CUDDY& FEDER LLP

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White Plains, New York 10601
Tel 914.761.1300 Fax 914.761.5372
www.cuddyfeder.com

December 18, 2015

BY EMAIL & FEDEX
Hon. Robert Stein, Chairman
and Members of the Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Development and Management Plan ("D&M Plan") Amendment
Connecticut Siting Council Docket No. 449
Telecommunications Facility at Redding Ridge Fire Department
186 Black Rock Turnpike, Redding, Connecticut

Dear Chairman Stein and Members of the Council:

On behalf of Message Center Management, Inc. ("MCM"), and in furtherance of the captioned Certificate, please accept for review and Siting Council ("Council") approval this amendment ("D&M Plan Amendment") to the Development Management Plan ("D&M Plan") approved by the Council on September 17, 2015 for the captioned Facility as approved in Docket No. 449.

Subsequent to the September 17, 2015 D&M Plan approval MCM consulted with a number of different construction firms as part of a bidding process. These consultations revealed a unanimous concern with the size of the equipment required for installation of the foundation and the nature of the confined space at the site. While construction is feasible, contractors felt this was not a prudent option and expressed concerns about completing the construction process.

Further consultation with contractors revealed however that a "pad and pier" foundation design would not require the same size equipment for foundation construction and would reduce greatly the potential for damage to existing structures or equipment on site. The difficult logistics of constructing the foundation proposed in the original D&M Plan demands a construction solution of less potential impact and that in turn requires removal of the existing tower prior to construction.

The final foundation will be 25' x 25' and is in keeping with the recommendations of the geotechnical engineering report included in the original August 19, 2015 D&M Plan filing. The tower location, compound size, equipment, and other features of the facility remain as approved in the original D&M Plan with the need for a larger foundation, construction sequencing and a temporary tower and being the only changes in this D&M Plan Amendment.

Accordingly, enclosed please find a D&M Plan Amendment for Council review and approval which includes a pad and pier design along and revised construction sequencing including removal of the of the existing tower installation of a temporary freestanding tower. The temporary tower will be approximately 60' AGL in height with antennas extending to 80' AGL and will be the same height as the existing tower. MCM estimates that the temporary tower will

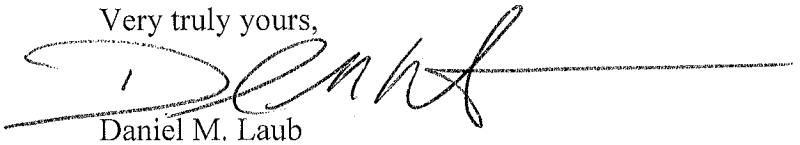
be in place approximately 6-8 weeks and removed once construction of the new approved tower is complete.

The tower still incorporates a yield point to ensure the setback radius remains within the boundaries of the subject property and a revised structural analysis incorporating the new foundation design is included and is described in the November 13, 2015 letter from Valmont Structures included in this submission (four copies of the calculations are being bulk filed to minimize the size of this filing). The final site plans including specifications for the antennas, equipment compound, radio equipment, access utilities and emergency backup details of the associated compound and access drive remain unchanged. Of note, the D&M Plan also includes construction sequencing and site preparations, drainage, and erosion and sedimentation control measures consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control as amended.

In furtherance of this request, enclosed please find an original and fifteen (15) sets of 11" x 17" D&M Plan Amendment drawings prepared by All Points Technology Corporation ("APT") last revised December 10, 2015 being filed in accordance with the Council's Decision and Order dated November 3, 2014. Two full sized sets of the D&M Plan drawings are also enclosed.

Should you have any questions or require further information please do not hesitate to contact me. We thank you for your consideration of the enclosed.

Very truly yours,



Daniel M. Laub

Attachments & Enclosures

cc: Redding Fire District No. 1
Hon. Julia Pemberton, First Selectman, Town of Redding
Aimee Pardee, M.A., ZEO, Town of Redding
Maria Scotti, MCM
Virginia King, MCM
Christopher Gelinas, MCM
Scott Chasse, P.E., APT
Michael Libertine, APT
Dean Gustafson, APT
Michele Briggs, AT&T
Christopher B. Fisher, Esq.

CERTIFICATE OF SERVICE

I hereby certify that on this day, an original and 15 copies of the foregoing was sent electronically and by overnight delivery to the Connecticut Siting Council with copy to:

Intervenor:
Cellco Partnership d/b/a/ Verizon Wireless
Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597
kbaldwin@rd.com

Facility Site Owner:
Redding Ridge Fire District No. 1
Bennet Pardee, Fire Commissioner
186 Black Rock Turnpike, Redding, CT 06896

Dated: December 18, 2015

Daniel M. Laub, Esq.

valmont
STRUCTURES

November 13, 2015

Ref: **Design and Failure Modes for a 150-ft AGL Tapered Monopole**
Quality of Steel and Fabrication of a Monopole Structure
Valmont Project No. 239975
Site: Redding-Blackrock Tower, CT
Pole Designed with a maximum Theoretical Fall Radius of 21'.

In order to assure you of the high quality of all Valmont products, we would like to offer the following comments:

- Communications monopole structures designed by Valmont are sized in accordance with the latest governing revision of the ANSI/TIA 222 standard unless otherwise requested by our customer. This standard has been approved by ANSI/ASCE-7, which has dealt with the design of antenna support structures for over 40 years. The TIA standard, based on provisions of this nationally known specification, has a long history of reliability. At its core philosophy is its first and foremost priority to safeguard and maintain the health and welfare of the public.
- The TIA standard designates a minimum wind loading for each county in the United States. Valmont uses the wind loading listed in the TIA standard unless a greater value is specified by our customer. Structures are also designed for radial ice at a code specified reduced design wind loading. Code designated coefficients are used to ensure that the structure will survive the designed wind speed. The structure can usually survive even a greater wind load than the basic design wind speed because of these conservative coefficients.
- Design and loading assumptions that are used for the analyses of these structures are very conservative in nature when compared to other codes, which makes structural failure highly improbable.
- Failure of a steel monopole occurs when a point is reached where the induced stresses exceed the yield strength of the material. At this point, the deflections induced in the material are no longer temporary. Hence, a permanent deflection in the monopole would exist.
- The term failure above refers to local buckling at a designated point on the pole. Local buckling does not cause a free falling pole; rather it relieves the stresses from the pole at this location. Monopoles are flexible, forgiving structures, which are not generally susceptible to damage by impact loads such as wind gust or earthquake shocks.
- When local buckling occurs, a relatively small portion of the shaft distorts and "kinks" the steel. When the pole begins to bend the exposure area is reduced and therefore, the force due to wind is decreased as well. Even though buckling exists, the cross section of the pole is capable of carrying the entire vertical load. Therefore, wind induced loads could not conceivably bring this type of structure to the ground due to the excellent ductile properties, design criteria, and failure mode.
- Valmont's communication poles have proven to be very reliable products. Valmont has provided structures that have performed well during earthquakes in California, hurricanes in the South (including Hugo, Andrew, Opal and Katrina), and a number of tornadoes. In over 25 years of engineering and fabricating thousands of monopoles, to our knowledge Valmont has never experienced an in service failure of a communication pole due to weather induced overloading, even though, as in the cases of Hurricanes Hugo, Andrew and Katrina, the wind speeds exceeded the design wind speed. We use the latest standards, wind speed information, and sophisticated analytical tools to ensure that we maintain our unblemished record for quality.

Valmont Microflect, LTCS, Valmont Industries, Inc.
3575 25th Street Salem, OR 97302-1123 USA
Toll Free: 800-547-2151 Fax: 503-316-2040 www.valmont.com

valmont
STRUCTURES

Valmont Quality of Steel and Manufacturing:

- Monopoles are fabricated from ASTM A572 Grade 65 material with a controlled silicon content of 0.06% maximum to ensure a uniform galvanized coating. The base material is fabricated from Grade 50 material. All plate material meets a V-Notch toughness requirement of 15 ft-lbs. @ -20 degrees Fahrenheit. By meeting the strict toughness requirement, monopoles are best suited to resist the cyclic/fatigue type loading (i.e. wind induced loading) these structures exhibit.
- Valmont's anchor bolts are fabricated from A615 Grade 75 material. The bolts are 2 ¼ in diameter, made from #18J bar stock. Anchor bolts come complete with five (5) A194 Grade 2H hex nuts.
- For the past 40 years, our company has always guaranteed the quality of the steel used in building our structures. Material Certifications are available on all material at the time of fabrication. Fabrication of the monopole is performed in accordance with the provisions of the AISC Manual of Steel Construction and ASCE Design of steel Transmission Pole Structures. All welding and inspection is in accordance with the American Welding Society's Specification D1.1-latest revision. Testing and inspection reports are available upon request at the time of fabrication.

In addition, we have designed this monopole with a theoretical break point at approximately 131.5-ft elevation, by purposely over designing the pole sections below this point. In the unlikely event the pole were to fail at this point, the significant loading reduction caused by the removal of the tower wind area and weight above would greatly reduce any chance that the remaining tower would have any structural damage, thereby providing a theoretical failure zone of approximately 18.5-ft for the 150-ft AGL monopole.

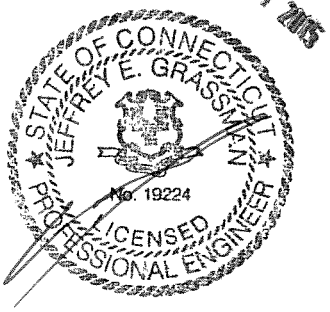
I hope these comments address any issues that you might encounter relative to the anticipated performance of monopole structures and quality of steel fabrication. If you have additional questions or comments, I may be reached at 503-589-6626.

Sincerely,

Jonathon Neumann
Associate Engineer, EIT
Valmont Microflect

RECEIVED DEC 11 2015

EXPIRES ON
JAN 31 2016



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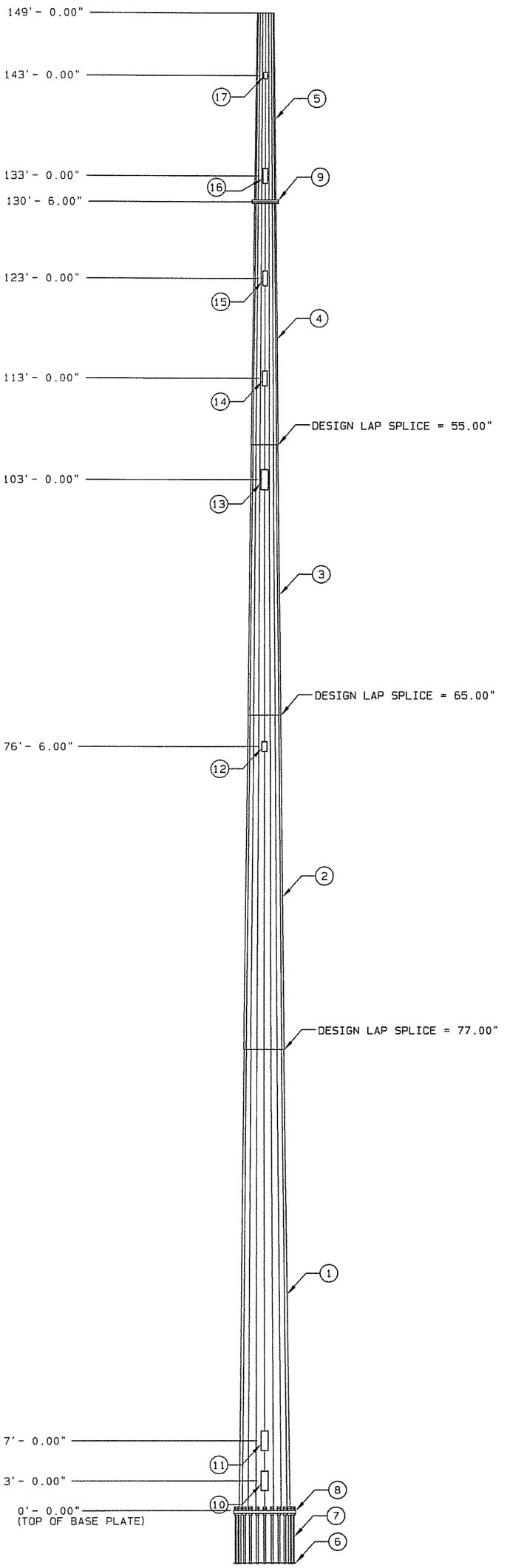
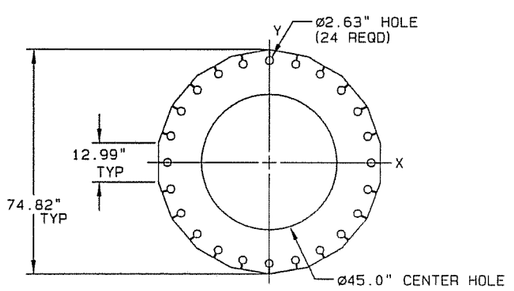


ITEM ID	NO. REQD	FEATURES	UNIT WEIGHT (LBS)	WEIGHT (LBS)
1	1	SECTION A VALMONT S-22 0.500" THK (A572 GR65)	14,810	14,810
2	1	SECTION B VALMONT S-22 0.438" THK (A572 GR65)	7,712	7,712
3	1	SECTION C VALMONT S-22 0.375" THK (A572 GR65)	4,357	4,357
4	1	SECTION D VALMONT S-22 0.250" THK (A572 GR65)	1,836	1,836
5	1	SECTION E VALMONT S-22 0.188" THK (A572 GR65)	832	832
6	1	BOTTOM CAGE PLATE	131	131
7	24	2.25" ANCHOR BOLT, LENGTH=5.50' A615 GR75	96	2,295
8	1	BASE PLATE VALMONT S-56 3.500" THK (A572 GR50)	3,308	3,308
9	2	FLANGE PLATE	274	548
	1	TOP CAGE PLATE (REMOVE BEFORE SETTING POLE)	174	174
	8	BOLT 1.00" DIA		
	1	SAFETY CLIMBING CABLE (LENGTH = 139.00')	108	108
	3	GROUNDING LUG	2	6
		GALVANIZING	505	505
	126	STEP AND CLIP (VALMONT STANDARD)	1	63
	7	BRACKET	10	70
10	3	HAND HOLE HVY (9" x 24")	66	198
11	3	HAND HOLE HVY (9" x 24")	66	198
12	2	HAND HOLE HVY (6" x 12")	26	52
13	3	HAND HOLE STD (9" x 24")	48	144
14	3	HAND HOLE STD (6" x 18")	18	54
15	3	HAND HOLE STD (6" x 18")	18	54
16	3	HAND HOLE STD (6" x 18")	18	54
17	3	HAND HOLE UR (6" x 18")		
	1	POLE CAP	21	21

HOLE COORDS (INCHES)	
X-COORD	Y-COORD
33.84	0.00
32.69	8.76
29.31	16.92
23.93	23.93
16.92	29.31
8.76	32.69
0.00	33.84



NOTES:
1. BASE PLATE THICKNESS = 3.500"
2. BASE PLATE ALLOWABLE STRESS (KSI) = 50
3. ANGLES ARE MEASURED CLOCKWISE FROM 0 DEGREES
4. MAXIMUM BOLT CIRCLE DIAMETER = 67.68"
5. MAXIMUM CAGE TEMPLATE DIAMETER = 73.68"

BASE PLATE / ANCHORAGE CHARACTERISTICS

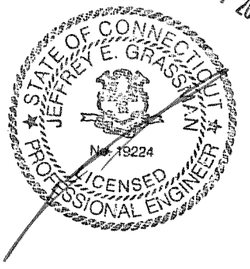
NOTES:

1. REACTIONS FOR FOUNDATION DESIGN.
   MOMENT = 58,792 IN-KIPS
   SHEAR = 42,078 #
   VERTICAL = 61,815 #
2. GALVANIZED PER ASTM A-123.
3. DESIGN CRITERIA: EIA/TIA 222-F
4. THIS STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LOADING:
   A. CASE 1: WIND = 85 MPH
   B. CASE 2: WIND = 74 MPH, ICE = 0.50 INCH
   C. CASE 3: WIND = 50 MPH
   D. EQUIPMENT

DESCRIPTION	MTG HT. (FT)	CENTROID HT. (FT)	WITHOUT ICE EPA (FT**2)	WITHOUT ICE WT (LBS)	WITH ICE EPA (FT**2)	WITH ICE WT (LBS)
1-4FT LIGHTNING ROD	149.00	151.00	0.25	10	2.00	22
1-2' HIGH PERFORMANCE	149.00	151.00	5.29	83	7.80	124
12-HPA-65R-BUU-H8	145.00	145.00	107.64	1188	138.72	2808
9-ERICSSON RRUS-11 (19.7"X17"	145.00	145.00	14.31	459	19.80	747
6-ERICSSON RRUS-12 (20.4"X18.	145.00	145.00	10.62	348	14.46	558
6-ERICSSON RRUS A2 MODULE (15	145.00	145.00	4.92	126	7.68	222
3-RRUS-E2 (20" X 20.4" X 9.5"	145.00	145.00	5.97	216	7.98	339
3-ERICSSON RRUS-32 (29.9"X13.	145.00	145.00	6.80	231	9.15	360
4-RAYCAP DC6-48-60-18-F (24"X	145.00	145.00	3.84	100	5.36	192
1-12' SPI LP PLATFORM	145.00	145.00	31.42	1143	55.71	1491
6-H8XX-65160S-VTM	135.00	135.00	23.10	276	31.32	672
6-X7C-FRO-660	135.00	135.00	40.44	408	51.96	1056
3-ALU 2X60 PCS RRU	135.00	135.00	4.65	120	6.51	204
3-ALU 2X60 700 RRU	135.00	135.00	4.83	138	6.69	237
3-ALU 4X30 AWS RRU	135.00	135.00	7.20	105	9.39	252
2-DB-T1-6Z-8AB-0Z FIBER DIST.	135.00	135.00	7.68	10	9.48	198
1-12' SPI LP PLATFORM	135.00	135.00	15.71	1143	27.77	1491
1-CARRIER #3	125.00	125.00	112.35	2388	155.73	4134
1-CARRIER #4	115.00	115.00	112.35	2388	155.73	4134
1-CARRIER #5	105.00	105.00	112.35	2388	155.73	4134
3-WHIP (2.5" X 20')	79.00	79.00	20.70	213	52.56	468
1-LARGE YAGI	79.00	79.00	9.06	81	13.38	112
3-6' PIVOT SIDE ARM (50" PIPE	79.00	79.00	8.76	387	17.76	576

5 FEEDLINES ARE PLACED INTERIOR TO POLE SHAFT (UNLESS NOTED OTHERWISE).
6. TOTAL POLE HEIGHT IS 150 FT AGL.
7. ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE (APPROX. 1 FT AGL).
8. POLE DESIGN MEETS TIA-222-G ADDENDUM 2.

DEC 11 2015



EXPIRES ON

JAN 31 2016

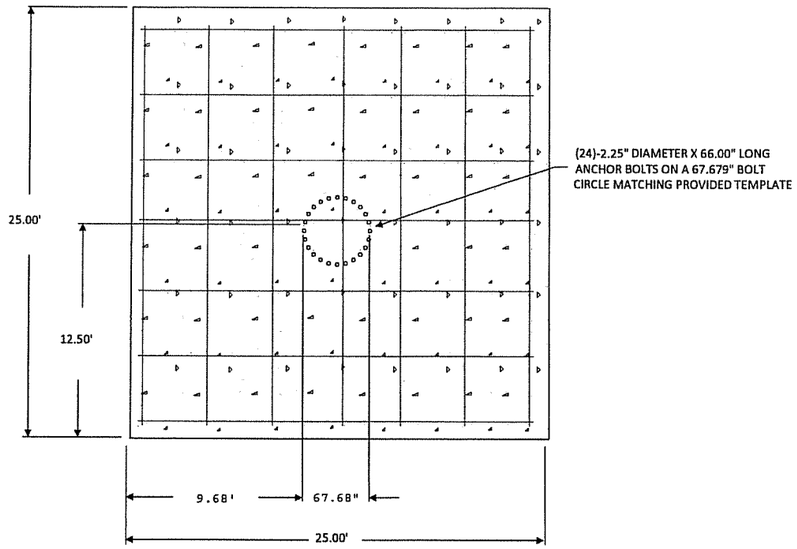
SECTION INFORMATION					
ITEM ID	LENGTH	BASE OD	TOP OD	THK	MATL
1	52'- 6.00"	60.25"	45.23"	0.500"	A572 65 KSI
2	38'-11.00"	47.94"	36.81"	0.438"	A572 65 KSI
3	31'- 5.00"	39.11"	30.12"	0.375"	A572 65 KSI
4	24'- 1.00"	31.93"	25.04"	0.250"	A572 65 KSI
5	18'- 6.00"	25.04"	19.75"	0.188"	A572 65 KSI

REV	DATE	BY	DESCRIPTION
B	11/13/15	JDN	REVISED THE CARRIER LOADING
A	07/10/15	JDN	ADDED FALL ZONE

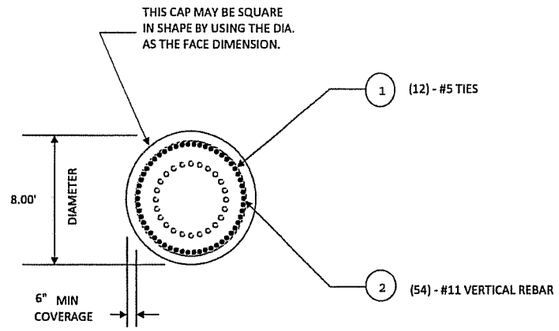
ORDER	PROJECT	FILE ID	SCALE	DATE	ENGR
239975		239975RB	NONE	06/24/15	JDN4

DESCRIPTION
MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT

valmont



SECTION A-A
No Scale



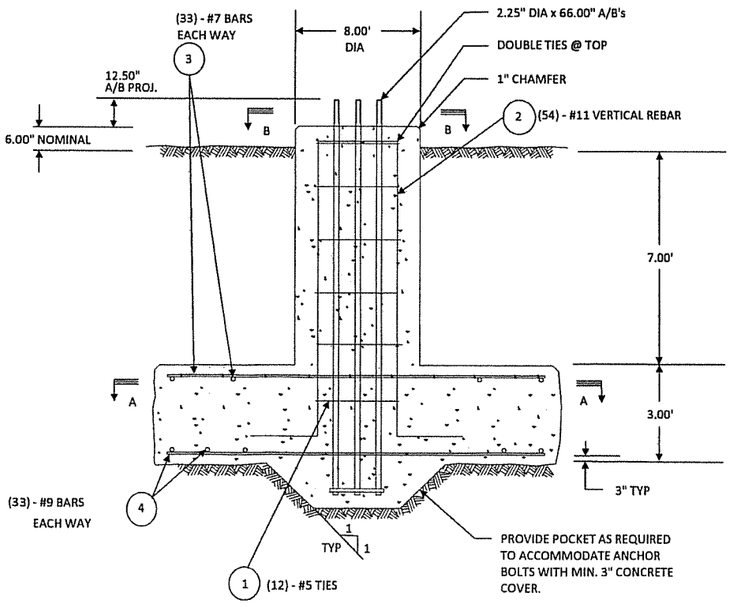
SECTION B-B
No Scale

GENERAL NOTES: SLAB FOUNDATION

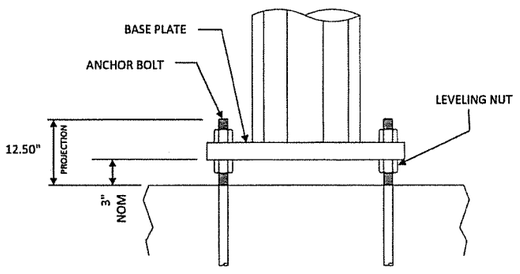
1. Prior to excavation, check the area for underground facilities.
2. All reinforcing shall be deformed bars conforming to ASTM A615 Grade 60 (60,000 psi min. yield) and shall be provided by the foundation contractor.
3. All concrete shall have a minimum compressive strength of 4000psi @ 28 days. The requirement for the concrete shall be as given in the ACI "Building Code Requirements for Reinforced Concrete", ACI 318, the latest edition.
4. Trowel top of foundation smooth.
5. Concrete shall be placed against undisturbed soil to the depth indicated on the foundation drawing. The portion above grade shall be formed. If an area is excavated beyond the limits shown, this volume shall be filled with concrete or formed. After the forms are removed, the excess excavation shall be replaced and compacted.
6. The ground water was encountered at 30.8' below grade during boring.
7. Foundation design based on allowable vert. bearing pressure of 5000 psf.
8. Concrete is assumed to weigh 150 pcf.
9. Estimated concrete volume = **87.22 cubic yards total.**
10. Design Based on the following loads from installation drawing for order No: 239975.

Moment = 4899 FT-KIPS **Overturning Safety Factor = 1.69**
Download = 61.8 KIPS **Max. Toe Bearing Pressure = 2.66 ksf**
Shear = 42.1 KIPS

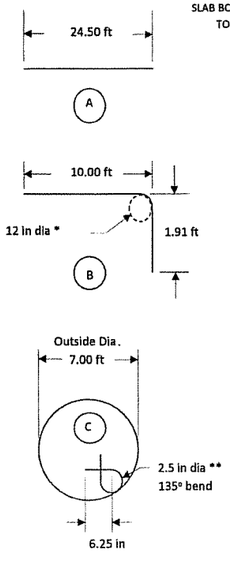
11. Backfill should be compacted to a density of 100 pcf.
12. Anchor bolts to be ASTM A615, Gr. 75 ksi.
13. Reference: Terracon Project No. J2135211, Dated: Novermber 15th, 2013
14. Ref Soils Report for installation recommendations.



ELEVATION
No Scale



ANCHOR BOLT INSTALLATION
N.T.S.
EXTREME CARE SHOULD BE TAKEN TO ASSURE THAT ALL LEVELING NUTS ARE LEVEL WITH RESPECT TO EACH OTHER PRIOR TO ERECTION OF THE STRUCTURE



REINFORCEMENT STEEL SCHEDULE						
	Sym	Type	Rebar Size	Rebar Spacing	Weight (lbs)	Qty
CAP TIES	1	C	#5	EQUAL	275	12
CAP VERTICAL REBAR	2	B	#11	———	3417	54
SLAB TOP STEEL	3	A	#7	9.19 in	3305	66
SLAB BOTTOM STEEL	4	A	#9	9.19 in	5498	66
TOTAL STEEL WEIGHT FOR COMPLETE FOUNDATION INSTALLATION =					12495	

Grade 60 Rebar

Size	Ask #	Wt/ft	10db (in)	d* (in)	d** (in)
#3	11-97203	0.38	3.75	2.25	1.50
#4	11-97204	0.67	5.00	3.00	2.00
#5	11-97205	1.04	6.25	3.75	2.50
#6	11-97200	1.50	7.50	4.50	4.50
#7	11-97207	2.04	8.75	5.25	4.25
#8	11-97208	2.67	10.00	6.00	6.00
#9	11-97209	3.40	11.28	9.50	-
#10	11-97210	4.30	12.70	10.75	-
#11	11-97211	5.31	14.10	12.00	-

* Refers to ACI standard hook detail chart
** Refers to ACI stirrup hook detail chart

Rebar Lap Splice

Rebar Size	Rebar Grade	Specified Concrete Strength	Overlap (inches) Vert	Bottom Horiz	Top Horiz
#3	60	4000 psi	15	15	21
#4	60	4000 psi	20	20	29
#5	60	4000 psi	26	26	36
#6	60	4000 psi	33	33	46
#7	60	4000 psi	45	45	62
#8	60	4000 psi	59	59	82
#9	60	4000 psi	74	74	104
#10	60	4000 psi	95	95	132
#11	60	4000 psi	116	116	163

Splicing is an alternative to specified material listed in rebar schedule.

DEC 11 2015

STATE OF CONNECTICUT
JEFFREY E. GRASSMAN
No. 19224
LICENSED PROFESSIONAL ENGINEER

EXPIRES ON
JAN 31 2016

Rev	Description	Date	By/Ck

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
X" ± X.X/X" ± 1/8"
X.XX" ± 1/16"
X' ± 1/8"
X" ± 1/16"

valmont MICROFLECT
3575 25TH STREET SE SALEM, OR 97302
MAIN (503) 363-9267
FAX (503) 316-2040

By: JDN
Check: MF
Date: 11/13/15

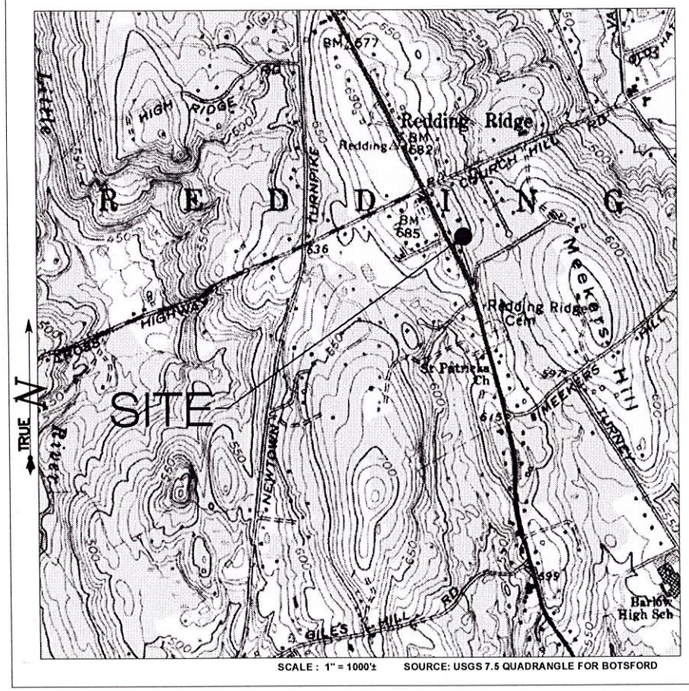
SLAB FOUNDATION LAYOUT
Customer Message Center Management
Site Redding-Blackrock Tower

S.O. 239975 | SIZE - B | Dwg No. B-142852 | Sheet 1 of 1

LOCATION MAP

SCALE : 1" = 800' SOURCE: GOOGLE MAPS

USGS TOPOGRAPHIC MAP



SCALE : 1" = 1000'± SOURCE: USGS 7.5 QUADRANGLE FOR BOTSFORD

SPRINGWICH CELLULAR LIMITED PARTNERSHIP

d/b/a at&t MOBILITY

500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

MCM

MESSAGE CENTER MANAGEMENT

40 WOODLAND STREET
HARTFORD, CT 06105
OFFICE: (888) 973-7483

DEVELOPMENT & MANAGEMENT PLAN DRAWING INDEX

*SITE INFORMATION:

-SITE NAME:..... REDDING RIDGE
-SITE ID NUMBER:..... CT-505

-SITE ADDRESS:..... 186 BLACK ROCK TURNPIKE
REDDING, CT 06896

-MAP:..... 23
-LOT:..... 72

-ZONE:..... R-2
-LATITUDE - ..... 41° 18' 35.77" N
-LONGITUDE - ..... 73° 20' 51.35" W
-ELEVATION - ..... 636'± AMSL

-FEMA/FIRM
DESIGNATION:..... PANEL #09001C0265F - ZONE 'X'
-ACREAGE:..... 0.624 Ac

ALL-POINTS TECHNOLOGY CORPORATION

3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
WWW.ALLPOINTSTECH.COM

PHONE: (860)-663-1697
FAX: (860)-663-0935

CONTACT PERSONNEL

APPLICANTS:
MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105

CO-APPLICANTS
AT&T MOBILITY
500 ENTERPRISE DRIVE
ROCKY HILL, CT 06067

LANDLORD
REDDING FIRE DISTRICT 1
PO BOX 45
REDDING, CT 06875

MCM PROJECT MANAGER:

VIRGINIA KING (860) 727-5790

MCM PROJECT ATTORNEY:

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EVERSOURCE (203) 845-3487
RICHARD MATHIES - CASE #2299239

TELCO PROVIDER:
FRONTIER: (800) 921-8102

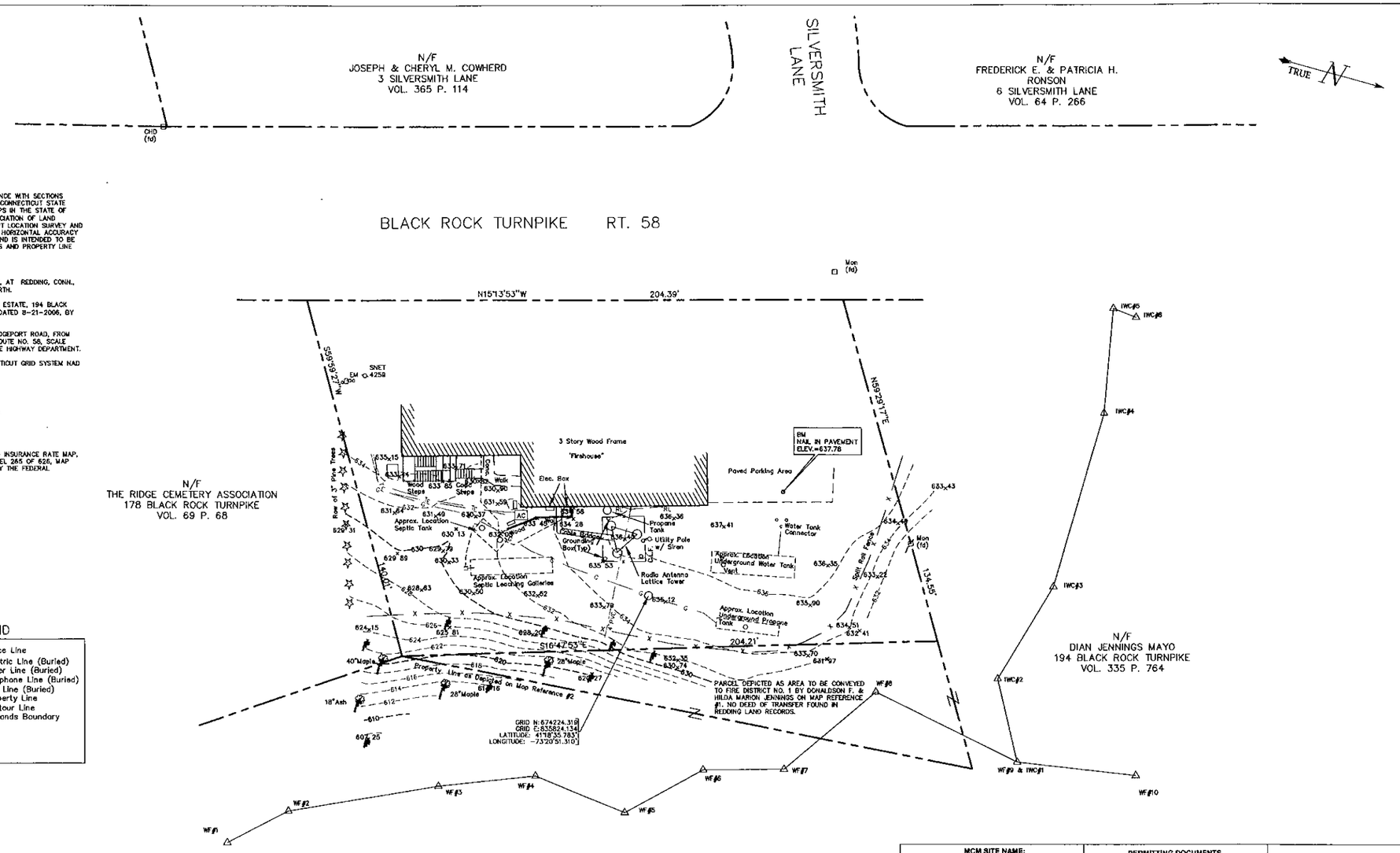
CALL BEFORE YOU DIG:
(800) 922-4455

GOVERNING CODES:
2009 CONNECTICUT BUILDING CODE (2003 IBC BASIS)
2011 NATIONAL ELECTRIC CODE
EIA/TIA 222F

SITE INFORMATION

REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DEVELOPMENT & MANAGEMENT DOCUMENTS REDDING RIDGE 186 BLACK ROCK TURNPIKE REDDING, CT 06896	TITLE SHEET & INDEX
DESIGN TYPE: RAW LAND	APT FILING NUMBER: CT-242-310 APT DRAWING NUMBER: CT-505_T-1 DRAWN BY: RCB / SCALE: AS NOTED CHECKED BY: SMC / DATE: 08/03/15
REVISIONS: REV.0: 08/11/15: FOR REVIEW: SMC REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC REV.2: 12/02/15: TOWER REVISIONS: SMC REV.3: 12/10/15: TEMP TOWER REVS: SMC REV.4: REV.5:	SHEET NUMBER: T-1



SURVEY NOTES

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300B-1 THRU 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPT. 26, 1996. IT IS A IMPROVEMENT LOCATION SURVEY AND IS BASED UPON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A-2 AND A VERTICAL ACCURACY OF CLASS T-2 AND IS INTENDED TO BE USED FOR THE PURPOSE OF SHOWING EXISTING CONDITIONS AND PROPERTY LINE INFORMATION.

