

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
: :
A PETITION OF CELLCO PARTNERSHIP : PETITION NO. 1629
D/B/A VERIZON WIRELESS FOR A :
DECLARATORY RULING ON THE NEED TO :
OBTAIN A SITING COUNCIL CERTIFICATE :
FOR THE INSTALLATION OF A WIRELESS :
TELECOMMUNICATIONS FACILITY AT 330 :
ROBERTS STREET, EAST HARTFORD, :
CONNECTICUT : JUNE 3, 2024

RESPONSES OF CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS TO
CONNECTICUT SITING COUNCIL INTERROGATORIES

On May 20, 2024, the Connecticut Siting Council (“Council”) issued Interrogatories to Cellco Partnership d/b/a Verizon Wireless (“Cellco”), relating to Petition No. 1629. Below are Cellco’s responses.

Notice

Question No. 1

Referencing Petition, Section III-B, and Attachments 8 & 9, has the Town of East Hartford and/or any abutting property owners provided comments to Cellco Partnership d/b/a Verizon Wireless (Cellco) since the Petition filing? If so, please summarize the comments.

Response

No abutting property owners have commented on the Petition. Cellco’s Counsel received a call from Steve Hnatuck, the Town’s Deputy Development Director. Mr. Hnatuck had some questions about the proposed facility and the Council’s jurisdiction over the installation.

Existing Non-Tower Antenna Array

Question No. 2

What entity approved the existing non-tower antenna array at the Ramada Inn? When?

Response

The Ramada Inn, non-tower antenna array, was approved by the Town of East Hartford on February 11, 2015.

Question No. 3

Provide details of the existing non-tower antenna array at the Ramada Inn facility including type, height, what equipment is installed and what services are provided?

Response

The Ramada Inn facility consisted of nine (9) antennas attached to the façade of the mechanical equipment screen wall on the roof of the hotel at a centerline height of approximately 53 feet above ground level. Equipment associated with the antennas was located on the ground adjacent to the building. Cellco's antennas operate in each of Cellco's frequencies (700 MHz, 850 MHz, 1900 MHz, 2100 MHz, 3700 MHz and 5G) providing service to portions of I-84 and the surrounding commercial and residential areas.

Question No. 4

Referring to Petition pp. 1-2, would the existing non-tower antenna array on Ramada Inn be decommissioned before Cellco installs the new site or afterwards? Would the transition from the existing site to the proposed site create a network outage or interruption?

Response

The existing Ramada Inn facility will remain on-air until the replacement facility described herein is constructed and activated. No interruption of service is therefore anticipated.

Question No. 5

Would any of the existing equipment from the non-tower antenna array at the Ramada Inn be used for the proposed facility?

Response

No equipment from the existing Ramada Inn facility would be used at the new facility location. Once the Ramada Inn site is decommissioned, its equipment will be put into Verizon stock for reuse at other existing facilities.

Question No. 6

Would a temporary tower facility be required to maintain Cellco service during the cutover of equipment to the replacement facility?

Response

The existing Ramada Inn facility will remain in operation while the new location is constructed and integrated into Cellco's network. Therefore, no temporary facility will be required, and no service interruption is anticipated.

Proposed Site

Question No. 7

How would the proposed replacement site impact Cellco's existing coverage and capacity within the service area. Would the proposed facility improve coverage and/or capacity? Please elaborate.

Response

The new facility may provide for some slight improvements in service since the antenna centerline height at the proposed facility is slightly higher than the existing facility location. Otherwise, Cellco expects the service from the new facility to be the same as the existing facility.

Question No. 8

Provide the distance and direction of the nearest property boundary.

Response

Cellco's proposed Beta Sector antennas are the closest, located approximately 60 feet from the westerly Property boundary. The closest property boundary to Cellco's proposed equipment platform is located approximately 45 feet to the north-northwest.

Question No. 9

Provide the distance and direction of the nearest residential structure.

Response

The nearest residential structure to the proposed facility is the Wood Cliff Estates apartment building on Nutmeg Lane in East Hartford, located approximately 1,130 feet to the southeast.

Proposed Replacement Facility and Associated Equipment

Question No. 10

What is the estimated cost of the proposed project? Does the cost include decommissioning the existing non-tower antenna array at the Ramada Inn?

Response

The estimated cost of the proposed project is approximately \$350,000. This does not include the estimated cost for the demolition of the existing Ramada Inn facility, which is estimated to be an additional \$50,000.

Question No. 11

Is the project, or any portion of the project, proposed to be undertaken by state departments, institutions or agencies, or to be funded in whole or in part by the state through any contract or grant?

Response

No.

Question No. 12

Provide typical construction workdays and hours, and the anticipated duration of construction.

Response

Construction would occur from 7 a.m. to 5 p.m. Monday through Saturday and is expected to take between 3 to 4 months.

Question No. 13

Referring to Petition p. 4, would Cellco's rooftop steel equipment platform be enclosed by fencing?

Response

No.

Question No. 14

The electronic version of the site plans provided in Attachment 2 of the Petition are not legible. Please provide a clear and legible electronic version of the site plans for the proposed facility.

Response

A new electronic version of the project plans is attached to the electronic filing of these responses.

Question No. 15

What is the height of the existing rooftop screen fence? What is the height of the proposed BTS and Battery cabinets?

Response

The top of the existing rooftop screening wall (fence) extends to a height of approximately 10.2 feet above the roof level of the building. The top of the proposed BTS and battery cabinets will be approximately 9.2 feet above the existing roof level.

Question No. 16

What limitations, if any, would the proposed facility design create for any future upgrades? Explain.

Response

The facility proposed will function much like a macro-cell tower site (three antenna sectors and related equipment located nearby). Other than structural or loading issues, Cellco does not foresee any limitations, that might limit or impact future facility upgrades.

Public Safety

Question No. 17

Would the proposed equipment installation be capable of supporting text-to-911 service and comply with federal E911 requirements and the Warning, Alert and Response Network Act of 2006?

Response

Yes.

Question No. 18

What measures are proposed for the site to ensure security and deter vandalism? (Including alarms, gates, locks, etc.) Is the door/access to the roof locked? Who has access?

Response

The door to the roof of the building remains locked at all times. Access to the roof is limited to building maintenance personnel and wireless carriers. In addition, Cellco's wireless

equipment will maintain separate silent intrusion alarms which are monitored remotely.

Question No. 19

Identify the safety standards and/or codes by which equipment, machinery or technology that would be used or operated at the proposed facility.

Response

- 2021 International Building Code (IBC), with the 2022 Connecticut State Building Code amendments.
- National Electric Code (NFPA 70).
- 2021 International Mechanical Code, with the 2022 Connecticut State Building Code amendments.
- 2022 Connecticut State Fire Safety Code.
- ANSI/TIA-222-H "Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures".
- Occupational Safety and Health Administration (OSHA).

Question No. 20

What is the maximum rated serviceable wind velocity for the proposed antennas?

Response

The maximum rated serviceable wind velocity for the proposed antennas is 150 mph.

Emergency Backup Power

Question No. 21

Does the building have a backup power source? If yes, does Cellco intend to connect to it? If so, identify the backup power source and where it is located.

Response

The existing building does not maintain a backup generator at the Property. Cellco plans to install a generator plug on the building to allow Cellco to connect a portable generator at the site, if needed.

Question No. 22

Referring to Petition Attachment 2,

- a. does the proposed facility have an emergency backup power battery cabinet? If yes, what is the anticipated run time of the battery?
- b. If a power outage exceeds the batteries capacity would a temporary generator be brought to site? If so, provide the fuel source and the location of the generator hookup.

Response

- a. Yes, Cellco will install a back-up battery cabinet on its equipment platform, which could provide up to 8 hours of power to the facility if commercial power is interrupted and the generator is not operating properly.
- b. If a long duration outage occurs, Cellco would bring in a portable generator to the site to provide backup power to the facility.

SUPPORTING DOCUMENTS

RADIO FREQUENCY (RF) DESIGN DATE: 2/8/24
 ANTENNA MOUNT STRUCTURAL ANALYSIS DATE: 3/25/24
 SUPPORT STRUCTURE (FOUR (4)-STORY STEEL FRAMED OFFICE BUILDING) STRUCTURAL ANALYSIS DATE: 3/25/24



20 ALEXANDER DRIVE, 2nd Floor, WALLINGFORD, CT 06492

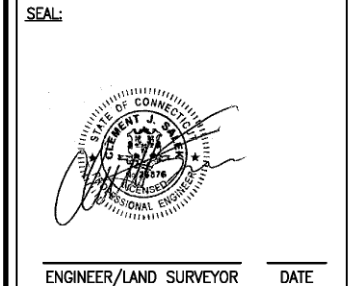
EAST HARTFORD 8 CT RELO

330 ROBERTS STREET
 EAST HARTFORD, CT 06108

PROJECT TYPE: WIRELESS TELECOMMUNICATIONS INSTALLATION ON ROOFTOP OF EXISTING (4)-STORY STEEL FRAMED OFFICE BUILDING



ARCHITECT/ENGINEER:
CHAPPELL ENGINEERING ASSOCIATES, LLC
 Civil · Structural · Land Surveying
 R.K. EXECUTIVE CENTRE
 201 BOSTON POST ROAD WEST
 SUITE 101
 MARLBOROUGH, MA 01752
 (508) 481-7400
 www.chappellengineering.com



DRAWING SCALE NOTE:
 THESE DRAWINGS HAVE BEEN PREPARED IN ARCH D (24"X36") FORMAT. AS SUCH, THE WRITTEN SCALES SHOWN ON ANY REPRODUCTIONS OF A CONDUITORY SIZE SHALL BE RENDERED INVALID. ALL BAR SCALES MAY BE USED REGARDLESS OF REPRODUCTION SIZE. WHERE IN CONFLICT, BAR SCALES SHALL SUPERSEDE WRITTEN SCALES.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE INFORMATION:

PROPERTY OWNER: SKM ROBERTS STREET LLC
 330 ROBERTS STREET, SUITE 404
 EAST HARTFORD, CT 06108

APPLICANT: CELCO PARTNERSHIP
 (dba VERIZON WIRELESS)
 20 ALEXANDER DRIVE, 2nd FLOOR
 WALLINGFORD, CT 06492

SITE ADDRESS: 330 ROBERTS STREET
 EAST HARTFORD, CT 06108

COUNTY: HARTFORD COUNTY, CONNECTICUT

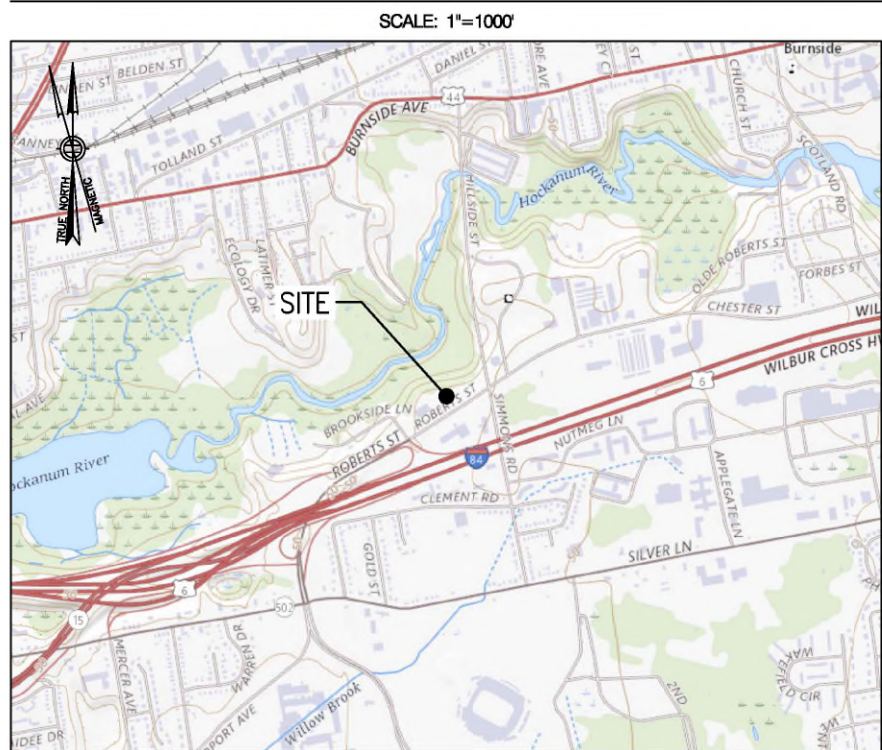
SITE CONTROL POINT: SOUTH CORNER OF EXISTING BUILDING
 N 41°-46'-08.04" (41.768900°) (NAD '83)
 W 72°-37'-14.65" (72.620736°) (NAD '83)

ARCHITECT / ENGINEER: CHAPPELL ENGINEERING ASSOCIATES, LLC
 201 BOSTON POST ROAD WEST, SUITE 101
 MARLBOROUGH, MA 01752

POWER COMPANY: EVERSOURCE ENERGY
 247 STATION DRIVE, SE 210
 WESTWOOD, MA 02090
 (781) 441-3610

TELEPHONE COMPANY: VERIZON
 185 FRANKLIN STREET
 BOSTON, MA 02107
 (800) 941-9900

VICINITY MAP



DRIVING DIRECTIONS

FROM WALLINGFORD, TAKE I-91 NORTH. TAKE EXIT 29 FOR U.S. 5 N/CONNECTICUT 15 N/I-84 EAST TOWARD EAST HARTFORD/BOSTON. USE THE RIGHT LANE TO MERGE ONTO US-5 NORTH. CONTINUE ONTO CT-15 NORTH. USE THE RIGHT 2 LANES TO TAKE EXIT 91 FOR SILVER LANE. TURN RIGHT ONTO SILVER LANE. TURN LEFT ONTO ROBERTS STREET. KEEP LEFT TO STAY ON ROBERTS STREET. THE SITE IS LOCATED ON THE LEFT HAND SIDE.

SHEET INDEX

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DO NOT SCALE DRAWINGS

ALL PLANS, EXISTING DIMENSIONS AND CONDITIONS AT THE PROPOSED PROJECT SITE SHALL BE VERIFIED IN THE FIELD DURING THE CONSTRUCTION PHASE. THE PROJECT OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES IMMEDIATELY PRIOR TO PROCEEDING WITH THE PROPOSED WORK AFFECTED BY SUCH DISCREPANCIES. IN THE EVENT OF LACK OF SUCH NOTIFICATION, SUCH DISCREPANCIES SHALL BECOME THE RESPONSIBILITY OF THE PREVAILING CONTRACTOR RESPONSIBLE FOR CONSTRUCTION.

PROJECT DESCRIPTION

- THIS IS AN UNMANNED AND RESTRICTED ACCESS EQUIPMENT INSTALLATION AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC WIRELESS TELECOMMUNICATIONS SERVICE.
- THIS FACILITY WILL CONSUME NO UNRECOVERABLE ENERGY.
- NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
- NO WASTE WATER WILL BE GENERATED AT THIS LOCATION.
- NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION.

GENERAL NOTES

- CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK. FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACES THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT THE DISCREPANCIES AT THE CONTRACTOR'S EXPENSE.
- NEW CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
 - BUILDING CODE: 2022 CONNECTICUT STATE BUILDING CODE
 - ELECTRICAL CODE: 2023 NATIONAL ELECTRICAL CODE
 - STRUCTURAL CODE: TIA/EIA-222-H STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

AT LEAST 72 HOURS PRIOR TO DIGGING, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 811



REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR 95% REVIEW	2/29/24
1	ISSUED FOR CONSTRUCTION (FINAL)	3/25/24

PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
 330 ROBERTS STREET
 EAST HARTFORD, CT 06108

DRAWING TITLE:
 TITLE SHEET

DRAWING NO:
T01

SCALE: AS SHOWN	DESIGNED BY: NMC DRAWN BY: NMC	VZW PROJECT NO.: 17056059
CEA PROJECT NO.: 96210.431	CHECKED BY: GRS ORIGINAL ISSUE DATE: 2/29/24	MDG LOCATION ID: 5000924924 VZW LOCATION CODE: 791873

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR - VERIZON WIRELESS
SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - VERIZON WIRELESS
OEM - ORIGINAL EQUIPMENT MANUFACTURER
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
- THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- SUBCONTRACTOR SHALL NOTIFY CHAPPELL 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACK FILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS & POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.
- CONSTRUCTION SHALL COMPLY WITH VERIZON WIRELESS SITES.
- SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

SITE WORK GENERAL NOTES:

- THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.
- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTILITIES.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
- SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE VERIZON WIRELESS SPECIFICATION FOR SITE SIGNAGE.

STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND VERIZON WIRELESS SPECIFICATION 25252-000-3PS-GET-00001 UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTM-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION", 9TH EDITION. PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (¾") AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE ¾" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO THE MANUFACTURERS RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS. ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL.
- ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

CONSTRUCTION NOTES:

- FIELD VERIFICATION:
SUBCONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, VERIZON WIRELESS ANTENNA PLATFORM LOCATION AND ANTENNAS TO BE REPLACED.
- COORDINATION OF WORK:
SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.
- CABLE LADDER RACK:
SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION.

ELECTRICAL INSTALLATION NOTES:

- WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
- SUBCONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLEING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBMIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
- POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANEL BOARD AND CIRCUIT ID'S).
- PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#8 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #3 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#34 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

CLIENT:



ARCHITECT/ENGINEER:



R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST
SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

SEAL:



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE:

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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR 95% REVIEW	2/29/24
1	ISSUED FOR CONSTRUCTION (FINAL)	3/25/24

PROJECT NAME:

EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:

**330 ROBERTS STREET
EAST HARTFORD, CT 06108**

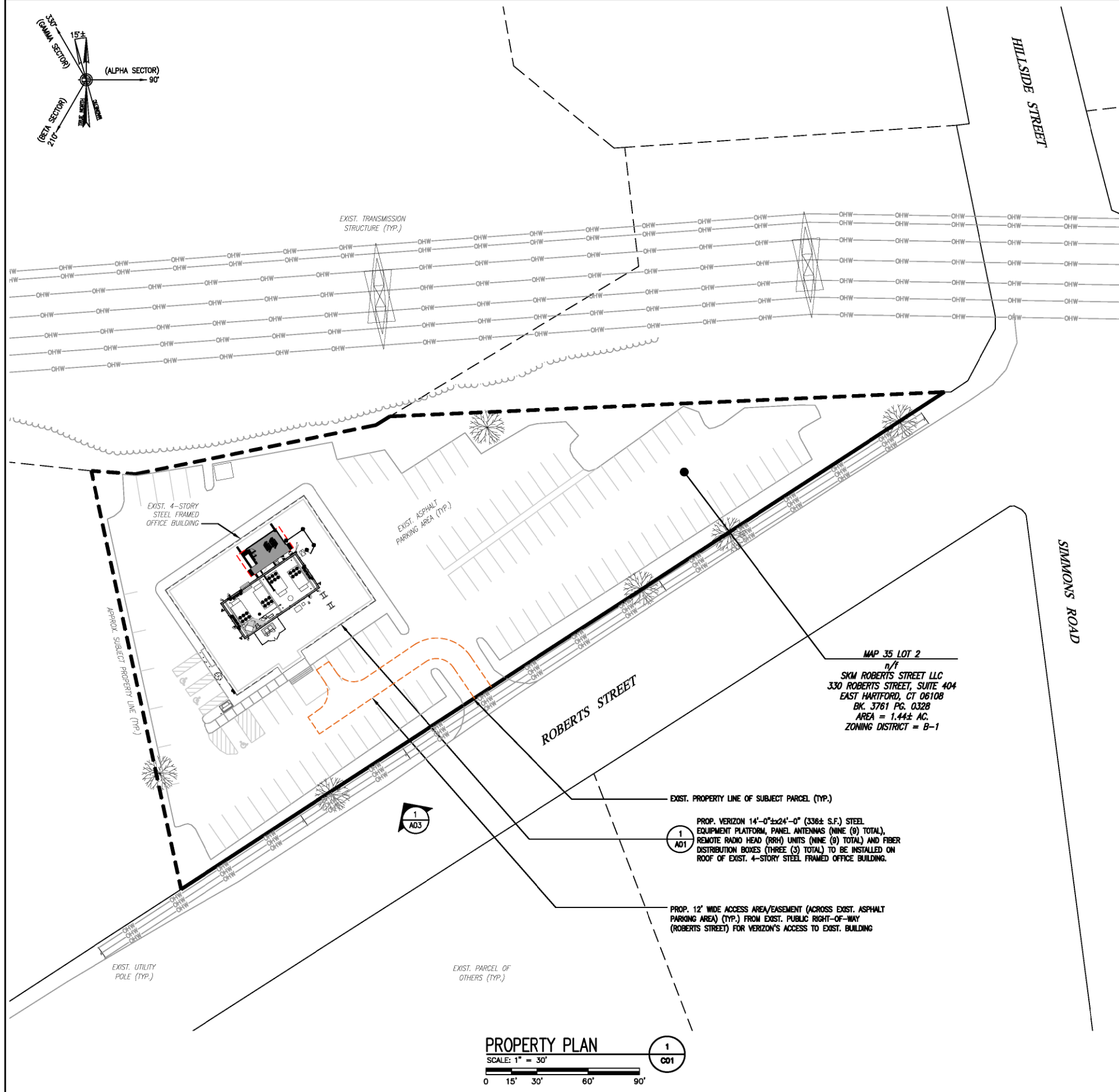
DRAWING TITLE:

GENERAL NOTES AND SPECIFICATIONS

DRAWING NO:

GN01

SCALE: AS SHOWN	DESIGNED BY: NWC DRAWN BY: NWC	VZW PROJECT NO.: 17056059
CEA PROJECT NO.: 96210.431	CHECKED BY: GRS ORIGINAL ISSUE DATE: 2/29/24	MDG LOCATION ID: 5000924924 VZW LOCATION CODE: 791873



- GENERAL NOTES:**
- LIMITED DESIGN VISIT DATES: 6/1/23 & 6/15/23
 - 1A SURVEY VISIT DATE: 2/10/24
 - VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAD '88)
 - HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD '83)
 - SITE CONTROL POINT: SOUTH CORNER OF EXISTING BUILDING
LATITUDE: N41°-46'-08.04" (41.7689007) (NAD '83)
LONGITUDE: W72°-37'-14.65" (72.6207367) (NAD '83)
 - LAND OWNER: SKM ROBERTS STREET LLC
330 ROBERTS STREET, SUITE 404
EAST HARTFORD, CT 06108
 - SITE ADDRESS: 330 ROBERTS STREET
EAST HARTFORD, CT 06108
 - APPLICANT: CELCO PARTNERSHIP
(dba VERIZON WIRELESS)
20 ALEXANDER DRIVE, 2nd FLOOR
WALLINGFORD, CT 06492
 - ALL UNDERGROUND UTILITY INFORMATION PRESENTED HEREON WAS DETERMINED FROM SURFACE EVIDENCE AND PLANS OF RECORD. ALL UNDERGROUND UTILITIES SHOULD BE LOCATED IN THE FIELD PRIOR TO THE COMMENCEMENT OF ANY SITE WORK. CALL DIGSAFE 1-888-344-7233 A MINIMUM OF 72 HOURS PRIOR TO PLANNED ACTIVITY.
 - THE PROPERTY LINES SHOWN WERE COMPILED UTILIZING RECORDED DEEDS, PLANS OF REFERENCE AND LIMITED SURVEYS OF THE PROPERTY PERFORMED BY CHAPPELL ENGINEERING ASSOCIATES ON 6/1/23, 6/15/23 AND 2/10/24.
 - THE SITE IS LOCATED IN FLOOD HAZARD ZONE X (AREA OF MINIMAL FLOOD HAZARD) AS SHOWN ON FLOOD INSURANCE RATE MAP FOR THE TOWN OF EAST HARTFORD, CT (MAP NUMBER 0900300388F) EFFECTIVE 9/26/2008.

LEGEND

---	OR	STREET	PROPERTY LINE
---			ABUTTING PROPERTY LINE
---			PROPERTY OFFSET/RADIUS
---			EXIST. EASEMENT
x-x-x-x			EXIST. CHAIN LINK FENCE
o-o-o-o			EXIST. STOCKADE FENCE
---			EXIST. EDGE OF PAVEMENT
---			EXIST. OVERHEAD UTILITIES
---			APPROXIMATE ZONING BOUNDARY
---			APPROXIMATE TOWN LINE

CLIENT:
verizon

ARCHITECT/ENGINEER:
CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST
SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
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SEAL:

ENGINEER/LAND SURVEYOR DATE

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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR 95% REVIEW	2/29/24
1	ISSUED FOR CONSTRUCTION (FINAL)	3/25/24

PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
330 ROBERTS STREET
EAST HARTFORD, CT 06108

DRAWING TITLE:
PROPERTY PLAN

DRAWING NO.:
C01

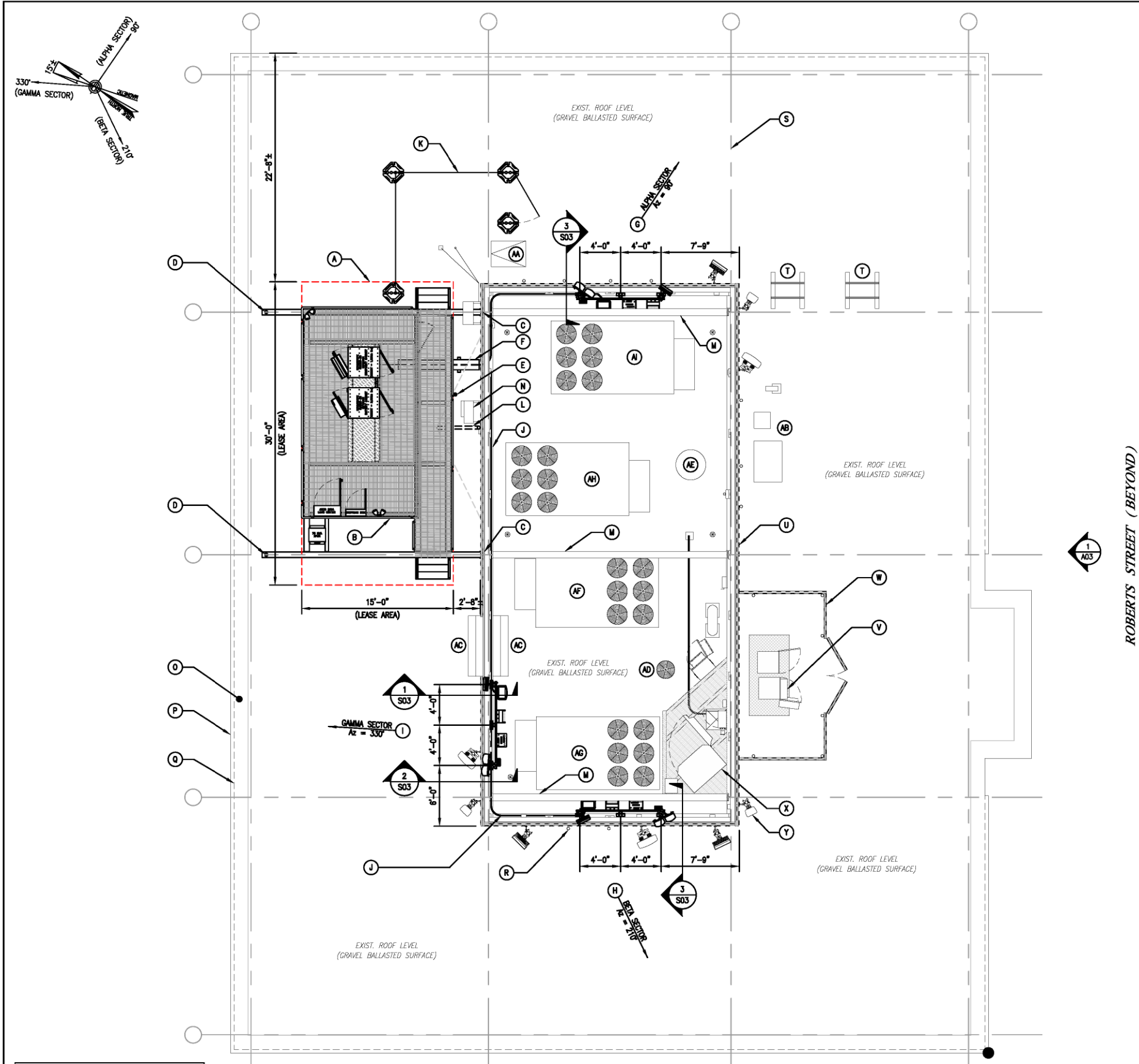
SCALE: 1" = 30'	DESIGNED BY: NWC DRAWN BY: NWC	VZM PROJECT NO.: 17056059
CEA PROJECT NO.: 96210.431	CHECKED BY: GRS ORIGINAL ISSUE DATE: 2/29/24	MOG LOCATION ID: 5000924924 VZM LOCATION CODE: 791873

PROPERTY PLAN
SCALE: 1" = 30'
0 15' 30' 60' 90'

MAP 35 LOT 2
n/t
SKM ROBERTS STREET LLC
330 ROBERTS STREET, SUITE 404
EAST HARTFORD, CT 06108
BK. 3761 PG. 0328
AREA = 1.44± AC.
ZONING DISTRICT = B-1

1 A01
PROP. VERIZON 14'-0"±x24'-0" (336± S.F.) STEEL EQUIPMENT PLATFORM, PANEL ANTENNAS (NINE (9) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (NINE (9) TOTAL) AND FIBER DISTRIBUTION BOXES (THREE (3) TOTAL) TO BE INSTALLED ON ROOF OF EXIST. 4-STORY STEEL FRAMED OFFICE BUILDING.

PROP. 12' WIDE ACCESS AREA/EASEMENT (ACROSS EXIST. ASPHALT PARKING AREA) (TYP.) FROM EXIST. PUBLIC RIGHT-OF-WAY (ROBERTS STREET) FOR VERIZON'S ACCESS TO EXIST. BUILDING



SITE CONTROL POINT:
 SOUTH CORNER OF EXIST. BUILDING
 N 41°-46'-08.04" (41.768900") (NAD '83)
 W 72°-37'-14.65" (72.620736") (NAD '83)
 GROUND ELEVATION - 49.5' AMSL (NAVD '88)

PER CEA 1A SURVEY

ROOF PLAN
 SCALE: 3/16" = 1'-0"
 0 5'-4" 10'-8" 16'-0"

