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August 11, 2016

VIA ELECTRONIC & OVERNIGHT DELIVERY

Melanie Bachman, Esq.
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, Connecticut 06051

Re: Docket No. 423
Co-applicant New Cingular Wireless PCS, LLC ("AT&T")
Route 198, Woodstock, Connecticut

Dear Executive Director Bachman:

On behalf of New Cingular Wireless PCS LLC ("AT&T"), please accept for review and approval this filing for AT&T's facility approved in Docket No. 423.¹

Proposed Modification

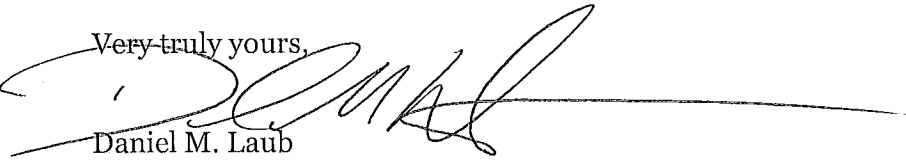
AT&T proposes a different shelter location within the compound. This modification shifts AT&T's shelter from the eastern portion of the compound to the western side of the compound closer to the on-site utility connections. No other changes are proposed. Please find enclosed 11" x 17" sized revised construction drawings filed for review of this modification. Two full-sized sets will be provided separately.

Required Notifications

AT&T has obtained a building permit and intends on commencing construction later this month. The General Contractor/Supervisor for all construction related matters for AT&T's facility is Bryon Morawski. Mr. Morawski can be reached by telephone at (860) 513-7223.

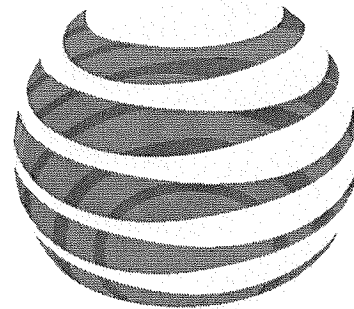
Should you have any questions please do not hesitate to contact me. Thank you for your consideration of the enclosed.

Very truly yours,


Daniel M. Laub
Enclosures

cc: Gregory Mercier, Esq., American Tower
Jessica Rincon, AT&T
Paul Reed, Centerline Communications

¹ As you will recall, on March 6, 2015 the Council transferred the Certificate of Environmental Compatibility and Public Need issued in Docket 423 from North Atlantic Towers, LLC to American Tower Corporation. On April 20, 2016 the Council granted an extension of time for completion of the facility and installation of at least one fully operational wireless carrier to December 21, 2016.



at&t

SITE NAME: WOODSTOCK RT 198
SITE NUMBER: CT2067
ADDRESS: ROUTE 198
WOODSTOCK, CT 06282

CONSTRUCTION

ProTerra
DESIGN GROUP, LLC

4 Bay Road
Building A, Suite 200
Hadley, MA 01035
(413)320-4918

CLIENT:



27 Northwestern Drive
Salem, NH 03079

NO.	DATE	REVISIONS
A	2/11/14	ISSUED FOR REVIEW
0	3/21/14	ISSUED FOR CONSTRUCTION
1	4/11/14	CONSTRUCTION REVISED
2	7/20/16	CONSTRUCTION REVISED

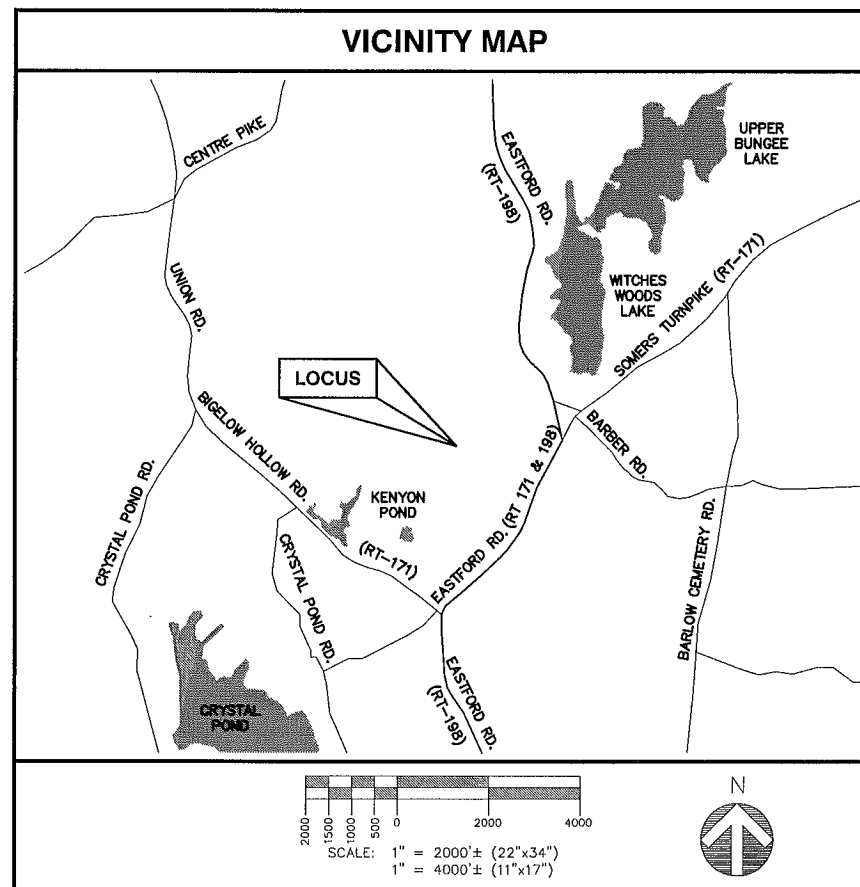
DRAWING INDEX

SHEET	DESCRIPTION	REVISION
T-1	TITLE SHEET	2
GN-1	GENERAL NOTES	2
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GENERAL NOTES

- CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER & AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE LATEST AT&T CONSTRUCTION GUIDELINES.
- ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL DIG-SAFE (888) 344-7233 72-HOURS PRIOR TO ANY EXCAVATION.
- THIS SHEET SET WAS ORIGINALLY PRINTED TO ANSI D (22"x34") WITH 1" MARGINS. PRINTING TO ANSI B (11"x17") WILL RESULT IN A HALF-SCALE (1:2) SHEET SET WITH 1/2" MARGINS. CONFIRM ALL SCALED DISTANCES WITH GRAPHICAL SCALES SHOWN HEREIN.

VICINITY MAP



PROJECT INFORMATION

SITE TYPE: CO-LOCATION MONOPOLE
 SCOPE OF WORK: PROPOSED PANEL ANTENNAS & RF EQUIPMENT ON SECTOR FRAME MOUNTED ON (E) MONOPOLE. SHELTER & GENERATOR PROPOSED AT GROUND LEVEL.
 SITE NAME: WOODSTOCK RT 198
 SITE NUMBER: CT2067
 SITE ADDRESS: ROUTE 198 WOODSTOCK, CT 06282
 ASSESSOR'S TAX ID#: MAP 5789 BLOCK 37 LOT 24
 ZONING DISTRICT: COMMUNITY DISTRICT
 LATITUDE: 41° 56' 21.97" N (RECORD PLANS)
 LONGITUDE: 72° 04' 55.26" W (RECORD PLANS)
 DATUM: NAD83
 PROPERTY OWNER: N/F WOODSTOCK TOWER PARTNERS, LLC
 35 KENNEDY DRIVE
 PUTNAM, CT 06260
 ENGINEER: PROTERRA DESIGN GROUP, LLC
 4 BAY ROAD
 BUILDING A, SUITE 200
 HADLEY, MA 01035
 (413) 320-4918

DRIVING DIRECTIONS

DRIVING DIRECTIONS FROM AT&T IN ROCKY HILL, CT:
 TAKE I-91 NORTH TO EXIT 29, MERGE ONTO CT-15/US-5 NORTH TOWARDS I-84, CONTINUE ONTO CT-15, MERGE ONTO I-84 EAST, TAKE EXIT 73 FOR CT-190 TOWARDS UNION, TURN RIGHT ONTO CT-190 E/BUCKLEY HIGHWAY, TURN RIGHT ONTO CT-171 E/BIGELOW HOLLOW ROAD, TURN LEFT ONTO CT-171 E/ CT-198 N / EASTFORD ROAD, ACCESS ROAD 0.6 MILES ON LEFT.

