL CODE (NEC)
 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
 IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.
- ALL STRUCTURAL WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL, 13TH EDITION (AISC 13TH ED.)
- ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI 301) SPECIFICATIONS FOR STRUCTURAL CONCRETE THE BUILDING (ACI 318) AND BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- ALL REINFORCING STEEL WORK TO BE DONE IN ACCORDANCE WITH THE (ACI 315) MANUAL OF STANDARD PRACTICE FOR REINFORCING REINFORCED CONCRETE STRUCTURES.



VERIZON WIRELESS
51 ALDER STREET
MIDDLETOWN, MA 02053

MIDDLEBURY QUASSY
S - NENG, SC, ES, NAP
PROJECT ID:
16774051
LOCATION CODE:
467716

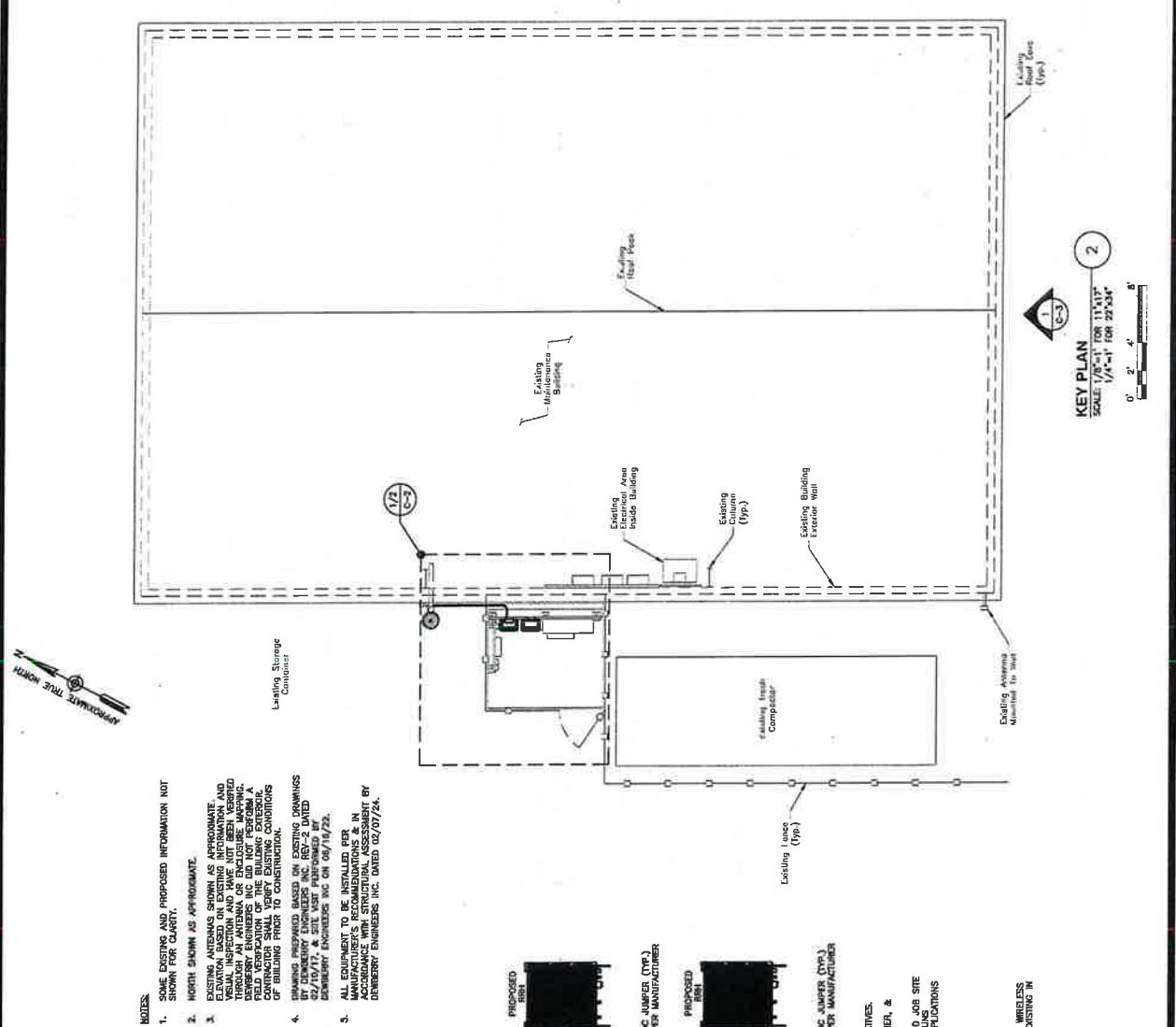
CONSTRUCTION DRAWINGS	
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3	02/12/24 FOR SUBMITTAL
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1	09/16/22 FOR SUBMITTAL
0	09/12/22 FOR SUBMITTAL