MAP REFERENCES

1) MAP OF PROPERTY PREPARED FOR FIRE DISTRICT NO. 1, AT REDDING, CONN., SCALE 1"=30', DATED APRIL 29, 1965, JOHN M. FARNSWORTH.

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3) RIGHT OF WAY MAP, TOWN OF REDDING, BETHEL – BRIDGEPORT ROAD, FROM MEEKER HILL ROAD, NORTHERLY TO THE FIVE CORNERS, ROUTE NO. 58, SCALE 1"=40', DATED OCTOBER 29, 1937, BY CONNECTICUT STATE HIGHWAY DEPARTMENT.

NORTH ORIENTATION AND COORDINATES REFER TO CONNECTICUT GRID SYSTEM NAD 83.

ELEVATIONS BASED ON NAVD 1988 DATUM.

PARCEL ADDRESS: 186 BLACK ROCK TURNPIKE

PARCEL OWNER OF RECORD: REDDING FIRE DISTRICT NO. 1

MAP 23 LOT 72 REDDING ASSESSORS MAP.

PARCEL AREA = 0.624± ACRES.

PARCEL IS NOT IN A FLOOD HAZARD ZONE ON THE FLOOD INSURANCE RATE MAP, FAIRFIELD COUNTY, CONNECTICUT, ALL JURISDICTIONS, PANEL 285 OF 626, MAP NUMBER 09001C0285F, EFFECTIVE DATE JUNE 18, 2010, BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

SYMBOLS LEGEND

Monument	Fence Line
Hydrant	Electric Line (Buried)
Post	Water Line (Buried)
Utility Post	Telephone Line (Buried)
Elec. Box	Gas Line (Buried)
EM Elec. Meter	Property Line
Evergreen Tree	Contour Line
Deciduous Tree	Wetlands Boundary
AC Air Conditioner	
T Transformer	
646.41 Spot Grade	

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND SEAL

4/11/2014

A. RAFAEL MARTINEZ LLS #18833 — DATE

STATE OF CONNECTICUT — JOSE R. MARTINEZ — No. 18833 — LICENSED LAND SURVEYOR

MCM SITE NAME: REDDING RIDGE CT505 APT FILING NUMBER: CT-242-310	PERMITTING DOCUMENTS REDDING RIDGE 186 BLACK ROCK TURNPIKE REDDING, CT 06896	EXISTING CONDITIONS SURVEY
	DESIGN TYPE: RAW LAND	APT FILING NUMBER: CT-242-310 APT DRAWING NUMBER: CT-505 DRAWN BY: JBR — SCALE: 1"=20' CHECKED BY: ARM — DATE: 03/27/14
	REVISIONS: REV.0: REV.1: REV.2: REV.3: REV.4: REV.5:	SHEET NUMBER:

ALL-POINTS TECHNOLOGY CORPORATION
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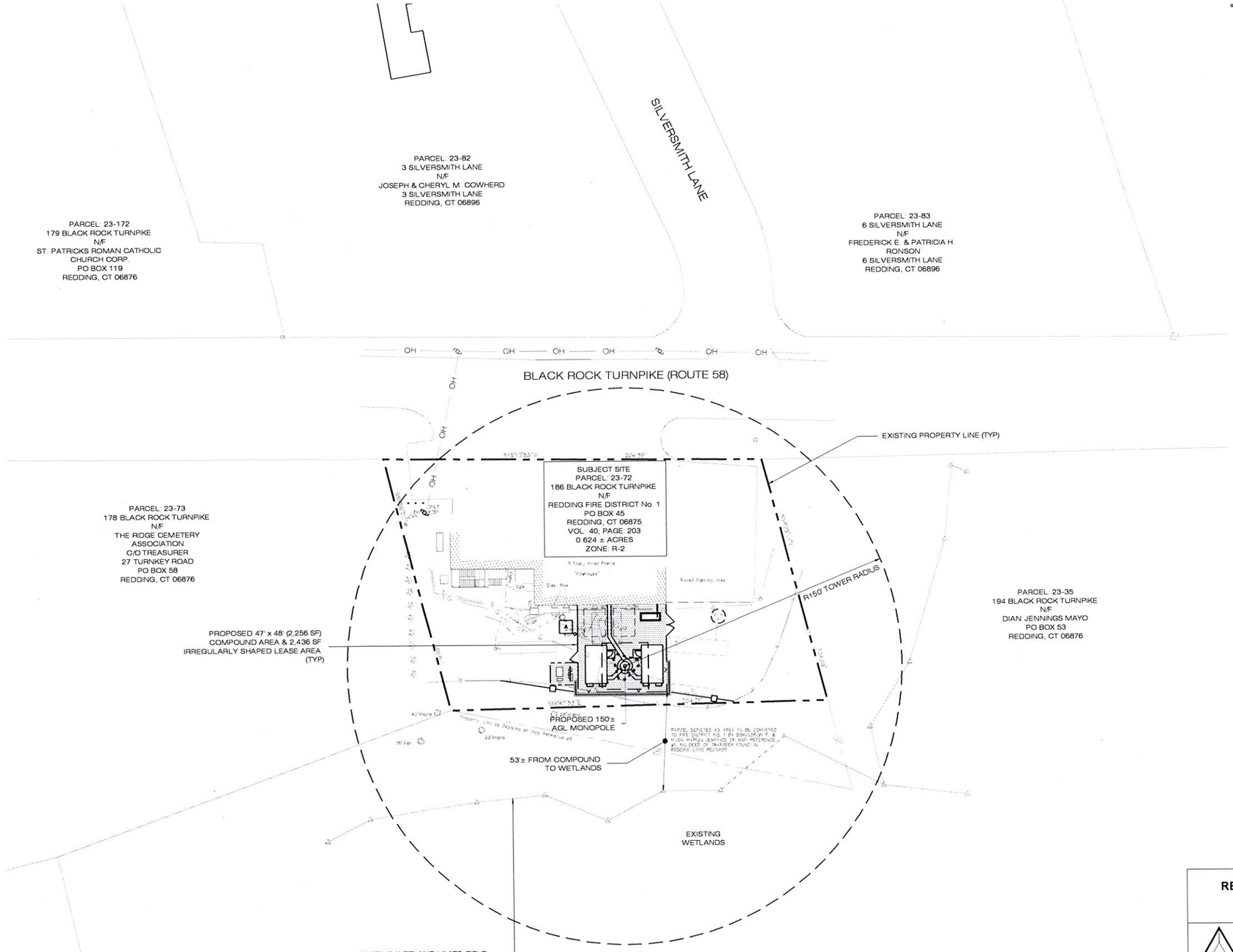
KILLINGWORTH, CT 06419
WWW.ALLPOINTSTECH.COM
PHONE: (860)-663-1697
FAX: (860)-663-0935



TRUE N

ABUTTERS MAP

SCALE : 1" = 30'-0"

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)

1 inch = 30 ft.

CONSTRUCTION SEQUENCING

CONTRACTOR TO FOLLOW THE FOLLOWING CONSTRUCTION PHASING AS CLOSELY AS POSSIBLE.

1. CONTRACTOR TO HAVE A GPR SURVEY PERFORMED AND HAVE ALL UNDERGROUND UTILITIES & STRUCTURES MARKED OUT PRIOR TO CONSTRUCTION.

2. INSTALL TEMPORARY "NO PARKING, EMERGENCY VEHICLES ONLY" SIGNS ON OR NEAR FIRE DEPT. GARAGE BAY DOORS.

3. MOBILIZATION: BRING MATERIAL AND EQUIPMENT TO SITE. ALL CONSTRUCTION TRAFFIC AND ACTIVITIES MUST RESIDE INSIDE ACCESS PATH DELINEATED, WITHIN STAGING AND STOCKPILE AREA, OR WITHIN AREA WHERE PROPOSED WORK IS BEING COMPLETED. THE CONTRACTOR IS TO PROTECT WETLANDS FROM DISTURBANCE AT ALL TIMES AND NO CONSTRUCTION ACTIVITIES OR DUMPING SHALL OCCUR IN THE WETLANDS.

4. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROL BARRIERS.

5. INSTALL HIGH VIS. CONSTRUCTION FENCING ALONG EXISTING UNDERGROUND STRUCTURES. EXISTING WATER FILLING STATION MUST BE CLEARED AND ACCESSIBLE AT THE END OF EACH WORKING DAY.

6. INSTALL CONSTRUCTION ENTRANCE.

7. INSTALL NEW UNDERGROUND PROPANE GAS LINE FROM EXISTING UNDERGROUND PROPANE TANK TO EXISTING FIRE DEPARTMENT GENERATOR.

8. INSTALL NEW GAS SERVICE MANIFOLD AND CONNECT & ACTIVATE NEW UNDERGROUND PROPANE GAS LINE FROM EXISTING UNDERGROUND PROPANE TANK TO EXISTING FIRE DEPARTMENT GENERATOR.

9. DISCONNECT EXISTING UNDERGROUND PROPANE LINE AT BOTH ENDS THAT RUNS FROM EXISTING UNDERGROUND PROPANE TANK TO THE EXISTING FIRE DEPARTMENT GENERATOR AND REMOVE EXISTING PIPING WITHIN THE PROPOSED LIMITS OF CONSTRUCTION. EXISTING FIRE DEPT. GENERATOR SHALL NOT BE LEFT OUT OF SERVICE FOR MORE THAN 4 HOURS.

10. INSTALL TEMPORARY TELECOMMUNICATION TOWER ON SITE AND RELOCATE FIRE DEPARTMENT ANTENNAS FROM EXISTING LATTICE TOWER TO TEMPORARY TOWER AND RUN CABLES FROM RELOCATED ANTENNAS TO FIRE DEPARTMENT.

11. REMOVE EXISTING CHAIN LINK FENCE, FENCE POSTS & POST FOUNDATIONS.

12. REMOVE EXISTING LATTICE TOWER, ANTENNAS, CABLING, TOWER FOUNDATION & GROUNDING BOXES.

12. REMOVE & RELOCATE EXISTING ABOVE GROUND PROPANE TANK & ASSOCIATED PIPING. INSTALL NEW ASSOCIATED PROPANE PIPING FROM NEW ABOVE GROUND TANK LOCATION TO EXISTING FIRE DEPARTMENT ENTRY PORT.

13. REMOVE & RELOCATE EXISTING UTILITY POLE, SIREN & ASSOCIATED ELECTRICAL SERVICE CONDUITS AND WIRING. INSTALL NEW ELECTRICAL SERVICE FROM NEW SIREN LOCATION TO NEW FIRE DEPARTMENT ENTRY PORT.

14. UTILITY COMPANY TO REMOVE EXISTING UTILITY POLE (SNET #4259) & INSTALL NEW REPLACEMENT UTILITY POLE, GUY WIRE & NEW OVERHEAD ELECTRIC AND TELCO SERVICE FROM EXISTING UTILITY POLE (SNET #1973) TO NEW REPLACEMENT POLE.

15. CONSTRUCT NEW ELECTRIC & TELCO UTILITY TRENCH & INSTALL CONDUITS TO NEW UTILITY AREA @ COMPOUND & BACKFILL.

16. ROUGH GRADE THE PORTION OF THE COMPOUND AREA IN THE AREA OF THE NEW TOWER AND SHELTERS (PROTECT, MAINTAIN & KEEP ACTIVE EXISTING LATTICE TOWER).

17. EXCAVATE FOR TOWER FOUNDATION AND EQUIPMENT SHELTER FOUNDATIONS.

18. CONSTRUCT NEW ROOF LEADER DRAINAGE PIPING & SPLASH PAD.

19. PREPARE SUBGRADE AND INSTALL FORMS, STEEL REINFORCING, AND CONCRETE FOR TOWER FOUNDATION & EQUIPMENT SHELTER FOUNDATIONS.

20. INSTALL BURIED GROUND RINGS, GROUND RODS, GROUND LEADS, UTILITY CONDUITS, AND UTILITY EQUIPMENT.

21. INSTALL NEW ELECTRICAL & TELCO CONDUITS FROM NEW UTILITY AREA TO NEW EQUIPMENT SHELTERS.

22. BACKFILL FOUNDATION & EQUIPMENT SHELTER FOUNDATION.

23. ERECT MONOPOLE.

24. INSTALL TELECOMMUNICATIONS EQUIPMENT ON TOWER AND IN COMPOUND.

25. REMOVE TEMPORARY TOWER ONCE FIRE DEPARTMENT ANTENNAS HAVE BEEN RELOCATED TO NEW TOWER AND ACTIVATED.

26. CONSTRUCT NEW RETAINING WALL.

27. CONSTRUCT NEW CONCRETE PAD FOR NEW SHARED GENERATOR.

28. INSTALL NEW UNDERGROUND PROPANE LINE FROM EXISTING UNDERGROUND PROPANE TANK TO NEW SHARED GENERATOR PAD.

29. INSTALL NEW GENERATOR & EXHAUST PIPING. CONNECT NEW PROPANE LINE.

30. INSTALL COMPOUND GRAVEL SURFACES.

31. INSTALL FENCING.

32. CONNECT GROUNDING LEADS AND LIGHTENING PROTECTION.

33. FINAL GRADE AROUND COMPOUND.

34. LOAM AND SEED DISTURBED AREAS OUTSIDE COMPOUND, AS REQUIRED.

35. REMOVE SILT FENCING AFTER SEEDED AREAS HAVE ESTABLISHED VEGETATION.

36. FINAL CLEANUP AND EQUIPMENT TESTING.

THE ESTIMATED TIME FOR COMPLETION OF THE WORK IS APPROXIMATELY EIGHT (8) WEEKS. THE EXACT PROCESS MAY VARY DEPENDING ON THE CONTRACTORS AND SUBCONTRACTORS AVAILABILITY TO COMPLETE WORK AND WEATHER DELAYS.

BASE MAPPING FOR SHEETS A-1, SP-1, SP-2 AND SP-3 FROM:

1. PLAN ENTITLED "TOPOGRAPHIC SURVEY - 186 BLACK ROCK TURNPIKE REDDING, CONNECTICUT "PREPARED BY MARTINEZ COUCH & ASSOCIATES, LLC 1084 CROMWELL AVENUE ROCKY HILL, CT DATED MARCH 27, 2014.

2. TOWN OF REDDING ASSESSOR MAP 23.

3. TOWN OF REDDING "ZONING MAP"

4. DIGITAL GLOBAL 2012 DIGITAL ORTHOPHOGRAPHS.

MCM SITE NAME:
REDDING RIDGE CT505

APT FILING NUMBER:
CT-242-310

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105
OFFICE: (888) 973-7483
MCM

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DEVELOPMENT & MANAGEMENT DOCUMENTS

REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:

RAW LAND

REVISIONS:

REV.0: 08/11/15: FOR REVIEW: SMC
REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
REV.2: 12/02/15: TOWER REVISIONS: SMC
REV.3: 12/10/15: TEMP TOWER REVS: SMC
REV.4:
REV.5:

ABUTTERS MAP

APT FILING NUMBER: CT-242-310
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DRAWN BY: RCB
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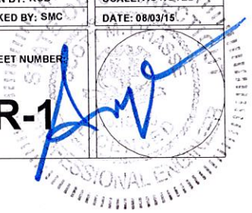
SHEET NUMBER

R-1



PARCEL: 23-82
3 SILVERSMITH LANE
N/F
JOSEPH & CHERYL M. COWHERD
3 SILVERSMITH LANE
REDDING, CT 06896

SILVERSMITH LANE

PARCEL: 23-83
6 SILVERSMITH LANE
N/F
FREDERICK E. & PATRICIA H.
RONSON
6 SILVERSMITH LANE
REDDING, CT 06896

EXISTING SNET #1973

PROPOSED OVERHEAD ELECTRICAL & TELCO SERVICE FROM EXISTING DEMARC (EXISTING SNET POLE #1973) TO PROPOSED REPLACEMENT UTILITY POLE

BLACK ROCK TURNPIKE

EXISTING OVERHEAD ELECTRICAL & TELCO SERVICE TO FIRE DEPARTMENT

PROPOSED REPLACEMENT UTILITY POLE

N15°13'53"W 264.39'

EXISTING PROPERTY LINE (TYP)

PROPOSED BOLLARD (TYP 3PL) (4' O.C.) 4/S-1

CONTRACTOR TO MANAGE EXCAVATED MATERIAL FOR UTILITY TRENCH WORK TO PREVENT SEDIMENT TRANSPORT. CONTRACTOR SHALL STOCKPILE EXCAVATED MATERIAL ON THE HIGH SIDE OF THE EXCAVATION AND BACKFILL AT THE CLOSE OF DAY. STABILIZE BACKFILLED TRENCHES DAILY WITH GRAVEL OR TOPSOIL AND SEED.

PROPOSED STEPDOWN TRANSFORMER

EXISTING FIRE DEPT. 75kw, 120/208V, 3Ø PROPANE FIRED GENERATOR

PROPOSED 25' WIDE ACCESS EASEMENT (TYP)

PARCEL: 23-35
194 BLACK ROCK TURNPIKE
N/F
DIAN JENNINGS MAYO
PO BOX 53
REDDING, CT 06876

PROPOSED UNDERGROUND ELECTRICAL FROM PROPOSED STEPDOWN TRANSFORMER TO PROPOSED MULTIMETER CENTER (APPROX. 145±) & TELCO SERVICE FROM EXISTING DEMARC (PROPOSED REPLACEMENT UTILITY POLE) TO PROPOSED CSC CABINET (APPROX. 145±) @ COMPOUND AREA 1/S-1

CONNECT TO EXISTING GENERATOR - COORDINATE OUTAGE & CONNECTION W/ FIRE DEPT. PERSONNEL

EXISTING WELL

PROPOSED PROPANE GAS LINE FROM EXISTING PROPANE TANK TO EXISTING FIRE DEPT. GENERATOR 1/M-1

3 Story Wood Frame Firehouse

PLAN SP-2

BM NAIL IN PAVEMENT ELEV.=637.78

2/SP-2 PROPOSED CONSTRUCTION ENTRANCE RING EXISTING WATER FILLING STATION W/ HIGH VIS. CONSTRUCTION FENCING

EXISTING WATER FILLING STATION FOR FIRE DEPARTMENT - MUST BE CLEAR AT THE END OF EACH WORKING DAY

3/SP-2 TEMPORARY STOCKPILE AREA (2:1 SIDE SLOPES) - RING W/ SILT FENCE @ 5' OFFSET FROM TOE OF STOCKPILE

EXISTING 80' LATTICE TOWER TO BE REMOVED

PROPOSED 80'± AGL TEMPORARY FREE-STANDING TOWER 6/C-5

PROPOSED 150'± AGL MONOPOLE (PER TOWER DESIGN FROM "VALMONT STRUCTURES" ORDER #239975, SITE REDDING-BLACKROCK TOWER, CT, PREPARED FOR MESSAGE CENTER MANAGEMENT, DATED 06/24/15 W/ LATEST REVISION 11/13/15)

EXISTING SEPTIC TANK

EXISTING UNDERGROUND WATER STORAGE TANK

EXTENT OF EXISTING LEACHING GALLERY

1/S-2 PROPOSED MODULAR BLOCK RETAINING WALL (TYP)

1/M-1 PROPOSED U/G PROPANE GAS LINE FROM EXISTING PROPANE TANK TO PROPOSED SHARED GENERATOR

CONNECT TO EXISTING SPLIT RAIL FENCE

11/S-1 PROPOSED SPLIT RAIL FENCE (TYP)

PARCEL: 23-73
178 BLACK ROCK TURNPIKE
N/F
THE RIDGE CEMETERY ASSOCIATION
C/O TREASURER
27 TURNKEY ROAD
PO BOX 58
REDDING, CT 06876

CONNECT TO EXISTING SPLIT RAIL FENCE

PROPOSED SPLIT RAIL FENCE (TYP) 11/S-1

7'± FROM COMPOUND

EXISTING UNDERGROUND PROPANE TANK

PROPOSED RIPRAP SPLASH PAD FOR RELOCATED ROOF LEADER DISCHARGE (TYP) 2&3/S-2

21'± FROM TOWER

PROPOSED SINGLE ROW OF 6' STRAW WATTLES & ROW OF SILT FENCE BACKING 1&3/SP-2

EXISTING WETLAND LIMITS (FIELD DELINEATED)

PROPOSED 47' x 48' (2,256 SF) COMPOUND AREA & 2,436 SF IRREGULARLY SHAPED LEASE AREA (TYP)

47'± INSTALLATION OF E&S CONTROLS TO WETLANDS

EXISTING WETLANDS

EXISTING WETLANDS

GRAPHIC SCALE
15 0 7.5 15 30 60
(IN FEET)
1 inch = 15 ft.

SITE PLAN
SCALE : 1" = 15'-0"

TRUE N

SURVEY NOTES

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300B-1 THRU 20-300B-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES - "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPT. 26, 1996. IT IS A IMPROVEMENT LOCATION SURVEY AND IS BASED UPON A DEPENDENT RESURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A-2 AND A VERTICAL ACCURACY OF CLASS T-2 AND IS INTENDED TO BE USED FOR THE PURPOSE OF SHOWING EXISTING CONDITIONS AND PROPERTY LINE INFORMATION.

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ELEVATIONS BASED ON NAVD 1988 DATUM.

PARCEL ADDRESS: 186 BLACK ROCK TURNPIKE

PARCEL OWNER OF RECORD: REDDING FIRE DISTRICT NO. 1

MAP 23 LOT 72 REDDING ASSESSORS MAP.

PARCEL AREA = .624± ACRES.

PARCEL IS NOT IN A FLOOD HAZARD ZONE ON THE FLOOD INSURANCE RATE MAP, FAIRFIELD COUNTY, CONNECTICUT, ALL JURISDICTIONS, PANEL 265 OF 626, MAP NUMBER 09001C0265F, EFFECTIVE DATE JUNE 18, 2010, BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

SITE AREAS & VOLUMES OF EARTHWORK

SITEWORK SHALL ENTAIL APPROXIMATELY 20 CY OF FILL FOR THE COMPOUND AREA AND 55 CY OF TRENCH EXCAVATION. APPROXIMATELY 80 CUBIC YARDS OF CRUSHED STONE SHALL BE IMPORTED TO CONSTRUCT THE COMPOUND.

COMPOUND AREA SLOPES:
EXISTING - 9.0%
PROPOSED - 5.0%

TOTAL AREA OF DISTURBANCE = 4,150± SF

STORMWATER VELOCITY:
PRIOR TO GROUND COVER < 2 FT/SEC
FOLLOWING GROUND COVER < 2 FT/SEC

GROUND COVER TO BE ESTABLISHED AS FOLLOWS (U.O.N):
- WHITE CLOVER @ 0.20#/- SF
- TALL FESCUE @ 0.45#/- SF
- RYEGRASS @ 0.10#/- SF

NOTE: NO TREES WILL BE REMOVED IN CONSTRUCTING THE FACILITY

LEGEND

CURB	DRAINAGE INLET / STRUCTURE
DROP CURB	CATCH BASIN
WALL	SIGN
STONE WALL	LIGHT POLE
EDGE OF PAVEMENT	UTILITY POLE
OVERHEAD WIRES	STOCKADE FENCE
STRUCTURE - MANHOLE	CONTOURS
GAS VALVE	TOP/BOTTOM OF CURB
WATER VALVE	SPOT ELEVATION
HANDICAP PARKING	CONCRETE
PARKING STALL COUNT	GUY WIRE
UNDERGROUND ELECTRICAL AND TELCO UTILITIES	NEW FENCE

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DEVELOPMENT & MANAGEMENT DOCUMENTS

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186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:
RAW LAND

REVISIONS:
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REV.2: 12/02/15: TOWER REVISIONS: SMC
REV.3: 12/10/15: TEMP TOWER REVS: SMC
REV.4:
REV.5:

SITE PLAN

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DRAWN BY: RCB
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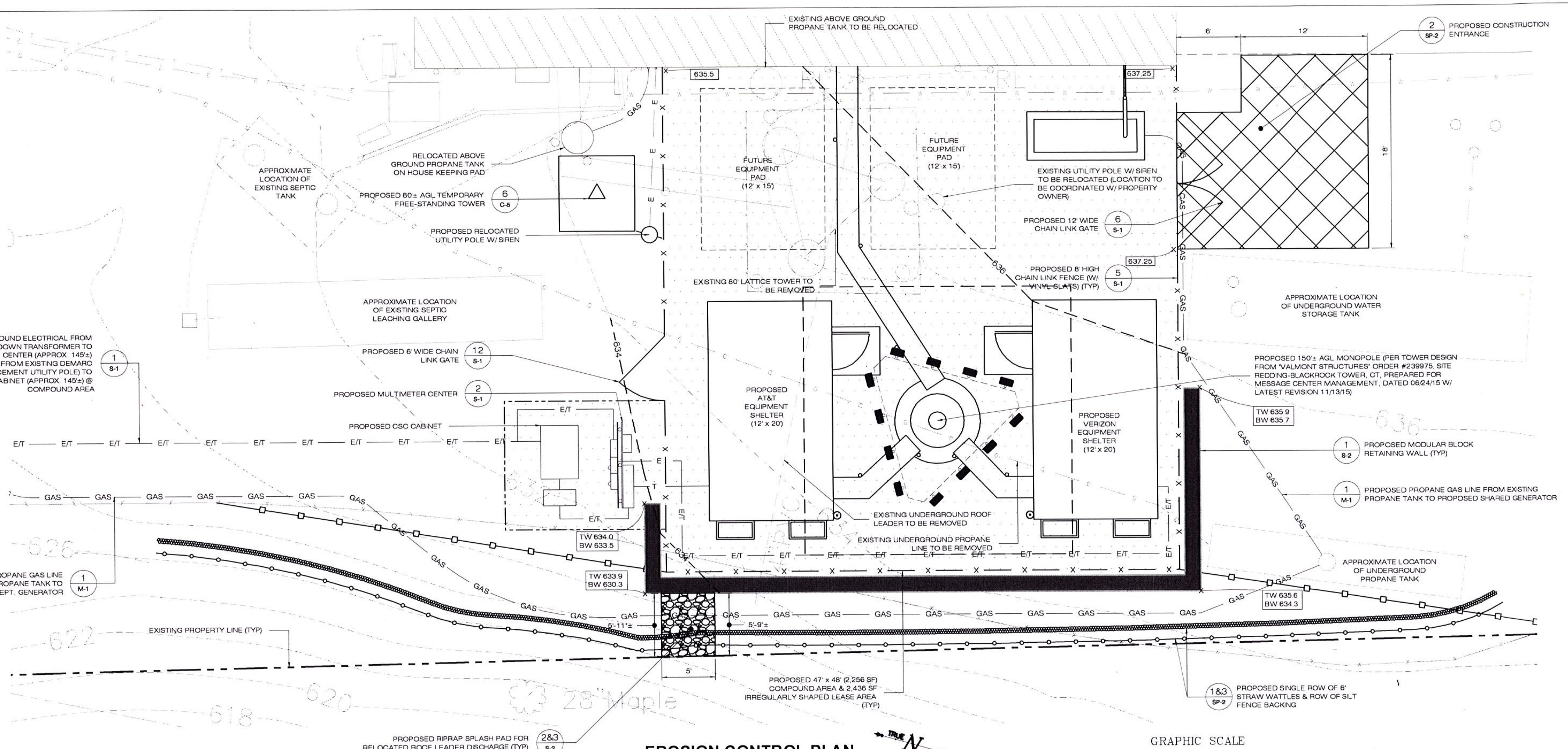
SHEET NUMBER:
SP-1


EXISTING ABOVE GROUND PROPANE TANK TO BE RELOCATED
PROPOSED CONSTRUCTION ENTRANCE
6'
12'
18'
635.5
637.25
APPROXIMATE LOCATION OF EXISTING SEPTIC TANK
RELOCATED ABOVE GROUND PROPANE TANK ON HOUSE KEEPING PAD
PROPOSED 80'± AGL TEMPORARY FREE-STANDING TOWER
PROPOSED RELOCATED UTILITY POLE W/ SIREN
FUTURE EQUIPMENT PAD (12' x 15')
FUTURE EQUIPMENT PAD (12' x 15')
EXISTING UTILITY POLE W/ SIREN TO BE RELOCATED (LOCATION TO BE COORDINATED W/ PROPERTY OWNER)
PROPOSED 12' WIDE CHAIN LINK GATE
PROPOSED 8' HIGH CHAIN LINK FENCE (W/ VINYL SLATS) (TYP)
EXISTING 80' LATTICE TOWER TO BE REMOVED
APPROXIMATE LOCATION OF EXISTING SEPTIC LEACHING GALLERY
APPROXIMATE LOCATION OF UNDERGROUND WATER STORAGE TANK
PROPOSED UNDERGROUND ELECTRICAL FROM PROPOSED STEPDOWN TRANSFORMER TO PROPOSED MULTIMETER CENTER (APPROX. 145'±) & TELCO SERVICE FROM EXISTING DEMARC (PROPOSED REPLACEMENT UTILITY POLE) TO PROPOSED CSC CABINET (APPROX. 145'±) @ COMPOUND AREA
PROPOSED 6' WIDE CHAIN LINK GATE
PROPOSED MULTIMETER CENTER
PROPOSED CSC CABINET
PROPOSED AT&T EQUIPMENT SHELTER (12' x 20')
PROPOSED VERIZON EQUIPMENT SHELTER (12' x 20')
PROPOSED 150'± AGL MONOPOLE (PER TOWER DESIGN FROM "VALMONT STRUCTURES" ORDER #239975, SITE REDDING-BLACKROCK TOWER, CT, PREPARED FOR MESSAGE CENTER MANAGEMENT, DATED 06/24/15 W/ LATEST REVISION 11/13/15)
TW 635.9 BW 635.7
PROPOSED MODULAR BLOCK RETAINING WALL (TYP)
PROPOSED PROPANE GAS LINE FROM EXISTING PROPANE TANK TO PROPOSED SHARED GENERATOR
EXISTING UNDERGROUND ROOF LEADER TO BE REMOVED
EXISTING UNDERGROUND PROPANE LINE TO BE REMOVED
TW 634.0 BW 633.5
TW 633.9 BW 630.3
APPROXIMATE LOCATION OF UNDERGROUND PROPANE TANK
TW 635.6 BW 634.3
PROPOSED PROPANE GAS LINE FROM EXISTING PROPANE TANK TO EXISTING FIRE DEPT. GENERATOR
EXISTING PROPERTY LINE (TYP)
5'-11"±
5'-9"±
5'
PROPOSED 47' x 48' (2,256 SF) COMPOUND AREA & 2,436 SF IRREGULARLY SHAPED LEASE AREA (TYP)
PROPOSED SINGLE ROW OF 6" STRAW WATTLES & ROW OF SILT FENCE BACKING
28" Maple
PROPOSED RIPRAP SPLASH PAD FOR RELOCATED ROOF LEADER DISCHARGE (TYP)
TRUE N

EROSION CONTROL PLAN

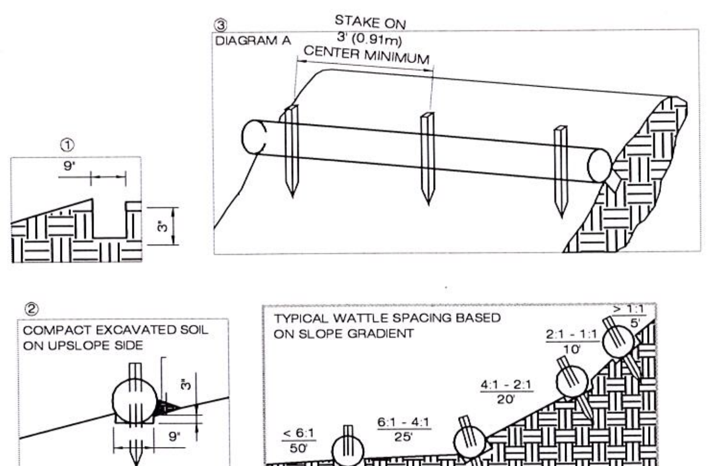
SCALE : 1" = 5'-0"

GRAPHIC SCALE

5 0 2.5 5 10 20

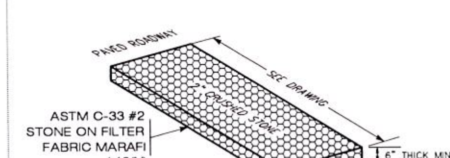
(IN FEET)
1 inch = 5 ft.