SITE NAME: WOODSTOCK RT 198
 SITE NUMBER: CT2067
 ADDRESS: ROUTE 198 WOODSTOCK, CT 06282

NEW CIRCULAR WIRELESS FCS, LLC
 "AT&T"
 500 ENTERPRISE DRIVE
 ROCKY HILL, CT 06067



STAMP:



DATE: 2/11/14

DRAWN: TBD

CHECK: JMM/TEJ

SCALE: SEE PLAN

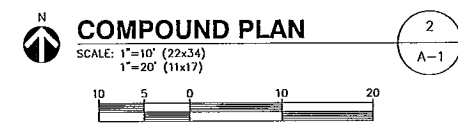
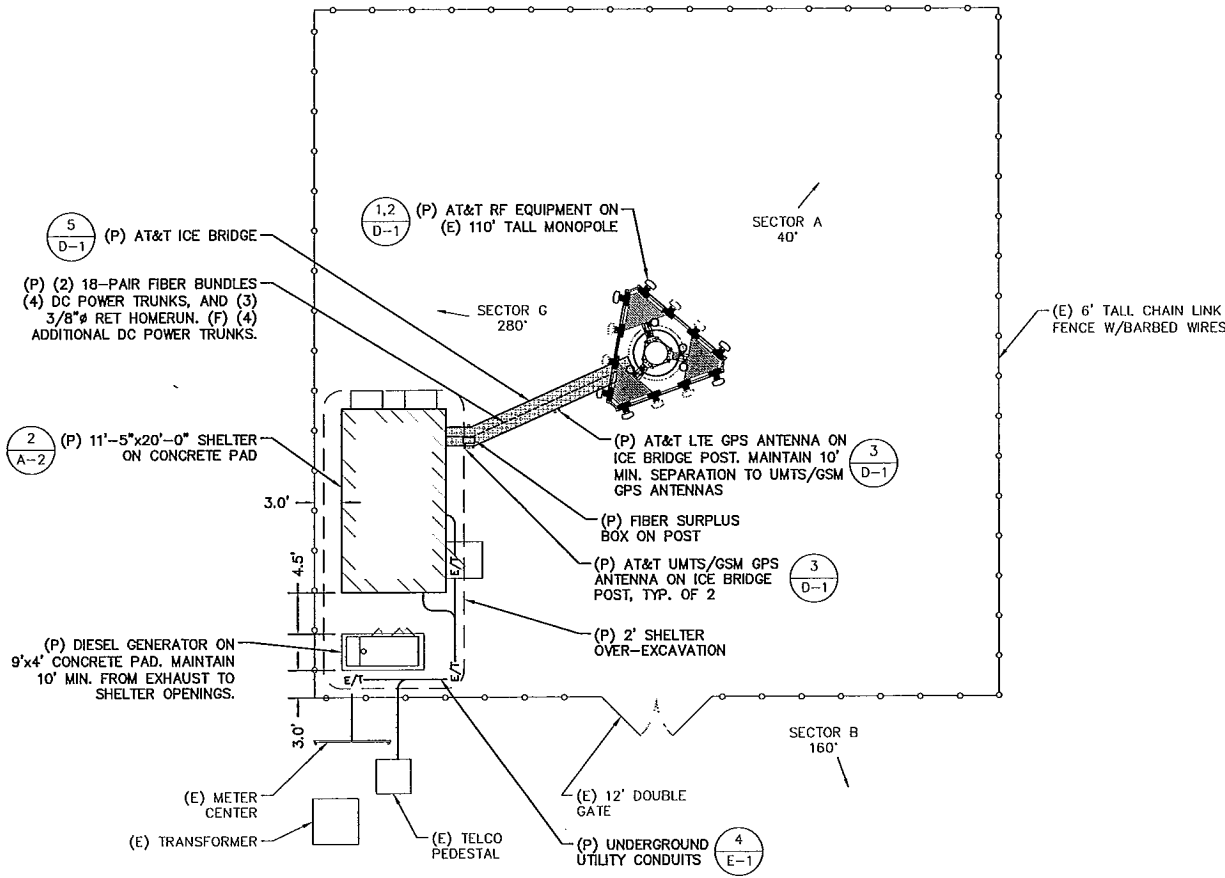
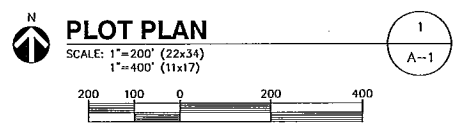
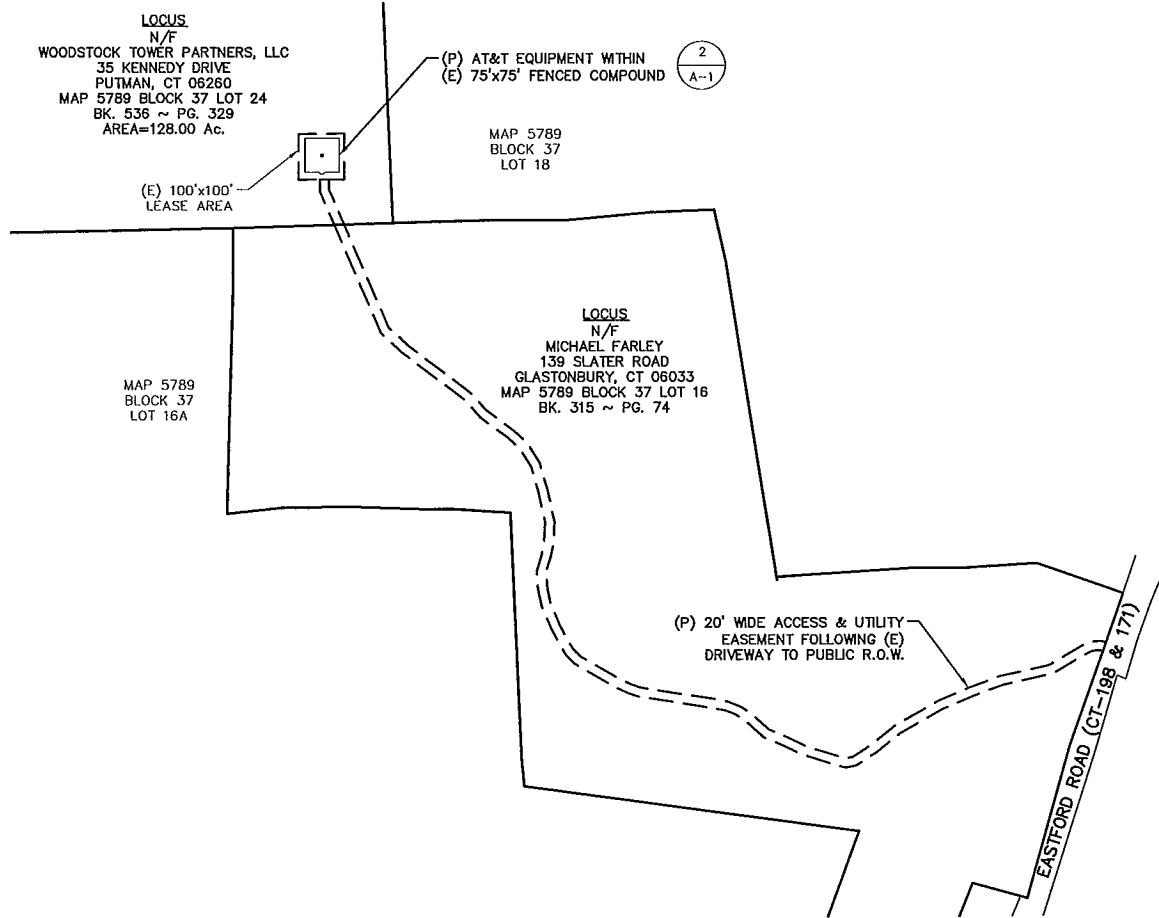
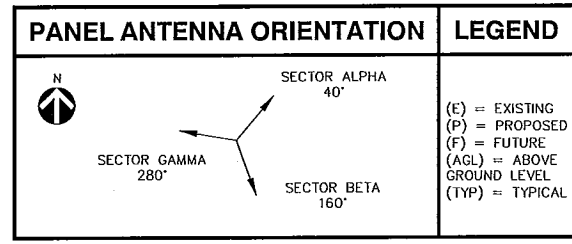
JOB NO.: 13-063

SHEET TITLE:

TITLE SHEET

T-1

- ### PLAN REFERENCES
1. TOWN OF WOODSTOCK WEBSITE (ON-LINE REAL ESTATE DATABASE)
 2. RECORD PLAN ENTITLED "UPDATED -- EXISTING CONDITIONS" BY INFINGY SURVEYING DATED SEPTEMBER 2013.