Dewberry
Dewberry Engineers Inc.
STATE STREET
BOSTON, MA 02110
TEL: 617.552.2700
FAX: 617.552.3316



DRAWN BY: 03/19/2024 MR
REVIEWED BY: OAS
CHECKED BY: BMR
PROJECT NUMBER: 30121407
JOB NUMBER: 30770393
COORDINATES:
N 41.5276669°
W 73.1493105°
ADDRESS:
2132 MIDDLEBURY RD.
MIDDLEBURY, CT 06762

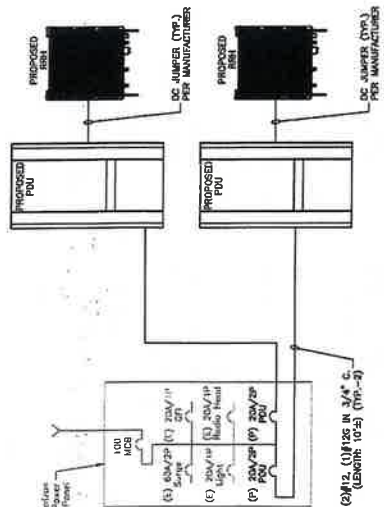
SHEET TITLE
AERIAL MAP &
KEY PLAN
KEY PLAN
SHEET NUMBER
C-1



KEY PLAN
SCALE: 1/4"=1' FOR 22'x34'
0' 2' 4' 8'



AERIAL MAP
SCALE: N.T.S.



PARTIAL ONE LINE DIAGRAM
SCALE: N.T.S.

- NOTES**
- SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
 - NOTES SHOWN AS APPROXIMATE.
 - EXISTING ANTENNAS SHOWN AS APPROXIMATE. ELEVATION BASED ON EXISTING INFORMATION AND THROUGH AN ANTENNA OR ENCLOSURE MAPPING. DEWBERRY ENGINEERS INC DID NOT PERFORM A FIELD SURVEY TO VERIFY EXISTING ANTENNA COORDINATES SHALL VERIFY EXISTING CONDITIONS OF BUILDING PRIOR TO CONSTRUCTION.
 - IMAGING PREPARED BASED ON EXISTING DRAWINGS AND VISUAL SURVEY DATED 02/16/17, & SITE VISIT PERFORMED BY DEWBERRY ENGINEERS INC ON 09/16/22.
 - ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH THE 2017 NEC, AS ADAPTED BY DEWBERRY ENGINEERS INC. DATED 02/07/24.

