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May 1, 2018

BY EMAIL & OVERNIGHT DELIVERY
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")
Connecticut Siting Council Docket No. 476
Certificate of Environmental Compatibility and Public Need for the Construction, Maintenance and Operation ("Certificate") of a Telecommunications Facility at
248 Hall Hill Road, Somers, Connecticut

Dear Chairman Stein and Members of the Council:

On behalf of the certificate holder Eco-Site and in furtherance of the captioned Certificate, please accept for review and Council approval this Development Management Plan ("D&M Plan") filing for the captioned Facility as approved in Docket No. 476.

Tower, Compound & Other Equipment
Enclosed are an original and fifteen (15) sets of 11" x 17" drawings prepared by Infinigy dated February 27, 2018 and last revised March 15, 2018 ("D&M Plan Drawings") being filed in accordance with the Siting Council's ("Council") Decision and Order dated February 15, 2018 ("Decision and Order"). Two full-sized sets of the D&M Plan drawings are being forwarded to the Council separately.

Accompanying these drawings please find enclosed a geotechnical report (Attachment 1), tower and foundation structural review (Attachment 2), and the Development and Management Plan Drawings (Attachment 3).

As per Order number 1 of the Council's Decision and Order, the D&M Plan Drawings incorporates seasonal restrictions to protect the potential vernal pool on the host parcel. See, Note - Sheet C2. In regard to the Council's Order number 2 please note that no tree clearing restrictions have been imposed as a result of either state or federal review. Please also note that hours of construction are anticipated to be between 8:00 a.m. and 6:00 p.m. and otherwise in accordance with the Town of Somers regulations and direction.

Included in the D&M are the final site plans including specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access utilities and emergency

C&F: 1683672.1
C&F: 3707043.1

backup details of the associated compound and access drive. Incorporated in the D&M drawings are specifications regarding the antennas, remote radiohead units (RRUs) and the alternate power unit and propane tanks. The D&M Plan Drawings also include site preparation and erosion and sedimentation control measures consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control as amended.

Required Notifications
In accordance with RCSA Section 16-50j-61(d) a copy of this filing is being provided to property owner, Debra Romano.

In accordance with the provisions of RCSA Section 16-50j-77, the certificate holder hereby notifies the Council of its intention to begin site work after Council approval of the D&M Plan. Construction of the tower and other site improvements will commence after issuance of a local building permit. The supervisor for all construction related matters on this project is Charles Moore who can be reached by telephone at (518) 368-2545.

We respectfully request that this matter be included on the Council's earliest available agenda for review and approval.

Thank you for your consideration of the enclosed.

Very truly yours,

Daniel M. Laub

Attachments

cc: Steve Russo, Eco-Site
Mark Richards, T-Mobile
Debra Romano, Property Owner
Project team

ATTACHMENT 1

GEOTECHNICAL INVESTIGATION REPORT

July 18, 2017

Prepared For:

Infinigy

Somers
CT-0005A
Proposed 180-Foot Monopole Tower
248 Hall Hill Road, Somers (Tolland County), Connecticut 06071
Latitude N 42° 00' 09.3" Longitude W 72° 29' 06.0"

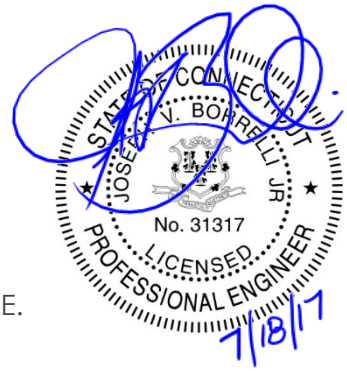
Delta Oaks Group Project GEO17-01159-08
Revision 0

Performed By:

Erin Beaton, E.I.

Reviewed By:

Joseph V. Borrelli, Jr., P.E.



INTRODUCTION

This geotechnical investigation report has been completed for the proposed 180-foot monopole tower located at 248 Hall Hill Road in Somers (Tolland County), Connecticut. The purpose of this investigation was to provide engineering recommendations and subsurface condition data at the proposed tower location. A geotechnical engineering interpretation of the collected information was completed and utilized to suggest design parameters regarding the adequacy of the structure's proposed foundation capacity under various loading conditions. This report provides the scope of the geotechnical investigation; geologic material identification; results of the geotechnical laboratory testing; and design parameter recommendations for use in the design of the telecommunication facility's foundation and site development.

SITE CONDITION SUMMARY

The proposed tower and compound are located densely vegetated lot exhibiting a generally flat topography across the tower compound and subject property.

REFERENCES

- Civil Drawings, prepared by Infinigy, dated January 26, 2017
- TIA Standard (TIA-222-G), dated August 2005

SUBSURFACE FIELD INVESTIGATION SUMMARY

The subsurface field investigation was conducted through the advancement of one mechanical soil test boring to the auger refusal depth of 10.0 feet bgs. Samples were obtained at selected intervals in accordance with ASTM D 1586. The sampling was conducted at the staked centerline of the proposed tower. Upon encountering auger refusal 5.0 feet of rock coring was conducted in accordance with ASTM D 2113. Soil and rock samples were transported to our laboratory and classified by a geotechnical engineer in accordance with ASTM D 2487. A detailed breakdown of the material encountered in our subsurface field investigation can be found in the boring log presented in the Appendix of this report.

Additional testing was performed on selected samples in accordance with ASTM D 7012 (Unconfined Compressive Strength – Rock). Laboratory data can be found in the Appendix of this report.

A boring plan portraying the spatial location of the boring in relation to the proposed tower, tower compound and immediate surrounding area can be found in the Appendix.

SUBSURFACE CONDITION SUMMARY

The following provides a general overview of the site's subsurface conditions based on the data obtained during our field investigation.

FILL

Fill material was not encountered during the subsurface field investigation.

SOIL

The residual soil encountered in the subsurface field investigation began at the existing ground surface in the boring and consisted of poorly graded sand. The materials ranged from a loose to very dense relative density.

Auger advancement refusal was encountered during the subsurface field investigation at a depth of 10.0 feet bgs.

ROCK

Rock was encountered during the subsurface investigation at a depth of 10.0 feet bgs. The rock can be described as highly to moderately fractured, slightly weathered, moderately hard sandstone.

SUBSURFACE WATER

At the time of drilling, subsurface water was encountered during the subsurface investigation at a depth of 7.5 feet bgs. However, subsurface water elevations can fluctuate throughout the year due to variations in climate, hydraulic parameters, nearby construction activity and other factors.

FROST PENETRATION

The frost penetration depth for Tolland County, Connecticut is 40 inches (3.3 feet).

CORROSIVITY

Soil resistivity testing was performed in accordance with ASTM G57. Test result can be found in the Appendix of this report.

FOUNDATION DESIGN SUMMARY

In consideration of the provided tower parameters and the determined soil characteristics, Delta Oaks Group recommends utilizing a shallow foundation and/or drilled shaft foundation for the proposed structure. The strength parameters presented in the following sections can be utilized for design of the foundation.

GENERAL SUBSURFACE STRENGTH PARAMETERS

Boring	Depth (bgs)	USCS	Moist/Buoyant Unit Weight (pcf)	Phi Angle (degrees)	Cohesion (psf)
B-1	0.0 – 2.0	SP	110	30	0
	2.0 – 4.0	SP	125	38	0
	4.0 – 6.0	SP	130	40	0
	6.0 – 8.0	SP	125 / 63	37	0
	8.0 – 10.0	SP	130 / 68	40	0
	10.0 – 15.0	SANDSTONE	130	0	10,000

- The buoyant unit weight of soil should be utilized below a depth of 7.5 feet bgs.
- The unit weight provided assumes overburden soil was compacted to a minimum of 95% of the maximum dry density as obtained by the standard Proctor method (ASTM D 698) and maintained a moisture content within 3 percent of optimum
- The values provided for phi angle and cohesion should be considered ultimate.

SUBSURFACE STRENGTH PARAMETERS – SHALLOW FOUNDATION

Boring	Dimensions (feet)	Depth (feet bgs)	Net Ultimate Bearing Capacity (psf)
B-1	Greater Than 5.0 x 5.0	Greater Than 3.3	30,000

- Delta Oaks Group recommends the foundation bear a minimum of 3.3 feet bgs.
- A sliding friction factor of 0.35 can be utilized along the base of the proposed foundation.
- The bearing capacity can be increased by 1/3 for transient loading.
- An Ultimate Passive Pressure Table with a reduction due to frost penetration to a depth of 3.3 feet bgs is presented on the following page.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.

ULTIMATE PASSIVE PRESSURE VS. DEPTH - TOWER FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0	110	30	0	0	3	0
Bottom	2	110	30	0	220	3	330
Top	2	125	38	0	220	4.203745843	462.4120427
Bottom	3.3	125	38	0	382.5	4.203745843	803.9663924
Top	3.3	125	38	0	382.5	4.203745843	1607.932785
Bottom	4	125	38	0	470	4.203745843	1975.760546
Top	4	130	40	0	470	4.598909932	2161.487668
Bottom	6	130	40	0	730	4.598909932	3357.20425
Top	6	125	37	0	730	4.022791206	2936.63758
Bottom	7.5	125	37	0	917.5	4.022791206	3690.910931
Top	7.5	125	37	0	917.5	4.022791206	3690.910931
Bottom	8	125	37	0	948.8	4.022791206	3816.824296
Top	8	130	40	0	948.8	4.598909932	4363.445744
Bottom	10	130	40	0	1084	4.598909932	4985.218366

SUBSURFACE STRENGTH PARAMETERS - DRILLED SHAFT FOUNDATION

Boring	Depth (bgs)	Net Ultimate Bearing Capacity (psf)	Ultimate Skin Friction - Compression (psf)	Ultimate Skin Friction - Uplift (psf)
B-1	0.0 – 3.3	-	-	-
	3.3 – 4.0	16,070	570	420
	4.0 – 8.0	31,200	860	640
	8.0 – 10.0	79,800	1,100	820
	10.0 – 15.0	79,700	5,500	5,500

- The top 3.3 feet of soil should be ignored due to the frost penetration.
- The bearing capacity can be increased by 1/3 for transient loading.
- The values presented assume the concrete is cast-in-place against earth walls and any casing utilized during construction of the foundation was removed.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.

SUBSURFACE STRENGTH PARAMETERS – SUPPORT STRUCTURE FOUNDATION

Boring	Depth (bgs)	Net Ultimate Bearing Capacity (psf)	Minimum Design Footing Width (ft)	Modulus of Subgrade Reaction (pci)
B-1	3.3	30,000	2.0	225

- Delta Oaks Group recommends utilizing a slab on grade in conjunction with continuous perimeter footings that bear on residual soil or properly compacted structural fill placed in accordance with the recommendations provided in the *CONSTRUCTION* section of this report.
- The slab on grade should be properly reinforced to prevent concrete cracking and shrinkage.
- The foundation should bear a minimum of 3.3 feet bgs.
- A sliding friction factor of 0.35 can be utilized along the base of the proposed foundation.
- An Ultimate Passive Pressure Table is presented on the following page. An appropriate reduction should be considered in accordance with local building code frost penetration depth.
- Delta Oaks Group recommends an appropriate factor of safety be utilized for the design of the foundation.

ULTIMATE PASSIVE PRESSURE VS. DEPTH – SUPPORT STRUCTURE FOUNDATION

Soil Layers (feet)		Moist Unit Weight	Phi Angle	Cohesion	PV	KP	Ph
Top	0	110	30	0	0	3	0
Bottom	2	110	30	0	220	3	330
Top	2	125	38	0	220	4.203745843	462.4120427
Bottom	3.3	125	38	0	382.5	4.203745843	803.9663924
Top	3.3	125	38	0	382.5	4.203745843	1607.932785
Bottom	4	125	38	0	470	4.203745843	1975.760546
Top	4	130	40	0	470	4.598909932	2161.487668
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Top	6	125	37	0	730	4.022791206	2936.63758
Bottom	7.5	125	37	0	917.5	4.022791206	3690.910931
Top	7.5	125	37	0	917.5	4.022791206	3690.910931
Bottom	8	125	37	0	948.8	4.022791206	3816.824296
Top	8	130	40	0	948.8	4.598909932	4363.445744
Bottom	10	130	40	0	1084	4.598909932	4985.218366

CONSTRUCTION

SITE DEVELOPMENT

The proposed access road and tower compound should be evaluated by a Geotechnical Engineer, or their representative, after the removal or "cutting" of the areas to design elevation but prior to the placement of any structural fill material to verify the presence of unsuitable or weak material. Unsuitable or weak materials should be undercut to a suitable base material as determined by a Geotechnical Engineer, or their representative. Backfill of any undercut area(s) should be conducted in accordance with the recommendations provided in the *STRUCTURAL FILL PLACEMENT* section of this report.

Excavations should be sloped or shored in accordance and compliance with OSHA 29 CFR Part 1926, Excavation Trench Safety Standards as well as any additional local, state and federal regulations.

STRUCTURAL FILL PLACEMENT

Structural fill materials should be verified, prior to utilization, to have a minimum unit weight of 110 pcf (pounds per cubic foot) when compacted to a minimum of 95% of its maximum dry density and within plus or minus 3 percentage points of optimum moisture. Materials utilized should not contain more than 5 percent by weight of organic matter, waste, debris or any otherwise deleterious materials. The Liquid Limit should be no greater than 40 with a Plasticity Index no greater than 20. Structural fill material should contain a maximum particle size of 4 inches with 20 percent or less of the material having a particle size between 2 and 4 inches. Backfill should be placed in thin horizontal lifts not to exceed 8 inches (loose) in large grading areas and 4 inches (loose) where small handheld or walk-behind compaction equipment will be utilized. The potential suitability of on-site materials to be utilized as fill should be evaluated by a Geotechnical Engineer, or their representative just prior to construction.

During construction structural fill placement should be monitored and tested. This should include at minimum, visual observation as well as a sufficient amount of in-place field density tests by a Geotechnical Engineer, or their representative. Materials should be compacted to a minimum of 95% of the maximum dry density as determined by ASTM D 698 (standard Proctor method). Moisture contents should be maintained to within plus or minus 3 percentage points of the optimum moisture content.

SHALLOW FOUNDATIONS

Foundation excavation(s) should be evaluated by a Geotechnical Engineer, or their representative, prior to reinforcing steel and concrete placement. This evaluation should include visual observation to verify a level bearing surface; vertical side-walls with no protrusions, sloughing or caving; and the exposed bearing surface is free of deleterious material, loose soil and standing water. Excavation dimensions should be verified and testing performed on the exposed bearing surface to verify compliance with design recommendations. Bearing testing should be conducted in accordance with ASTM STP399 (Dynamic Cone Penetrometer). A 6-inch layer of compacted crushed stone should be installed prior to reinforcing steel and concrete placement. If subsurface water is encountered during excavation dewatering methods such as sump pumps or well points may be required.

DRILLED SHAFT FOUNDATIONS

Drilled shaft foundations (caissons) are typically installed utilizing an earth auger to reach the design depth of the foundation. Specialized roller bits or core bits can be utilized to penetrate boulders or rock. The equipment utilized should have cutting teeth to result in an excavation with little or no soil smeared or caked on the excavation sides with spiral-like corrugated walls. The drilled shaft design diameter should be maintained throughout the excavation with a plumbness tolerance of 2 percent of the length and an eccentricity tolerance of 3 inches from plan location. A removable steel casing can be installed in the shaft to prevent caving of the excavation sides due to soil relaxation. Upon completion of the drilling and casing placement, loose soils and subsurface water greater than 3-inches in depth should be removed from the bottom of the excavation for the "dry" installation method. The drilled shaft installation should be evaluated by a Geotechnical Engineer, or their representative, to verify suitable end bearing conditions, design diameter and bottom cleanliness. The evaluation should be conducted immediately prior to as well as during concrete placement operations.

The drilled shaft should be concreted as soon as reasonably practical after excavation to reduce the deterioration of the supporting soils to prevent potential caving and water intrusion. A concrete mix design with a slump of 6 to 8 inches employed in conjunction with the design concrete compressive strength should be utilized for placement. Super plasticizer may be required to obtain the recommended slump range. During placement, the concrete may fall freely through the open area in the reinforcing steel cage provided it does not strike the reinforcing steel and/or the casing prior to reaching the bottom of the excavation. The removable steel casing should be extracted as concrete is placed. During steel casing removal a head of concrete should be maintained above the bottom of the casing to prevent soil and water intrusion into the concrete below the bottom of the casing.

If subsurface water is anticipated and/or weak soil layers are encountered drilled shafts are typically installed utilizing the "wet" method by excavating beneath a drilling mud slurry. The drilling mud slurry is added to the drilled shaft excavation after groundwater has been encountered and/or the sides of the excavation are observed to be caving or sloughing. Additional inspection by a Geotechnical Engineer, or their representative, during the "wet" method should consist of verifying maintenance of sufficient slurry head, monitoring the specific gravity, pH and sand content of the drilling slurry, and monitoring any changes in the depth of the excavation between initial approval and just prior to concreting.

Concrete placement utilizing the "wet" method is conducted through a tremie pipe at the bottom of the excavation with the drilling mud slurry level maintained at a minimum of 5 feet or one shaft diameter, whichever is greater, above the ground water elevation. The bottom of the tremie should be set one tremie pipe diameter above the excavation. A closure flap at the bottom of the tremie or a sliding plug introduced into the tremie before the concrete is recommended to reduce the potential contamination of the concrete by the drilling mud slurry. The bottom of the tremie must be maintained in the concrete during placement. Additional concrete should be placed through the tremie causing the slurry to overflow from the excavation in order to reduce the potential for the development of "slurry pockets" remaining in the drilled shaft.

QUALIFICATIONS

The design parameters and conclusions provided in this report have been determined in accordance with generally accepted geotechnical engineering practices and are considered applicable to a rational degree of engineering certainty based on the data available at the time of report preparation and our practice in this geographic region. All recommendations and supporting calculations were prepared based on the data available at the time of report preparation and knowledge of typical geotechnical parameters in the applicable geographic region.

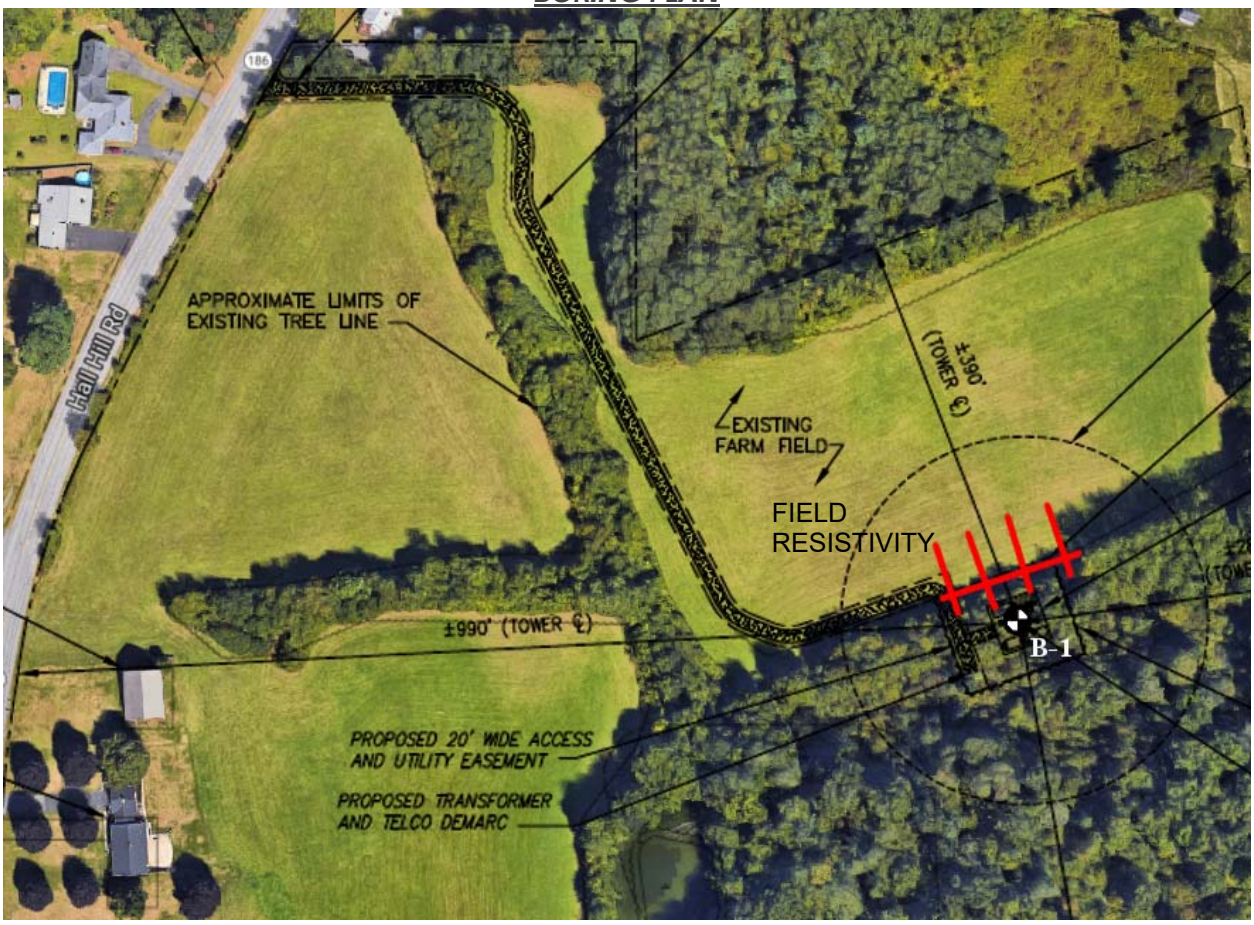
The subsurface conditions used in the determination of the design recommendations contained in this report are based on interpretation of subsurface data obtained at specific boring locations. Irrespective of the thoroughness of the subsurface investigation, the potential exists that conditions between borings will differ from those at the specific boring locations, that conditions are not as anticipated during the original analysis, or that the construction process has altered the soil conditions. That potential is significantly increased in locations where existing fill materials are encountered. Additionally, the nature and extent of these variations may not be evident until the commencement of construction. Therefore, a geotechnical engineer, or their representative, should observe construction practices to confirm that the site conditions do not differ from those conditions anticipated in design. If such variations are encountered, Delta Oaks Group should be contacted immediately in order to provide revisions and/or additional site exploration as necessary

Samples obtained during our subsurface field investigation will be retained by Delta Oaks Group for a period of 45 days unless otherwise instructed by Infinigy. No warranty, expressed or implied, is presented.

