

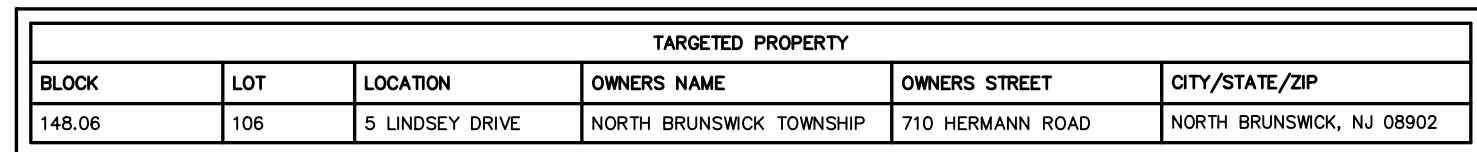
R-1	Single Family Residential
R-2	Single Family Residential
R-3	Single Family Residential
R-4	Single Family Residential
R-5	Garden Apartment Residential
R-6(PRD)	Planned Residential Development
R-7	Multistoreyed Senior Citizen Apt. Residential
R-M	Manufactured Housing Residential
R-T-D	Townhouse - Duplex Residential
C-1	Neighborhood Commercial
C-2	General Commercial
C-3	Restricted Neighborhood Commercial District
C-4	Not Restricted Commercial
G-O	General Office
O-R	Mid - Rise Office Research
I-1	Industrial
I-2	Industrial
TOMU	Transit-Oriented Mixed Use
TMU	Transitional Mixed Use
PUD	Planned Unit Development
PUD II	Planned Unit Development
ERR	Recreation - Recreation Research
PAC	Planned Adult Community



**5 LINDSEY DRIVE
NORTH BRUNSWICK, NJ 08902
MIDDLESEX COUNTY**

SITE CHARACTERISTICS	
LATITUDE:	N 40° 25' 56.8992" (NAD 83)
LONGITUDE:	W 74° 29' 58.4988" (NAD 83)
GROUND ELEVATION (AMSL):	98± AMSL (NAVD 88)
STRUCTURE TYPE:	PROPOSED MONOPOLE
LOCATION OF PROPOSED EQUIPMENT:	AT GRADE
STRUCTURE HEIGHT:	±150'-0" AGL (EXISTING TOP OF WATER TANK) ±180'-0" AGL (TOP OF PROPOSED MONOPOLE)

SHEET INDEX	
SHEET NO.	SHEET DESCRIPTION
T-1	TITLE SHEET
Z-1	OVERALL SITE PLAN & BULK TABLES
Z-2	SITE PLAN & GENERAL NOTES
Z-3	FINAL ELEVATION
Z-4	ANTENNA LAYOUT & NOTES
Z-5	EQUIPMENT DETAILS
Z-6	EQUIPMENT DETAILS
Z-7	EQUIPMENT DETAILS
Z-8	SHELTER DETAILS
Z-9	WIC MOUNTING KIT
Z-10	GENERATOR DETAILS
Z-11	CONCRETE DETAILS & NOTES

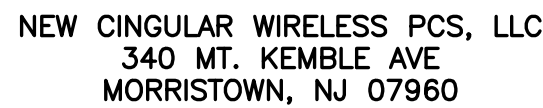


THE APPLICANT PROPOSES TO INSTALL SIXTEEN (16) NEW ANTENNAS ON A PROPOSED MONOPOLE AS WELL AS INSTALL A NATURAL GAS GENERATOR, EQUIPMENT CABINETS, & RELATED ACCESSORY EQUIPMENT WITHIN A NEW FENCED COMPOUND.

APPROVALS	
<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between;"> BOARD CHAIR DATE </div>	<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div>
<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between;"> BOARD SECRETARY DATE </div>	<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div>
<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div> <div style="display: flex; justify-content: space-between;"> BOARD ENGINEER DATE </div>	<div style="border-bottom: 1px solid black; margin-bottom: 5px;"></div>



NEW JERSEY LAW REQUIRES
THREE WORKING DAYS NOTICE PRIOR
TO ANY EARTH MOVING ACTIVITIES



10950 GRANDVIEW DRIVE
OVERLAND PARK, KANSAS 66210
(913) 458-2000

976 TABOR ROAD, UNIT 6
MORRIS PLAINS, NJ 07950
862-242-8050
NEW JERSEY STATE BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF AUTHORIZATION # 24GA28326800

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NICHOLAS D. BARILE
PROFESSIONAL ENGINEER, N.J. LIC. No. 24GE04909100

ZONING DRAWINGS
MI-144X

FA CODE: 15372460

5 LINDSEY DRIVE

NORTH BRUNSWICK, NJ 08902

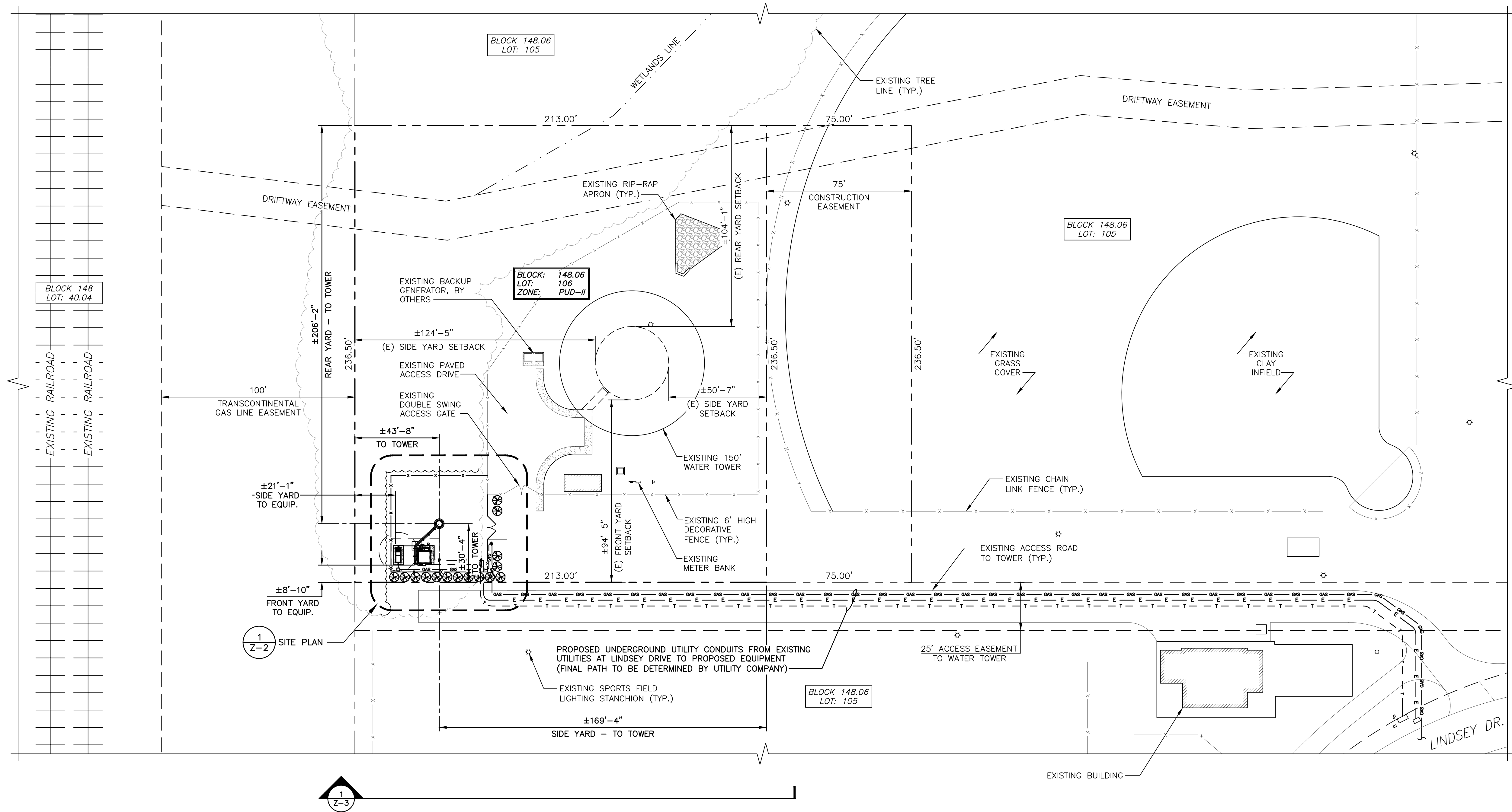
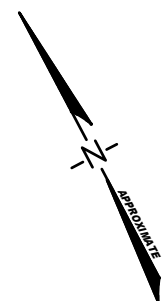
BLOCK: 148.02, LOT: 106

DRAWING TITLE:

TITLE SHEET

DRAWING SHEET:

T-1



NOTE:
OVERALL SITE PLAN IS BASED ON "ELEVATED WATER STORAGE TANK - SITE PLAN & PROFILE", COMPLETED BY: CME ASSOCIATES, DATED 12/15/97, AERIAL PHOTOGRAPHS, AND TOWNSHIP OF NORTH BRUNSWICK TAX MAPS.

1
Z-1 OVERALL SITE PLAN
SCALE: 1"=30'-0" (22"x34" SHEET)
SCALE: 1"=60'-0" (11"x17" SHEET)

SCHEDULE OF REQUIREMENTS IN THE AREA PUD-II ZONE			
ITEM	REQUIRED	EXISTING	PROPOSED
MAXIMUM HEIGHT	N/A	150 FT.	180 FT.
MINIMUM LOT AREA	N/A	±50,374 S.F.	NO CHANGE
MINIMUM LOT WIDTH	N/A	213 FT.	NO CHANGE
MINIMUM FRONT YARD SETBACK	N/A	±95 FT.	±8'-10" TO EQUIP.
MINIMUM REAR YARD SETBACK	N/A	±105 FT.	NO CHANGE
MINIMUM SIDE YARD SETBACK	N/A	±50 FT.	±21'-1" TO EQUIP.
MAXIMUM LOT COVERAGE	N/A	±8%	±8.4%
MINIMUM PARKING	N/A	N/A	NO CHANGE

LEGEND:
(*) - EXISTING NON-CONFORMANCE
(**) - VARIANCE REQUIRED

SCHEDULE OF WIRELESS REQUIREMENTS - § 205-168			
ITEM	REQUIRED	EXISTING	PROPOSED
MAXIMUM STRUCTURE HEIGHT	150 FT.	150 FT.	180 FT.(**)
MAXIMUM EQUIPMENT HEIGHT	15 FT.	N/A	12 FT.
MAXIMUM EQUIPMENT AREA	250 S.F.	N/A	438 S.F. (AT&T LEASE AREA)(**) 2500 S.F. (PROPOSED COMPOUND)(**)
MINIMUM TOWER SETBACK (% OF OVERALL TOWER HEIGHT)	50% (90 FT.)	34% (51 FT.)(*)	16% (30 FT.)(**)



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340 MT. KEMBLE AVE
MORRISTOWN, NJ 07960



BLACK & VEATCH

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ENGINEERING**

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**ZONING DRAWINGS
MI-144X**

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5 LINDSEY DRIVE
NORTH BRUNSWICK, NJ 08902
BLOCK: 148.02, LOT: 106**

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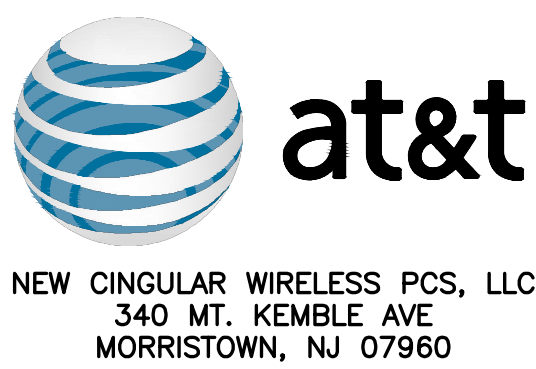
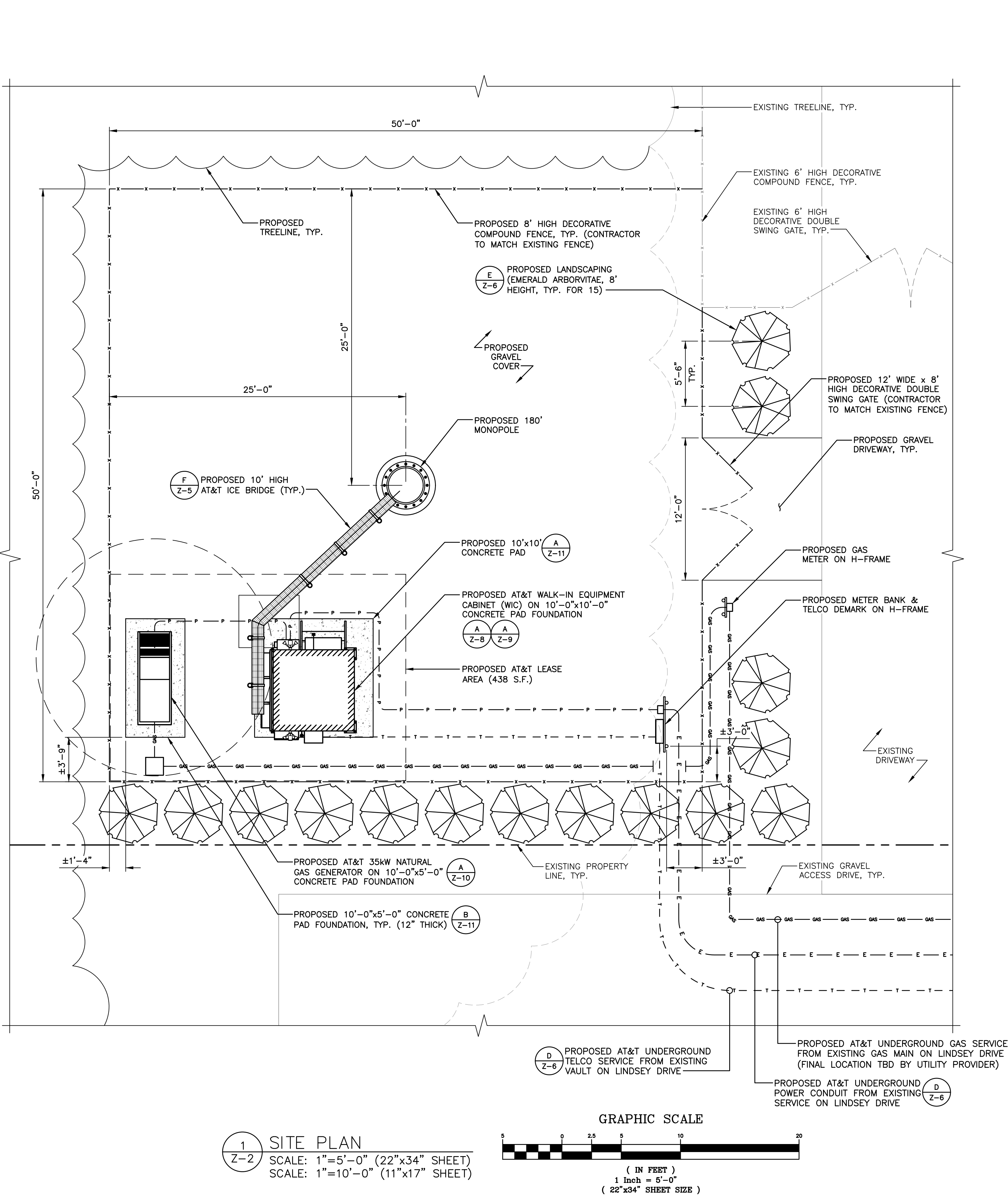
**OVERALL
SITE PLAN
& BULK TABLES**

DRAWING SHEET:

Z-1

GENERAL NOTES:

- SUBJECT PROPERTY IS KNOWN AS BLOCK 148.06, LOT 106 AS SHOWN ON AN OFFICIAL TOWNSHIP OF NORTH BRUNSWICK TAX MAP.
- THE APPLICANT PROPOSES TO INSTALL SIXTEEN (16) ANTENNAS ON PROPOSED MONOPOLE, ONE (1) NEW GENERATOR ON A PROPOSED CONCRETE PAD AT GRADE, & INSTALL A NEW SHELTER WITHIN A PROPOSED LEASE AREA ON A CONCRETE PAD AT GRADE IN A NEW FENCED COMPOUND.
- CONTRACTOR SHALL NOT COMMENCE ANY WORK UNTIL HE OBTAINS, AT HIS OWN EXPENSE, ALL INSURANCE REQUIRED BY NEW CINGULAR WIRELESS, PCS, LLC (AT&T), THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.
- THE PROPOSED FACILITY IS NOT INTENDED FOR PERMANENT EMPLOYEE OCCUPANCY AND THEREFORE POTABLE WATER, SANITARY SEWERS, ADDITIONAL SITE PARKING AND HANDICAP ACCESS ARE NOT REQUIRED.
- THIS FACILITY SHALL BE VISITED ON AN AVERAGE OF ONCE A MONTH FOR MAINTENANCE AND SHALL BE MONITORED FROM A REMOTE FACILITY.
- FINAL CONNECTION TO ELECTRICAL AND TELEPHONE TO BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANY.
- THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL CONDITIONS OF APPROVAL HAVE BEEN SATISFIED AND EACH OF THE DRAWINGS HAVE BEEN REVISED TO INDICATE "ISSUED FOR CONSTRUCTION".
- SITE INFORMATION SHOWN OBTAINED FROM A LIMITED SITE VISIT PHOTOS & NOTES BY BLACK & VEATCH ON 04/09/20 AND "ELEVATED WATER STORAGE TANK - SITE PLAN & PROFILE", COMPLETED BY: CME ASSOCIATES, DATED 12/15/97, AERIAL PHOTOGRAPHS, AND TOWNSHIP OF NORTH BRUNSWICK TAX MAPS.
- THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
- NO EXCESSIVE NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
- THE PROPOSED DEVELOPMENT DOES NOT INCLUDE STREET SIGNS OF ANY TYPE.
- THE PROPOSED DEVELOPMENT DOES NOT INCLUDE OUTDOOR STORAGE OR ANY SOLID WASTE RECEPTACLES.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES OR OTHER PUBLIC AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THIS PROJECT IN ACCORDANCE WITH THE OVERALL INTENT OF THESE DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
- THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.
- CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.
- DESIGN REQUIREMENTS PER INTERNATIONAL BUILDING CODE 2015 AND THE EIA/TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
- ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
- CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
- IF ANY PIPING EXISTS BENEATH THE SITE AREA, CONTRACTOR MUST LOCATE IT AND CONTACT OWNER'S REPRESENTATIVE.
- THE CONSTRUCTION CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ALL CONSTRUCTION MEANS AND METHODS. THE CONSTRUCTION CONTRACTOR IS ALSO RESPONSIBLE FOR ALL JOB SITE SAFETY.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.
- THE CONTRACTOR IS TO REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. THE CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUB-CONTRACTORS AND RELATED PARTIES. THE SUB-CONTRACTOR SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON THE SITE AT ALL TIMES AND INSURE THE DISTRIBUTION OF NEW DRAWINGS TO SUB-CONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH 1 SET OF REDLINE "AS-BUILT" DRAWINGS TO THE CLIENT UPON COMPLETION OF THE WORK.
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- ALL MATERIAL PROVIDED BY THE CLIENT IS TO BE REVIEWED BY THE CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTORS PRIOR TO INSTALLATION. ANY DEFICIENCIES TO PROVIDE MATERIALS SHALL BE BROUGHT TO THE CONSTRUCTION MANAGER'S ATTENTION IMMEDIATELY.
- THE MATERIALS INSTALLED SHALL MEET REQUIREMENTS OF CONTRACTORS DOCUMENTS. NO SUBSTITUTIONS ARE ALLOWED.
- THE CONTRACTOR SHALL COORDINATE ALL CIVIL, STRUCTURAL AND ELECTRICAL DRAWINGS FOR THE LOCATIONS OF ALL OPENINGS, RECESSES, BUILT-IN WORK, ETC..
- THE CONTRACTOR SHALL RECEIVE CLARIFICATION AND AUTHORIZATION IN WRITING TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND TO BE IN THE FIELD.
- ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMEN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST-ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAND PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL COORDINATE HIS WORK AND SCHEDULE HIS ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROPERTY OWNER AND/OR PROPERTY MANAGEMENT COMPANY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OR WHERE LOCAL CODES OR REGULATIONS MAY TAKE PRECEDENCE.
- THE CONTRACTOR SHALL REPAIR ALL EXISTING SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND WITH ADJACENT SURFACES.
- THE CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE AND DISPOSE OF ALL DEBRIS AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. THE CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITIONS AND FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.
- BEFORE FINAL ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT, TEMPORARY WORKS, UNUSED AND USELESS MATERIALS, RUBBISH AND TEMPORARY STRUCTURES.
- LANDSCAPING IS PROPOSED AS PART OF THIS APPLICATION.
- TECHNICIAN TO PARK IN ANY AVAILABLE PARKING SPOT. NO NEW PARKING IS PROPOSED.



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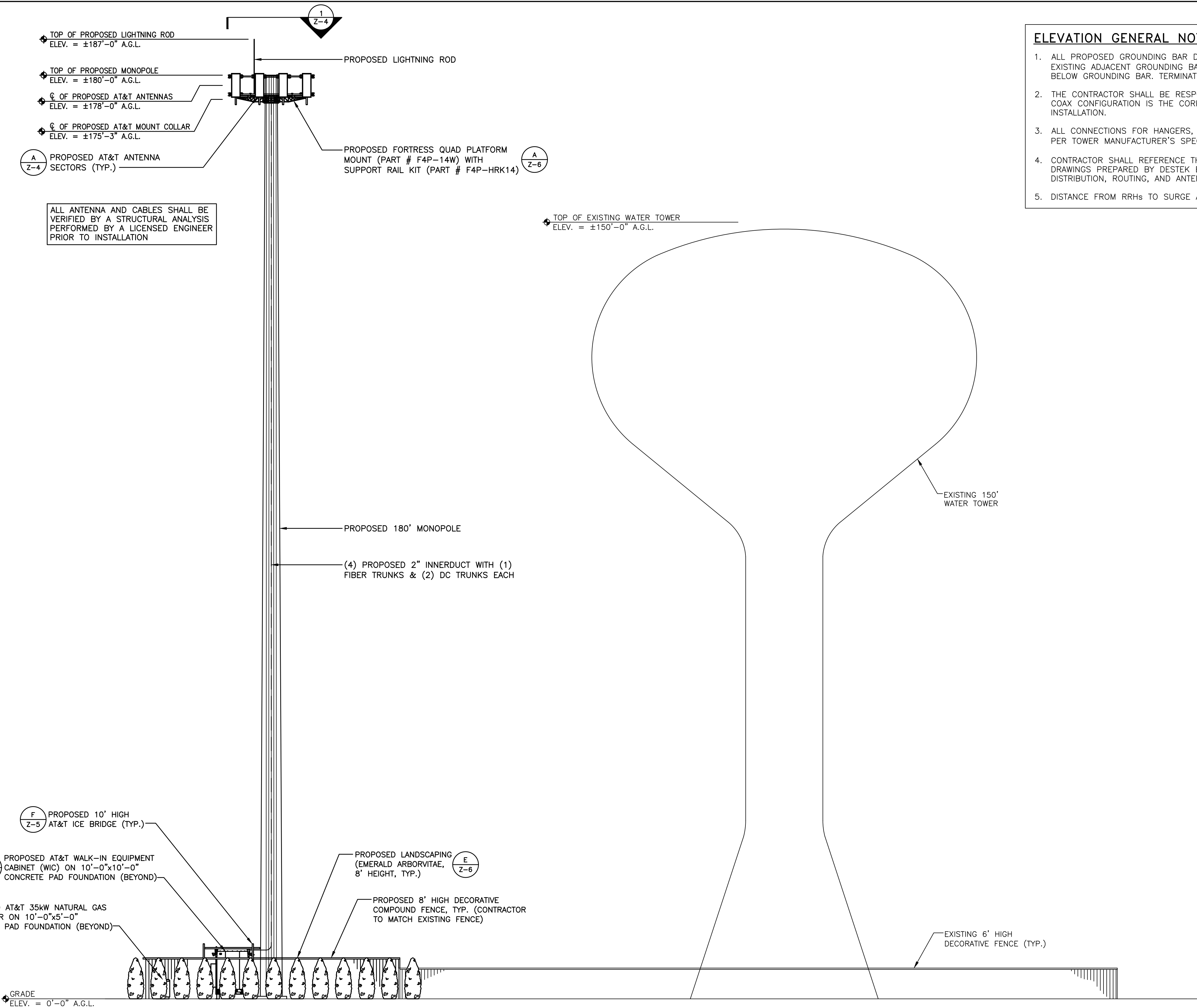
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ZONING DRAWINGS
MI-144X
FA CODE: 15372460
5 LINDSEY DRIVE
NORTH BRUNSWICK, NJ 08902
BLOCK: 148.02, LOT: 106

DRAWING TITLE:
SITE PLAN & GENERAL NOTES

DRAWING SHEET:
Z-2



ELEVATION GENERAL NOTES

1. ALL PROPOSED GROUNDING BAR DOWNLOADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUNDING BAR. DOWNLOADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUNDING BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ANTENNA AND THE COAX CONFIGURATION IS THE CORRECT MAKE AND MODELS, PRIOR TO INSTALLATION.
3. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER MANUFACTURER'S SPECIFICATION & RECOMMENDATIONS.
4. CONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS PREPARED BY DESTEK ENGINEERING FOR DIRECTIONS ON CABLE DISTRIBUTION, ROUTING, AND ANTENNA CONFIGURATION.
5. DISTANCE FROM RRRs TO SURGE ARRESTOR TO BE A MAXIMUM OF 16 FEET.



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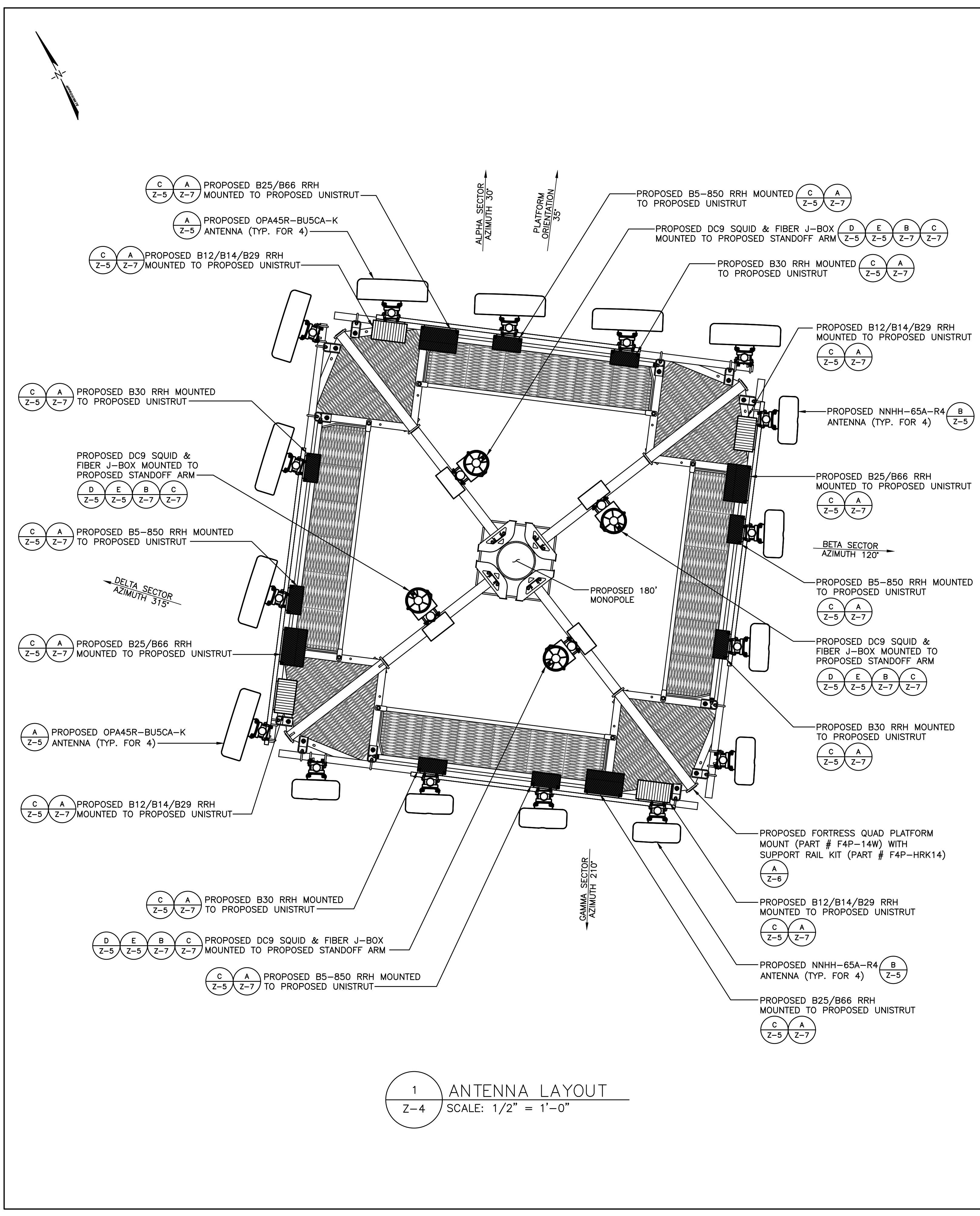
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**FINAL
ELEVATION**

DRAWING SHEET:

Z-3


**1
Z-3** FINAL ELEVATION
SCALE: 3/32"=1'-0" (22"x34" SHEET)
SCALE: 3/64"=1'-0" (11"x17" SHEET)



ANTENNA MOUNTING NOTES:

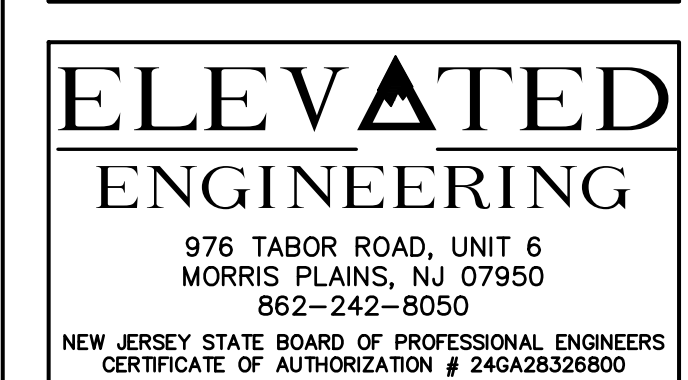
<ol style="list-style-type: none">1. DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.2. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.3. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.4. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.5. ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.6. CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.7. ALL UNUSED PORTS ON ANY ANTENNAS SHALL BE TERMINATED WITH A 50-OHM LOAD TO ENSURE ANTENNAS PERFORM AS DESIGNED.8. PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.9. JUMPERS FROM THE TMA'S MUST TERMINATE TO OPPOSITE POLARIZATIONS IN EACH SECTOR.10. CONTRACTOR SHALL RECORD THE SERIAL #, SECTOR, AND POSITION OF EACH ACTUATOR INSTALLED AT THE ANTENNAS AND PROVIDE THE INFORMATION TO AT&T.11. TMA'S SHALL BE MOUNTED ON PIPE DIRECTLY BEHIND ANTENNAS AS CLOSE TO ANTENNA AS FEASIBLE IN A VERTICAL POSITION.12. ANTENNAS SHALL HAVE A 4'-0" MIN CENTER TO CENTER HORIZONTAL SEPARATION.