- NOTES**
- COORDINATE ROUTING OF CONDUITS WITH BUILDING OWNER REPRESENTATIVES.
 - COORDINATE POWER SHUT-DOWN WITH UTILITY COMPANY, BUILDING OWNER, & TENANT.
 - PROVIDE RULL BOXES & EXPANSION JOINTS AS REQUIRED BY CODE AND JOB SITE CONDITIONS. ADDITIONALLY, PROVIDE EXPANSION FITTINGS IN CONDUIT RUNS FOR THERMAL EXPANSION.
 - INSTALL ALL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.
 - ALL GROUNDING SHALL COMPLY WITH NEC ARTICLE 250.
 - SEE SHEET C-2 FOR EQUIPMENT LAYOUT.
 - VERIFY BREAKER SIZE WITH THE CABINET MANUFACTURER AND VERIZON WIRELESS C.E. PRIOR TO CONSTRUCTION. PROVIDE CIRCUIT BREAKER TO MATCH EXISTING IN TYPE AND AC RATING.
 - PROVIDE VERIZON WIRELESS PERMANENT LABELS ON PANEL.
 - (P) = PROPOSED
(E) = EXISTING



VERIZON WIRELESS
51 ALDER STREET
MIDDLETOWN, MA 02053

MIDDLEBURY COLLEGE
S - NENG, SC, ES/NAP
PROJECT ID:
16774051
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Dewberry
Dewberry Engineers Inc.
100 MARKET STREET
ROCHESTER, MA 02110
PHONE: 603.655.2800
FAX: 603.655.2810



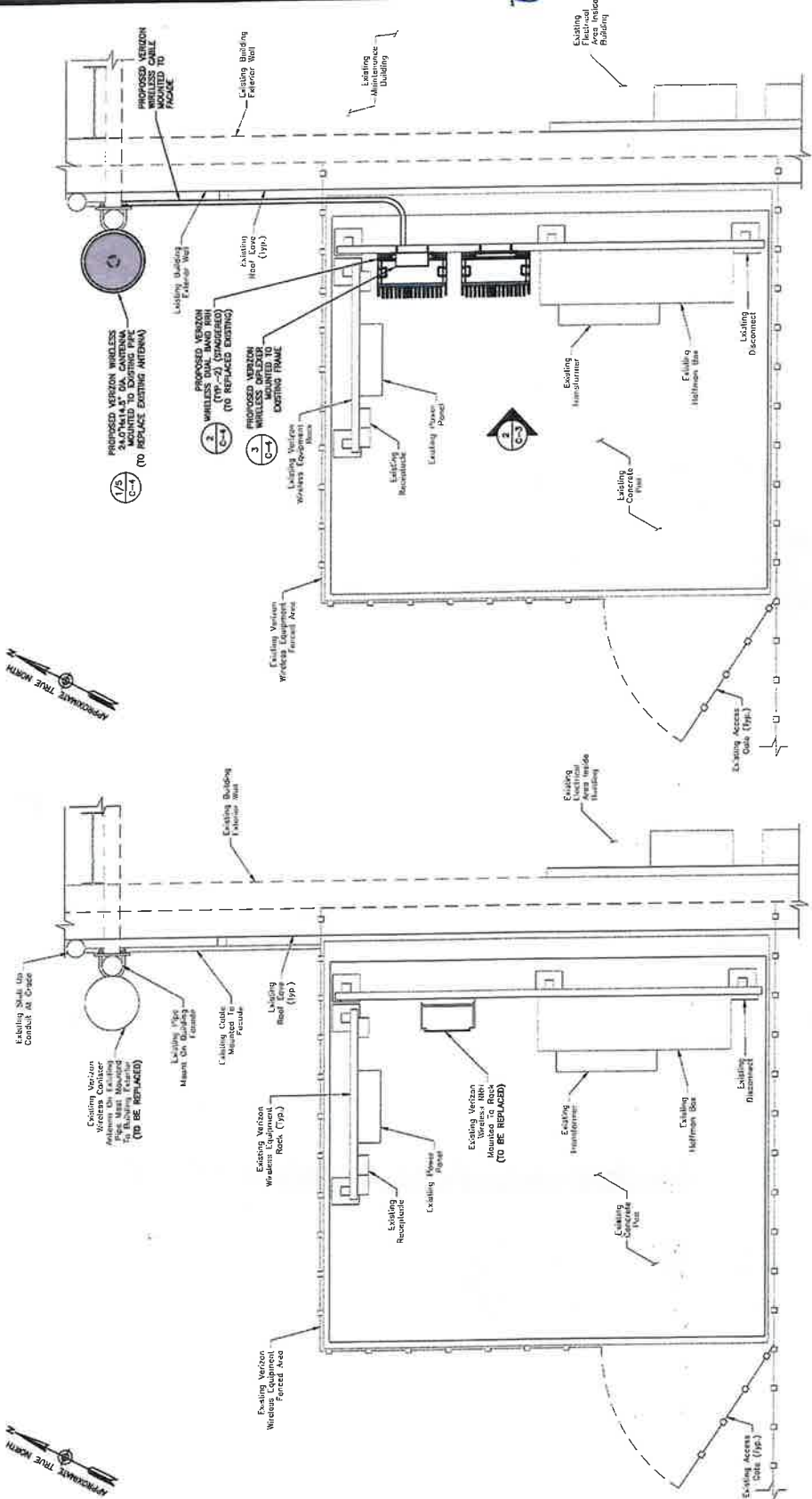
DATE: 03/19/2024
REVISED BY:
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PROJECT NUMBER: 50121407
JOB NUMBER: 50170303