Delta Oaks Group appreciates the opportunity to be of service for this Geotechnical Investigation Report. Please do not hesitate to contact Delta Oaks Group with any questions or should you require additional service on this project.

APPENDIX

BORING PLAN


186
Hall Hill Rd
APPROXIMATE LIMITS OF EXISTING TREE LINE
±390' (TOWER ℄)
EXISTING FARM FIELD
FIELD RESISTIVITY
±990' (TOWER ℄)
B-1
PROPOSED 20' WIDE ACCESS AND UTILITY EASEMENT
PROPOSED TRANSFORMER AND TELCO DEMARC

Field Resitivity Data Sheet

ASTM G57-06

DOG Project #:	GEO17-01159-08	**Tested By:**	EMB	**Date:**	7/12/17
Site Name:	Somers	**Checked By:**	JVB	**Date:**	7/18/17
Site ID:	CT-0005A	**Gnd Elevation:**	247 ft		
Location:	B-1				

Direction	Spacing (feet)	Spacing (cm)	Resistance (ohms)	Resistivity (ohm-cm)
SW - NE (1)	10	3050	90	1,724,734
SW - NE (1)	15	4575	43	1,236,060
SW - NE (1)	20	6100	25	958,186
SE - NW (2)	10	3050	78	1,494,770
SE - NW (2)	15	4575	46	1,322,296
SE - NW (2)	20	6100	26	996,513
SE - NW (3)	10	3050	89	1,705,571
SE - NW (3)	15	4575	47	1,351,042
SE - NW (3)	20	6100	24	919,858
SE - NW (4)	10	3050	66	1,264,805
SE - NW (4)	15	4575	42	1,207,314
SE - NW (4)	20	6100	24	919,858
SE - NW (5)	10	3050	96	1,839,717
SE - NW (5)	15	4575	51	1,466,024
SE - NW (5)	20	6100	23	881,531
			Average Resistivity Reading	1,288,760

PROJECT NAME Somers (CT-0005A)

CLIENT Infinigy

PROJECT NUMBER GEO17-01159-08

Boring No.: B-1 PAGE 1 OF 1

PROJECT LOCATION 248 Hall Hill Road, Somers (Tolland County), CT

DATE DRILLED : 7/8/2017

DRILLING METHOD : Hollow Stem Auger & Rock Coring

GROUND ELEVATION : 247

BORING DEPTH (ft) : 15

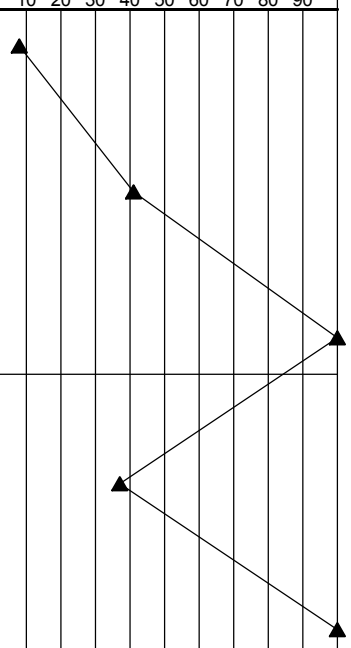
GROUND WATER LEVELS:

AT TIME OF DRILLING : 7.50 ft

AT END OF DRILLING : --- Not Encountered

AFTER DRILLING : --- Not Encountered

DEPTH (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE	MATERIAL CLASSIFICATION	Pocket Penetrometer (tsf)	BLOWS 1st	BLOWS 2nd	BLOWS 3rd	N VALUE
0	POORLY GRADED SAND (SP), loose, brown, moist		SP		4	4	4	8
	-- Dense				10	16	25	41
5	-- Very dense				41	50/2"		100
	-- Dense, reddish brown, with rock fragments				22	18	19	37
10	-- Very dense				50/3"			100
	SANDSTONE, reddish brown, highly to moderately fractured, slightly weathered, moderately hard				REC 100%	RQD 34%		
15	Compressive Strength 7,460 psi @ 13'							
	Refusal at 10.0 feet. Bottom of borehole at 15.0 feet.							
20								



ATTACHMENT 2

Sabre Industries™
Towers and Poles

Structural Design Report

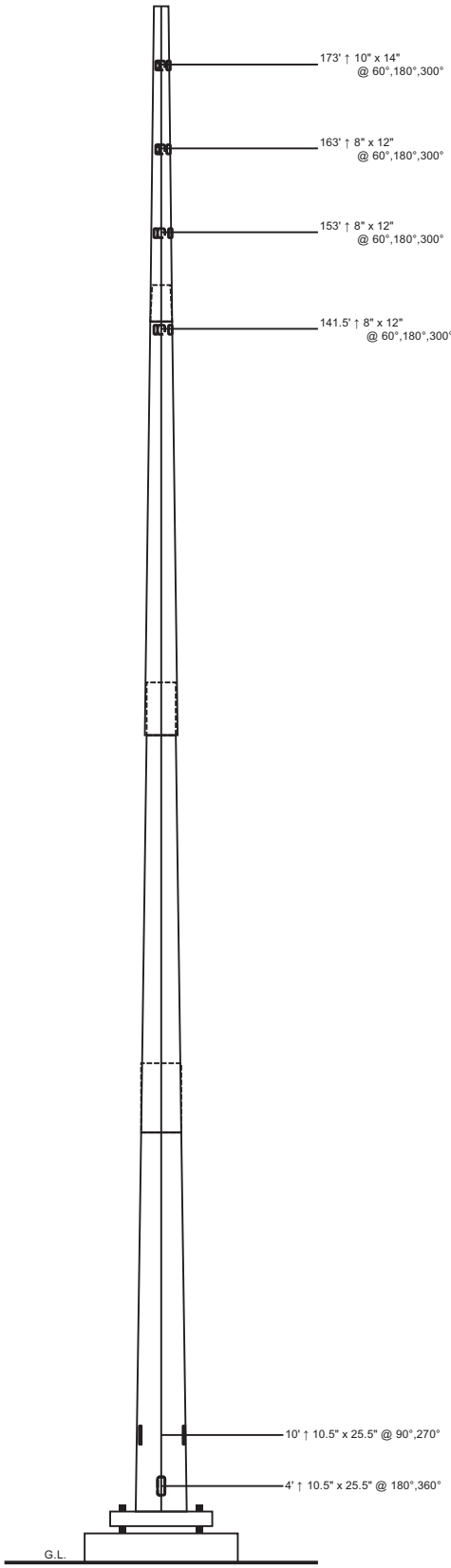
180' Monopole
Site: Blue Ridge, CT
Site Number: CT-0005

Prepared for: ECO-SITE
by: Sabre Towers & Poles ™

Job Number: 18-6446-JDS

April 6, 2018

Length (ft)	37'-6"	53'-6"	53'-6"	53'-3"
Number Of Sides		18		
Thickness (in)	1/4"	3/8"	7/16"	
Lap Splice (ft)	A	6' - 3"	8' - 3"	
Top Diameter (in)	18.75"	28.47"	42.25"	55.29"
Bottom Diameter (in)	30.28"	44.93"	58.7"	71.67"
Taper (in/ft)	0.3075			
Grade	A572-65			
Weight (lbs)	2932	8442	13407	18980
Overall Steel Height (ft)	179			



Designed Appurtenance Loading

Elev	Description	Tx-Line
175	(1) 250 Sq. Ft. EPA (4,400 lbs)	(24) 1 5/8"
165	(1) 190 SQ. FT. EPA	(15) 1 5/8"
155	(1) 150 Sq. Ft. EPA (175 Sq. Ft. Ice EPA)	(15) 1 5/8"
145	(1) 150 Sq. Ft. EPA (175 Sq. Ft. Ice EPA)	(15) 1 5/8"

Load Case Reactions

Description	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
3s Gusted Wind	78.32	62.24	8824.69	15.41	10.35
3s Gusted Wind 0.9 Dead	58.79	62.37	8708.88	15.11	10.12
3s Gusted Wind&Ice	154.04	25.84	4310.15	8.32	5.74
Service Loads	65.29	13.36	1890.66	3.37	2.24

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	84.75"	2.25"	79"	22	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	2664.2	A615-75	Galv

Material List

Display	Value
A	4' - 3"

Notes

1) Antenna Feed Lines Run Inside Pole
2) All dimensions are above ground level, unless otherwise specified.
3) Weights shown are estimates. Final weights may vary.
4) The Monopole was designed for a basic wind speed of 97 mph with 0" of radial ice, and 50 mph with 1" of radial ice, in accordance with ANSI/TIA-222 -G, Structure Class II, Exposure Category C, Topographic Category 1.
5) Full Height Step Bolts
6) Tower Rating: 99.9%
7) The tower design meets the requirements for an Ultimate Wind Speed of 125 mph (Risk Category II), in accordance with the 2016 Connecticut Building Code.

Sabre Industries
Towers and Poles

Sabre Communications Corporation
7101 Southbridge Drive
P.O. Box 658
Sioux City, IA 51102-0658
Phone: (712) 258-6690
Fax: (712) 279-0814

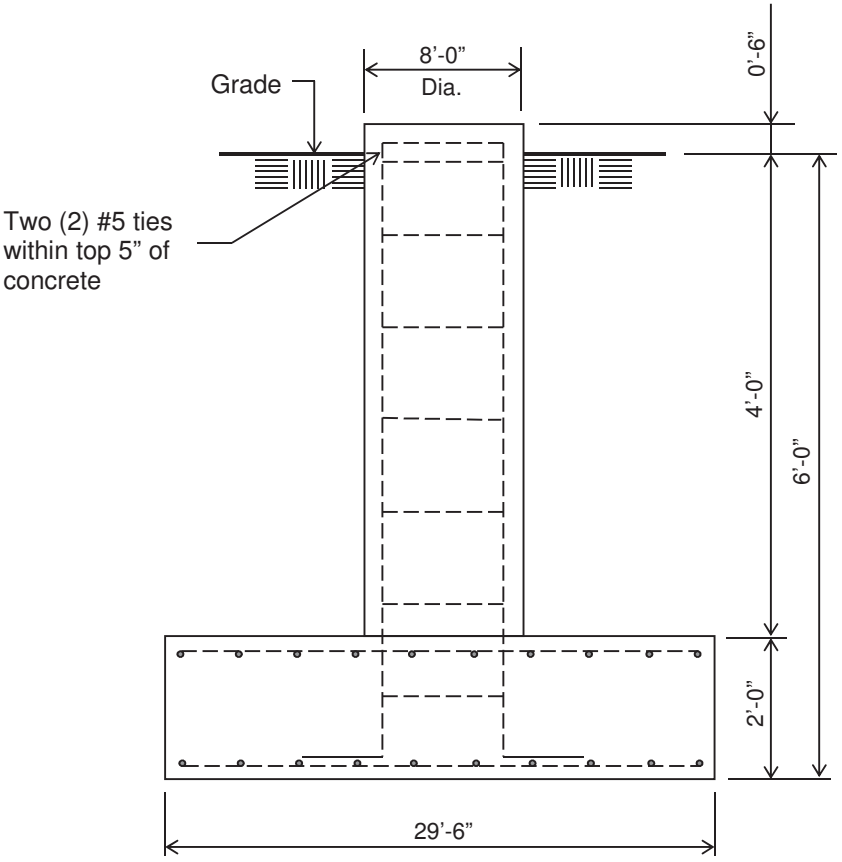
Job:	**18-6446-JDS**
Customer:	ECO-SITE
Site Name:	Blue Ridge, CT CT-0005
Description:	180' Monopole
Date:	4/6/2018 By: REB

Sabre Industries™
Towers and Poles

No.: 18-6446-JDS

Date: 04/06/18
By: REB

Customer: ECO-SITE
Site: Blue Ridge, CT CT-0005
180' Monopole at
97 mph Wind with no ice and 50 mph Wind with 1 in. Ice per ANSI/TIA-222-G.



ELEVATION VIEW
(72.84 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-11.

2) Rebar to conform to ASTM specification A615 Grade 60.

3) All rebar to have a minimum of 3" concrete cover.

4) All exposed concrete corners to be chamfered 3/4".

5) The foundation design is based on the geotechnical report by Delta Oaks Group project no. GEO17-01159-08, dated: 7/18/17

6) See the geotechnical report for compaction requirements, if specified.

7) 4 ft of soil cover is required over the entire area of the foundation slab.

8) The foundation is based on the following factored loads:
   Moment = 8,824.69 k-ft
   Axial = 78.32 k
   Shear = 62.24 k

Rebar Schedule for Pad and Pier	
Pier	(50) #9 vertical rebar w/ hooks at bottom w/ #5 ties, two within top 5" of pier, then 12" C/C
Pad	(65) #9 horizontal rebar evenly spaced each way top and bottom (260 total)

7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

 on: 6 apr 2018 at: 7:04:29

180' Monopole / Blue Ridge, CT

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES ϕ*Pn kip	RESISTANCES ϕ*Mn ft-kip	SPLICE TYPE	...OVERLAP... LENGTH ft	...OVERLAP... RATIO	w/t
179.0										
			19.04	0.250	1090.6	412.7				
	A	18								11.5
			29.41	0.250	1629.2	961.6				
145.7										
			29.41	0.250	1629.2	961.6				
	A/B	18					SLIP	4.25	1.71	
			30.25	0.375	2601.0	1566.2				
141.5										
			30.25	0.375	2601.0	1566.2				
	B	18								12.2
			43.66	0.375	3638.4	3186.5				
98.5										
			43.66	0.375	3638.4	3186.5				
	B/C	18					SLIP	6.25	1.70	
			44.87	0.438	4512.3	4052.2				
92.2										
			44.87	0.438	4512.3	4052.2				
	C	18								16.0
			57.02	0.438	5351.6	6133.2				
53.2										
			57.02	0.438	5351.6	6133.2				
	C/D	18					SLIP	8.25	1.71	
			58.74	0.438	5456.4	6444.3				
45.0										
			58.74	0.438	5456.4	6444.3				
	D	18								21.6
			72.77	0.438	6186.9	9080.0				
0.0										

POLE ASSEMBLY

SECTION NAME	BASE ELEV ft	BOLTS AT BASE OF SECTION NUMBER	TYPE	DIAM in	STRENGTH ksi	THREADS IN SHEAR PLANE	CALC BASE ELEV ft
A	141.500	0	A325	0.00	92.0	0	141.500
B	92.250	0	A325	0.00	92.0	0	92.250
C	45.000	0	A325	0.00	92.0	0	45.000
D	0.000	0	A325	0.00	92.0	0	0.000

POLE SECTIONS

SECTION NAME	No.of SIDES	LENGTH ft	OUTSIDE.DIAMETER BOT * in	OUTSIDE.DIAMETER TOP * in	BEND RAD in	MAT-ERIAL ID	FLANGE.ID BOT	FLANGE.ID TOP	FLANGE.WELD ..GROUP.ID.. BOT	FLANGE.WELD ..GROUP.ID.. TOP
A	18	37.50	30.75	19.04	0.000	1	0	0	0	0
B	18	53.50	45.62	28.91	0.000	2	0	0	0	0
C	18	53.50	59.61	42.91	0.000	3	0	0	0	0
D	18	53.25	72.77	56.15	0.000	4	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT & deg	HEIGHT in	WIDTH in	.THICKNESS. WEB in	FLANGE in	IRREGULARITY .PROJECTION. % OF AREA	ORIENT deg
PL	1	1	0.0	30.75	0.25	0.250	0.250	0.00	0.0
PL	2	1	0.0	45.62	0.38	0.375	0.375	0.00	0.0
PL	3	1	0.0	59.61	0.44	0.438	0.438	0.00	0.0
PL	4	1	0.0	72.77	0.44	0.438	0.438	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES

MATERIAL TYPE NO.	ELASTIC MODULUS ksi	UNIT WEIGHT pcf	.. STRENGTH .. Fu ksi	Fy ksi	THERMAL COEFFICIENT /deg
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170
4	29000.0	490.0	80.0	65.0	0.00001170

* Only 3 condition(s) shown in full
* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

97 mph wind with no ice. Wind Azimuth: 0◆

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	174.000	0.00	0.0	0.0	0.0000	5.2116	0.0000	0.0000
C	174.000	0.00	0.0	0.0	14.3360	5.2800	0.0000	0.0000
C	164.000	0.00	0.0	0.0	0.0000	3.0701	0.0000	0.0000
C	164.000	0.00	0.0	0.0	10.7612	3.0000	0.0000	0.0000
C	154.000	0.00	0.0	0.0	0.0000	2.8829	0.0000	0.0000
C	154.000	0.00	0.0	0.0	8.3846	4.8000	0.0000	0.0000
C	144.000	0.00	0.0	0.0	0.0000	2.6957	0.0000	0.0000
C	144.000	0.00	0.0	0.0	8.2677	4.8000	0.0000	0.0000
D	179.000	0.00	180.0	0.0	0.0645	0.0656	0.0000	0.0000
D	167.917	0.00	180.0	0.0	0.0645	0.0656	0.0000	0.0000
D	167.917	0.00	180.0	0.0	0.0742	0.0765	0.0000	0.0000
D	156.833	0.00	180.0	0.0	0.0742	0.0765	0.0000	0.0000
D	156.833	0.00	180.0	0.0	0.0835	0.0875	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0835	0.0875	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0898	0.2352	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0898	0.2352	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0956	0.1539	0.0000	0.0000
D	127.167	0.00	180.0	0.0	0.0956	0.1539	0.0000	0.0000
D	127.167	0.00	180.0	0.0	0.1062	0.1751	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.1062	0.1751	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.1159	0.1963	0.0000	0.0000
D	98.500	0.00	180.0	0.0	0.1159	0.1963	0.0000	0.0000
D	98.500	0.00	180.0	0.0	0.1223	0.4545	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.1223	0.4545	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.1256	0.2596	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.1256	0.2596	0.0000	0.0000

D	79.250	0.00	180.0	0.0	0.1319	0.2820	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.1319	0.2820	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.1367	0.3045	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1367	0.3045	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1392	0.6414	0.0000	0.0000
D	45.000	0.00	180.0	0.0	0.1392	0.6414	0.0000	0.0000
D	45.000	0.00	180.0	0.0	0.1380	0.3354	0.0000	0.0000
D	33.750	0.00	180.0	0.0	0.1380	0.3354	0.0000	0.0000
D	33.750	0.00	180.0	0.0	0.1363	0.3549	0.0000	0.0000
D	22.500	0.00	180.0	0.0	0.1363	0.3549	0.0000	0.0000
D	22.500	0.00	180.0	0.0	0.1297	0.3744	0.0000	0.0000
D	11.250	0.00	180.0	0.0	0.1297	0.3744	0.0000	0.0000
D	11.250	0.00	180.0	0.0	0.1317	0.3939	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.1317	0.3939	0.0000	0.0000

LOADING CONDITION M

97 mph wind with no ice. Wind Azimuth: 0◆

LOADS ON POLE

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	174.000	0.00	0.0	0.0	0.0000	3.9087	0.0000	0.0000
C	174.000	0.00	0.0	0.0	14.3360	3.9600	0.0000	0.0000
C	164.000	0.00	0.0	0.0	0.0000	2.3026	0.0000	0.0000
C	164.000	0.00	0.0	0.0	10.7612	2.2500	0.0000	0.0000
C	154.000	0.00	0.0	0.0	0.0000	2.1622	0.0000	0.0000
C	154.000	0.00	0.0	0.0	8.3846	3.6000	0.0000	0.0000
C	144.000	0.00	0.0	0.0	0.0000	2.0218	0.0000	0.0000
C	144.000	0.00	0.0	0.0	8.2677	3.6000	0.0000	0.0000
D	179.000	0.00	180.0	0.0	0.0645	0.0492	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0836	0.0656	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0898	0.1764	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0898	0.1764	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0956	0.1154	0.0000	0.0000
D	127.167	0.00	180.0	0.0	0.0956	0.1154	0.0000	0.0000
D	127.167	0.00	180.0	0.0	0.1062	0.1313	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.1062	0.1313	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.1159	0.1472	0.0000	0.0000
D	98.500	0.00	180.0	0.0	0.1159	0.1472	0.0000	0.0000
D	98.500	0.00	180.0	0.0	0.1223	0.3408	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.1223	0.3408	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.1256	0.1947	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.1256	0.1947	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.1319	0.2115	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.1319	0.2115	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.1367	0.2284	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1367	0.2284	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.1392	0.4811	0.0000	0.0000
D	45.000	0.00	180.0	0.0	0.1392	0.4811	0.0000	0.0000
D	45.000	0.00	180.0	0.0	0.1380	0.2516	0.0000	0.0000
D	33.750	0.00	180.0	0.0	0.1380	0.2516	0.0000	0.0000
D	33.750	0.00	180.0	0.0	0.1363	0.2662	0.0000	0.0000
D	22.500	0.00	180.0	0.0	0.1363	0.2662	0.0000	0.0000
D	22.500	0.00	180.0	0.0	0.1297	0.2808	0.0000	0.0000
D	11.250	0.00	180.0	0.0	0.1297	0.2808	0.0000	0.0000
D	11.250	0.00	180.0	0.0	0.1317	0.2954	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.1317	0.2954	0.0000	0.0000

LOADING CONDITION Y

50 mph wind with 1 ice. Wind Azimuth: 0◆

LOADS ON POLE

LOAD	ELEV	APPLY..LOAD..AT		LOAD	.....FORCES.....		.....MOMENTS.....	