LEGEND	
ITEM	DESCRIPTION
(A)	PROP. VERIZON 15'-0"x30'-0" (450 S.F.) EQUIPMENT LEASE AREA
(1/SO1)	PROP. VERIZON 14'-0"x24'-0" (336± S.F.) STEEL FRAMED EQUIPMENT PLATFORM WITHIN PROP. 15'-0"x30'-0" (450 S.F.) LEASE AREA
(1/SO1)	PROP. VERIZON SEATED STEEL CONNECTION TO FLANGE OF EXIST. WF SCREENING WALL POST (TYP.) AT (2) LOCATIONS TOTAL
(1/SO1)	PROP. VERIZON STEEL POST DOWN TO TOP OF EXIST. STEEL FRAMING BELOW ROOF LEVEL (TYP.) AT (2) LOCATIONS TOTAL. ALL ROOF PENETRATIONS SHALL BE SEALED WATERTIGHT.
(5/RF01)	PROP. VERIZON GPS ANTENNA MOUNTED TO OUTBOARD SIDE OF PROP. RAILING. TOP OF GPS ANTENNA SHALL BE MOUNTED 4'-0" ABOVE TOP OF RAILING.
(1/A02)	PROP. VERIZON (3)-6x12 HYBRID SIGNAL CABLES ROUTED WITHIN PROP. NON-PENETRATING STEEL CABLE COVER (TYP.)
(-/SO3)	PROP. VERIZON ALPHA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.
(-/SO3)	PROP. VERIZON BETA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.
(-/SO3)	PROP. VERIZON GAMMA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.
(J)	PROP. VERIZON HYBRID SIGNAL CABLES ROUTED ALONG INBOARD STEEL FRAMING OF EXIST. SCREENING WALL AROUND TO LOCATIONS OF PROP. FIBER JUNCTION BOXES (TYP.)
(K)	PROP. NON-PENETRATING BALLASTED ROOFTOP GUARDRAIL (TYP.) FROM EXIST. ROOF ACCESS HATCH TO PROP. STEEL ACCESS STEPS. TOP OF PROP. GUARDRAIL SHALL BE 3'-6" ABOVE EXIST. ROOF SURFACE.
(L)	EXIST. VENT STACK TO BE RE-ROUTED AROUND PROP. EQUIPMENT PLATFORM AND ATTACHED TO FACE OF EXIST. SCREENING WALL. VENT STACK SHALL TERMINATE 2'-0" ABOVE TOP OF EXIST. SCREENING WALL. (ATTACHMENT DETAILS BY CONTRACTOR)
(M)	EXIST. STEEL FRAMING (TYP.)
(N)	EXIST. AC CONDENSING UNIT MOUNTED TO OUTBOARD SIDE OF EXIST. SCREENING WALL (TYP.)
(O)	EXIST. ROOF PERIMETER CURBING (TYP.)
(P)	EDGE OF EXIST. ROOF/METAL FLASHING (TYP.)
(Q)	FACE OF EXIST. BUILDING BELOW ROOF LEVEL (TYP.)
(R)	EXIST. ABANDONED ANTENNA PIPE MAST OF OTHERS MOUNTED TO OUTBOARD SIDE OF EXIST. SCREENING WALL (TYP.)
(S)	EXIST. BUILDING COLUMN GRID LINE (TYP.)
(T)	EXIST. ABANDONED ROOF CURB SUPPORTS (TYP.)
(U)	EXIST. STEEL-FRAMED WOOD-FACED SCREENING WALL (TYP.)
(V)	EXIST. T-MOBILE EQUIPMENT CABINET (TYP.) MOUNTED TO EXIST. STEEL PEDestal WITHIN EXIST. SCREENING ENCLOSURE
(W)	EXIST. T-MOBILE WOOD-FACED SCREENING ENCLOSURE
(X)	EXIST. T-MOBILE EQUIPMENT CABINET (TYP.) MOUNTED TO EXIST. STEEL PLATFORM BEHIND EXIST. SCREENING WALLS
(Y)	EXIST. T-MOBILE PANEL ANTENNA MOUNTED TO OUTBOARD SIDE OF EXIST. SCREENING WALL (TYP.)
(Z)	THIS SPACE INTENTIONALLY LEFT BLANK
(MA)	EXIST. ROOF ACCESS HATCH
(MB)	EXIST. BULKHEADS
(MC)	EXIST. WOOD STEP
(MD)	EXIST. AC CONDENSING UNIT
(ME)	EXIST. EXHAUST FAN (EF1)
(MF)	EXIST. ROOFTOP AC UNIT (RTU-1)
(MG)	EXIST. ROOFTOP AC UNIT (RTU-2)
(MH)	EXIST. ROOFTOP AC UNIT (RTU-3)
(MN)	EXIST. ROOFTOP AC UNIT (RTU-4)

CLIENT:
verizon

ARCHITECT/ENGINEER:
CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil - Structural - Land Surveying
 R.K. EXECUTIVE CENTRE
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 SUITE 101
 MARLBOROUGH, MA 01752
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SEAL:

 ENGINEER/LAND SURVEYOR DATE

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REVISIONS		
NO.	DESCRIPTION	DATE
0	ISSUED FOR 95% REVIEW	2/29/24
1	ISSUED FOR CONSTRUCTION (FINAL)	3/25/24

PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
 330 ROBERTS STREET
 EAST HARTFORD, CT 06108

DRAWING TITLE:
ROOF PLAN

DRAWING NO.:
A01

SCALE: 3/16" = 1'-0"	DESIGNED BY: MNC DRAWN BY: MNC	VZW PROJECT NO.: 17056059
CEA PROJECT NO.: 96210.431	CHECKED BY: GRS ORIGINAL ISSUE DATE: 2/29/24	MFG LOCATION ID: 5000924924 VZW LOCATION CODE: 791873

CLIENT:

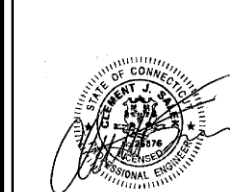


ARCHITECT/ENGINEER:



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MARLBOROUGH, MA 01752
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PROJECT NAME:

EAST HARTFORD 8 CT
RELO

PROJECT ADDRESS:

330 ROBERTS STREET
EAST HARTFORD, CT 06108

DRAWING TITLE:

SOUTHEAST (FRONT)
BUILDING ELEVATION
(ALONG ROBERTS STREET)

DRAWING NO.:

A03

SCALE:

3/16" = 1'-0"

DESIGNED BY: MNC

CHECKED BY: GRS

96210.431

DATE:

2/29/24

DRAWN BY: MNC

ORIGINAL ISSUE DATE:

2/29/24

VZW PROJECT NO.:

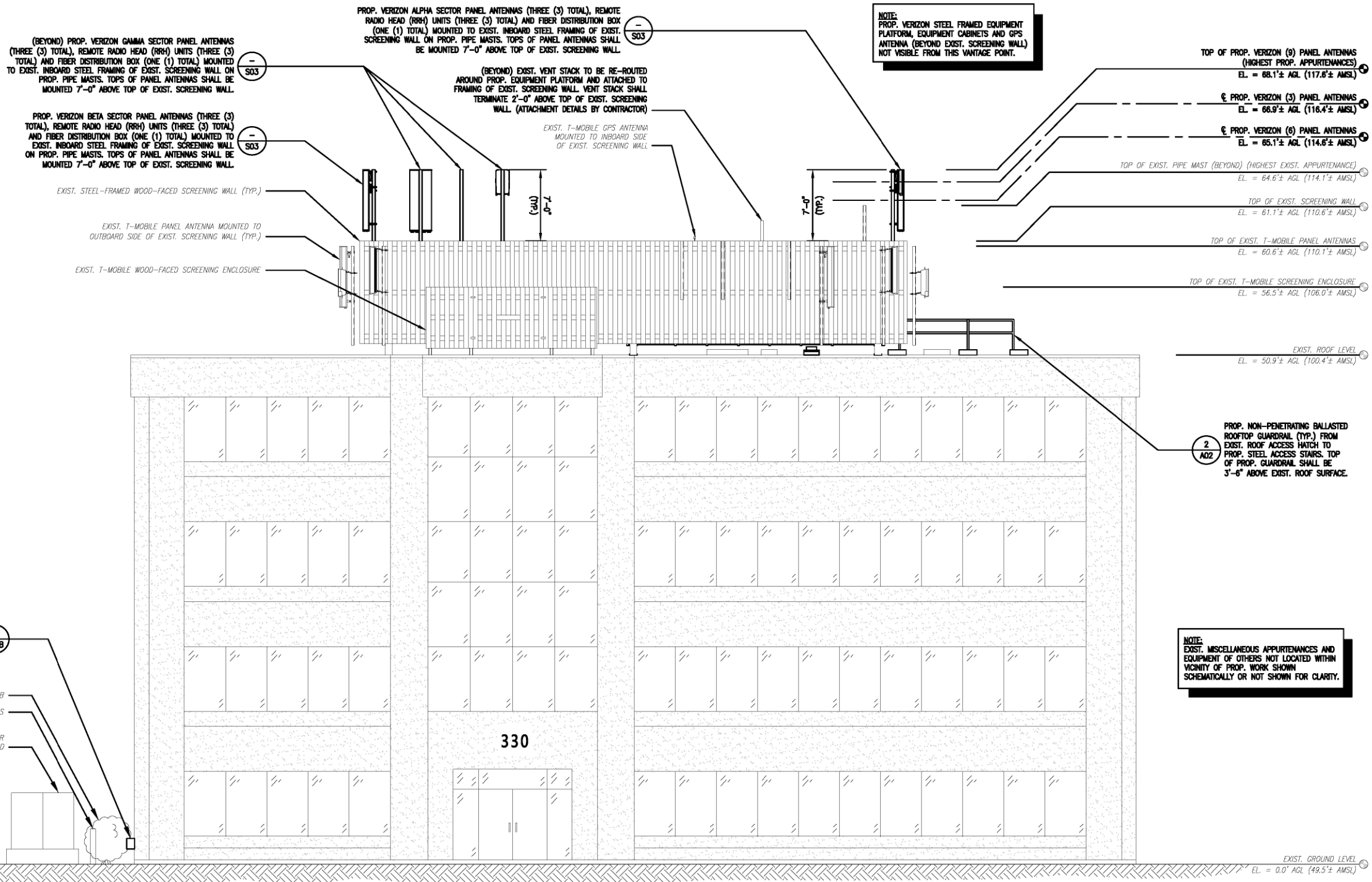
17056059

MFG LOCATION ID:

5000924924

VZW LOCATION CODE:

791873



SOUTHEAST (FRONT) BUILDING ELEVATION (ALONG ROBERTS STREET)

SCALE: 3/16" = 1'-0"
0 5'-4" 10'-8" 16'-0"

1
A03

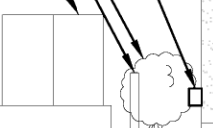
LEGEND	
AGL	ABOVE GROUND LEVEL
BGL	BELOW GROUND LEVEL
AMSL	ABOVE MEAN SEA LEVEL

PROP. VERIZON BACK-UP GENERATOR PLUG AND MANUAL TRANSFER SWITCH (MTS) TO BE INSTALLED ON OUTSIDE FACE OF BUILDING FOR USE OF A TEMPORARY "ROLL-UP" STYLE GENERATOR IN THE EVENT OF A PROLONGED POWER FAILURE.

3
ED2B

EXIST. SHRUB
EXIST. STEEL BOLLARDS

EXIST. ELECTRIC TRANSFORMER ON CONCRETE PAD



(BEYOND) PROP. VERIZON GAMMA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL ON PROP. PIPE MASTS. TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.

PROP. VERIZON BETA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL ON PROP. PIPE MASTS. TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.

EXIST. STEEL-FRAMED WOOD-FACED SCREENING WALL (TYP.)

EXIST. T-MOBILE PANEL ANTENNA MOUNTED TO OUTBOARD SIDE OF EXIST. SCREENING WALL (TYP.)

EXIST. T-MOBILE WOOD-FACED SCREENING ENCLOSURE

PROP. VERIZON ALPHA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL ON PROP. PIPE MASTS. TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.

(BEYOND) EXIST. VENT STACK TO BE RE-ROUTED AROUND PROP. EQUIPMENT PLATFORM AND ATTACHED TO FRAMING OF EXIST. SCREENING WALL. VENT STACK SHALL TERMINATE 2'-0" ABOVE TOP OF EXIST. SCREENING WALL. (ATTACHMENT DETAILS BY CONTRACTOR)

EXIST. T-MOBILE GPS ANTENNA MOUNTED TO INBOARD SIDE OF EXIST. SCREENING WALL

NOTE:
PROP. VERIZON STEEL-FRAMED EQUIPMENT PLATFORM, EQUIPMENT CABINETS AND GPS ANTENNA (BEYOND EXIST. SCREENING WALL) NOT VISIBLE FROM THIS VANTAGE POINT.

TOP OF PROP. VERIZON (9) PANEL ANTENNAS (HIGHEST PROP. APPURTENANCES)
EL. = 68.1'± AGL (117.6'± AMSL)

PROP. VERIZON (3) PANEL ANTENNAS
EL. = 66.9'± AGL (116.4'± AMSL)

PROP. VERIZON (6) PANEL ANTENNAS
EL. = 65.1'± AGL (114.6'± AMSL)

TOP OF EXIST. PIPE MAST (BEYOND) (HIGHEST EXIST. APPURTENANCE)
EL. = 64.6'± AGL (114.1'± AMSL)

TOP OF EXIST. SCREENING WALL
EL. = 61.1'± AGL (110.6'± AMSL)

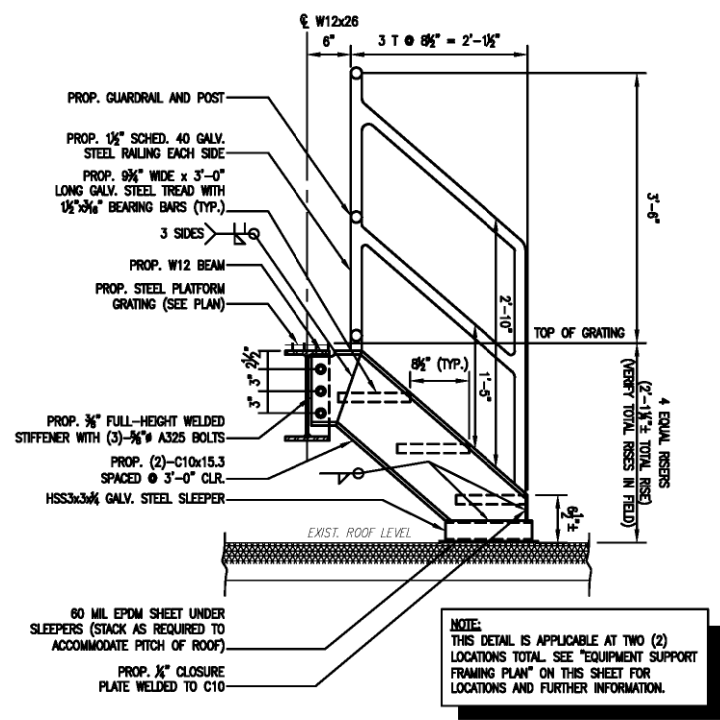
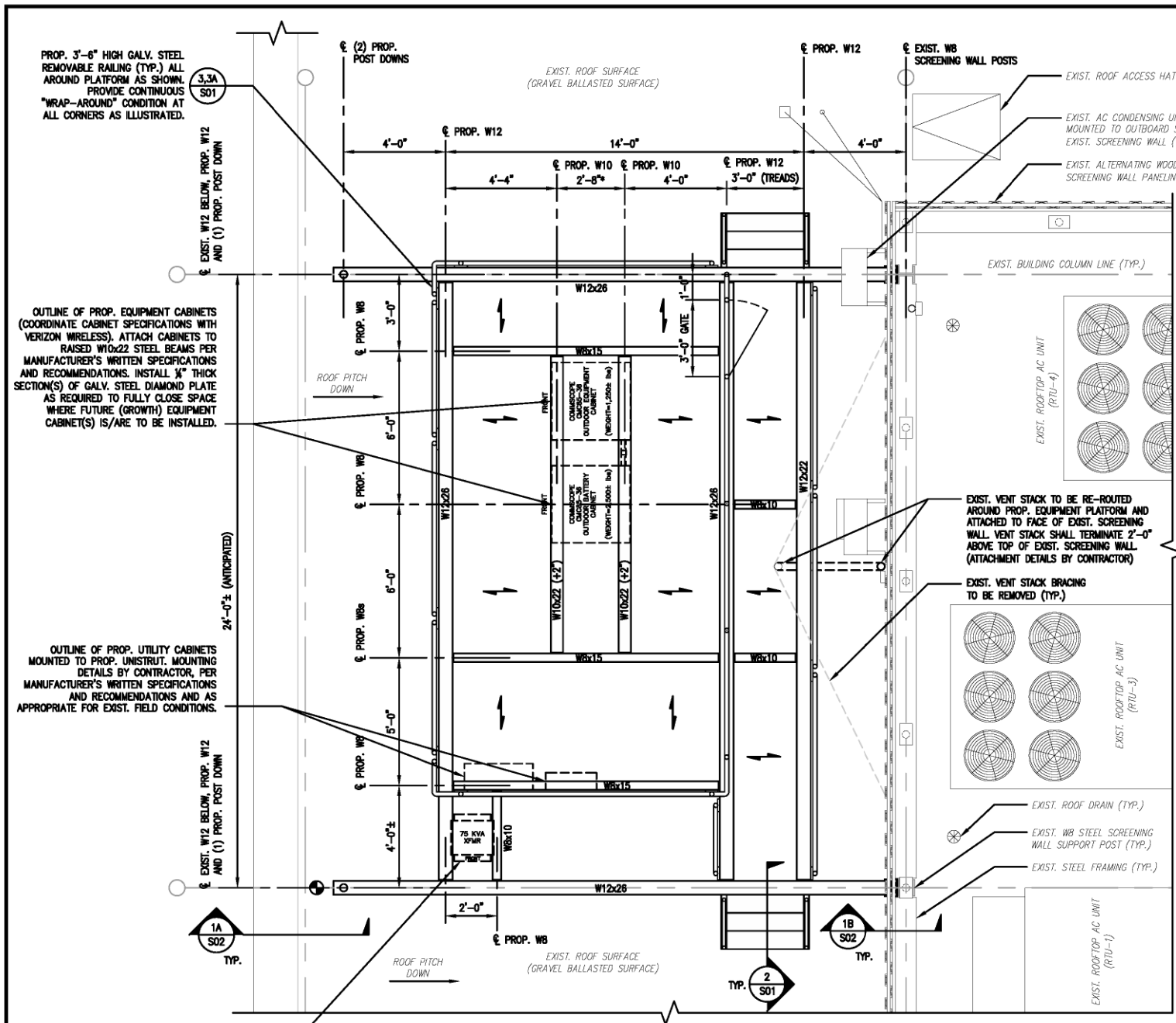
TOP OF EXIST. T-MOBILE PANEL ANTENNAS
EL. = 60.6'± AGL (110.1'± AMSL)

TOP OF EXIST. T-MOBILE SCREENING ENCLOSURE
EL. = 56.5'± AGL (106.0'± AMSL)

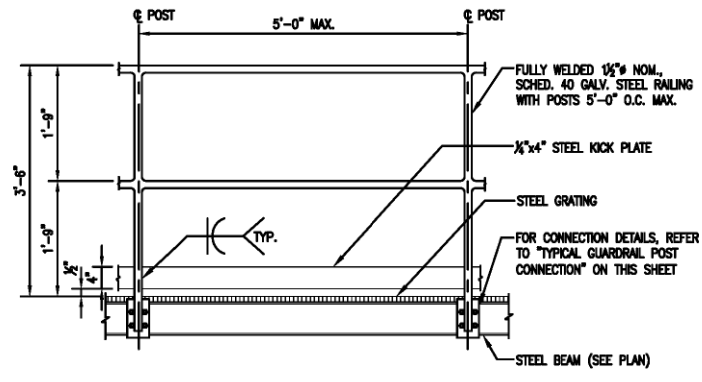
EXIST. ROOF LEVEL
EL. = 50.9'± AGL (100.4'± AMSL)

2
A02
PROP. NON-PENETRATING BALLASTED ROOFTOP GUARDRAIL (TYP.) FROM EXIST. ROOF ACCESS HATCH TO PROP. STEEL ACCESS STAIRS. TOP OF PROP. GUARDRAIL SHALL BE 3'-6" ABOVE EXIST. ROOF SURFACE.