ProTerra
DESIGN GROUP, LLC

4 Bay Road
Building A, Suite 200
Hadley, MA 01035
(413)320-4918

CLIENT:

27 Northwestern Drive
Salem, NH 03079

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A	12/11/14	ISSUED FOR REVIEW
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1	4/11/14	CONSTRUCTION REVISED
2	7/20/16	CONSTRUCTION REVISED

SITE NAME: WOODSTOCK RT 198
SITE NUMBER: CT2067
ADDRESS: ROUTE 198
WOODSTOCK, CT 06282

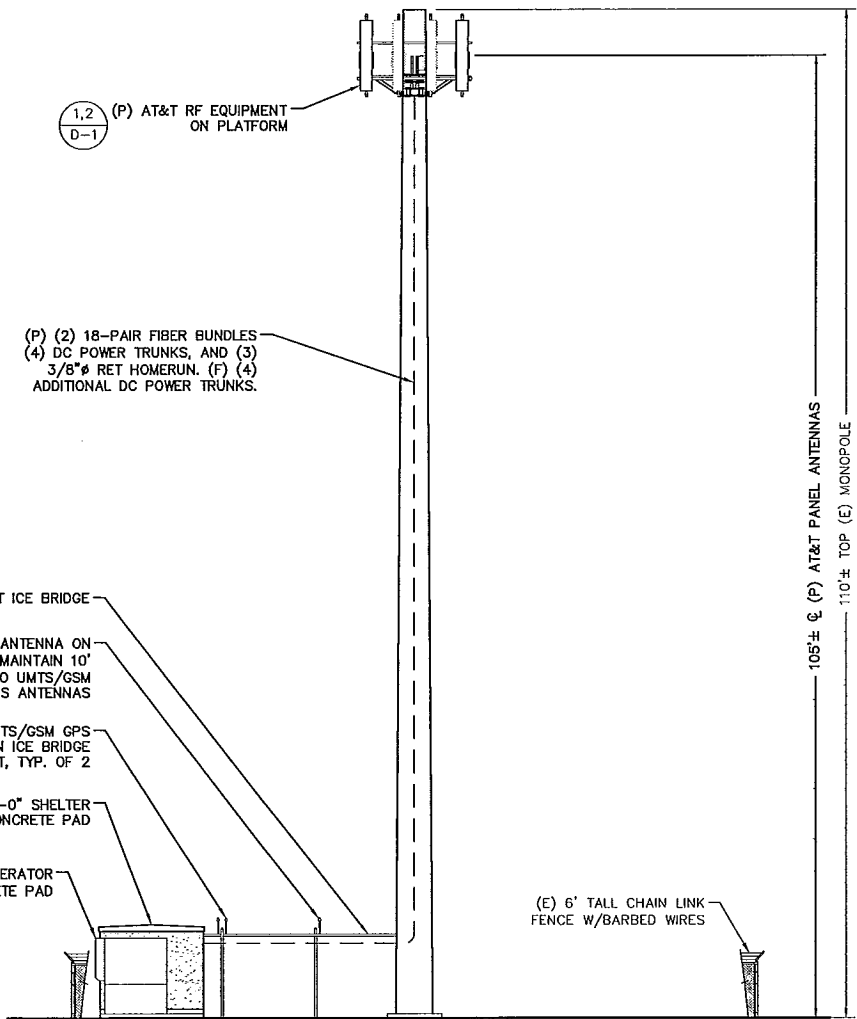
APPLICANT:
NEW CIRCULAR WIRELESS PCS, LLC
"AT&T"
600 ENTERPRISE DRIVE
ROCKY HILL, CT 0867

STAMP:

DATE: 2/11/14
DRAWN: TBD
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 13-063

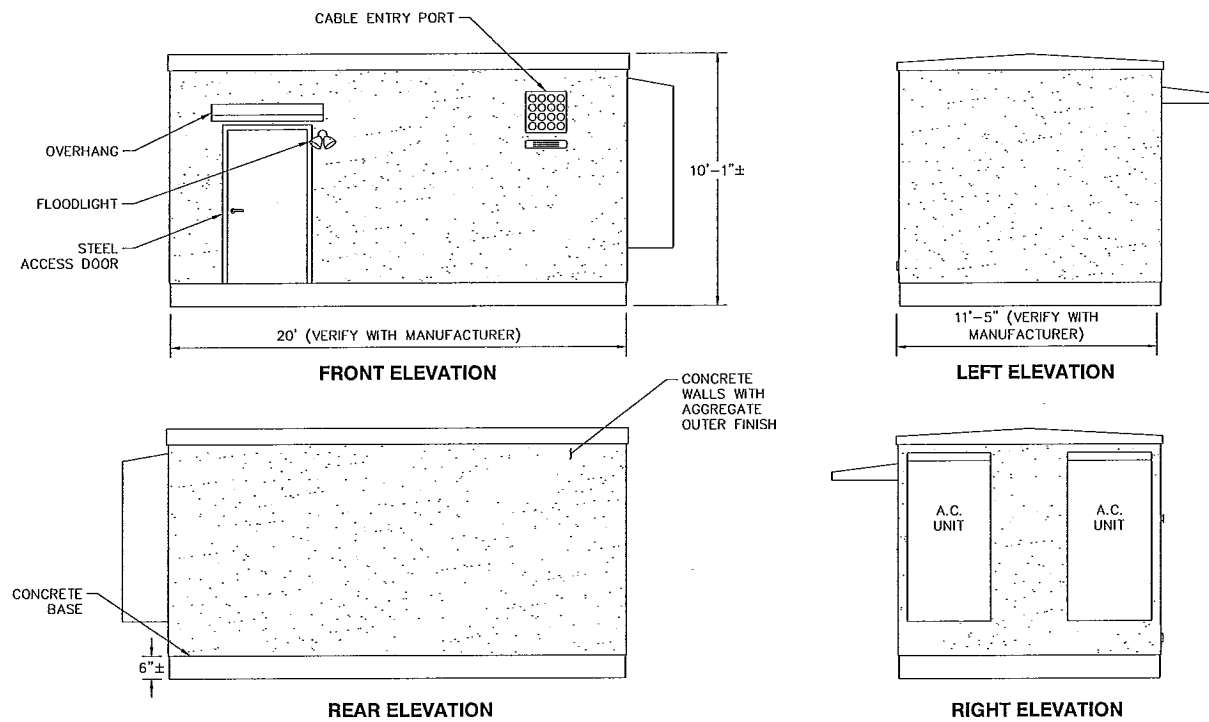
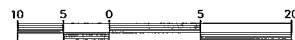
SHEET TITLE:
PLOT & COMPOUND PLAN
A-1

ALL WORK ON TOWER TO BE PERFORMED IN ACCORDANCE WITH REPORT ENTITLED "STRUCTURAL ANALYSIS: 110-FT MONOPOLE" PREPARED BY MICHAEL P. PLAHOVINSK, PE DATED FEBRUARY 10, 2014.



SOUTH ELEVATION

SCALE: 1"=10' (22x34)
1"=20' (11x17)



NOTE: CELLXION 11'-5"x20' SHOWN CONTRACTOR TO VERIFY AND PROVIDE CONNECTICUT-SPECIFIC SHELTER DRAWINGS AND APPROVALS TO BUILDING INSPECTOR AS REQUIRED. A MINIMUM OF 1 HR RATING WITH NON COMBUSTIBLE EXTERIOR WALLS REQUIRED.

PREFABRICATED SHELTER

SCALE: NONE

2
A-2

ProTerra
DESIGN GROUP, LLC

4 Bay Road
Building A, Suite 200
Hadley, MA 01035
(413)320-4918

CLIENT:

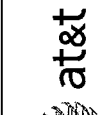


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2	7/20/16	CONSTRUCTION REVISED

SITE NAME: WOODSTOCK RT 198
SITE NUMBER: CT2067
ADDRESS: ROUTE 198
WOODSTOCK, CT 06282

NEW CUNILAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067



STAMP:



DATE: 2/11/14

DRAWN: TBD

CHECK: JMM/TEJ

SCALE: SEE PLAN

JOB NO.: 13-063

SHEET TITLE:

**ELEVATION &
DETAILS**

A-2

CLIENT:



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Salem, NH 03079

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SITE NUMBER: CT2067
ADDRESS: ROUTE 198
WOODSTOCK, CT 06282

NEW CIRCULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067



TITLE:

STAMP:

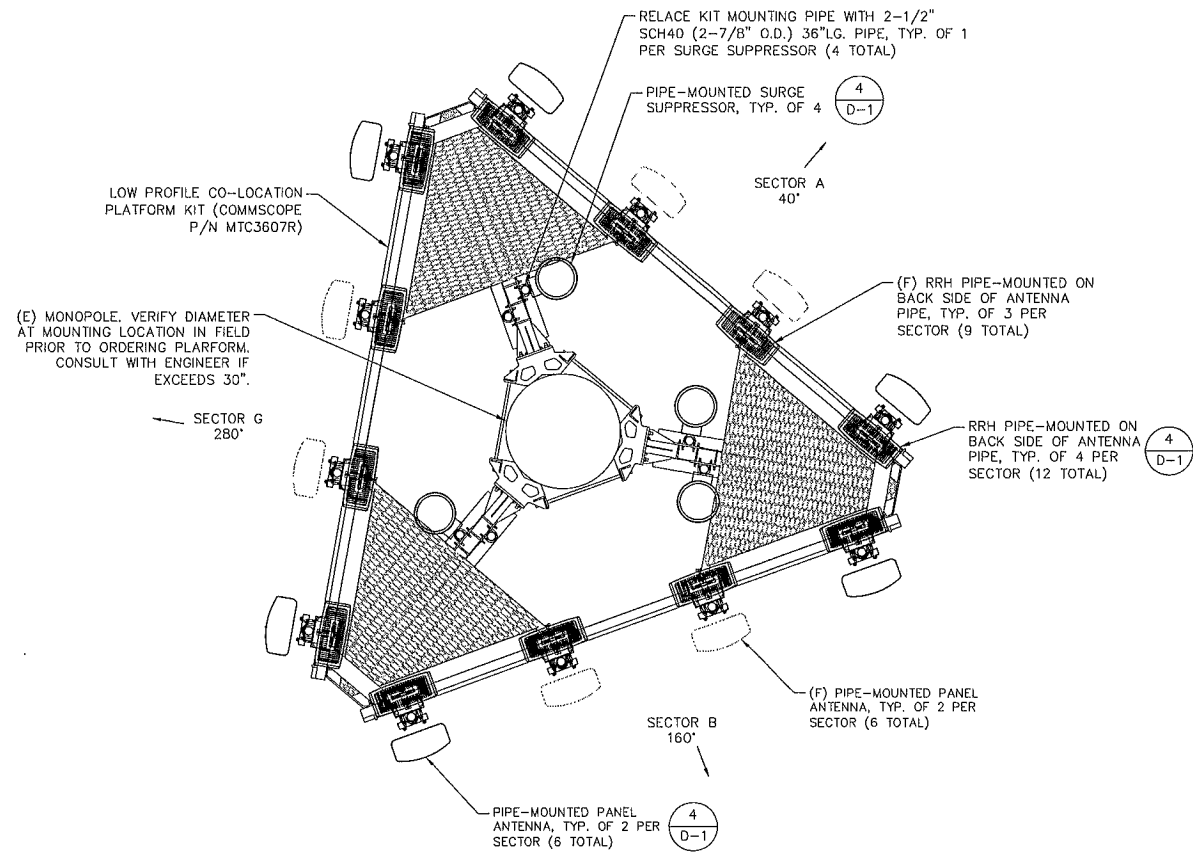


DATE: 2/11/14
DRAWN: TBD
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 13-063

SHEET TITLE:

DETAILS

D-1

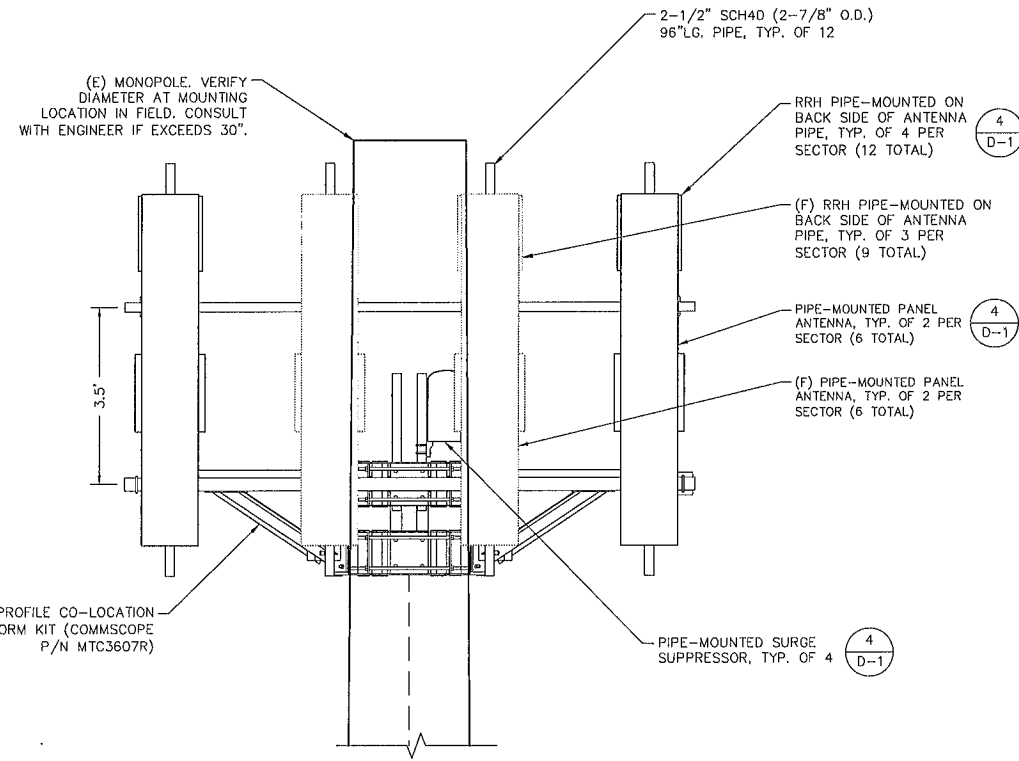


RF EQUIPMENT PLAN

SCALE: 1"=3' (11x17)
1"=6' (22x34)

1

D-1

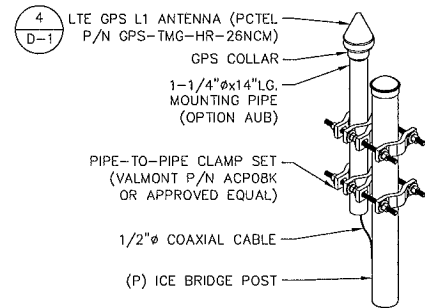


RF EQUIPMENT ELEVATION

SCALE: 1"=3' (11x17)
1"=6' (22x34)

2

D-1

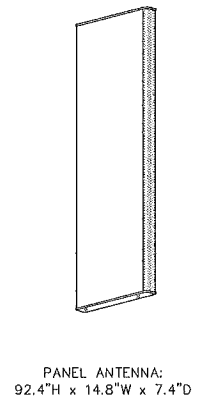


GPS ANTENNA

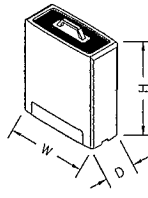
SCALE: NONE

3

D-1



PANEL ANTENNA:
92.4"H x 14.8"W x 7.4"D



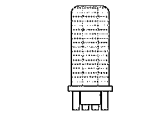
REMOTE RADIO HEAD:
19.7"H x 17.0"W x 7.2"D (RRUS-11)
20.4"H x 18.5"W x 13.3"D (RRUS-12)
29.9"H x 13.3"W x 9.5"D (RRUS-32)
20.4"H x 18.5"W x 13.3"D (RRUS-E2)

ANTENNA EQUIPMENT

SCALE: NONE

4

D-1



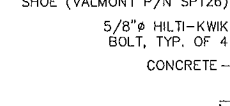
SURGE SUPPRESSOR:
23.5"H x 9.7"φ



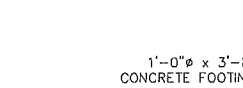
GPS ANTENNA:
5"H x 3.2"D

- ALL COMPONENTS SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
- CONTRACTOR SHALL DETERMINE REQUIRED QUANTITY OF ALL ICE BRIDGE COMPONENTS.
- SNAP-IN HANGERS, SPLICE KITS, HINGE KITS, EXTENSION KITS, STIFFENERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.
- ICE BRIDGE SHALL BE ROUTED TO ACCOMMODATE THE MINIMUM BENDING RADIUS OF THE COAXIAL CABLE.
- ICE BRIDGE COMPONENTS SHOWN ARE SCHEMATIC. CONSULT MANUFACTURER FOR EXACT AND CURRENT SPECIFICATIONS.