TYPE	ft	RADIUS ft	AZI	AZI	HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	174.000	0.00	0.0	0.0	0.0000	5.2116	0.0000	0.0000
C	174.000	0.00	0.0	0.0	8.0065	15.6776	0.0000	0.0000
C	164.000	0.00	0.0	0.0	0.0000	3.0701	0.0000	0.0000
C	164.000	0.00	0.0	0.0	5.9853	8.8731	0.0000	0.0000
C	154.000	0.00	0.0	0.0	0.0000	2.8829	0.0000	0.0000
C	154.000	0.00	0.0	0.0	2.4759	23.4768	0.0000	0.0000
C	144.000	0.00	0.0	0.0	0.0000	2.6957	0.0000	0.0000
C	144.000	0.00	0.0	0.0	2.4343	23.3526	0.0000	0.0000
D	179.000	0.00	180.0	0.0	0.0243	0.1324	0.0000	0.0000
D	167.917	0.00	180.0	0.0	0.0243	0.1324	0.0000	0.0000
D	167.917	0.00	180.0	0.0	0.0271	0.1527	0.0000	0.0000
D	156.833	0.00	180.0	0.0	0.0271	0.1527	0.0000	0.0000
D	156.833	0.00	180.0	0.0	0.0299	0.1729	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0299	0.1729	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0318	0.3270	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0318	0.3270	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0335	0.2518	0.0000	0.0000
D	127.167	0.00	180.0	0.0	0.0335	0.2518	0.0000	0.0000
D	127.167	0.00	180.0	0.0	0.0366	0.2842	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0366	0.2842	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0394	0.3163	0.0000	0.0000
D	98.500	0.00	180.0	0.0	0.0394	0.3163	0.0000	0.0000
D	98.500	0.00	180.0	0.0	0.0412	0.5819	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.0412	0.5819	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.0421	0.3917	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.0421	0.3917	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.0439	0.4227	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.0439	0.4227	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.0452	0.4529	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0452	0.4529	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0457	0.7953	0.0000	0.0000
D	45.000	0.00	180.0	0.0	0.0457	0.7953	0.0000	0.0000
D	45.000	0.00	180.0	0.0	0.0454	0.4918	0.0000	0.0000
D	11.250	0.00	180.0	0.0	0.0422	0.5344	0.0000	0.0000
D	11.250	0.00	180.0	0.0	0.0423	0.5452	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0423	0.5452	0.0000	0.0000

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on: 6 apr 2018 at: 7:04:29

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180' Monopole / Blue Ridge, CT

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	.....DEFLECTIONS (ft)..... HORIZONTAL ..... ALONG	ACROSS	DOWN	.....ROTATIONS (deg)..... TILT ..... ALONG	ACROSS	TWIST
179.0	15.41C	0.04C	1.93E	10.35C	0.02C	0.00U
167.9	13.47C	0.03C	1.58E	10.26C	0.02C	0.00U
156.8	11.58C	0.03C	1.25E	9.76C	0.02C	0.00U
145.7	9.82C	0.03C	0.96E	8.89C	0.02C	0.00U
141.5	9.19C	0.02C	0.87E	8.62C	0.02C	0.00U
127.2	7.21C	0.02C	0.59E	7.51C	0.02C	0.00U
112.8	5.50C	0.02C	0.38E	6.34C	0.02C	0.00U
98.5	4.07C	0.01C	0.24E	5.21C	0.01C	0.00U

92.2	3.53C	0.01C	0.19E	4.81C	0.01C	0.00U
79.2	2.54C	0.01C	0.11E	3.97C	0.01C	0.00U
66.2	1.73L	0.01C	0.06E	3.19C	0.01C	0.00U
53.2	1.09L	0.00C	0.03E	2.48C	0.01C	0.00U
45.0	0.77L	0.00C	0.02E	2.05L	0.01C	0.00U
33.7	0.42L	0.00C	0.01E	1.48L	0.00C	0.00U
22.5	0.18L	0.00C	0.00E	0.95L	0.00C	0.00U
11.2	0.04L	0.00C	0.00AF	0.46L	0.00C	0.00U
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
179.0	-0.01 P	-0.01 F	0.00 E	0.01 P	0.00 E	0.00 E
	22.35 AI	15.08 P	0.00 E	-100.06 D	-0.02 F	-0.03 U
167.9	22.35 AB	15.08 N	0.00 L	-100.06 D	-0.03 F	-0.04 U
	35.98 AB	26.65 N	0.00 L	-370.25 D	-0.09 K	-0.13 U
156.8	35.98 AF	26.66 T	0.01 Q	-370.28 D	-0.08 K	-0.13 U
	64.25 AF	35.92 T	0.01 Q	-772.69 D	-0.11 T	-0.28 U
145.7	64.25 AI	36.10 P	0.13 B	-772.74 A	0.26 R	-0.28 U
	91.68 AI	44.74 P	0.13 B	-963.26 D	0.36 E	-0.35 U
141.5	91.74 AC	44.74 C	-0.15 B	-963.19 L	-0.35 B	-0.36 U
	95.34 AC	46.10 C	-0.15 B	-1672.55 C	2.10 T	-0.79 U
127.2	95.33 AC	46.08 N	0.16 C	-1672.55 C	2.10 T	-0.80 U
	99.40 AC	47.59 N	0.16 C	-2399.21 C	4.38 T	-1.19 U
112.8	99.40 AC	47.59 N	0.17 C	-2399.18 C	4.39 T	-1.19 U
	103.93 AC	49.24 N	0.17 C	-3144.44 C	6.51 T	-1.53 U
98.5	103.93 AC	49.24 X	0.22 C	-3144.66 C	6.53 T	-1.54 U
	107.56 AC	50.00 X	0.22 C	-3475.44 C	7.43 T	-1.66 U
92.2	107.56 AC	50.03 X	0.19 C	-3475.49 C	7.38 T	-1.67 U
	112.65 AC	51.66 X	0.19 C	-4177.85 C	-9.80 C	-1.95 U
79.2	112.65 AC	51.68 X	0.22 C	-4177.82 C	-9.78 C	-1.95 U
	118.14 AC	53.39 X	0.22 C	-4896.74 C	-12.67 C	-2.19 U
66.2	118.14 AC	53.40 X	0.23 C	-4896.73 C	-12.71 C	-2.19 U
	124.03 AC	55.18 X	0.23 C	-5632.92 C	-15.66 C	-2.40 U
53.2	124.03 AC	55.19 X	0.24 C	-5632.88 C	-15.60 C	-2.40 U
	130.59 AC	56.33 X	0.24 C	-6109.59 C	-17.59 C	-2.50 U
45.0	130.59 AC	56.34 X	0.24 C	-6109.54 C	-17.59 C	-2.50 U
	136.20 AC	57.89 X	0.24 C	-6770.91 C	-20.26 C	-2.61 U

33.7						
	136.20 AC	57.89 X	0.24 C	-6770.93 C	-20.26 C	-2.61 U
	141.97 AC	59.42 X	0.24 C	-7444.41 L	-22.94 C	-2.68 U
22.5						
	141.97 AC	59.43 X	0.23 C	-7444.44 L	-22.93 C	-2.68 U
	147.90 AC	60.89 X	0.23 C	-8129.45 L	-25.56 C	-2.73 U
11.2						
	147.90 AC	60.88 X	0.24 C	-8129.45 L	-25.56 C	-2.73 U
	154.04 AC	62.37 X	0.24 C	-8824.69 L	-28.21 C	-2.75 U
base reaction	154.04 AC	-62.37 X	-0.24 C	8824.69 L	28.21 C	2.75 U

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
179.00							
	0.00P	0.00P	0.00F	0.00P	YES	11.46A	45.2
	0.02AI	0.17D	0.02P	0.18D	YES	13.87A	45.2
167.92							
	0.02AB	0.17D	0.02N	0.18D	YES	13.87A	45.2
	0.02AB	0.48D	0.04N	0.49D	YES	16.27A	45.2
156.83							
	0.02AF	0.48D	0.04T	0.49D	YES	16.27A	45.2
	0.04AF	0.80D	0.04T	0.82D	YES	18.67A	45.2
145.75							
	0.03AI	0.52A	0.03P	0.53A	YES	11.86A	45.2
	0.03AI	0.59D	0.03P	0.61D	YES	12.48A	45.2
141.50							
	0.04AC	0.62L	0.03C	0.63L	YES	12.24A	45.2
	0.03AC	0.81C	0.03C	0.82C	YES	14.31A	45.2
127.17							
	0.03AC	0.81C	0.03N	0.82C	YES	14.31A	45.2
	0.03AC	0.91C	0.03N	0.92C	YES	16.39A	45.2
112.83							
	0.03AC	0.91C	0.03N	0.92C	YES	16.39A	45.2
	0.03AC	0.99C	0.03N	1.00C	YES	18.46A	45.2
98.50							
	0.02AC	0.82C	0.02X	0.83C	YES	15.57A	45.2
	0.02AC	0.83C	0.02X	0.84C	YES	16.34A	45.2
92.25							
	0.02AC	0.86C	0.02X	0.87C	YES	16.04A	45.2
	0.02AC	0.89C	0.02N	0.90C	YES	17.65A	45.2
79.25							
	0.02AC	0.89C	0.02N	0.90C	YES	17.65A	45.2
	0.02AC	0.90C	0.02N	0.92C	YES	19.26A	45.2
66.25							
	0.02AC	0.90C	0.02N	0.92C	YES	19.26A	45.2
	0.02AC	0.92C	0.02N	0.93C	YES	20.88A	45.2
53.25							
	0.02AC	0.92C	0.02N	0.93C	YES	20.88A	45.2
	0.02AC	0.93C	0.02N	0.94C	YES	21.90A	45.2
45.00							
	0.02AC	0.95C	0.02U	0.96C	YES	21.54A	45.2
	0.02AC	0.96C	0.02U	0.97C	YES	22.94A	45.2
33.75							
	0.02AC	0.96C	0.02U	0.97C	YES	22.94A	45.2

	0.02AC	0.96L	0.02U	0.97L	YES	24.33A	45.2
22.50	.....						
	0.02AC	0.96L	0.02U	0.97L	YES	24.33A	45.2
	0.02AC	0.97L	0.02U	0.98L	YES	25.73A	45.2
11.25	.....						
	0.02AC	0.97L	0.02U	0.98L	YES	25.73A	45.2
	0.02AC	0.97L	0.02U	0.98L	YES	27.12A	45.2
0.00	.....						

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
==========

DOWN	SHEAR.w.r.t.WIND.DIR ALONG	ACROSS	MOMENT.w.r.t.WIND.DIR ALONG	ACROSS	TORSION
kip	kip	kip	ft-kip	ft-kip	ft-kip
154.04	62.37	0.24	-8824.69	-28.21	-2.75
AC	X	C	L	C	U

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(USA 222-G) - Monopole Spatial Analysis (c)2015 Guymast Inc.

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180' Monopole / Blue Ridge, CT

****
********** Service Load Condition **********
****

* Only 1 condition(s) shown in full
* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A ==========

60 mph wind with no ice. Wind Azimuth: 0

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	174.000	0.00	0.0	0.0	0.0000	4.3430	0.0000	0.0000
C	174.000	0.00	0.0	0.0	3.0673	4.4000	0.0000	0.0000
C	164.000	0.00	0.0	0.0	0.0000	2.5584	0.0000	0.0000
C	164.000	0.00	0.0	0.0	2.3025	2.5000	0.0000	0.0000
C	154.000	0.00	0.0	0.0	0.0000	2.4024	0.0000	0.0000
C	154.000	0.00	0.0	0.0	1.7940	4.0000	0.0000	0.0000
C	144.000	0.00	0.0	0.0	0.0000	2.2464	0.0000	0.0000
C	144.000	0.00	0.0	0.0	1.7690	4.0000	0.0000	0.0000
D	179.000	0.00	180.0	0.0	0.0138	0.0547	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0179	0.0729	0.0000	0.0000
D	145.750	0.00	180.0	0.0	0.0192	0.1960	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0192	0.1960	0.0000	0.0000
D	141.500	0.00	180.0	0.0	0.0204	0.1282	0.0000	0.0000
D	127.167	0.00	180.0	0.0	0.0204	0.1282	0.0000	0.0000
D	127.167	0.00	180.0	0.0	0.0227	0.1459	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0227	0.1459	0.0000	0.0000
D	112.833	0.00	180.0	0.0	0.0248	0.1636	0.0000	0.0000
D	98.500	0.00	180.0	0.0	0.0248	0.1636	0.0000	0.0000

D	98.500	0.00	180.0	0.0	0.0262	0.3787	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.0262	0.3787	0.0000	0.0000
D	92.250	0.00	180.0	0.0	0.0269	0.2163	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.0269	0.2163	0.0000	0.0000
D	79.250	0.00	180.0	0.0	0.0282	0.2350	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.0282	0.2350	0.0000	0.0000
D	66.250	0.00	180.0	0.0	0.0293	0.2538	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0293	0.2538	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0298	0.5345	0.0000	0.0000
D	45.000	0.00	180.0	0.0	0.0298	0.5345	0.0000	0.0000
D	45.000	0.00	180.0	0.0	0.0295	0.2795	0.0000	0.0000
D	33.750	0.00	180.0	0.0	0.0295	0.2795	0.0000	0.0000
D	33.750	0.00	180.0	0.0	0.0292	0.2957	0.0000	0.0000
D	22.500	0.00	180.0	0.0	0.0292	0.2957	0.0000	0.0000
D	22.500	0.00	180.0	0.0	0.0278	0.3120	0.0000	0.0000
D	11.250	0.00	180.0	0.0	0.0278	0.3120	0.0000	0.0000
D	11.250	0.00	180.0	0.0	0.0282	0.3282	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0282	0.3282	0.0000	0.0000

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	DEFLECTIONS (ft) HORIZONTAL ALONG	HORIZONTAL ACROSS	DOWN	ROTATIONS (deg) TILT ALONG	TILT ACROSS	TWIST
179.0	3.37C	-0.01F	0.10A	2.24C	0.00F	0.00C
167.9	2.94C	-0.01F	0.08A	2.22C	0.00F	0.00C
156.8	2.52C	0.00F	0.06A	2.11C	0.00F	0.00C
145.7	2.13C	0.00F	0.05A	1.92C	0.00F	0.00C
141.5	1.99C	0.00F	0.04A	1.86C	0.00F	0.00C
127.2	1.56C	0.00F	0.03A	1.62C	0.00F	0.00F
112.8	1.19C	0.00F	0.02A	1.36C	0.00F	0.00F
98.5	0.88C	0.00F	0.01A	1.12C	0.00F	0.00F
92.2	0.76C	0.00F	0.01A	1.03C	0.00F	0.00F
79.2	0.55C	0.00F	0.01A	0.85C	0.00F	0.00F
66.2	0.37C	0.00F	0.00A	0.68C	0.00F	0.00F
53.2	0.23C	0.00F	0.00A	0.53C	0.00F	0.00F
45.0	0.16C	0.00F	0.00A	0.44C	0.00F	0.00F
33.7	0.09C	0.00F	0.00A	0.32C	0.00F	0.00C
22.5	0.04C	0.00F	0.00A	0.20C	0.00F	0.00C
11.2	0.01C	0.00F	0.00A	0.10C	0.00F	0.00C
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	SHEAR.w.r.t.WIND.DIR ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	MOMENT.w.r.t.WIND.DIR ACROSS ft-kip	TORSION ft-kip
179.0	0.00 D	0.00 I	0.00 C	0.00 B	0.00 C	0.00 L
	9.38 H	3.23 I	0.00 C	-21.71 I	0.00 L	0.00 C
167.9	9.38 L	3.23 C	0.00 I	-21.71 A	0.00 E	0.00 C
	15.15 L	5.71 C	0.00 I	-80.32 C	-0.01 I	0.00 C

156.8	15.15 L	5.71 I	0.00 L	-80.32 K	0.01 E	0.00 C
	22.33 L	7.69 I	0.00 L	-167.21 A	0.03 E	-0.01 C
145.7	22.33 B	7.73 L	0.03 B	-167.26 C	0.06 E	-0.01 C
	29.41 B	9.58 L	0.03 B	-208.18 K	0.07 C	-0.01 C
141.5	29.41 L	9.58 A	-0.03 E	-208.17 I	-0.06 B	-0.01 C
	31.25 L	9.87 A	-0.03 E	-360.54 A	0.49 E	-0.03 C
127.2	31.25 L	9.87 A	-0.03 F	-360.53 A	0.48 E	-0.03 C
	33.34 L	10.20 A	-0.03 F	-516.32 A	0.86 E	-0.04 C
112.8	33.34 L	10.20 A	-0.03 F	-516.31 A	0.86 E	-0.04 C
	35.68 L	10.55 A	-0.03 F	-675.67 A	1.23 E	-0.05 F
98.5	35.68 L	10.56 A	-0.05 F	-675.63 A	1.22 E	-0.05 F
	38.05 L	10.73 A	-0.05 F	-746.41 A	1.44 F	-0.05 F
92.2	38.05 L	10.74 C	-0.03 F	-746.39 A	1.43 F	-0.05 F
	40.86 L	11.09 C	-0.03 F	-896.06 C	1.82 F	-0.06 F
79.2	40.86 L	11.07 C	-0.03 F	-896.06 C	1.82 F	-0.06 F
	43.91 L	11.44 C	-0.03 F	-1049.68 C	2.26 F	-0.07 F
66.2	43.91 L	11.44 C	-0.03 F	-1049.69 C	2.26 F	-0.07 F
	47.21 L	11.82 C	-0.03 F	-1207.14 C	2.66 F	-0.08 F
53.2	47.21 L	11.82 C	0.03 B	-1207.13 C	2.66 F	-0.08 F
	51.62 L	12.07 C	0.03 B	-1309.13 C	2.90 F	-0.08 F
45.0	51.62 L	12.07 C	0.03 B	-1309.12 C	2.90 F	-0.08 F
	54.77 L	12.40 C	0.03 B	-1450.67 C	3.20 F	-0.08 F
33.7	54.77 L	12.40 C	0.03 B	-1450.67 C	3.21 F	-0.08 F
	58.09 L	12.73 C	0.03 B	-1594.88 C	3.50 F	-0.09 C
22.5	58.09 L	12.73 C	-0.03 F	-1594.87 C	3.50 F	-0.09 C
	61.60 L	13.04 C	-0.03 F	-1741.59 C	3.83 F	-0.09 C
11.2	61.60 L	13.04 C	0.03 B	-1741.59 C	3.83 F	-0.09 C
	65.29 L	13.36 C	0.03 B	-1890.66 C	4.14 F	-0.09 C
base reaction	65.29 L	-13.36 C	-0.03 B	1890.66 C	-4.14 F	0.09 C