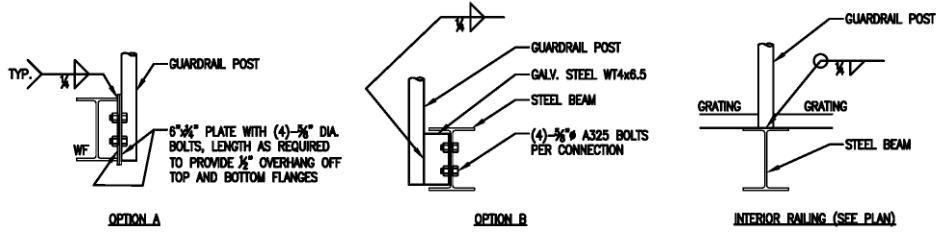
NOTE:
EXIST. MISCELLANEOUS APPURTENANCES AND EQUIPMENT OF OTHERS NOT LOCATED WITHIN VICINITY OF PROP. WORK SHOWN SCHEMATICALLY OR NOT SHOWN FOR CLARITY.



TYPICAL ACCESS STEPS DETAIL
SCALE: NOT TO SCALE



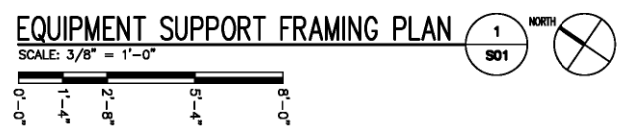
TYPICAL GUARDRAIL DETAIL
SCALE: NOT TO SCALE



TYPICAL GUARDRAIL POST CONNECTION DETAILS
SCALE: NOT TO SCALE

EQUIPMENT SUPPORT FRAMING PLAN NOTES:

- 1.) ALL STEEL SHALL BE INSTALLED LEVEL UNLESS OTHERWISE NOTED.
- 2.) TOP OF NEW STEEL ELEVATION SHALL BE HELD 2'-0" ABOVE EXISTING ROOF SURFACE AT LOCATION INDICATED ON PLAN BY R UNLESS OTHERWISE NOTED THUS (\pm) INDICATING DISTANCE ABOVE OR BELOW TOP OF STEEL REFERENCE ELEVATION.
- 3.) GRATING SHALL BE ALL WELDED GALV. STEEL WITH 1 1/2"x3/16" BEARING BARS @ 1-3/16" O.C. (MANICHOLS QW-125 SERIES WELDED BAR GRATING WITH A 19-W-4 PRODUCT SPACING (OR EQUAL)).
- 4.) FASTEN GRATING TO STEEL FRAMING WITH MANICHOLS TYPE GG GALV. STEEL GRATING CLIPS (OR EQUAL). SPACING OF FASTENERS AS PER MANUFACTURER'S RECOMMENDATION. PROVIDE TWO (2) GRATING CLIPS MINIMUM EACH END OF INDIVIDUAL GRATING PANELS. JOIN SIDE BARS OF ADJACENT GRATING PANELS TOGETHER WITH GALVANIZED OR STAINLESS STEEL END PANEL CLIPS @ 2'-0" O.C.
- 5.) ANTENNAS, CABLE TRAYS, CABLES, CONDUITS, PIPING, ETC. WITHIN VICINITY OF STEEL SUPPORT FRAMING NOT SHOWN FOR CLARITY. COORDINATE ALL REQUIRED WORK WITH THAT OF OTHER TRADES.
- 6.) AFTER THE AWARD OF THE BID AND PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL OPEN THE EXISTING ROOF AT ALL NEW POST LOCATIONS (TWO (2) TOTAL) TO PERMIT THE ENGINEER TO VERIFY EXISTING ASSUMED CONDITIONS SHOWN AND TO MODIFY THE NEW POST DETAIL IF REQUIRED. ELEVATIONS AND EXISTING CONDITIONS SHALL ALSO BE MEASURED AT THIS TIME BY THE STEEL DETAILER REQUIRED FOR STEEL SHOP DRAWING PREPARATION. EXISTING FIELD MEASUREMENTS AND CONDITIONS AT ALL POST LOCATIONS MUST BE SHOWN ON THE STEEL SHOP DRAWINGS. THE CONTRACTOR SHALL INCLUDE IN THE BID PRICE THE COST FOR THIS WORK AND FOR TEMPORARY ROOF PENETRATION CLOSURES THAT CAN BE OPENED AND CLOSED AS REQUIRED BY THE ENGINEER AND STEEL DETAILER THROUGHOUT CONSTRUCTION.



SPAN OF GALV. STEEL WELDED GRATING WITH 1 1/2"x3/16" BEARING BARS @ 1-3/16" O.C. (MANICHOLS QW-125 SERIES WELDED BAR GRATING WITH A 19-W-4 PRODUCT SPACING (OR EQUAL))

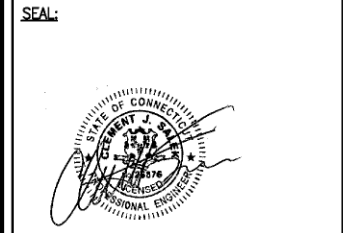
SET TOP OF STEEL ELEVATION FROM THIS LOCATION (NORTHWEST SIDE OF PROP. PLATFORM)

PLATFORM ACCESSORY NOTE:
CONTRACTOR SHALL SUPPLY THE FOLLOWING ITEMS AT EQUIPMENT PLATFORM:
- FIBERGLASS FOLDING TABLE
- CHAIN AND LOCK TO SECURE ALL ITEMS
COORDINATE EXACT ACCESSORY REQUIREMENTS WITH VERIZON WIRELESS PRIOR TO BID.

CLIENT:
verizon

ARCHITECT/ENGINEER:
CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying

R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST
SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE:
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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR 95% REVIEW	2/29/24
1	ISSUED FOR CONSTRUCTION (FINAL)	3/25/24

PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
330 ROBERTS STREET
EAST HARTFORD, CT 06108

DRAWING TITLE:
EQUIPMENT PLATFORM FRAMING PLAN AND DETAILS

DRAWING NO:
S01

SCALE: AS SHOWN	DESIGNED BY: NWC DRAWN BY: NWC	VZW PROJECT NO.: 17056059
CEA PROJECT NO.: 96210.431	CHECKED BY: GRS ORIGINAL ISSUE DATE: 2/29/24	MFG LOCATION ID: 5000924924 VZW LOCATION CODE: 791873

REVISIONS		
NO.	DESCRIPTION	DATE
0	ISSUED FOR 95% REVIEW	2/29/24
1	ISSUED FOR CONSTRUCTION (FINAL)	3/25/24

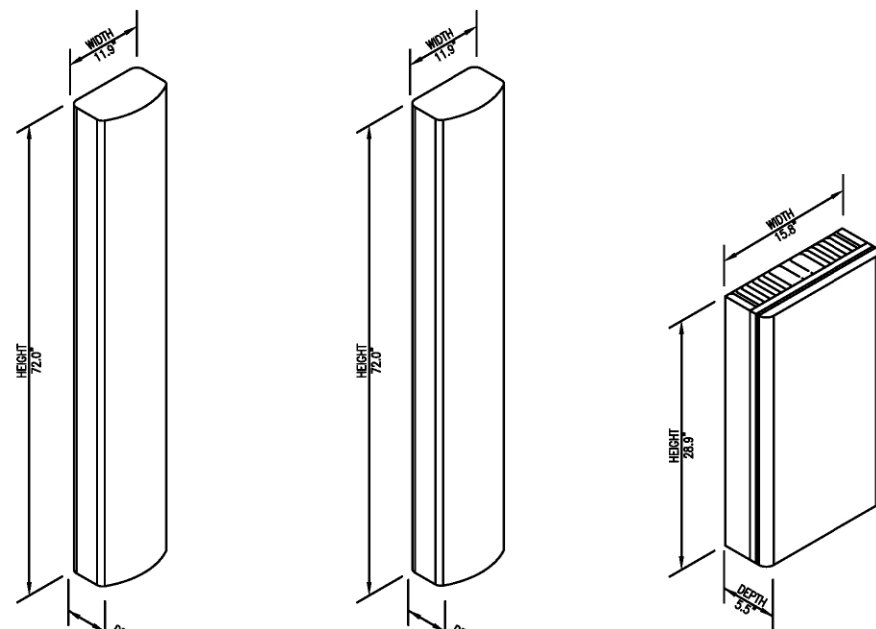
PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
**330 ROBERTS STREET
EAST HARTFORD, CT 06108**

DRAWING TITLE:
ANTENNA DETAILS AND ANCILLARY EQUIPMENT SPECIFICATIONS

DRAWING NO:
RF01

SCALE: AS SHOWN	DESIGNED BY: NWC DRAWN BY: NWC CHECKED BY: GRS	VZW PROJECT NO.: 17056059 MDG LOCATION ID: 5000924924 VZW LOCATION CODE: 791873
CEA PROJECT NO.: 96210.431	ORIGINAL ISSUE DATE: 2/29/24	



ITEM 1

LTE (700/850/1900 MHz) PANEL ANTENNA

DIMENSIONS: 72.0"H x 11.9"W x 7.1"D
WEIGHT: 43.7 LBS EACH
QUANTITY: 1 PER SECTOR, TOTAL OF 3

STATUS: PROPOSED

ITEM 2

LTE (2100/CBRS MHz) PANEL ANTENNA

DIMENSIONS: 72.0"H x 11.9"W x 7.1"D
WEIGHT: 50.9 LBS EACH
QUANTITY: 1 PER SECTOR, TOTAL OF 3

STATUS: PROPOSED

ITEM 3

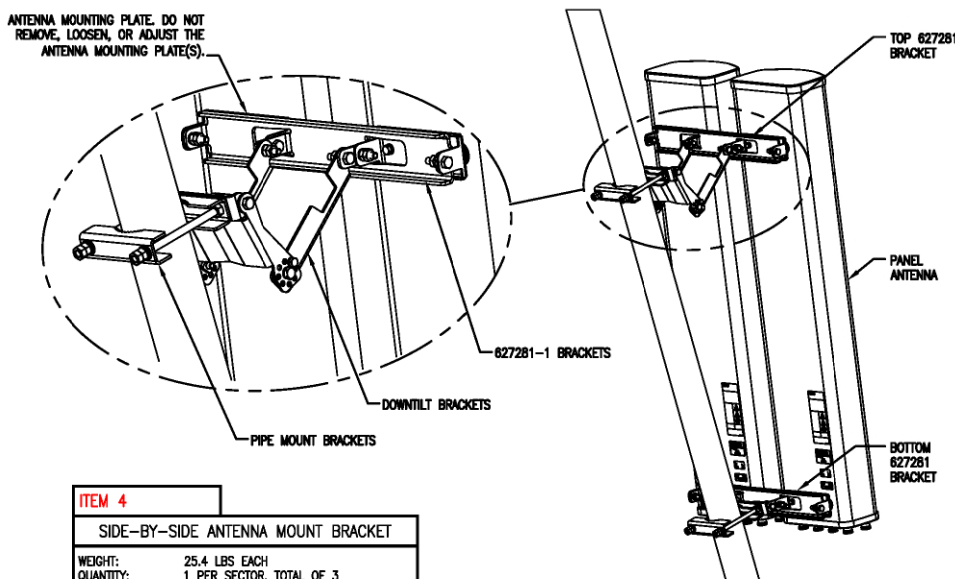
MT6413-77A ANTENNA

DIMENSIONS: 28.9"H x 15.8"W x 5.5"D
WEIGHT: 57.3 LBS EACH
QUANTITY: 1 PER SECTOR, TOTAL OF 3

STATUS: PROPOSED

TYPICAL PROP. PANEL ANTENNA SPECIFICATIONS
SCALE: NONE

1
RF01



ITEM 4

SIDE-BY-SIDE ANTENNA MOUNT BRACKET

WEIGHT: 25.4 LBS EACH
QUANTITY: 1 PER SECTOR, TOTAL OF 3

STATUS: PROPOSED

TYPICAL SIDE-BY-SIDE ANTENNA MOUNT KIT (COMMSCOPE PART #BSAMNT-SBS-1-2)
SCALE: NOT TO SCALE

3
RF01



SAMSUNG RF4461d-13A

ITEM 9

LTE/NR (700/850 MHz) REMOTE RADIO HEAD UNIT

DIMENSIONS: 15.0"H x 15.0"W x 10.2"D
WEIGHT: 79.1 LBS
QUANTITY: 1 PER SECTOR, TOTAL OF 3

STATUS: PROPOSED



SAMSUNG RRH-BR049

ITEM 10

PCS-AWS (1900/2100 MHz) REMOTE RADIO HEAD UNIT

DIMENSIONS: 15.4"H x 15.8"W x 12.0"D
WEIGHT: 84.4 LBS
QUANTITY: 1 PER SECTOR, TOTAL OF 3

STATUS: PROPOSED



SAMSUNG RT4423-48A

ITEM 11

(BAND 48 (3.5 GHz)) NR AU RRH

DIMENSIONS: 11.8"H x 8.7"W x 3.6"D
WEIGHT: 15.4 LBS
QUANTITY: 1 PER SECTOR, TOTAL OF 3

STATUS: PROPOSED

TYPICAL REMOTE RADIO HEAD (RRH) UNIT DIMENSIONS
SCALE: N.T.S.

2
RF01

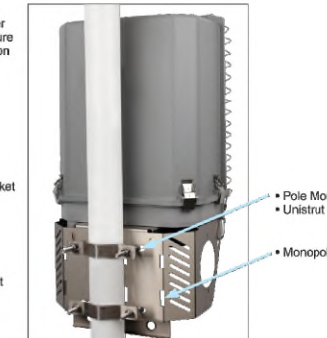
Procedure
Mounting Procedures

4.1 A mounting base is delivered with the unit. The base allows either wall/ladder or pole mounted installation. See picture to identify the holes for each installation method.

4.2 **Option 1: Pole Mount**
Using supplied hardware, mount Bracket to 2" to 4" diameter pole.