FIBER & POWER CABLE MOUNTING NOTES:	
1.	THE FIBER OPTIC TRUNK CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY. WHEN INSTALLING FIBER OPTIC TRUNK CABLES INTO A CABLE TRAY SYSTEM, THEY SHALL BE INSTALLED INTO AN INTER DUCT AND A PARTITION BARRIER SHALL BE INSTALLED BETWEEN THE 600 VOLT CABLES AND THE INTER DUCT IN ORDER TO SEGREGATE CABLE TYPES. OPTIC FIBER TRUNK CABLES SHALL HAVE APPROVED CABLE RESTRAINTS EVERY (60) SIXTY FEET AND SECURELY FASTENED TO THE CABLE TRAY SYSTEM. NFPA 70 (NEC) ARTICLE 770 RULES SHALL APPLY.
2.	THE TYPE TC-ER CABLES SHALL BE INSTALLED INTO CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY AND SHALL BE SECURED AT INTERVALS NOT EXCEEDING (6) SIX FEET. AN EXCEPTION; WHERE TYPE TC-ER CABLES ARE NOT SUBJECT TO PHYSICAL DAMAGE, CABLES SHALL BE PERMITTED TO MAKE A TRANSITION BETWEEN CONDUITS, CHANNEL CABLE TRAYS, OR CABLE TRAY WHICH ARE SERVING UTILIZATION EQUIPMENT OR DEVICES, A DISTANCE (6) SIX FEET SHALL NOT BE EXCEEDED WITHOUT CONTINUOUS SUPPORTING. NFPA 70 (NEC) ARTICLES 336 AND 392 RULES SHALL APPLY.
3.	WHEN INSTALLING OPTIC FIBER TRUNK CABLES OR TYPE TC-ER CABLES INTO CONDUITS, NFPA 70 (NEC) ARTICLE 300 RULES SHALL APPLY.




at&t

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PROFESSIONAL ENGINEER, N.J. LIC. NO. 24GE04909100

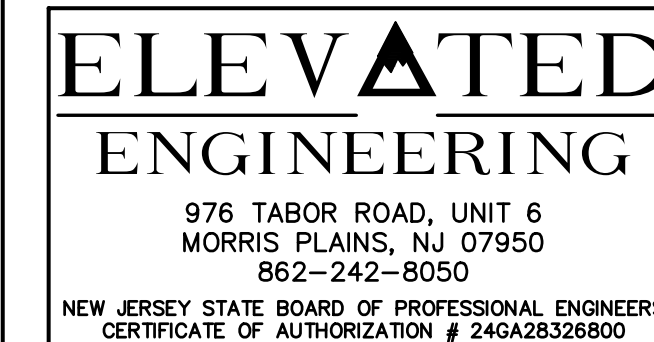
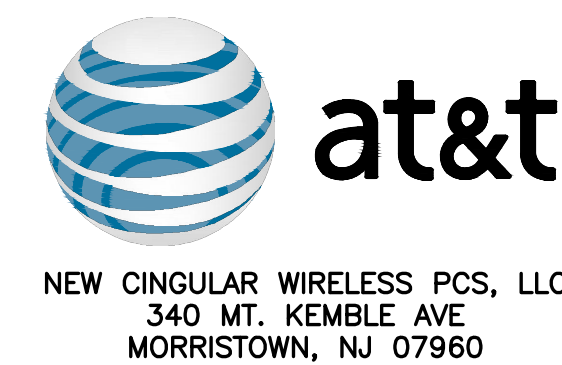
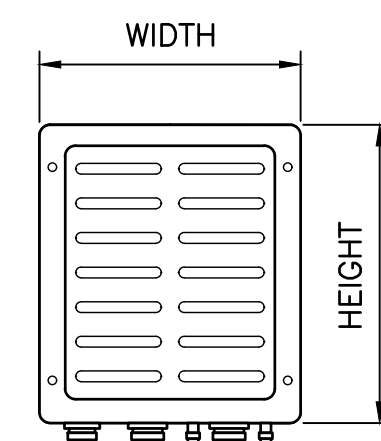
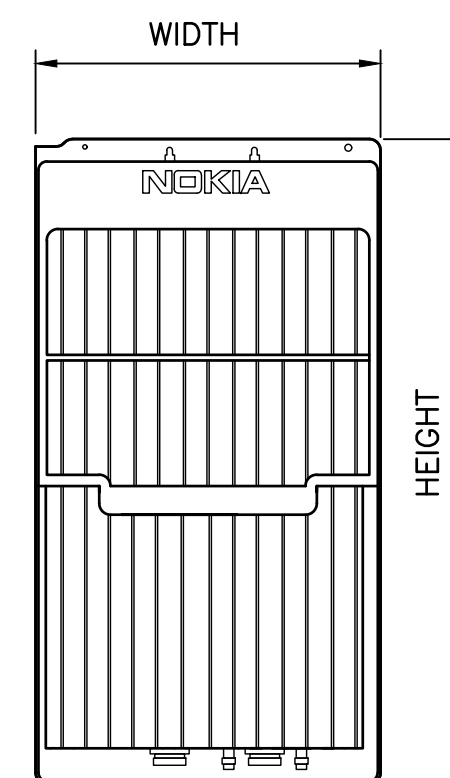
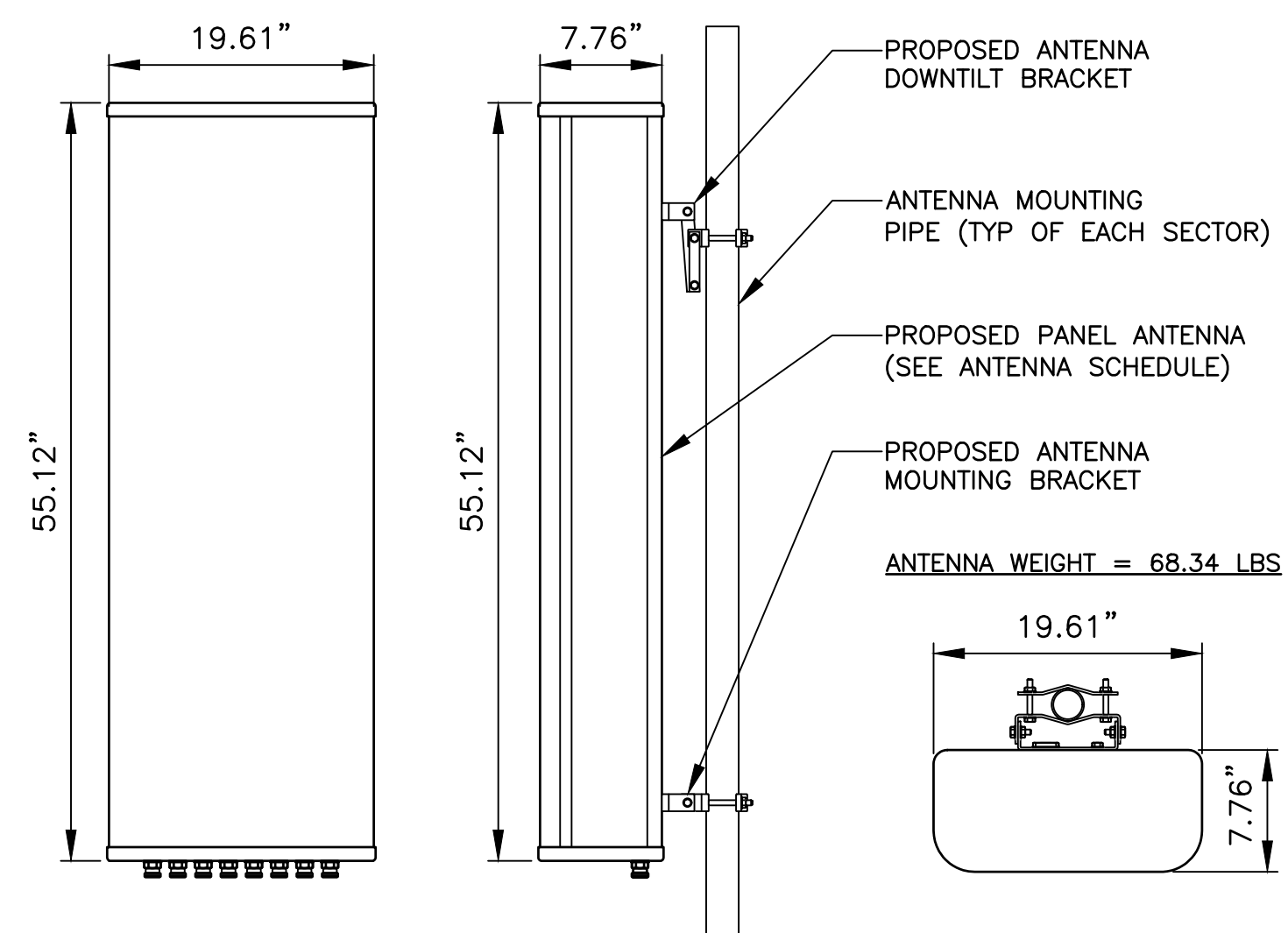
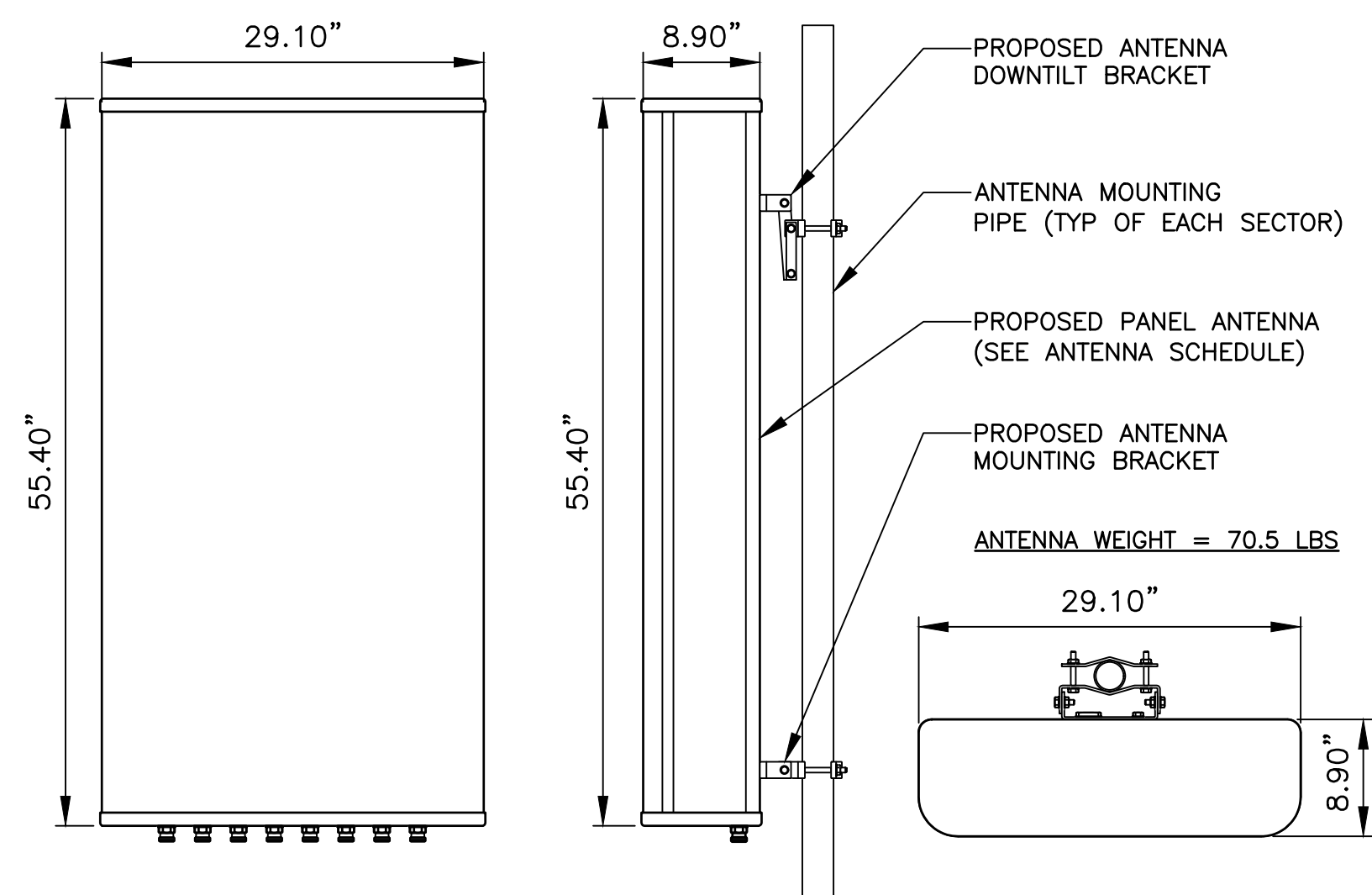
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MI-144X
FA CODE: 15372460
5 LINDSEY DRIVE
NORTH BRUNSWICK, NJ 08902
BLOCK: 148.02, LOT: 106