COORDINATES:
N 41.5276669°
W 73.1493105°

2132 MIDDLEBURY RD,
MIDDLEBURY, CT 06762

SHEET TITLE
EXISTING & PROPOSED
EQUIPMENT PLANS
SHEET NUMBER

C-2



- NOTES:
1. SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
 2. NORTH SHOWN AS APPROXIMATE.
 3. VERIZON EQUIPMENT PLANS AND PROPOSED INFORMATION IS APPROXIMATE. DEWBERRY ENGINEERS INC. HAS CONDUCTED VISUAL INSPECTION AND HAS NOT BEEN VERIFIED THROUGH AN ANTENNA OR ENCLOSURE SURVEY. VERIFICATION OF THE BUILDING EXTERIOR CONTRACTOR SHALL VERIFY EXISTING CONDITIONS OF BUILDING PRIOR TO CONSTRUCTION.
 4. DEWBERRY ENGINEERS INC. HAS CONDUCTED VISUAL INSPECTION AND HAS NOT BEEN VERIFIED THROUGH AN ANTENNA OR ENCLOSURE SURVEY. VERIFICATION OF THE BUILDING EXTERIOR CONTRACTOR SHALL VERIFY EXISTING CONDITIONS OF BUILDING PRIOR TO CONSTRUCTION.
 5. ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH STRUCTURAL ASSESSMENT BY DEWBERRY ENGINEERS INC. DATED 02/07/24.



VERIZON WIRELESS
51 ALDER STREET
MIDDLETOWN, MA 02055

MIDDLEBURY QUASSY
S-NENG, SC ESNAP
PROJECT ID:
16774051
LOCATION CODE:
467716

CONSTRUCTION DRAWINGS	
5	03/19/24 FOR SUBMITTAL
4	02/27/24 FOR SUBMITTAL
3	02/12/24 FOR SUBMITTAL
2	07/21/23 FOR SUBMITTAL
1	09/18/22 FOR SUBMITTAL
0	06/12/22 FOR SUBMITTAL