4.3 **Option 2: Unistrut**

4.4 **Option 3: Monopole**
Use 1" stainless steel bands (not supplied) through slots on bracket to mount to Monopole.



Gland/Insert Definitions


5.1 See picture to identify Base Gland Assembly Definitions.

Assembled in unit as shipped:

Qty	Connector Size	Pos	Insert P/N	Insert Hole	Cable Type
2	M75	A	190-0760	42mm	6x12 RL
4	M75	B	190-0738	3x 16.5mm	1x2

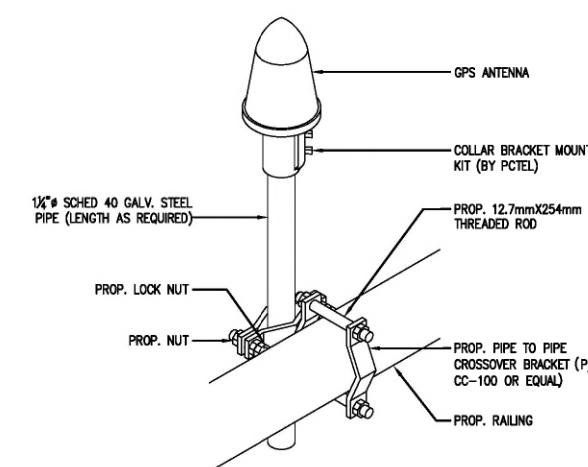
Included in kit shipped with unit:

Qty	Connector Size	Insert P/N	Insert Hole	Cable Type	Purpose	Pos
2	M75	190-0760	42mm	6x12 RL	2 glands fit 1 each 6/12 Hyb	B
2	M75	190-0747	2x 24.5mm	2x12 DC	2 glands fit 2 each #6 12 cond DC	B
1	M75	190-0905	2x 10.5mm	2x12 Fiber	1 gland fit 2 x 12 fiber trunk	B
1	M75	190-0912	2x 9.5mm	2 ETH	1 gland fits 2 ethernet cable	B



TYPICAL FIBER JUNCTION BOX DIMENSIONS, SCHEMATIC AND MOUNTING PROCEDURE
SCALE: N.T.S.

4
RF01



NOTE:
THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A STANDARD 1"-1 1/2" DIAMETER GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.

GPS ANTENNA MOUNTING DETAIL
SCALE: N.T.S.

5
RF01

CLIENT:

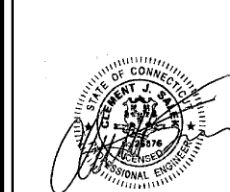


ARCHITECT/ENGINEER:



R.K. EXECUTIVE CENTRE
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SUITE 101
MARLBOROUGH, MA 01752
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www.chappellengineering.com

SEAL:



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE:

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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR 95% REVIEW	2/29/24
1	ISSUED FOR CONSTRUCTION (FINAL)	3/25/24

PROJECT NAME:

EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:

330 ROBERTS STREET
EAST HARTFORD, CT 06108

DRAWING TITLE:

RF BILL OF MATERIALS
AND RF CABLE
PLUMBING DIAGRAM

DRAWING NO.:

RF02

SCALE: AS SHOWN	DESIGNED BY: NMC DRAWN BY: NMC	VZW PROJECT NO.: 17056059
CEA PROJECT NO.: 96210.431	CHECKED BY: GRS ORIGINAL ISSUE DATE: 2/29/24	MOG LOCATION ID: 5000924924 VZW LOCATION CODE: 791873

RF BILL OF MATERIALS (PROP. (FINAL) CONFIGURATION)

SITE NAME: EAST HARTFORD 8 CT RELO A = ALPHA SECTOR B = BETA SECTOR G = GAMMA SECTOR

ITEM (SEE PLAN)	DESCRIPTION	BAND	QTY	STATUS	CABLE LENGTH/UNIT SIZE	COMMENTS
1	PANEL ANTENNA	700/850/1900	3 TOTAL (A,B,G)	PROP.	72.0"H x 11.9"W x 7.1"D (43.7 lbs, each)	MOUNT TO PROP. SIDE-BY-SIDE MOUNT
2	PANEL ANTENNA	2100/CBRS	3 TOTAL (A,B,G)	PROP.	72.0"H x 11.9"W x 7.1"D (50.9 lbs, each)	MOUNT TO PROP. SIDE-BY-SIDE MOUNT
3	PANEL ANTENNA	3700-3980	3 TOTAL (A,B,G)	PROP.	28.9"H x 15.6"W x 5.5"D (57.3 lbs, each)	MOUNT TO PROP. PIPE MAST
4	SIDE-BY-SIDE ANTENNA MOUNT KIT	-	3 TOTAL (A,B,G)	PROP.	25.4 lbs, each	MOUNT TO PROP. PIPE MAST
5	6x12 HYBRID SIGNAL CABLE (MAIN LINE)	-	3 TOTAL (A,B,G)	PROP.	45 FT.± (A), 85 FT.± (B), 60 FT.± (G)	ROUTE WITHIN PROP. NON-PENETRATING STEEL CABLE COVER ALONG ROOFTOP OF EXIST. BUILDING TO PROP. FIBER JUNCTION BOXES
6	1x1 HYBRID SIGNAL CABLE (JUMPER)	-	9 TOTAL (3 PER SECTOR)	PROP.	20 FT. MAX. EACH	ROUTE FROM PROP. UPPER FIBER JUNCTION BOXES TO PROP. REMOTE RADIO HEAD UNITS
7	1x2 HYBRID SIGNAL CABLE (JUMPER)	-	3 TOTAL (1 PER SECTOR)	PROP.	20 FT. MAX. EACH	ROUTE FROM PROP. UPPER FIBER JUNCTION BOXES TO PROP. MTR413-77A ANTENNAS
8	1/2" COAXIAL CABLE (JUMPER)	-	48 TOTAL (16 PER SECTOR)	PROP.	20 FT. MAX. EACH	ROUTE FROM PROP. REMOTE RADIO HEAD (RRH) UNITS TO PROP. PANEL ANTENNAS
9	REMOTE RADIO HEAD (RRH) UNIT	700/850	3 TOTAL (A,B,G)	PROP.	15.0"H x 15.0"W x 10.2"D (79.1 lbs, each)	MOUNT TO PROP. UNISTRUT RACK
10	REMOTE RADIO HEAD (RRH) UNIT	1900/2100	3 TOTAL (A,B,G)	PROP.	15.4"H x 15.8"W x 12.0"D (84.4 lbs, each)	MOUNT TO PROP. UNISTRUT RACK
11	REMOTE RADIO HEAD (RRH) UNIT	BAND 48	3 TOTAL (A,B,G)	PROP.	11.8"H x 8.7"W x 3.6"D (15.4 lbs, each)	MOUNT TO PROP. UNISTRUT RACK
12	UPPER FIBER JUNCTION BOX WITH SURGE	-	3 TOTAL (A,B,G)	PROP.	29.58"H x 16.5"W x 12.6"D (32.0 lbs, each)	MOUNT TO PROP. UNISTRUT RACK
13	LOWER FIBER JUNCTION BOX/RACK	-	1 TOTAL	PROP.	29.58"H x 16.5"W x 12.6"D (32.0 lbs, each)	EQUIPMENT CABINET/ROOM INTERFACE

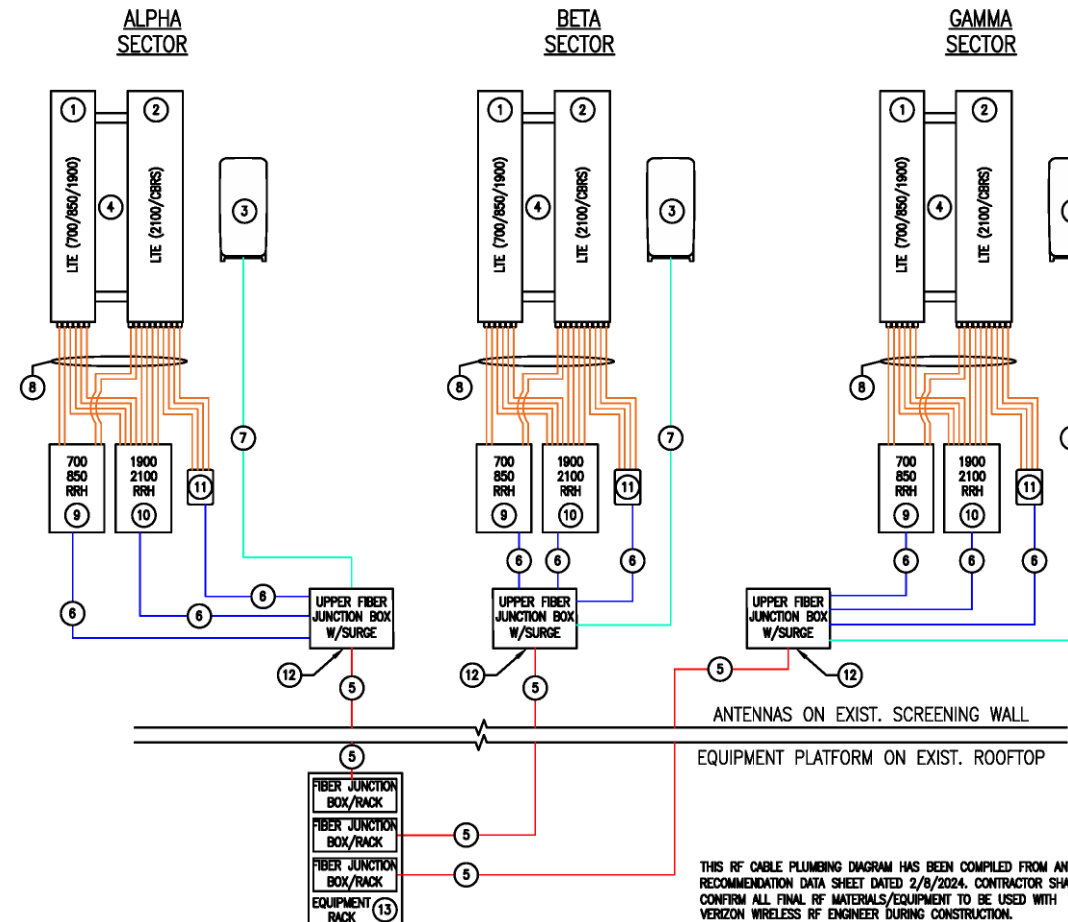
THIS RF BILL OF MATERIALS (BOM) HAS BEEN COMPILED FROM ANTENNA RECOMMENDATION DATA SHEET DATED 2/8/2024. CONTRACTOR SHALL CONFIRM ALL FINAL RF MATERIALS/EQUIPMENT TO BE USED WITH VERIZON WIRELESS RF ENGINEER DURING CONSTRUCTION.

RF BILL OF MATERIALS (FINAL CONFIGURATION)

SCALE: NONE

1 RF01

NOTE:
ARRANGEMENT OF ANTENNAS, REMOTE RADIO HEAD (RRH) UNITS, FIBER JUNCTION BOXES AND ALL ASSOCIATED WIRING AND ANCILLARY EQUIPMENT SHOWN SCHEMATICALLY ON THIS PLUMBING DIAGRAM. SEE PROP. ANTENNA ORIENTATION PLAN(S) AND CROSS REFERENCE WITH RF BILL OF MATERIALS FOR PROP. ANTENNA/EQUIPMENT PLACEMENT DETAIL.



RF CABLE PLUMBING DIAGRAM (FINAL CONFIGURATION)

SCALE:

2 RF02

RADIO FREQUENCY (RF) DESIGN NOTES:
1) ALL RADIO FREQUENCY (RF) DESIGN INFORMATION CONTAINED ON THIS SHEET IS SHOWN SCHEMATICALLY.
2) THE GENERAL CONTRACTOR SHALL CONFIRM ALL RF DESIGN ELEMENTS SHOWN (INCLUDING BUT NOT LIMITED TO PANEL ANTENNA MODELS & ARRANGEMENT, AZIMUTHS, REMOTE RADIO HEAD (RRH) UNIT MODELS & ARRANGEMENT AND CABLING DIAGRAMS/SCHEMATICS) WITH THE VERIZON WIRELESS RF ENGINEER AT THE TIME OF CONSTRUCTION.

LEGEND

RED	— (##) —	= HYBRID CABLE (MAIN LINE)
PURPLE	— (##) —	= COAXIAL CABLE (MAIN LINE)
BLUE	— (##) —	= 1x1 HYBRID CABLE (JUMPER)
CYAN	— (##) —	= 1x2 HYBRID CABLE (JUMPER)
ORANGE	— (##) —	= 1/2" COAXIAL CABLE (JUMPER)
GREEN	— (##) —	= RET CONTROL CABLE(S) (JUMPER)

Sector	Band	Color Coding	Sector	Band	Color Coding	Sector	Band	Color Coding
Alpha Sector Az = 90°	800MHz	R	Beta Sector Az = 210°	800MHz	B	Gamma Sector Az = 330°	800MHz	G
	850MHz	R		850MHz	B		850MHz	G
	PCS	R		PCS	B		PCS	G
	AW5	R		AW5	B		AW5	G
	800MHz	R		800MHz	B		800MHz	G
	850MHz	R		850MHz	B		850MHz	G
	PCS	R		PCS	B		PCS	G
	AW5	R		AW5	B		AW5	G
	800MHz	R		800MHz	B		800MHz	G
	850MHz	R		850MHz	B		850MHz	G
	PCS	R		PCS	B		PCS	G
	AW5	R		AW5	B		AW5	G
	800MHz	R		800MHz	B		800MHz	G
	850MHz	R		850MHz	B		850MHz	G
	PCS	R		PCS	B		PCS	G
	AW5	R		AW5	B		AW5	G
	800MHz	R		800MHz	B		800MHz	G
	850MHz	R		850MHz	B		850MHz	G
	PCS	R		PCS	B		PCS	G

Main Line Cable Length/Information	<p>CABLE LENGTH PROVIDED BELOW IS APPROXIMATE IN NATURE AND REFLECTED AS AN ADJUSTED VALUE TO PROVIDE ADEQUATE LENGTH. ANY FIELD MEASUREMENTS OF ANTICIPATED CABLE LENGTH IS ENCOURAGED IN AN EFFORT TO REDUCE SLACK AND TO OPTIMIZE DESIGN. SUCH FIELD MEASUREMENTS MAY SUPERCEDE THE LENGTH PROVIDED BELOW AT THE DISCRETION OF THE GENERAL CONTRACTOR</p> <p style="text-align: center;">PROPOSED 45'± (ONE (1) PROP. 6x12 HYBRID SIGNAL CABLE)</p>	<p>CABLE LENGTH PROVIDED BELOW IS APPROXIMATE IN NATURE AND REFLECTED AS AN ADJUSTED VALUE TO PROVIDE ADEQUATE LENGTH. ANY FIELD MEASUREMENTS OF ANTICIPATED CABLE LENGTH IS ENCOURAGED IN AN EFFORT TO REDUCE SLACK AND TO OPTIMIZE DESIGN. SUCH FIELD MEASUREMENTS MAY SUPERCEDE THE LENGTH PROVIDED BELOW AT THE DISCRETION OF THE GENERAL CONTRACTOR</p> <p style="text-align: center;">PROPOSED 85'± (ONE (1) PROP. 6x12 HYBRID SIGNAL CABLE)</p>	<p>CABLE LENGTH PROVIDED BELOW IS APPROXIMATE IN NATURE AND REFLECTED AS AN ADJUSTED VALUE TO PROVIDE ADEQUATE LENGTH. ANY FIELD MEASUREMENTS OF ANTICIPATED CABLE LENGTH IS ENCOURAGED IN AN EFFORT TO REDUCE SLACK AND TO OPTIMIZE DESIGN. SUCH FIELD MEASUREMENTS MAY SUPERCEDE THE LENGTH PROVIDED BELOW AT THE DISCRETION OF THE GENERAL CONTRACTOR</p> <p style="text-align: center;">PROPOSED 60'± (ONE (1) PROP. 6x12 HYBRID SIGNAL CABLE)</p>
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Hybrid Cable on Rooftops and Water tanks

Hybrid Cable 1

Sector	Identification Color	-48V	RTN
700 Alpha	Blue		
AW5 Alpha	Violet		
PCS Alpha	Green		
850 Alpha	Brown		
Spare	Yellow		
Spare	White		