ICE BRIDGE POST WITH BASE SHOE (VALMONT P/N SP126)



ALTERNATE ANCHORING DETAIL

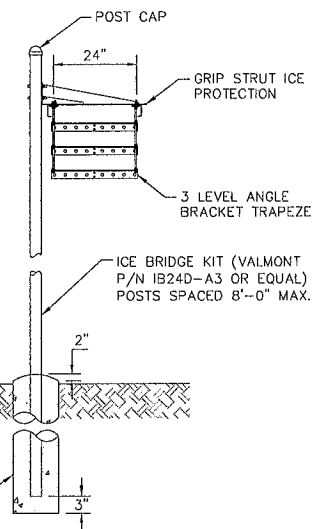


ICE BRIDGE

SCALE: NONE

5

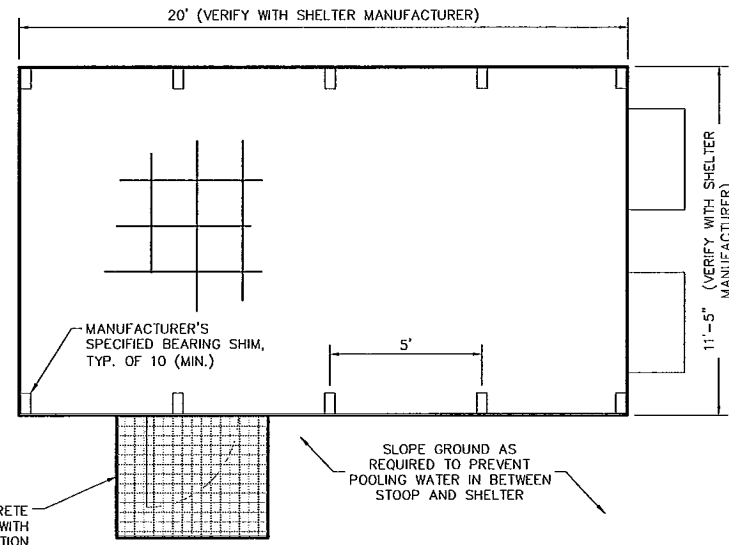
D-1



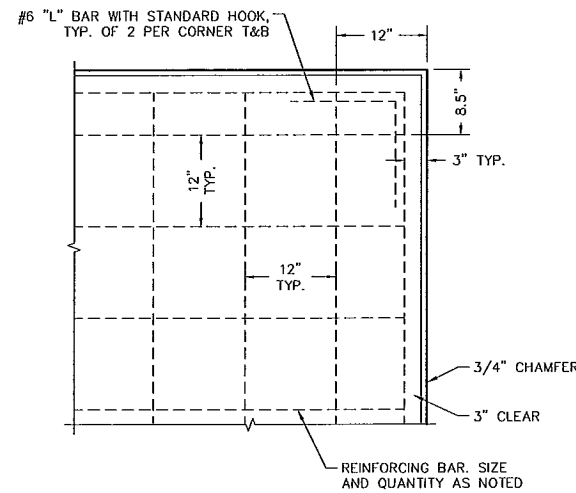
ICE BRIDGE KIT (VALMONT P/N IB24D-A3 OR EQUAL) POSTS SPACED 8\"/>

CONCRETE PAD NOTES

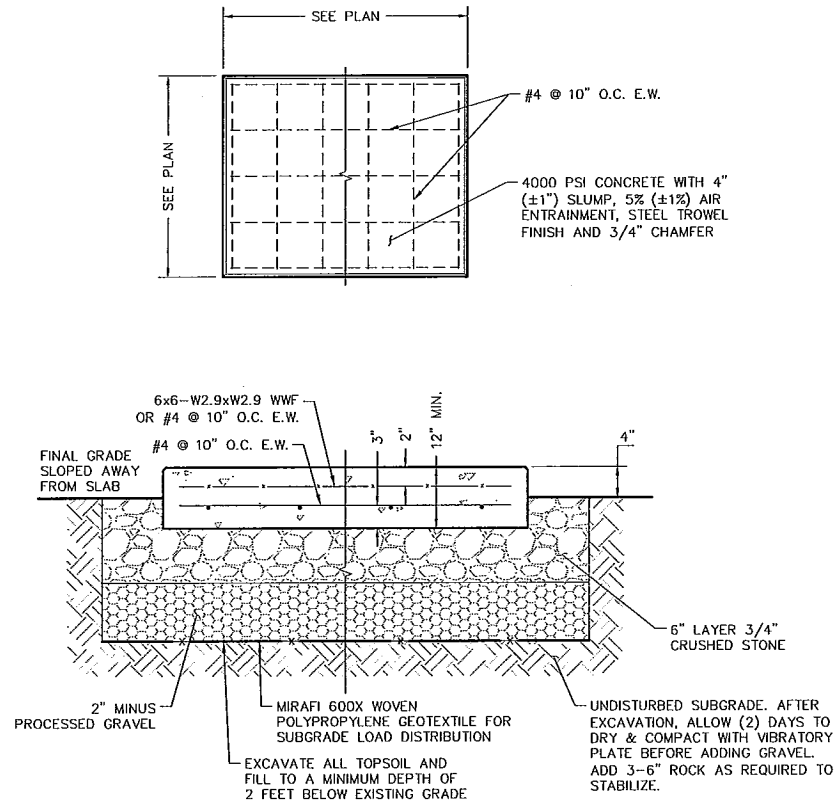
- FOUNDATIONS TO BE CONSTRUCTED ON UNDISTURBED SUBGRADE WITH MINIMUM BEARING CAPACITY OF 3000 PSF (1.5 TSF). ENGINEER IS TO BE NOTIFIED IMMEDIATELY IF UNSUITABLE MATERIALS ARE PRESENT.
- BEARING SHIMS, TIE-DOWN PLATES AND ASSOCIATED INSTALLATION ANCHORS PROVIDED BY SHELTER MANUFACTURER. CONTRACTOR SHALL VERIFY ALL SHIM & TIE-DOWN QUANTITIES AND LOCATIONS WITH SHELTER MANUFACTURER PRIOR TO PERFORMING WORK.
- SLAB/TOP OF WALL TOLERANCE IS 1/4"±.
- TOP 8" OF FOUNDATION SIDES MUST BE FORMED FLAT TO ACCEPT TIE-DOWN PLATES.
- PER NEC REQUIREMENTS, THE REBAR IN FOUNDATION AND FOOTING SHALL BE BONDED TO GROUND RING WITH A #2 AWG SOLID CONDUCTOR USING LISTED AND APPROVED METHODS.
- PROVIDE PVC SLEEVES FOR UTILITY CONDUIT PASSAGE THROUGH FOUNDATION OR CAST CONDUITS IN PLACE. REFER TO ELECTRICAL DRAWINGS FOR CONDUIT SIZES AND QUANTITIES AS REQUIRED.
- BEARING MEDIUM TO CONSIST OF DENSE GRANULAR MATERIAL OR COMPACTED STRUCTURAL FILL (95% COMPACTION) OR LEDGE.
- SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. NO DELETERIOUS MATERIALS OR ORGANICS TO BE USED.
- USE GALVANIZED ANCHORS AS SPECIFIED BY SHELTER MANUFACTURER FOR EQUIPMENT ANCHORAGE.
- FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.