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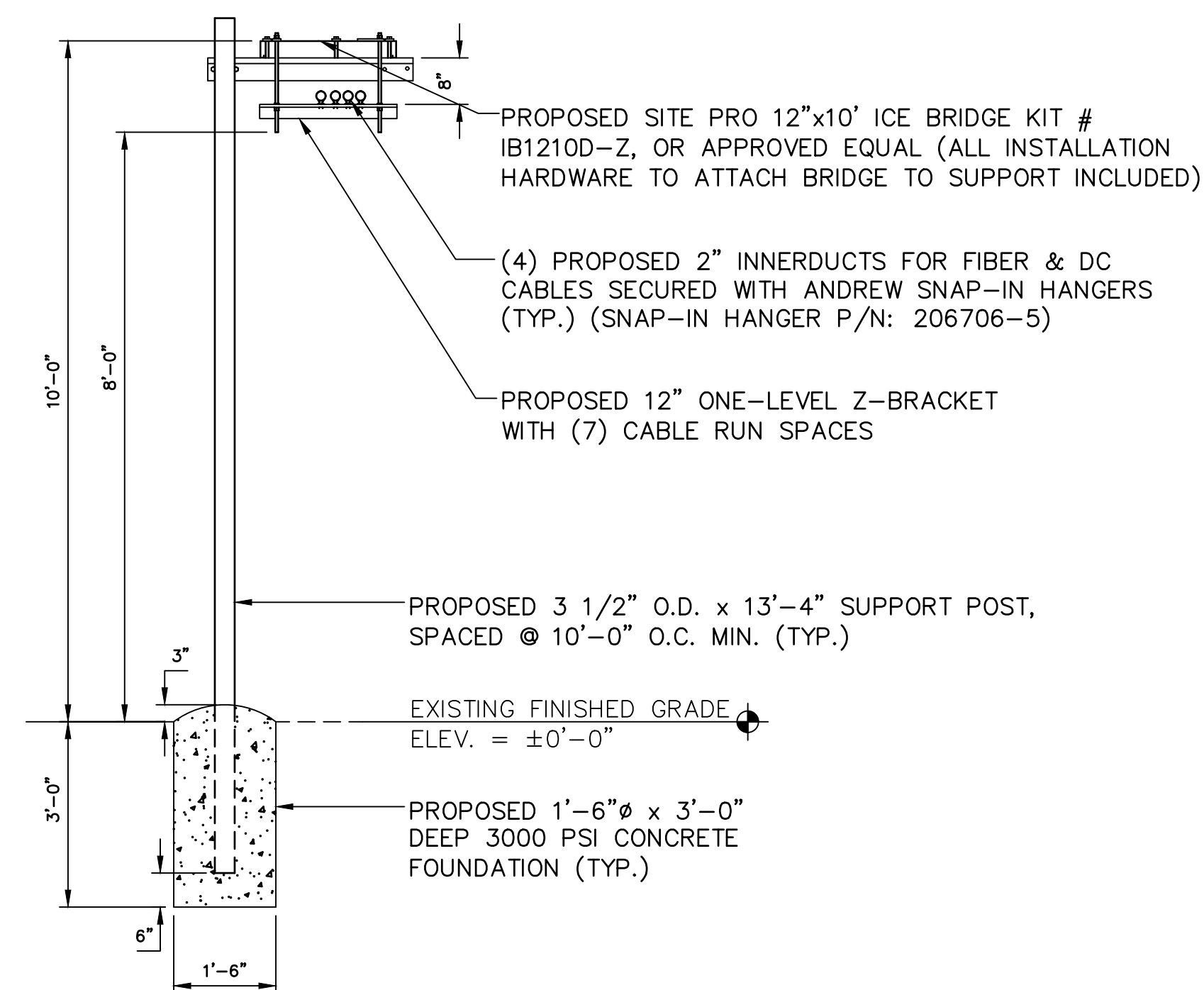
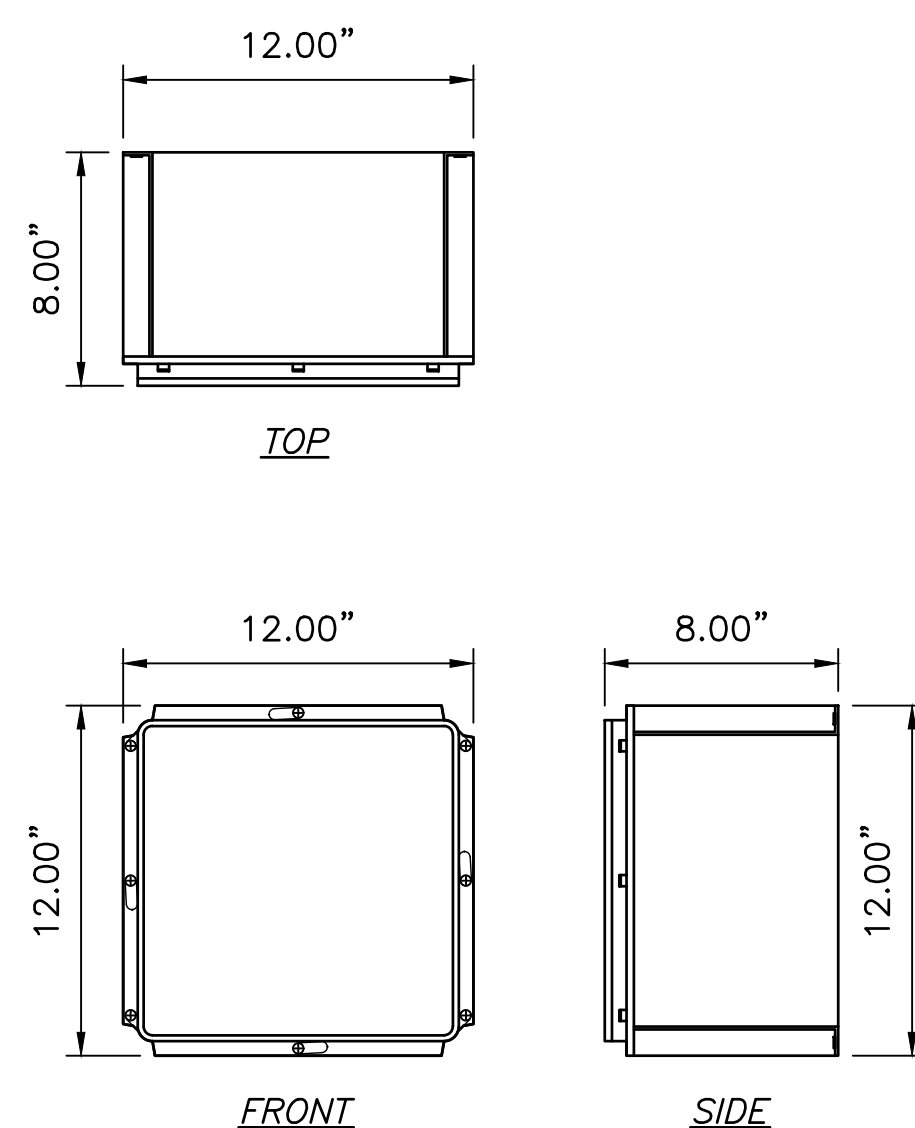
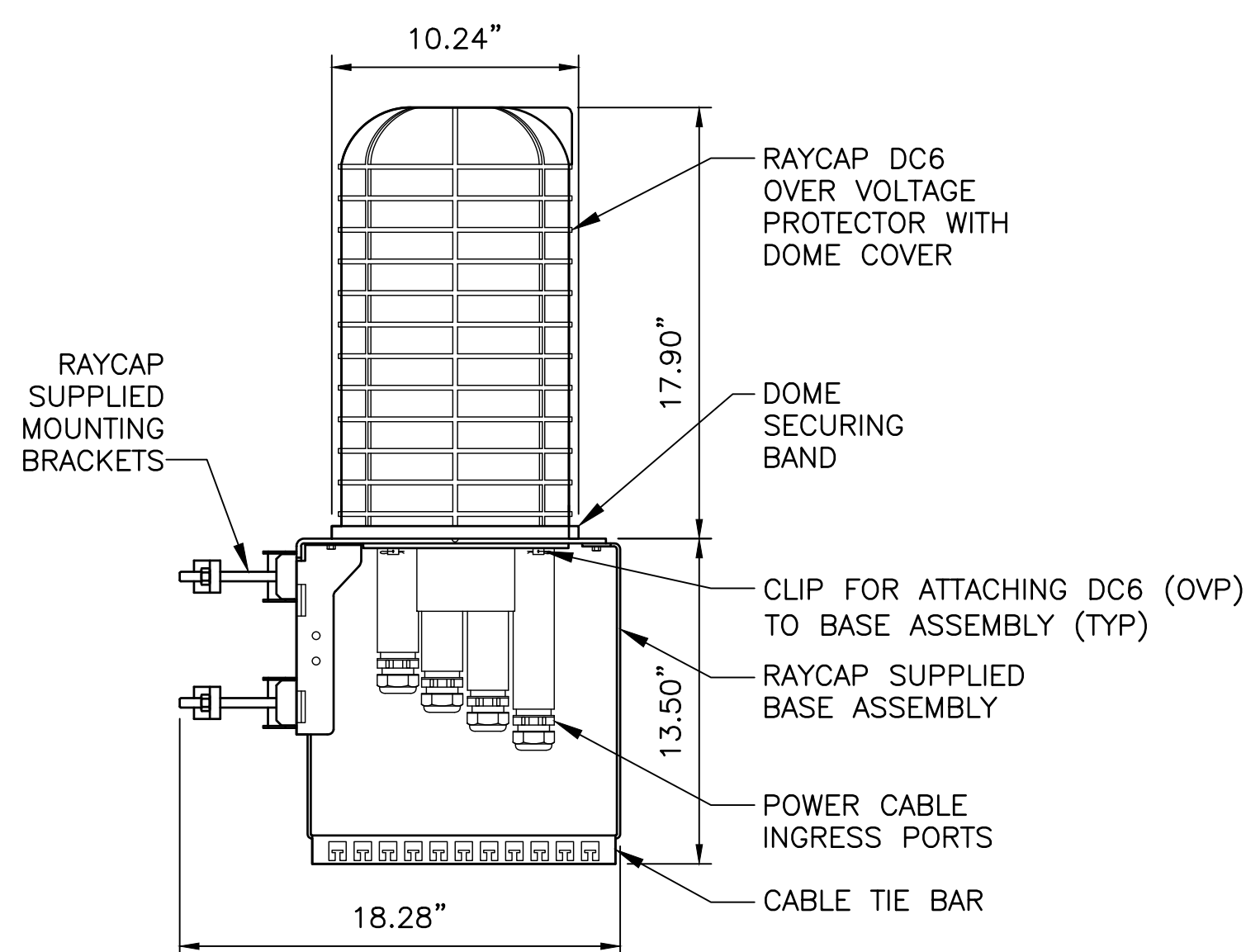
**ANTENNA
LAYOUT &
NOTES**

DRAWING SHEET:

Z-4



SCHEDULE OF REVISIONS		
7		
6		
5		
4		
3		
2		
1	01/20/21	REVISED PER CLIENT COMMENTS
0	01/12/21	INITIAL SUBMISSION
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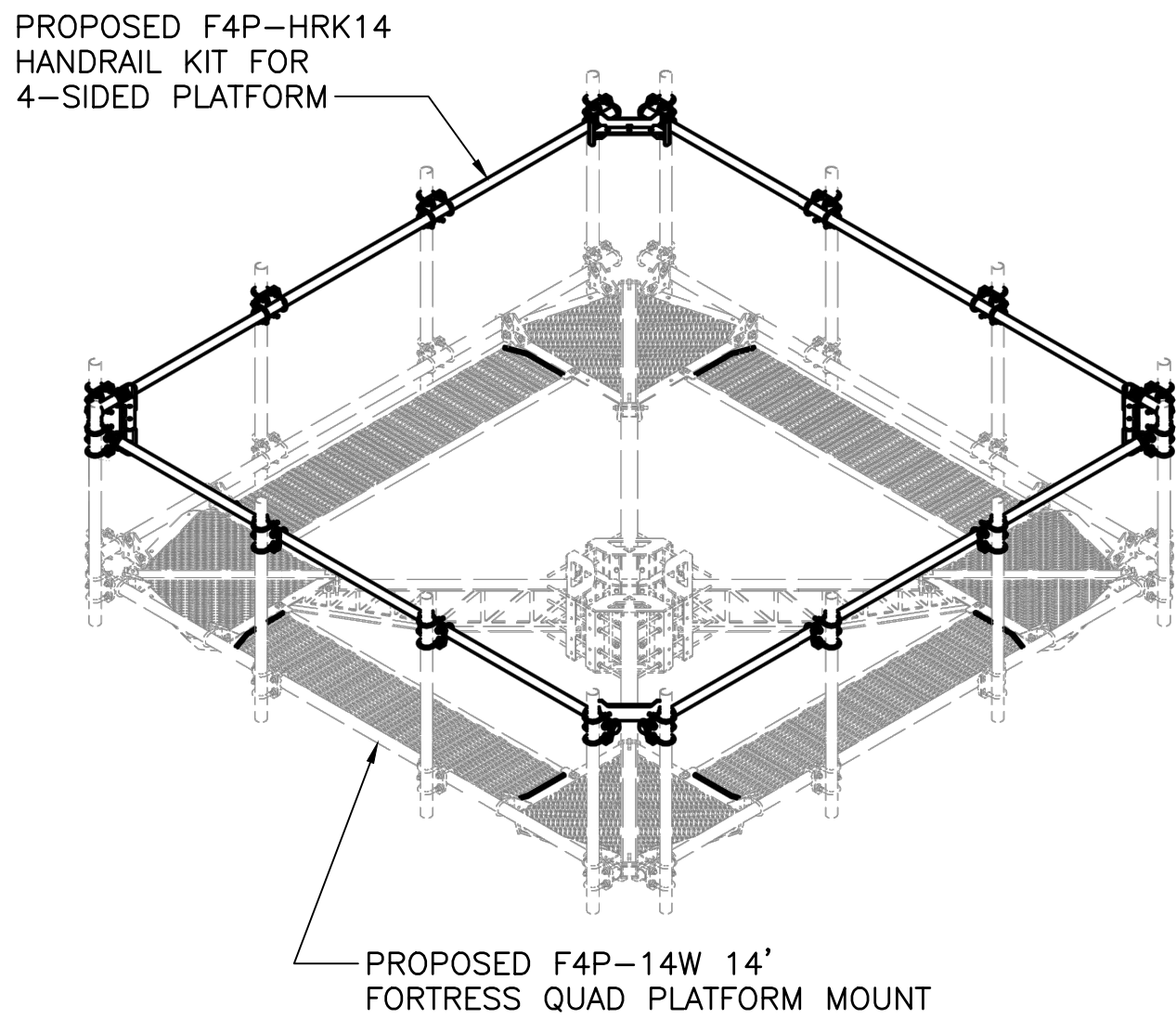
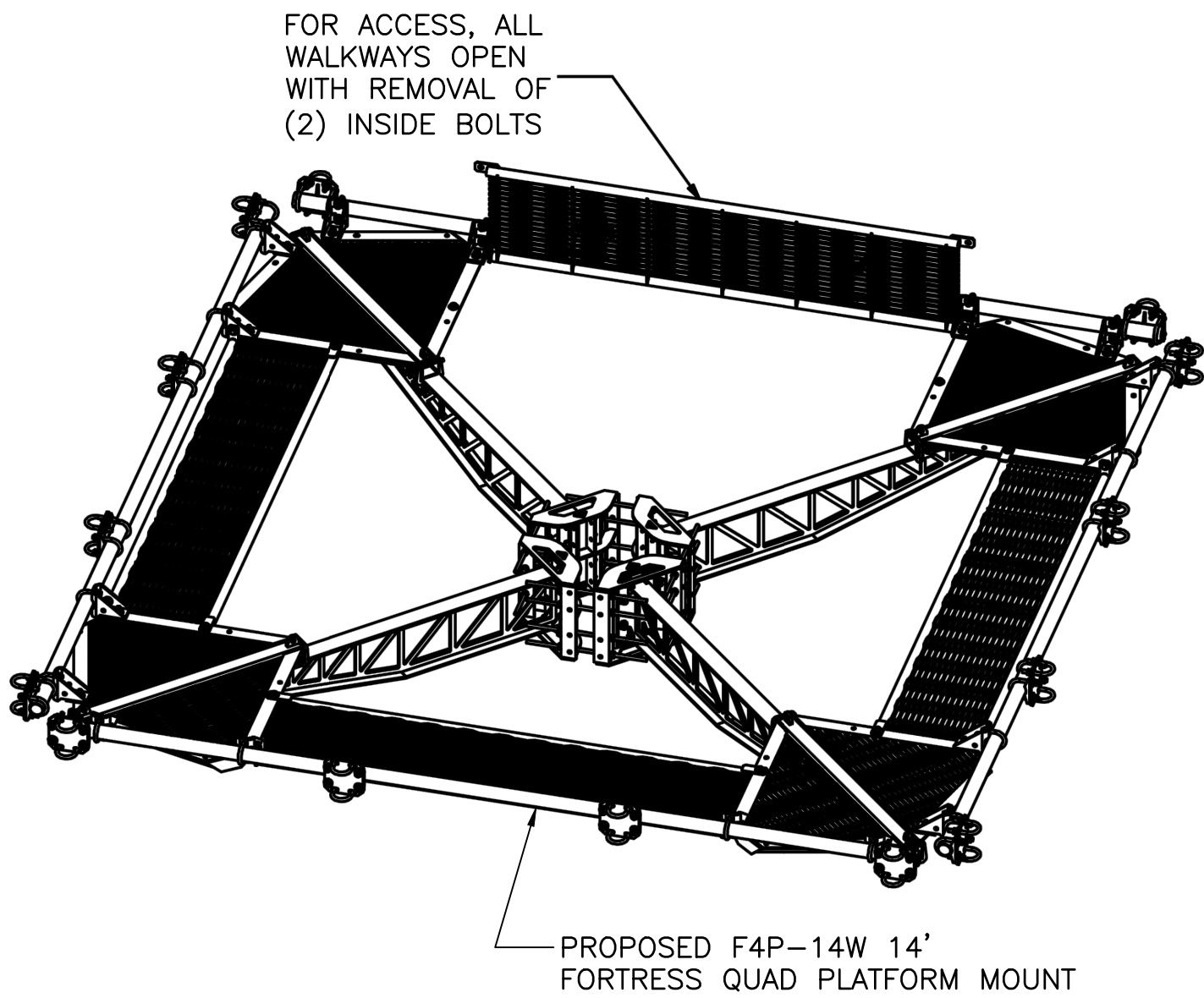
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BLOCK: 148.02, LOT: 106

DRAWING TITLE:

EQUIPMENT DETAILS

DRAWING SHEET:

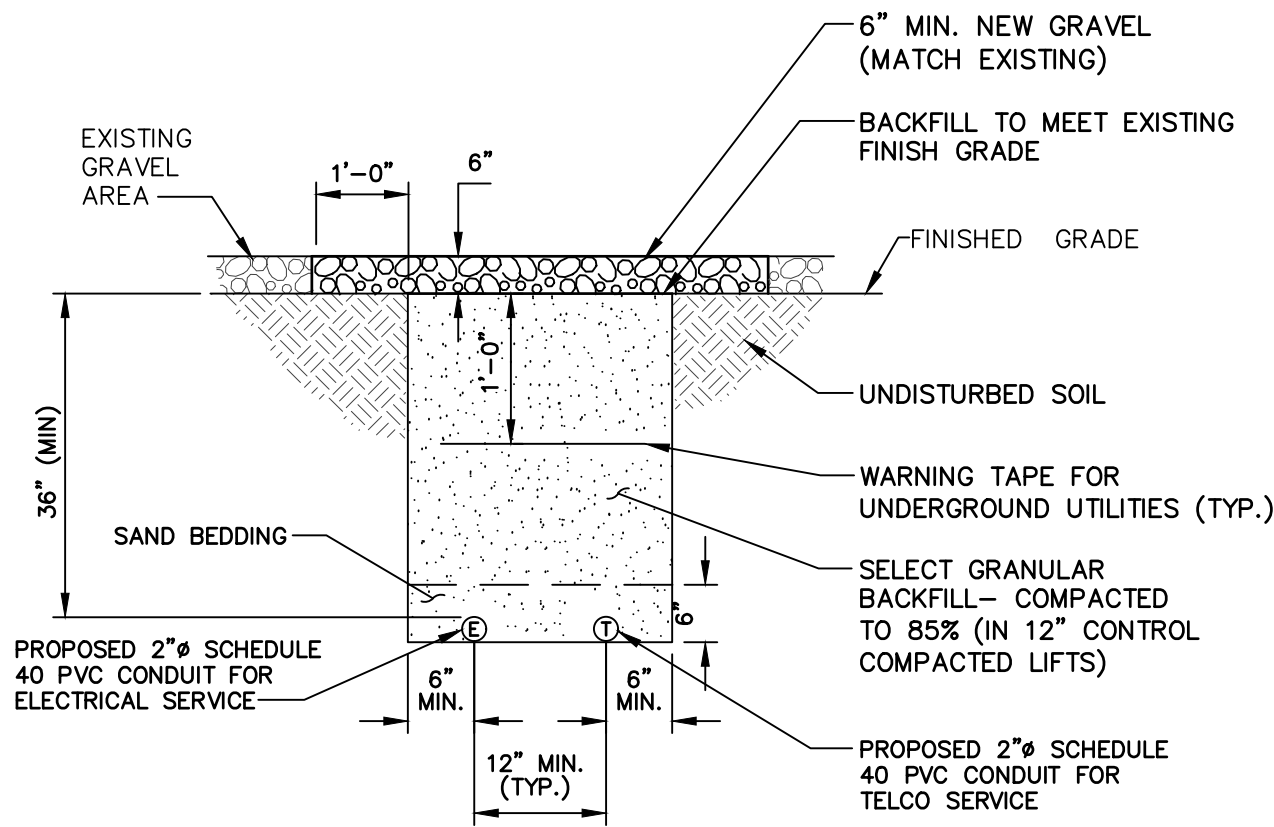
Z-5



ANTENNA MOUNTING FRAME DETAIL

NO SCALE

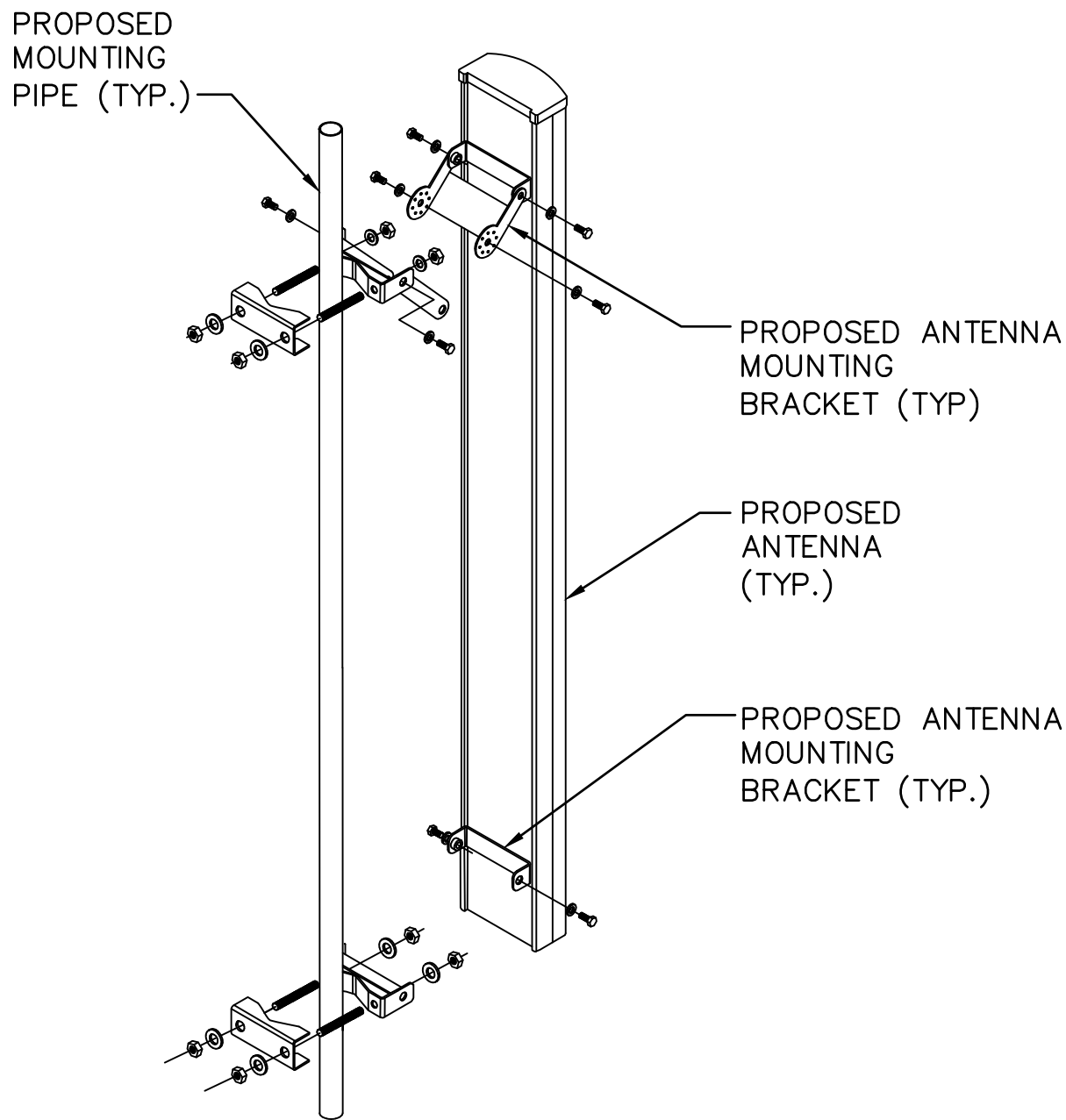
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TYPICAL UTILITY CONDUIT DETAIL

NO SCALE

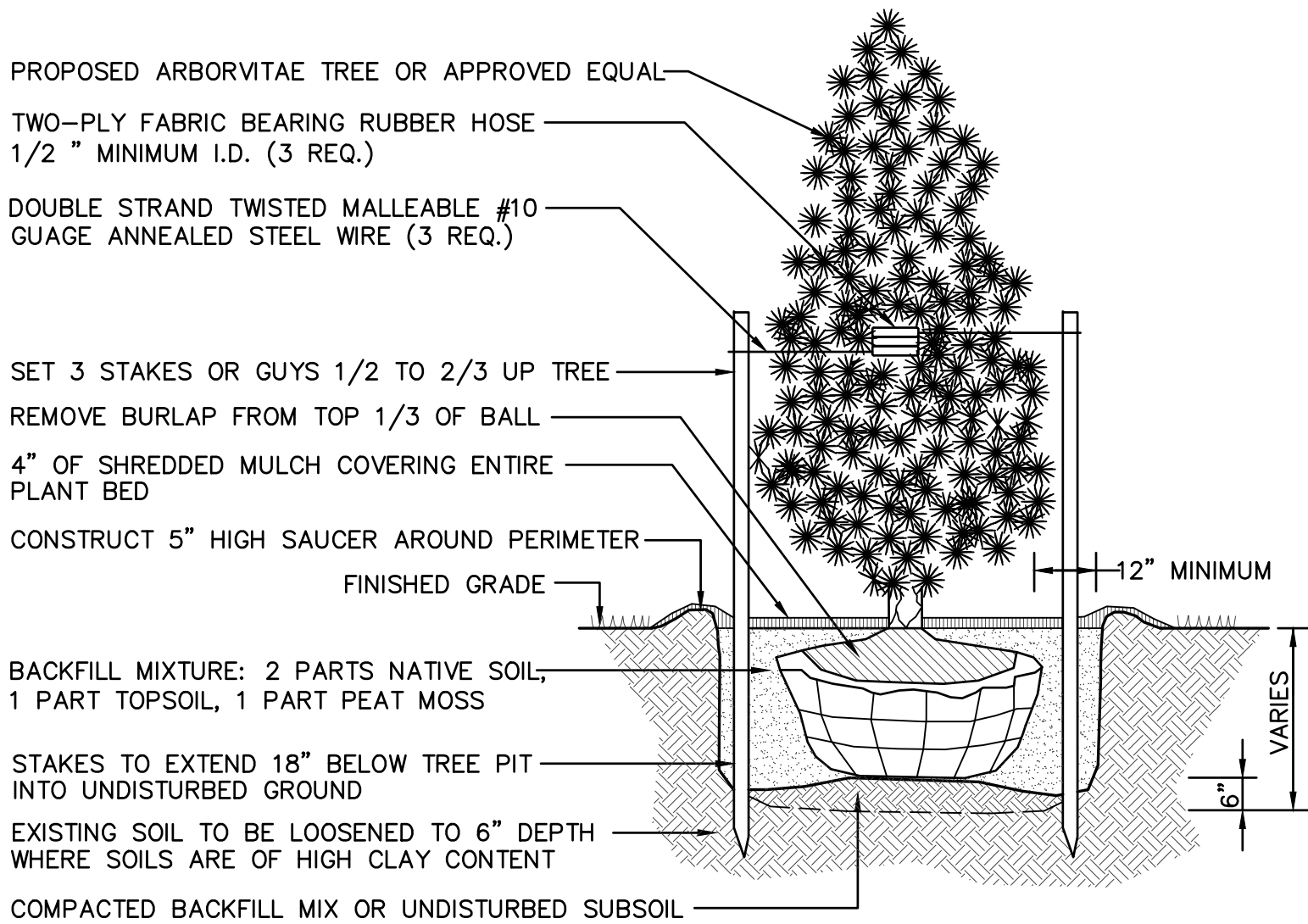
D



ANTENNA MOUNTING DETAIL

NO SCALE

B



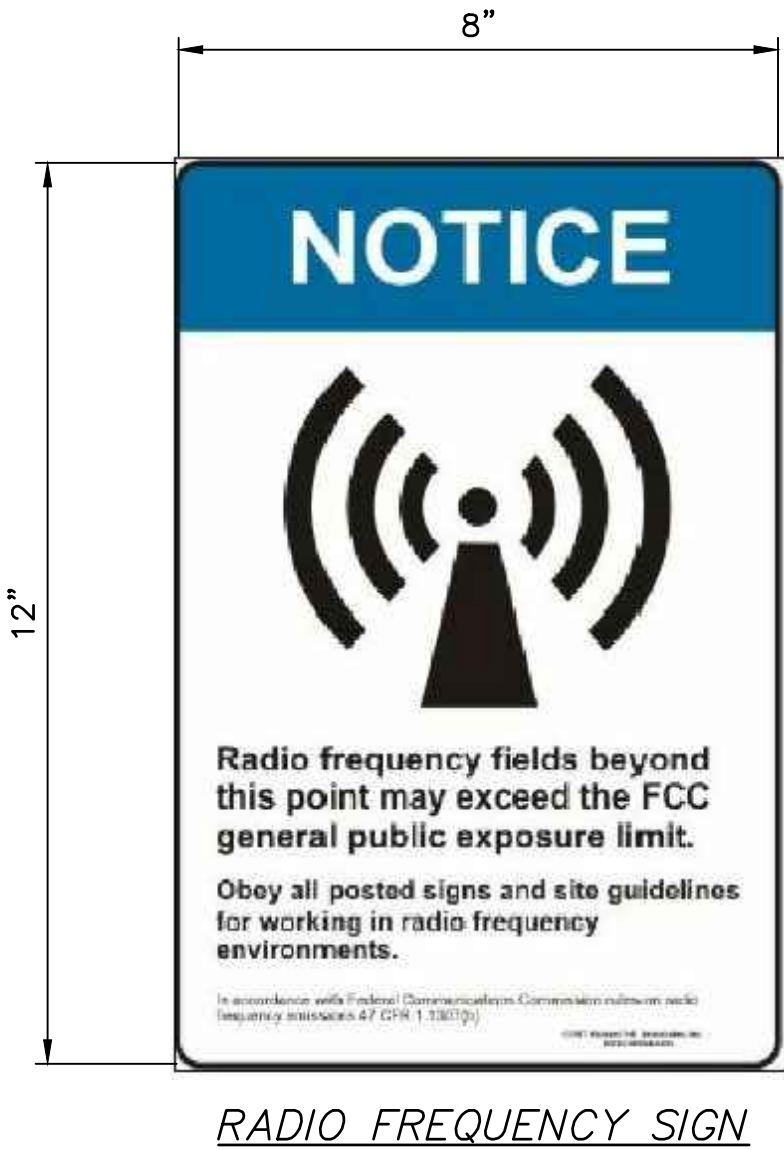
- NOTES:
1. STAKE ALL EVERGREEN TREES UNDER 8 FT. GUY TREES 8 FT. AND OVER AS SPECIFIED FOR DECIDUOUS TREE.
 2. TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE IN THE NURSERY.
 3. PRUNE ONLY TO REMOVE DAMAGED OR BROKEN BRANCHES. LEADER OF TREE SHALL NEVER BE CUT.

PLANTING SCHEDULE					
BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	MATURE HEIGHT	MATURE SPREAD
THUJA OCCIDENTALIS 'SMARAGD'	EMERALD ARBORVITAE	15	8' HEIGHT	12'-15'	3'-5'