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t(w/t)	MAX ALLOWED
179.00	0.00D	0.00B	0.00I	0.00B	YES	11.46A	45.2
	0.01H	0.04I	0.00I	0.04I	YES	13.87A	45.2
167.92	0.01L	0.04A	0.00C	0.04A	YES	13.87A	45.2
	0.01L	0.10C	0.01C	0.11C	YES	16.27A	45.2
156.83	0.01L	0.10K	0.01I	0.11K	YES	16.27A	45.2

	0.01L	0.17A	0.01I	0.19A	YES	18.67A	45.2
145.75							
	0.01B	0.11C	0.01L	0.12C	YES	11.86A	45.2
	0.01B	0.13K	0.01L	0.14K	YES	12.48A	45.2
141.50							
	0.01L	0.13I	0.01A	0.14L	YES	12.24A	45.2
	0.01L	0.17A	0.01A	0.18A	YES	14.31A	45.2
127.17							
	0.01L	0.17A	0.01A	0.18A	YES	14.31A	45.2
	0.01L	0.20A	0.01A	0.21A	YES	16.39A	45.2
112.83							
	0.01L	0.20A	0.01A	0.21A	YES	16.39A	45.2
	0.01L	0.21A	0.01A	0.22A	YES	18.46A	45.2
98.50							
	0.01L	0.18A	0.00A	0.18A	YES	15.57A	45.2
	0.01L	0.18A	0.00A	0.19A	YES	16.34A	45.2
92.25							
	0.01L	0.18A	0.00C	0.19A	YES	16.04A	45.2
	0.01L	0.19C	0.00C	0.20C	YES	17.65A	45.2
79.25							
	0.01L	0.19C	0.00C	0.20C	YES	17.65A	45.2
	0.01L	0.19C	0.00C	0.20C	YES	19.26A	45.2
66.25							
	0.01L	0.19C	0.00C	0.20C	YES	19.26A	45.2
	0.01L	0.20C	0.00C	0.21C	YES	20.88A	45.2
53.25							
	0.01L	0.20C	0.00C	0.21C	YES	20.88A	45.2
	0.01L	0.20C	0.00C	0.21C	YES	21.90A	45.2
45.00							
	0.01L	0.20C	0.00C	0.21C	YES	21.54A	45.2
	0.01L	0.20C	0.00C	0.21C	YES	22.94A	45.2
33.75							
	0.01L	0.20C	0.00C	0.21C	YES	22.94A	45.2
	0.01L	0.21C	0.00C	0.22C	YES	24.33A	45.2
22.50							
	0.01L	0.21C	0.00C	0.22C	YES	24.33A	45.2
	0.01L	0.21C	0.00C	0.22C	YES	25.73A	45.2
11.25							
	0.01L	0.21C	0.00C	0.22C	YES	25.73A	45.2
	0.01L	0.21C	0.00C	0.22C	YES	27.12A	45.2
0.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
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DOWN	SHEAR.w.r.t.WIND.DIR		MOMENT.w.r.t.WIND.DIR		TORSION
	ALONG	ACROSS	ALONG	ACROSS	
kip	kip	kip	ft-kip	ft-kip	ft-kip
65.29	13.36	0.03	-1890.66	4.14	-0.09
L	C	B	C	F	C

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Sabre Industries™
Towers and Poles

SO#: 18-6446-JDS
Site Name: Blue Ridge, CT
Date: 4/6/2018

Round Base Plate and Anchor Rods, per ANSI/TIA 222-G

Pole Data

Diameter:	71.670	in (flat to flat)
Thickness:	0.4375	in
Yield (Fy):	65	ksi
# of Sides:	18	"0" IF Round
Strength (Fu):	80	ksi

Reactions

Moment, Mu:	8824.69	ft-kips
Axial, Pu:	78.32	kips
Shear, Vu:	62.24	kips

Anchor Rod Data

Quantity:	22		
Diameter:	2.25	in	
Rod Material:	A615		
Strength (Fu):	100	ksi	
Yield (Fy):	75	ksi	
BC Diam. (in):	79	BC Override:	

Anchor Rod Results

Maximum Rod (Pu+ Vu/η):	252.9 Kips	
Allowable Φ*Rnt:	260.0 Kips	(per 4.9.9)
Anchor Rod Interaction Ratio:	**97.3%** **Pass**	

Plate Data

Diameter (in):	84.75	Dia. Override:	
Thickness:	2.25	in	
Yield (Fy):	50	ksi	
Eff Width/Rod:	10.34	in	
Drain Hole:	2.625	in. diameter	
Drain Location:	33.75	in. center of pole to center of drain hole	
Center Hole:	59.5	in. diameter	

Base Plate Results

Base Plate (Mu/Z):	44.9 ksi	
Allowable Φ*Fy:	45.0 ksi	(per AISC)
Base Plate Interaction Ratio:	**99.7%** **Pass**	

MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES
180' Monopole ECO-SITE Blue Ridge, CT (18-6446-JDS) 04/06/18 REB

Overall Loads:			
Factored Moment (ft-kips)	8824.69		
Factored Axial (kips)	78.32		
Factored Shear (kips)	62.24		
Bearing Design Strength (ksf)	22.5	Max. Net Bearing Press. (ksf)	20.16
Water Table Below Grade (ft)	**7.5**		
Width of Mat (ft)	29.5	Allowable Bearing Pressure (ksf)	**30.00**
Thickness of Mat (ft)	2	Safety Factor	**1.00**
Depth to Bottom of Slab (ft)	6	Ultimate Bearing Pressure (ksf)	30.00
Quantity of Bolts in Bolt Circle	22	Bearing Φs	0.75
Bolt Circle Diameter (in)	79		
Top of Concrete to Top of Bottom Threads (in)	60		
Diameter of Pier (ft)	8	Minimum Pier Diameter (ft)	7.92
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	7.09
Ht. of Pier Below Ground (ft)	4	Square Pier? (Y/N)	**N**
Quantity of Bars in Mat	65		
Bar Diameter in Mat (in)	1.128		
Area of Bars in Mat (in^2)	64.96		
Spacing of Bars in Mat (in)	5.42	Recommended Spacing (in)	5 to 12
Quantity of Bars Pier	50		
Bar Diameter in Pier (in)	1.128		
Tie Bar Diameter in Pier (in)	0.625		
Spacing of Ties (in)	12		
Area of Bars in Pier (in^2)	49.97	Minimum Pier A_s (in^2)	36.19
Spacing of Bars in Pier (in)	5.51	Recommended Spacing (in)	5 to 12
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Soil (kcf)	**0.11**		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd^3)	72.84		
Two-Way Shear Action:			
Average d (in)	19.872		
ϕv_c (ksi)	0.228	v_u (ksi)	0.217
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.342		
$\phi v_c = \phi(\alpha_s d/b_o + 2)f'_c{}^{1/2}$	0.239		
$\phi v_c = \phi 4 f'_c{}^{1/2}$	0.228		
Shear perimeter, b_o (in)	364.02		
β_c	1		
One-Way Shear:			
ϕV_c (kips)	802.2	V_u (kips)	565.2
Stability:			
Overturning Design Strength (ft-k)	9572.1	Total Applied M (ft-k)	9229.3

Pier Design:

ϕV_n (kips)	845.3	V_u (kips)	62.2
$\phi V_c=\phi 2(1+N_u/(2000A_g))f'_c{}^{1/2}b_wd$	845.3		
V_s (kips)	0.0	*** V_s max = 4 $f'_c{}^{1/2}b_wd$ (kips)	1978.3
Maximum Spacing (in)	7.62	(Only if Shear Ties are Required)	
Actual Hook Development (in)	18.74	Req'd Hook Development l_{dh} (in)	13.48
		*** Ref. To Spacing Requirements ACI 11.5.4.3	

Flexure in Slab:

ϕM_n (ft-kips)	5388.0	M_u (ft-kips)	5362.2
a (in)	2.88		
Steel Ratio	0.00923		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	131.46	Required Development in Pad (in)	31.29

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram Visual Check	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1

ATTACHMENT 3

811 Know what's below. Call before you dig.

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN MASSACHUSETTS, CALL DIG SAFE SYSTEM, INC. TOLL FREE: 1-888-344-7233 OR www.digsafe.com

MASSACHUSETTS STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

Eco-Site

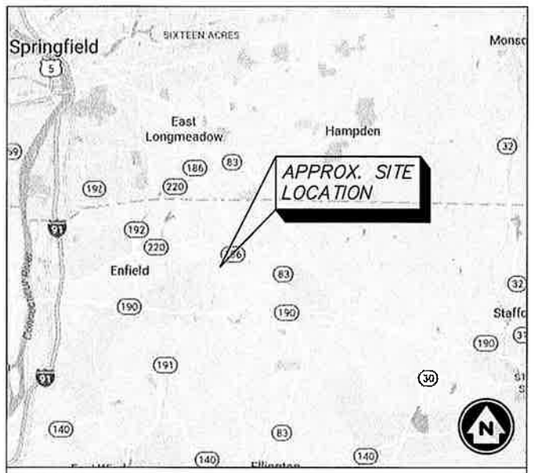
240 LEIGH FARM ROAD, SUITE 415
DURHAM, NC 27707

DEVELOPMENT & MANAGEMENT PLAN
DOCKET No.: 476
ECO-SITE: SOMERS CT-0005A
T-MOBILE: ROMANO/CTHA027B

SITE ADDRESS:

248 HALL HILL ROAD
SOMERS, CT 06071
TOLLAND COUNTY

LATITUDE: 42° 0' 9.34" N
LONGITUDE: 72° 29' 5.99 W
ELEVATION: 232' AMSL
TAX/PIN #: MAP 7, LOT 72
ZONING: A-1



VICINITY MAP

1. HEAD NORTH ON I-91 N TOWARD CT-220E/ELM STREET.
2. TAKE EXIT 48 ON TO ELM STREET IN ENFIELD.
3. TURN RIGHT TO CONTINUE ON ELM STREET.
4. CONTINUE STRAIGHT ONTO MOODY ROAD.
5. MOODY ROAD BECOMES GEORGE WOOD ROAD.
6. TURN RIGHT ONTO TO BRACE ROAD
7. TURN RIGHT ONTO HALL HILL ROAD
8. SITE WILL BE ON YOUR LEFT

DRIVING DIRECTIONS

CONSTRUCTION OF TELECOMMUNICATION AND PUBLIC UTILITY FACILITY, CONSISTING OF A MONOPOLE TOWER, SPACE FOR CARRIER EQUIPMENT AND A UTILITY BACKBOARD WITHIN A FENCED COMPOUND. NO WATER OR SEWER IS REQUIRED.

PROJECT SUMMARY

DEVELOPER:

ECO-SITE
240 LEIGH FARM ROAD, SUITE 415
DURHAM, NC 27707
(919) 636-6810
ATTN:

POWER COMPANY:

EVERSOURCE
107 SELDON STREET
BERLIN MA, 06037
(800) 286-2000
ATTN: CUSTOMER SERVICE

TELEPHONE COMPANY:

TBD
(800) XXX-XXXX
ATTN: CUSTOMER SERVICE

PROPERTY OWNER:

DEBRA ROMANO
248 HALL HILL ROAD
SOMERS, CT 06071

PROJECT SUMMARY

DRWG. #	TITLE	REV.#	DATE
T1	TITLE SHEET	1	3/15/18
C1	GENERAL NOTES & LEGEND	1	3/15/18
C2	OVERALL SITE PLAN	1	3/15/18
C3	ENLARGED SITE LAYOUT	1	3/15/18
C4	TOWER ELEVATION	1	3/15/18
C5	CIVIL DETAILS	1	3/15/18
C6	CIVIL DETAILS	1	3/15/18
C7	UTILITY RACK DETAIL	1	3/15/18
C8	T-MOBILE EQUIPMENT DETAILS	1	3/15/18
C9	T-MOBILE EQUIPMENT DETAILS	1	3/15/18
C10	ICE BRIDGE DETAILS	1	3/15/18
C11	EQUIPMENT DETAILS & GENERATOR PLUMBING DIAGRAM	1	3/15/18
C12	GENERATOR DETAILS	1	3/15/18
C13	FUEL TANK DETAILS	1	3/15/18
C14	SITE SIGNAGE DETAILS	1	3/15/18
EC1	GRADING & EROSION SEDIMENT CONTROL NOTES & DETAILS	1	3/15/18
EC2	GRADING PLAN	1	3/15/18
EC3	GRADING PLAN CONT'D	1	3/15/18

DRAWING INDEX

TOWN OF SOMERS:

600 MAIN STREET, PO BOX 308
SOMERS, CT 06071
(860) 763-8201

PERMIT INFORMATION

INFINIGY
1033 Watervliet Shaker Road | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com

T-Mobile

STATE OF CONNECTICUT
JOHN S. STEVENS
LICENSED PROFESSIONAL ENGINEER
APR 27 2018

No.	Submittal / Revision	Appd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	3/27/18

Drawn: SKB Date: 3/27/18
Designed: AJD Date: 3/27/18
Checked: AJD Date: 3/27/18

Project Number: 502-005

Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

Drawing Title: TITLE SHEET

Drawing Scale:
Date: 3/15/18
CD

Drawing Number: T1

GENERAL NOTES

1. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
2. DO NOT CHANGE SIZE NOR SPACING OF STRUCTURAL ELEMENTS.
3. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
4. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
5. BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
6. DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
7. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE APPROVAL.
8. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS TO ENSURE THAT WORK PROGRESSION IS NOT INTERRUPTED.
10. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A NEAT AND ORDERLY SITE, YARD AND GROUNDS. REMOVE AND DISPOSE OFF SITE ALL RUBBISH, WASTE MATERIALS, LITTER, AND ALL FOREIGN SUBSTANCES. REMOVE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS TO A SMOOTH EVEN-TEXTURED SURFACE.
11. THE PLANS SHOW SOME KNOWN SUBSURFACE STRUCTURES, ABOVE-GROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED. IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE SHOWN OR MAY NOT BE SHOWN; AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. 48 HOURS BEFORE YOU DIG, DRILL OR BLAST, CALL 1-800-922-4455.
12. THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE.
13. THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
14. THE CONTRACTOR SHALL RESTORE ALL PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO AT LEAST AS GOOD OF CONDITION AS BEFORE DISTURBED AS DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.
15. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INCLUDING, BUT NOT LIMITED TO, THE BUILDING PERMIT, INSPECTIONS, CERTIFICATES, ETC.
17. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR.
18. ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE OSHA REGULATIONS FOR CONSTRUCTION.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
20. ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER. NOTIFY THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.
21. MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
22. ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS AS DEFINED BY THE OWNER OR OWNER'S REPRESENTATIVE ON THE DRAWINGS.
23. CONTRACTOR SHALL GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE EQUIPMENT PAD AND THE TOWER.
24. ALL IMPROVEMENTS TO CONFORM WITH LOCAL JURISDICTION CONSTRUCTION STANDARDS AND SPECIFICATIONS, LATEST EDITION.

STRUCTURAL STEEL NOTES

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
2. ALL INTERIOR STRUCTURAL STEEL USED SHALL BE, WHEN DELIVERED, FINISHED WITH ONE COAT FABRICATOR'S NON-LEAD, RED OXIDE PRIMER. PRIMING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE PRIMED AREAS SHALL BE REPAIRED BY FIELD TOUCH-UP PRIOR TO COMPLETION OF THE WORK.
3. ALL EXTERIOR STEEL WORK SHALL BE GALVANIZED IN ACCORDANCE WITH SPECIFICATION ASTM A36 UNLESS OTHERWISE NOTED. GALVANIZING SHALL BE PERFORMED AFTER SHOP FABRICATION TO THE GREATEST EXTENT POSSIBLE. ALL DINGS, SCRAPES, MARS, AND WELDS IN THE GALVANIZED AREAS SHALL BE REPAIRED BY FIELD TOUCH-UP PRIOR TO COMPLETION OF THE WORK.
4. DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
5. CONNECTIONS:
   A. ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION ", 9TH EDITION. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED.
   B. BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
   C. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
   D. CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.

DESIGN DATA

1. WIND LOADS: PER EIA/TIA G-222
   ICE LOADS: 1/2" RADIAL ON ALL COMPONENTS & CABLE
   SNOW LOAD: PER CT STATE BLDG. CODE.
   SEISMIC LOADS: PER CT STATE BLDG CODE.

CONCRETE NOTES

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE";
2. MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (±1.5%) WITH A MAXIMUM 4" SLUMP, AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE NOTED.
4. MAXIMUM AGGREGATE SIZE SHALL BE 1".
5. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT:	ASTM C 150, TYPE I
REINFORCEMENT:	ASTM A 185
NORMAL WEIGHT AGGREGATE:	ASTM C 33
WATER:	DRINKABLE
ADMIXTURES:	NON-CHLORIDE CONTAINING

6. REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315.
7. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
8. 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 & WWF .....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.

9. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
10. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURES WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
11. CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
12. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301.
13. DO NOT WELD OR TACKWELD REINFORCING STEEL.
14. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
15. LOCATE ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION AS ACCEPTABLE TO ENGINEER. PLACE REINFORCEMENT CONTINUOUSLY THROUGH JOINT.
16. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
17. PLACE CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANES OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING. DO NOT USE VIBRATORS TO TRANSPORT CONCRETE THROUGH CHUTES OR FORMWORK.
18. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
19. DO NOT ALLOW CONCRETE SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
20. FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.

CIVIL LEGEND

EXISTING		PROPOSED
	FENCE	x x x
UNDERGROUND ELECTRIC	UNDERGROUND ELECTRIC	
UNDERGROUND TELEPHONE	UNDERGROUND TELEPHONE	
OVERHEAD WIRES	OVERHEAD TELEPHONE	
	OVERHEAD ELECTRIC	
250	5' OR 10' CONTOUR LINE	250
202	1' OR 2' CONTOUR LINE	202
120.5 OR x	SPOT ELEVATION	120.5 OR x
	PRIMARY PROPERTY OR R.O.W.	
	LEASE LINE	
	EASEMENT	
	UTILITY POLE	
	TELEPHONE PEDESTAL	
	CURB	
	ASPHALT PAVEMENT	
	BUILDING	
	TREES, SHRUBS, BUSHES	
X / X	REPRESENTS DETAIL NUMBER / REF. DRAWING NUMBER	

INFINIGY
1033 Watervliet Shaker Road | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com

T-Mobile

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
APR 27 2018

No.	Submittal / Revision	Appd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	2/27/18

Drawn: SKB Date: 2/27/18
Designed: AJD Date: 2/27/18
Checked: AJD Date: 2/27/18

Project Number: 502-005

Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

Drawing Title:
GENERAL NOTES & LEGEND

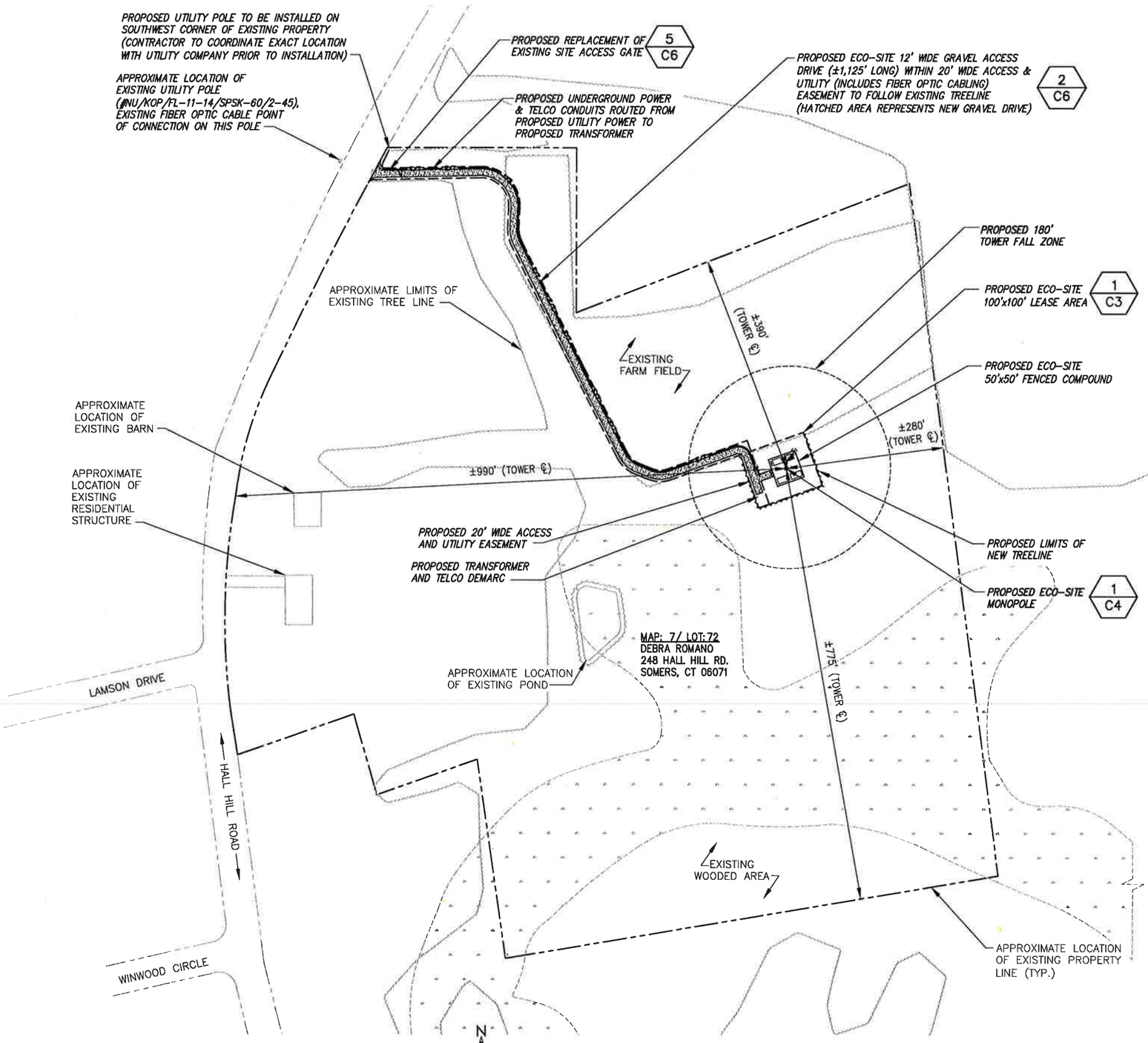
Drawing Scale: —
Date: 3/15/18
CD

Drawing Number: C1

NOTE:
- ROUTE OF UTILITY IS TO FOLLOW ACCESS EASEMENT UNLESS OTHERWISE DIRECTED BY UTILITY COMPANY.
- FINAL INSTALLATION METHOD (OVERHEAD OR UNDERGROUND) TO BE DETERMINED.
- HOURS OF CONSTRUCTION SHALL BE FROM 8:00AM – 6:00PM EST.