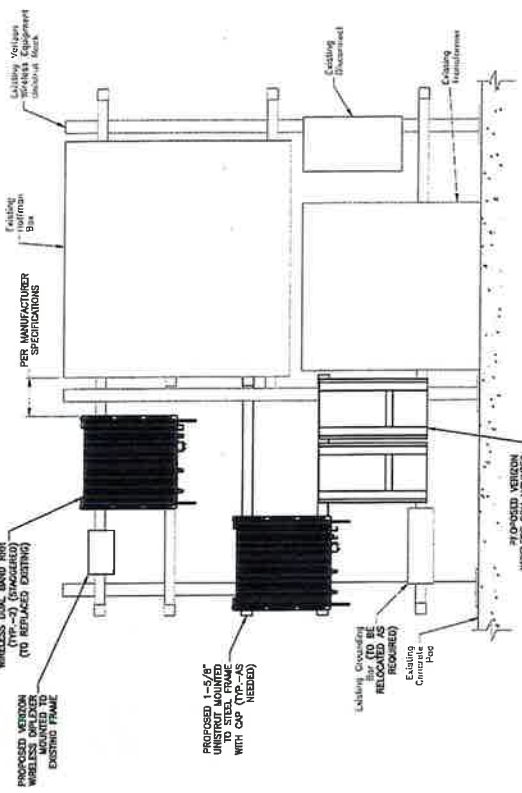
Dewberry
Dewberry Engineers Inc.
301 E. 7th Street
Boston, MA 02110
Tel: 617.753.3100
Fax: 617.753.3110



DRAWN BY: 03/19/2024 MR
REVISED BY: OMS
CHECKED BY: BBR
PROJECT NUMBER: 3012487
JOB NUMBER: 50170303
COORDINATES:
N 41.5276669°
W 73.1493105°
ADDRESS:

2132 MIDDLEBURY RD.
MIDDLEBURY, CT 06762

ELEVATION
SHEET TITLE
SHEET NUMBER
C-3

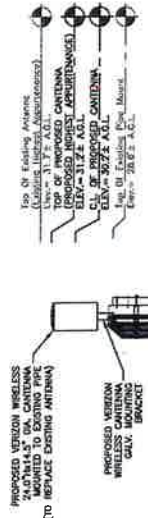


RRH ELEVATION 2
SCALE: N.T.S.

Existing Top of Roof
Elev. = 18.11 A.C.L.

Ground Line
Elev. = 0.01 A.C.L.

- NOTES:**
- SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
 - ELEVATION SHOWN AS APPROXIMATE.
 - EXISTING ANTENNAS SHOWN AS APPROXIMATE ELEVATION BASED ON EXISTING INFORMATION AND VISUAL INSPECTION AND HAVE BEEN RELOCATED TO THE PROPOSED ANTENNA MOUNTING POINTS. DEWBERRY ENGINEERS INC DID NOT PERFORM A FIELD VERIFICATION OF THE BUILDING EXTERIOR. CONTRACTOR SHALL VERIFY ALL CONDITIONS OF BUILDING PRIOR TO CONSTRUCTION.
 - DRAWING PREPARED BASED ON EXISTING DRAWINGS BY DEWBERRY ENGINEERS INC. DATED 02/16/17, & SITE VISIT PERFORMED BY DEWBERRY ENGINEERS INC ON 04/19/22.
 - ALL EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS & IN ACCORDANCE WITH STRUCTURAL ASSESSMENT BY DEWBERRY ENGINEERS INC. DATED 02/01/24.



RRH ELEVATION 1
SCALE: 3/16"=1' FOR 11'x17'
3/8"=1' FOR 25'x34'

Existing Top of Roof
Elev. = 18.11 A.C.L.

Ground Line
Elev. = 0.01 A.C.L.





VERIZON WIRELESS
51 ALDER STREET
MEDWAY, MA 02053

MIDDLEBURY QUASSY
S - NENG, SC ESNAP
PROJECT ID:
16774051
LOCATION CODE:
467716

CONSTRUCTION DRAWINGS	
5 03/19/24	FOR SUBMITTAL
4 02/27/24	FOR SUBMITTAL
3 02/12/24	FOR SUBMITTAL
2 07/21/23	FOR SUBMITTAL
1 09/16/22	FOR SUBMITTAL
0 09/12/22	FOR SUBMITTAL



Dewberry Engineers Inc.
1000 MAIN STREET
SUITE 100
MIDDLEBURY, MA 02048
PHONE: 802.233.3300
FAX: 802.233.3308



DRAWN BY: 03/19/2024, LR
REVISED BY: DUS
CHECKED BY: BER
PROJECT NUMBER: 9121407
JOB NUMBER: 30170383
COORDINATOR:

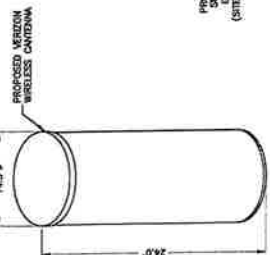
N 41.5276669°
W 73.1493105°

ADDRESS:
2132 MIDDLEBURY RD.
MIDDLEBURY, CT 06762

SHEET TITLE:
CONSTRUCTION DETAILS

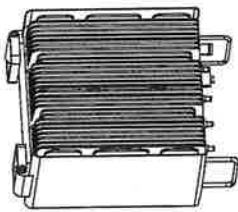
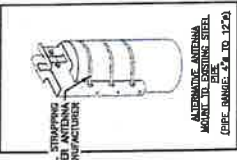
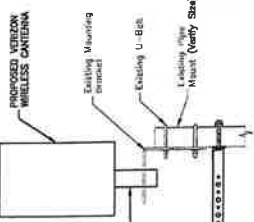
SHEET NUMBER

C-4



Cadillac Cellular	
Model:	N1UB00S-00-FIM4
Dimensions:	28.6" L x 12.0" S
Weight:	26.6 LBS
EMERGENCY ANTENNA	
MODEL:	022414-B6780
DIMENSIONS:	24.0" L x 14.5" S
WEIGHT:	22.5 LBS.

- ANTENNA NOTES:
- INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. USE APPROPRIATE MOUNTING HARDWARE FOR CONSTRUCTION TYPE.
 - RUSTED BOLTS ARE TO BE REMOVED AND REPLACED AS REQUIRED IN FIELD.
 - ALL DEBRIS ARE TO BE NEATLY BUNDLED, PROVIDE MOUNTING HARDWARE AS REQUIRED.
 - ALL STEEL TO BE GALVANIZED.
 - CONTRACTOR TO GROUND EXISTING/PROPOSED PIPE MOUNTS WITH GROUNDING LEADS. CONNECT LEADS TO THE SECTOR GROUNDING BAR. SECTOR GROUNDING BAR SHALL BE SEPARATE FROM THE MAIN GROUNDING BAR.
 - SECTOR GROUNDING BAR SHALL BE SEPARATE FROM THE MAIN GROUNDING BAR.
 - CONTRACTOR SHALL PROTECT THE PIPE STRUCTURAL MEMBERS FROM ABUSE TO PREVENT BRACING, HOLES, DOWNS, ETC. DURING FABRICATION, HANDLING, AND INSTALLATION.

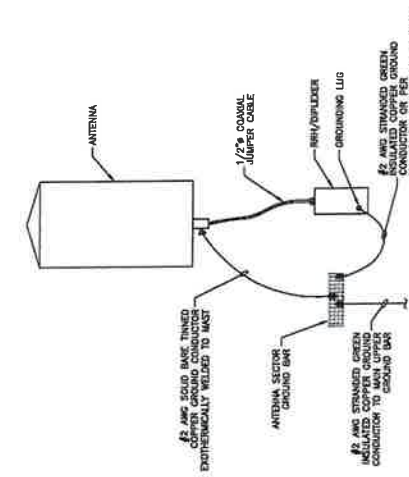


250/2500 MINI MICRO BAND (E5444414-13A)	
DIMENSIONS:	14.9" H x 14.9" W x 8.1" D
WEIGHT:	79.24 LBS
QUANTITY:	1 TOTAL
EMERGENCY MICRO BAND (E5433318-25A)	
DIMENSIONS:	14.9" H x 14.9" W x 10.0" D
WEIGHT:	74.75 LBS
QUANTITY:	1 TOTAL

- NOTE:
- CONTRACTOR TO VERIFY EQUIPMENT WEIGHTS AND MANAGED FOR FINAL MANUFACTURER PRIOR TO CONSTRUCTION.