LANDSCAPING DETAIL

NO SCALE

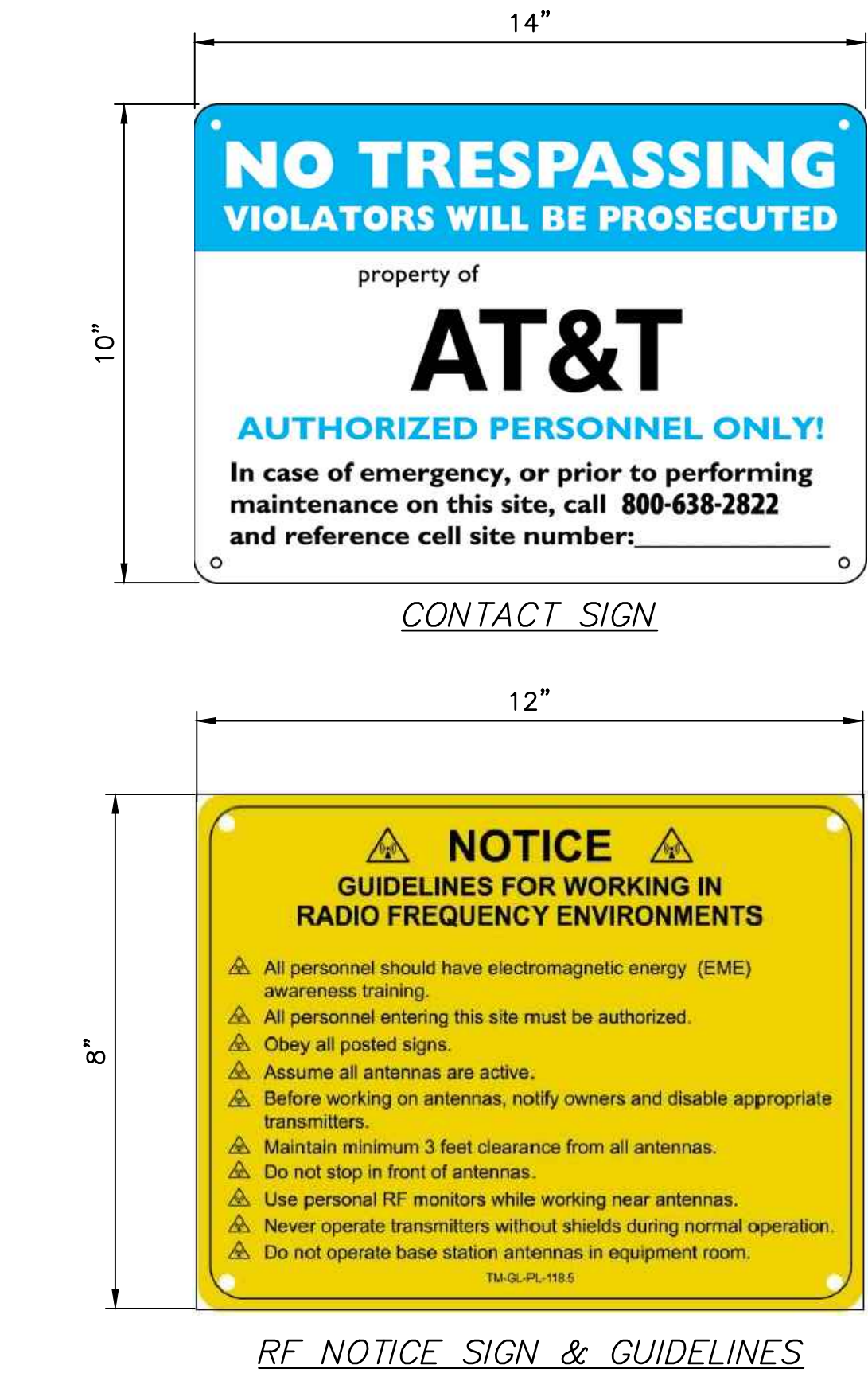
E



SITE SIGNAGE DETAILS

NO SCALE

C



RF NOTICE SIGN & GUIDELINES

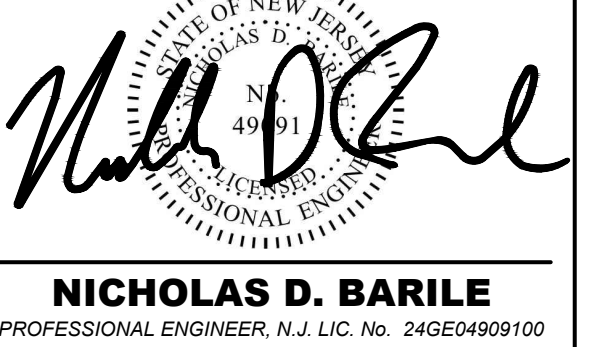


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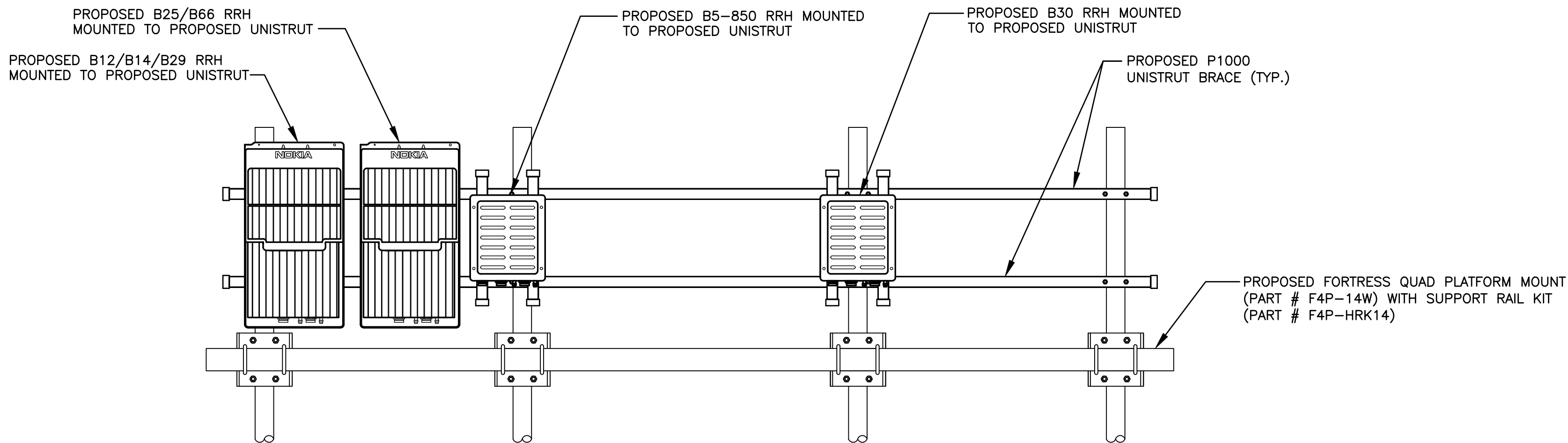
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DRAWING TITLE:

EQUIPMENT DETAILS

DRAWING SHEET:

Z-6



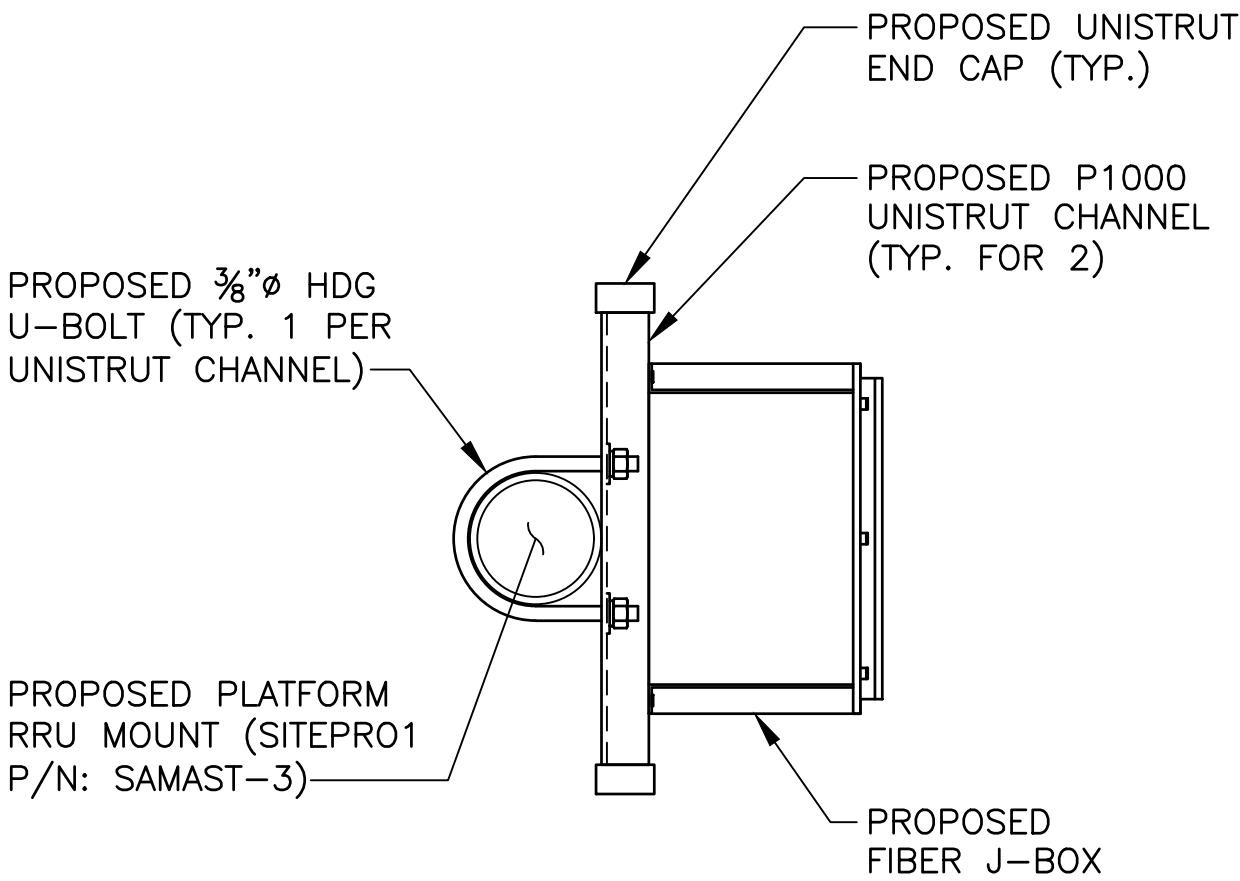
NOTES:

- MANUFACTURER VIA AT&T SUPPLIES THE RRH. THE SUBCONTRACTOR SHALL SUPPLY ALL OTHER MATERIALS AND INSTALL ALL MOUNTING HARDWARE.
- A SUPPORT FOR A SINGLE RRH SHALL HAVE A MINIMUM OF TWO ANCHORS/FASTENERS FOR EACH UNISTRUT CHANNEL.
 - ANCHORS AND UNISTRUT CHANNEL SHALL HAVE HOT-DIPPED GALVANIZED FINISH.
- INSTALL ANCHORS/FASTENERS A MAXIMUM OF 2'-0" ON CENTERS.
 - ANCHORS AND UNISTRUT CHANNEL SHALL HAVE HOT-DIPPED GALVANIZED FINISH.
- MOUNT RRH TO UNISTRUT WITH 3/8" UNISTRUT BOLTING HARDWARE AND SPRING NUTS. TYPICAL FOUR PER DEVICE. SUBCONTRACTOR SHALL SUPPLY.
- THE SUBCONTRACTOR SHALL SUPPLY AND INSTALL RUBBER END CAPS AT EACH END OF ALL PROPOSED UNISTRUT CHANNEL. END CAPS SHALL BE AS SPECIFIED BY THE UNISTRUT MANUFACTURER.

RRH MOUNTING DETAIL

NO SCALE

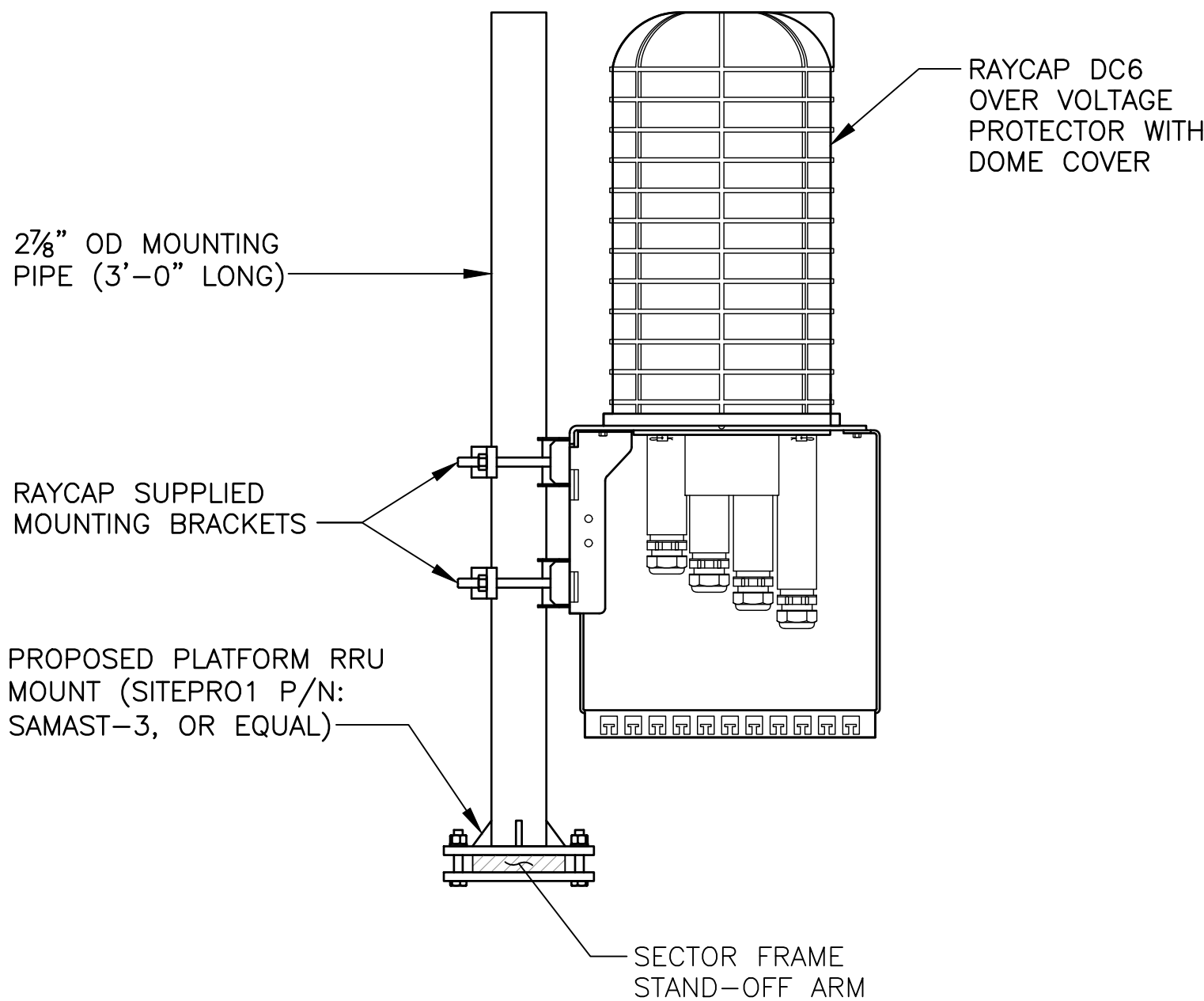
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FIBER J-BOX MOUNTING DETAIL

NO SCALE

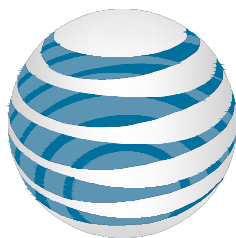
B



DC9 SQUID MOUNTING DETAIL

NO SCALE

C



at&t

NEW CINGULAR WIRELESS PCS, LLC
340 MT. KEMBLE AVE
MORRISTOWN, NJ 07960



BLACK & VEATCH

10950 GRANDVIEW DRIVE
OVERLAND PARK, KANSAS 66210
(913) 458-2000

ELEVATED
ENGINEERING

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MORRIS PLAINS, NJ 07950
862-242-8050
NEW JERSEY STATE BOARD OF PROFESSIONAL ENGINEERS
CERTIFICATE OF AUTHORIZATION # 246A28326800

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MI-144X

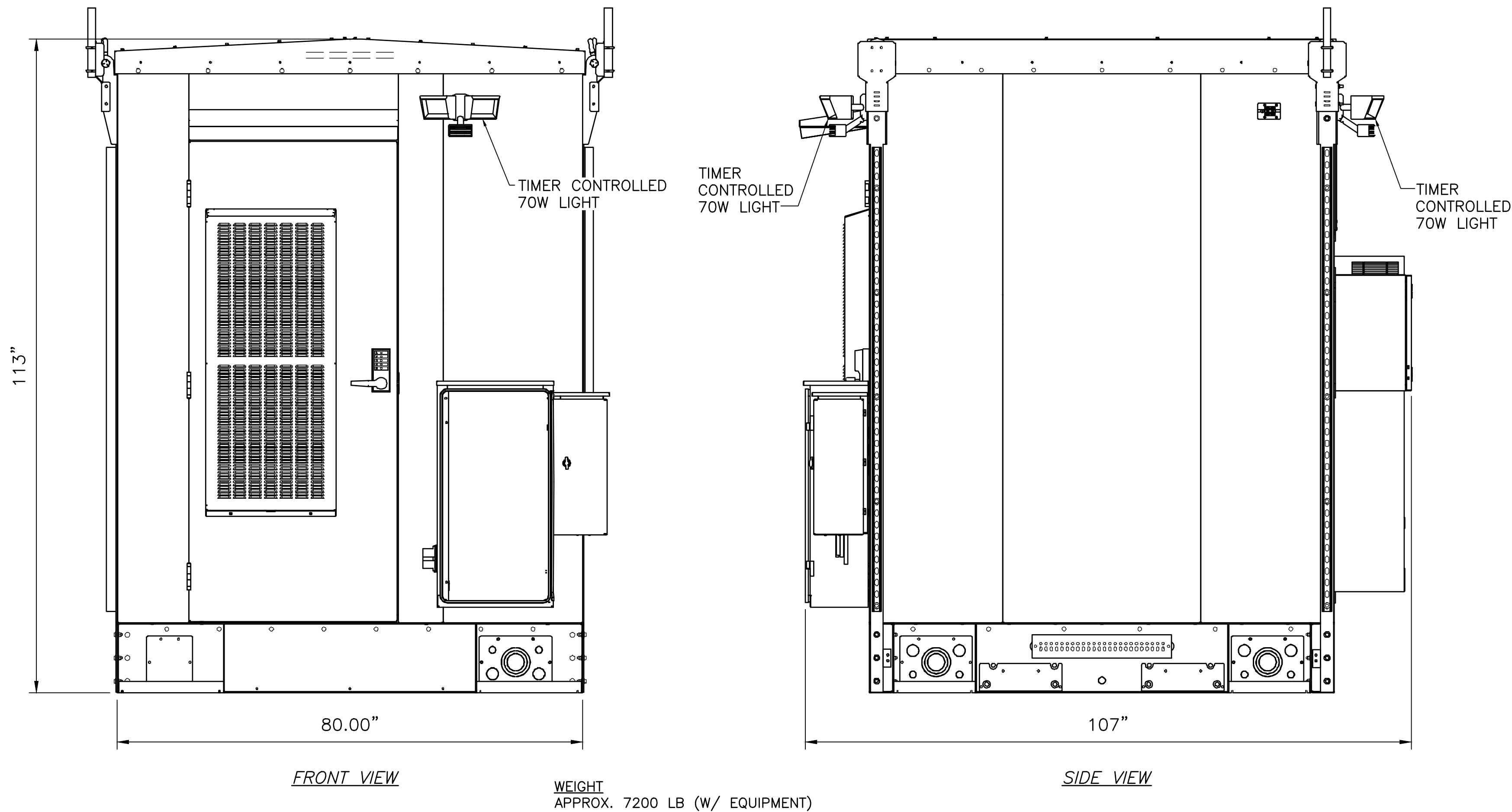
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5 LINDSEY DRIVE
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DRAWING TITLE:

EQUIPMENT
DETAILS

DRAWING SHEET:

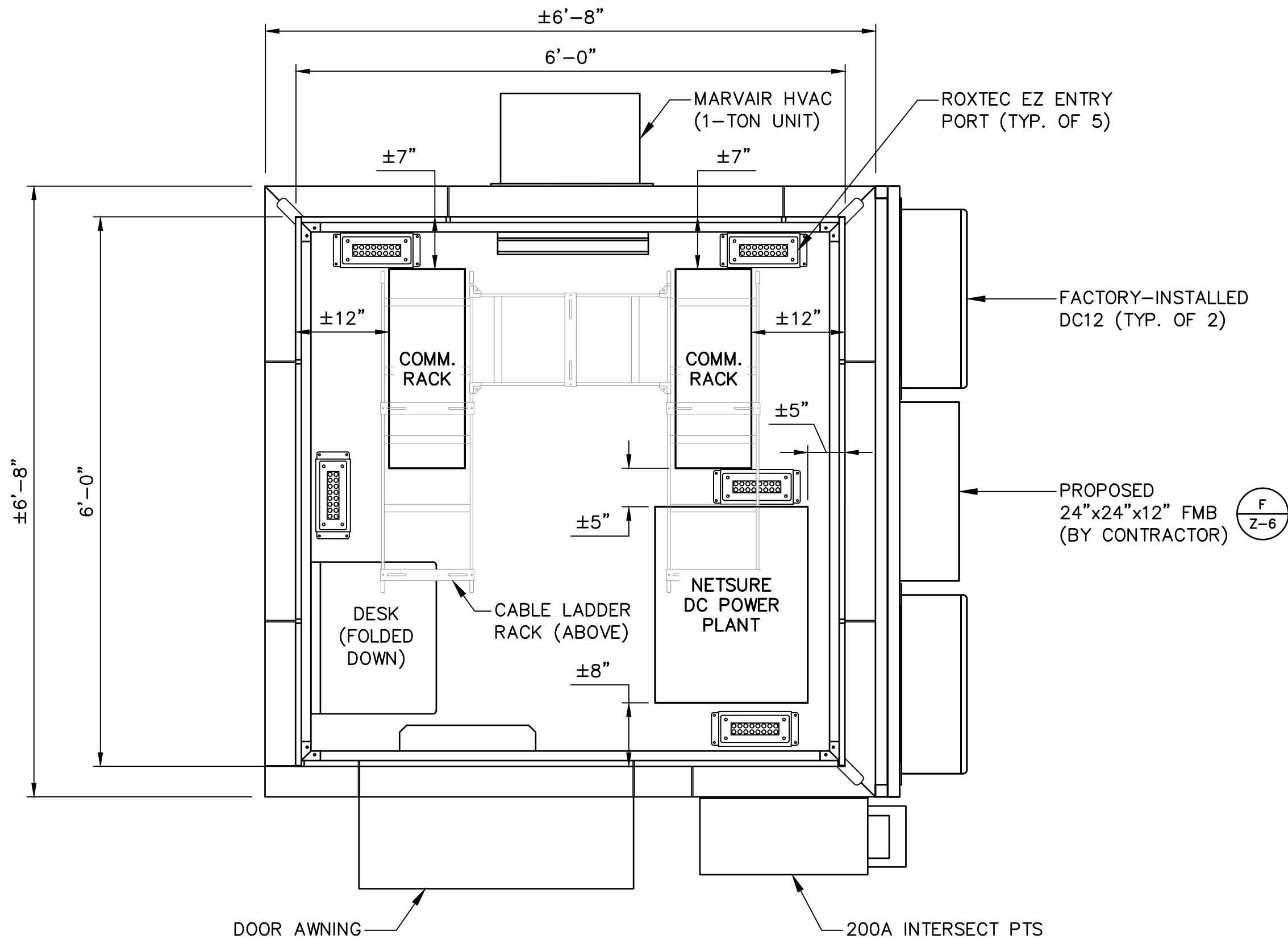
Z-7



SHELTER ELEVATION DETAIL – WIC (SMARTMOD UE)

NO SCALE

A



SHELTER LAYOUT – WIC (SMARTMOD UE)

NO SCALE

B



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MORRISTOWN, NJ 07960



BLACK & VEATCH

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ZONING DRAWINGS

MI-144X

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5 LINDSEY DRIVE

NORTH BRUNSWICK, NJ 08902

BLOCK: 148.02, LOT: 106

DRAWING TITLE:

**SHELTER
DETAILS**

DRAWING SHEET:

Z-8

SG035 | 5.4L | 35 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency



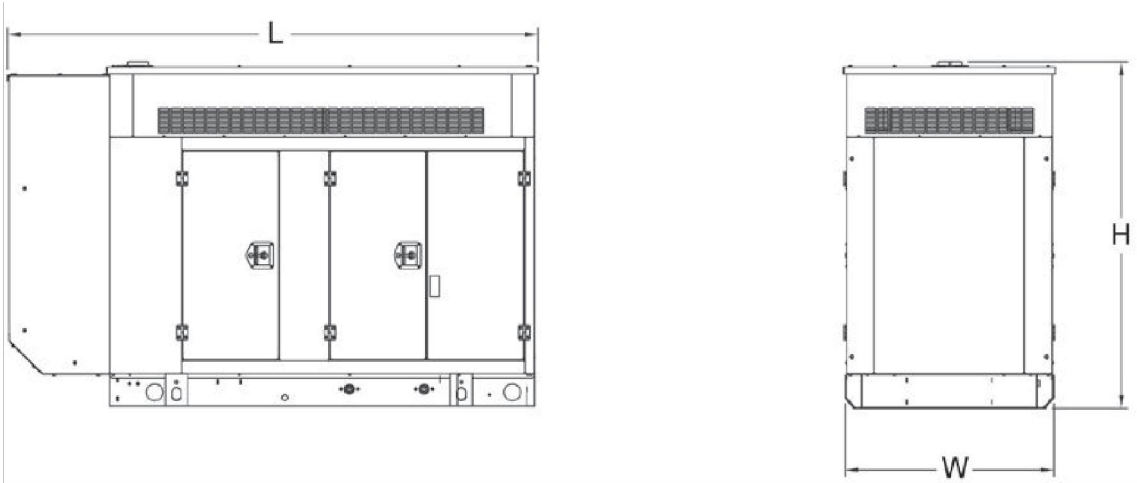
APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General		Cooling System	
Make	Generac	Cooling System Type	Pressurized Closed Recovery
Cylinder #	8	Water Pump Flow -gal/min (l/min)	38 (144)
Type	V	Fan Type	Pusher
Displacement - L (cu In)	5.4L (329.53)	Fan Speed (rpm)	2143
Bore - mm (in)	90.17 (3.55)	Fan Diameter mm (in)	508 (20)
Stroke - mm (in)	105.92 (4.17)	Coolant Heater Wattage	1500
Compression Ratio	9:1	Coolant Heater Standard Voltage	120 V
Intake Air Method	Naturally Aspirated		
Number of Main Bearings	4		
Connecting Rods	Forged	Fuel System	
Cylinder Head	Aluminum	Fuel Type	Natural Gas, Propane Vapor
Cylinder Liners	No	Carburetor	Down Draft
Ignition	Single Fire	Secondary Fuel Regulator	Standard
Piston Type	Aluminum Alloy	Fuel Shut Off Solenoid	Standard
Crankshaft Type	Nodular Iron	Operating Fuel Pressure	7" - 11" H ₂ O
Lifter Type	Hydraulic		
Intake Valve Material	Steel Alloy	Engine Electrical System	
Exhaust Valve Material	Hardened Steel	System Voltage	12 VDC
Hardened Valve Seats	Yes	Battery Charging Alternator	Standard
Engine Governing		Battery Size	See Battery Index 0161970SBY
Governor	Electronic	Battery Voltage	12 VDC
Frequency Regulation (Steady State)	± 0.25%	Ground Polarity	Negative
Lubrication System			
Oil Pump Type	Gear		
Oil Filter Type	Full-flow sping-on cartridge		
Crankcase Capacity - L (qts)	5.7 (6)		

ALTERNATOR SPECIFICATIONS

Standard Model	390mm	Standard Excitation	Brushless
Poles	4	Bearings	Sealed Ball
Field Type	Revolving	Coupling	Flexible Disc
Insulation Class - Rotor	H	Prototype Short Circuit Test	Yes
Insulation Class - Stator	H	Voltage Regulator Type	Full Digital
Total Harmonic Distortion	<5%	Number of Sensed Phases	All
Telephone Interference Factor (TIF)	<50	Regulation Accuracy (Steady State)	± 0.25%



LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H in (mm)	94.8 (2408.9) x 38 (965.1) x 62 (1573.9)
Weight lbs (kg)	Steel: 2871 (1302)
	Aluminum: 2517 (1142)

FUEL SYSTEM		FUEL CONSUMPTION RATES	
FUEL TYPE	NATURAL GAS	PERCENT LOAD	CU FT/HR
ENCLOSURE	ALUMINUM (SOUND LEVEL 1) (SOUND LEVEL 2)	25%	239
		50%	409
		75%	553
OPERATING FUEL PRESSURE	7"–11" H2O	100%	682



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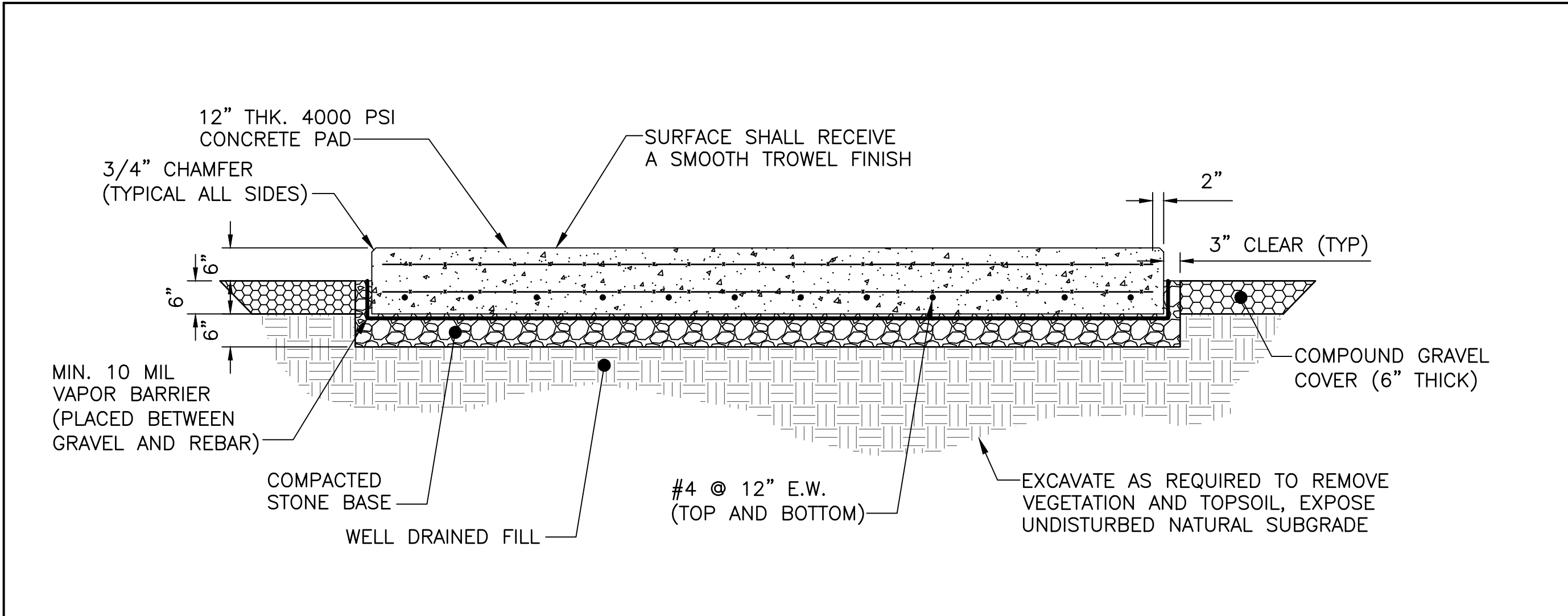
FA CODE: 15372460
5 LINDSEY DRIVE
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BLOCK: 148.02, LOT: 106

DRAWING TITLE:

GENERATOR
DETAILS

DRAWING SHEET:

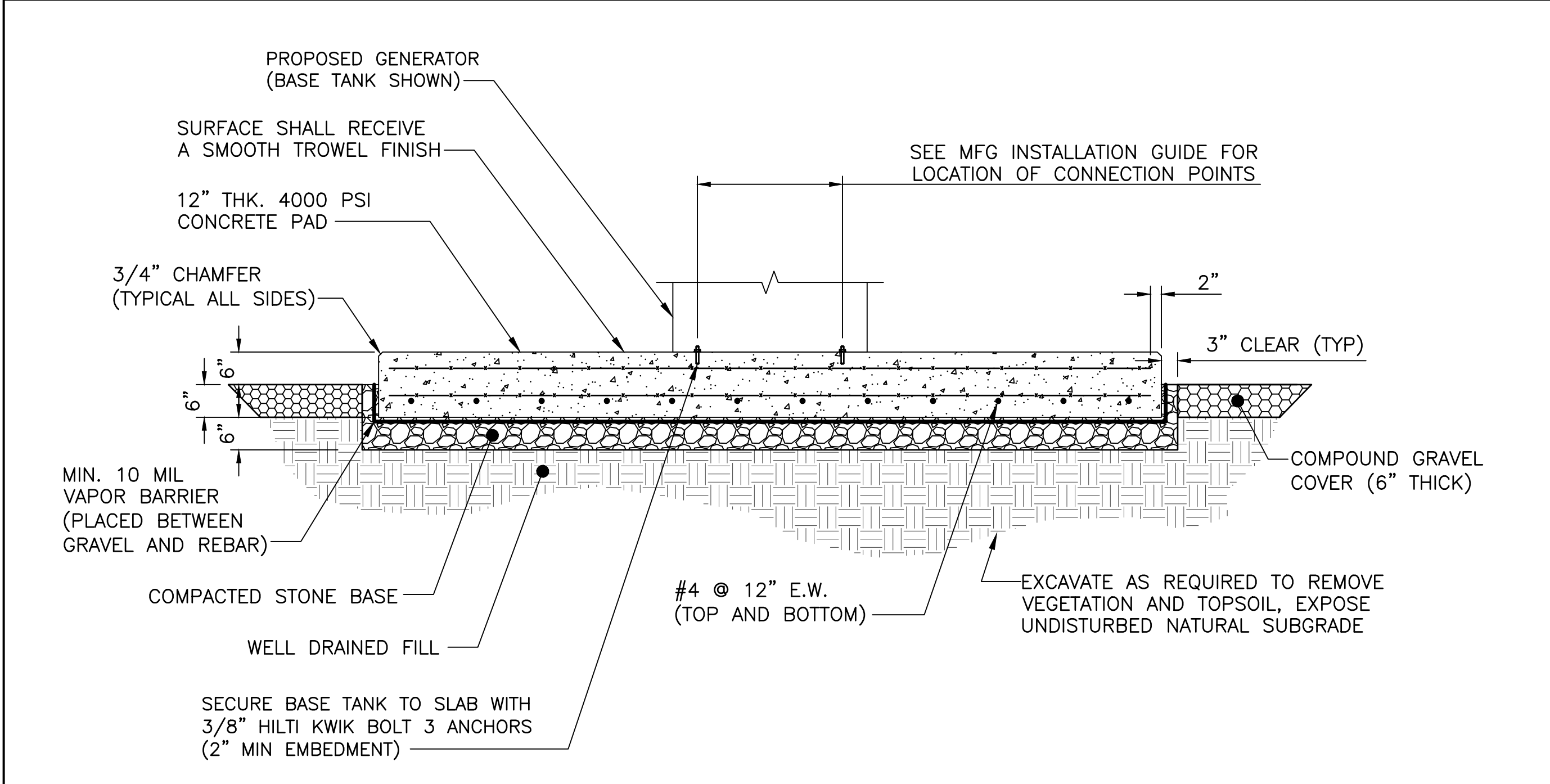
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WIC CONCRETE PAD DETAIL