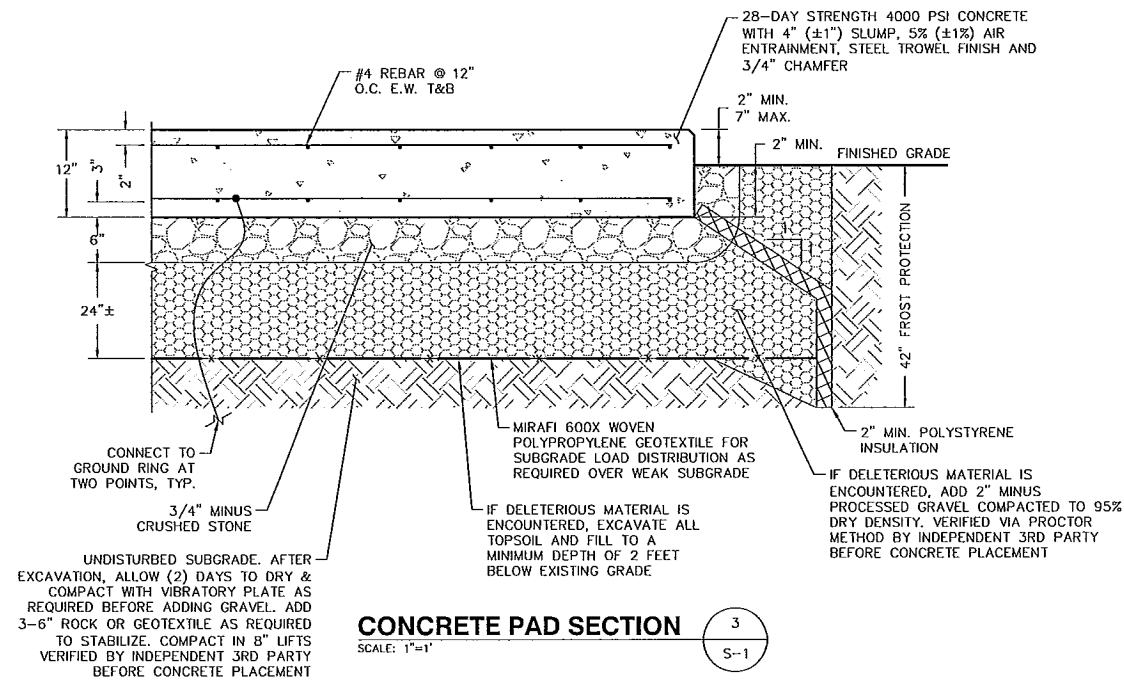
CONCRETE PAD PLAN
SCALE: NONE



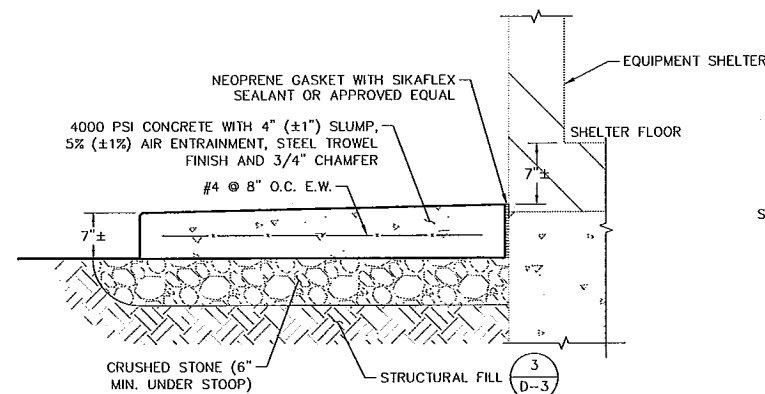
REINFORCEMENT CORNER DETAIL
SCALE: NONE



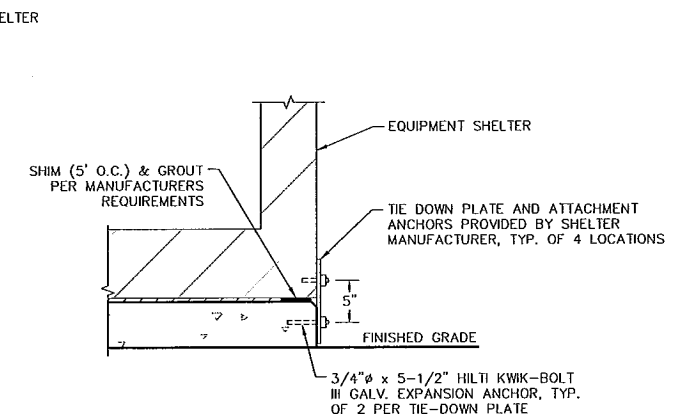
GENERATOR PAD
SCALE: NONE



CONCRETE PAD SECTION
SCALE: 1"=1'



CONCRETE STOOP
SCALE: NONE



TIE-DOWN DETAIL
SCALE: NONE

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DESIGN GROUP, LLC

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SITE NAME: WOODSTOCK RT 198
SITE NUMBER: CT2067
ADDRESS: ROUTE 198
WOODSTOCK, CT 06282

NEW CIRCULAR
WIRELESS FCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06867



STAMP:



DATE: 2/11/14
DRAWN: TBD
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 13-063

SHEET TITLE:

**STRUCTURAL
DETAILS**

S-1

CLIENT:



27 Northwestern Drive
Salem, NH 03079

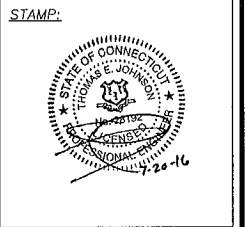
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4	7/20/16	CONSTRUCTION REVISED

SITE NAME: WOODSTOCK RT 198
SITE NUMBER: CT2067
ADDRESS: ROUTE 198
WOODSTOCK, CT 06222

NEW CIRCULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

at&t

TITLE:

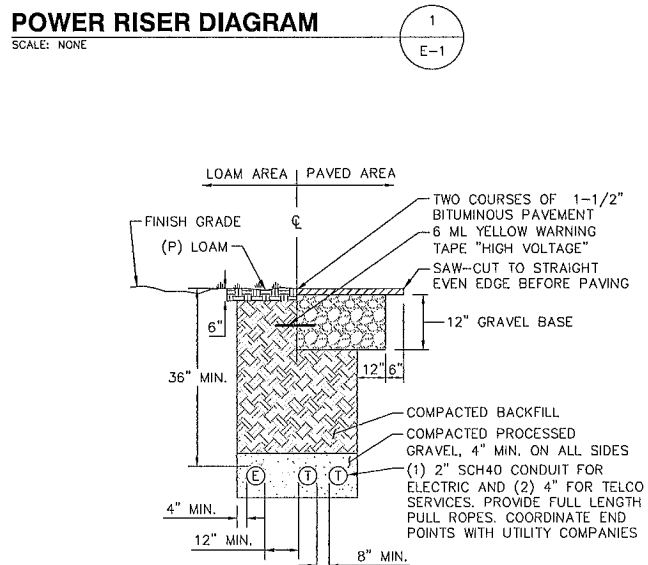
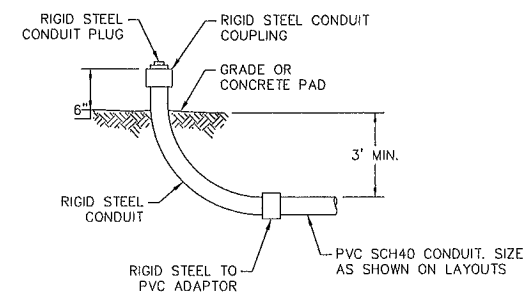
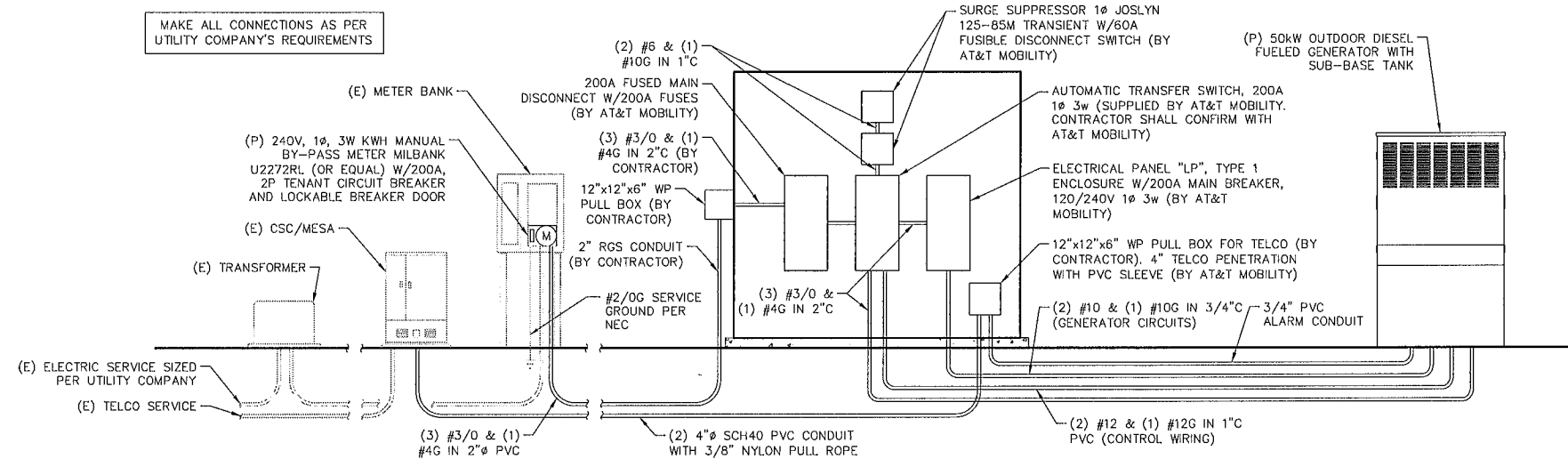
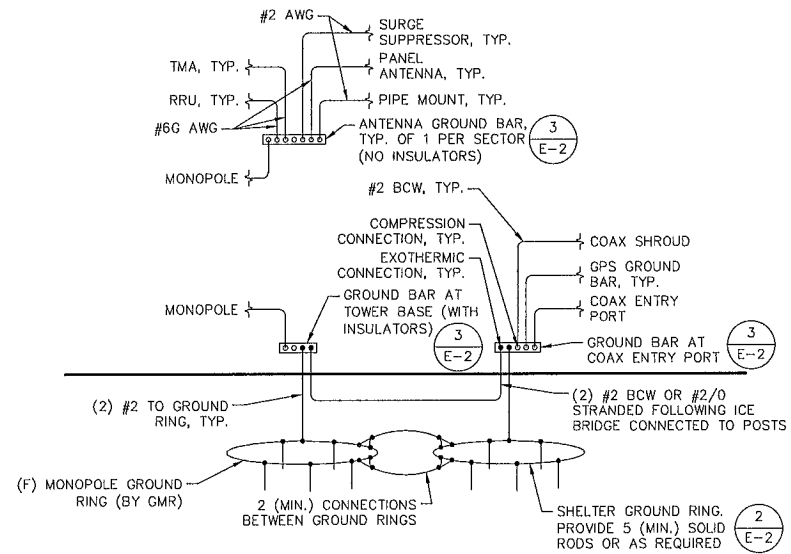