EMERGENCY	
DIMENSIONS:	4.5" H x 6.5" W x 2.0" D
WEIGHT:	6.15 LBS.
QUANTITY:	1 TOTAL

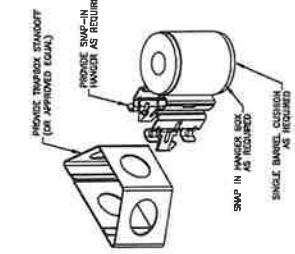
CANTENNA DETAIL 1
SCALE: N.T.S.



- NOTES:
- VERIFY EXISTING GROUNDING SYSTEM IS INSTALLED PER VERIZON WIRELESS STANDARDS.
 - BOND NEW EQUIPMENT INTO EXISTING GROUNDING SYSTEM IN ACCORDANCE WITH VERIZON WIRELESS STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.

TYPICAL PANEL ANTENNA/RRH GROUNDING DETAIL 5
SCALE: N.T.S.

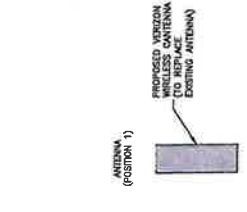
RRH DETAIL 2
SCALE: N.T.S.



- NOTES:
- DO NOT INSTALL CABLE GROUND KIT AT A BOND. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 - GROUNDING KIT SHALL BE TIN PLATED COPPER WITH TWO-HOLE LUG, SIZE PER COAX DIAMETER.
 - WEATHER SEAL GROUND KIT FOR CARRIER REQUIREMENTS.
 - COAX CABLE GROUND KIT LOCATION & QUANTITY SHALL BE PER CARRIER SPECIFICATIONS & STANDARDS.

COAX/HYBRID GROUNDING DETAIL 4
SCALE: N.T.S.

DIPLEXER DETAIL 3
SCALE: N.T.S.



ANTENNA CONFIGURATION 7
SCALE: N.T.S.

FINAL EQUIPMENT CONFIGURATION									
SECTOR	POSITION	TECHNOLOGY	ANTENNA MODEL	VENDOR	RRH (QTY./ANGLE)	CENTRELINE (QTY.)	ASSEMBLY (QTY./ANG)	ANCLARY	FEED LINE LENGTH
ALPHA	A1	LTE	022414-B6780	COMSCOPE	(P) (1) 82/BRAN RHH-CRAN (P-H4396-25A)	30.0±	Ø	(P) (1) DECSER 5A181824-0	40'±
					(P) (1) (P-H4311-13A)				

CONTRACTOR TO FIELD VERIFY HYBRID CABLE LENGTHS PRIOR TO CONSTRUCTION. LENGTH IS ESTIMATED FROM THE FORCED AREA AT GRADE TO ANTENNA WITH 15% BUFFER.
(C) = Existing
(P) = PROPOSED

FINAL EQUIPMENT CONFIGURATION 8
SCALE: N.T.S.

CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS

ABUTTING PROPERTY OWNERS

**2132 MIDDLEBURY ROAD
MIDDLEBURY, CONNECTICUT**

	Property Address	Owner's and Mailing Address
1.	2328 Middlebury Road	McDonald Et Al 2328 Middlebury Road Middlebury, CT 06762
2.	2300 Middlebury Road	Town of Middlebury 1212 Whittemore Road Middlebury, CT 06762
3.	20 Christian Road	Matthew Cusack 20 Christian Road Middlebury, CT 06762
4.	19 Abbott Farm Road	Mark and Jennifer Ocampo 19 Abbott Farm Road Middlebury, CT 06762
5.	11 Abbott Farm Road	Donna Cipriano and Donna Mychaskiw 11 Abbott Farm Road Middlebury, CT 06762
6.	42 Abbott Farm Road	Krenan Etemi 42 Abbott Farm Road Middlebury, CT 06762
7.	2130 Middlebury Road	Town of Middlebury 1212 Whittemore Road Middletown, CT 06762