1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.5 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPSLOPE FROM THE ANCHOR TRENCH.
2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
3. SECURE THE WATTLE WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9-1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.



STRAW WATTLE SEDIMENTATION CONTROL BARRIER

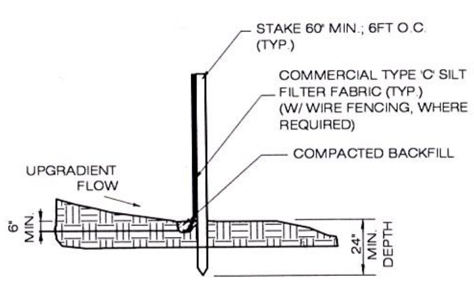
1 SP-2 SCALE : NTS



NOTE: SEE SP-2 FOR ACTUAL (CE) PLAN DIMENSIONS. THIS SITE IS EXTREMELY FLAT; THE LIMIT OF DISTURBANCE AREA IS SMALL AND WILL CONSIST MAINLY OF EXCAVATIONS TO BE FILLED WITH GRAVEL. SEDIMENT TRANSPORT IS NOT LIKELY. THEREFORE IT IS AN ENGINEERING JUDGEMENT TO MODIFY THE (CE) PLAN SIZE AS SHOWN ON THIS SET IN LIEU OF THE STANDARD AS IT WILL PROVIDE SUFFICIENT PROTECTION AND MINIMIZE DISTURBANCE.

(CE) CONSTRUCTION ENTRANCE DETAIL

2 SP-2 SCALE : NTS

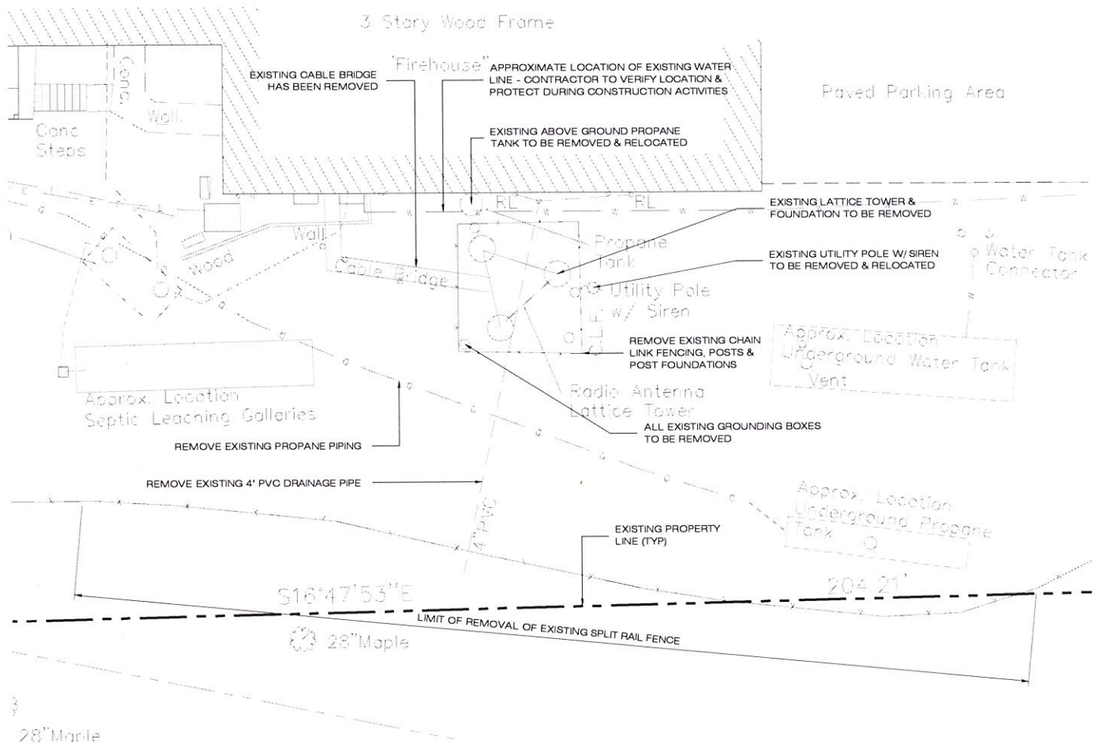


GEOTEXTILE SILT FENCE DETAIL

3 SP-2 SCALE : NTS

MCM SITE NAME: **REDDING RIDGE CT505**	DEVELOPMENT & MANAGEMENT DOCUMENTS	**SEDIMENTATION & EROSION CONTROL PLAN**
APT FILING NUMBER: **CT-242-310**	REDDING RIDGE 186 BLACK ROCK TURNPIKE REDDING, CT 06896	
MCM — MESSAGE CENTER MANAGEMENT 40 WOODLAND STREET HARTFORD, CT 06105 OFFICE: (888) 973-7483	DESIGN TYPE: RAW LAND	APT FILING NUMBER: CT-242-310 APT DRAWING NUMBER: CT-505 SP-2
		DRAWN BY: RCB — SCALE: AS NOTED
		CHECKED BY: SMC — DATE: 08/03/15
ALL-POINTS TECHNOLOGY CORPORATION 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419 WWW.ALLPOINTSTECH.COM PHONE: (860)-663-1697 FAX: (860)-663-0935	REVISIONS: REV.0: 08/11/15: FOR REVIEW: SMC REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC REV.2: 12/02/15: TOWER REVISIONS: SMC REV.3: 12/10/15: TEMP TOWER REVS: SMC REV.4: REV.5:	SHEET NUMBER: **SP-2**

NOTE:
1. CONTRACTOR TO HAVE A GPR SURVEY PERFORMED AND HAVE ALL UNDERGROUND UTILITIES & STRUCTURES MARKED OUT PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO COORDINATE W/ THE PROPERTY OWNER AND LANDLORD FOR ALL REMOVAL AND RELOCATION ACTIVITIES.
3. CONTRACTOR TO INSTALL TEMPORARY "NO PARKING, EMERGENCY VEHICLES ONLY" SIGNS ON OR NEAR GARAGE BAY DOORS.
4. THE EXISTING WATER TANK CONNECTION AREA MUST BE ACCESSIBLE AND CLEARED AT THE END OF EACH WORKING DAY.
5. THE EXISTING FIRE DEPT. GENERATOR SHALL NOT BE LEFT OUT OF SERVICE FOR MORE THAN 4 HOURS.



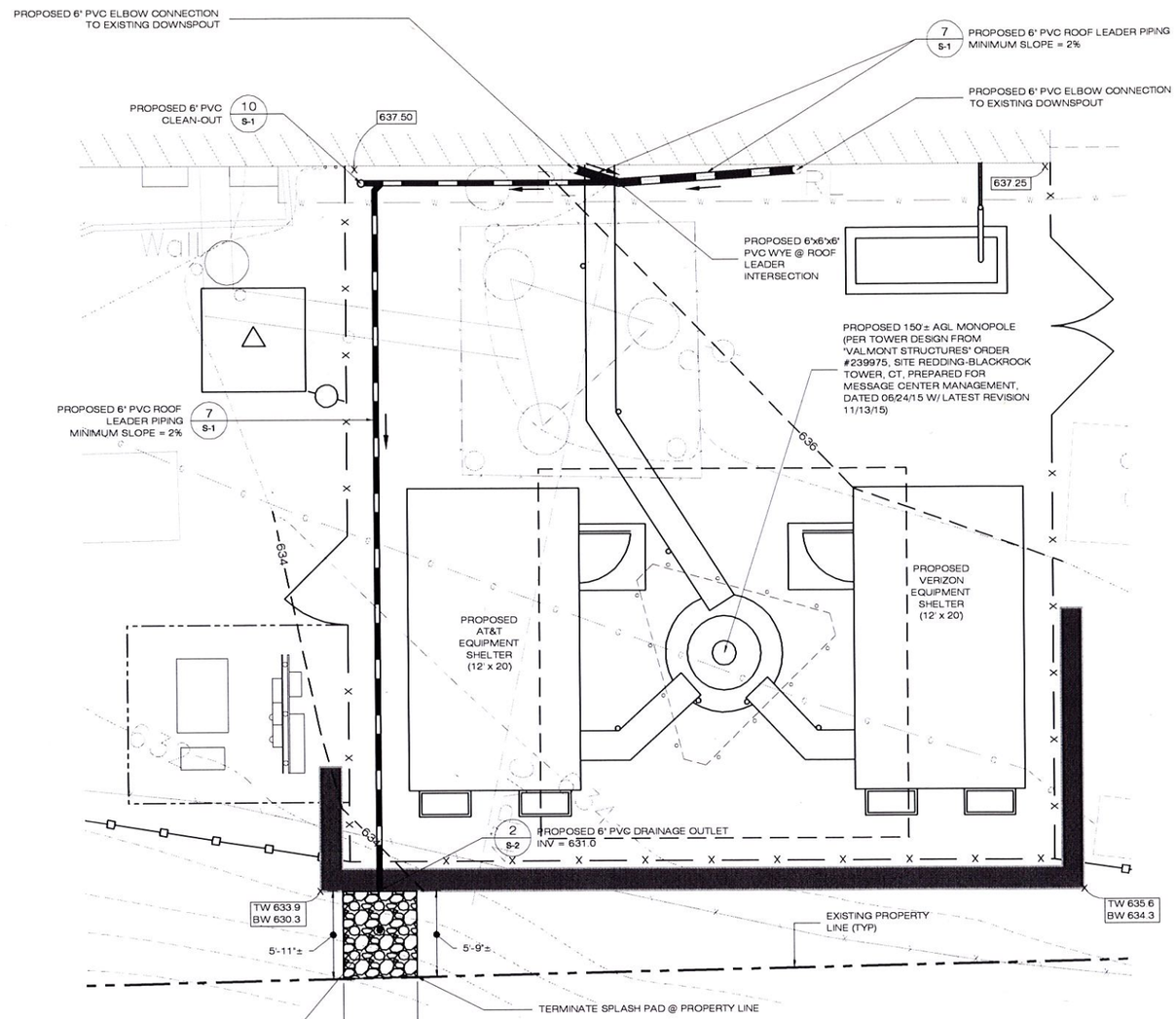
TRUE N

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

1 SP-3 DEMOLITION PLAN
SCALE : 1" = 10'-0"



TRUE N

2 SP-3 ROOF LEADER PLAN
SCALE : 1" = 5'-0"

GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)
1 inch = 5 ft.

MCM SITE NAME:
REDDING RIDGE CT505

APT FILING NUMBER:
CT-242-310

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105
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MCM

ALL-POINTS TECHNOLOGY CORPORATION
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KILLINGWORTH, CT 06419
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DEVELOPMENT & MANAGEMENT DOCUMENTS
REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:
RAW LAND

REVISIONS:
REV.0: 08/11/15: FOR REVIEW: SMC
REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
REV.2: 12/02/15: TOWER REVISIONS: SMC
REV.3: 12/10/15: TEMP TOWER REVS: SMC
REV.4:
REV.5:

DEMOLITION & ROOF LEADER PLAN

APT FILING NUMBER: CT-242-310
APT DRAWING NUMBER: CT-505 SP-3
DRAWN BY: RCB
SCALE: AS NOTED
CHECKED BY: SMC
DATE: 08/03/15

SHEET NUMBER:
SP-3

EXISTING 2-STORY FIREHOUSE

EXISTING PROPANE TANK TO BE RELOCATED

EXISTING BITUMINOUS PARKING/DRIVEWAY AREA (TYP)

PROPOSED GRAVEL SURFACE COMPOUND TREATMENT (TYP) (3/S-1)

EXISTING FENCED AREA TO BE REMOVED (TYP)

10' SPARK ZONE

APPROXIMATE LOCATION OF EXISTING WATER LINE - CONTRACTOR TO VERIFY LOCATION & PROTECT DURING CONSTRUCTION ACTIVITIES

PROPOSED 4'-6"x11'-0" CONCRETE PAD FOR SHARED PROPANE-FIRED GENERATOR (8/S-1)

PROPOSED GENERATOR EXHAUST WITH RAIN CAPTO BE PIPED ABOVE THE EXIST ROOFLINE

EXISTING 80'± AGL LATTICE TOWER TO BE REMOVED

EXISTING A/C UNIT

635.5

637.25

FUTURE EQUIPMENT PAD (12' x 15')

FUTURE EQUIPMENT PAD (12' x 15')

EXISTING UTILITY POLE W/ SIREN TO BE RELOCATED

PROPOSED RELOCATED ABOVE GROUND PROPANE TANK ON HOUSE KEEPING PAD

PROPOSED 80'± AGL TEMPORARY FREE-STANDING TOWER (6/C-5)

PROPOSED TOWN OF REDDING CABLE BRIDGE FROM EXISTING FIRE STATION TO TOWER ENTRY PORT (4/C-5)

PROPOSED 12' WIDE CHAIN LINK GATE (6/S-1)

637.25

5' SEPTIC SETBACK

PROPOSED RELOCATED UTILITY POLE W/ SIREN (COORDINATE FINAL LOCATION W/ PROPERTY OWNER)

PROPOSED 150'± AGL MONOPOLE (PER TOWER DESIGN FROM "VALMONT STRUCTURES" ORDER #239975, SITE REDDING-BLACKROCK TOWER, CT, PREPARED FOR MESSAGE CENTER MANAGEMENT, DATED 06/24/15 W/ LATEST REVISION 11/13/15)

APPROXIMATE LOCATION OF UNDERGROUND WATER STORAGE TANK

APPROXIMATE LOCATION OF EXISTING SEPTIC SYSTEM

PROPOSED 6' WIDE CHAIN LINK GATE (12/S-1)

PROPOSED MULTIMETER CENTER (2/S-1)

634

PROPOSED VERIZON EQUIPMENT SHELTER (12' x 20) (SEE 1&2/C-3)

PROPOSED 8' HIGH CHAIN LINK FENCE W/ VINYL SLATS ON EAST SIDE ONLY) (TYP) (5/S-1)

47'-0" COMPOUND & LEASE AREA

PROPOSED AT&T EQUIPMENT SHELTER (12' x 20) (SEE 1&2/C-1)

22'-6"

TW 635.9 BW 635.7

PROPOSED RETAINING WALL (TYP) (1/S-2)

15' SEPTIC SETBACK

12'-0" LEASE AREA

TW 634.0 BW 633.5

TERMINATE PROPOSED RELOCATED SPLIT RAIL FENCE AT COMPOUND FENCE CORNER (TYP) (11/S-1)

14'-0"

PROPOSED AT&T GPS UNIT (7/C-2)

PROPOSED VERIZON WIRELESS GPS UNIT (5/C-4)

APPROX. LOCATION OF UNDERGROUND PROPANE TANK

PROPOSED GRAVEL SURFACE TREATMENT IN UTILITY AREA (SEE 3/S-1 SIMILAR)

TW 633.9 BW 630.3

TW 635.6 BW 634.3

PROPOSED AT&T CABLE BRIDGE FROM SHELTER TO TOWER ENTRY PORT (4/C-1)

PROPOSED CSC CABINET

PROPOSED VERIZON WIRELESS CABLE BRIDGE FROM SHELTER TO TOWER ENTRY PORT (4/C-3)

PROPOSED TOWER FOUNDATION W/ 6" AGL REVEAL (25'-0"x25'-0" PAD W/ 8'-0"Ø PIER - PER DESIGN FROM "VALMONT MICROFLECT" DWG NO. B-142852, DATED 11/13/15)

EXISTING PROPERTY LINE (TYP)

EXISTING SPLIT RAIL FENCE (TYP)

11 S-1 TERMINATE PROPOSED RELOCATED SPLIT RAIL FENCE AT COMPOUND FENCE CORNER (TYP)

PROPOSED 47' x 48' (2,256 SF) COMPOUND AREA & 2,436 SF IRREGULARLY SHAPED LEASE AREA (TYP)

48'-0" COMPOUND AREA

63'-0" LEASE AREA

28" Maple

GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)
1 inch = 5 ft.

COMPOUND PLAN

SCALE : 1" = 5'-0"

TRUE N

T/ STRUCTURE NOT TO EXCEED 154'-0"± AGL

PROPOSED TOWN OF REDDING 2Ø MICROWAVE DISHES ON STANDOFF (2/C-5)

PROPOSED (12) AT&T PANEL ANTENNAS (90°, 210°, 330°) W/ (21) RRHs, (6) A2 MODULES, (4) SQUID BOXES ON COMMSCOPE MTC3706 PLATFORM KIT & MTC3706R RRH RING MOUNT KIT (1/C-2)

PROPOSED (12) VERIZON WIRELESS PANEL ANTENNAS (90°, 190°, 330°) W/ (6) RRHs & (1) MDB ON COMMSCOPE MTC3706 PLATFORM KIT (1/C-4)

FUTURE CARRIER ANTENNAS (TYP)

FUTURE CARRIER ANTENNAS (TYP)

PROPOSED 150'± AGL MONOPOLE (PER TOWER DESIGN FROM "VALMONT STRUCTURES" ORDER #239975, SITE REDDING-BLACKROCK TOWER, CT, PREPARED FOR MESSAGE CENTER MANAGEMENT, DATED 06/24/15 W/ LATEST REVISION 11/13/15)

PROPOSED VERIZON EQUIPMENT SHELTER (12' x 20) (1/C-3)

RELOCATED TOWN ANTENNAS (1/C-5)

TEMPORARY RELOCATED TOWN ANTENNAS (1/C-5)

EXISTING 80'± AGL LATTICE TOWER TO BE REMOVED

EXISTING YAGI ANTENNA TO BE REMOVED

EXISTING UTILITY POLE W/ SIREN TO BE RELOCATED (LOCATION TO BE COORDINATED W/ PROPERTY OWNER)

PROPOSED AT&T EQUIPMENT SHELTER (12' x 20) (1/C-1)

PROPOSED 47' x 48' (2,256 SF) FENCED COMPOUND AREA & 2,436 SF IRREGULARLY SHAPED LEASE AREA

PROPOSED 80'± AGL TEMPORARY FREE-STANDING TOWER

PROPOSED MULTIMETER CENTER (2/S-1)

EXISTING 2-STORY FIREHOUSE (TYP)

T/ PROPOSED TEMP. TOWER & RELOCATED TOWN ANTS @ 80'-0"± AGL

T/ EX. LATTICE TOWER & RELOCATED TOWN ANTS @ 80'-0"± AGL

FUTURE ANTENNAS CENTERLINE @ 115'± AGL

FUTURE ANTENNAS CENTERLINE @ 125'± AGL

PROPOSED VERIZON ANTENNAS CENTERLINE @ 135'± AGL

PROPOSED AT&T ANTENNAS CENTERLINE @ 145'± AGL

T/ PROPOSED MONOPOLE @ 150'± AGL

PROPOSED MUNICIPAL MW DISH CENTERLINE @ 153'± AGL

5'

10'

10'

10'

7'

3'

6Ø

UG

PROPOSED UNDERGROUND ELECTRICAL FROM PROPOSED STEPDOWN TRANSFORMER TO PROPOSED MULTIMETER CENTER (APPROX. 145'±) & TELCO SERVICE FROM EXISTING DEMARC (PROPOSED REPLACEMENT UTILITY POLE) TO PROPOSED CSC CABINET (APPROX. 145'±) @ COMPOUND AREA (1/S-1)

PROPOSED CSC CABINET

PROPOSED TEMPORARY TOWER FOUNDATION (6/C-5)

PROPOSED RETAINING WALL (1/S-2)

25'-0" SQUARE

PROPOSED TOWER FOUNDATION W/ 6" AGL REVEAL (25'-0"x25'-0" PAD W/ 8'-0"Ø PIER - PER DESIGN FROM "VALMONT MICROFLECT" DWG NO. B-142852, DATED 11/13/15)

PROVIDE POCKET AS REQUIRED TO ACCOMODATE ANCHOR BOLTS W/ MIN. 3" CONCRETE COVER

9 S-1 SECONDARY UNDERGROUND UTILITIES FROM DEMARCS TO CARRIER EQUIPMENT

EASTERN ELEVATION

SCALE : 1/16" = 1'-0"

GRAPHIC SCALE

16 0 8 16 32 64

(IN FEET)
1 inch = 16 ft.

ENGINEERING ANALYSIS AND CERTIFICATION

IN ACCORDANCE WITH THE 2009 CONNECTICUT STATE BUILDING CODE AND THE ELECTRONIC INDUSTRIES ASSOCIATION STANDARD EIA/TIA-222-F "STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORT STRUCTURES" FOR FAIRFIELD COUNTY, THE TOWER WOULD BE DESIGNED TO WITHSTAND PRESSURES EQUIVALENT TO A MAXIMUM 85 MPH FASTEST MILE WIND SPEED. THE FOUNDATION DESIGN WOULD BE BASED ON SOIL CONDITIONS AT THE SITE.

MCM SITE NAME:
REDDING RIDGE CT505

APT FILING NUMBER:
CT-242-310

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105
OFFICE: (888) 973-7483

MCM

ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
WWW.ALLPOINTSTECH.COM
PHONE: (860)-663-1697
FAX: (860)-663-0935

DEVELOPMENT & MANAGEMENT DOCUMENTS

REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

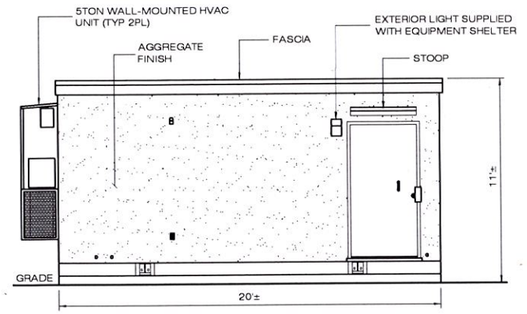
DESIGN TYPE:
RAW LAND

REVISIONS:
REV.0: 08/11/15: FOR REVIEW: SMC
REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
REV.2: 12/02/15: TOWER REVISIONS: SMC
REV.3: 12/10/15: TEMP TOWER REVS: SMC
REV.4:
REV.5:

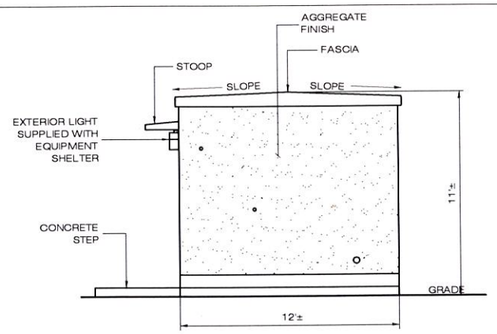
COMPOUND PLAN & TOWER ELEVATION

APT FILING NUMBER: CT-242-310
APT DRAWING NUMBER: CT-505 A-1
DRAWN BY: RCB
SCALE: AS NOTED
CHECKED BY: SMC
DATE: 08/03/15

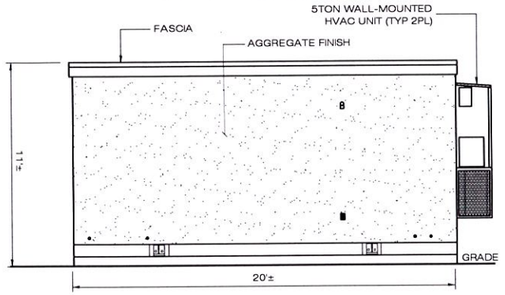
SHEET NUMBER:
A-1



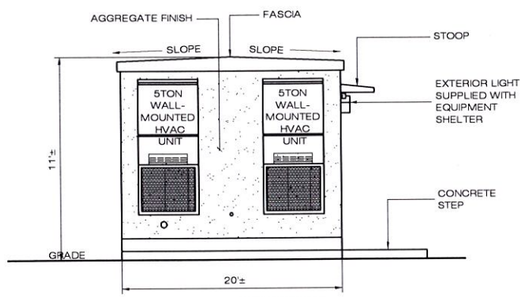
NORTHERN ELEVATION



WESTERN ELEVATION

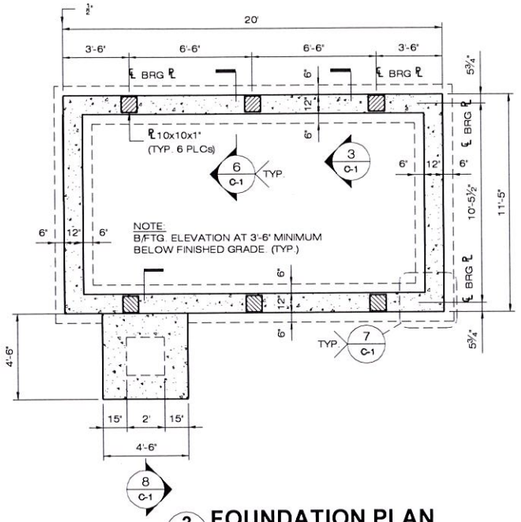


SOUTHERN ELEVATION

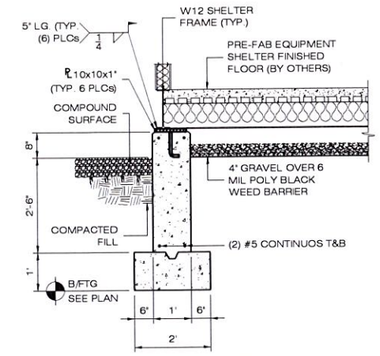


EASTERN ELEVATION

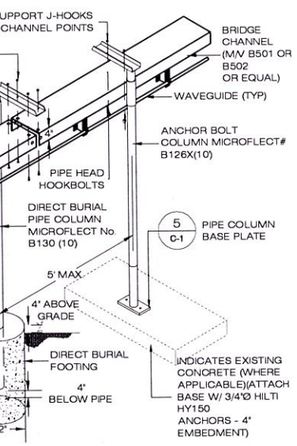
1 C-1 12' X 20' EQUIPMENT SHELTER
SCALE : 1/4" = 1'-0"



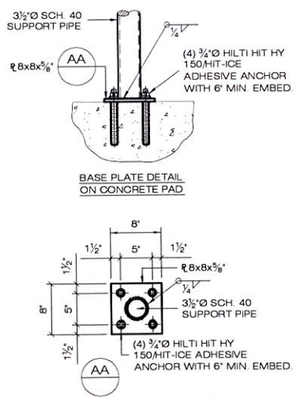
2 C-1 FOUNDATION PLAN
SCALE : 1/4" = 1'-0"



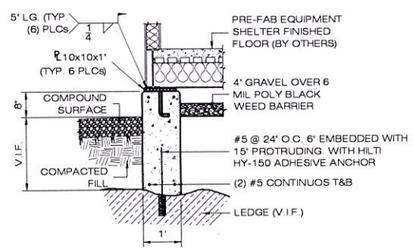
3 C-1 FOUNDATION SECTION
SCALE : 1/2" = 1'-0"



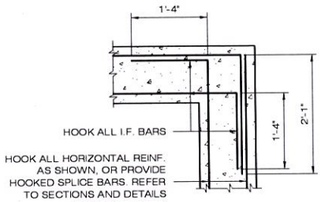
4 C-1 CABLE BRIDGE & COAX HANGER DETAIL
SCALE : NTS



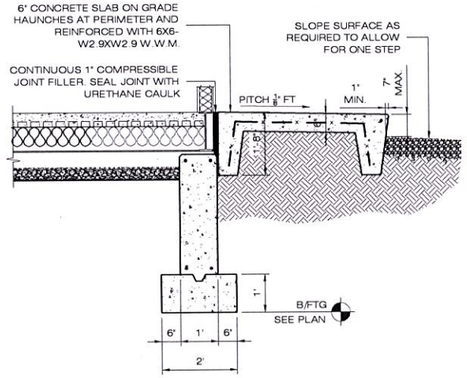
5 C-1 PIPE BASE PLATE
SCALE : N.T.S.



6 C-1 FOUNDATION OVER LEDGE OR TOWER FOUNDATION
SCALE : 1/2" = 1'-0"



7 C-1 DETAIL CORNER REINFORCEMENT
SCALE : 3/4" = 1'-0"



8 C-1 SECTION @ STOOP
SCALE : 1/2" = 1'-0"

DESIGN LOAD CRITERIA

EQUIPMENT SHELTER SHALL BE DESIGNED AND MANUFACTURED TO MEET ALL STATE AND LOCAL CODES. ITS LAYOUT SHALL BE COORDINATED WITH CARRIERS.