DATE: 2/11/14
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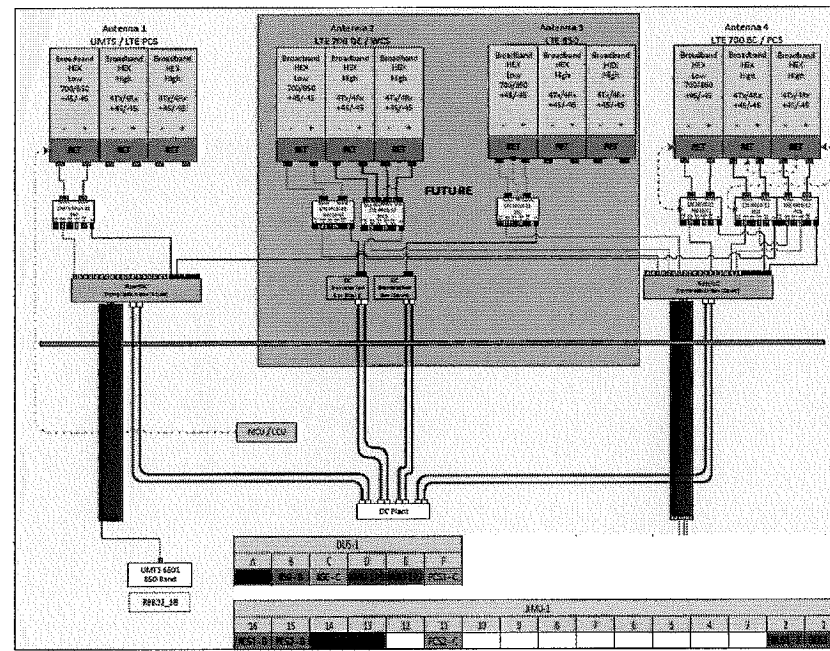
SHEET TITLE:
ELECTRICAL & GROUNDING DETAILS

E-1

SECTOR	RF EQUIPMENT TABLE										FUTURE COMPONENTS IN PARENTHESIS (#)								
	PANEL ANTENNAS					FROM REMOTE RADIO UNIT					REMOTE RADIO UNIT		FROM SURGE SUPPRESSOR		SURGE SUPPRESSOR		FROM SHELTER		
	AZIMUTH	QTY.	MAKE & MODEL	RAD. CENTER (AGL)	DOWNTILT	COAX. QTY.	COAX. SIZE	COAX. LENGTH	RET. QTY.	QTY.	MAKE & MODEL	A2 QTY.	DC QTY.	FIBER QTY.	DC & FIBER LENGTH	QUANTITY	DC BUNDLE QTY.	FIBER TRUNK QTY.	FIBER & DC LENGTH
ALPHA	40°	2(2)	CCI HPA-65R-BUU-H8	105'	0°M 2°E	8(8)	1/2" Ø	20'±	4(2)	4(3)	SEE RF PLUMBING DIAGRAM	0	4(3)	4(3)	15'±				160'±
BETA	160°	2(2)	CCI HPA-65R-BUU-H8	105'	0°M 2°E	8(8)	1/2" Ø	20'±	4(2)	4(3)	SEE RF PLUMBING DIAGRAM	0	4(3)	4(3)	15'±	4	4(4)	2	160'±
GAMMA	280°	2(2)	CCI HPA-65R-BUU-H8	105'	0°M 2°E	8(8)	1/2" Ø	20'±	4(2)	4(3)	SEE RF PLUMBING DIAGRAM	0	4(3)	4(3)	15'±				160'±
GPS	N/A	3	PCTEL GPS-TMG-HR-26N	12'	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	(3)	1/2" Ø COAX	50'±



- NOTES
1. DETAIL AS SHOWN IS FOR SECONDARY ELECTRIC SERVICE. PRIMARY HIGH VOLTAGE SERVICE REQUIRES 4" CONCRETE ENCASUREMENT.
 2. SCH80 PVC MAYBE REQUIRED IN AREAS UNDER THE INFLUENCE OF VEHICULAR TRAFFIC.



BASED UPON RFDS DATED 5/18/2016

RF PLUMBING DIAGRAM
SCALE: NONE

STUB-UP CONDUIT DETAIL
SCALE: NONE

BURIED CONDUIT SECTION
SCALE: NONE

RF PLUMBING DIAGRAM
SCALE: NONE

CLIENT:

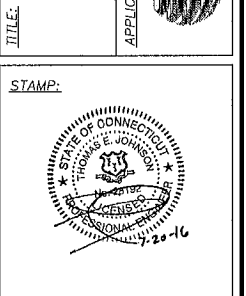


27 Northwestern Drive
Salem, NH 03079

NO.	DATE	REVISIONS
A	2/11/14	ISSUED FOR REVIEW
0	3/21/14	ISSUED FOR CONSTRUCTION
1	4/11/14	CONSTRUCTION REVISED
2	7/20/16	CONSTRUCTION REVISED

SITE NAME: WOODSTOCK RT 198
SITE NUMBER: CT2067
ADDRESS: ROUTE 198
WOODSTOCK, CT 06282

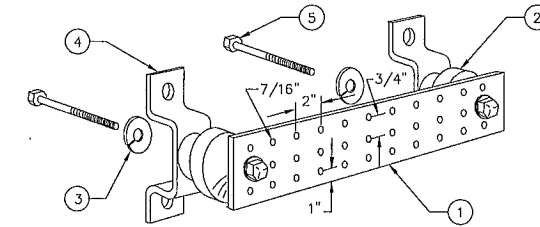
NEW CIRCULAR
WIRELESS PCS, LLC
"AT&T"
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067



DATE: 2/11/14
DRAWN: TBD
CHECK: JMM/TEJ
SCALE: SEE PLAN
JOB NO.: 13-063

SHEET TITLE:
**GROUNDING
DETAILS & NOTES**

E-2



1. COPPER GROUND BAR, 1/4"x4"x24", BY NEWTON INSTRUMENT CO. OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
3. 5/8" LOCKWASHERS OR EQUAL
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUAL
5. 5/8-11x1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUAL
6. INSULATORS SHALL BE ELIMINATED WHEN BONDING DIRECTLY TO TOWER/MONOPINE STRUCTURE. CONNECTION TO TOWER/MONOPINE STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

GROUND BAR DETAIL

SCALE: NONE

GROUNDING NOTES

GENERAL

1. GROUNDING SHALL COMPLY WITH ARTICLE (250) OF THE NATIONAL ELECTRIC CODE, 2008 MASSACHUSETTS ELECTRIC CODE WITH AMMENDMENTS (527 CMR 12.00), EIA/TIA & MOTOROLA R-56 AS REQUIRED.
2. ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
3. THE CONTRACTOR SHALL SECURE A COPY OF ANY SOIL RESISTIVITY AND/OR SITE RESISTANCE TO EARTH TESTING PREVIOUSLY PERFORMED. IF NO RECORDS EXIST THAN A FOUR-POINT SOIL RESISTIVITY TEST SHALL BE PERFORMED TO ASSURE 10 OHMS OR LESS WITH SOIL RESISTIVITY UP TO 50,000 OHMS-CM. MORE STRINGENT VERIZON SPECIFICATIONS MAY CONTROL.

GROUND RODS

1. RODS SHALL BE 5/8" DIAMETER, 10' LONG COPPER CLAD STEEL OR SOLID COPPER
2. SHALL BE BURIED 30" (MIN.) OR BELOW PERMANENT MOISTURE LEVEL PENETRATING BELOW FROST LINE
3. RODS SEPARATED 20' (MIN.) TO OTHER GROUND RODS OR ELECTRODES
4. SEPARATION BETWEEN GROUND RODS IN SAME GROUNDING SYSTEM SHALL BE GREATER THAN SUM OF RESPECTIVE LENGTHS
5. GROUND RODS SHALL NOT BE SHORTENED BY CUTTING OR DEFORMED BY DRIVING MACHINERY
6. WHERE CONDITIONS REQUIRE, RODS MAY BE DRIVEN AT ANGLES UP TO 45 DEGREES OR HORIZONTAL ORIENTED PERPENDICULAR TO GROUND RING

ELECTROLYTIC GROUND RODS

1. WHERE CONDITIONS REQUIRE, ELECTROLYTIC GROUND RODS MAY BE USED. INSTALL PER MANUFACTURER'S SPECIFICATIONS
2. L-SHAPED ELECTROLYTIC RODS SHALL BE INSTALLED PERPENDICULAR TO GROUND RING
3. BACKFILL WITH GROUNDING ENCASEMENT MATERIALS