SHADED AREA REPRESENTS "INLAND WETLAND SOILS" FROM SOMERS CT GIS ONLINE DATABASE DELINEATION IN FIELD TO BE COMPLETED BY OTHERS. PER WETLAND INVESTIGATION BY OTHERS, NO WETLANDS EXIST ON THIS PARCEL.

NOTE:
- NO CONSTRUCTION IS TO BE COMPLETED BETWEEN THE DATE OF FEBRUARY 15TH & APRIL 15TH DUE TO VERNAL POOL.
- HOURS OF CONSTRUCTION ARE FROM DAWN UNTIL DUSK



1 OVERALL SITE PLAN
SCALE: AS NOTED

DRAWING SCALE
200' 100' 0 100' 200'
SCALE (11x17): 1" = 200'-0"
SCALE (22x34): 1" = 100'-0"

BASEMAPPING INFORMATION BASED ON INFORMATION OBTAINED FROM A SITE WALK COMPLETED BY INFINIGY ON 11/29/16 AND SITE SURVEY COMPLETED BY "CLIMAX DEVELOPMENT OF W.N.Y." TITLED: "BLUE RIDGE, SITE SURVEY".

INFINIGY
1033 Watervliet Shaker Road | Albany, NY 12205
Phone: 518.690.0790 | Fax: 518.690.0793
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T-Mobile

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 21705
APR 27 2018
LICENSED PROFESSIONAL ENGINEER

No.	Submittal / Revision	App'd	Date
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Checked: AJD Date: 2/27/18

Project Number: 502-005

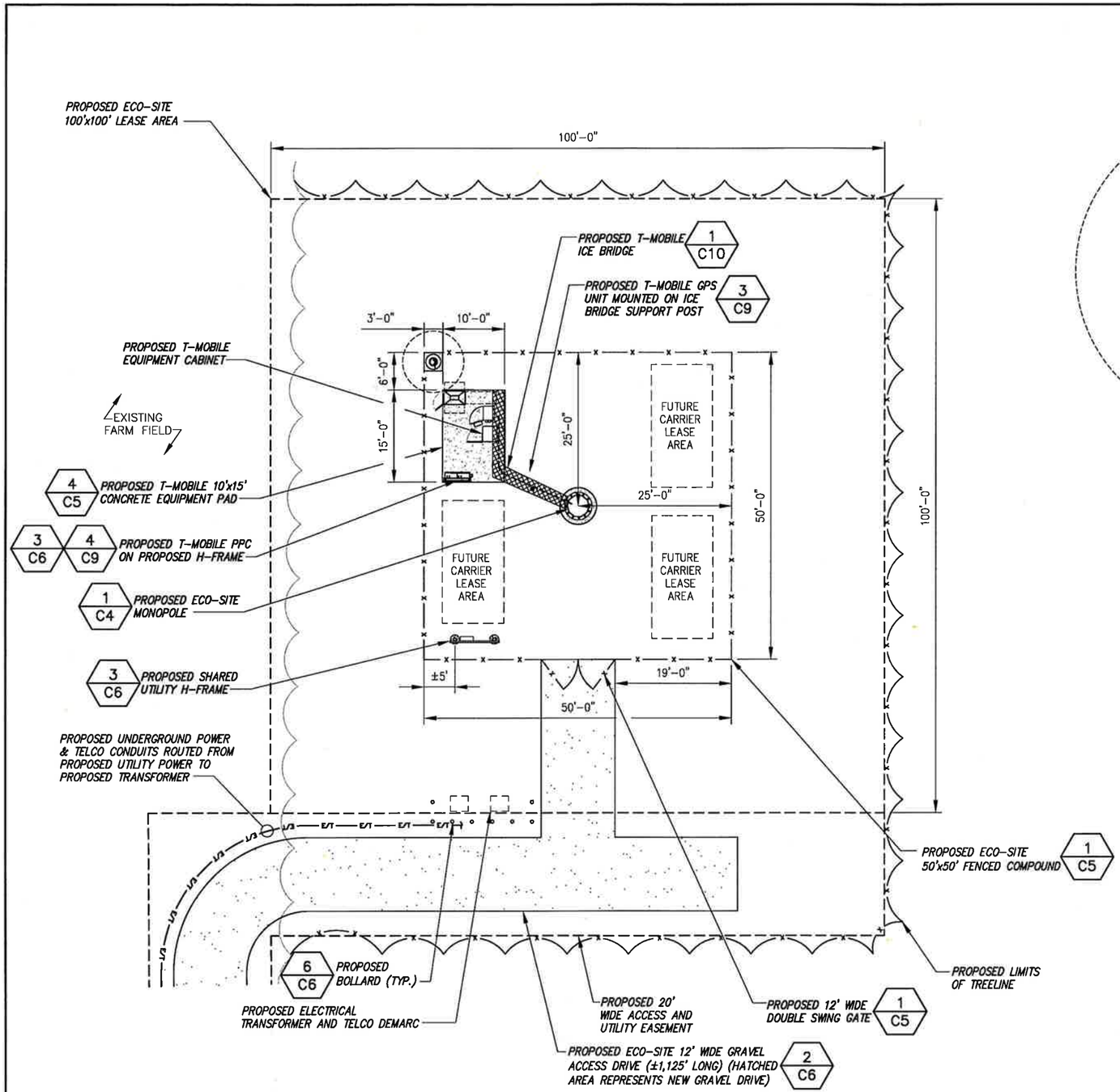
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

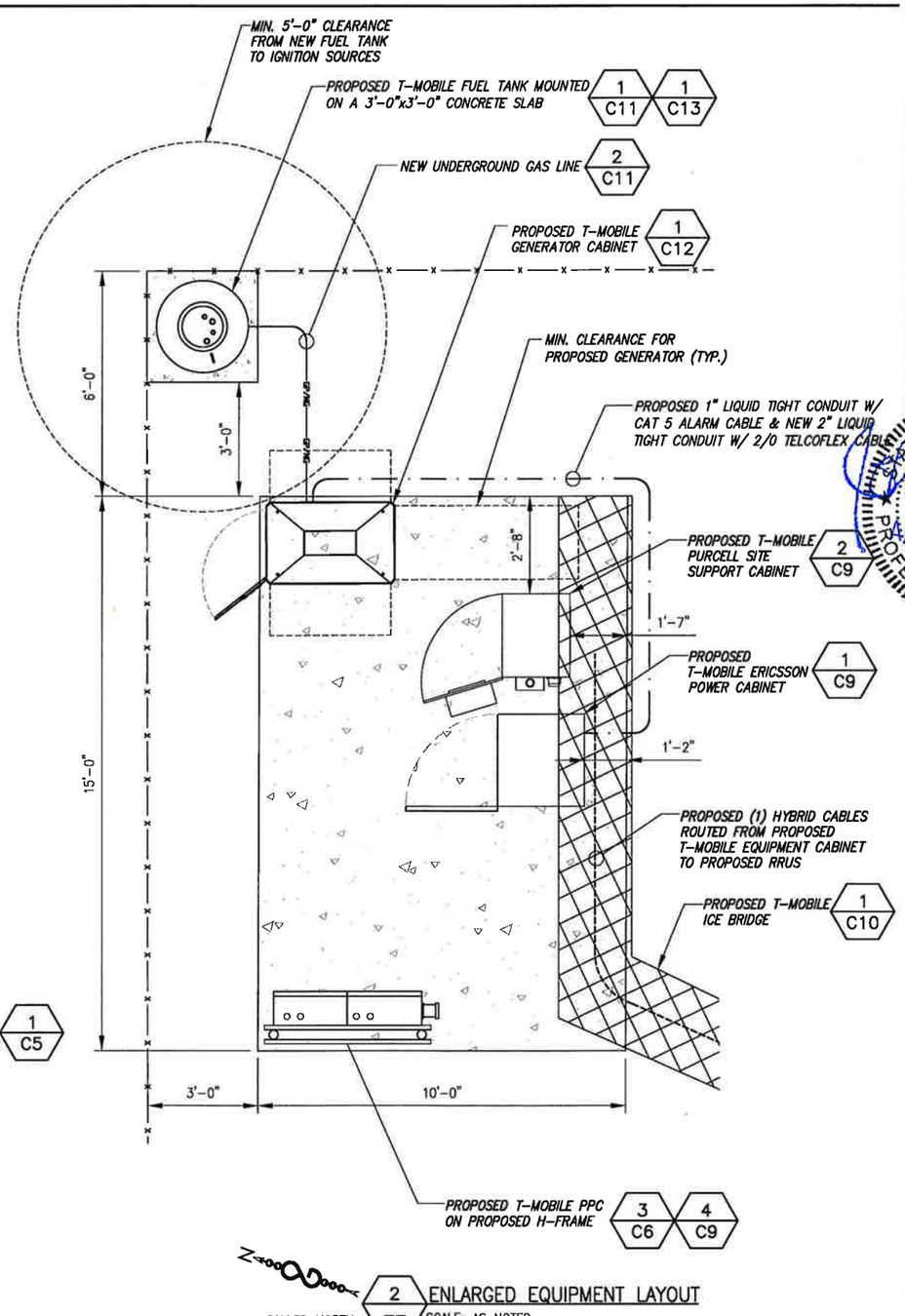
Prepared For: Eco-Site

Drawing Title: OVERALL SITE PLAN

Drawing Scale: —
Date: 3/15/18
CD

Drawing Number: C2





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STATE OF CONNECTICUT
JOHN D. STEVENS
No. 24018
APR 2, 2018
LICENSED PROFESSIONAL ENGINEER

No.	Submittal / Revision	Appr	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	2/27/18

Drawn: SKB Date: 2/27/18
Designed: AJD Date: 2/27/18
Checked: AJD Date: 2/27/18

Project Number:
502-005

Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

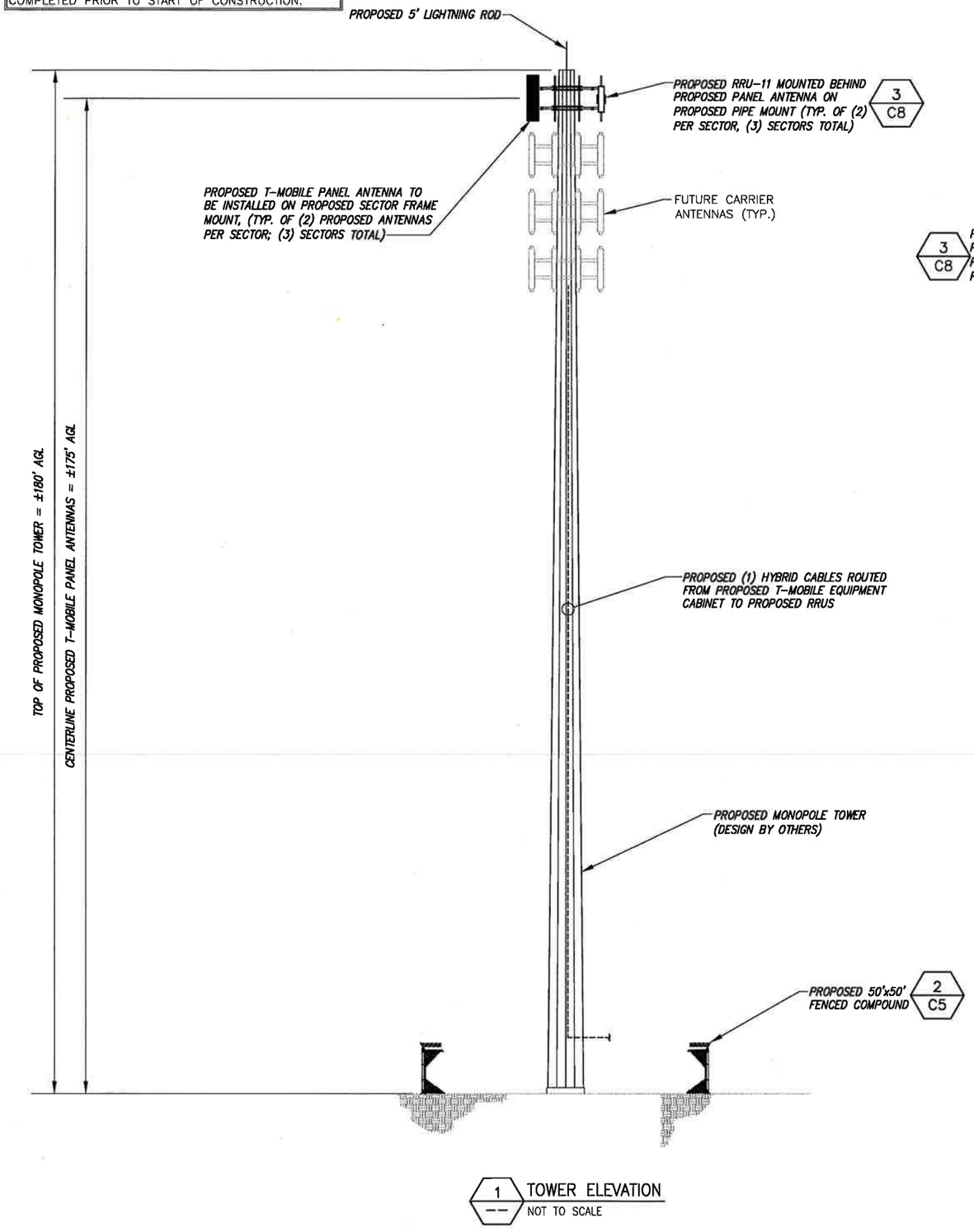
Prepared For:
Eco-Site

Drawing Title:
ENLARGED
SITE LAYOUT

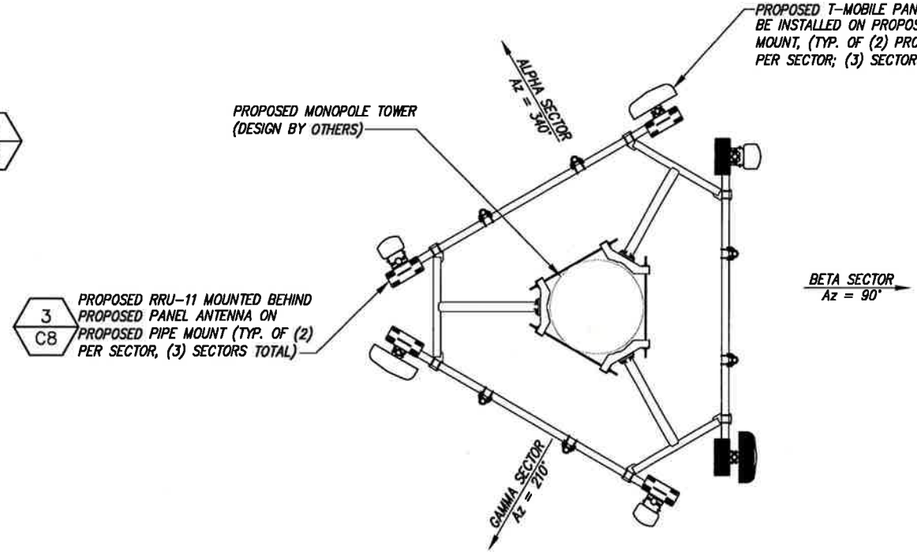
Drawing Scale:
Date: 3/15/18
CD

Drawing Number:
C3

INFINIGY ENGINEERING ASSUMES NO LIABILITY FOR THE STRUCTURAL INTEGRITY OF THE PROPOSED TOWER INSTALLATION. A STRUCTURAL ANALYSIS MUST BE COMPLETED PRIOR TO START OF CONSTRUCTION.

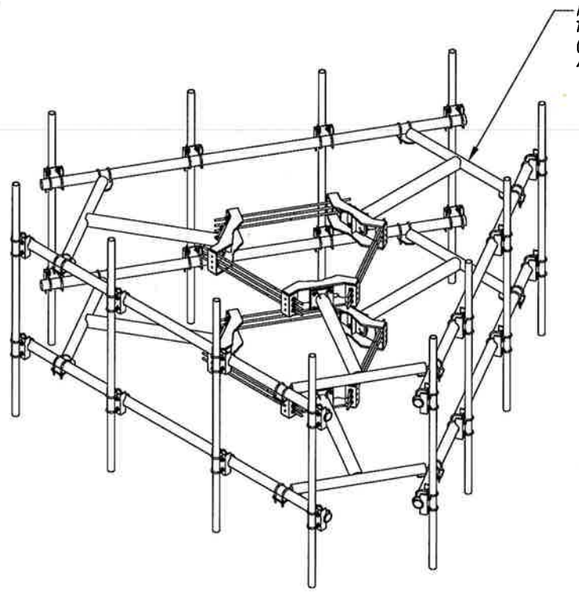


1 -- TOWER ELEVATION
NOT TO SCALE



N
CALLED NORTH

2 -- ANTENNA ORIENTATION PLAN
NOT TO SCALE



3 -- ANTENNA FRAME DETAIL
NOT TO SCALE

INFINIGY
1093 Watervliet Shaker Road | Albany, NY 12205
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www.infinigy.com

T-Mobile

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 21705
PROFESSIONAL ENGINEER
LICENSED
APR 27 2018