DESIGN BASIS	CONNECTICUT STATE BUILDING CODE
GOVERNING CODE	
DESIGN LIVE LOADS	40 PSF (ASCE 7-02)
IMPORTANCE CATEGORY	II
SNOW LOAD:	
GROUND SNOW LOAD (Pg)	30 PSF
IMPORTANCE FACTOR	1.0
EXPOSURE FACTOR (Ce)	0.9
THERMAL FACTOR (Ct)	1.0
WIND LOAD:	
BASIC WIND LOAD	100 MPH (3 SEC. GUST)
EXPOSURE GROUP	C
IMPORTANCE FACTOR	1.0
SHELTER LOAD:	
FLOOR LIVE LOAD INCLUDING EQUIPMENT	250 PSF
EQUIPMENT SHELTER DL	24,500 LBS
SEISMIC DESIGN PARAMETERS:	
SEISMIC USE GROUP	II
MCE SPECTRAL ACCELERATION SHORT (Sa)	0.288
MCE SPECTRAL ACCELERATION SHORT (Si)	0.066
SITE CLASS	D FOR UNKNOWN SOIL PROPERTIES
IMPORTANCE FACTOR	1.0

MCM SITE NAME: **REDDING RIDGE CT505**

APT FILING NUMBER: **CT-242-310**

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105
OFFICE: (888) 973-7483
MCM

DEVELOPMENT & MANAGEMENT DOCUMENTS

REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:

RAW LAND

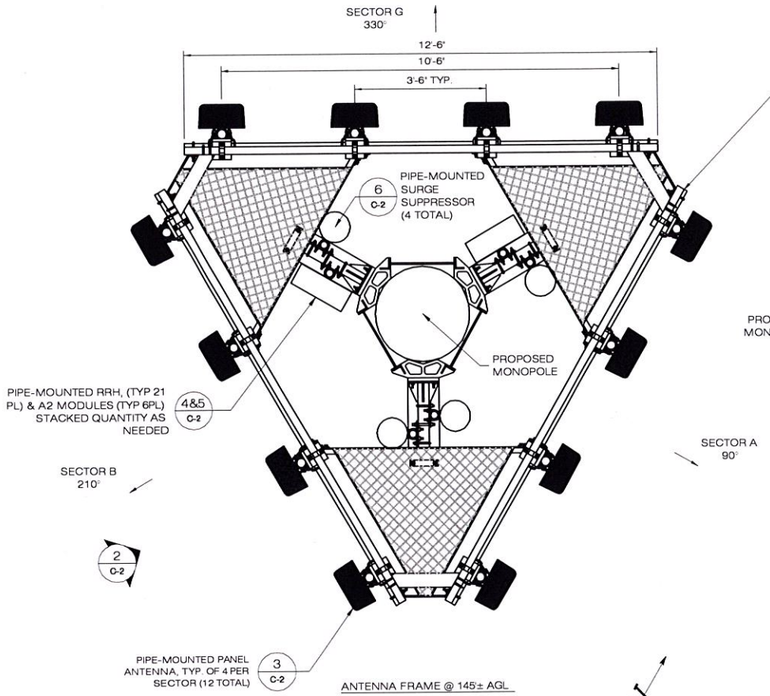
AT&T EQUIP. SHELTER PLAN & DETAILS

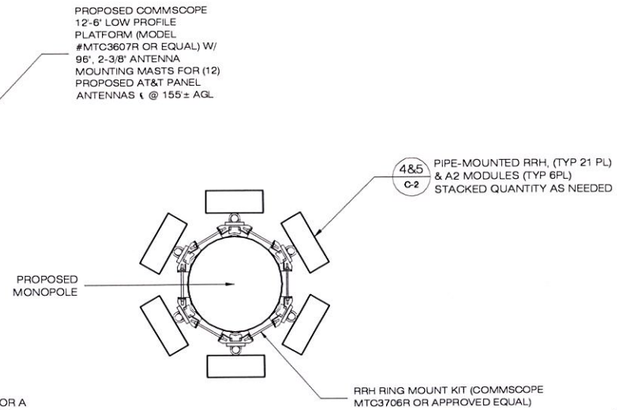
APT FILING NUMBER: CT-242-310
APT DRAWING NUMBER: CT-505 C-1
DRAWN BY: RCB | SCALE: AS NOTED
CHECKED BY: SMC | DATE: 08/03/15

REVISIONS:
- REV.0: 08/11/15: FOR REVIEW: SMC
- REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
- REV.2: 12/02/15: TOWER REVISIONS: SMC
- REV.3: 12/10/15: TEMP TOWER REVS: SMC
- REV.4:
- REV.5:

SHEET NUMBER: **C-1**

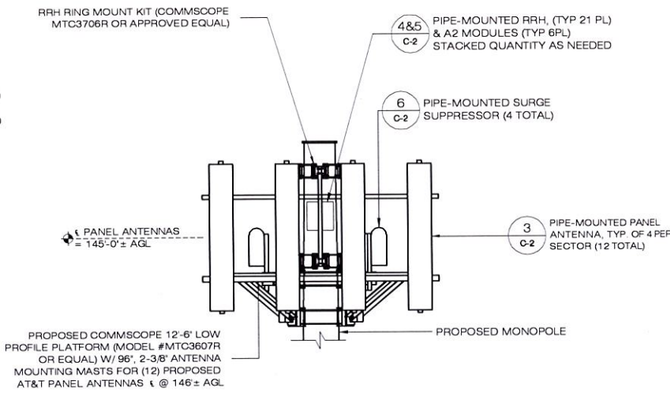
ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
WWW.ALLPOINTSTECH.COM
PHONE: (860)-663-1697
FAX: (860)-663-0935



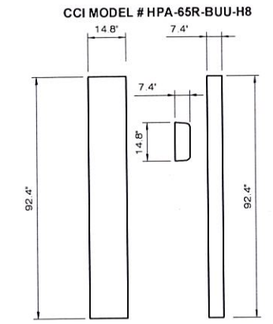


NOTES:
1. PAINT ALL COMPONENTS AND MOUNTS TO MATCH PROPOSED MONOPOLE
2. ROTATE ANTENNA FRAME, RRU FRAME, AND SURGE SUPPRESSORS TO MAINTAIN CLEAR CLIMBING PATH

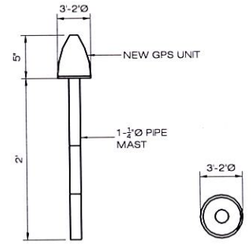
1 C-2 ANTENNA PLAN
SCALE : NTS



2 C-2 ANTENNA ELEVATION
SCALE : NTS

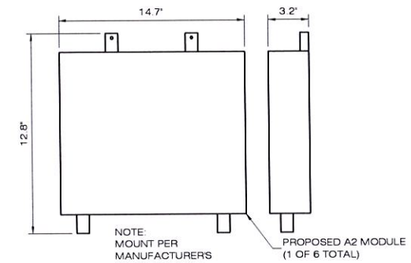


3 C-2 TYPICAL PANEL ANTENNA
SCALE : NTS

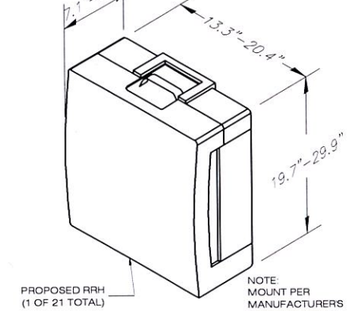


FOR MOUNT - SEE 8/C-2

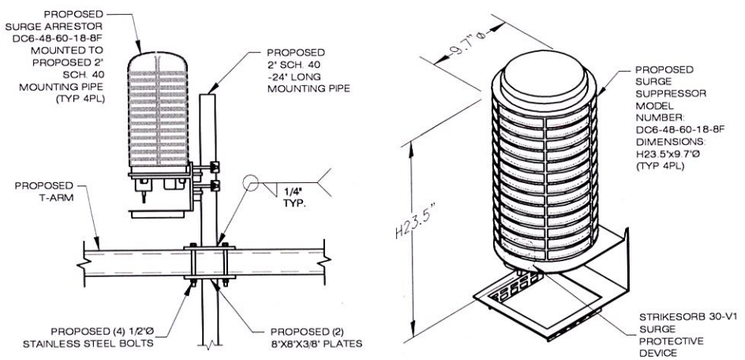
7 C-2 TYPICAL GPS DETAILS
SCALE : NTS



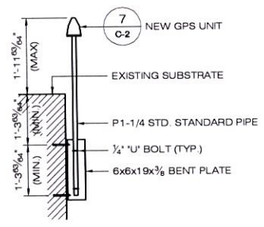
4 C-2 TYPICAL A2 MODULE
SCALE : NTS



5 C-2 TYPICAL RRU
SCALE : NTS



6 C-2 TYPICAL SURGE SUPPRESSOR
SCALE : NTS



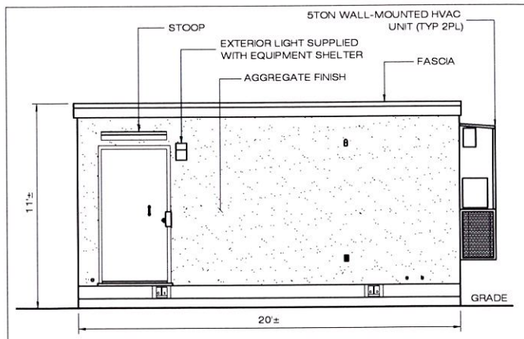
8 GPS UNIT MOUNT
SCALE : N.T.S.

MCM SITE NAME: REDDING RIDGE CT505	DEVELOPMENT & MANAGEMENT DOCUMENTS: REDDING RIDGE, 186 BLACK ROCK TURNPIKE, REDDING, CT 06896
APT FILING NUMBER: CT-242-310	
MESSAGE CENTER MANAGEMENT, 40 WOODLAND STREET, HARTFORD, CT 06105, OFFICE: (888) 973-7483 — MCM	DESIGN TYPE: RAW LAND
ALL-POINTS TECHNOLOGY CORPORATION — 3 SADDLEBROOK DRIVE, KILLINGWORTH, CT 06419, WWW.ALLPOINTSTECH.COM, PHONE: (860)-663-1697, FAX: (860)-663-0935	REVISIONS: REV.0: 08/11/15: FOR REVIEW: SMC; REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC; REV.2: 12/02/15: TOWER REVISIONS: SMC; REV.3: 12/10/15: TEMP TOWER REVS: SMC; REV.4: ; REV.5:

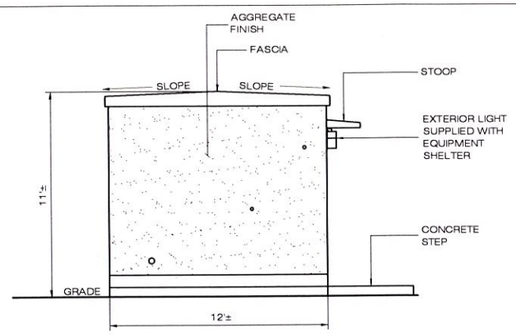
AT&T ANTENNA PLAN & DETAILS

APT FILING NUMBER: CT-242-310	
APT DRAWING NUMBER: CT-505 C-2	
DRAWN BY: RCB	SCALE: AS NOTED
CHECKED BY: SMC	DATE: 08/03/15

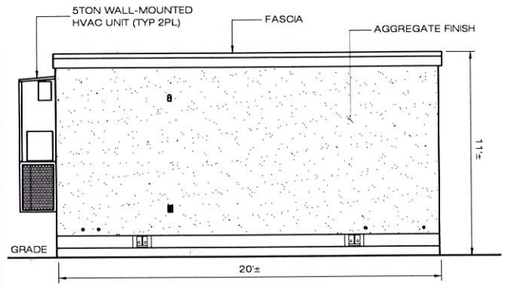
SHEET NUMBER: C-2



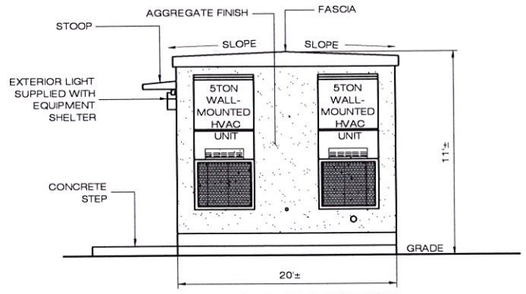
SOUTHERN ELEVATION



WESTERN ELEVATION

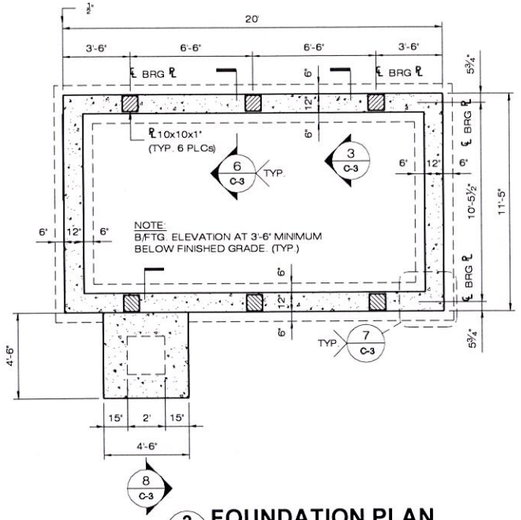


NORTHERN ELEVATION

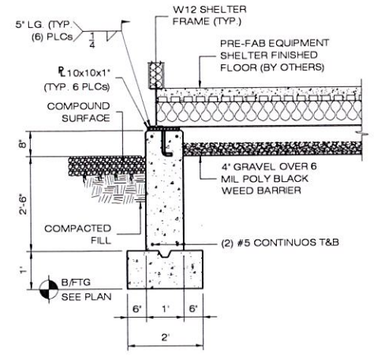


EASTERN ELEVATION

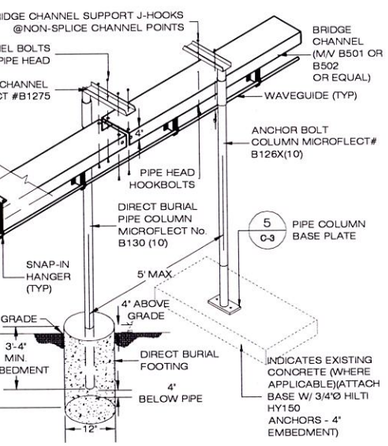
1 C-3 12' X 20' EQUIPMENT SHELTER
SCALE : 1/4" = 1'-0"



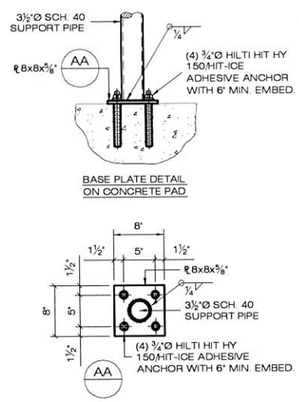
2 C-3 FOUNDATION PLAN
SCALE : 1/4" = 1'-0"



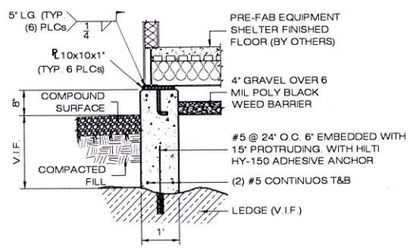
3 C-3 FOUNDATION SECTION
SCALE : 1/2" = 1'-0"



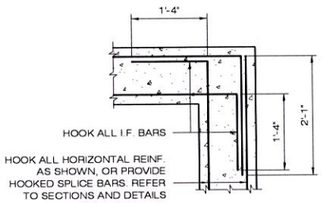
4 C-3 CABLE BRIDGE & COAX HANGER DETAIL
SCALE : NTS



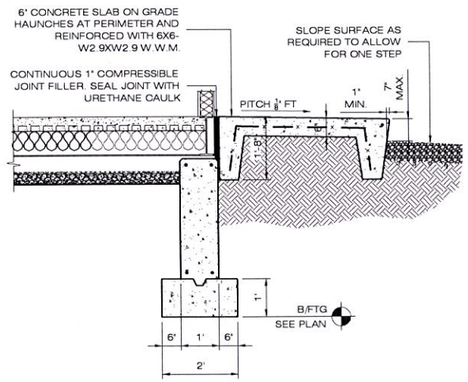
5 C-3 PIPE BASE PLATE
SCALE : N.T.S.



6 C-3 FOUNDATION OVER LEDGE OR TOWER FOUNDATION
SCALE : 1/2" = 1'-0"



7 C-3 DETAIL CORNER RIEFORCEMENT
SCALE : 3/4" = 1'-0"



8 C-3 SECTION @ STOOP
SCALE : 1/2" = 1'-0"

DESIGN LOAD CRITERIA

EQUIPMENT SHELTER SHALL BE DESIGNED AND MANUFACTURED TO MEET ALL STATE AND LOCAL CODES. ITS LAYOUT SHALL BE COORDINATED WITH CARRIERS.

DESIGN BASIS	CONNECTICUT STATE BUILDING CODE
GOVERNING CODE	
DESIGN LIVE LOADS	40 PSF (ASCE 7-02)
IMPORTANCE CATEGORY	II
SNOW LOAD	
GROUND SNOW LOAD (Pg)	30 PSF
IMPORTANCE FACTOR	1.0
EXPOSURE FACTOR (Ce)	0.9
THERMAL FACTOR (Ct)	1.0
WIND LOAD	
BASIC WIND LOAD	100 MPH (3 SEC. GUST)
EXPOSURE GROUP	C
IMPORTANCE FACTOR	1.0
SHELTER LOAD	
FLOOR LIVE LOAD INCLUDING EQUIPMENT	250 PSF
EQUIPMENT SHELTER DL	24,500 LBS
SEISMIC DESIGN PARAMETERS	
SEISMIC USE GROUP	II
MCE SPECTRAL ACCELERATION SHORT (Sa)	0.288
MCE SPECTRAL ACCELERATION SHORT (Si)	0.066
SITE CLASS	D FOR UNKNOWN SOIL PROPERTIES
IMPORTANCE FACTOR	1.0

MCM SITE NAME: **REDDING RIDGE CT505**

APT FILING NUMBER: **CT-242-310**

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105
OFFICE: (888) 973-7483
MCM

ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
WWW.ALLPOINTSTECH.COM
PHONE: (860)-663-1697
FAX: (860)-663-0935

DEVELOPMENT & MANAGEMENT DOCUMENTS

REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:

RAW LAND

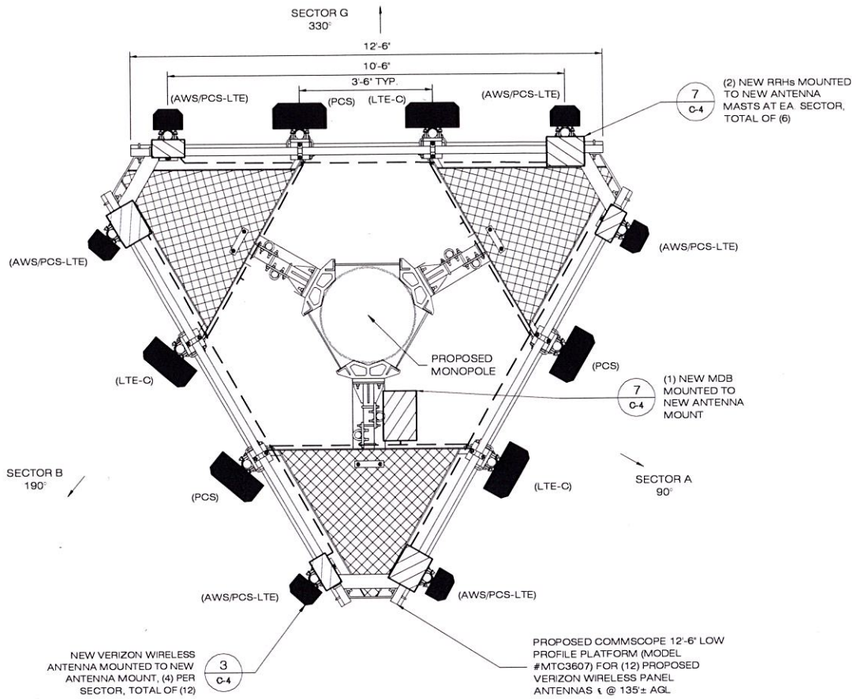
REVISIONS:

- REV.0: 08/11/15: FOR REVIEW: SMC
- REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
- REV.2: 12/02/15: TOWER REVISIONS: SMC
- REV.3: 12/10/15: TEMP TOWER REVS: SMC
- REV.4:
- REV.5:

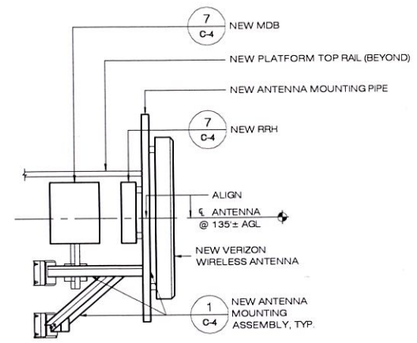
VZW EQUIP. SHELTER PLAN & DETAILS

APT FILING NUMBER: CT-242-310
APT DRAWING NUMBER: CT-505 C-3
DRAWN BY: RCB
SCALE: AS NOTED
CHECKED BY: SMC
DATE: 08/03/15

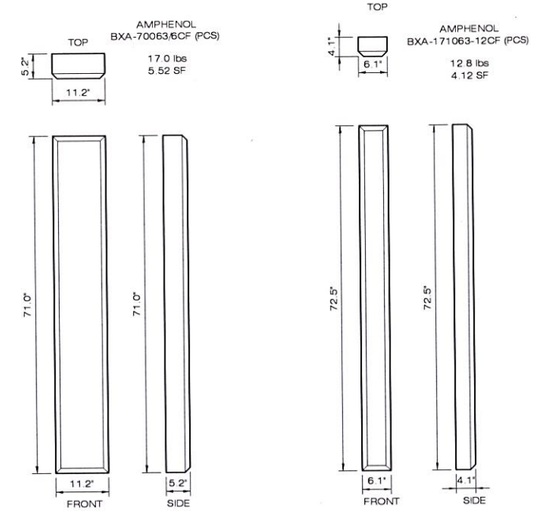
SHEET NUMBER: **C-3**



1 C-4 ANTENNA PLAN
SCALE : NTS



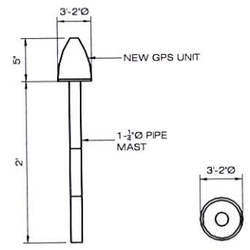
2 C-4 ANTENNA MOUNTING DETAIL
SCALE : NTS



3 C-4 TYPICAL PANEL ANTENNA
SCALE : NTS

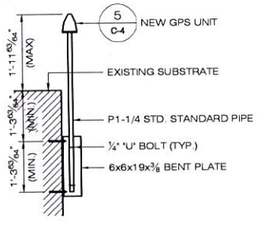
NOTES:
1. ALL EXPOSED UNISTRUT ENDS TO BE CAPPED WITH UNISTRUT CAP (MODEL #P2860-10)
2. ONLY 1-5/8" UNISTRUT TO BE USED FOR RACK CONSTRUCTION.
3. EXTEND UNISTRUT AS NEEDED BASED ON LENGTH OF ANTENNA SECTOR. DO NOT CANTILEVER UNISTRUT FOR MORE THAN 24" BEYOND ANTENNA MAST.
4. FOR SPANS GREATER THAN 5'-0" USE UNISTRUT PART #P1001

4 C-4 RRH EQUIPMENT ANTENNA MOUNT
SCALE : ½" = 1'-0"

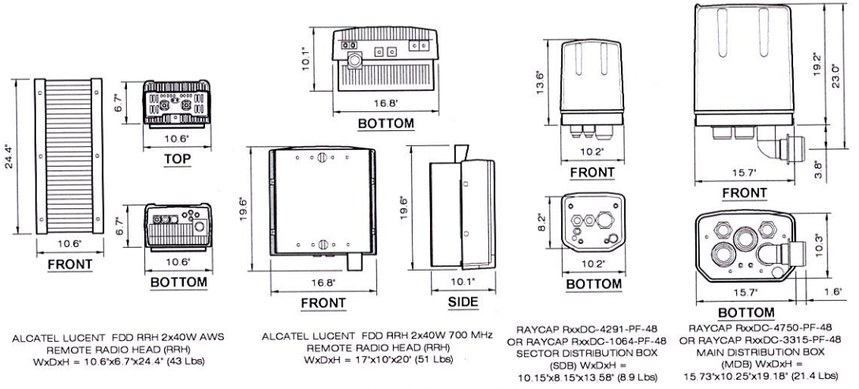


FOR MOUNT - SEE 6/C-4

5 C-4 TYPICAL GPS DETAILS
SCALE : NTS

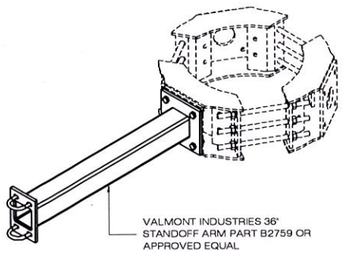


6 C-4 GPS UNIT MOUNT
SCALE : N.T.S.

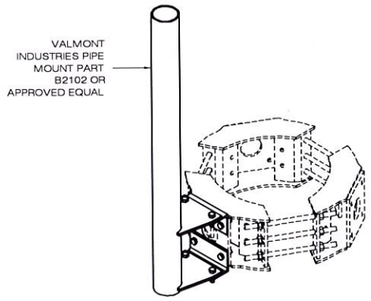


7 C-4 RRH EQUIPMENT
SCALE : 1" = 1'-0"

MCM SITE NAME: REDDING RIDGE CT505 APT FILING NUMBER: CT-242-310	DEVELOPMENT & MANAGEMENT DOCUMENTS REDDING RIDGE 186 BLACK ROCK TURNPIKE REDDING, CT 06896	VZW ANTENNA PLAN & DETAILS
MESSAGE CENTER MANAGEMENT 40 WOODLAND STREET HARTFORD, CT 06105 OFFICE: (888) 973-7483 MCM	DESIGN TYPE: RAW LAND	APT FILING NUMBER: CT-242-310 APT DRAWING NUMBER: CT-505 C-4 DRAWN BY: RCB / SCALE: AS NOTED CHECKED BY: SMC / DATE: 08/03/15
ALL-POINTS TECHNOLOGY CORPORATION 3 SADDLEBROOK DRIVE KILLINGWORTH, CT 06419 WWW.ALLPOINTSTECH.COM PHONE: (860)-663-1697 FAX: (860)-663-0935	REVISIONS: REV.0: 08/11/15: FOR REVIEW: SMC REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC REV.2: 12/02/15: TOWER REVISIONS: SMC REV.3: 12/10/15: TEMP TOWER REVS: SMC REV.4: REV.5:	SHEET NUMBER: C-4



1 C-5 3' SIDEARM ANTENNA MOUNT
SCALE : NTS



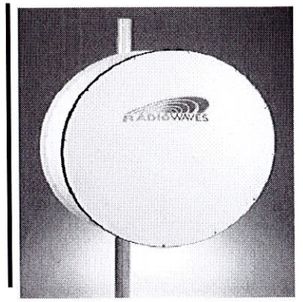
2 C-5 MICROWAVE DISH MOUNT
SCALE : NTS

RADIOWAVES
THE LEADER IN MICROWAVE ANTENNA INNOVATION

High Performance Series for 4.4-5.0 GHz Frequencies

Key Features

- High Performance antennas minimize interference as they have more stringent radiation side lobe and front-to-back suppression characteristic
- Lightweight and rugged design
- Easily installed with our superior mounting system included with the antenna
- RF connector: "N" female connector. Some models are available with 7/16 DIN Connector. Please call the factory for availability
- Our industry leading 5-year warranty
- Radome is included
- Single (HP) and Dual (HPD) polarization are available



Antenna Specifications, Electrical (typical)

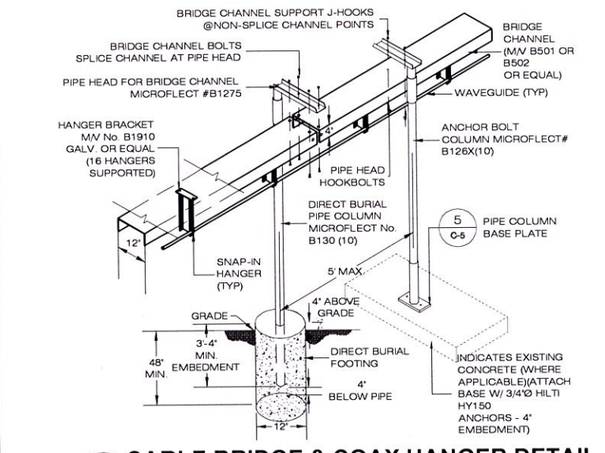
Model Number	Diameter ft. (m)	Frequency GHz	Gain (dBi) Low	Mid	High	3dB BW degs	X-Pol Rejection. dB	F/B Ratio dB	VSWR, Max (R.L., dB)	Antenna Weight
HP2-4.7	2 (0.6)	4.4-5.0	25.8	26.4	29.8	7.1 deg	28 dB	48 dB	1.5:1 (14.0)	27 lbs. (12.3 kg)
HP3-4.7	3 (0.9)	4.4-5.0	29.2	29.8	30.3	4.7 deg	30 dB	52 dB	1.5:1 (14.0)	50 lbs. (22.7 kg)
HP4-4.7	4 (1.2)	4.4-5.0	31.8	32.4	32.8	3.6 deg	30 dB	54 dB	1.5:1 (14.0)	85 lbs. (38.3 kg)
HP6-4.7	6 (1.8)	4.4-5.0	34.8	35.4	35.3	2.6 deg	30 dB	57 dB	1.5:1 (14.0)	251 lbs. (113.6 kg)
HP8-4.7	8 (2.4)	4.4-5.0	48.2	38.8	39.3	1.8 deg	30 dB	61 dB	1.5:1 (14.0)	424 lbs. (194.5 kg)
HPD2-4.7	2 (0.6)	4.4-5.0	25.8	26.4	26.9	7.1 deg	28 dB	48 dB	1.5:1 (14.0)	27 lbs. (12.3 kg)
HPD3-4.7	3 (0.9)	4.4-5.0	29.2	29.8	30.3	4.7 deg	30 dB	52 dB	1.5:1 (14.0)	50 lbs. (22.7 kg)
HPD4-4.7	4 (1.2)	4.4-5.0	31.8	32.4	32.8	3.6 deg	30 dB	54 dB	1.5:1 (14.0)	85 lbs. (38.3 kg)
HPD6-4.7	6 (1.8)	4.4-5.0	34.8	35.4	35.9	2.6 deg	30 dB	57 dB	1.5:1 (14.0)	251 lbs. (113.0 kg)
HPD8-4.7	8 (2.4)	4.4-5.0	38.2	38.8	39.3	1.8 deg	30 dB	61 dB	1.5:1 (14.0)	424 lbs. (194.5 kg)

Note: LMR jumpers and Side Struts available from Radio Waves

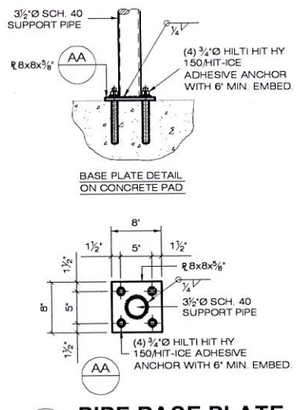
Radio Waves, Inc. • 495 R Billerica Avenue • N. Billerica, MA. 01862 USA • Tel: (978) 459-8800 • Fax: (978) 459-3310 / 8810
www.radiowavesinc.com

HPX4.7 Rev. A

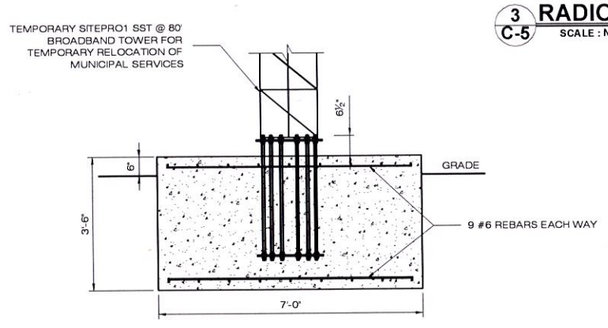
3 C-5 RADIOWAVES HFD2-4.7 ANTENNA
SCALE : NTS



4 C-5 CABLE BRIDGE & COAX HANGER DETAIL
SCALE : NTS



5 C-5 PIPE BASE PLATE
SCALE : N.T.S.



NOTES:
1. THE DESIGN ASSUMES A SOFT/LOOSE SOIL EXHIBITING THE FOLLOWING PROPERTIES: ALLOWABLE BEARING PRESSURE OF 2000 PSF, A SOIL UNIT WEIGHT OF 100 PCF, COEFFICIENT OF BASE SLIDING FRICTION OF 0.20, AND NO GROUNDEATER ENCOUNTERED.

2. REINFORCING BAR TO CONFORM TO ASTM A615 GRADE 60 SPECIFICATIONS. A MINIMUM OF 3 INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT.

3. CONCRETE INSTALLATION TO CONFORM TO ACI-318 (2002) BUILDING REQUIREMENTS FOR REINFORCED CONCRETE. ALL CONCRETE TO BE PLACED AGAINST UNDISTURBED EARTH FREE OF WATER AND ALL FOREIGN OBJECTS AND MATERIALS. A MINIMUM OF 3 INCHES OF CONCRETE SHALL COVER ALL REINFORCEMENT. MINIMUM 28-DAY COMPRESSION STRENGTH OF CONCRETE SHALL BE 3000 PSI.

4. FOUNDATION MUST BEAR AT OR BELOW LOCAL FROST DEPTH FOR UNHEATED STRUCTURES.

6 C-5 TEMPORARY TOWER FOUNDATION
SCALE : ½" = 1'-0"

DESIGN LOAD CRITERIA

EQUIPMENT SHELTER SHALL BE DESIGNED AND MANUFACTURED TO MEET ALL STATE AND LOCAL CODES. ITS LAYOUT SHALL BE COORDINATED WITH CARRIERS.

DESIGN BASIS	CONNECTICUT STATE
GOVERNING CODE	BUILDING CODE
DESIGN LIVE LOADS	40 PSF (ASCE 7-02)
IMPORTANCE CATEGORY	II
SNOW LOAD:	
GROUND SNOW LOAD (Pg)	30 PSF
IMPORTANCE FACTOR	1.0
EXPOSURE FACTOR (Ce)	0.9
THERMAL FACTOR (Ct)	1.0
WIND LOAD:	
BASIC WIND LOAD	100 MPH (3 SEC. GUST)
EXPOSURE GROUP	C
IMPORTANCE FACTOR	1.0
SHELTER LOAD:	
FLOOR LIVE LOAD INCLUDING EQUIPMENT	250 PSF
EQUIPMENT SHELTER DL	24,500 LBS
SEISMIC DESIGN PARAMETERS:	
SEISMIC USE GROUP	II
MCE SPECTRAL ACCELERATION SHORT (Sa)	0.288
MCE SPECTRAL ACCELERATION SHORT (Si)	0.066
SITE CLASS	D FOR UNKNOWN SOIL PROPERTIES
IMPORTANCE FACTOR	1.0

MCM SITE NAME:
REDDING RIDGE CT505

APT FILING NUMBER:
CT-242-310

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105
OFFICE: (888) 973-7483
MCM

ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
WWW.ALLPOINTSTECH.COM
PHONE: (860)-663-1697
FAX: (860)-663-0935

DEVELOPMENT & MANAGEMENT DOCUMENTS
REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

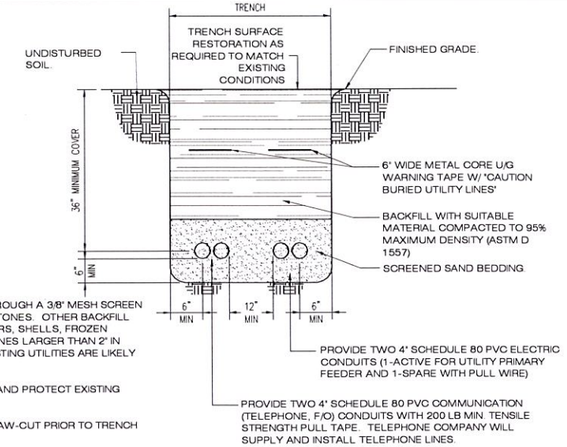
DESIGN TYPE:
RAW LAND

REVISIONS:
- REV.0: 08/11/15: FOR REVIEW: SMC
- REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
- REV.2: 12/02/15: TOWER REVISIONS: SMC
- REV.3: 12/10/15: TEMP TOWER REVS: SMC
- REV.4:
- REV.5:

TOWN ANTENNA PLAN & DETAILS

APT FILING NUMBER: CT-242-310
APT DRAWING NUMBER: CT-505 'C-5'
DRAWN BY: RCB
CHECKED BY: SMC
SCALE: AS NOTED
DATE: 08/03/15

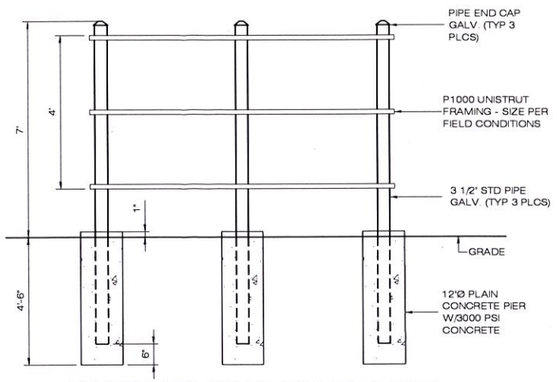
SHEET NUMBER:
C-5



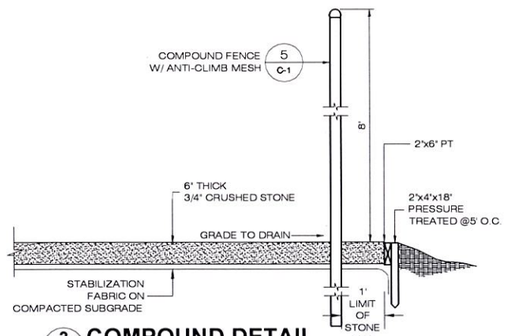
NOTES:

1. THE CLEAN FILL SHALL PASS THROUGH A 3/8" MESH SCREEN AND SHALL NOT CONTAIN SHARP STONES. OTHER BACKFILL SHALL NOT CONTAIN ASHES, CINDERS, SHELLS, FROZEN MATERIAL, LOOSE DERBIES OR STONES LARGER THAN 2" IN MAXIMUM DIMENSION. WHERE EXISTING UTILITIES ARE LIKELY TO BE ENCOUNTERED.
2. CONTRACTOR SHALL HAND DIG AND PROTECT EXISTING UTILITIES.
3. EXISTING PAVEMENT SHALL BE SAW-CUT PRIOR TO TRENCH EXCAVATION.