NO SCALE

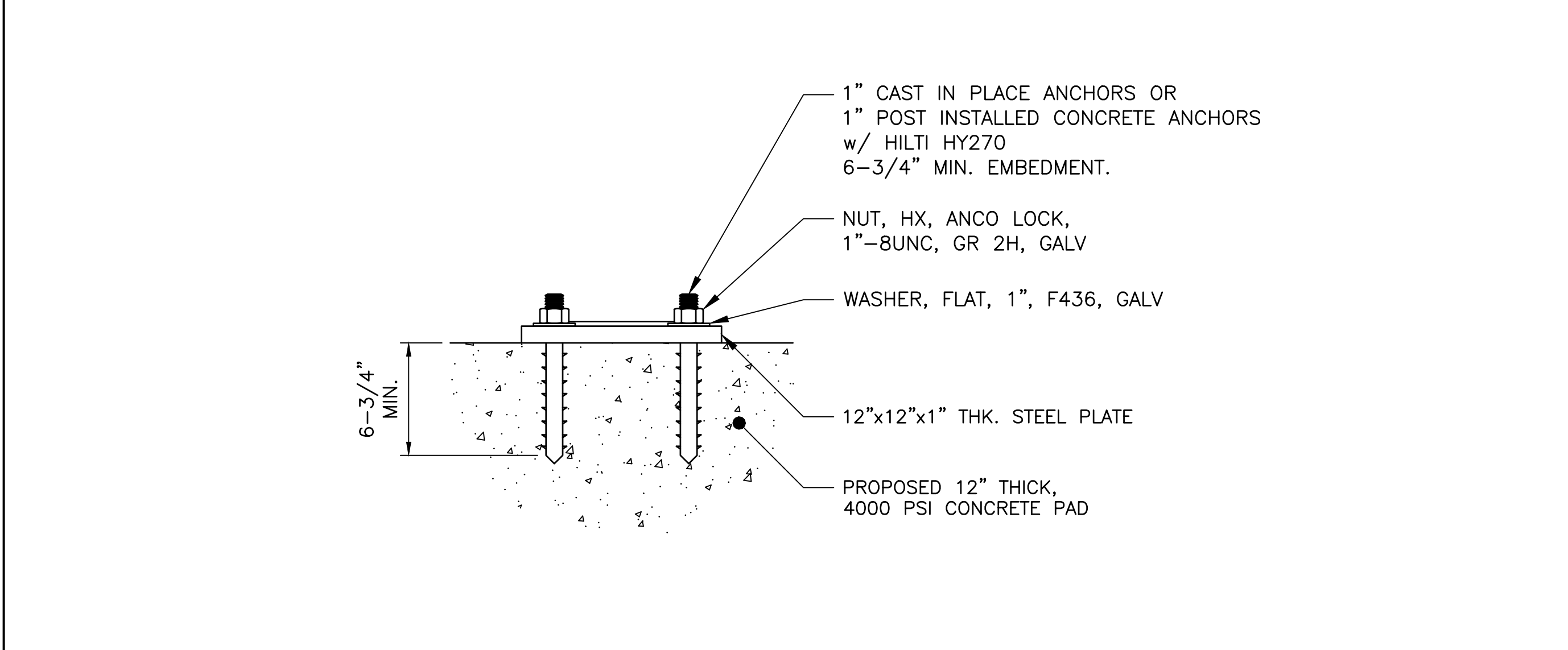
A



GENERATOR CONCRETE PAD DETAIL

NO SCALE

B



WIC MOUNTING DETAIL

NO SCALE

C

EQUIPMENT FOUNDATION STRUCTURAL NOTES

- PLATFORM DESIGN LOADS
A. ASCE 7-10/IBC 2015 EXPOSURE B, (REF. PILE DESIGN TABLE FOR DESIGN WIND SPEED)
B. MAX. AXIAL COMPRESSION PER LEG = 6000 LBS
C. MAX. UPLIFT PER LEG = 1200 LBS
D. MAX. HORIZONTAL SHEAR = 3000 PSF
- PRESUMPTIVE SOIL PARAMETERS
A. SOIL UNIT WEIGHT, γ = 90 PCF
B. ANGLE OF INTERNAL FRICTION = 30°
- SEISMIC DESIGN PARAMETERS
A. OCCUPANCY CATEGORY II
B. SITE CLASS = D
C. SEISMIC USE GROUP = SUG II
D. SEISMIC DESIGN CATEGORY – REF. TO PILE DESIGN TABLE.
- ALL FABRICATION AND INSTALLATION SHOULD BE DONE BY A CONTRACTOR EXPERIENCED IN SIMILAR WORK.
- CONTRACTOR SHOULD OBSERVE ALL OSHA AND OTHER APPLICABLE SAFETY GUIDELINES DURING INSTALLATION.
- ALL FABRICATION AND INSTALLATION PROCEDURES AND SITE SAFETY ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHOULD FIELD VERIFY ALL DIMENSIONS AND FIT BEFORE FABRICATION.
- THE DRAWINGS DO NOT INCLUDE ALL THE EXISTING FIELD CONDITIONS, SOME OF WHICH MAY INTERFERE WITH THE INSTALLATION. CONTRACTOR SHOULD CONDUCT A FIELD SURVEY TO IDENTIFY ANY POTENTIAL DIFFICULTIES IN THE INSTALLATION BEFORE WORK COMMENCES. CONTACT THE ENGINEER IF THE FIELD CONDITIONS REQUIRED ANY CHANGES IN THE DESIGN.
- CONTRACTOR MAY HAVE TO TEMPORARILY REMOVE EXISTING TRANSMISSION LINES AND OTHER OBSTRUCTIONS TO INSTALL NEW STRUCTURE. COORDINATE ALL SUCH PROCEDURES WITH THE BUILDING OWNER.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LICENSES, PERMITS AND ANY OTHER APPROVALS REQUIRED FOR CONSTRUCTION.
- PAINT THE NEW MEMBERS TO MATCH THE EXISTING STRUCTURE.
- THE STRUCTURAL STEEL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ANCHOR BOLT LOCATIONS, ELEVATION OF TOP OF CONCRETE AND BEARING PLATES, ALIGNMENT ETC. PRIOR TO START OF STEEL ERECTION.
- THE LATEST EDITION OF THE FOLLOWING SPECIFICATIONS SHALL GOVERN:
A. AISC – "ALLOWABLE STRESS DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
B. AISC – "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
C. AWS – "D1.1 STRUCTURAL WELDING CODE – STEEL"

- MATERIAL, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:
A. STRUCTURAL WIDE FLANGE & M SHAPES A992 OR A572
FY = 50 KSI
A36
FY = 36 KSI
A500 GR. B
FY = 46 KSI
A325
A36
A307 OF A36
SCH. 40 PIPE
- ALL STEEL SHALL BE HOT DIPPED GALVANIZED AS PER ASTM A123 SPECIFICATIONS.
- ALL STEEL HARDWARE SHALL BE HOT DIPPED GALVANIZED AS PER ASTM A153
- ALL BOLTS SHALL BE DOMESTIC, NEW 1/2 INCH DIAMETER HIGH STRENGTH GALVANIZED BOLTS, BEARING TYPE "X", UNLESS OTHERWISE NOTED IN THE DRAWINGS AND SHALL CONFORM TO ASTM A325 SPECIFICATIONS. USE ANCO LOCKNUTS & FLAT WASHERS ON ALL BOLTS.
- ALL FINISHED BOLT HOLES SHALL NOT BE MORE THAN 1/16 INCH LARGER THAN THE BOLT DIAMETER UNLESS OTHERWISE NOTED.
- ALL BOLTS SHALL BE TIGHTENED USING TURN-OF-THE-NUT METHOD.
- ALL BOLT HOLES EDGE DISTANCES SHALL BE 1-1/2 INCH UNLESS OTHERWISE NOTED.
- ALL WELDING SHALL BE DONE USING E-70 ELECTRODES AND IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STANDARDS AND SPECIFICATIONS.
- ANY FIELD CUTS MUST BE THOROUGHLY CLEANED AND DOUBLE COATED.
- DO NOT HEAT STRUCTURAL MATERIAL FOR STRAIGHTENING BENT OR WARPED MEMBERS.
- CLEAN THE SITE OF ALL DEBRIS UPON COMPLETION OF THE WORK. STORE ALL SURPLUS MATERIALS NEATLY IN AN AREA APPROVED BY THE OWNER.
- BEFORE FIELD WELDING CLEAN ALL PAINT AND GALVANIZING TO BARE METAL. PREHEATING AND POST HEATING OF THE BASE METAL SHOULD BE AS PER AWS D1.1 SPECIFICATION AND APPLICABLE CODES REGARDING PREHEATING AND POSTHEATING.
- CONTRACTOR TO PROVIDE FIRE PROTECTION BEFORE FIELD WELDING.
- HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED. ALL HOLES IN BEARING PLATES SHALL BE DRILLED.
- EPOXY ANCHORS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

FOUNDATION STRUCTURAL NOTES

NO SCALE

D

CONCRETE GENERAL NOTES

- ALL CONCRETE WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF ACI 301 AND ACI 318 (LATEST EDITION) UNLESS OTHERWISE SPECIFIED.
- REINFORCING STEEL FOR CAST-IN-PLACE CONCRETE SHALL CONFORM TO ASTM A615, GR60, EXCEPT REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706.
- ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO THE ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES, ACI 315.
- THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 4,000 PSI AT 28 DAYS U.N.O.
- PRODUCED CONCRETE SHALL HAVE A SLUMP OF 4" OR LESS IF CONSOLIDATION IS TO BE DONE BY VIBRATION AND 5" OR LESS IF CONSOLIDATION IS TO BE DONE BY METHODS OTHER THAN VIBRATION. A TOLERANCE OF 1" ABOVE THE INDICATED MAXIMUM SHALL BE ALLOWED FOR INDIVIDUAL BATCHES PROVIDED THE AVERAGE FOR ALL BATCHES OR MOST RECENT 10 BATCHES TESTED, WHICHEVER IS FEWER, DOES NOT EXCEED MAX LIMIT.
- CONCRETE SHALL BE AIR-ENTRAINED AND SHALL CONFORM TO THE AIR CONTENT LIMITS OF THE FOLLOWING TABLE AS MEASURED BY ASTM C231 OR ASTM C138.
- CONCRETE CURING SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF ACI 308.

NOMINAL MAXIMUM SIZE OF COARSE AGGREGATE, IN	SIZE NUMBER	TOTAL AIR CONTENT PERCENT OF VOLUME
3/8	8	6-10
1/2	7	5-9
3/4	67	4-8
1	57	3.5-6.5
1-1/2	467	3-6
2	357	2.5-5.5
3	-	1.5-4.5

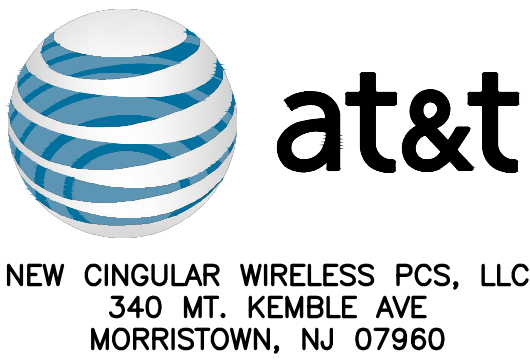
- CONCRETE IN COLD AND HOT WEATHER SHALL CONFORM TO THE PROJECT SPECIFICATIONS AND THE LATEST EDITION OF ACI 306R AND ACI 305R RESPECTIVELY.
- TEST CYLINDERS SHALL BE TAKEN AS A REPRESENTATIVE SAMPLE OF CONCRETE PLACED AS REQUIRED BY ACI 301. CYLINDERS TO BE BROKEN ON DAY 7, 14, AND 28.
- TEST RESULTS SHALL BE FORWARDED TO THE ARCHITECT/ENGINEER, UNLESS NOTED OTHERWISE.
- NORMAL WEIGHT CONCRETE (150 PCF) SHALL BE USED WITH A 1" MAX COURSE AGGREGATE CONFORMING TO ASTM C33.
- CHAMFER ALL EXTERNAL EXPOSED CORNERS OF CONCRETE WITH 3/4" 45-DEGREE CHAMFER U.N.O.
- UNLESS NOTED OTHERWISE, CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
A. CONCRETE CAST AGAINST EARTH – 3"
B. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER – 2"
- ALL REINFORCING BAR SPLICES SHALL BE CLASS "13" TENSION LAP SPLICES, IN ACCORDANCE WITH ACI 318, CHAPTER 12, U.N.O.
- STAGGER SPLICES IN REBAR, IN ACCORDANCE WITH ACI 318. FOLLOWING SHALL BE THE MINIMUM LAP SPLICES AND OVERLAPPING LENGTHS.

BAR SIZE	REBAR TABLE			
	MIN. LAP SPLICE		MIN. DEVELOPMENT LENGTH	
	TOP BAR (INCHES)	OTHER BAR (INCHES)	TOP BAR (INCHES)	OTHER BAR (INCHES)
#4	20	16	16	12
#5	24	18	18	14
#6	29	22	22	17
#7	42	32	32	25
#8	48	37	37	28
#9	60	46	46	35
#10	74	57	57	44
#11	88	68	68	52

CONCRETE GENERAL NOTES

NO SCALE

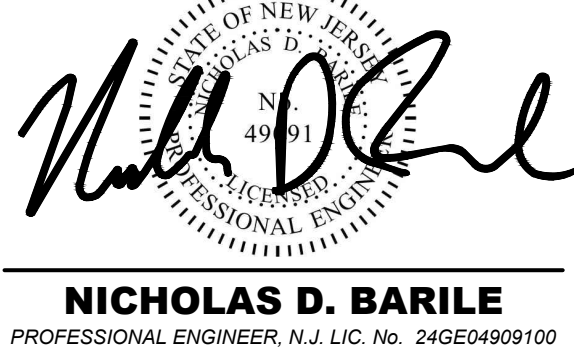
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SCHEDULE OF REVISIONS

REV. NO.	DATE	DESCRIPTION OF CHANGES
7		
6		
5		
4		
3		
2		
1	01/20/21	REVISED PER CLIENT COMMENTS
0	01/12/21	INITIAL SUBMISSION
DRAWN BY: DPB		
CHECKED BY: NDB		
SCALE: AS NOTED		
JOB NO: 20024-BVE		

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ZONING DRAWINGS
MI-144X
FA CODE: 15372460
5 LINDSEY DRIVE
NORTH BRUNSWICK, NJ 08902
BLOCK: 148.02, LOT: 106

DRAWING TITLE:

CONCRETE
DETAILS & NOTES

DRAWING SHEET:

Z-11