Hybrid Cable 2

Sector	Identification Color	-48V	RTN
700 Beta	Blue		
AW5 Beta	Violet		
PCS Beta	Green		
850 Beta	Brown		
Spare	Yellow		
Spare	White		

Hybrid Cable 3

Sector	Identification Color	-48V	RTN
700 Gamma	Blue		
AW5 Gamma	Violet		
PCS Gamma	Green		
850 Gamma	Brown		
Spare	Yellow		
Spare	White		

CLIENT:
verizon

ARCHITECT/ENGINEER:
CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST
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MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

SEAL:

ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE:
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REVISIONS		
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0	ISSUED FOR 95% REVIEW	2/29/24
1	ISSUED FOR CONSTRUCTION (FINAL)	3/25/24

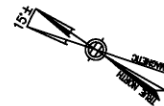
PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
330 ROBERTS STREET
EAST HARTFORD, CT 06108

DRAWING TITLE:
RF COLOR CODE SPECIFICATIONS

DRAWING NO.:
RF03

SCALE: N/A	DESIGNED BY: NWC DRAWN BY: NWC CHECKED BY: GRS	V2W PROJECT NO.: 17056059 MOG LOCATION ID: 5000924924
CEA PROJECT NO.: 96210.431	ORIGINAL ISSUE DATE: 2/29/24	V2W LOCATION CODE: 791873

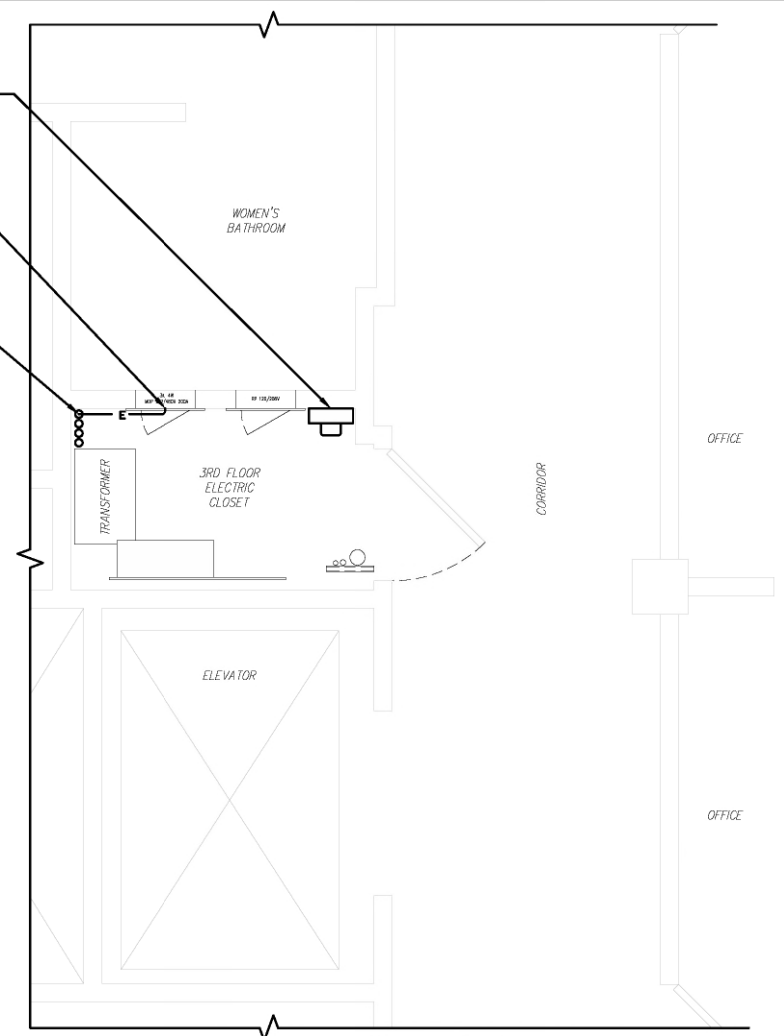


PROP. VERIZON ELECTRIC SUBMETER TO BE MOUNTED TO EXIST. WALL. EXACT DETAILS OF SERVICE ARRANGEMENT TO BE COORDINATED WITH LANDLORD.

EXIST. 30-POSITION 277/480V 3Ø 4W ELECTRICAL POWER PANEL (MDP). PROP. 3-P 100A BREAKER SHALL BE INSTALLED (OCCUPYING POSITIONS 28-30) AND SHALL BE UTILIZED FOR VERIZON'S PROP. 200A SUB-METERED ELECTRIC SERVICE. VERIZON'S PROP. STEP-DOWN TRANSFORMER SHALL BE LOCATED ON VERIZON'S PROP. EQUIPMENT PLATFORM ON ROOF LEVEL. (SEE "ELECTRICAL PLAN (ROOF)" ON THIS SHEET FOR TRANSFORMER LOCATION)

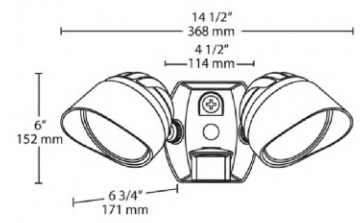
(PROP. VERIZON UTILITY RISER LOCATION)
PROP. VERIZON GROUND CONDUIT (IF REQUIRED), ELECTRIC SERVICE CONDUIT AND FIBER TELEPHONE SERVICE CONDUIT ROUTED DOWN FROM ROOF ABOVE. PROP. "NORMAL POWER" CONDUIT SHALL BE ROUTED DOWN TO 1ST FLOOR LEVEL BELOW. SEE "1ST FLOOR PLAN" ON SHEET 1-3 FOR CONTINUATION. PROP. GROUND CONDUIT (IF REQUIRED) AND FIBER TELEPHONE SERVICE CONDUIT SHALL BE ROUTED DOWN TO BASEMENT LEVEL BELOW. SEE "ELECTRICAL PLAN (BASEMENT)" ON SHEET E02C FOR CONTINUATIONS. ALL FLOOR PENETRATIONS SHALL BE FIRESTOPPED.

NOTE:
EXIST. INTERIOR BUILDING PARTITIONS AND FEATURES SHOWN SCHEMATICALLY OR NOT SHOWN FOR CLARITY.



ELECTRICAL PLAN (PART 3RD FLOOR) 2
E02A
SCALE: 1/2" = 1'-0"
0 2'-0" 4'-0" 6'-0"

NOTE:
CONTRACTOR SHALL PROVIDE DUAL-FLOOD LIGHT AT TWO (2) LOCATIONS SHOWN (SEE PLAN ON THIS SHEET FOR LOCATIONS)



TYPICAL LED FLOOD LIGHT DETAIL 3
E02A
SCALE: N.T.S.

PROP. NON-PENETRATING BALLASTED ROOFTOP GUARDRAIL (TYP.) FROM EXIST. ROOF ACCESS HATCH TO PROP. STEEL ACCESS STAIRS. TOP OF PROP. GUARDRAIL SHALL BE 3'-6" ABOVE EXIST. ROOF SURFACE.

EXIST. AC CONDENSING UNIT MOUNTED TO OUTBOARD SIDE OF EXIST. SCREENING WALL (TYP.)

PROP. DUAL LED FLOOD LIGHT (RAB LIGHTING PART #BULLET2X12B) MOUNTED TO INBOARD SIDE OF PROP. PLATFORM RAILING (TYP. OF 2) (MOUNTING DETAILS BY CONTRACTOR) 3 E02A

PROP. VERIZON EQUIPMENT CABINETS TO BE INSTALLED ON PROP. STEEL EQUIPMENT PLATFORM

PROP. DUPLEX GFCI RECEPTACLE IN WEATHERPROOF 1-GANG WORK BOX WITH CLEAR PLASTIC COVER
PROP. 200A POWER PANEL WITHIN NEMA 3R OUTDOOR RATED ENCLOSURE MOUNTED TO PROP. PLATFORM FRAMING (MOUNTING DETAILS BY CONTRACTOR) 2 E02B

PROP. VERIZON STEP-DOWN TRANSFORMER TO BE LOCATED ON VERIZON'S PROP. EQUIPMENT PLATFORM

EXIST. VENT STACK TO BE RE-ROUTED AROUND PROP. EQUIPMENT PLATFORM AND ATTACHED TO FACE OF EXIST. SCREENING WALL. VENT STACK SHALL TERMINATE 2'-0" ABOVE TOP OF EXIST. SCREENING WALL.

EXIST. ROOF PERIMETER CURBING (TYP.)

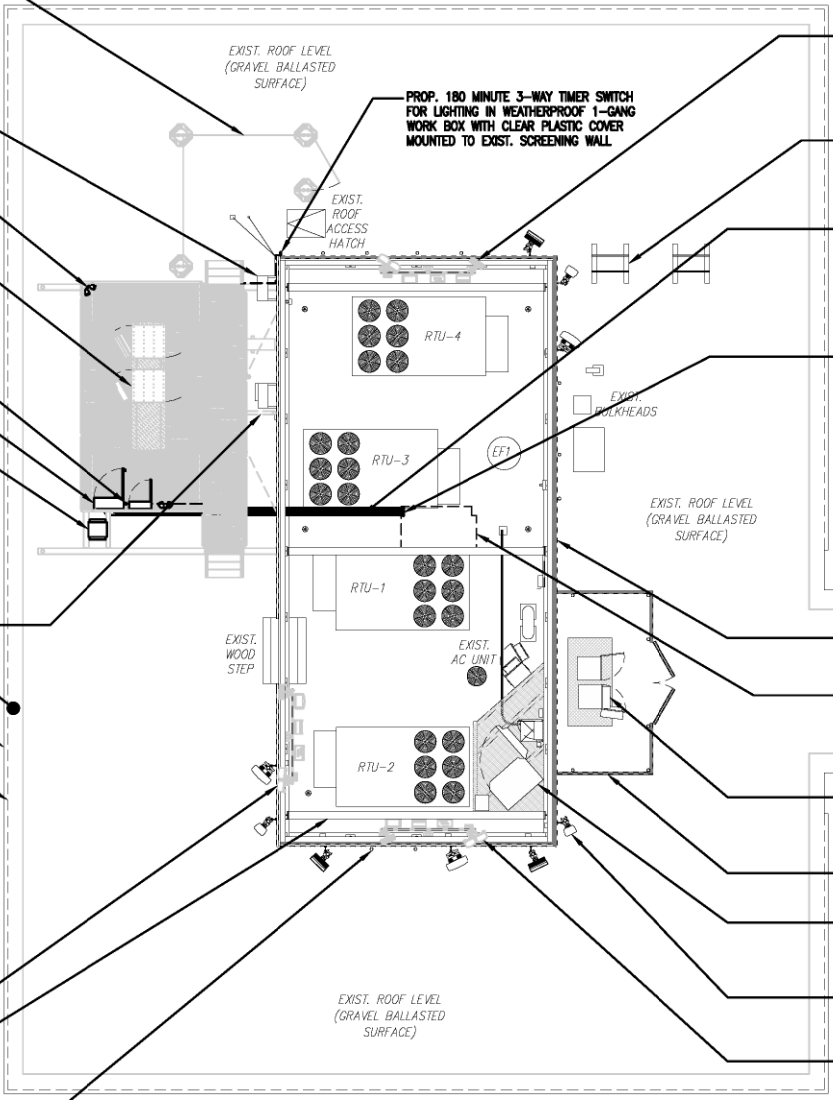
EDGE OF EXIST. ROOF/METAL FLASHING (TYP.)

FACE OF EXIST. BUILDING BELOW (TYP.)

PROP. VERIZON ALPHA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL. TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.

EXIST. STEEL FRAMING (TYP.)

EXIST. ABANDONED ANTENNA PIPE MAST OF OTHERS MOUNTED TO OUTBOARD SIDE OF EXIST. SCREENING WALL (TYP.)



PROP. 180 MINUTE 3-WAY TIMER SWITCH FOR LIGHTING IN WEATHERPROOF 1-GANG WORK BOX WITH CLEAR PLASTIC COVER MOUNTED TO EXIST. SCREENING WALL

PROP. VERIZON ALPHA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL. TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.

EXIST. ABANDONED ROOF CURB SUPPORTS (TYP.)

PROP. VERIZON GROUND CONDUIT (IF REQUIRED), ELECTRIC SERVICE CONDUIT, FIBER TELEPHONE SERVICE CONDUIT AND BACK-UP POWER CONDUIT ROUTED ALONG ROOF SURFACE ON NON-PENETRATING SLEEPERS (TYP.) FROM PROP. EQUIPMENT PLATFORM TO PROP. UTILITY RISER LOCATION AS SHOWN.

(PROP. VERIZON UTILITY RISER LOCATION)
PROP. VERIZON GROUND CONDUIT (IF REQUIRED), ELECTRIC SERVICE CONDUIT AND FIBER TELEPHONE SERVICE CONDUIT ROUTED DOWN THROUGH EXIST. ROOF INTO EXIST. STACKED ELECTRIC CLOSETS TO LOWER LEVELS OF BUILDING. ALL ROOF PENETRATIONS SHALL BE SEALED WATERTIGHT.

EXIST. STEEL-FRAMED WOOD-FACED SCREENING WALL (TYP.)

OUTLINE OF EXIST. STACKED ELECTRIC CLOSETS BELOW

EXIST. T-MOBILE EQUIPMENT CABINET (TYP.) MOUNTED TO EXIST. STEEL PEDESTAL WITHIN EXIST. SCREENING ENCLOSURE

EXIST. T-MOBILE WOOD-FACED SCREENING ENCLOSURE

EXIST. T-MOBILE EQUIPMENT CABINET (TYP.) MOUNTED TO EXIST. STEEL PLATFORM BEHIND EXIST. SCREENING WALLS

EXIST. T-MOBILE PANEL ANTENNA MOUNTED TO OUTBOARD SIDE OF EXIST. SCREENING WALL (TYP.)

PROP. VERIZON BETA SECTOR PANEL ANTENNAS (THREE (3) TOTAL), REMOTE RADIO HEAD (RRH) UNITS (THREE (3) TOTAL) AND FIBER DISTRIBUTION BOX (ONE (1) TOTAL) MOUNTED TO EXIST. INBOARD STEEL FRAMING OF EXIST. SCREENING WALL. TOPS OF PANEL ANTENNAS SHALL BE MOUNTED 7'-0" ABOVE TOP OF EXIST. SCREENING WALL.