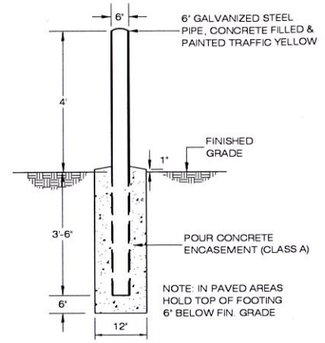
1 S-1 PRIMARY UTILITY TRENCH
SCALE : NTS



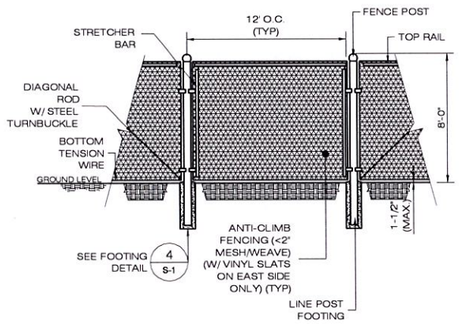
2 S-1 UTILITY BACKBOARD DETAIL
SCALE : NTS



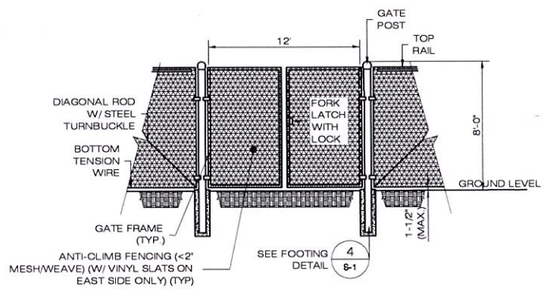
3 S-1 COMPOUND DETAIL
SCALE : NTS



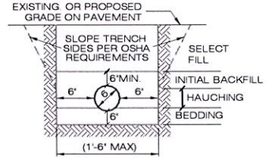
4 S-1 BOLLARD DETAIL
SCALE : NTS



5 S-1 CHAIN-LINK FENCING DETAIL
SCALE : NTS

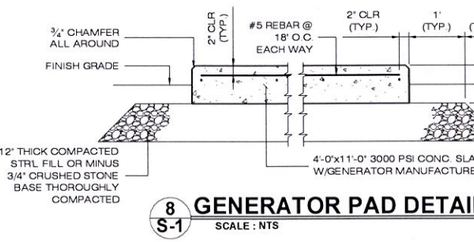


6 S-1 FENCE & GATE DETAIL
SCALE : N.T.S.

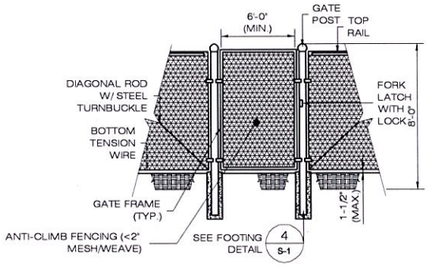


1. BEDDING SHALL BE COMPACTED CRUSHED STONE AND SHALL BE SHAPED TO THE BOTTOM OF THE PIPE.
2. HAUNCHING AND INITIAL BACKFILL MATERIAL AND SHALL BE COMPACTED. MATERIAL SHALL BE CLASS I OR II (REF ASTM D2321) GRANULAR TO 95% STANDARD PROCTOR.
3. SELECT FILL SHALL BE SELECT MATERIAL FREE OR LARGE ROCKS (3"+) AND SHALL BE PLACED IN 8" MAX. LOOSE LIFTS AND COMPACTED TO 95% STANDARD PROCTOR.

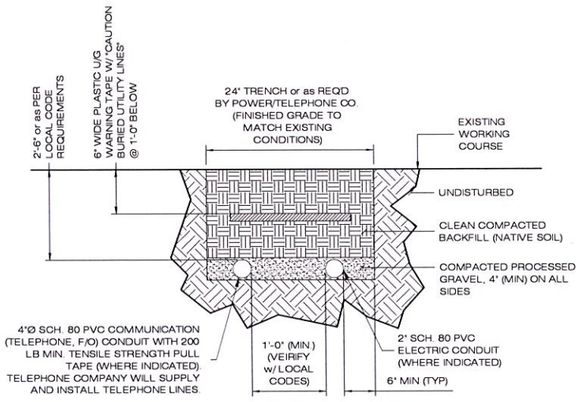
7 S-1 PVC TRENCH SECTION
SCALE : N.T.S.



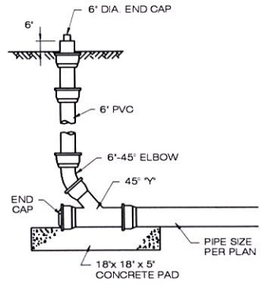
8 S-1 GENERATOR PAD DETAIL
SCALE : NTS



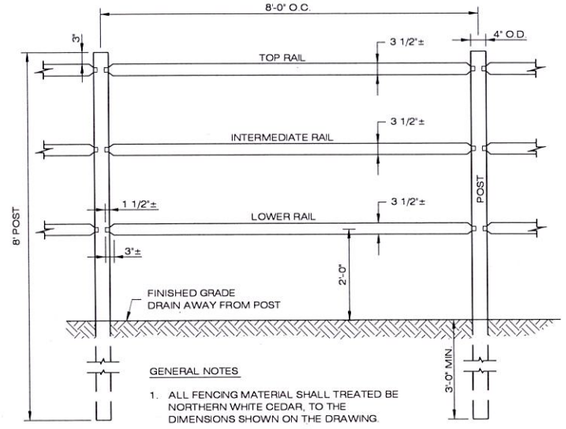
12 S-1 MAN GATE DETAIL
SCALE : NTS



9 S-1 SECONDARY TRENCH DETAIL
SCALE : N.T.S.



10 S-1 DRAINAGE CLEAN-OUT
SCALE : N.T.S.



GENERAL NOTES

1. ALL FENCING MATERIAL SHALL TREATED BE NORTHERN WHITE CEDAR, TO THE DIMENSIONS SHOWN ON THE DRAWING.
2. ALL POSTS SHALL BE INSTALLED PARALLEL AND PLUMB. ALL RAILS SHALL BE INSTALLED PARALLEL AND TRUE.

11 S-1 SPLIT RAIL FENCE
SCALE : N.T.S.

MCM SITE NAME: REDDING RIDGE CT505
APT FILING NUMBER: CT-242-310

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
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DEVELOPMENT & MANAGEMENT DOCUMENTS
REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

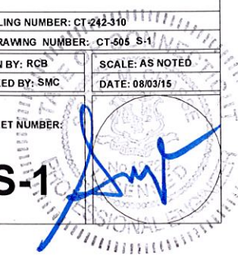
DESIGN TYPE:
RAW LAND

REVISIONS:
REV.0: 08/11/15: FOR REVIEW: SMC
REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
REV.2: 12/02/15: TOWER REVISIONS: SMC
REV.3: 12/10/15: TEMP TOWER REVS: SMC
REV.4:
REV.5:

COMPOUND DETAILS

APT FILING NUMBER: CT-242-310
APT DRAWING NUMBER: CT-505 S-1
DRAWN BY: RCB
SCALE: AS NOTED
CHECKED BY: SMC
DATE: 08/03/15

SHEET NUMBER: S-1



ENVIRONMENTAL NOTES:

WETLAND AND PUBLIC WATER SUPPLY WATERSHED PROTECTION PROGRAM

Portions of the proposed MCM Redding Ridge Facility's compound are located in close proximity (±53 feet) to a wetland area. In addition, the MCM Redding Ridge Facility is located within the public water supply watershed of the Hemlock Reservoir and active source of public drinking water maintained by the Aquarion Water Company (PWSID #CT0150011). As a result, the following protective measures shall be followed to help avoid degradation of the nearby wetland system or water quality that could affect this public water supply watershed. These protective measures satisfy recommendations from the Drinking Water Section ("DWS") of the Department of Public Health as specified in a June 27, 2014 letter and Conditon No. 3 of the Connecticut Siting Council's Decision and Order (Docket No. 449) dated October 30, 2014.

It is of the utmost importance that the Contractor complies with the requirement for the installation of protective measures and the education of its employees and subcontractors performing work on the project site. These measures will also provide protection to a nearby wetland system. This protection program shall be implemented regardless of time of year the construction activities occur. All-Points Technology Corporation, P.C. ("APT") will serve as the Environmental Monitor for this project to ensure that wetland protection measures are implemented properly. The Contractor shall contact Dean Gustafson, Senior Environmental Scientist at APT and Aquarion Water Company personnel, at least 5 business days prior to the pre-construction meeting. Mr. Gustafson can be reached by phone at (860) 663-1697 ext. 201 or via email at dgustafson@allpointstech.com.

The wetland and public water supply watershed protection program consists of several components: use of appropriate erosion control measures to control and contain erosion while avoiding/minimizing wildlife entanglement, periodic inspection and maintenance of isolation structures and erosion control measures; education of all contractors and sub-contractors prior to initiation of work on the site; protective measures; and, reporting.

1. Erosion and Sedimentation Controls
   a. Plastic netting used in a variety of erosion control products (i.e., erosion control blankets, fiber rolls [wattles], reinforced silt fence) has been found to entangle wildlife, including reptiles, amphibians, birds and small mammals. No permanent erosion control products or reinforced silt fence will be used on the MCM project. Temporary Erosion control products will use either erosion control blankets and fiber rolls composed of processed fibers mechanically bound together to form a continuous matrix (net less) or netting composed of planar woven natural biodegradable fiber to avoid/minimize wildlife entanglement.
   b. Installation of erosion control measures (i.e., conventional silt fencing, straw bales, straw wattles, compost filter socks, etc.) shall be performed by the Contractor prior to any earthwork. APT will inspect the work zone following erosion control barrier installation to ensure erosion controls are properly installed prior to the start of earthwork.
   c. All erosion controls materials and installation/maintenance methods shall follow the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (DEP Bulletin 34), as amended. The Contractor is responsible for daily inspections of erosion control measures for tears or breeches in the fabric/material and accumulation levels of sediment, particularly following storm events of 0.10 inch or greater. APT will provide periodic inspections of the erosion control measures throughout the duration of construction activities, generally on a biweekly frequency or more frequently if site conditions warrant.
   d. The extent of the erosion control barriers will be as shown on the site plans. The Contractor shall have additional erosion control materials stockpiled on site should field conditions warrant extending/reinforcing erosion control barriers as directed by APT or other responsible agencies.
   e. All silt fencing and other erosion control devices shall be removed within 30 days of completion of work and permanent stabilization of site soils so that reptile and amphibian movement between uplands and wetlands is not restricted. If fiber rolls/wattles, straw bales, or other natural material erosion control products are used, such devices will not be left in place to biodegrade and shall be promptly removed after soils are stable so as not to create a barrier to migrating wildlife. Seed from seeding of soils should not spread over fiber rolls/wattles as it makes them harder to remove once soils are stabilized by vegetation.

2. Contractor Education
   a. Prior to work on site, the Contractor shall attend an educational session at the pre-construction meeting with APT. This orientation and educational session will consist of an introductory meeting with APT to understand the environmentally sensitive nature of the development site and the need to follow Protective Measures as described in Section 3 below.
   b. The Contractor will be provided with cell phone and email contacts for Aquarion Water Company personnel to immediately report any releases of sediment or fuel or hazardous material releases.

3. Petroleum Materials Storage and Spill Prevention
   a. Certain precautions are necessary to store petroleum materials, refuel and contain and properly clean up any inadvertent fuel or petroleum (i.e., oil, hydraulic fluid, etc.) spill due to the projects location in proximity to sensitive wetlands and within the Hemlock Reservoir public water supply watershed.
   b. A spill containment kit consisting of a sufficient supply of absorbent pads and absorbent material will be maintained by the Contractor at the construction site throughout the duration of the project. In addition, a waste drum will be kept on site to contain any used absorbent pads/material for proper and timely disposal off site in accordance with applicable local, state and federal laws.
   c. The following petroleum and hazardous materials storage and refueling restrictions and spill response procedures will be adhered to by the Contractor.

      i. Petroleum and Hazardous Materials Storage and Refueling
         1. Refueling of vehicles or machinery shall occur a minimum of 100 feet from wetlands or watercourses and shall take place on an impervious pad with secondary containment designed to contain fuels.
         2. Any fuel or hazardous materials that must be kept on site shall be stored on an impervious surface utilizing secondary containment a minimum of 100 feet from wetlands or watercourses.

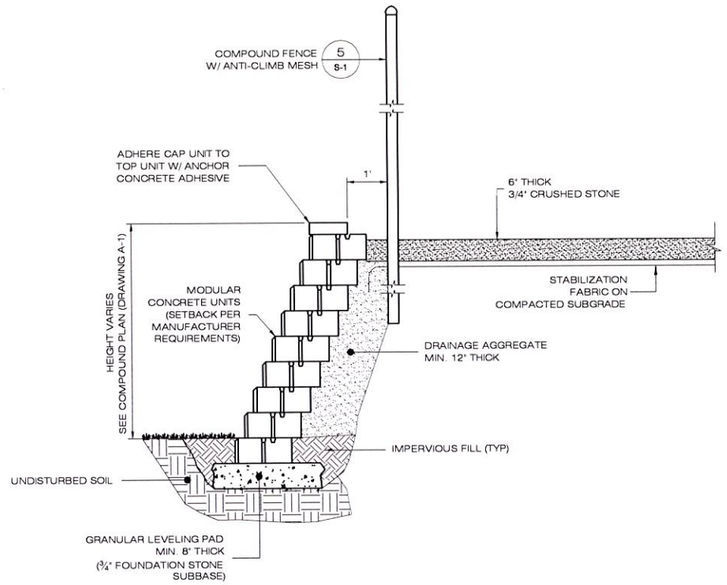
      ii. Initial Spill Response Procedures
         1. Stop operations and shut off equipment.
         2. Remove any sources of spark or flame.
         3. Contain the source of the spill.
         4. Determine the approximate volume of the spill.
         5. Identify the location of natural flow paths to prevent the release of the spill to sensitive nearby waterways or wetlands.
         6. Ensure that fellow workers are notified of the spill.

      iii. Spill Clean Up & Containment
         1. Obtain spill response materials from the on-site spill response kit. Place absorbent materials directly on the release area.
         2. Limit the spread of the spill by placing absorbent materials around the perimeter of the spill.
         3. Isolate and eliminate the spill source.
         4. Contact Aquarion Water Company personnel and Connecticut Siting Council along with other appropriate local, state and/or federal agencies, as necessary.
         5. Contact a disposal company to properly dispose of contaminated materials.

      iv. Reporting
         1. Complete an incident report.
         2. Submit a completed incident report to Aquarion Water Company and the Connecticut Siting Council.

4. Herbicide and Pesticide Restrictions
   a. The use of herbicides and pesticides at the proposed wireless telecommunications facility is strictly prohibited.

5. Reporting
   a. Monthly inspection reports (brief narrative and applicable photos) will be submitted to the Connecticut Siting Council for compliance verification.
   b. Any significant releases of sediment (e.g., impacting the nearby wetlands) will be reported to the Connecticut Siting Council and Aquarion Water Company within 24 hours.



1 S-2 TYPICAL RETAINING WALL SECTION

SCALE : NTS

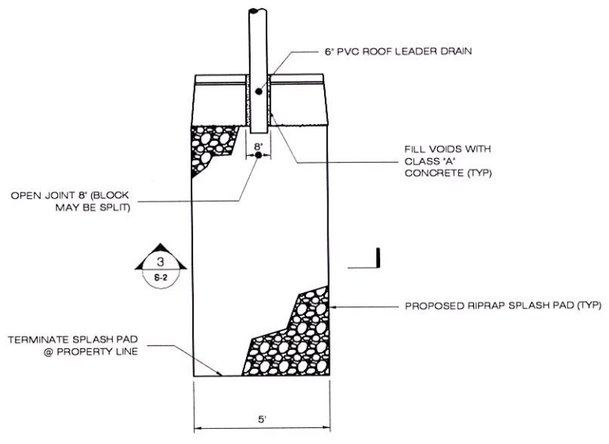
GENERAL NOTES:

1. STRIP ALL VEGETATION AND ORGANIC SOIL FROM THE WALL ALIGNMENT.
2. BENCH CUT ALL EXCAVATED SLOPES.
3. DO NOT OVER EXCAVATE UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.
4. SITE SOIL ENGINEER SHALL VERIFY FOUNDATION SOILS AS BEING COMPETENT PER THE DESIGN STANDARDS AND PARAMETERS.
5. LEVELING PAD SHALL CONSIST OF 3/4" FOUNDATION STONE, MINIMUM 8" THICK, OR 3,000 PSI CONCRETE.
6. CONTRACTOR MAY OPT FOR A CONCRETE FOOTING. CONCRETE FOOTING SHALL BE UNREINFORCED, DEPTH OF CONCRETE TO BE A MINIMUM THICKNESS OF 6".
7. MINIMUM EMBEDMENT OF WALL BELOW FINISH GRADE SHALL BE 16" FOR WALL HEIGHTS FROM 4' AND UP TO 10', 8" FOR HEIGHTS BELOW 4' UNLESS SHOWN DIFFERENTLY.
8. FOLLOW APPLICABLE PROVISIONS OF THE MANUFACTURERS INSTALLATION INSTRUCTIONS AND WRITTEN SPECIFICATIONS.
9. COMPACTION TESTS SHALL BE TAKEN AS THE WALL IS INSTALLED. THE MINIMUM NUMBER OF TESTS SHALL BE DETERMINED BY THE SITE SOILS ENGINEER, OR AS INDICATED IN THE SPECIFICATION.
10. COMPACTION SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D-1557.
11. ESTABLISH TURF AS SOON AS THE WALL IS COMPLETED.
12. FINAL WALL ALIGNMENT SHALL BE LOCATED IN THE FIELD.
13. REINFORCED BACK FILL REQUIREMENTS FOR THE SEGMENTAL CONCRETE RETAINING WALL SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

SIEVE SIZE	PERCENT PASSING REINFORCED BACK FILL
2 INCH	100
NO. 4	40-85
NO. 10	25-75
NO. 40	15-50
NO. 100	10-40
NO. 200	4-12

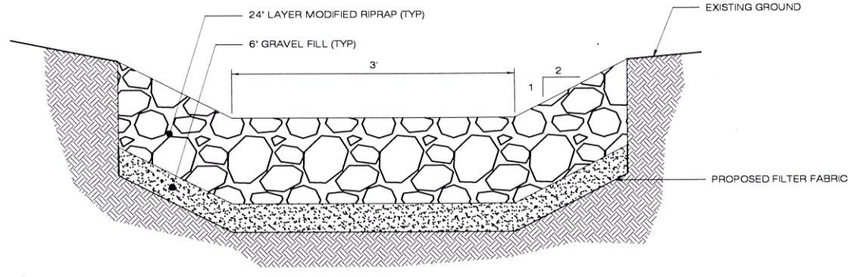
PLASTICITY INDEX (PI) LESS THAN OR EQUAL TO 10 AND A LIQUID LIMIT LESS THAN OR EQUAL TO 40. REINFORCED BACK FILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES. REINFORCED BACK FILL SHALL BE COMPACTED TO 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM-1557. THE MOISTURE CONTENT OF THE BACK FILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE WITHIN 2 PERCENTAGE POINTS OF DRY OPTIMUM.

IF CONDITIONS ARE DIFFERENT THAN THOSE STATED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR MUST CONTACT THE ENGINEER PRIOR TO PROCEEDING WITH THE CONSTRUCTION OF THE WALL.



2 S-2 DRAINAGE OUTLET DETAIL

SCALE : NTS



3 S-2 RIPRAP SPLASHPAD SECTION

SCALE : NTS

MCM SITE NAME: REDDING RIDGE CT505

APT FILING NUMBER: CT-242-310

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105
OFFICE: (888) 973-7483

MCM

DEVELOPMENT & MANAGEMENT DOCUMENTS

REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:

RAW LAND

REVISIONS:

REV.0: 08/11/15: FOR REVIEW: SMC
REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
REV.2: 12/02/15: TOWER REVISIONS: SMC
REV.3: 12/10/15: TEMP TOWER REVS: SMC
REV.4:
REV.5:

ALL-POINTS TECHNOLOGY CORPORATION

3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
WWW.ALLPOINTSTECH.COM

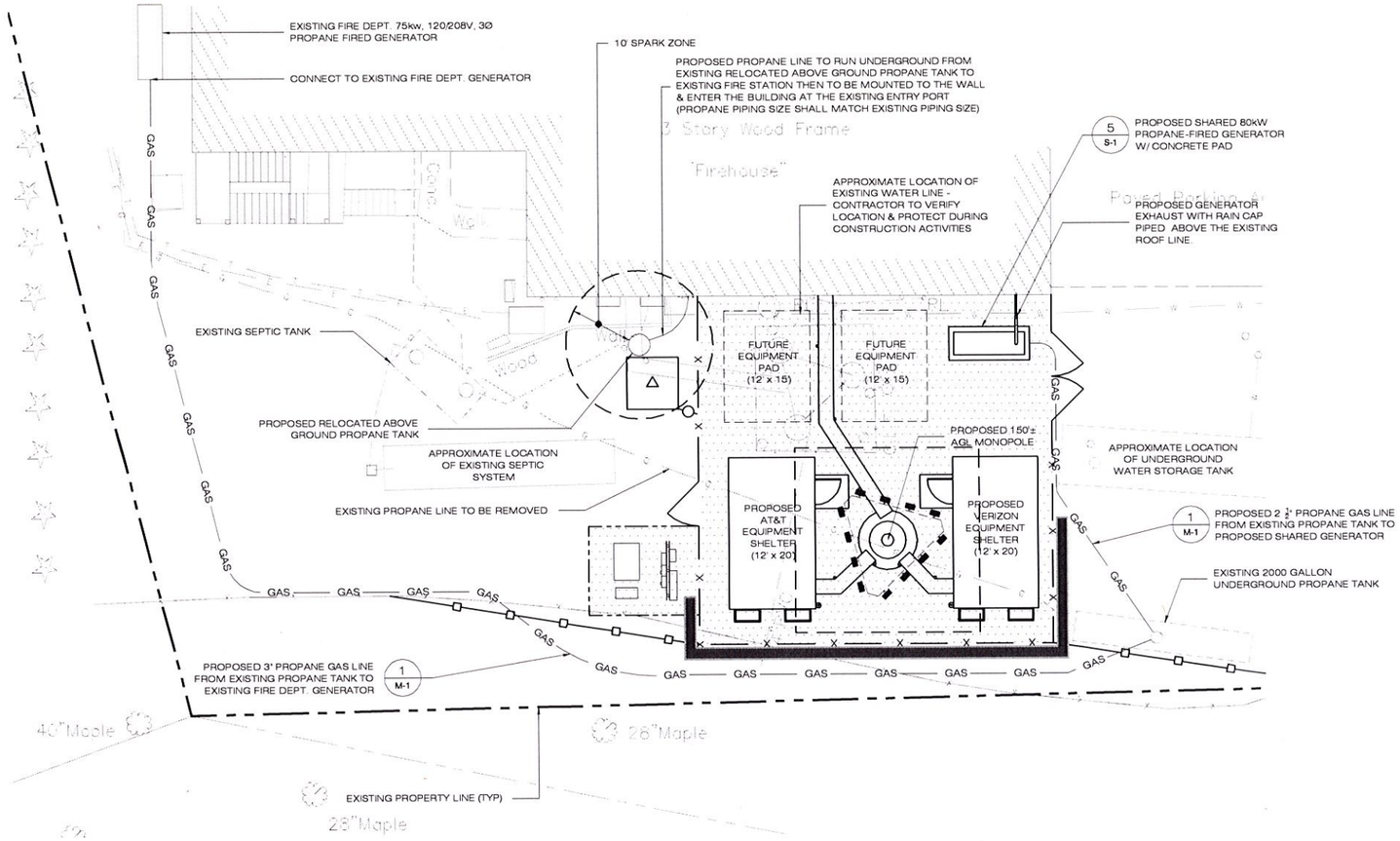
PHONE: (860)-663-1697
FAX: (860)-663-0935

COMPOUND DETAILS & ENVIRONMENTAL NOTES

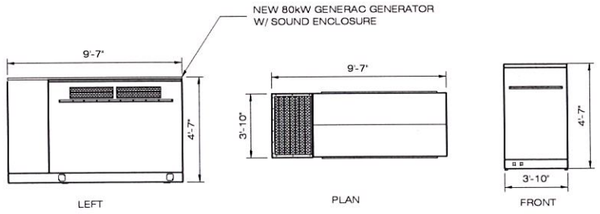
APT FILING NUMBER: CT-242-310
APT DRAWING NUMBER: CT-505 S-2
DRAWN BY: RCB
SCALE: AS NOTED
CHECKED BY: SMC
DATE: 08/03/15

SHEET NUMBER:

S-2

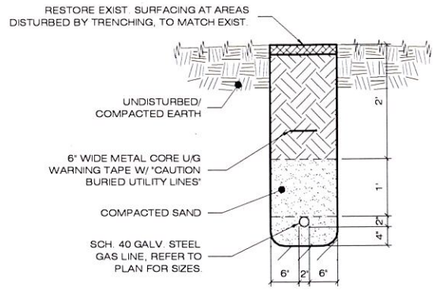


GAS ROUTING PLAN
SCALE : 1" = 10'-0"

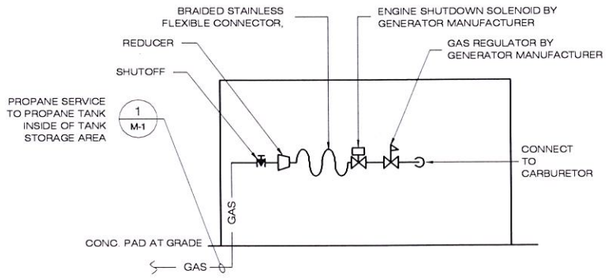


FOR GENERATOR PAD, SEE 8/S-1

5 M-1 80KW PROPANE GENERATOR
SCALE : NTS

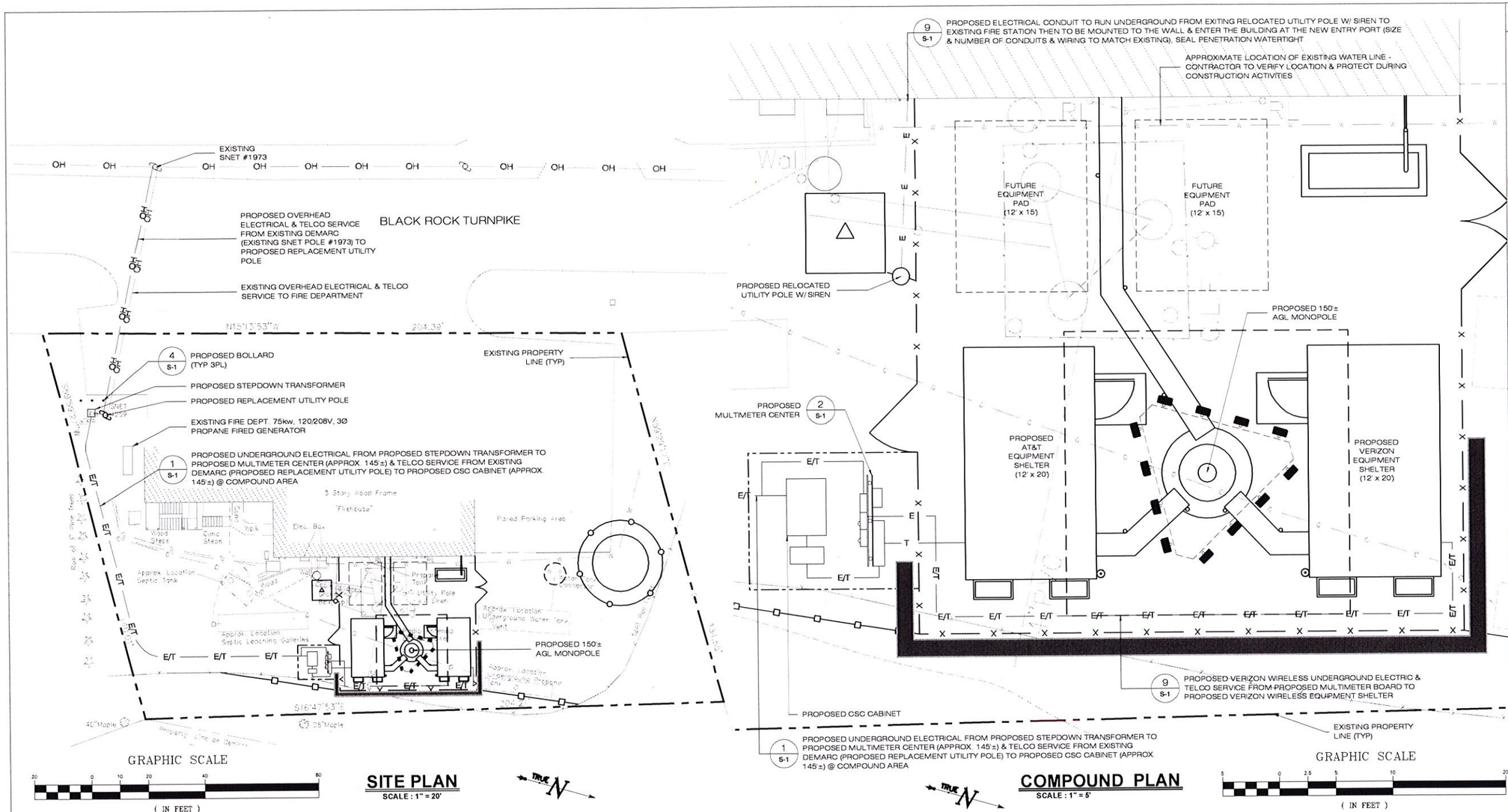


1 M-1 PROPANE GAS TRENCH
SCALE : N.T.S.



2 M-1 GENERATOR CONNECTION DETAIL
SCALE : NTS

MCM SITE NAME: REDDING RIDGE CT505 APT FILING NUMBER: CT-242-310	DEVELOPMENT & MANAGEMENT DOCUMENTS REDDING RIDGE 186 BLACK ROCK TURNPIKE REDDING, CT 06896	MECHANICAL PLAN & DETAILS
MESSAGE CENTER MANAGEMENT 40 WOODLAND STREET HARTFORD, CT 06105 OFFICE: (888) 973-7483 MCM	DESIGN TYPE: RAW LAND	APT FILING NUMBER: CT-242-310 APT DRAWING NUMBER: CT-505 M-1 DRAWN BY: RCB / SCALE: AS NOTED CHECKED BY: SMC / DATE: 08/03/15
ALL-POINTS TECHNOLOGY CORPORATION 3 SADDLEBROOK DRIVE, KILLINGWORTH, CT 06419 WWW.ALLPOINTSTECH.COM PHONE: (860)-663-1697 FAX (860)-663-0935	REVISIONS: REV.0: 08/11/15: FOR REVIEW: SMC REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC REV.2: 12/02/15: TOWER REVISIONS: SMC REV.3: 12/10/15: TEMP TOWER REVS: SMC REV.4: REV.5:	SHEET NUMBER: M-1



ELECTRICAL LEGEND

U.O.N.	UNLESS OTHERWISE NOTED		NEW PANEL BOARD, SURFACE MOUNTED
WP	WEATHERPROOF		EXISTING PANEL BOARD, SURFACE MOUNTED
GFI	GROUND FAULT INTERRUPTER	T	DRY TYPE TRANSFORMER
A	AMPERE	M	METER
V	VOLT		CIRCUIT BREAKER
KWH	KILOWATT - HOUR		NON-FUSIBLE DISCONNECT SWITCH, MOUNTED 54' A.F.F.
C	CONDUIT	F	FUSIBLE DISCONNECT SWITCH, MOUNTED 54' A.F.F.
G	GROUND	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER W/ BUILT-IN FUSES, SURFACE MOUNTED
	GROUND		DUPLEX OUTLET, SURFACE MOUNTED, 20 AMPS, 125 VOLTS, SINGLE PHASE
MGB	MASTER GROUND BAR	J	JUNCTION BOX, SURFACE MOUNTED 18" A.F.F.
	1/4"x8"x24" COPPER		EXPOSED WIRING
EGB	EQUIPMENT GROUND BAR		HOME RUNS, MINIMUM 2#10 + 1#10G IN 3/4" CONDUIT U.O.N.
	¼"x4"x12" OR ¼"x4"x18" COPPER	A.F.F.	ABOVE FINISHED FLOOR
	GROUND COPPER WIRE, SIZE AS NOTED		
	EXPOSED WIRING		
	COAXIAL CABLE		
	5/8"x8' COPPER CLAD STEEL GROUND ROD		
	EXOTHERMIC (CADWELD) OR MECHANICAL (COMPRESSION TYPE) CONNECTION		

ELECTRICAL AND GROUNDING NOTES

1) ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS of THE NATIONAL ELECTRICAL CODE (NEC) as WELL as APPLICABLE STATE & LOCAL CODES
2) ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED & PROCURED PER SPECIFICATION REQUIREMENTS.
3) THE ELECTRICAL WORK INCLUDES ALL LABOR & MATERIAL DESCRIBED BY DRAWINGS & SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING & APPROVED ELECTRICAL SYSTEM.
4) GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, & IS RESPONSIBLE FOR OBTAINING SAID PERMITS & COORDINATION OF INSPECTIONS.
5) ELECTRICAL & TELCO WIRING OUTSIDE A BUILDING & EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS or SCHEDULE 80 PVC (as PERMITTED BY CODE) & WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL or NONMETALLIC CONDUITS.
6) BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7) ELECTRICAL WIRING SHALL BE COPPER w/ TYPE XHHW, THWN, or THHNINSULATION.
8) RUN ELECTRICAL CONDUIT or CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT & LESSEE/LICENSEE CELL SITE POWER PEDESTAL as INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION w/ UTILITY COMPANY.
9) RUN TELCO CONDUIT or CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT & LESSEE/LICENSEE CELL SITE TELCO CABINET & BTS CABINET as INDICATED ON THIS DRAWING PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE @ EACH END.
10) WHERE CONDUIT BETWEEN BTS & LESSEE/LICENSEE CELL SITE POWER PEDESTAL & BETWEEN BTS & LESSEE/LICENSEE CELL SITE TELCO SERVICE CABINET ARE UG USE PVC, SCH.40 CONDUIT. ABOVE THE GROUND PORTION of THESE CONDUITS SHALL BE PVC CONDUIT.
11) ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
12) POWER PEDESTAL SUPPLIED BY LESSEE/LICENSEE.
13) GROUNDING SHALL COMPLY w/ NEC ART. 250.
14) GROUND COAXIAL CABLE SHIELDS MINIMUM @ BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY LESSEE/LICENSEE.
15) USE #6 COPPER STRANDED WIRE w/ GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) & #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING as INDICATED ON THE DRAWING.
16) ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS or CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT w/ GALVANIZED STEEL.
17) ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST & STRAIGHTEST PATH POSSIBLE, EXCEPT as OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT @ RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT @ 8" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS w/IN 7 FEET of LESSEE/LICENSEE EQUIPMENT or CABINET TO MASTER GROUND BAR.
18) CONNECTIONS TO GROUND BARS SHALL BE MADE w/ TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
19) APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
20) BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, & ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
21) BOND ANTENNA EGBS & MGB TO GROUND RING.
22) TEST COMPLETED GROUND SYSTEM & RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.