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Project Number: 502-005

Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

Drawing Title: TOWER ELEVATION

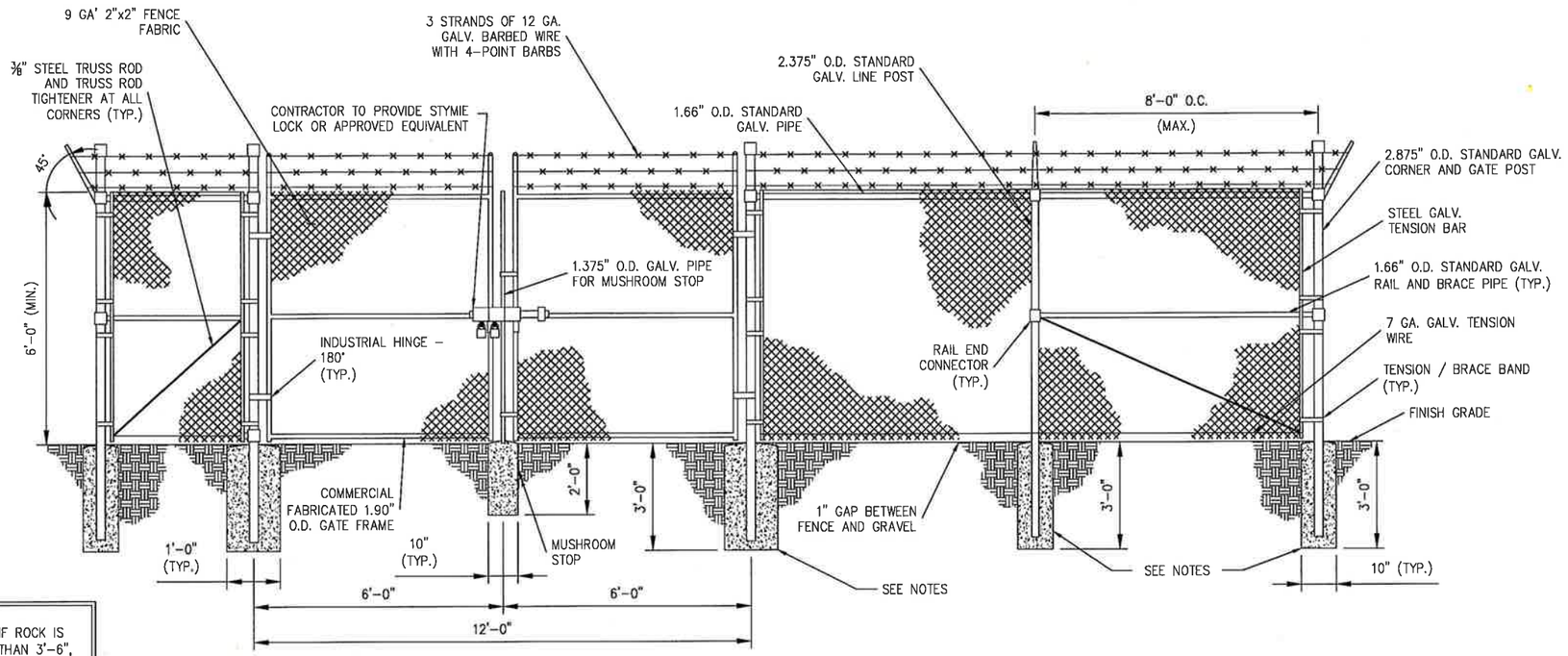
Drawing Scale: —
Date: 3/15/18
CD

Drawing Number: C4

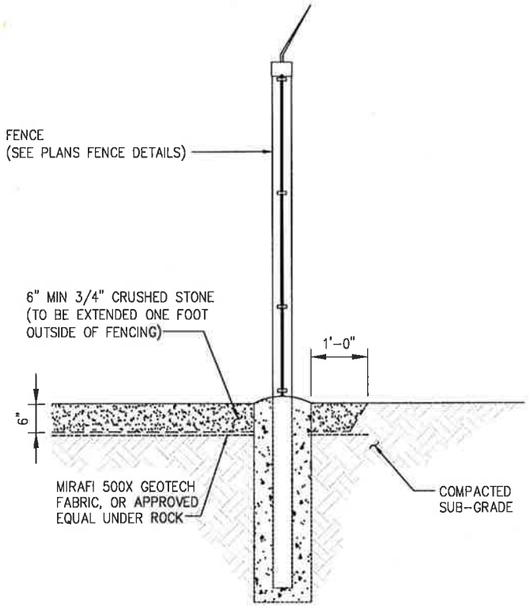
FENCE NOTES

1. USE 3,000–PSI CONCRETE, FULLY CONSOLIDATED AROUND THE POST.
2. WHERE THE POST IS SET IN ROCK OR CONCRETE, CORE A HOLE 12" DEEP AND 1" LARGER IN DIAMETER THAN THE POST. SET THE POST AND GROUT IN PLACE USING NON–SHRINK GROUT.
3. ALL POSTS MUST BE PLUMB AND ALIGNED WITH ONE ANOTHER IN BOTH HORIZONTAL AND VERTICAL PLANES.
4. CORNERS AND GATEPOSTS FOR CHAIN LINK FENCES SHALL EXTEND ABOVE THE TOP STRAND OF BARBED WIRE TO PROVIDE TENSIONING FOR THE BARBED WIRE.
5. PROVIDE MIDRAILS AND BRACING AT ALL CORNER POSTS WHERE THE FENCE CHANGES DIRECTION BY MORE THAN 30 DEGREES.
6. THE GRADE OF THE SITE AND INSTALLATION OF THE FENCE SHALL PROVIDE FOR NO MORE THAN A 1" GAP BETWEEN THE BOTTOM OF THE FENCE MATERIAL AND FINISH GRADE.
7. CONTRACTOR SHALL PROVIDE HOLD OPEN DEVICES FOR ALL GATES AT THE SPECIFIED OPEN POSITIONS, DRIVEN PIPE TYPE RECEIVERS ARE NOT AUTHORIZED.
8. CONTRACTOR SHALL ALSO PROVIDE A MUSHROOM TYPE RECEIVER AT THE CLOSE POSITION.

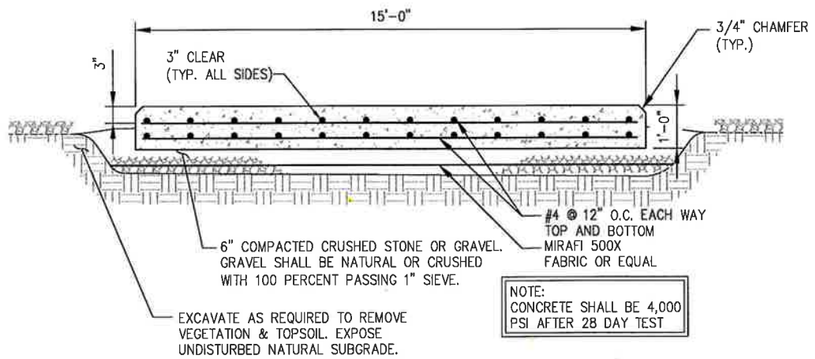
NOTE:
1. ALTERNATE FOOTINGS FOR ALL FENCE POSTS IN ROCK: IF ROCK IS ENCOUNTERED AT GRADE, OR AT A DEPTH SHALLOWER THAN 3'–6", CORE DRILL AN 8" DIA HOLE 18" INTO THE ROCK. CENTER POST IN THE HOLE AND FILL WITH CONCRETE OR GROUT. IF ROCK IS BELOW FINISH GRADE, COAT BACKFILLED SECTION OF POST WITH COAL TAR, AND BACKFILL WITH WELL–DRAINING GRAVEL.
2. ATTACH EACH GATE WITH 3 NON–LIFT–OFF TYPE, MALLEABLE IRON OR FORGING, PIN–TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL. (THREE POINT HINGE)



1 CHAIN LINK FENCE & GATE ELVATION
SCALE: N.T.S.



2 SECTION THROUGH COMPOUND
SCALE: N.T.S.



3 CONCRETE SLAB DETAIL
SCALE: N.T.S.

INFINIGY
1033 Watervliet Shaker Road | Albany, NY 12205
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STATE OF CONNECTICUT
JOHN S. STEVENS
APR 07 2018
LICENSED PROFESSIONAL ENGINEER

No.	Submittal / Revision	App'd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	3/27/18

Drawn: SKB Date: 3/27/18
Designed: AJD Date: 3/27/18
Checked: AJD Date: 3/27/18

Project Number: 502-005

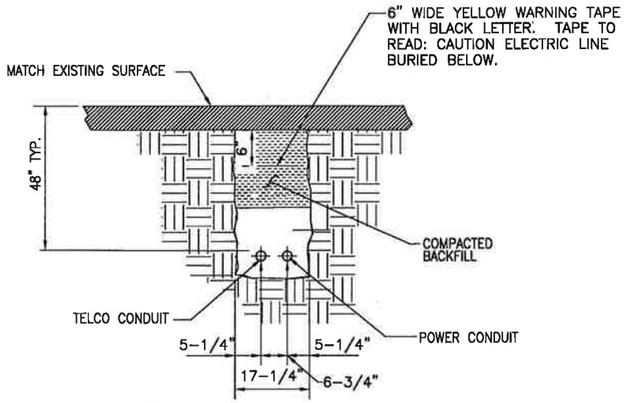
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

Drawing Title: CIVIL DETAILS

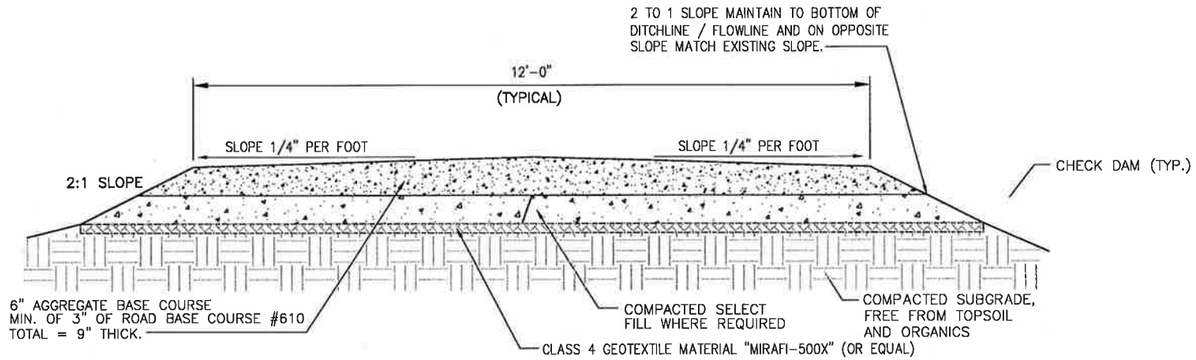
Drawing Scale:
Date: 3/15/18
CD

Drawing Number: C5

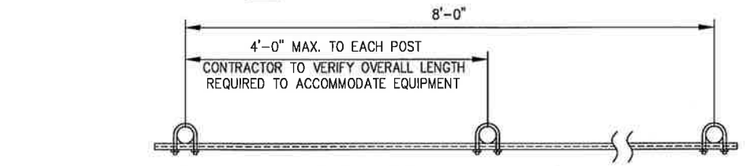


NOTE:
1. NUMBER AND SIZE OF CONDUITS MAY VARY. REFER TO CONSTRUCTION DRAWINGS FOR CONDUIT SIZE AND LOCATION. CONFIRM DIMENSIONS SHOWN WITH UTILITY COMPANY.
2. CONTRACTOR TO VERIFY IN FIELD THE LOCATION, SIZE, TYPE, AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO DIGGING THE SERVICE TRENCH. PROVIDE A MINIMUM OF 18" CLEARANCE BETWEEN PROPOSED UTILITIES AND EXISTING UTILITIES IN THE CASE OF UTILITY LINE CROSSINGS.

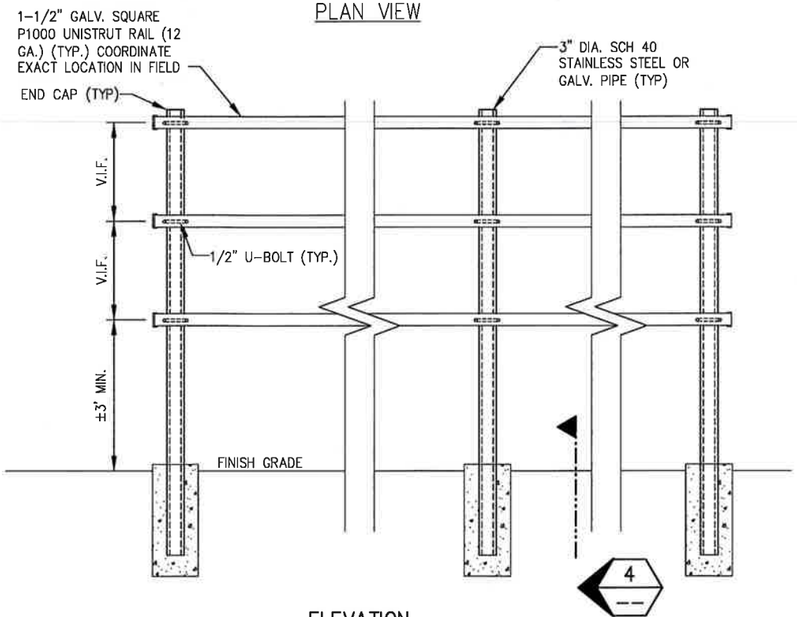
1 TYPICAL CONDUIT TRENCH DETAIL
NOT TO SCALE



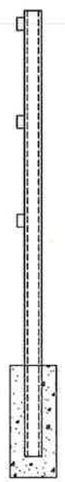
2 DRIVEWAY SECTION – CROWNED
NOT TO SCALE



PLAN VIEW

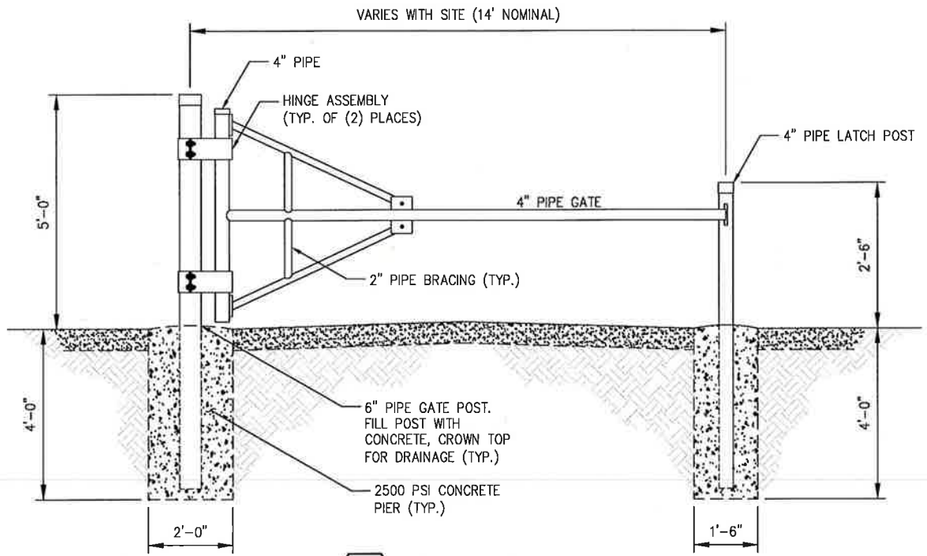


ELEVATION

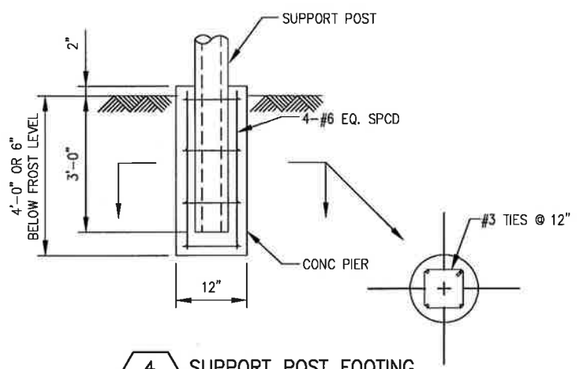


END VIEW

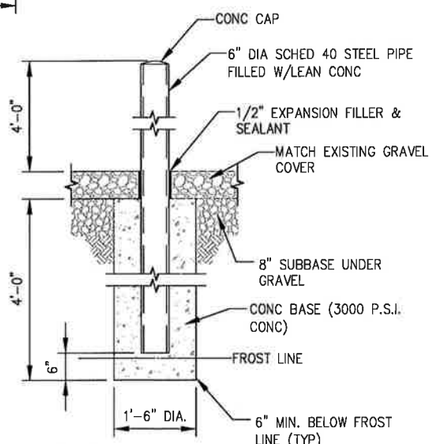
3 H-FRAME FABRICATION DETAIL
NOT TO SCALE



5 ACCESS ROAD GATE
NOT TO SCALE



4 SUPPORT POST FOOTING
NOT TO SCALE



6 BOLLARD DETAIL
NOT TO SCALE

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www.infinigy.com

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No. 20785
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APR 27 2018

No.	Submittal / Revision	Appl	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	3/27/18

Drawn: SKB Date: 2/27/18
Designed: AJD Date: 2/27/18
Checked: AJD Date: 2/27/18

Project Number: 502-005

Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

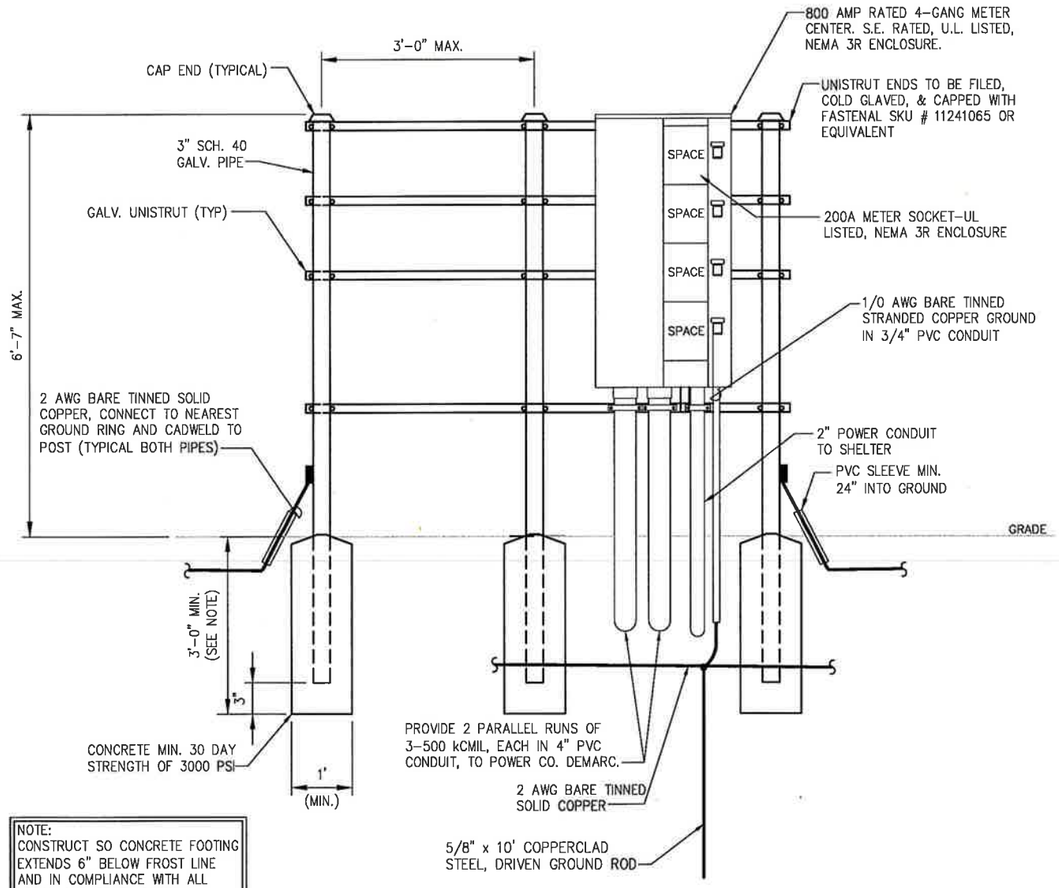
Prepared For: Eco-Site

Drawing Title: CIVIL DETAILS

Drawing Scale:
Date: 3/15/18
CD

Drawing Number: C6

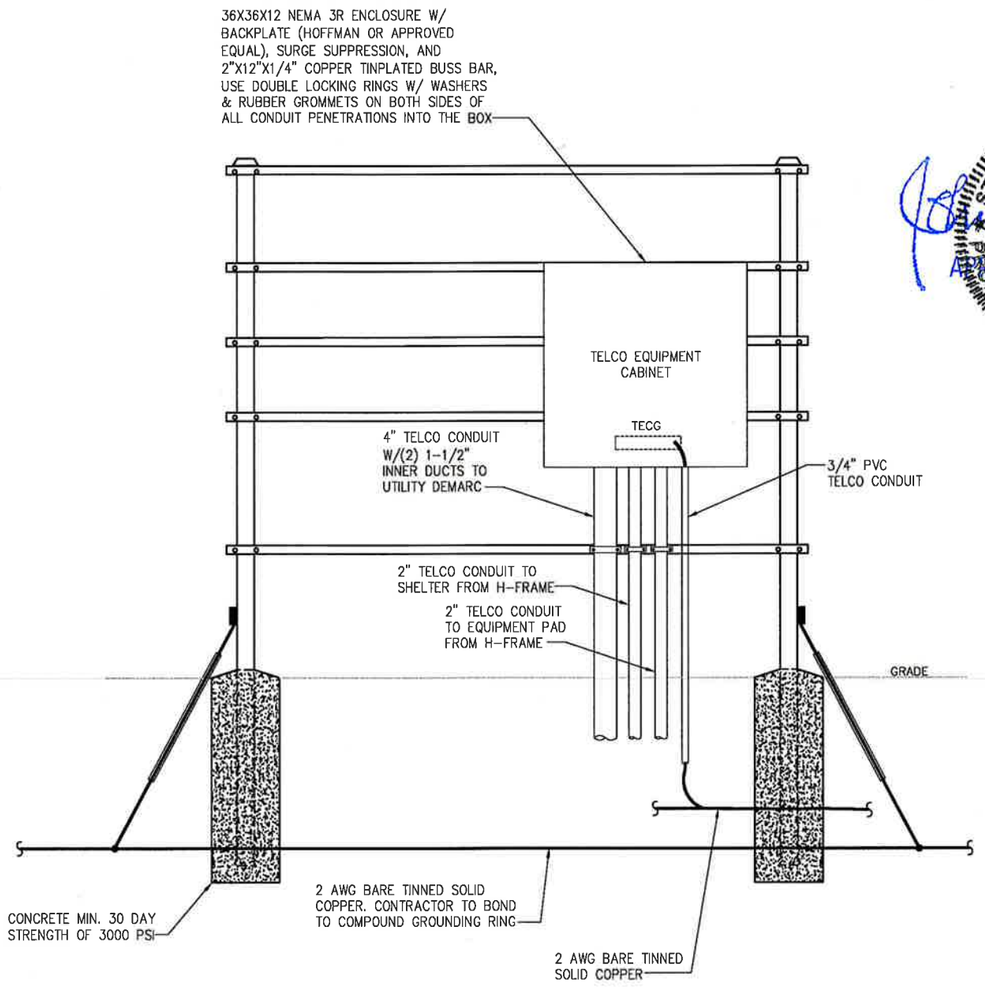
1. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, STATE BUILDING CODES AND THE LOCAL BUILDING CODES. ALL COMPONENTS SHALL BE U.L. LISTED.
2. REFER TO SITE LAYOUT PLAN FOR THE EXACT LOCATION OF H-FRAME.
3. CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR METER.
4. CONTRACTOR TO PROVIDE AND INSTALL METER SOCKET.
5. CONTRACTOR TO LOCATE METER RACK TO ENSURE WORKING SPACES REQUIRED BY THE NEC (ART. 110.26), STATE, OR LOCAL CODES ARE MAINTAINED BETWEEN FRONT OF ENCLOSURES AND THE CHAIN LINK FENCE.
6. SHOW LOCATION (INCLUDING DIMENSIONS) OF ALL CAPPED UNDERGROUND CONDUIT ON FINAL AS-BUILT DRAWINGS SUBMITTED TO OWNER.
7. COORDINATE EXACT LOCATION OF UNDERGROUND FEEDERS AND CIRCUITRY WITH THE OWNER.
8. CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRICAL AUTHORITY HAVING JURISDICTION (AHJ) AND OTHER TRADES TO DETERMINE "FROST" LINE, AND TYPES OF RACEWAYS REQUIRED FOR INSTALLATION.
9. ALL CONDUITS ABOVE GROUND SHALL BE GALVANIZED CONDUIT.
10. CONTRACTOR TO CONTACT LOCAL UTILITY PRIOR TO PURCHASING METER CENTER TO VERIFY ANY PARTICULAR REQUIREMENTS, SUCH AS LEVER BYPASS, ETC.