NOTES:
1.) SEE ONE LINE DIAGRAMS ON SHEET E03 FOR FURTHER CONDUIT DETAILS

ELECTRICAL PLAN (ROOF) 1
E02A
SCALE: 1/8" = 1'-0"
0 8'-0" 16'-0" 24'-0"

CLIENT:
verizon

ARCHITECT/ENGINEER:
CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil-Structural-Land Surveying

R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST
SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

SEAL:

ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE:
THESE DRAWINGS HAVE BEEN PREPARED IN ARCH D (24"x36") FORMAT. AS SUCH THE WRITTEN SCALES SHOWN ON ANY REPRODUCTIONS OF A CONFORMATORY SIZE SHALL BE RENDERED INVALID. ALL BAR SCALES MAY BE USED REGARDLESS OF REPRODUCTION SIZE. WHERE IN CONFLICT, BAR SCALES SHALL SUPERSEDE WRITTEN SCALES.
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REVISIONS

NO.	DESCRIPTION	DATE
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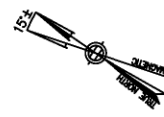
PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
**330 ROBERTS STREET
EAST HARTFORD, CT 06108**

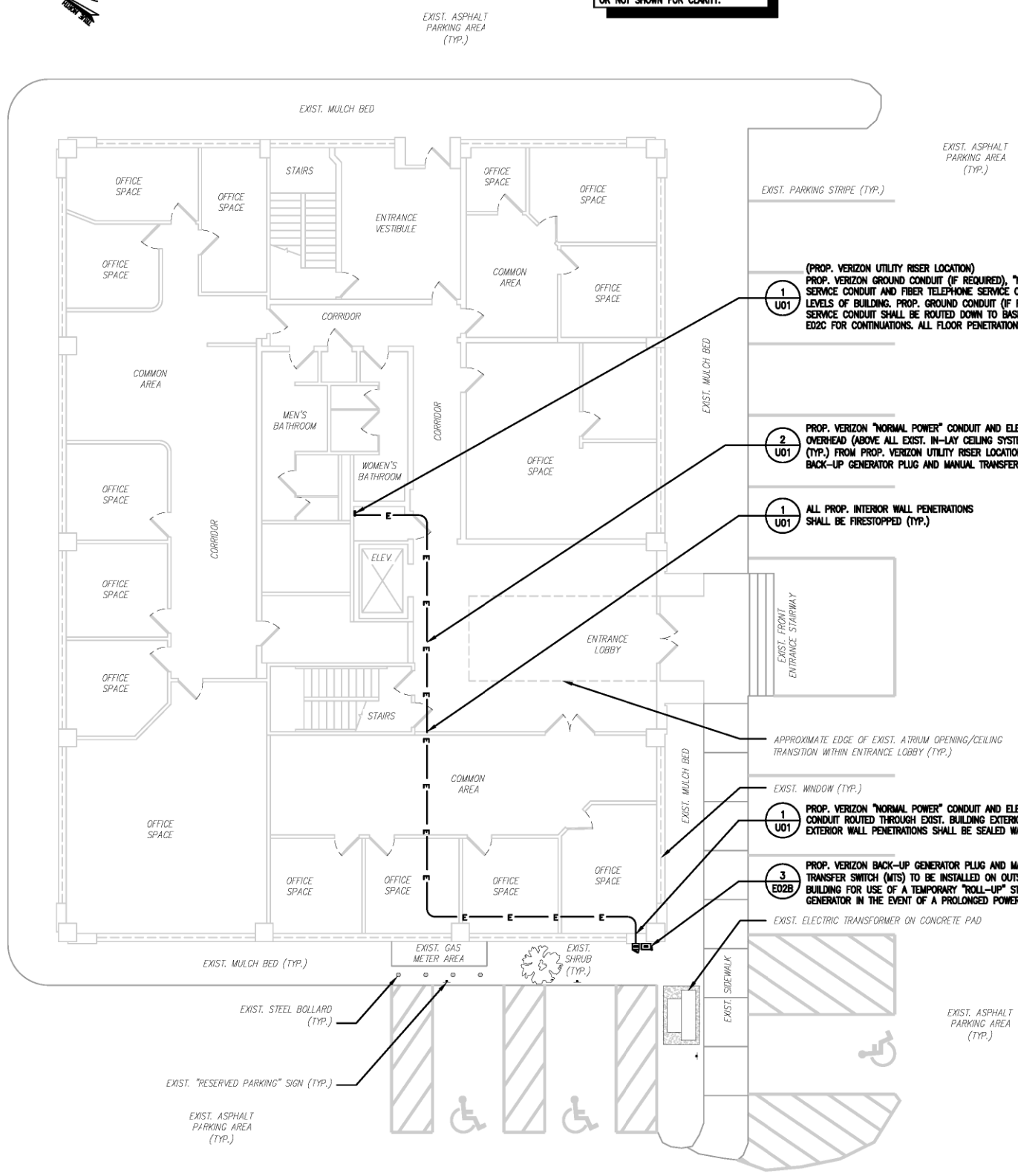
DRAWING TITLE:
ELECTRICAL PLAN (ROOF AND PART 3RD FLOOR PLAN) AND ELECTRICAL DETAILS

DRAWING NO:
E02A

SCALE: AS SHOWN	DESIGNED BY: NWC DRAWN BY: NWC	VZW PROJECT NO.: 17056059
CEA PROJECT NO.: 96210.431	CHECKED BY: GRS ORIGINAL ISSUE DATE: 2/29/24	MDG LOCATION ID: 5000924924 VZW LOCATION CODE: 791673



NOTE:
EXIST. INTERIOR BUILDING PARTITIONS
AND FEATURES SHOWN SCHEMATICALLY
OR NOT SHOWN FOR CLARITY.



ELECTRICAL PLAN (1ST FLOOR) 1
SCALE: 1/8" = 1'-0"
0 8'-0" 16'-0" 24'-0" E02B

ASCO D300L SERIES, SINGLE PHASE, 200A POWER TRANSFER LOAD CENTER IN 3R ENCLOSURE ELECTRICAL PANEL SCHEDULE 85,000 A.L.C. NEMA 3R

CKT #	DESCRIPTION	AMP	AMP	DESCRIPTION	CKT #
1	RECTIFIER #1	30	30	RECTIFIER #2	2
3					4
5	RECTIFIER #3	30	30	RECTIFIER #4	6
7					8
9	RECTIFIER #5	30	30	RECTIFIER #6	10
11					12
13	RECTIFIER #7	30	30	RECTIFIER #8	14
15					16
17	FUTURE RECTIFIER #9	30	30	FUTURE RECTIFIER #10	18
19					20
21	FUTURE RECTIFIER #11	30	30	FUTURE RECTIFIER #12	22
23					24
25	GFCI RECEPTACLE/LIGHT	20	20	PLATFORM LIGHTING	26
27	BLANK	-	20	TELCO/HOFFMAN CABINET HEATER, FAN, RECEPTACLE	28
29	BLANK	-	-	BLANK	30

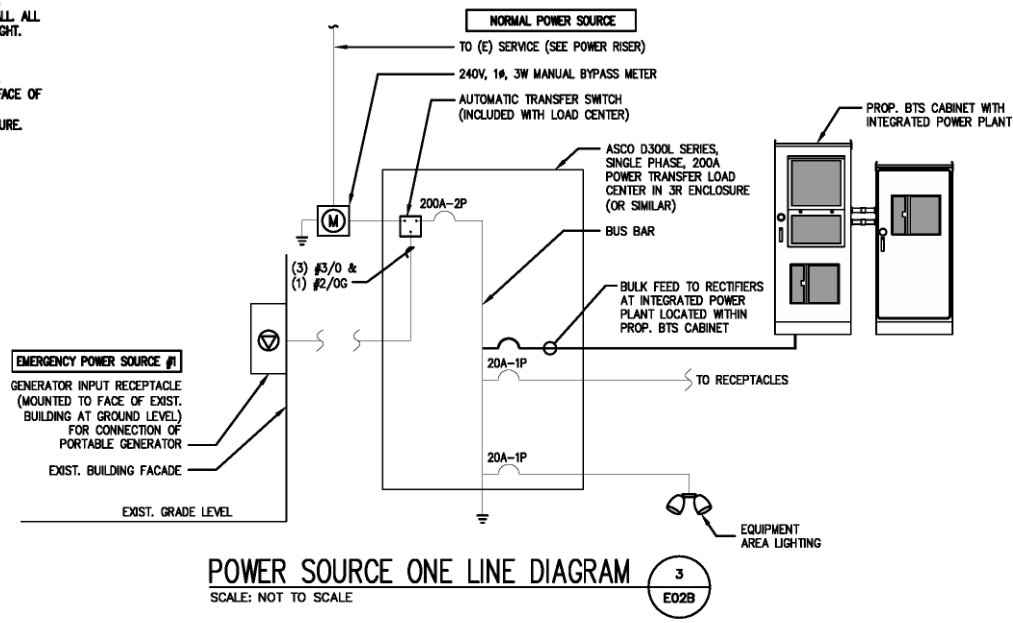
ELECTRICAL PANEL SCHEDULE 2
SCALE: NTS E02B

UTILITY CONTACTS

ELECTRICAL: EVERSOURCE ENERGY
247 STATION DRIVE, SE 210
WESTWOOD, MA 02090
(781) 441-3610

TELEPHONE: VERIZON
165 FRANKLIN STREET
BOSTON, MA 02107
(800) 941-9800

NOTES:
1.) SEE ONE LINE DIAGRAMS ON SHEET E03 FOR FURTHER CONDUIT DETAILS



POWER SOURCE ONE LINE DIAGRAM 3
SCALE: NOT TO SCALE E02B

CLIENT:
verizon

ARCHITECT/ENGINEER:
CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying

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MARLBOROUGH, MA 01752
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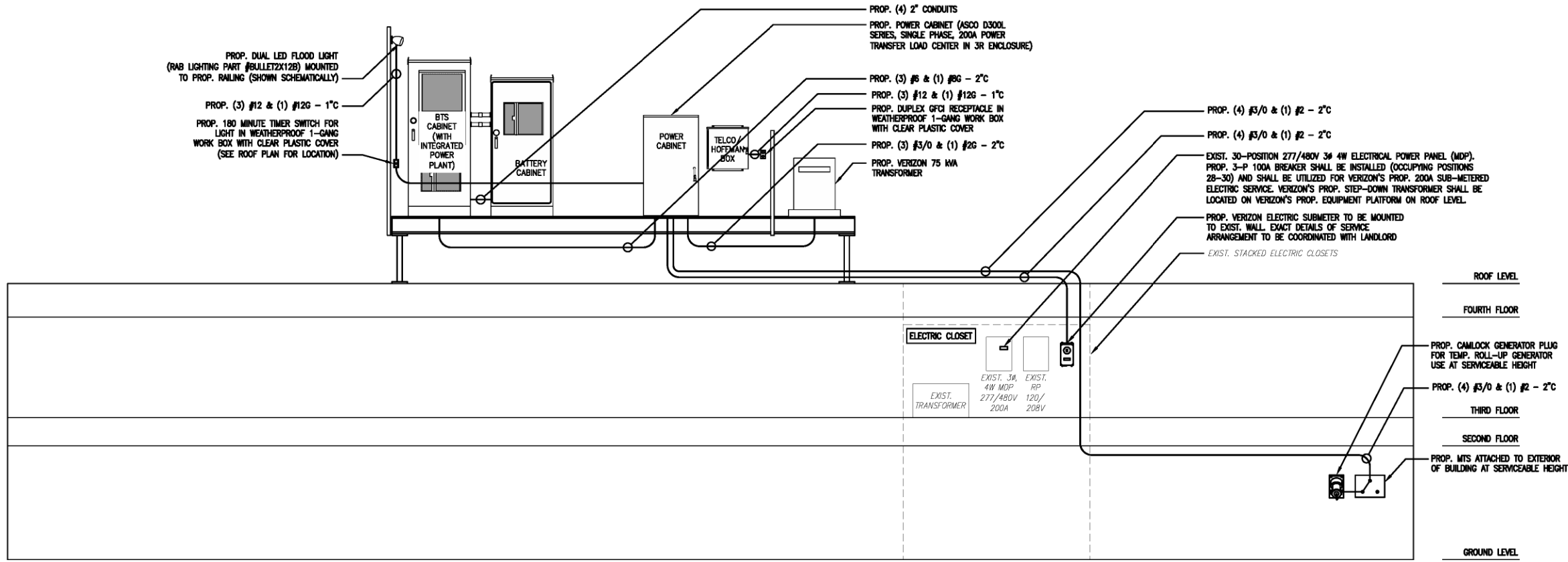
PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
330 ROBERTS STREET
EAST HARTFORD, CT 06108

DRAWING TITLE:
ELECTRICAL PLAN (1ST FLOOR) AND ELECTRICAL DETAILS

DRAWING NO:
E02B

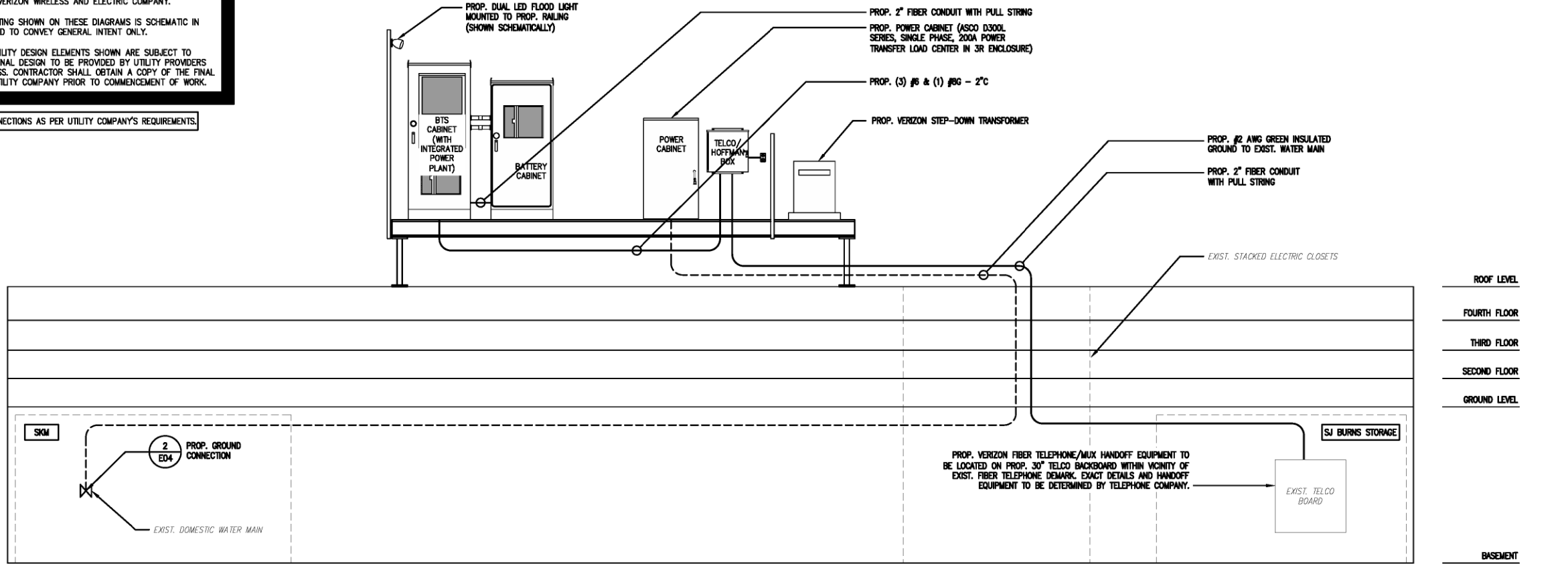
SCALE: AS SHOWN	DESIGNED BY: INIC DRAWN BY: INIC	VZW PROJECT NO.: 17056059
CEA PROJECT NO.: 96210.431	CHECKED BY: GRS ORIGINAL ISSUE DATE: 2/29/24	MDG LOCATION ID: 5000924924 VZW LOCATION CODE: 791673



ELECTRICAL ONE LINE DIAGRAM 1E
 SCALE: N.T.S. E03

- ONE-LINE DIAGRAM NOTES:**
- 1) PROVIDE WEATHER TIGHT SEAL CONNECTORS ON ALL CONNECTIONS INSIDE AND OUT.
 - 2) COORDINATE ANY FURTHER MISCELLANEOUS WIRING AND CONDUIT REQUIREMENTS WITH VERIZON WIRELESS AND ELECTRIC COMPANY.
 - 3) ALL CONDUIT ROUTING SHOWN ON THESE DIAGRAMS IS SCHEMATIC IN NATURE AND INTENDED TO CONVEY GENERAL INTENT ONLY.
 - 4) ALL PROPOSED UTILITY DESIGN ELEMENTS SHOWN ARE SUBJECT TO CHANGE BASED ON FINAL DESIGN TO BE PROVIDED BY UTILITY PROVIDERS AND VERIZON WIRELESS. CONTRACTOR SHALL OBTAIN A COPY OF THE FINAL UTILITY DESIGN BY UTILITY COMPANY PRIOR TO COMMENCEMENT OF WORK.

MAKE ALL CONNECTIONS AS PER UTILITY COMPANY'S REQUIREMENTS.