MCM SITE NAME:
REDDING RIDGE CT505

APT FILING NUMBER:
CT-242-310

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DEVELOPMENT & MANAGEMENT DOCUMENTS
REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:
RAW LAND

REVISIONS:
- REV.0: 08/11/15: FOR REVIEW: SMC
- REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
- REV.2: 12/02/15: TOWER REVISIONS: SMC
- REV.3: 12/10/15: TEMP TOWER REVS: SMC
- REV.4:
- REV.5:

ELECTRICAL PLAN & DETAILS

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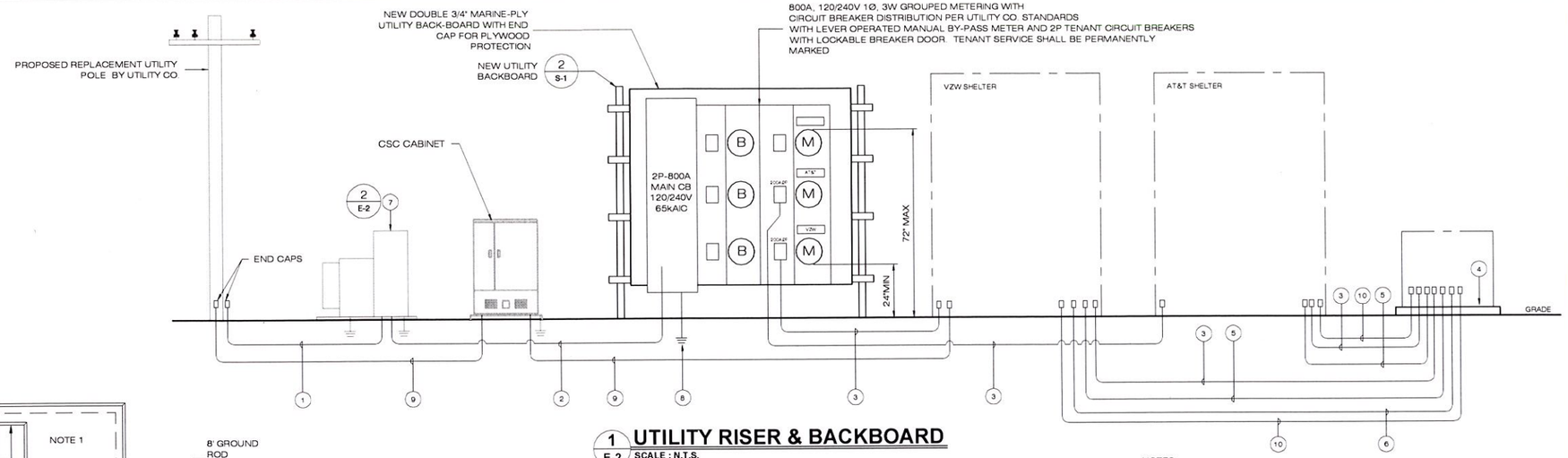
DATE: 08/03/15

SHEET NUMBER:
E-1



1 E-2 UTILITY RISER & BACKBOARD

SCALE : N.T.S.

NOTES:

(1) NEW PRIMARY ELECTRIC SERVICE. CONTRACTOR SHALL PROVIDE CONDUIT, PRIMARY CABLE PROVIDED BY UTILITY CO. (2) 4" SCHED. 40 PVC. WITH DRAG LINES (1-ACTIVE, 1-SPARE)

(2) (2) 4" SCHED. 80 PVC, 4 #600KCMIL EACH.

(3) 2" SCHED. 80 PVC CONDUIT WITH DRAG LINE TO NEW EQUIP. SHELTER.

(4) CONCRETE PAD FOR NEW PROPOSED 80KW/100KVA 120/240-1Ø 60HZ STAND-BY GENERATOR.

(5) 1" SCHED. 80 PVC WITH DRAG LINE FOR GENERATOR CONTROL WIRING.

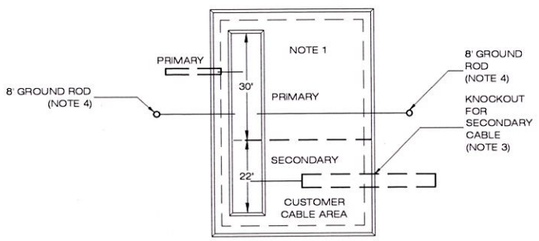
(6) 1" SCHED. 80 PVC WITH DRAG LINE FOR GENERATOR. GENERATOR CONVENIENCE RECEPTACLE, BLOCK HEATER AND CHARGER.

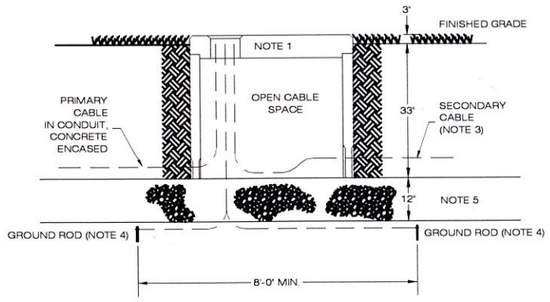
(7) NEW PAD-MOUNTED UTILITY TRANSFORMER PROVIDED BY UTILITY CO. PROVIDE NEW TRANSFORMER VAULT PER UTILITY COMPANY STANDARDS.

(8) #3/0 CU GND TO SHELTER GROUNDING ELECTRODE SYSTEM. GROUND AT SERVICE EQUIPMENT SHALL BE IN ACCORDANCE WITH NEC ARTICLE 250. GROUNDING ELECTRODE CONDUCTOR CONNECTION SHALL BE MADE AT AN ACCESSIBLE LOCATION IN SERVICE QUIPMENT AND NOT IN METER SOCKET. GROUNDING ELECTRODE CONDUCTOR SHALL NOT BE RUN THROUGH METER SOCKET.

(9) (2) 4" SCHED 40. PVC WITH 3/8" NYLON PULL ROPE.

(10) 3/4" SCHED. 40 PVC WITH DRAG LINE FOR ALARMS





NOTES

1. 75 - 300KVA - INSTALL 76"x54"x36" PAD AS PER SPC P-013 AND P-014.
   500-2500KVA - INSTALL 76"x70"x36" PAD AS PER SPC P-01.5 AND P-016.
   (COORDINATE REQUIRED PAD SIZE FOR PROJECT WITH UTILITY COMPANY)
2. PRIMARY CABLE: BY UTILITY COMPANY
3. SECONDARY CABLE: LEAVE SLACK FOR FUTURE RECONNECTING TO TRANSFORMERS WITH HIGHER SECONDARY TERMINALS. CUSTOMER CABLE(S) SHALL ENTER FROM THE REAR AND SHALL BE CONFINED TO THE AREA DEFINED AS THE "CUSTOMER CABLE AREA".
4. GALVANIZED GROUND RODS: INSTALL IN TRENCH AND CONNECT A #2 COPPER CONDUCTOR FROM ROD THROUGH PAD OPENING AND EXTENDING 5'-0" ABOVE PAD. GROUND RODS SHALL BE A MINIMUM OF 8' FROM EACH OTHER.
5. THE EXCAVATION FOR THE PAD SHALL BE CARRIED TO A DEPTH OF 12 INCHES BELOW THE BOTTOM OF THE PAD WALLS. THE BACKFILL UNDER THE PAD WALLS SHALL BE A CLEAN GRAVEL, FREE OF FOREIGN MATTER AND CONSTRUCTION DEBRIS, AND IN ACCORDANCE WITH CONNECTICUT DOT SPEC M.02.06 GRADING "A". BACKFILL SHALL BE PLACED IN 6 INCH LAYERS AND COMPACTED WITH MECHANICAL TAMPERS TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD COMPACTION TESTS, AASHTO T180 OR ASTM D698.
6. ALL WORK SHALL CONFORM TO NORTHEAST UTILITIES TRANSFORMER PAD INSTALLATION REQUIREMENTS. REFER TO NORTHEAST UTILITIES CONSTRUCTION STANDARD DTR 58.301 FOR ADDITIONAL INFORMATION.

2 E-2 UTILITY PAD TRANSFORMER DETAIL

SCALE : N.T.S.

ELECTRICAL LEGEND

U.O.N.	UNLESS OTHERWISE NOTED		NEW PANEL BOARD, SURFACE MOUNTED
WP	WEATHERPROOF		EXISTING PANEL BOARD, SURFACE MOUNTED
GFI	GROUND FAULT INTERRUPTER	T	DRY TYPE TRANSFORMER
A	AMPERE	M	METER
V	VOLT		CIRCUIT BREAKER
KWH	KILOWATT - HOUR		NON-FUSIBLE DISCONNECT SWITCH, MOUNTED 54" A.F.F.
C	CONDUIT	F	FUSIBLE DISCONNECT SWITCH, MOUNTED 54" A.F.F.
G	GROUND	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER w/ BUILT-IN FUSES, SURFACE MOUNTED
	GROUND		DUPLEX OUTLET, SURFACE MOUNTED, 20 AMPS, 125 VOLTS, SINGLE PHASE
MGB	MASTER GROUND BAR	J	JUNCTION BOX, SURFACE MOUNTED 18" A.F.F.
	1/4"x8"x24' COPPER		EXPOSED WIRING
EGB	EQUIPMENT GROUND BAR		HOME RUNS, MINIMUM 2#10 + 1#10G IN 3/4" CONDUIT U.O.N.
	¼"x4"x12' OR ¼"x4"x18' COPPER	A.F.F.	ABOVE FINISHED FLOOR
	GROUND COPPER WIRE, SIZE AS NOTED		
	EXPOSED WIRING		
	COAXIAL CABLE		
	5/8"x8' COPPER CLAD STEEL GROUND ROD		
	EXOTHERMIC (CADWELD) OR MECHANICAL (COMPRESSION TYPE) CONNECTION		

ELECTRICAL AND GROUNDING NOTES

1) ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS of THE NATIONAL ELECTRICAL CODE (NEC) as WELL as APPLICABLE STATE & LOCAL CODES
2) ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED & PROCURED PER SPECIFICATION REQUIREMENTS.
3) THE ELECTRICAL WORK INCLUDES ALL LABOR & MATERIAL DESCRIBED BY DRAWINGS & SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING & APPROVED ELECTRICAL SYSTEM.
4) GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, & IS RESPONSIBLE FOR OBTAINING SAID PERMITS & COORDINATION OF INSPECTIONS.
5) ELECTRICAL & TELCO WIRING OUTSIDE A BUILDING & EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS or SCHEDULE 80 PVC (as PERMITTED BY CODE) & WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL or NONMETALLIC CONDUITS.
6) BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.
7) ELECTRICAL WIRING SHALL BE COPPER w/ TYPE XHHW, THWN, or THHNINSULATION.
8) RUN ELECTRICAL CONDUIT or CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT & LESSEE/LICENSEE CELL SITE POWER PEDESTAL as INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION w/ UTILITY COMPANY.
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DEVELOPMENT & MANAGEMENT DOCUMENTS
REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:
RAW LAND

REVISIONS:
- REV.0: 08/11/15: FOR REVIEW: SMC
- REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
- REV.2: 12/02/15: TOWER REVISIONS: SMC
- REV.3: 12/10/15: TEMP TOWER REVS: SMC
- REV.4:
- REV.5:

ELECTRICAL DETAILS

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DRAWN BY: RCB
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DATE: 08/03/15

SHEET NUMBER
E-2

GENERAL NOTES:

1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL COMPLY WITH THE STANDARDS AND SPECIFICATIONS OF THE TOWN OF REDDING, AND OTHER GOVERNMENTAL AGENCIES, AS APPLICABLE.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL NECESSARY PERMITS BEFORE COMMENCING WORK. THE CONTRACTOR SHALL FOLLOW CONDITIONS OF ALL APPLICABLE PERMITS AND WORK IN ACCORD WITH OSHA REGULATIONS.

3. UTILITY INFORMATION SHOWN ON THE PLAN IS BASED ON VISIBLE FIELD EVIDENCE AND AVAILABLE RECORDS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO COMMENCING WORK. THE CONTRACTOR IS ADVISED THAT THESE DRAWINGS MAY NOT ACCURATELY DEPICT AS-BUILT LOCATIONS AND OTHER UNKNOWN STRUCTURES. THE CONTRACTOR SHALL THEREFORE DETERMINE THE EXACT LOCATION OF EXISTING UNDERGROUND ELEMENTS AND EXCAVATE WITH CARE AFTER CALLING MARKOUT SERVICE AT 1-800-922-4455 (72) HOURS BEFORE DIGGING, DRILLING OR BLASTING. CARE SHALL BE TAKEN NOT TO DISTURB EXISTING UTILITIES AND SERVICE CONNECTIONS (OR PORTIONS THERE OF) TO REMAIN. CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING STRUCTURES OR UTILITIES DAMAGED BY HIS OPERATIONS.

4. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF NEW SERVICE CONNECTIONS AND SHALL COORDINATE WORK WITH THE APPROPRIATE UTILITY COMPANY.

5. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, FIBER OPTIC, 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 THE ENGINEER.

6. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE, BUT NOT BE LIMITED TO:
   A) FALL PROTECTION,
   B) CONFINED SPACE ENTRY,
   C) ELECTRICAL SAFETY, AND
   D) TRENCHING & EXCAVATION.

7. ELECTRIC SERVICE SHALL BE COORDINATED WITH EVERSOURCE.

8. ALL ELEVATIONS SHOWN ARE IN N.G.V. DATUM 1929.

9. ALL RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

10. CONTRACTOR SHALL PROTECT EXISTING PAVED AND GRAVEL SURFACES, CURBS, LANDSCAPE AND STRUCTURES AND RESTORE SITE TO PRECONSTRUCTION CONDITION WITH AS GOOD, OR BETTER, MATERIALS. NEW MATERIALS SHALL MATCH EXISTING THICKNESS AND TYPE.

11. THE CONTRACTOR SHALL SHORE ALL TRENCH EXCAVATION GREATER THAN 5 FEET IN DEPTH OR LESS WHERE SOIL CONDITIONS ARE DEEMED UNSTABLE. ALL SHEETING AND/OR SHORING METHODS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER.

12. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING GROUNDWATER LEVELS IN THE VICINITY OF EXCAVATIONS TO PROTECT ADJACENT PROPERTIES AND NEW WORK. GROUNDWATER SHALL BE DRAINED IN ACCORDANCE WITH LOCAL SEDIMENTATION & EROSION CONTROL GUIDELINES.

13. THE CONTRACTOR IS REQUIRED TO REVIEW THE STATEMENT OF SPECIAL INSPECTION PRIOR TO THE START OF WORK. THE CONTRACTOR TO PROVIDE E-MAIL REQUEST TO THE PROJECT ENGINEER FOR INSPECTION 72 HOURS IN ADVANCE OF INSPECTION.

14. EXCAVATION.
CONTRACTOR SHALL GRADE ONLY AREAS SHOWN TO BE MODIFIED HEREIN AND ONLY TO THE EXTENT REQUIRED TO SHED OVERLAND WATER FLOW AWAY FROM SITE. ALL SLOPES SHALL NOT BE STEEPER THAN 3:1 (HORIZ:VERT).

BEDROCK SUBGRADE SHOULD NOT BE STEEPER THAN 4H:1V. HIGH SPOTS IN BEDROCK SUBGRADES MAY NEED TO BE REMOVED AND LOW SPOTS MAY BE FILLED WITH LEAN CONCRETE OR MINUS ¾" CRUSHED STONE TO PROVIDE A LEVEL SURFACE. BEDROCK SUBGRADES DO NOT REQUIRE PROOFROLLING.

SEDIMENTATION AND EROSION CONTROLS SHOWN AND SPECIFIED SHALL BE ESTABLISHED BEFORE STRIPPING EXISTING VEGETATION.

ORGANIC MATERIAL AND DEBRIS SHALL BE STRIPPED AND STOCKPILED BEFORE ADDING FILL MATERIAL.

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.

ALL FILL SHALL BE PLACED IN EIGHT INCH LIFTS AND COMPACTED IN PLACE. STRUCTURAL FILL SHALL BE COMPACTED TO 95% MAXIMUM MODIFIED PROCTOR DRY DENSITY TESTED IN ACCORDANCE WITH ASTM D1557, METHOD C.

EXCAVATIONS FOR FOOTINGS SHALL BE CUT LEVEL TO THE REQUIRED DEPTH AND TO UNDISTURBED SOIL. REPORT UNSUITABLE SOIL CONDITIONS TO THE ENGINEER.

STRUCTURAL FILL SHALL BE TESTED FOR MOISTURE CONTENT AND COMPACTION DURING PLACEMENT. SHOULD THE RESULTS OF THE IN-PLACE DENSITY TESTS INDICATE THE SPECIFIED MOISTURE OR COMPACTION LIMITS HAVE NOT BEEN MET, THE AREA REPRESENTED BY THE TEST SHOULD BE REWORKED AND RETESTED, AS REQUIRED, UNTIL THE SPECIFIED MOISTURE AND COMPACTION REQUIREMENTS ARE ACHIEVED.

EQUIPMENT CABINETS MAY BE SUPPORTED ON SLABS-ON-GRADE UNDERLAIN BY AT LEAST A 12-INCH THICKNESS OF COMPACTED STRUCTURAL FILL OR MINUS ¾"-INCH CRUSHED STONE PLACED ON THE EXISTING FILL, THE SURFACE OF WHICH SHOULD BE THOROUGHLY COMPACTED AND CLEAR OF ORGANIC MATTER.

THE AREA UNDERLYING THE SLABS SHOULD BE ROUGH GRADED AND THEN THOROUGHLY PROOFROLLED WITH A VIBRATORY ROLLER OR HEAVY PLATE COMPACTOR PRIOR TO FINAL GRADING AND PLACEMENT OF STRUCTURAL FILL OR MINUS ¾"-INCH CRUSHED STONE.

A SOIL UNIT WEIGHT OF 100 LBS PER CUBIC FOOT (PCF) SHOULD BE USED FOR ENGINEERED FILL OVERLYING THE FOOTINGS.

TRENCH EXCAVATIONS SHALL BE BACKFILLED AT THE END OF EACH DAY.

SURPLUS MATERIAL SHALL BE REMOVED FROM THE SITE.

TOWER FOUNDATION EXCAVATION, BACKFILL AND COMPACTION SHALL BE IN ACCORD WITH TOWER MANUFACTURER'S DESIGNS AND SPECIFICATIONS.

CONTRACTOR TO VERIFY THAT FOOTING ELEVATIONS AND PIER ELEVATION PROVIDED HEREIN ARE CONSISTENT WITH THE TOWER DESIGN REQUIREMENTS.

14. MATERIALS.
NATIVE GRAVEL MATERIAL MAY BE USED FOR TRENCH BACKFILL WHERE SELECT MATERIAL IS NOT SPECIFIED. GRAVEL MATERIAL FOR CONDUIT TRENCH BACKFILL SHALL NOT CONTAIN ROCK GREATER THAN 2 INCHES IN DIAMETER.

BANK OR CRUSHED GRAVEL SHALL CONSIST OF TOUGH, DURABLE PARTICLES OF CRUSHED OR UNCRUSHED GRAVEL FREE OF SOFT, THIN, ELONGATED OR LAMINATED PIECES AND MEET THE GRADATION.

FILL SHOULD MEET THE FOLLOWING MATERIAL PROPERTY REQUIREMENTS:

FILL TYPE (1)	USCS CLASSIFICATION	ACCEPTABLE LOCATION FOR PLACEMENT
STRUCTURAL FILL	GW (2)	ALL LOCATIONS AND ELEVATIONS. THE EXISTING FILL MAY BE SELECTIVELY RE-USED AS STRUCTURAL FILL PROVIDED IT IS FREE OF ORGANIC AND CLOSELY MEETS THE GRADATION REQUIREMENTS IN NOTE 2, BELOW.
COMMON FILL	VARIES (3)	COMMON FILL MAY BE USED FOR GENERAL SITE GRADING TO WITHIN 12 INCHES OF FINISHED GRADE. COMMON FILL SHOULD NOT BE USED UNDER SETTLEMENT SENSITIVE STRUCTURES. THE EXISTING FILL MAY BE RE-USED AS COMMON FILL, PROVIDED IT IS FREE OF ORGANICS AND CAN BE ADEQUATELY COMPACTED.

1. COMPACTED FILL SHOULD CONSIST OF APPROVED MATERIALS THAT ARE FREE OF ORGANIC MATTER AND DEBRIS. FROZEN MATERIAL SHOULD NOT BE USED. FILL SHOULD NOT BE PLACED ON A FROZEN SUBGRADE.

2. IMPORTED STRUCTURAL FILL SHOULD MEET THE FOLLOWING GRADATION:
PERCENT PASSING BY WEIGHT

SIEVE SIZE	STRUCTURAL FILL
6"	100
3"	70-100
2"	(100)*
¾"	45-95
NO. 4	30-90
NO. 10	25-80
NO. 40	10-50
NO. 200	0-12

* MAXIMUM 2-INCH PARTICLE SIZE WITHIN 12 INCHES OF THE UNDERSIDE OF CONCRETE ELEMENTS.

3. COMMON FILL SHOULD HAVE A MAXIMUM PARTICLE SIZE OF 6 INCHES AND NO MORE THAN 25 PERCENT BY WEIGHT PASSING THE US NO. 200 SIEVE.

SEDIMENTATION/EROSION

1. THE CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE 2002 CONNECTICUT GUIDLINES FOR SOIL EROSION AND SEDIMENT CONTROL.

2. CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
THE FOLLOWING GENERAL CONDITIONS SHALL BE OBSERVED:

A. LIMITS OF CLEARING AND GRUBBING SHALL BE CLEARLY MARKED BEFORE COMMENCING WITH SUCH WORK.

B. EXISTING VEGETATION TO REMAIN SHALL BE PROTECTED AND REMAIN UNDISTURBED.

C. CLEARING AND GRADING SHALL BE SCHEDULED SO AS TO MINIMIZE THE SIZE OF EXPOSED AREAS AND THE LENGTH OF TIME THAT AREAS ARE EXPOSED.

D. TOPSOIL SHALL BE SPREAD TO FINISH GRADES AND SEEDED AS SOON AS FINISHED GRADES ARE ESTABLISHED. STRAW MULCH, JUTE NETTING OR MATS SHALL BE USED WHERE THE NEW SEED IS PLACED.

E. THE LENGTH AND STEEPNESS OF CLEARED SLOPES SHALL BE MINIMIZED TO REDUCE RUNOFF VELOCITIES.

F. RUNOFF SHALL BE DIVERTED AWAY FROM CLEARED SLOPES.

G. ALL SEDIMENT SHALL BE TRAPPED ON THE SITE.

3. SEDIMENTATION AND EROSION CONTROL (SEC) MEASURES SHOWN SHALL BE INSTALLED PRIOR TO LAND CLEARING, EXCAVATION OR GRADING OPERATIONS. REQUIREMENTS SPECIFIED SHALL BE MET PRIOR TO COMMENCING EARTHWORK OPERATIONS.

4. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN SEC MEASURES THROUGHOUT DURATION OF PROJECT UNTIL DISTURBED LAND IS THOROUGHLY VEGETATED.

5. FAILURE OF THE SEC SYSTEMS SHALL BE CORRECTED IMMEDIATELY AND SUPPLEMENTED WITH ADDITIONAL MEASURES AS NEEDED.

6. VEGETATIVE SEEDING: UON, AREA TO BE SEEDED SHALL BE LOOSE AND FRIABLE TO A DEPTH OF 3". TOPSOIL SHALL BE LOOSENED BY RAKING OR DISKING BEFORE SEEDING. APPLY 50 Lbs. OF DOLOMITIC LIMESTONE AND 25 Lbs. OF 10-10-10 FERTILIZER PER 1000 SF. HARROW LIME AND FERTILIZER INTO LOOSE SOIL. APPLY COMMON BERMUDA AND RYE GRASS AT 50 Lbs/ACRE. USE CYCLONE SEED DRILL CULTIPACKER SEEDER OR HYDROSEEDER (SEED & FERTILIZER SLURRY) FOR STEEP SLOPES. IRRIGATE UNTIL VEGETATION IS COMPLETELY ESTABLISHED.

7. PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.

8. INSPECT AND MAINTAIN EROSION CONTROL MEASURES, AND REMOVE SEDIMENT THEREFROM ON A WEEKLY BASIS AND WITHIN TWELVE HOURS AFTER EACH STORM EVENT AND DISPOSE OF SEDIMENTS IN AN UPLAND AREA SUCH THAT THEY DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.

9. CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOS IT.

10. UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE SYSTEMS LOCATED ON SITE.

11. APPROPRIATE MEANS SHALL BE USED TO CONTROL DUST DURING CONSTRUCTION.

12. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE MAINTAINED TO PREVENT SOIL AND LOOSE DEBRIS FORM BEING TRACKED ONTO LOCAL ROADS. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED UNTIL THE SITE IS PERMANENTLY STABILIZED.

13. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES SHALL BE IN CONFORMACE WITH THE STATE OF CONNECTICUT GUIDELINES FOR EROSION AND SEDIMENT CONTROL , AS AMENDED.

14. TEMPORARY SILT FENCE EROSION CONTROL BARRIER SHALL BE MAINTAINED THROUGHOUT SITE CONSTRUCTION. STOCKPILE ON SITE 100 FT. OF SILT FENCE FOR EMERGENCY USE. TEMPORARY EROSION BARRIERS SHALL REMAIN IN PLACE UNTIL PERMANENT VEGETATIVE GROUND COVER IS ESTABLISHED.

15. ALL DISTURBED AREAS OUTSIDE THE LIMITS OF THE EQUIPMENT LEASE AREA SHALL BE PERMANENTLY ESTABLISHED WITH A VEGETATIVE GROUND COVER.

16. STILLING BASIN SHALL BE UTILIZED FOR ANY DE-WATERING DISCHARGE WHICH MAY OCCUR DURING CONSTRUCTION OPERATIONS.

17. PROPOSED CONSTRUCTION IMPACTS AND PERMANENT IMPROVEMENTS SHALL NOT SIGNIFICANTLY IMPACT STORM WATER RUNOFF PATTERNS, VOLUME OR PEAK FLOW RATES. THE FLAT GRADE OF THE EQUIPMENT COMPOUND AND STONE SURFACE WILL PROMOTE STORM WATER INFILTRATION.

18. CONTRACTOR SHALL INSTALL ALL EROSION AND SEDIMENTATION CONTROL MEASURES PRIOR TO ANY GRADING ACTIVITIES IN LOCATIONS SHOWN ON THESE DRAWINGS.

19. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.

20. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.

21. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

22. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATION.

23. NO GREATER THAN 80,000 SQUARE FEET OF LAND SHALL BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS EXPOSED DURING DEVELOPMENT, THE EXPOSURE SHOULD BE KEPT TO THE SHORTEST PRACTICAL PERIOD OF TIME AND SHALL NOT EXCEED 10 DAYS. LAND SHOULD NOT BE LEFT EXPOSED DURING THE WINTER MONTHS.

24. ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION. HAY OR STRAW MULCH SHALL BE APPLIED TO ALL FRESHLY SEEDED AREAS AT A RATE OF 2 TONS PER ACRES. BALES SHALL BE UNSPOILED, AIR-DRIED, AND FREE FROM WEED, SEEDS, AND ANY COARSE MATERIAL.

STRUCTURAL NOTES & SPECS

STEEL

1. CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. THE ENGINEER SHALL BE NOTIFIED OF ANY CONDITIONS WHICH PRECLUDE COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

2. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".

3. STRUCTURAL AND MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A992 (FY-50 KSI), UNLESS OTHERWISE NOTED.

4. STEEL PIPE SHALL CONFORM TO ASTM A500, GRADE B, STEEL PIPE DIAMETERS NOTED ON THE DRAWINGS ARE NOMINAL.

5. STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL HAVE MINIMUM OF TWO BOLTS, UNLESS NOTED OTHERWISE ON THE DRAWINGS. LOCK WASHER ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.

6. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIAMETER GALVANIZED ASTM A 307 BOLTS UNLESS OTHERWISE NOTED.

7. ALL STEEL MATERIAL EXPOSED TO WEATHER SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIPPED GALVANIZED) COATINGS" ON IRON AND STEEL PRODUCTS.

8. ALL BOLTS ANCHORS AND MISCELLANEOUS HARDWARE EXPOSED TO WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE."

9. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY UP ALL DAMAGED GALVANIZED STEEL WITH COLD ZINC, "GALVANOX", "DRY GALV", "ZINC IT", OR APPROVED EQUIVALENT, IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCH UP DAMAGED NON GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.

10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES." ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND 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. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED. SEE NOTE 9.

11. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.

SITE NOTES

1. ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR AND THE TESTING AGENCY PRIOR TO BEGINNING ANY MATERIAL ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNERS ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES.

2. DAMAGE BY THE CONTRACTOR TO UTILITIES OR PROPERTY OF OTHERS, INCLUDING EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CLIENT. FOR GRASSED AREAS, SEED AND MULCH SHALL BE ACCEPTABLE.

3. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN ITS PRESENT STATE. IF THE MATERIAL, AFTER REWORKING, REMAINS UNSUITABLE THEN THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACED WITH APPROVED MATERIAL AT HIS EXPENSE. ALL SUBGRADES SHALL BE PROOF ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED AND REPLACED.

4. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL DITCHES, PIPES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTABLE BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURES IN OPERABLE CONDITION.

5. ALL DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE OWNER IMMEDIATELY IF DISCREPANCIES ARE DISCOVERED. THE CONTRACTOR SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHEN WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

6. CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR THIS PROJECT FROM ALL APPLICABLE GOVERNMENTAL AGENCIES (NOT SUPPLIED BY OWNER).

7. ANY PERMITS WHICH MUST BE OBTAINED SHALL BE THE CONTRACTORS RESPONSIBILTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS (NOT SUPPLIED BY OWNER).

8. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND THE LATEST APPLICABLE CODES AND STANDARDS.

9. THE CONTRACTOR SHALL NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY, OR CITY) ENGINEER 24 HOURS PRIOR TO BEGINNING OF CONSTRUCTION.

10. CONTRACTOR RESPONSIBLE FOR CLOSING AND FILING ALL PERMITS ASSOCIATED WITH THE SITE.

11. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.

12. ALL EXISTING AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO MATCH PRECONSTRUCTION CONDITIONS.

13. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES COMMENCING.

CONCRETE NOTES

1. ALL CONCRETE CONSTRUCTION SHALL BE DONE IN ACCORD WITH AMERICAN CONCRETE INSTITUTE (ACI) CODES 301 & 318, LATEST REVISION.