NOTE:
CONSTRUCT SO CONCRETE FOOTING EXTENDS 6" BELOW FROST LINE AND IN COMPLIANCE WITH ALL LOCAL AND STATE CODES.

NOTE:
EQUIPMENT AND CONDUITS ON BACK NOT SHOWN FOR CLARITY PURPOSES.

1 / C7 H-FRAME DETAIL (FRONT)
SCALE: AS NOTED



2 / C7 H-FRAME DETAIL (REAR)
SCALE: AS NOTED

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www.infinigy.com

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JOHN S. STEVENS
STATE OF CONNECTICUT
LICENSED PROFESSIONAL ENGINEER
APR 27 2018

No.	Submittal / Revision	App'd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	2/27/18

Drawn: SKB Date: 2/27/18
Designed: AJD Date: 2/27/18
Checked: AJD Date: 2/27/18

Project Number: 502-005

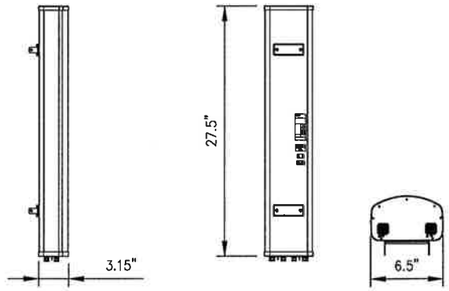
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

Drawing Title:
UTILITY RACK DETAIL

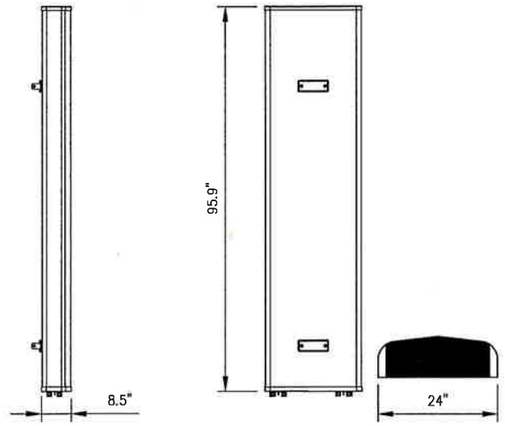
Drawing Scale: —
Date: 3/15/18
CD

Drawing Number:
C7



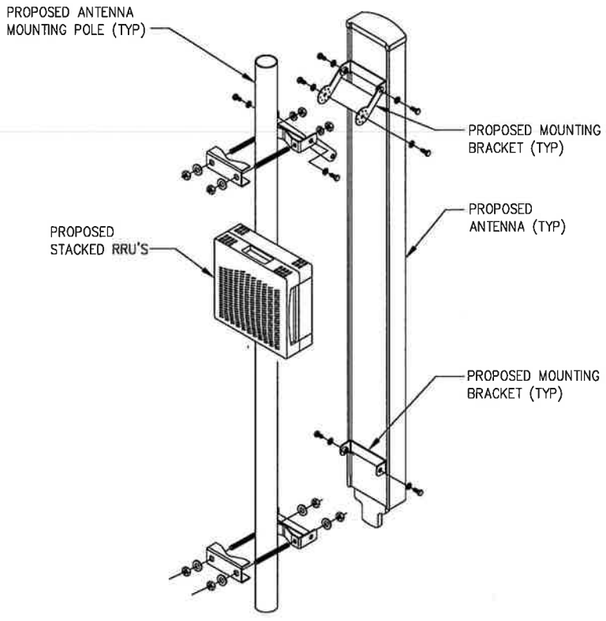
RFS MODEL NO.:	APXV18-206513-C-A20
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	(27.5"x6.5"x3.15")
WEIGHT, W/ PRE-MOUNTED BRACKETS:	8.8 LBS
CONNECTOR:	7-16 DIN FEMALE

1 ANTENNA DETAIL
NOT TO SCALE

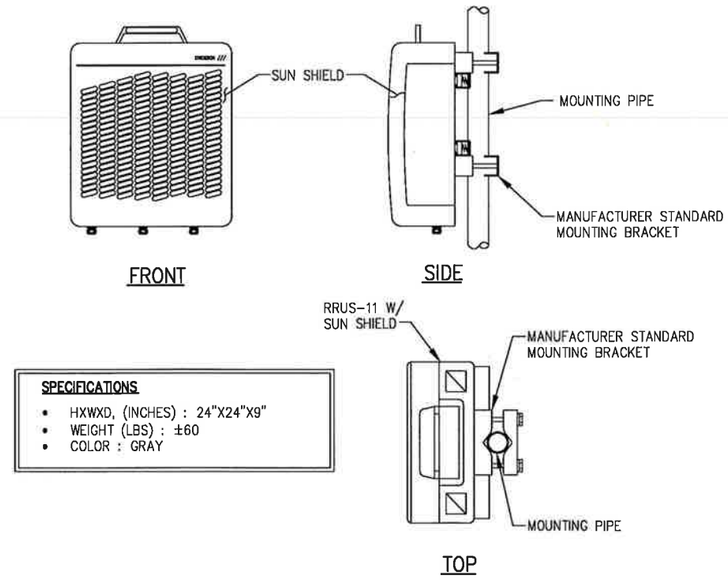


RFS MODEL NO.:	APXVAA24_43-U-A20
RADOME MATERIAL:	FIBERGLASS
RADOME COLOR:	LIGHT GRAY
DIMENSIONS, HxWxD:	(95.9"x24"x8.5")
WEIGHT, W/ PRE-MOUNTED BRACKETS:	45 LBS
CONNECTOR:	7-16 DIN FEMALE

2 ANTENNA DETAIL
NOT TO SCALE



3 MOUNTING DETAIL
NOT TO SCALE



SPECIFICATIONS

- HXWXD, (INCHES) : 24"X24"X9"
- WEIGHT (LBS) : ±60
- COLOR : GRAY

4 ERICSSON RRUS-11 DETAIL
NOT TO SCALE

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STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
APR 27 2018

No.	Submittal / Revision	App'd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	2/27/18

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Designed: AJD Date: 2/27/18
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Project Number: 502-005

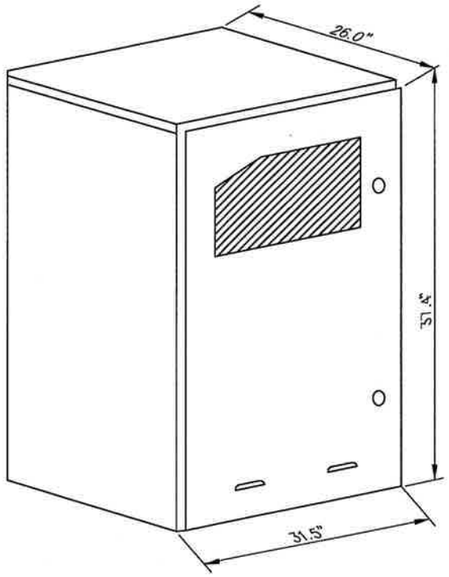
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

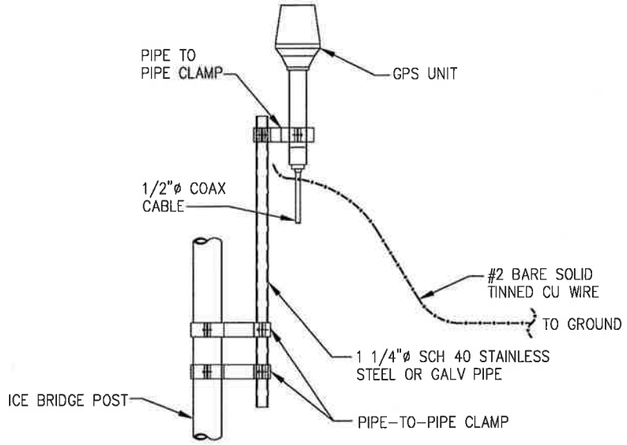
Drawing Title:
T-MOBILE
EQUIPMENT DETAILS

Drawing Scale:
Date: 3/15/18
CD

Drawing Number:
C8

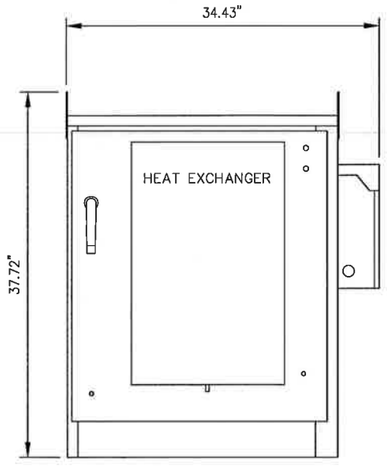


1 ERICSSON PBC05 CABINET DETAIL
NOT TO SCALE

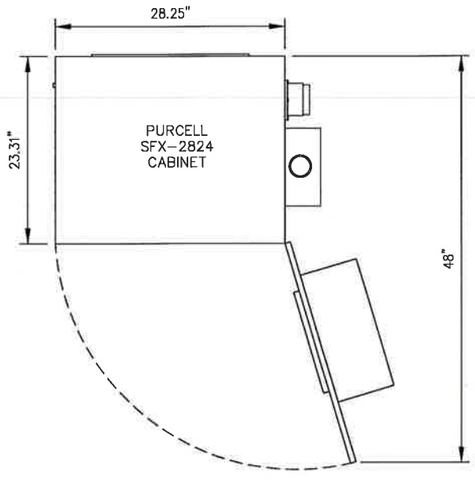


NOTES:
1. THE ELEVATION AND LOCATION OF THE GPS ANTENNA SHALL BE IN ACCORDANCE WITH THE FINAL RF REPORT.
2. THE GPS ANTENNA MOUNT IS DESIGNED TO FASTEN TO A GROUND PLANE BOLTED TO A STANDARD 1-1/4" DIAMETER, SCHEDULE 40 GALVANIZED STEEL OR STAINLESS STEEL PIPE. THE PIPE MUST NOT BE THREADED AT THE ANTENNA MOUNT END. THE PIPE SHALL BE CUT TO THE REQUIRED LENGTH (MINIMUM OF 18 INCHES) USING A HAND OR ROTARY PIPE CUTTER TO ASSURE A SMOOTH AND PERPENDICULAR CUT. A HACK SAW SHALL NOT BE USED. THE CUT PIPE END SHALL BE DEBURRED AND SMOOTH IN ORDER TO SEAL AGAINST THE NEOPRENE GASKET ATTACHED TO THE ANTENNA MOUNT.
3. IT IS CRITICAL THAT THE GPS ANTENNA IS MOUNTED SUCH THAT IT IS WITHIN 2 DEGREES OF VERTICAL AND THE BASE OF THE ANTENNA IS WITHIN 2 DEGREES OF LEVEL.
4. DO NOT SWEEP TEST GPS ANTENNA.

3 GPS UNIT
NOT TO SCALE

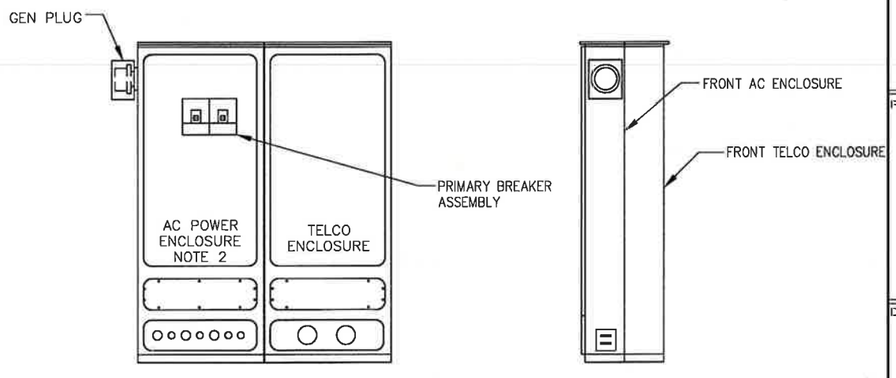


FRONT VIEW



TOP VIEW

2 PURCELL SFX17 2824 CABINET DETAIL
NOT TO SCALE



FRONT VIEW

SIDE VIEW

NOTES
1. METER SOCKET BY THIS CONTRACT. METER TO BE SUPPLIED BY LOCAL UTILITY COMPANY.
2. AC POWER ENCLOSURE. 200 AMP, 208/120V, 1ø, 3W W/ GROUND. 200A/2P MAIN CIRCUIT BREAKER.
3. ALL EQUIPMENT SHALL BE GROUNDED PER LATEST EDITION OF NEC AND AS INDICATED.
4. ELECTRICAL EQUIPMENT SHALL BE MIN. 3'-0" FROM ANY STRUCTURE AND AS REQUIRED BY LOCAL UTILITY COMPANIES AND AHJ.
5. CONTRACTOR MUST LABEL ALIKE BREAKERS IN DISTRIBUTION PANEL.
6. REFER TO ACTUAL EQUIPMENT DRAWINGS.

4 PPC DETAIL
NOT TO SCALE

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STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
APR 27 2018

No.	Submittal / Revision	App'd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	2/27/18

Drawn: SKB Date: 2/27/18
Designed: AJD Date: 2/27/18
Checked: AJD Date: 2/27/18

Project Number: 502-005

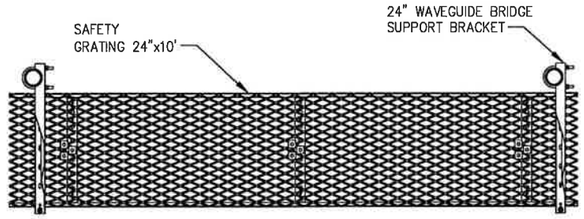
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

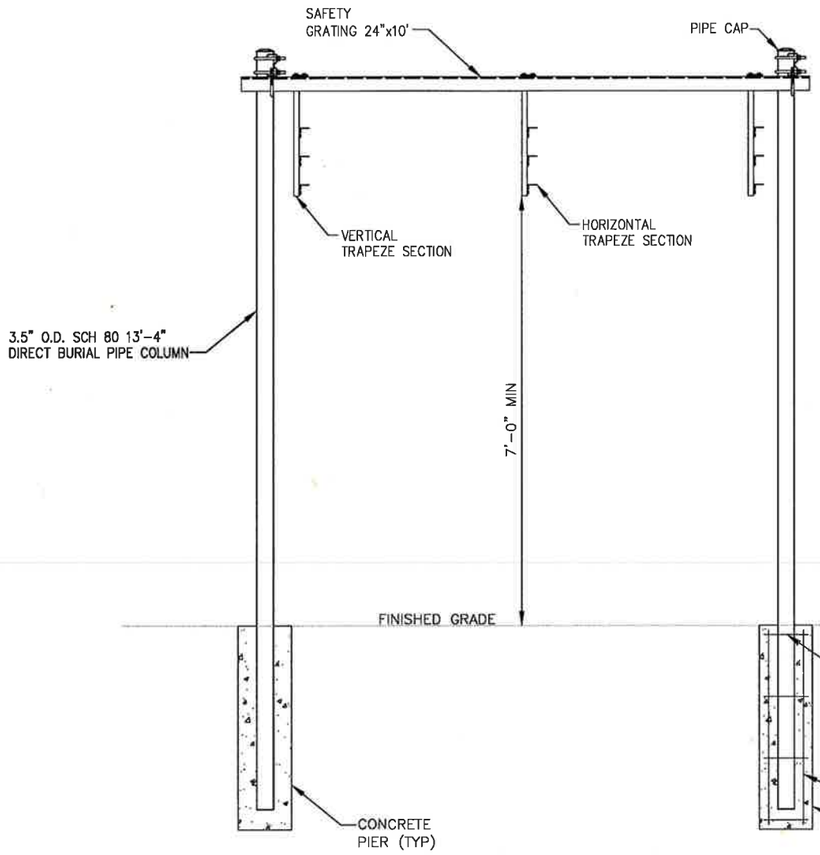
Drawing Title:
T-MOBILE
EQUIPMENT DETAILS

Drawing Scale:
Date: 3/15/18
CD

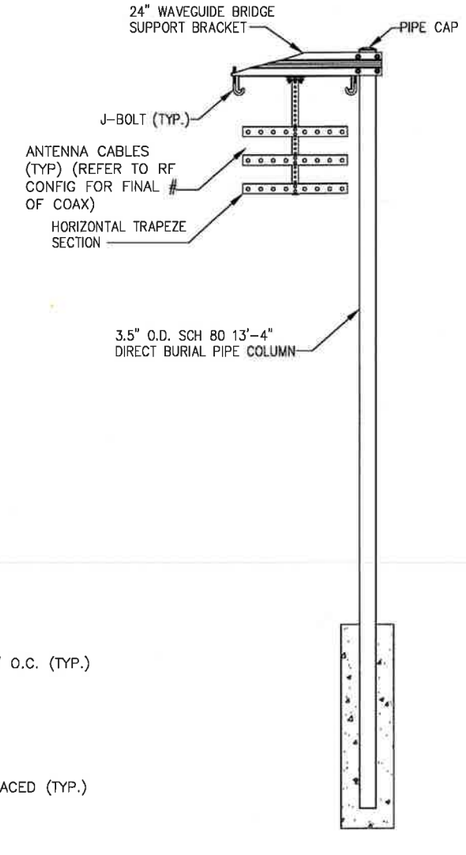
Drawing Number:
C9



TOP



FRONT



SIDE

NOTES:
1. USE SITE PRO 1 PARTS OR APPROVED EQUAL.