GROUND PLATES

1. ONLY TO BE USED WHERE CONDITIONS PROHIBIT USE OF GROUND RODS
2. 1/16" (MIN.) THICKNESS WITH 2 SQUARE FEET (MIN.) AREA UNPAINTED COPPER CLAD STEEL OR SOLID COPPER
3. TOP EDGE BURIED 30" (MIN.) OR BELOW PERMANENT MOISTURE LEVEL
4. PLATES SHALL BE INSTALLED VERTICALLY
5. BACKFILL WITH GROUNDING ENCASEMENT MATERIALS 6" MINIMUM ON ALL SIDES

RADIAL GROUNDING CONDUCTORS

1. #2/0 AWG TINNED STRANDED COPPER OR (2) #2 BCW IN GROUND ENHANCEMENT MATERIAL
2. CONDUCTORS SHALL RADIATE FROM TOWER CENTER
3. SHALL BE BONDED TO GROUND RING AND DIRECTLY TO TOWER
4. WHERE NOT POSSIBLE TO BOND DIRECTLY TO TOWER, ADDITIONAL #2/0 CONDUCTORS SHALL BE BONDED TO RING
5. BURIED 30" WHERE POSSIBLE, 18" (MIN.)
6. EACH RADIAL CONDUCTOR SHALL BE 25' (MIN.), 80' (MAX.) IN LENGTH
7. WHERE MULTIPLE RADIALS ARE USED, VARY CONDUCTOR LENGTHS

GROUNDING ENCASEMENT MATERIALS

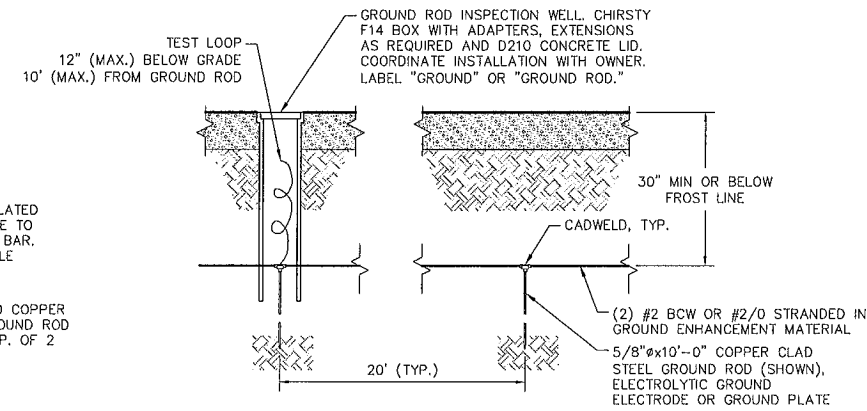
1. PRE-PACKAGED MATERIALS SHALL BE USED
2. ACCEPTABLE MATERIALS: BENTONITE, BENTONITE CONTAINING MATERIALS, CONCRETE, CONDUCTIVE CONCRETE, CEMENT WITH GRADED GRANULAR CARBONACEOUS AGGREGATE IN PLACE OF SAND OR GRAVEL

CONDUCTORS

1. (2) #2 SOLID TINNED (BCW) OR #2/0 STRANDED TINNED WHERE BELOW GROUND OR PARTIALLY BELOW GROUND
2. #2 OR #6 AWG TINNED SOLID OR STRANDED COPPER WHERE ABOVE GROUND AS NOTED
3. SPLICES SHALL BE EXOTHERMICALLY WELDED
4. 8" (MIN.) BENDING RADIUS FOR #2 OR SMALLER. 90 DEGREES (MIN.) BEND. ALL BENDS TOWARDS GROUND LOCATION.
5. #2/0 AWG MIN. STRANDED FOR USE ON BUILDING

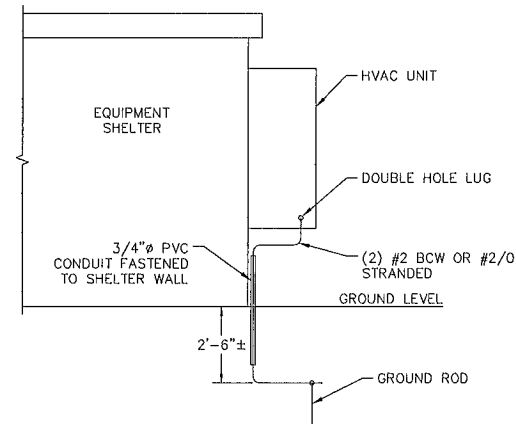
CONNECTORS

1. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC UNLESS OTHERWISE NOTED.
2. EXOTHERMIC WELDS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
3. PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD OR EQUAL
4. PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL
5. FOLLOWING CONNECTION, APPLY APPROPRIATE CONDUCTIVE ANTI-OXIDIZING PAINT.
6. MECHANICAL CONNECTIONS SHALL BE 3 GRIMP STYLE COMPRESSION FIT CRIMPED WITH HYDRAULIC CRIMPING TOOLS OR EQUAL. NO SLIP BOLTS ARE ACCEPTABLE.



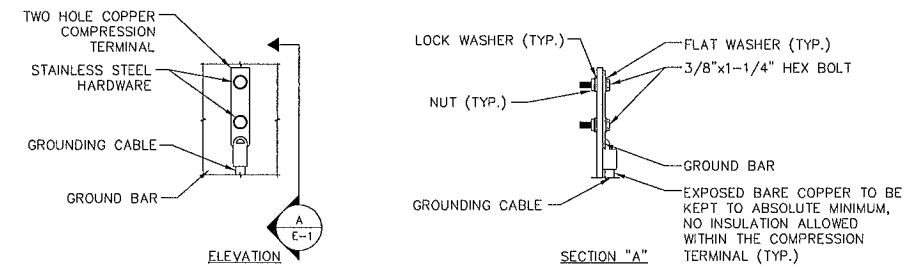
GROUND ROD

SCALE: NONE



HVAC UNIT GROUNDING

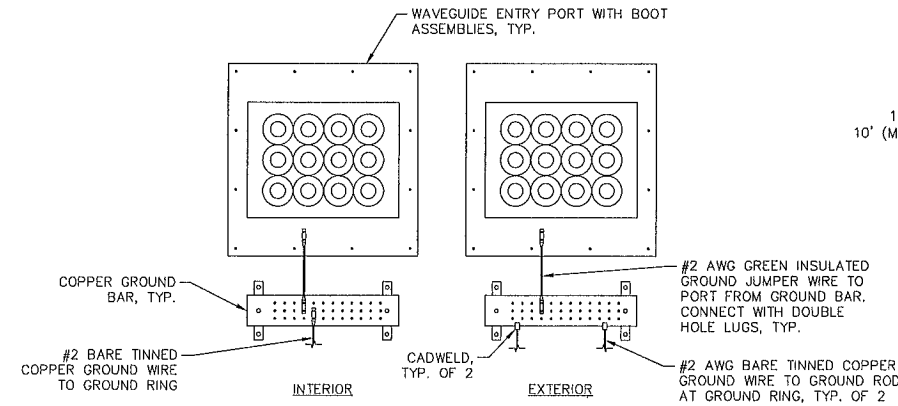
SCALE: NONE



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

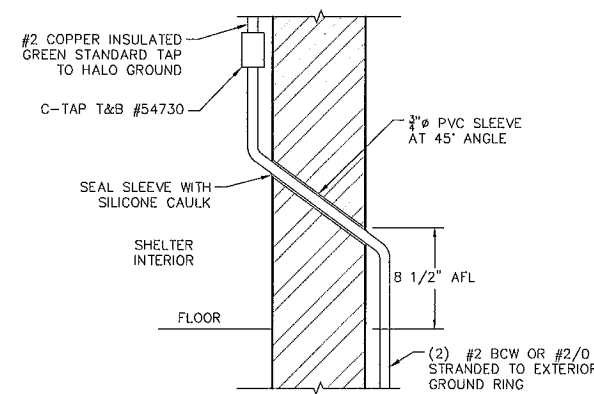
GROUND BAR CONNECTION

SCALE: NONE



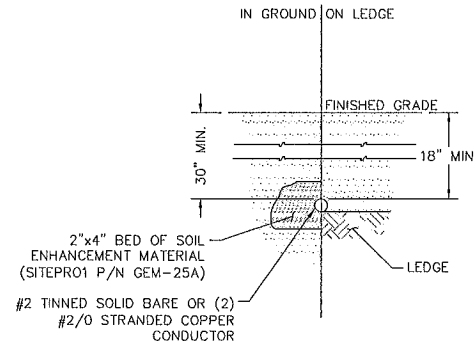
CABLE PORT GROUNDING

SCALE: NONE



WALL GROUND PENETRATION

SCALE: NONE



SOIL ENHANCEMENT

SCALE: NONE

6

SCALE: NONE

A

D

C

B

D

C

B

A