TELCO/FIBER ONE LINE DIAGRAM 1T
 SCALE: N.T.S. E03

CLIENT:
verizon

ARCHITECT/ENGINEER:
CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
 R.K. EXECUTIVE CENTRE
 201 BOSTON POST ROAD WEST
 SUITE 101
 MARLBOROUGH, MA 01752
 (508) 481-7400
 www.chappellengineering.com

SEAL:

 ENGINEER/LAND SURVEYOR DATE

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PROJECT NAME:
EAST HARTFORD 8 CT RELO

PROJECT ADDRESS:
 330 ROBERTS STREET
 EAST HARTFORD, CT 06108

DRAWING TITLE:
ELECTRICAL AND TELCO/FIBER ONE LINE DIAGRAMS

DRAWING NO:
E03

SCALE: AS SHOWN	DESIGNED BY: NWC DRAWN BY: NWC CHECKED BY: GRS	VZW PROJECT NO.: 17058059 MDG LOCATION ID: 5000924924 VZW LOCATION CODE: 791873
CEA PROJECT NO.: 96210.431	ORIGINAL ISSUE DATE: 2/29/24	

GROUNDING GENERAL NOTES

1. ALL EXTERIOR CONDUCTORS SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNLESS OTHERWISE NOTED. MINIMUM BEND RADIUS SHALL BE EIGHT (8) INCHES.
2. ALL CONNECTIONS TO HALO GROUND RING AND ALL CABLE TRAY JUMPERS SHALL BE #6 AWG, BARE, STRANDED, COPPER WIRE.
3. ALL WIRE-TO-WIRE CONNECTIONS SHALL BE THREE-CLAMP, C TAP COMPRESSION (T&B #54740 ORANGE OR EQUIVALENT). ALL GROUND BAR CONNECTIONS SHALL BE TWO-HOLE, LONG-BARREL TYPE COMPRESSION LUGS (T&B OR EQUIVALENT). ALL OTHER CONNECTIONS TO STEEL SURFACES SHALL USE LUG-TYPE CONNECTORS.
4. MECHANICALLY BOND ANTENNA MOUNTS WITH #2 AWG, BARE, STRANDED CONDUCTORS.
5. ALL GROUNDING WORK SHALL COMPLY WITH VERIZON WIRELESS AND LUCENT STANDARDS.
6. CONNECT GROUND CONDUCTOR TO EXISTING WATER SERVICE. ATTACH TO WALLS, PARAPET, CABLE TRAY, ETC. WITH A CLAMPS AS NECESSARY. REMOVE PAINT, FIREPROOFING, MILL SCALE, ETC. TO ACHIEVE GOOD CADWELD GROUND CONNECTION.

GROUNDING LEGEND

SYMBOL	DESCRIPTION
▶	MECHANICAL CONNECTION
■	EXOTHERMIC WELD (CADWELD)

CLIENT:



ARCHITECT/ENGINEER:



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PROJECT ADDRESS:

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EAST HARTFORD, CT 06108

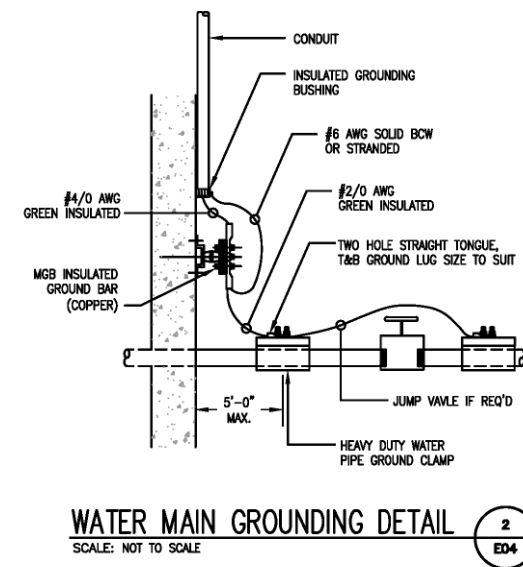
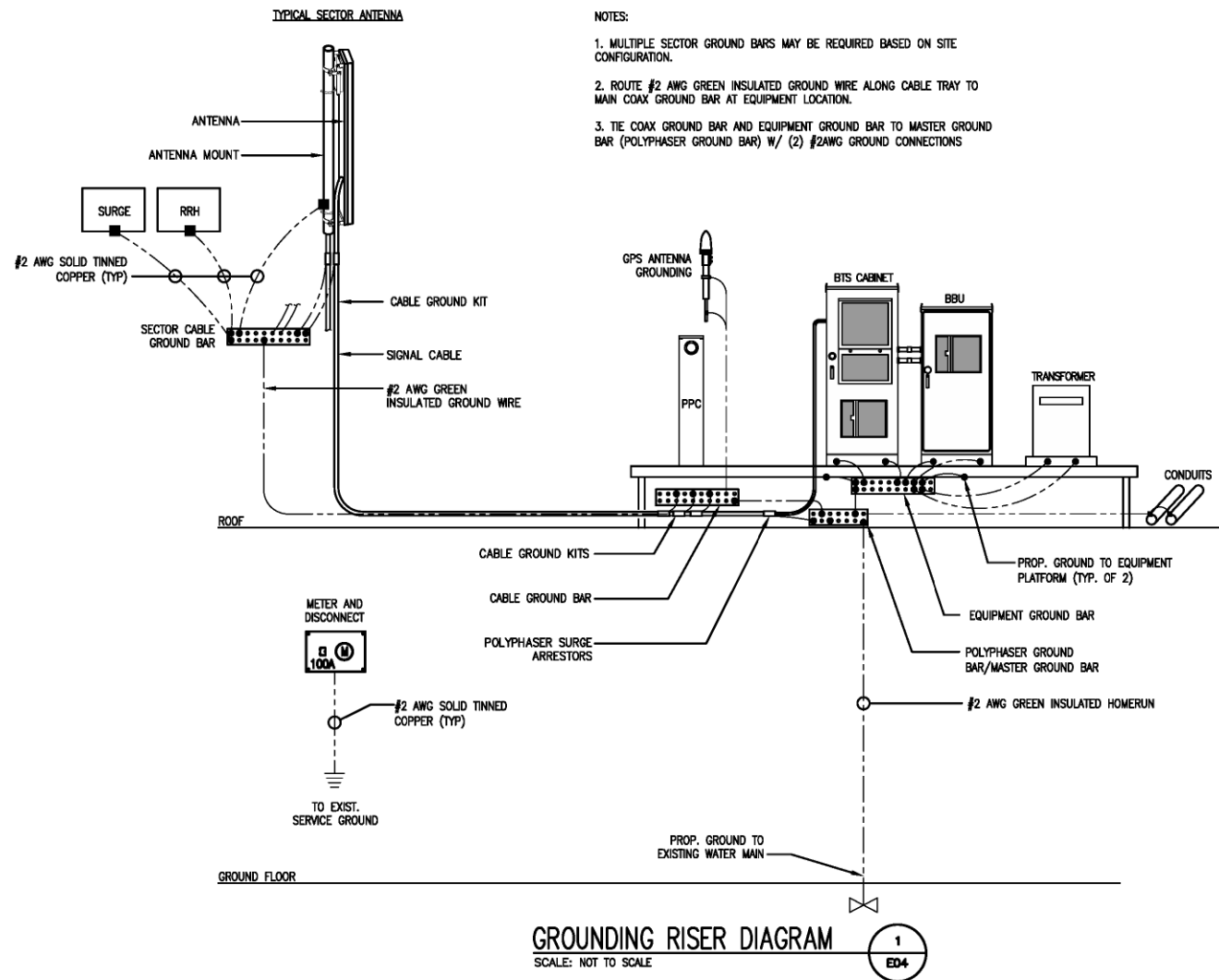
DRAWING TITLE:

GROUNDING DIAGRAM,
NOTES AND DETAILS

DRAWING NO.:

E04

SCALE: AS SHOWN	DESIGNED BY: NWC DRAWN BY: NWC CHECKED BY: GRS	VZW PROJECT NO.: 17056059 MDG LOCATION ID: 5000924924 VZW LOCATION CODE: 791873
CEA PROJECT NO.: 96210.431	ORIGINAL ISSUE DATE: 2/29/24	



CLIENT:



ARCHITECT/ENGINEER:



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MARLBOROUGH, MA 01752
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PROJECT NAME:

EAST HARTFORD 8 CT
RELO

PROJECT ADDRESS:

330 ROBERTS STREET
EAST HARTFORD, CT 06108

DRAWING TITLE:

GROUNDING DETAILS

DRAWING NO.:

E05

SCALE:

AS SHOWN

DESIGNED BY: NWC

DRAWN BY: NWC

CHECKED BY: GRS

ORIGINAL ISSUE DATE:

2/29/24

VZW PROJECT NO.:

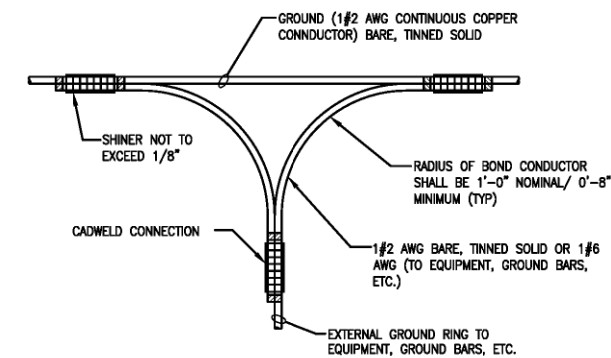
17056059

MDG LOCATION ID:

5000924924

VZW LOCATION CODE:

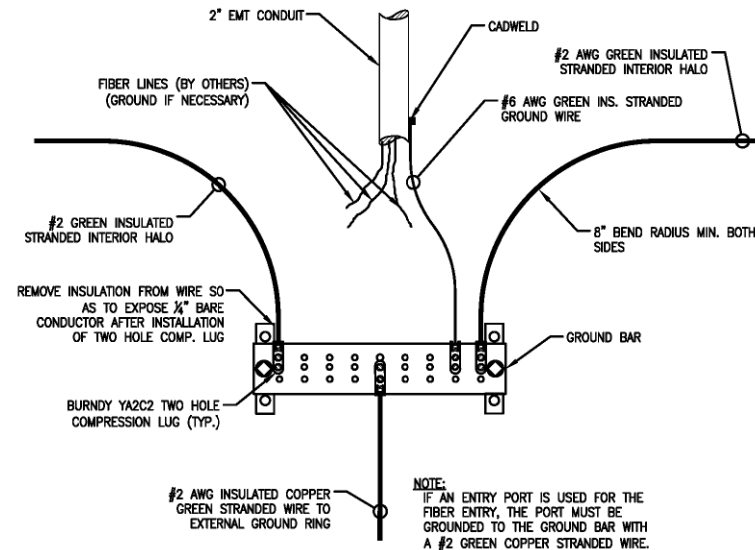
791873



NOTE: ALL CONNECTION TO GROUND SHALL BE NON-DIRECTIONAL

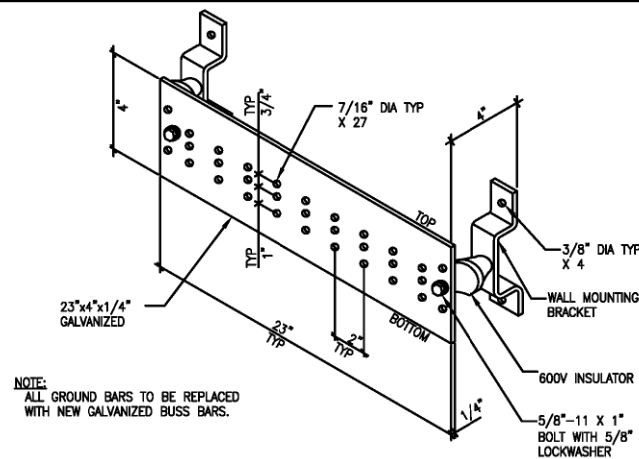
NON-DIRECTIONAL SPLICE

SCALE: N.T.S.



INTERIOR GROUNDING AT TELCO ENTRY

SCALE: N.T.S.

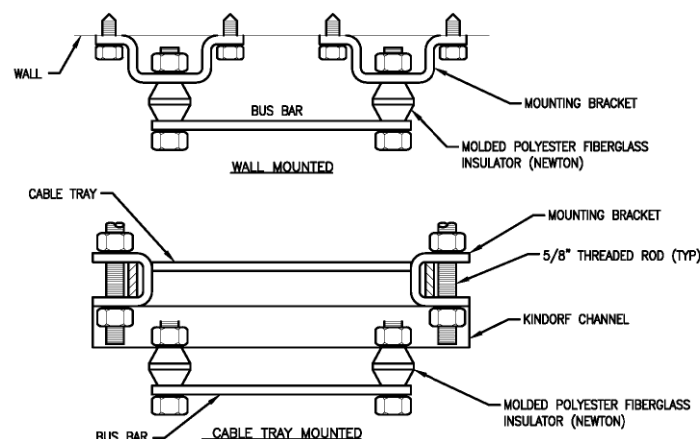


NOTE: ALL GROUND BARS TO BE REPLACED WITH NEW GALVANIZED BUSS BARS.

- SURFACE PREPARATION:** ALL CONNECTIONS MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE MADE BARE TO ENSURE PROPER CONTACT. NO WASHERS SHALL BE ALLOWED BETWEEN THE ITEMS BEING GROUNDED. ALL CONNECTIONS SHALL HAVE AN ANTI-OXIDANT APPLIED PRIOR TO INSTALLATION.
- BUSS PREPARATION:** ALL COPPER BUSSES SHALL BE CLEANED, POLISHED AND AN ANTI-OXIDANT APPLIED. NO FINGERPRINTS OR DISCOLORED COPPER WILL BE PERMITTED.
- TERMINATIONS:** ALL EQUIPMENT TERMINATIONS SHALL BE MADE WITH A BURNDY TWO HOLE COMPRESSION LUG WITH 10-24x3/4" LONG S.S. SCREWS, NUTS AND LOCKWASHERS. ALL BUSS TERMINATIONS SHALL BE MADE WITH A CAD-WELD OR BURNDY YC2C2 2 HOLE COMPRESSION LUG OR EQUAL. ALL INTERIOR HALO ATTACHMENTS SHALL BE MADE USING A BURNDY YC2C2 COMPRESSION LUG.

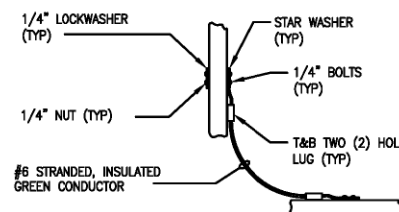
TYP. INTERIOR & EXTERIOR GROUND BAR

SCALE: N.T.S.



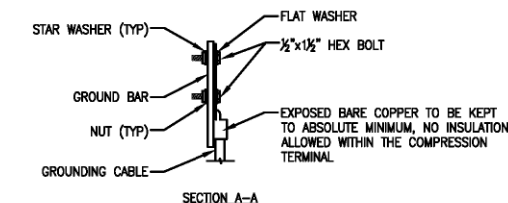
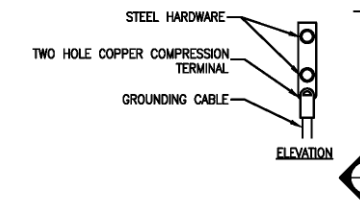
BUS BAR MOUNTING

SCALE: N.T.S.



CABLE TRAY GROUNDING

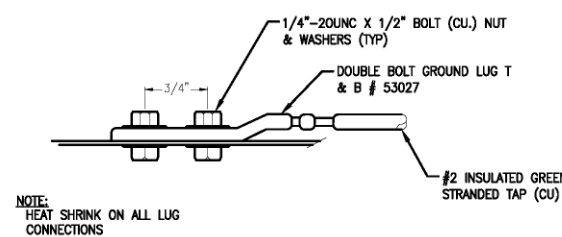
SCALE: N.T.S.



- NOTE:
- "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
 - OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

TYPICAL GROUND BAR CONNECTION DETAIL

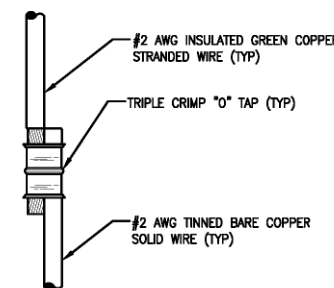
SCALE: N.T.S.



NOTE: HEAT SHRINK ON ALL LUG CONNECTIONS

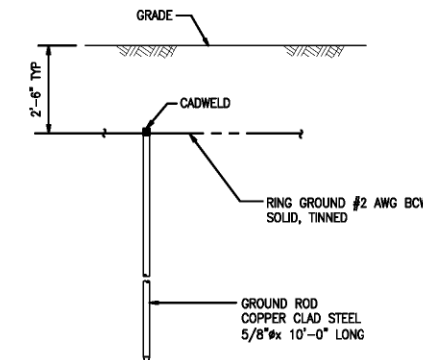
TYPICAL EQUIPMENT GROUND CONNECTION

SCALE: N.T.S.



TYPICAL GROUND CONNECTION SPLICE DETAIL

SCALE: N.T.S.



GROUND ROD

SCALE: N.T.S.