2. TOWER FOUNDATION WORK SHALL BE IN ACCORDANCE WITH TOWER MANUFACTURERS DESIGNS AND SPECIFICATIONS.

3. ALL CONCRETE USED SHALL BE 4000 PSI (28 DAY COMP STRENGTH). THE CONCRETE MIX SHALL BE BASED ON USING THE FOLLOWING MATERIALS AND PARAMETERS:

PORTLAND CEMENT:	ASTM C150, T1
AGGREGATE:	ASTM C33, 1 INCH MAX
WATER	POTABLE
ADMIXTURE:	NON-CHLORIDE
AIR:	6%*
SLUMP:	4 INCH

UNLESS NOTED OTHERWISE
*ALL CONCRETE EXPOSED TO FREEZING WEATHER SHALL CONTAIN ENTRAINED AIR PER ACI 211 TABLE 4.2.1 OF ACI 318-95.

4. ALL REINFORCING STEEL SHALL BE ASTM A615, GR 60 (DEFORMED) UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS 'B' AND ALL HOOKS SHALL BE ACI STANDARD UNO. REINFORCING BARS SHALL BE COLD BENT WHERE REQUIRED AND TIED (NOT WELDED).

5. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST EARTH = 3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
     #6 AND LARGER = 2 IN.
     #5 AND SMALLER = 1 1/2 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
     SLAB AND WALL = 3/4 IN.
     BEAMS AND COLUMNS = 1 1/2 IN.

6. A 3/4 IN. CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OR CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

7. CONCRETE SHALL BE PLACED IN A UNIFORM MANNER AND CONSOLIDATED IN PLACE.

8. CONCRETE FOOTINGS SHALL BE CAST AGAINST LEVEL, COMPACTED, NON-FROZEN BASE SOIL FREE OF STANDING WATER.

9. APPLY A QUALITY CONCRETE SEALER SUCH AS THEROSEAL TO EXPOSED CONCRETE IN ACCORDANCE WITH MANUFACTURERS APPLICATIONS DIRECTIONS.

MCM SITE NAME:
REDDING RIDGE CT505

APT FILING NUMBER:
CT-242-310

MESSAGE CENTER MANAGEMENT
40 WOODLAND STREET
HARTFORD, CT 06105
OFFICE: (888) 973-7483

MCM

ALL-POINTS TECHNOLOGY CORPORATION
3 SADDLEBROOK DRIVE
KILLINGWORTH, CT 06419
WWW.ALLPOINTSTECH.COM
PHONE: (860)-663-1697
FAX: (860)-663-0935

DEVELOPMENT & MANAGEMENT DOCUMENTS

REDDING RIDGE
186 BLACK ROCK TURNPIKE
REDDING, CT 06896

DESIGN TYPE:

RAW LAND

REVISIONS:

REV.0: 08/11/15: FOR REVIEW: SMC
REV.1: 08/12/15: FIRE DEPT. REVISIONS: SMC
REV.2: 12/02/15: TOWER REVISIONS: SMC
REV.3: 12/10/15: TEMP TOWER REVS: SMC
REV.4:
REV.5:

NOTES & SPECIFICATIONS

APT FILING NUMBER: CT-242-310
APT DRAWING NUMBER: CT-505 N-1
DRAWN BY: RCB
CHECKED BY: SMC
SCALE: AS NOTED
DATE: 08/03/15

SHEET NUMBER:
N-1

CERTIFICATE OF SERVICE

I hereby certify that on December 18, 2015, an original and 15 copies of the D&M Amendment submission was sent by overnight delivery to the Connecticut Siting Council with copies sent to the below intervenor and property owner. Electronic submission was made on December 21, 2015.

Intervenor:
Cellco Partnership d/b/a/ Verizon Wireless
Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103-3597
kbaldwin@rd.com

Facility Site Owner:
Redding Ridge Fire District No. 1
Bennet Pardee, Fire Commissioner
186 Black Rock Turnpike, Redding, CT 06896

Dated: December 21, 2015

Daniel M. Laub, Esq.

valmont STRUCTURES

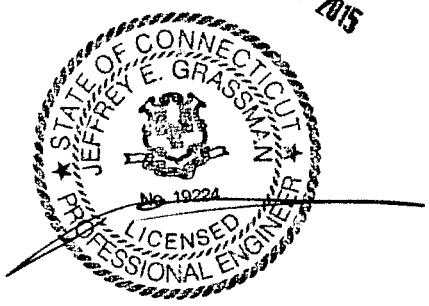
VALMONT MICROFLECT
3575 25th St. SE
Salem, OR 97302
PHONE: 1-800-547-2151
ENGINEER: Jonathon Neumann
Reviewed by: JDN

COMMUNICATION POLE DESIGN CALCULATIONS

DEC 11 2015

EXPIRES ON

JAN 31 2016



Message Center Management
VALMONT ORDER# 239975
SITE NAME: Redding-Blackrock Tower, CT
POLE HEIGHT: 149FT (150 FT AGL)

valmont STRUCTURES

11/13/15

ENGINEERING DATA

for

Message Center Management
Redding-Blackrock Tower, CT
VALMONT QUOTATION 239975

1) STRUCTURE DESIGN CONFORMS TO EIA/TIA-222-F INCLUDING:
85.0 MPH FASTEST MILE BASIC WIND SPEED WITH NO ICE
73.6 MPH FASTEST MILE BASIC WIND SPEED WITH ICE
DESIGN ICE THICKNESS = 0.50 INCHES
50.0 MPH FASTEST MILE BASIC WIND SPEED WITH NO ICE FOR TWIST AND SWAY
2) FEEDLINES ARE ASSUMED TO BE PLACED INTERIOR TO THE POLE.
3) ALL MICROWAVE ASSUMED TO BE 6 GHz UNLESS OTHERWISE NOTED.
4) TOTAL POLE HEIGHT IS 150 FT AGL.
5) ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE (APPROX. 1 FT AGL).
6) POLE DESIGN MEETS TIA-222-G ADDENDUM 2.
7) LOADING AS FOLLOWS:
149.0' POLE
1 - 4ft lightning rod @ 149.0
1 - 2' HIGH PERFORMANCE (5.5 GHz) @ 149.0
12 - HPA-65R-BUU-H8 @ 145.0
9 - Ericsson RRUS-11 (19.7"x17"x7.2") @ 145.0
6 - Ericsson RRUS-12 (20.4"x18.6"x7.4") @ 145.0
6 - Ericsson RRUS A2 Module (15"x12.8" x3.4") @ 145.0
3 - RRUS-E2 (20" X 20.4" X 9.5") @ 145.0
3 - Ericsson RRUS-32 (29.9"x13.3"x9.5") @ 145.0
4 - Raycap DC6-48-60-18-F (24"x11") @ 145.0
1 - 12' SP1 LP Platform @ 145.0
6 - HBXX-6516DS-VTM @ 135.0
6 - X7C-FRO-660 @ 135.0
3 - ALU 2X60 PCS RRU @ 135.0
3 - ALU 2X60 700 RRU @ 135.0
3 - ALU 4X30 AWS RRU @ 135.0
2 - DB-T1-6Z-8AB-OZ FIBER DIST. BOX @ 135.0
1 - 12' SP1 LP Platform @ 135.0
1 - CARRIER #3 @ 125.0
1 - CARRIER #4 @ 115.0
1 - CARRIER #5 @ 105.0
3 - WHIP (2.5" X 20') @ 79.0
1 - LARGE YAGI @ 79.0
3 - 6' Pivot Side Arm @ 79.0

STRUCTURE ANCHORAGE INFORMATION

POLE HEIGHT(FT):	149	NUMBER OF A.B.'s:	24
BOLT CIRCLE(IN):	67.68	DIA. OF A.B.'s(IN):	2.25
BASE VERTIC	61.82	LENGTH OF A.B.'s(IN):	66.00
BASE SHEAR(K):	42.08	PROJECTION LENGTH(IN):	12.50
BASE MOMENT(FT-K):	4899	TEMPLATE OD(IN):	71.18

valmont STRUCTURES

BY_____ DATE _____
CHKD. BY _____ DATE _____

SHEET NO. _____

11/13/15

ENGINEERING DATA

for

Message Center Management
Redding-Blackrock Tower, CT
VALMONT QUOTATION 239975

EIA/TIA-222-F		
BASIC WIND:	85.0	MPH
WIND & ICE:	73.6	MPH AND 0.5 IN. ICE
TWIST & SWAY:	50.0	MPH

QTY	DESCRIPTION	HEIGHT	DATA W.O. ICE EPA	DATA W.O. ICE WT	DATA W/ ICE EPA	DATA W/ ICE WT
1	4ft lightning rod	@ 149.0 '	0.25	10	2.00	22
1	2' HIGH PERFORMANCE	@ 149.0 '	5.29	83	7.80	124
12	HPA-65R-BUU-H8	@ 145.0 '	107.64	1188	138.72	2808
9	Ericsson RRUS-11 (19.7"x17"x7.2")	@ 145.0 '	14.31	459	19.80	747
6	Ericsson RRUS-12 (20.4"x18.6"x7.4")	@ 145.0 '	10.62	348	14.46	558
6	Ericsson RRUS A2 Module (15"x12.8" x3.4")	@ 145.0 '	4.92	126	7.68	222
3	RRUS-E2 (20" X 20.4" X 9.5")	@ 145.0 '	5.97	216	7.98	339
3	Ericsson RRUS-32 (29.9"x13.3"x9.5")	@ 145.0 '	6.90	231	9.15	360
4	Raycap DC6-48-60-18-F (24"x11")	@ 145.0 '	3.84	100	5.36	192
1	12' SP1 LP Platform	@ 145.0 '	31.42	1143	55.71	1491
6	HBXX-6516DS-VTM	@ 135.0 '	23.10	276	31.32	672
6	X7C-FRO-660	@ 135.0 '	40.44	408	51.96	1056
3	ALU 2X60 PCS RRU	@ 135.0 '	4.65	120	6.51	204
3	ALU 2X60 700 RRU	@ 135.0 '	4.83	138	6.69	237
3	ALU 4X30 AWS RRU	@ 135.0 '	7.20	105	9.39	252
2	DB-T1-6Z-8AB-OZ FIBER DIST. BOX	@ 135.0 '	7.68	10	9.48	198
1	12' SP1 LP Platform	@ 135.0 '	15.71	1143	27.77	1491
1	CARRIER #3	@ 125.0 '	112.35	2388	155.73	4134
1	CARRIER #4	@ 115.0 '	112.35	2388	155.73	4134
1	CARRIER #5	@ 105.0 '	112.35	2388	155.73	4134
3	WHIP (2.5" X 20')	@ 79.0 '	20.70	213	52.56	468
1	LARGE YAGI	@ 79.0 '	9.06	81	13.38	112
3	6' Pivot Side Arm (50" pipe)	@ 79.0 '	8.76	387	17.76	576

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

*** SUMMARY ***

Design Code: EIA-222-F

---------- DESIGN SUMMARY ----------

Height Above Base Plate (ft)	149.00	Ground Line Diameter (in)	60.250	Pole Shaft Weight (lbs)	29547
		Top Diameter (in)	19.752		
		Pole Taper (in/ft)	0.28606	Shape:	18 Sides

Connections Between Sections	/First/	/Second/	/Third/	/Fourth/
Height Above Ground (ft)	52.50	85.00	111.00	130.50
Type	Slip Joint	Slip Joint	Slip Joint	Flange Joint
Overlap Length (in)	77	65	55	0
Maximum Axial Force (lbs)	38986	28805	19840	10471

Section Characteristics	/First/	/Second/	/Third/	/Fourth/	/Fifth/
Base Diameter (in)	60.250	47.942	39.109	31.933	25.044
Top Diameter (in)	45.232	36.810	30.122	25.044	19.752
Thickness (in)	0.50000	0.43750	0.37500	0.25000	0.18750
Length (ft)	52.500	38.917	31.417	24.083	18.500
Weight (lbs)	14810	7712	4357	1836	832

---------- ANALYSIS SUMMARY ----------

	Pt. of Fixity	Governing Level Sec.1	Governing Level Sec.2	Governing Level Sec.3	Governing Level Sec.4	Governing Level Sec.5	Pole Top
Governing Load Case	ICE + WIND	ICE + WIND	ICE + WIND	ICE + WIND	ICE + WIND	ICE + WIND	ICE + WIND
Height (ft)	0.00	29.00	52.50	85.00	111.00	130.50	149.00
Resultant Moment (in-kips)	58792	44366	32989	17961	7445	2212	9
Shear Force (lbs)	42145	40765	39797	35637	28895	16636	369
Axial Force (lbs)	58459	48129	38986	28805	19840	10471	106
Combined Stress (ksi)	42.68	43.45	46.84	44.97	42.05	25.08	0.17
Allowable Stress (ksi)	51.99	51.99	51.99	51.99	51.99	51.99	51.99
Allowable/Combined Stress	1.22	1.20	1.11	1.16	1.24	2.07	99.90
Total Deflection (in)	0.00	3.04	10.44	29.39	52.70	74.97	98.78

Note: Diameters are outside, measured across the flats
Forces and moments are reported in the local element coordinate system

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

SUMMARY OF SECTION DIMENSIONS AS DETAILED

Height Above Base Plate (ft) 149.00 Ground Line Diameter (in) 60.250 Pole Shaft Weight (lbs) 29547

Top Diameter (in) 19.752

Pole Taper (in/ft) 0.28606 Shape: 18 Sides

Connections Between Sections	/First/	/Second/	/Third/	/Fourth/
Height Above Ground (ft)	52.50	85.00	111.00	130.50
Type	Slip Joint	Slip Joint	Slip Joint	Flange Joint
Flange Thickness (in)				2.000
Weld Root Gap (in)				0.250

Theoretical Design Section Dimension	/First/	/Second/	/Third/	/Fourth/	/Fifth/
Base Diameter (in)	60.250	47.942	39.109	31.933	25.044
Top Diameter (in)	45.232	36.810	30.122	25.044	19.752
Thickness (in)	0.50000	0.43750	0.37500	0.25000	0.18750
Length (ft)	52.500	38.917	31.417	24.083	18.500

As Detailed Section Characteristic	/First/	/Second/	/Third/	/Fourth/	/Fifth/
Base Diameter (in)	60.250	47.942	39.109	31.933	24.990
Top Diameter (in)	45.232	36.810	30.122	25.098	19.752
Thickness (in)	0.50000	0.43750	0.37500	0.25000	0.18750
Length (ft)	52.500	38.917	31.417	23.896	18.313

Note: Diameter are outside, measured across the flats

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

*** POLE SHAFT POINT OF FIXITY REACTIONS ***

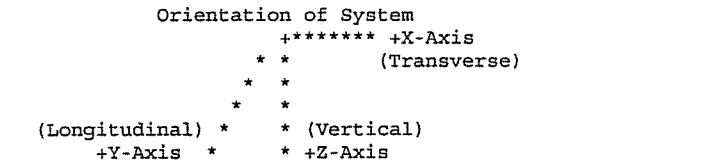
Loading Case Identifier	Moments About X-Axis (in-kips)	Moments About Y-Axis (in-kips)	Moments Resultant (X & Y) (in-kips)	Moments Torsional (in-kips)	Vertical Force (lbs)	Shear In X-Direction (lbs)	Shear In Y-Direction (lbs)	Shear Resultant (X & Y) (lbs)	Notes
WIND	43839	-36785	57227	0	44070	27383	32634	42600	
ICE + WIND	45037	-37791	58792	0	58507	27047	32234	42078	
T+S	15194	-12749	19834	0	43565	9483	11301	14753	

Note: Positive vertical force is downward.
Reactions are considered in the global coordinate system.

*** INPUT LOADS ***

Design Code EIA-222-F
Loading Case WIND

Basic Wind Velocity is 85.00 mph Ice Thickness 0.00
Wind Orientation is 50.0 Degrees Clockwise From +X Axis
Structure Weight Overload Factor is 1.000
Exposure C, Gust Factor 1.69
Orientations are Measured Clockwise From +X Axis
Positive Y Axis is 90 Degrees Clockwise From +X Axis
Foundation Rotation of 0.00 Degrees
Elevation of structure base above surrounding terrain = 1.00 ft



Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	149.00	151.00	0.00	50.00	8	9	10	0.25	1-4ft lightni
2	149.00	151.00	0.00	50.00	164	196	83	5.29	1-2' HIGH PER
3	145.00	145.00	0.00	50.00	3308	3942	1188	107.64	12-HPA-65R-BUU
4	145.00	145.00	0.00	50.00	440	524	459	14.31	9-Ericsson RR
5	145.00	145.00	0.00	50.00	326	389	348	10.62	6-Ericsson RR
6	145.00	145.00	0.00	50.00	151	180	126	4.92	6-Ericsson RR
7	145.00	145.00	0.00	50.00	183	219	216	5.97	3-RRUS-E2 (20
8	145.00	145.00	0.00	50.00	212	253	231	6.90	3-Ericsson RR
9	145.00	145.00	0.00	50.00	118	141	100	3.84	4-Raycap DC6-
10	145.00	145.00	0.00	50.00	966	1151	1143	31.42	1-12' SP1 LP
11	135.00	135.00	0.00	50.00	696	829	276	23.10	6-HBXX-6516DS
12	135.00	135.00	0.00	50.00	1218	1451	408	40.44	6-X7C-FRO-660
13	135.00	135.00	0.00	50.00	140	167	120	4.65	3-ALU 2X60 PC
14	135.00	135.00	0.00	50.00	145	173	138	4.83	3-ALU 2X60 70
15	135.00	135.00	0.00	50.00	217	258	105	7.20	3-ALU 4X30 AW
16	135.00	135.00	0.00	50.00	231	276	10	7.68	2-DB-T1-6Z-8A
17	135.00	135.00	0.00	50.00	473	564	1143	15.71	1-12' SP1 LP
18	125.00	125.00	0.00	50.00	3310	3945	2388	112.35	1-CARRIER #3

*** INPUT LOADS ***

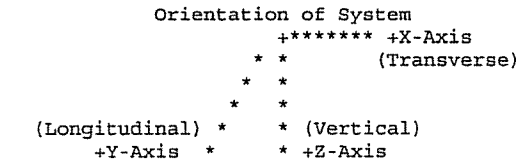
Loading Case WIND - Continued

Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	Orientation of System 1-CARRIER #3 1-CARRIER #3 1-CARRIER #3
19	115.00	115.00	0.00	50.00	3233	3853	2388	112.35	1-CARRIER #4
20	105.00	105.00	0.00	50.00	3151	3755	2388	112.35	1-CARRIER #5
21	79.00	79.00	0.00	50.00	536	638	213	20.70	3-WHIP (2.5"
22	79.00	79.00	0.00	50.00	234	279	81	9.06	1-LARGE YAGI
23	79.00	79.00	0.00	50.00	227	270	387	8.76	3-6' Pivot Si

*** INPUT LOADS ***

Design Code EIA-222-F
Loading Case ICE + WIND

Basic Wind Velocity is 73.61 mph Ice Thickness 0.50
Wind Orientation is 50.0 Degrees Clockwise From +X Axis
Structure Weight Overload Factor is 1.000
Exposure C, Gust Factor 1.69
Orientations are Measured Clockwise From +X Axis
Positive Y Axis is 90 Degrees Clockwise From +X Axis
Foundation Rotation of 0.00 Degrees
Elevation of structure base above surrounding terrain = 1.00 ft



Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	149.00	151.00	0.00	50.00	47	56	22	2.00	1-4ft lightni
2	149.00	151.00	0.00	50.00	182	217	124	7.80	1-2' HIGH PER
3	145.00	145.00	0.00	50.00	3197	3810	2808	138.72	12-HPA-65R-BUU
4	145.00	145.00	0.00	50.00	456	544	747	19.80	9-Ericsson RR
5	145.00	145.00	0.00	50.00	333	397	558	14.46	6-Ericsson RR
6	145.00	145.00	0.00	50.00	177	211	222	7.68	6-Ericsson RR
7	145.00	145.00	0.00	50.00	184	219	339	7.98	3-RRUS-E2 (20
8	145.00	145.00	0.00	50.00	211	251	360	9.15	3-Ericsson RR
9	145.00	145.00	0.00	50.00	124	147	192	5.36	4-Raycap DC6-
10	145.00	145.00	0.00	50.00	1284	1530	1491	55.71	1-12' SP1 LP
11	135.00	135.00	0.00	50.00	707	843	672	31.32	6-HBXX-6516DS
12	135.00	135.00	0.00	50.00	1173	1398	1056	51.96	6-X7C-FRO-660
13	135.00	135.00	0.00	50.00	147	175	204	6.51	3-ALU 2X60 PC
14	135.00	135.00	0.00	50.00	151	180	237	6.69	3-ALU 2X60 70
15	135.00	135.00	0.00	50.00	212	253	252	9.39	3-ALU 4X30 AW
16	135.00	135.00	0.00	50.00	214	255	198	9.48	2-DB-T1-6Z-8A
17	135.00	135.00	0.00	50.00	627	747	1491	27.77	1-12' SP1 LP
18	125.00	125.00	0.00	50.00	3441	4101	4134	155.73	1-CARRIER #3

*** INPUT LOADS ***

Loading Case ICE + WIND - Continued

Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	Orientation of System
									1-CARRIER #3
									1-CARRIER #3
									1-CARRIER #3
19	115.00	115.00	0.00	50.00	3361	4005	4134	155.73	1-CARRIER #4
20	105.00	105.00	0.00	50.00	3275	3903	4134	155.73	1-CARRIER #5
21	79.00	79.00	0.00	50.00	1020	1216	468	52.56	3-WHIP (2.5"
22	79.00	79.00	0.00	50.00	260	309	112	13.38	1-LARGE YAGI
23	79.00	79.00	0.00	50.00	345	411	576	17.76	3-6' Pivot Si

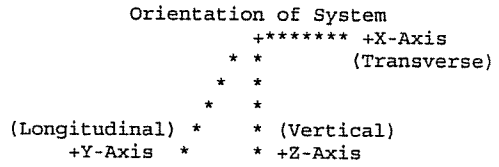
BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

*** INPUT LOADS ***

Design Code EIA-222-F
Loading Case T+S

Basic Wind Velocity is 50.00 mph Ice Thickness 0.00
Wind Orientation is 50.0 Degrees Clockwise From +X Axis
Structure Weight Overload Factor is 1.000
Exposure C, Gust Factor 1.69
Orientations are Measured Clockwise From +X Axis
Positive Y Axis is 90 Degrees Clockwise From +X Axis
Foundation Rotation of 0.00 Degrees
Elevation of structure base above surrounding terrain = 1.00 ft

Orientation of System



Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	
1	149.00	151.00	0.00	50.00	3	3	10	0.25	1-4ft lightni
2	149.00	151.00	0.00	50.00	57	68	83	5.29	1-2' HIGH PER
3	145.00	145.00	0.00	50.00	1145	1364	1188	107.64	12-HPA-65R-BUU
4	145.00	145.00	0.00	50.00	152	181	459	14.31	9-Ericsson RR
5	145.00	145.00	0.00	50.00	113	135	348	10.62	6-Ericsson RR
6	145.00	145.00	0.00	50.00	52	62	126	4.92	6-Ericsson RR
7	145.00	145.00	0.00	50.00	63	76	216	5.97	3-RRUS-E2 (20
8	145.00	145.00	0.00	50.00	73	87	231	6.90	3-Ericsson RR
9	145.00	145.00	0.00	50.00	41	49	100	3.84	4-Raycap DC6-
10	145.00	145.00	0.00	50.00	334	398	1143	31.42	1-12' SP1 LP
11	135.00	135.00	0.00	50.00	241	287	276	23.10	6-HBXX-6516DS
12	135.00	135.00	0.00	50.00	421	502	408	40.44	6-X7C-FRO-660
13	135.00	135.00	0.00	50.00	48	58	120	4.65	3-ALU 2X60 PC
14	135.00	135.00	0.00	50.00	50	60	138	4.83	3-ALU 2X60 70
15	135.00	135.00	0.00	50.00	75	89	105	7.20	3-ALU 4X30 AW
16	135.00	135.00	0.00	50.00	80	95	10	7.68	2-DB-T1-6Z-8A
17	135.00	135.00	0.00	50.00	164	195	1143	15.71	1-12' SP1 LP
18	125.00	125.00	0.00	50.00	1145	1365	2388	112.35	1-CARRIER #3

*** INPUT LOADS ***

Loading Case T+S - Continued

Load Number	Mounting Height (ft)	Load Height (ft)	Load Eccentricity (ft)	Orientation in XY Plane (Degrees)	Force-X (lbs)	Force-Y (lbs)	Force-Z (lbs)	EPA (ft^2)	Orientation of System
									1-CARRIER #3
									1-CARRIER #3
									1-CARRIER #3
19	115.00	115.00	0.00	50.00	1119	1333	2388	112.35	1-CARRIER #4
20	105.00	105.00	0.00	50.00	1090	1299	2388	112.35	1-CARRIER #5
21	79.00	79.00	0.00	50.00	185	221	213	20.70	3-WHIP (2.5"
22	79.00	79.00	0.00	50.00	81	97	81	9.06	1-LARGE YAGI
23	79.00	79.00	0.00	50.00	78	93	387	8.76	3-6' Pivot Si

*** Properties ***

Connection Locations	Distance From Base (ft)	Diameter Across Flats (in)	Wall Thickness (in)	D/t Across Flats	w/t Across Flats	Moments of Inertia (in^4)	Area (in^2)
Top of Sect 5	149.00	19.752	0.1875	105.34	16.81	563	11.64
EPA 3	145.00	20.896	0.1875	111.45	17.89	668	12.32
	144.00	21.182	0.1875	112.97	18.16	696	12.49
	139.00	22.613	0.1875	120.60	19.50	848	13.35
EPA 11	135.00	23.757	0.1875	126.70	20.58	984	14.03
	134.00	24.043	0.1875	128.23	20.85	1020	14.20
	130.50	25.044	0.1875	133.57	21.79	1154	14.79
Top of Sect 4	130.50	25.044	0.2500	100.18	15.90	1527	19.67
	129.00	25.473	0.2500	101.89	16.20	1608	20.01
EPA 18	125.00	26.617	0.2500	106.47	17.01	1837	20.92
	124.00	26.904	0.2500	107.61	17.21	1898	21.15
	119.00	28.334	0.2500	113.34	18.22	2220	22.28
EPA 19	115.00	29.478	0.2500	117.91	19.03	2502	23.19
	114.00	29.764	0.2500	119.06	19.23	2576	23.42
	111.00	30.622	0.2500	122.49	19.83	2808	24.10
Top of Sect 3	111.00	30.122	0.3750	80.33	12.40	3957	35.41
	109.00	30.694	0.3750	81.85	12.67	4190	36.09
Base of Sect 4	106.42	31.433	0.3750	83.82	13.02	4504	36.97
EPA 20	105.00	31.839	0.3750	84.90	13.21	4682	37.45
	104.00	32.125	0.3750	85.67	13.34	4811	37.79
	99.00	33.555	0.3750	89.48	14.01	5491	39.49
	94.00	34.985	0.3750	93.29	14.69	6232	41.19
	89.00	36.416	0.3750	97.11	15.36	7037	42.90
	85.00	37.560	0.3750	100.16	15.90	7729	44.26
Top of Sect 2	85.00	36.810	0.4375	84.14	13.07	8439	50.51
	84.00	37.096	0.4375	84.79	13.19	8640	50.90
Base of Sect 3	79.58	38.359	0.4375	87.68	13.70	9564	52.66
EPA 21	79.00	38.526	0.4375	88.06	13.76	9691	52.89
	74.00	39.957	0.4375	91.33	14.34	10824	54.88
	69.00	41.387	0.4375	94.60	14.92	12042	56.86
	64.00	42.817	0.4375	97.87	15.49	13349	58.85
	59.00	44.247	0.4375	101.14	16.07	14747	60.83
	54.00	45.678	0.4375	104.41	16.65	16238	62.82
	52.50	46.107	0.4375	105.39	16.82	16705	63.42
Top of Sect 1	52.50	45.232	0.5000	90.46	14.19	17940	70.99
	49.00	46.233	0.5000	92.47	14.54	19172	72.58

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

*** Properties ***

Connection Locations	Distance From Base (ft)	Diameter Across Flats (in)	Wall Thickness (in)	D/t Across Flats	w/t Across Flats	Moments of Inertia (in^4)	Area (in^2)
Base of Sect 2	46.08	47.067	0.5000	94.13	14.84	20240	73.90
	44.00	47.663	0.5000	95.33	15.05	21027	74.85
	39.00	49.094	0.5000	98.19	15.55	22999	77.12
	34.00	50.524	0.5000	101.05	16.05	25090	79.39
	29.00	51.954	0.5000	103.91	16.56	27304	81.65
	24.00	53.385	0.5000	106.77	17.06	29645	83.92
	19.00	54.815	0.5000	109.63	17.57	32116	86.19
	14.00	56.245	0.5000	112.49	18.07	34720	88.46
	9.00	57.675	0.5000	115.35	18.58	37462	90.73
	4.00	59.106	0.5000	118.21	19.08	40344	93.00
Pt of Fixity	0.00	60.250	0.5000	120.50	19.48	42754	94.82

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
149.00	5	-4	7	0	177	212	276	65
145.00	19	-16	25	0	317	378	494	227
145.00	19	-16	25	0	6245	7443	9716	3096
144.00	109	-91	142	0	6281	7486	9772	3138
139.00	565	-474	737	0	6465	7704	10057	3377
135.00	939	-788	1226	0	6623	7893	10304	3562
135.00	939	-788	1226	0	9867	11759	15351	5275
134.00	1080	-907	1410	0	9903	11802	15406	5344
130.50	1580	-1325	2062	0	10049	11976	15633	5516
130.50	1580	-1325	2062	0	10043	11969	15625	5541
129.00	1796	-1507	2344	0	10103	12040	15717	5669
125.00	2379	-1996	3105	0	10282	12254	15996	5947
125.00	2379	-1996	3105	0	13716	16346	21338	7865
124.00	2575	-2161	3362	0	13750	16386	21391	7987
119.00	3567	-2993	4656	0	13965	16643	21725	8438
115.00	4371	-3668	5706	0	14160	16875	22029	8747
115.00	4371	-3668	5706	0	17500	20856	27225	10745
114.00	4622	-3878	6034	0	17536	20898	27281	10878
111.00	5378	-4512	7020	0	17687	21079	27516	11120
111.00	5378	-4512	7020	0	17671	21059	27491	11182
109.00	5885	-4938	7682	0	17773	21181	27650	11637
106.42	6544	-5491	8543	0	17912	21346	27866	12219
105.00	6908	-5796	9017	0	17988	21437	27985	12398
105.00	6908	-5796	9017	0	21240	25313	33044	14426
104.00	7212	-6051	9414	0	21271	25350	33092	14636
99.00	8743	-7336	11413	0	21505	25629	33456	15436
94.00	10291	-8635	13433	0	21743	25912	33825	16271
89.00	11856	-9948	15477	0	21988	26204	34207	17124
85.00	13120	-11009	17127	0	22224	26486	34575	17716
85.00	13120	-11009	17127	0	22199	26455	34535	17794
84.00	13438	-11276	17542	0	22238	26503	34597	18196
79.58	14852	-12462	19388	0	22506	26822	35013	19727
79.00	15040	-12620	19633	0	22541	26864	35068	19831
79.00	15040	-12620	19633	0	23530	28042	36606	20511
74.00	16733	-14041	21844	0	23776	28335	36988	21581
69.00	18444	-15477	24078	0	24022	28629	37372	22684
64.00	20173	-16927	26334	0	24269	28923	37756	23822
59.00	21920	-18393	28614	0	24516	29217	38140	24992
54.00	23684	-19873	30917	0	24784	29536	38557	26143
52.50	24217	-20320	31612	0	24877	29648	38702	26465

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case WIND .

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
52.50	24217	-20320	31612	0	24846	29610	38653	26537
49.00	25466	-21369	33244	0	25039	29841	38954	28244
46.08	26515	-22248	34612	0	25201	30033	39205	29689
44.00	27267	-22880	35595	0	25280	30128	39329	30313
39.00	29086	-24406	37969	0	25515	30408	39694	31741
34.00	30921	-25946	40365	0	25744	30681	40051	33205
29.00	32772	-27499	42781	0	25968	30947	40399	34706
24.00	34640	-29066	45219	0	26195	31218	40753	36243
19.00	36524	-30647	47679	0	26427	31494	41113	37817
14.00	38425	-32242	50160	0	26663	31775	41480	39426
9.00	40343	-33852	52664	0	26902	32061	41853	41073
4.00	42278	-35475	55190	0	27154	32361	42244	42744
0.00	43839	-36785	57227	0	27415	32671	42649	44022

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

Deflections and Stresses for Pole

Loading Case WIND

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Applied Bending Stress (ksi)	Applied Axial Stress (ksi)	Applied Torsion Stress (ksi)	Applied Shear Stress (ksi)	Applied Combined Stress (ksi)	Allowable Stress (ksi)	Allowable Divided by Combined
149.00	60.9	72.5	94.7	3.5	5.97	0.12	0.01	0.00	0.05	0.12	51.99	99.90
145.00	57.7	68.7	89.7	3.3	5.96	0.40	0.02	0.00	0.08	0.42	51.99	99.90
145.00	57.7	68.7	89.7	3.3	5.96	0.40	0.25	0.00	1.58	2.76	51.99	18.86
144.00	56.9	67.8	88.5	3.2	5.96	2.20	0.25	0.00	1.57	2.76	51.99	18.87
139.00	52.9	63.0	82.3	2.9	5.89	9.98	0.25	0.00	1.51	10.24	51.99	5.08
135.00	49.7	59.3	77.4	2.6	5.79	15.02	0.25	0.00	1.48	15.28	51.99	3.40
135.00	49.7	59.3	77.4	2.6	5.79	15.02	0.38	0.00	2.20	15.40	51.99	3.38
134.00	49.0	58.4	76.2	2.6	5.76	16.87	0.38	0.00	2.18	17.25	51.99	3.01
130.50	46.3	55.2	72.0	2.4	5.63	22.72	0.37	0.00	2.12	23.09	51.99	2.25
130.50	46.3	55.2	72.0	2.4	5.63	17.17	0.28	0.00	1.60	17.45	51.99	2.98
129.00	45.2	53.8	70.2	2.3	5.58	18.85	0.28	0.00	1.58	19.14	51.99	2.72
125.00	42.2	50.3	65.6	2.0	5.43	22.84	0.28	0.00	1.54	23.13	51.99	2.25
125.00	42.2	50.3	65.6	2.0	5.43	22.84	0.38	0.00	2.05	23.22	51.99	2.24
124.00	41.5	49.4	64.5	2.0	5.39	24.20	0.38	0.00	2.03	24.58	51.99	2.12
119.00	37.9	45.2	59.0	1.7	5.16	30.18	0.38	0.00	1.96	30.56	51.99	1.70
115.00	35.2	41.9	54.8	1.5	4.95	34.13	0.38	0.00	1.91	34.51	51.99	1.51
115.00	35.2	41.9	54.8	1.5	4.95	34.13	0.46	0.00	2.36	34.59	51.99	1.50
114.00	34.5	41.2	53.7	1.5	4.89	35.39	0.46	0.00	2.34	35.85	51.99	1.45
111.00	32.6	38.8	50.7	1.4	4.72	38.87	0.46	0.00	2.30	39.33	51.99	1.32
111.00	32.6	38.8	50.7	1.4	4.72	27.13	0.32	0.00	1.56	27.45	51.99	1.89
109.00	31.3	37.3	48.8	1.3	4.64	28.57	0.32	0.00	1.54	28.90	51.99	1.80
106.42	29.7	35.5	46.3	1.2	4.52	30.27	0.33	0.00	1.52	30.60	51.99	1.70
105.00	28.9	34.4	44.9	1.1	4.46	31.13	0.33	0.00	1.50	31.46	51.99	1.65
105.00	28.9	34.4	44.9	1.1	4.46	31.13	0.39	0.00	1.77	31.52	51.99	1.65
104.00	28.3	33.7	44.0	1.1	4.41	31.92	0.39	0.00	1.76	32.30	51.99	1.61
99.00	25.4	30.3	39.5	0.9	4.17	35.41	0.39	0.00	1.70	35.80	51.99	1.45
94.00	22.7	27.0	35.3	0.8	3.92	38.29	0.39	0.00	1.65	38.68	51.99	1.34
89.00	20.1	24.0	31.3	0.7	3.66	40.66	0.40	0.00	1.60	41.06	51.99	1.27
85.00	18.2	21.7	28.3	0.6	3.45	42.26	0.40	0.00	1.57	42.66	51.99	1.22
85.00	18.2	21.7	28.3	0.6	3.45	37.93	0.35	0.00	1.37	38.28	51.99	1.36
84.00	17.8	21.2	27.6	0.5	3.40	38.24	0.36	0.00	1.37	38.60	51.99	1.35
79.58	15.8	18.8	24.6	0.5	3.19	39.48	0.37	0.00	1.34	39.85	51.99	1.30
79.00	15.5	18.5	24.2	0.4	3.16	39.63	0.37	0.00	1.33	40.00	51.99	1.30
79.00	15.5	18.5	24.2	0.4	3.16	39.63	0.39	0.00	1.39	40.02	51.99	1.30
74.00	13.5	16.1	21.0	0.4	2.92	40.94	0.39	0.00	1.35	41.33	51.99	1.26
69.00	11.6	13.8	18.1	0.3	2.69	42.01	0.40	0.00	1.32	42.41	51.99	1.23
64.00	9.9	11.8	15.4	0.2	2.45	42.89	0.40	0.00	1.29	43.29	51.99	1.20
59.00	8.3	9.9	12.9	0.2	2.22	43.59	0.41	0.00	1.26	44.00	51.99	1.18
54.00	6.9	8.2	10.7	0.1	1.99	44.15	0.42	0.00	1.23	44.57	51.99	1.17

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015

Fuse 1.13.0.0

Deflections and Stresses for Pole

Loading Case WIND

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Applied Bending Stress (ksi)	Applied Axial Stress (ksi)	Applied Torsion Stress (ksi)	Applied Shear Stress (ksi)	Applied Combined Stress (ksi)	Allowable Stress (ksi)	Allowable Divided by Combined
52.50	6.5	7.7	10.1	0.1	1.92	44.30	0.42	0.00	1.23	44.72	51.99	1.16
52.50	6.5	7.7	10.1	0.1	1.92	40.47	0.37	0.00	1.09	40.84	51.99	1.27
49.00	5.6	6.7	8.7	0.1	1.78	40.70	0.39	0.00	1.08	41.09	51.99	1.27
46.08	4.9	5.9	7.7	0.1	1.66	40.87	0.40	0.00	1.07	41.27	51.99	1.26
44.00	4.5	5.4	7.0	0.1	1.58	40.96	0.41	0.00	1.06	41.37	51.99	1.26
39.00	3.5	4.2	5.4	0.0	1.38	41.15	0.41	0.00	1.03	41.56	51.99	1.25
34.00	2.6	3.1	4.1	0.0	1.18	41.27	0.42	0.00	1.01	41.69	51.99	1.25
29.00	1.9	2.3	3.0	0.0	1.00	41.33	0.43	0.00	0.99	41.76	51.99	1.25
24.00	1.3	1.5	2.0	0.0	0.81	41.34	0.43	0.00	0.98	41.78	51.99	1.24
19.00	0.8	1.0	1.2	0.0	0.63	41.32	0.44	0.00	0.96	41.76	51.99	1.25
14.00	0.4	0.5	0.7	0.0	0.46	41.26	0.45	0.00	0.94	41.70	51.99	1.25
9.00	0.2	0.2	0.3	0.0	0.29	41.17	0.45	0.00	0.93	41.62	51.99	1.25
4.00	0.0	0.0	0.1	0.0	0.13	41.05	0.46	0.00	0.91	41.51	51.99	1.25
0.00	0.0	0.0	0.0	0.0	0.00	40.95	0.46	0.00	0.90	41.41	51.99	1.26

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015

Forces and Moments for Pole in the Local Element Coordinate System Fuse 1.13.0.0

Loading Case ICE + WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
149.00	7	-6	9	0	237	283	369	106
145.00	24	-20	31	0	354	422	550	318
145.00	24	-20	31	0	6754	8050	10508	5984
144.00	121	-101	157	0	6784	8085	10555	6038
139.00	611	-513	798	0	6931	8260	10783	6348
135.00	1011	-849	1320	0	7062	8417	10987	6589
135.00	1011	-849	1320	0	10550	12573	16413	10160
134.00	1162	-975	1517	0	10573	12601	16449	10247
130.50	1695	-1422	2212	0	10694	12744	16636	10471
130.50	1695	-1422	2212	0	10682	12731	16619	10500
129.00	1924	-1615	2512	0	10724	12780	16683	10655
125.00	2542	-2133	3318	0	10872	12957	16914	10995
125.00	2542	-2133	3318	0	14546	17335	22630	14611
124.00	2750	-2308	3590	0	14560	17352	22651	14756
119.00	3798	-3187	4958	0	14714	17536	22891	15301
115.00	4645	-3897	6063	0	14875	17727	23141	15680
115.00	4645	-3897	6063	0	18435	21970	28680	19385
114.00	4909	-4119	6408	0	18450	21987	28703	19543
111.00	5703	-4785	7445	0	18574	22135	28895	19840
111.00	5703	-4785	7445	0	18543	22099	28848	19908
109.00	6235	-5231	8139	0	18617	22187	28963	20431
106.42	6925	-5811	9040	0	18723	22314	29128	21099
105.00	7305	-6129	9536	0	18786	22389	29226	21305
105.00	7305	-6129	9536	0	22251	26518	34617	25044
104.00	7623	-6397	9952	0	22253	26520	34620	25283
99.00	9223	-7739	12039	0	22404	26700	34855	26196
94.00	10833	-9090	14141	0	22555	26880	35090	27149
89.00	12454	-10450	16258	0	22715	27070	35338	28123
85.00	13759	-11545	17961	0	22907	27299	35637	28805
85.00	13759	-11545	17961	0	22863	27247	35569	28889
84.00	14086	-11820	18389	0	22874	27260	35586	29339
79.58	15539	-13039	20285	0	23079	27504	35904	31066
79.00	15732	-13201	20536	0	23107	27538	35948	31184
79.00	15732	-13201	20536	0	24721	29461	38459	32286
74.00	17508	-14691	22855	0	24873	29643	38696	33490
69.00	19296	-16191	25189	0	25025	29824	38932	34732
64.00	21094	-17700	27536	0	25175	30003	39166	36011
59.00	22903	-19218	29898	0	25324	30180	39398	37327
54.00	24723	-20745	32273	0	25506	30397	39681	38622
52.50	25271	-21205	32989	0	25581	30486	39797	38986

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case ICE + WIND

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
52.50	25271	-21205	32989	0	25532	30428	39721	39063
49.00	26554	-22281	34663	0	25662	30583	39924	40961
46.08	27627	-23182	36065	0	25771	30713	40093	42568
44.00	28397	-23828	37069	0	25802	30749	40140	43258
39.00	30250	-25383	39489	0	25941	30915	40357	44842
34.00	32114	-26947	41921	0	26075	31075	40565	46465
29.00	33986	-28518	44366	0	26203	31228	40765	48129
24.00	35868	-30097	46823	0	26334	31384	40969	49832
19.00	37760	-31684	49292	0	26468	31543	41176	51576
14.00	39661	-33280	51774	0	26603	31704	41387	53359
9.00	41572	-34883	54269	0	26741	31869	41602	55182
4.00	43493	-36495	56776	0	26891	32048	41836	57034
0.00	45037	-37791	58792	0	27091	32285	42145	58459

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015

Fuse 1.13.0.0

Deflections and Stresses for Pole

Loading Case ICE + WIND

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Applied Bending Stress (ksi)	Applied Axial Stress (ksi)	Applied Torsion Stress (ksi)	Applied Shear Stress (ksi)	Applied Combined Stress (ksi)	Allowable Stress (ksi)	Allowable Divided by Combined
149.00	63.5	75.7	98.8	3.9	6.26	0.16	0.01	0.00	0.06	0.17	51.99	99.90
145.00	60.1	71.7	93.5	3.6	6.26	0.49	0.03	0.00	0.09	0.52	51.99	99.90
145.00	60.1	71.7	93.5	3.6	6.26	0.49	0.49	0.00	1.71	3.01	51.99	17.28
144.00	59.3	70.7	92.2	3.5	6.25	2.43	0.48	0.00	1.70	3.06	51.99	16.98
139.00	55.1	65.7	85.7	3.1	6.18	10.80	0.48	0.00	1.62	11.28	51.99	4.61
135.00	51.8	61.7	80.6	2.9	6.07	16.18	0.47	0.00	1.57	16.65	51.99	3.12
135.00	51.8	61.7	80.6	2.9	6.07	16.18	0.72	0.00	2.35	16.90	51.99	3.08
134.00	51.0	60.8	79.3	2.8	6.04	18.15	0.72	0.00	2.33	18.87	51.99	2.75
130.50	48.2	57.4	75.0	2.6	5.90	24.37	0.71	0.00	2.26	25.08	51.99	2.07
130.50	48.2	57.4	75.0	2.6	5.90	18.41	0.53	0.00	1.70	18.95	51.99	2.74
129.00	47.0	56.0	73.1	2.5	5.84	20.20	0.53	0.00	1.68	20.73	51.99	2.51
125.00	43.9	52.3	68.3	2.2	5.68	24.41	0.53	0.00	1.63	24.94	51.99	2.08
125.00	43.9	52.3	68.3	2.2	5.68	24.41	0.70	0.00	2.17	25.11	51.99	2.07
124.00	43.1	51.4	67.1	2.2	5.64	25.84	0.70	0.00	2.15	26.54	51.99	1.96
119.00	39.4	47.0	61.4	1.9	5.39	32.13	0.69	0.00	2.07	32.82	51.99	1.58
115.00	36.6	43.6	56.9	1.7	5.17	36.27	0.68	0.00	2.01	36.94	51.99	1.41
115.00	36.6	43.6	56.9	1.7	5.17	36.27	0.84	0.00	2.49	37.10	51.99	1.40
114.00	35.9	42.8	55.9	1.6	5.11	37.58	0.83	0.00	2.46	38.42	51.99	1.35
111.00	33.9	40.4	52.7	1.5	4.93	41.22	0.82	0.00	2.41	42.05	51.99	1.24
111.00	33.9	40.4	52.7	1.5	4.93	28.77	0.56	0.00	1.64	29.33	51.99	1.77
109.00	32.6	38.8	50.7	1.4	4.84	30.27	0.57	0.00	1.61	30.84	51.99	1.69
106.42	30.9	36.8	48.1	1.3	4.72	32.03	0.57	0.00	1.58	32.60	51.99	1.59
105.00	30.0	35.8	46.7	1.2	4.65	32.92	0.57	0.00	1.57	33.49	51.99	1.55
105.00	30.0	35.8	46.7	1.2	4.65	32.92	0.67	0.00	1.86	33.59	51.99	1.55
104.00	29.4	35.0	45.7	1.2	4.60	33.74	0.67	0.00	1.84	34.41	51.99	1.51
99.00	26.4	31.4	41.0	1.0	4.35	37.35	0.66	0.00	1.77	38.02	51.99	1.37
94.00	23.5	28.1	36.6	0.9	4.08	40.30	0.66	0.00	1.71	40.96	51.99	1.27
89.00	20.9	24.9	32.5	0.7	3.81	42.71	0.66	0.00	1.66	43.37	51.99	1.20
85.00	18.9	22.5	29.4	0.6	3.59	44.32	0.65	0.00	1.62	44.97	51.99	1.16
85.00	18.9	22.5	29.4	0.6	3.59	39.78	0.57	0.00	1.42	40.35	51.99	1.29
84.00	18.4	21.9	28.6	0.6	3.54	40.09	0.58	0.00	1.41	40.66	51.99	1.28
79.58	16.4	19.5	25.5	0.5	3.32	41.31	0.59	0.00	1.37	41.90	51.99	1.24
79.00	16.1	19.2	25.1	0.5	3.29	41.45	0.59	0.00	1.37	42.04	51.99	1.24
79.00	16.1	19.2	25.1	0.5	3.29	41.45	0.61	0.00	1.46	42.06	51.99	1.24
74.00	14.0	16.7	21.7	0.4	3.04	42.84	0.61	0.00	1.42	43.45	51.99	1.20
69.00	12.0	14.3	18.7	0.3	2.79	43.95	0.61	0.00	1.38	44.56	51.99	1.17
64.00	10.2	12.2	15.9	0.2	2.54	44.84	0.61	0.00	1.34	45.46	51.99	1.14
59.00	8.6	10.2	13.4	0.2	2.30	45.55	0.61	0.00	1.30	46.16	51.99	1.13
54.00	7.1	8.5	11.1	0.1	2.06	46.09	0.61	0.00	1.27	46.71	51.99	1.11

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

Deflections and Stresses for Pole

Loading Case ICE + WIND

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Applied Bending Stress (ksi)	Applied Axial Stress (ksi)	Applied Torsion Stress (ksi)	Applied Shear Stress (ksi)	Applied Combined Stress (ksi)	Allowable Stress (ksi)	Allowable Divided by Combined
52.50	6.7	8.0	10.4	0.1	1.99	46.23	0.61	0.00	1.26	46.84	51.99	1.11
52.50	6.7	8.0	10.4	0.1	1.99	42.23	0.55	0.00	1.12	42.78	51.99	1.22
49.00	5.8	6.9	9.0	0.1	1.84	42.44	0.56	0.00	1.11	43.01	51.99	1.21
46.08	5.1	6.1	7.9	0.1	1.72	42.58	0.58	0.00	1.09	43.16	51.99	1.20
44.00	4.6	5.5	7.2	0.1	1.63	42.66	0.58	0.00	1.08	43.24	51.99	1.20
39.00	3.6	4.3	5.6	0.1	1.42	42.80	0.58	0.00	1.05	43.38	51.99	1.20
34.00	2.7	3.2	4.2	0.0	1.22	42.86	0.59	0.00	1.03	43.45	51.99	1.20
29.00	2.0	2.3	3.0	0.0	1.03	42.86	0.59	0.00	1.00	43.45	51.99	1.20
24.00	1.3	1.6	2.1	0.0	0.84	42.81	0.59	0.00	0.98	43.40	51.99	1.20
19.00	0.8	1.0	1.3	0.0	0.65	42.71	0.60	0.00	0.96	43.31	51.99	1.20
14.00	0.4	0.5	0.7	0.0	0.48	42.58	0.60	0.00	0.94	43.19	51.99	1.20
9.00	0.2	0.2	0.3	0.0	0.30	42.42	0.61	0.00	0.92	43.03	51.99	1.21
4.00	0.0	0.0	0.1	0.0	0.13	42.23	0.61	0.00	0.90	42.84	51.99	1.21
0.00	0.0	0.0	0.0	0.0	0.00	42.06	0.62	0.00	0.89	42.68	51.99	1.22

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case T+S

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
149.00	2	-1	2	0	62	74	96	90
145.00	7	-6	9	0	110	132	172	253
145.00	7	-6	9	0	2171	2588	3378	3950
144.00	38	-32	49	0	2184	2603	3397	3992
139.00	196	-165	256	0	2247	2678	3496	4215
135.00	326	-274	426	0	2302	2744	3582	4401
135.00	326	-274	426	0	3430	4087	5335	6542
134.00	376	-315	490	0	3442	4102	5354	6593
130.50	549	-461	717	0	3492	4162	5433	6765
130.50	549	-461	717	0	3490	4159	5429	6768
129.00	624	-524	815	0	3510	4183	5461	6873
125.00	827	-694	1079	0	3573	4258	5558	7151
125.00	827	-694	1079	0	4765	5679	7413	9483
124.00	895	-751	1168	0	4776	5692	7430	9561
119.00	1239	-1040	1618	0	4849	5779	7544	9940
115.00	1519	-1274	1983	0	4917	5860	7649	10249
115.00	1519	-1274	1983	0	6076	7241	9452	12590
114.00	1606	-1347	2096	0	6087	7255	9470	12676
111.00	1868	-1568	2439	0	6140	7317	9552	12919
111.00	1868	-1568	2439	0	6133	7309	9542	12926
109.00	2044	-1715	2668	0	6168	7351	9596	13341
106.42	2273	-1907	2967	0	6216	7407	9670	13885
105.00	2399	-2013	3132	0	6242	7439	9711	14064
105.00	2399	-2013	3132	0	7370	8783	11466	16409
104.00	2505	-2102	3270	0	7380	8795	11481	16547
99.00	3036	-2547	3963	0	7459	8889	11604	17222
94.00	3573	-2998	4664	0	7540	8985	11730	17926
89.00	4115	-3453	5372	0	7623	9085	11860	18658
85.00	4554	-3821	5945	0	7705	9183	11987	19251
85.00	4554	-3821	5945	0	7696	9171	11972	19260
84.00	4664	-3914	6088	0	7709	9187	11992	19593
79.58	5154	-4325	6728	0	7801	9297	12136	21062
79.00	5219	-4379	6813	0	7813	9311	12155	21166
79.00	5219	-4379	6813	0	8155	9718	12687	21847
74.00	5806	-4872	7579	0	8239	9819	12817	22782
69.00	6399	-5369	8353	0	8323	9919	12948	23751
64.00	6998	-5872	9135	0	8408	10020	13080	24754
59.00	7603	-6380	9925	0	8492	10121	13212	25791
54.00	8214	-6892	10723	0	8585	10231	13355	26854
52.50	8399	-7047	10964	0	8617	10269	13406	27176

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

Forces and Moments for Pole in the Local Element Coordinate System

Loading Case T+S

Dist. From Base (ft)	Mx (in-kips)	My (in-kips)	Resultant Mx & My (in-kips)	Torsion (in-kips)	Shear X-Dir. (lbs)	Shear Y-Dir. (lbs)	Resultant Shear (lbs)	Axial (lbs)
52.50	8399	-7047	10964	0	8606	10256	13388	27185
49.00	8831	-7410	11529	0	8672	10335	13492	28814
46.08	9195	-7715	12003	0	8728	10402	13578	30198
44.00	9455	-7934	12343	0	8755	10434	13621	30737
39.00	10085	-8462	13165	0	8836	10531	13747	32046
34.00	10721	-8996	13995	0	8915	10625	13870	33393
29.00	11362	-9534	14832	0	8993	10717	13990	34779
24.00	12009	-10076	15676	0	9071	10811	14112	36203
19.00	12661	-10624	16528	0	9152	10906	14237	37665
14.00	13319	-11176	17387	0	9233	11004	14364	39166
9.00	13983	-11733	18254	0	9316	11103	14494	40705
4.00	14654	-12296	19129	0	9403	11207	14629	42281
0.00	15194	-12749	19834	0	9494	11314	14770	43559

Deflections and Stresses for Pole

Loading Case T+S

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Applied Bending Stress (ksi)	Applied Axial Stress (ksi)	Applied Torsion Stress (ksi)	Applied Shear Stress (ksi)	Applied Combined Stress (ksi)	Allowable Stress (ksi)	Allowable Divided by Combined
149.00	21.1	25.2	32.9	0.4	2.07	0.04	0.01	0.00	0.02	0.05	51.99	99.90
145.00	20.0	23.9	31.1	0.4	2.07	0.14	0.02	0.00	0.03	0.16	51.99	99.90
145.00	20.0	23.9	31.1	0.4	2.07	0.14	0.32	0.00	0.55	1.01	51.99	51.64
144.00	19.7	23.5	30.7	0.4	2.07	0.76	0.32	0.00	0.55	1.09	51.99	47.69
139.00	18.4	21.9	28.6	0.4	2.05	3.47	0.32	0.00	0.53	3.79	51.99	13.73
135.00	17.3	20.6	26.9	0.3	2.01	5.22	0.31	0.00	0.51	5.54	51.99	9.39
135.00	17.3	20.6	26.9	0.3	2.01	5.22	0.47	0.00	0.76	5.69	51.99	9.14
134.00	17.0	20.3	26.4	0.3	2.00	5.87	0.46	0.00	0.76	6.33	51.99	8.21
130.50	16.1	19.1	25.0	0.3	1.95	7.90	0.46	0.00	0.74	8.35	51.99	6.22
130.50	16.1	19.1	25.0	0.3	1.95	5.97	0.34	0.00	0.55	6.31	51.99	8.24
129.00	15.7	18.7	24.4	0.3	1.94	6.55	0.34	0.00	0.55	6.90	51.99	7.54
125.00	14.6	17.4	22.8	0.3	1.88	7.94	0.34	0.00	0.53	8.28	51.99	6.28
125.00	14.6	17.4	22.8	0.3	1.88	7.94	0.45	0.00	0.71	8.39	51.99	6.19
124.00	14.4	17.1	22.4	0.3	1.87	8.41	0.45	0.00	0.71	8.86	51.99	5.87
119.00	13.2	15.7	20.5	0.2	1.79	10.49	0.45	0.00	0.68	10.93	51.99	4.76
115.00	12.2	14.6	19.0	0.2	1.72	11.86	0.44	0.00	0.66	12.30	51.99	4.23
115.00	12.2	14.6	19.0	0.2	1.72	11.86	0.54	0.00	0.82	12.40	51.99	4.19
114.00	12.0	14.3	18.6	0.2	1.70	12.30	0.54	0.00	0.81	12.84	51.99	4.05
111.00	11.3	13.5	17.6	0.2	1.64	13.50	0.54	0.00	0.80	14.04	51.99	3.70
111.00	11.3	13.5	17.6	0.2	1.64	9.42	0.37	0.00	0.54	9.79	51.99	5.31
109.00	10.9	13.0	16.9	0.2	1.61	9.92	0.37	0.00	0.53	10.29	51.99	5.05
106.42	10.3	12.3	16.1	0.2	1.57	10.51	0.38	0.00	0.53	10.89	51.99	4.77
105.00	10.0	11.9	15.6	0.2	1.55	10.81	0.38	0.00	0.52	11.19	51.99	4.65
105.00	10.0	11.9	15.6	0.2	1.55	10.81	0.44	0.00	0.62	11.25	51.99	4.62
104.00	9.8	11.7	15.3	0.1	1.53	11.08	0.44	0.00	0.61	11.52	51.99	4.51
99.00	8.8	10.5	13.7	0.1	1.45	12.30	0.44	0.00	0.59	12.73	51.99	4.08
94.00	7.9	9.4	12.2	0.1	1.36	13.29	0.44	0.00	0.57	13.73	51.99	3.79
89.00	7.0	8.3	10.9	0.1	1.27	14.11	0.43	0.00	0.56	14.55	51.99	3.57
85.00	6.3	7.5	9.8	0.1	1.20	14.67	0.43	0.00	0.54	15.10	51.99	3.44
85.00	6.3	7.5	9.8	0.1	1.20	13.16	0.38	0.00	0.48	13.55	51.99	3.84
84.00	6.2	7.3	9.6	0.1	1.18	13.27	0.38	0.00	0.47	13.66	51.99	3.81
79.58	5.5	6.5	8.5	0.1	1.11	13.70	0.40	0.00	0.46	14.10	51.99	3.69
79.00	5.4	6.4	8.4	0.1	1.10	13.75	0.40	0.00	0.46	14.15	51.99	3.67
79.00	5.4	6.4	8.4	0.1	1.10	13.75	0.41	0.00	0.48	14.17	51.99	3.67
74.00	4.7	5.6	7.3	0.1	1.01	14.21	0.42	0.00	0.47	14.62	51.99	3.56
69.00	4.0	4.8	6.3	0.0	0.93	14.58	0.42	0.00	0.46	14.99	51.99	3.47
64.00	3.4	4.1	5.3	0.0	0.85	14.88	0.42	0.00	0.45	15.30	51.99	3.40
59.00	2.9	3.4	4.5	0.0	0.77	15.12	0.42	0.00	0.44	15.54	51.99	3.34
54.00	2.4	2.8	3.7	0.0	0.69	15.31	0.43	0.00	0.43	15.74	51.99	3.30

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

Deflections and Stresses for Pole

Loading Case T+S

*** Deflections and Stresses ***

Distance From Base (ft)	Defl. X-Dir (in)	Defl. Y-Dir (in)	Defl. Resultant X & Y (in)	Defl. Z-Dir (in)	Rotation (deg.)	Applied Bending Stress (ksi)	Applied Axial Stress (ksi)	Applied Torsion Stress (ksi)	Applied Shear Stress (ksi)	Applied Combined Stress (ksi)	Allowable Stress (ksi)	Allowable Divided by Combined
52.50	2.3	2.7	3.5	0.0	0.67	15.36	0.43	0.00	0.42	15.79	51.99	3.29
52.50	2.3	2.7	3.5	0.0	0.67	14.03	0.38	0.00	0.38	14.42	51.99	3.61
49.00	1.9	2.3	3.0	0.0	0.62	14.12	0.40	0.00	0.37	14.51	51.99	3.58
46.08	1.7	2.0	2.7	0.0	0.58	14.17	0.41	0.00	0.37	14.58	51.99	3.57
44.00	1.6	1.9	2.4	0.0	0.55	14.21	0.41	0.00	0.37	14.62	51.99	3.56
39.00	1.2	1.4	1.9	0.0	0.48	14.27	0.42	0.00	0.36	14.68	51.99	3.54
34.00	0.9	1.1	1.4	0.0	0.41	14.31	0.42	0.00	0.35	14.73	51.99	3.53
29.00	0.7	0.8	1.0	0.0	0.35	14.33	0.43	0.00	0.34	14.75	51.99	3.52
24.00	0.4	0.5	0.7	0.0	0.28	14.33	0.43	0.00	0.34	14.76	51.99	3.52
19.00	0.3	0.3	0.4	0.0	0.22	14.32	0.44	0.00	0.33	14.76	51.99	3.52
14.00	0.1	0.2	0.2	0.0	0.16	14.30	0.44	0.00	0.33	14.74	51.99	3.53
9.00	0.1	0.1	0.1	0.0	0.10	14.27	0.45	0.00	0.32	14.72	51.99	3.53
4.00	0.0	0.0	0.0	0.0	0.04	14.23	0.45	0.00	0.32	14.68	51.99	3.54
0.00	0.0	0.0	0.0	0.0	0.00	14.19	0.46	0.00	0.31	14.65	51.99	3.55

MINIMUM DEFLECTION RATIO // DEFLECTION LIMIT / DEFLECTION // IS

F L A N G E A N A L Y S I S Version IMPAX-16.11.2015

FLANGE FOR THE D - E JOINT : CONTROLLING LOAD CASE ICE + WIND

Input Data

Applied Reactions			
Resultant Moment	=	2,212	in-kips
Torsion	=	0	in-kips
Resultant Shear	=	16,636	lbs
Axial	=	-10,471	lbs
Bolts			
Number of Bolts	=	8	
Bolt Diameter	=	1.00	in
Bolt Material	=	A325	
Bolt Circle	=	28.81	in
Flange			
Outside Diameter	=	31.31	in
Thickness	=	2.000	in
Yield Strength	=	50	ksi
Tensile Strength	=	65	ksi
Valmont Material Spec.	=	S-56	
Tube			
No. of sides	=	18	
Design Diameter	=	25.044	in
Detailed "D" Sect. Dia	=	25.098	in
Detailed "E" Sect. Dia	=	24.990	in
Thickness	=	0.2500	in
Yield	=	65	ksi

Results

Bolts			
Maximum Bolt Axial Force	=	39,707	lbs
Maximum Bolt Shear	=	2,080	lbs
Allowable Axial Stress	=	85	ksi
Combined Safety Factor	=	1.04	
Flange			
Weight	=	274	lbs
Controlling Stress	=	Shear	
Minimum Safety Factor	=	3.57	
Bending Safety Factor	=	6.71	
Shear Safety Factor	=	3.57	
Bearing Safety Factor	=	57.69	

*** BOLT COORDINATES ***

BOLT NO.	X-COORD	Y-COORD		BOLT NO.	X-COORD	Y-COORD
1	14.40	0.00	*	2	10.18	10.18
3	0.00	14.40	*			

BY VALMONT INDUSTRIES FOR: MESSAGE CENTER MANAGEMENT 150' POLE, SITE: REDDING-BLACKROCK TOWER, CT DATE 11/13/2015
Fuse 1.13.0.0

*** ANCHOR BOLT CHARACTERISTICS GOVERNED BY LOADING CASE ICE ***

NUMBER OF BOLTS	DIAMETER (IN.)	LENGTH (IN.)	WEIGHT (LB.)	SHIPPED AS	PROJECTION LENGTH (IN.)	GALVANIZED LENGTH (IN.)	THREAD SIZE
24	2.250	66	2641	BOLTS, TEMPLATES	12.50	66.00	4.5-UNC-2A

STEEL SPECIF.	MAXIMUM BOLT FORCE (LB.)	MAXIMUM STRESS (PSI)	ALLOWABLE STRESS (PSI)	STRESS AREA (SQ. IN.)	SAFETY FACTOR	CONFIGURATION OF BOTTOM END OF ANCHOR BOLT
A615	147222	45308	59985	3.250	1.32	THREADED WITH HEAVY HEX HEAD NUT

*** BOLT COORDINATES AND FORCES ***

BOLT NO.	X-COORD	Y-COORD	MAX TENSION-LB	MAX FORCE-LB	*	BOLT NO.	X-COORD	Y-COORD	MAX TENSION-LB	MAX FORCE-LB
1	33.840	0.00	- 2438	2438	*	2	32.687	8.758	35034	39910
3	29.306	16.920	69952	74828	*	4	23.928	23.928	99937	104817
5	16.920	29.306	122950	127825	*	6	8.758	32.687	137413	142289
7	0.00	33.840	142346	147222	*					

MAX. BOLT CIRCLE = 67.68 IN. TEMPLATE DIAMETER = 73.68 IN.

*** BASE PLATE CHARACTERISTICS GOVERNED BY LOADING CASE ICE ***

DRAWING NUMBER	OVERALL LENGTH (IN.)	OVERALL WIDTH (IN.)	THICKNESS (IN.)	ACTUAL WEIGHT (LB.)	RAW MATERIAL WEIGHT (LB.)	SIDE LENGTH (IN.)
SD18-98	73.68	74.82	3.5000	3308	5466	13.00

TOP WIDTH (IN.)	POLE DIAM. (MAJOR DIAM.) (IN.)	CRITICAL FAILURE MODE	TOTAL LENGTH OF FAIL MODE LINE (IN.)	EFFECTIVE LENGTH (IN.)	TOTAL MOMENT ALONG FAIL LINE (IN.-LB.)
13.00	60.25	1	74.69	60.77	3084508

STEEL SPECIF. VALMONT	STEEL SPECIF. OTHER	BENDING STRESS (PSI)	ALLOWABLE STRESS (PSI)	MAX. VERTICAL SHEAR STRESS (PSI)
S56	A572	24861	50010	7418

** LOADS AT POLE BASE IN THE GLOBAL COORDINATE SYSTEM ********** LOADING CASES **********

LOADING CASE IDENTIFICATION	WIND	ICE	T+S
MOMENT ABT. X-AXIS (IN-KIP)	43839	45037	15194
MOMENT ABT. Y-AXIS (IN-KIP)	- 36785	- 37791	- 12749
SHEAR FORCE (LB.)	42600	42078	14753
VERTICAL FORCE (LB.)	44070	58507	43565

]MAX CRITERION-	LOAD CASE
]MOMENT ABT. X	ICE
]MOMENT ABT. Y	ICE
]RES. MOMENT	ICE
]SHEAR FORCE	WIND
]BOLT FORCE	ICE
]BOLT TENSION	ICE