2. SUPPORT POSTS SHALL BE LOCATED ON ALTERNATING SIDES OF ICE BRIDGE, SPACED NO MORE THAN 6'-0".

3. ANY SPLICES OR CANTILEVERED SECTIONS OF THE ICE BRIDGE SHALL BE LOCATED WITHIN 2'-0" OF A SUPPORT POST.

1 / -- WAVEGUIDE BRIDGE KIT (SITE PRO P/N: IB24D-T3)
NOT TO SCALE

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STATE OF CONNECTICUT
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APR 27 2018
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PROFESSIONAL ENGINEER

No.	Submittal / Revision	App'd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	2/27/18

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Project Number:
502-005

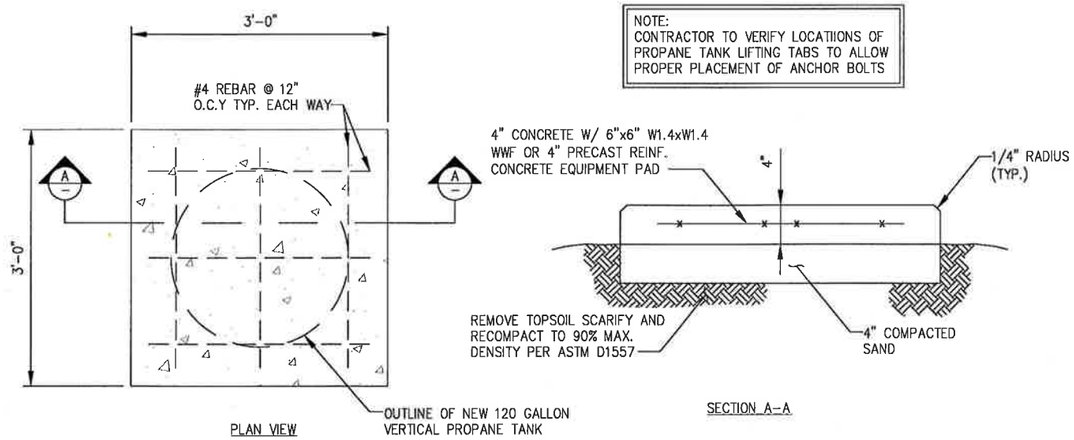
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For:
Eco-Site

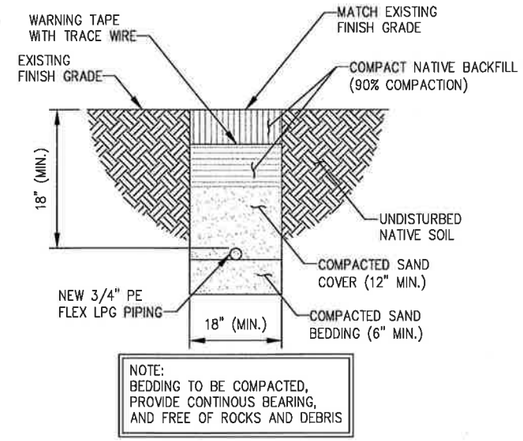
Drawing Title:
ICE BRIDGE DETAILS

Drawing Scale:
Date: 3/15/18
CD

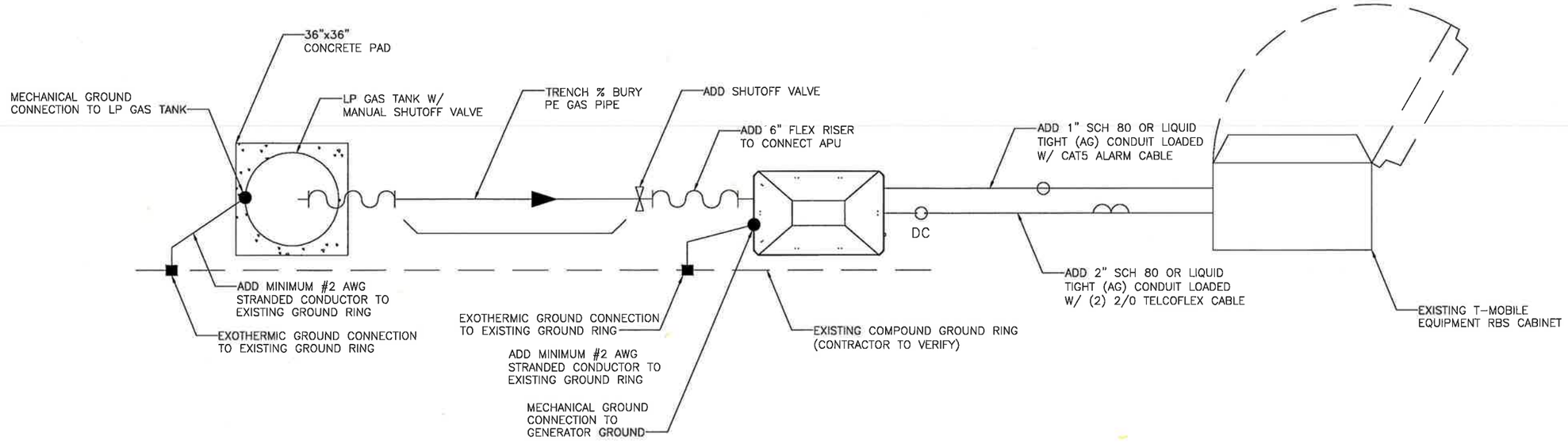
Drawing Number:
C10



1 PROPANE TANK SLAB DETAIL
SCALE: AS NOTED



2 LP GAS PE PIPE TRENCH
SCALE: AS NOTED



3 SCHEMATIC PLUMBING PLAN
NOT TO SCALE

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STATE OF CONNECTICUT
JOHN S. STEVENS
PROFESSIONAL ENGINEER
LICENSED
APR 27 2018

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0	FOR PERMIT	SKB	2/27/18

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Checked: AJD Date: 2/27/18

Project Number: 502-005

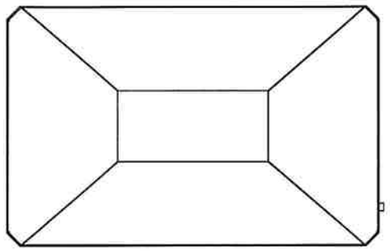
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

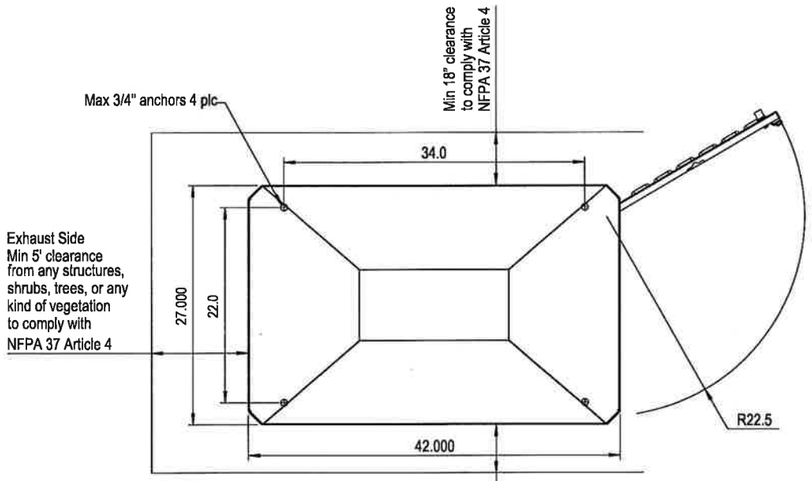
Prepared For: Eco-Site

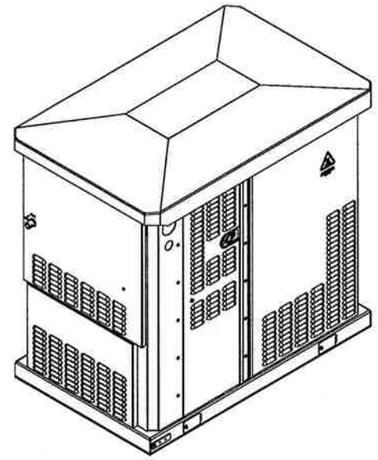
Drawing Title:
EQUIPMENT DETAILS & GENERATOR PLUMBING DIAGRAM

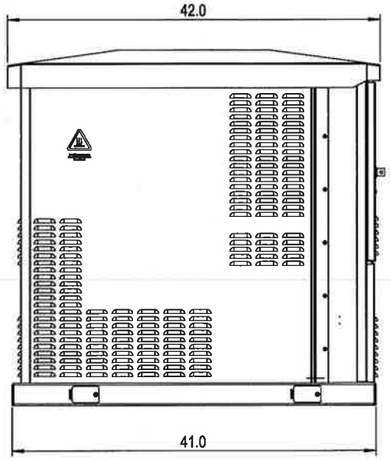
Drawing Scale: —
Date: 3/15/18
CD

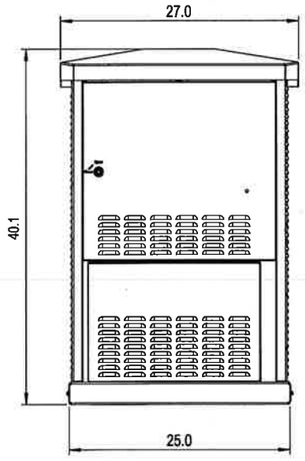
Drawing Number:
C11

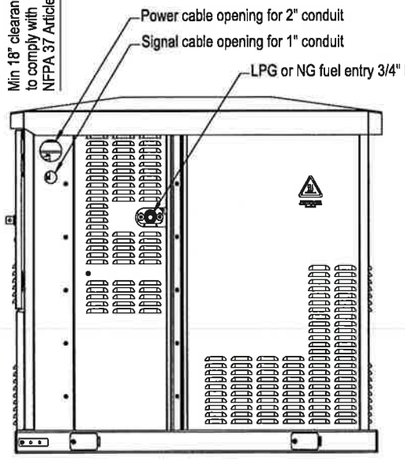


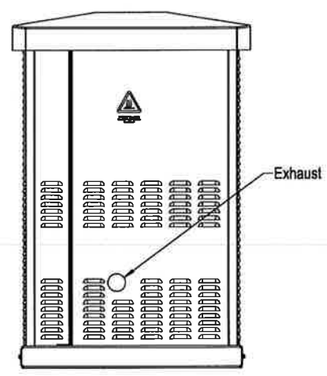












台達電子工業股份有限公司 DELTA ELECTRONICS, INC.	Drawn: 05/12/2015 Vince Byrne	Design: 05/12/2015 Vince Byrne	
THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF DELTA ELECTRONICS, INC. AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SELL OF APPARATUSES OR DEVICES WITHOUT PERMISSION.	THIRD ANGLE PROJECTION	Description: APU DC GENSET 7.5KW	
DIMENSIONAL TOLERANCES HOLES : ±0.05 ANGLES ±0.5° ( ) ( ) ( ) ( ) <30 ±0.25 >30~100 ±0.35 >100~300 ±0.5 ABOVE 300 ±0.8 DECIMALS X ±0.3 XX ±0.2 XX.XX±0.1 UP~100 ±0.2 100~150 ±0.25 150~200 ±0.3 200~250 ±0.35 250~300 ±0.4 300~350 ±0.45 350~400 ±0.5 UP~800 ±1.5 800~900 ±2.4 900~OVER:±3.1	A3 SIZE	Part No. ESOG150-PCAxx CLEARANCES	REV. 01
SCALE 1:3 UNIT in USED ON -		SHEET 1 OF 2	ISSUE DATE: 05/12/2015

V:\A0 Vault\ESOG150-PCA01 (TMO APU)\03 Design\eSystem Files\ESOG150-PCA01 (closed)*
X:\0_Projects\MO_APU\ESOG150-PCAxx_clearance

FRAME NAME:DF-MEA3H-1R01.SLDDRT

1 GENERATOR DETAIL
NOT TO SCALE

INFINIGY
1033 Watervliet Shaker Road | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com

T-Mobile

STATE OF CONNECTICUT
JOHN S. STEVENS
No. 24705
LICENSED PROFESSIONAL ENGINEER
APR 27 2018

No.	Submittal / Revision	Appd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	2/27/18

Drawn: SKB Date: 2/27/18
Designed: AJD Date: 2/27/18
Checked: AJD Date: 2/27/18

Project Number: 502-005

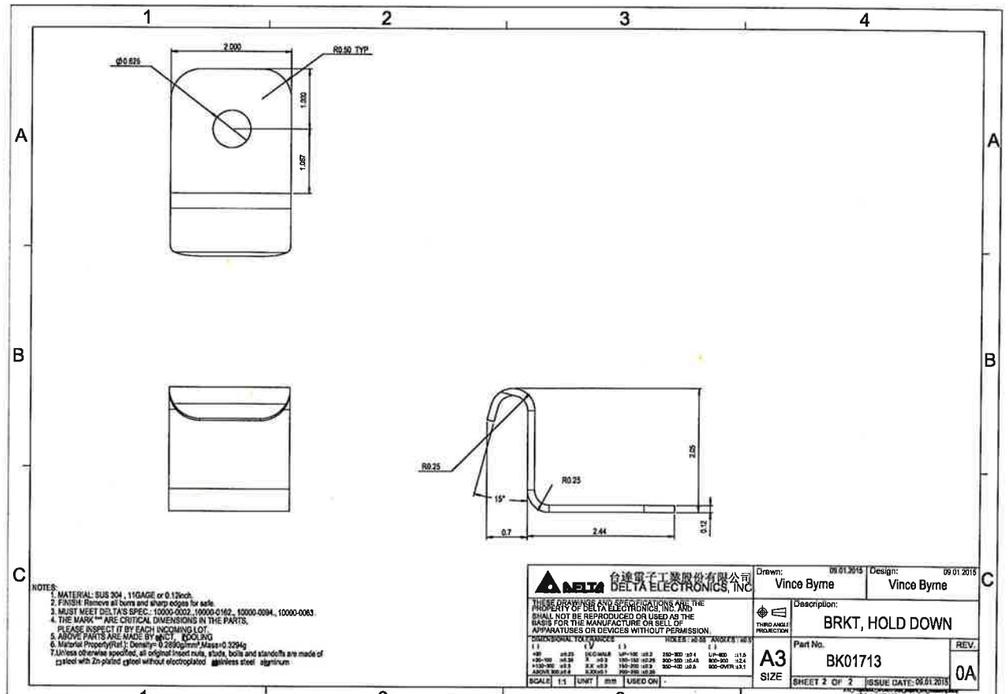
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

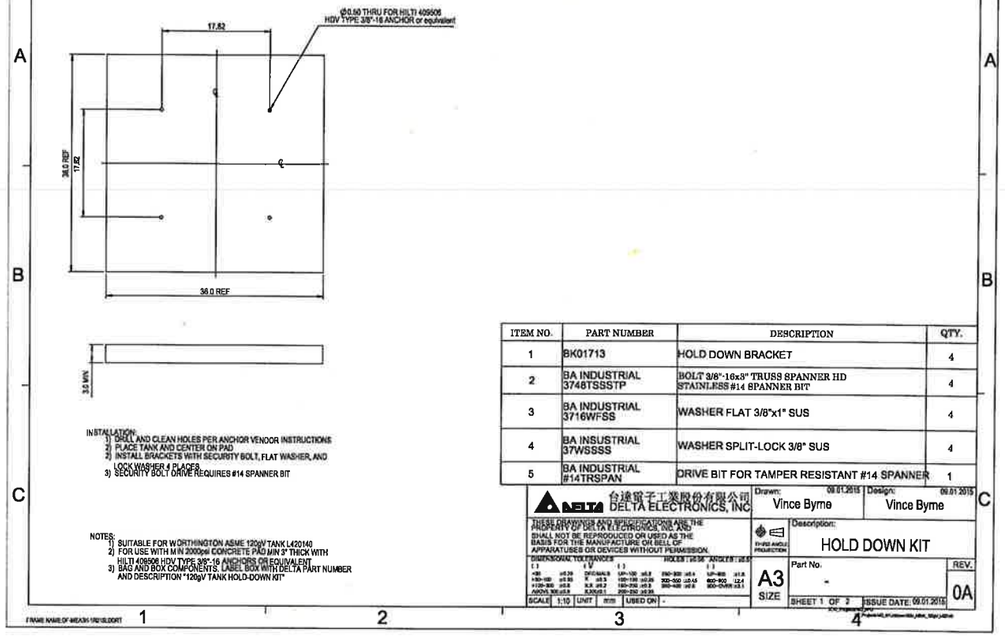
Prepared For: Eco-Site

Drawing Title: GENERATOR DETAILS

Drawing Scale:
Date: 3/15/18
CD

Drawing Number: C12





SPECIFICATIONS

STANDARD

MODEL/SIZE (LBS)	420
HEIGHT (IN)	52
LPG CAPACITY (GAL)	99.1
WATER CAPACITY (LBS)	1,000
NOMINAL TARE WEIGHT (LBS)	250
CYLINDER DIAMETER (IN)	30
CYLINDER VOLUME (CU. IN)	27,680
COLLAR DIAMETER (IN)	16
COLLAR HEIGHT (IN)	6.9
FOOTRING DIAMETER (IN)	22
VALVE	CGA-510 NO OPD
STANDARD SPECIFICATION	ASME

METRIC

MODEL/SIZE (LBS)	420
HEIGHT (MM)	1,321
LPG CAPACITY (L)	360
WATER CAPACITY (KG)	450
NOMINAL TARE WEIGHT (KG)	17
CYLINDER DIAMETER (MM)	762
CYLINDER VOLUME (L)	450
COLLAR DIAMETER (MM)	406
COLLAR HEIGHT (MM)	175
FOOTRING DIAMETER (MM)	559
VALVE	CGA-510 NO OPD
STANDARD SPECIFICATION	ASME

All dimensions are approximate.

200 OLD WILSON BRIDGE ROAD
COLUMBUS, OHIO 43085
P: 614.438.3013
F: 614.438.3083

TOLL-FREE: 866.928.2657
CYLINDERS@WORTHINGTONINDUSTRIES.COM
WORTHINGTONCYLINDERS.COM

WORTHINGTON INDUSTRIES

1 FUEL TANK DETAILS
NOT TO SCALE

INFINIGY
1033 Watervliet Shaker Road | Albany, NY 12205
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www.infinigypc.com

Mobile

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Project Number: 502-005

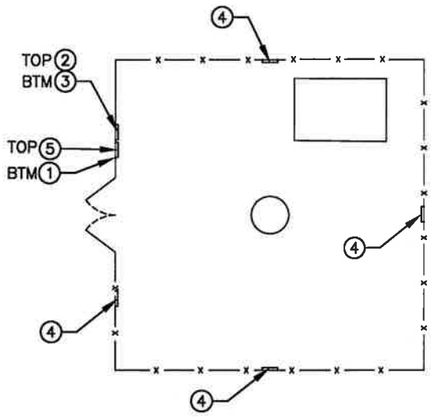
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

Drawing Title:
FUEL TANK DETAILS

Drawing Scale: —
Date: 3/15/18
CD

Drawing Number:
C13



NOTE:
SEE TYPICAL SIGNS AND SPECIFICATIONS DETAIL ON THIS SHEET FOR SIGN DESIGNATIONS.

① NOTICE – RF SIGN (BLUE)
12" x 18" DIGITAL PRINT MOUNTED TO 0.40 THICK ALUMINUM
(OPERATIONS PROVIDED)

② WARNING – RF SIGN
12" x 18" DIGITAL PRINT MOUNTED TO 0.40 THICK ALUMINUM
(OPERATIONS PROVIDED)

③ CAUTION – RF SIGN (YELLOW)
12" x 18" DIGITAL PRINT MOUNTED TO 0.40 THICK ALUMINUM
(OPERATIONS PROVIDED)

④ NO-TRESSPASSING SIGN
12" x 18" DIGITAL PRINT MOUNTED TO 0.40 THICK ALUMINUM
(OPERATIONS PROVIDED)

TOWER ID:
SITE NAME:
E911 ADDRESS:
FCC#:

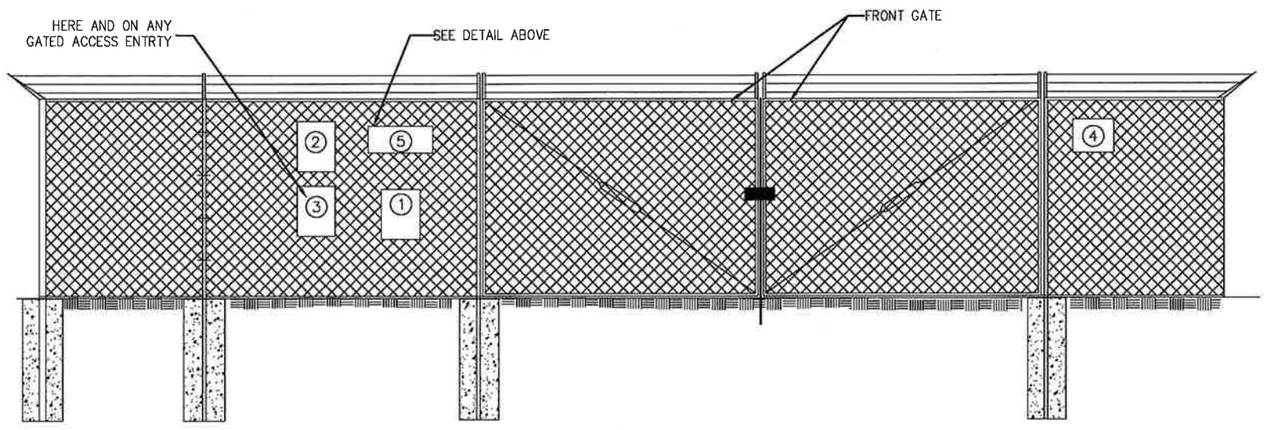
Eco-Site

FOR TOWER LEASING INFORMATION &
EMERGENCY CONTACT
1-866-899-6191

⑤ ECO-SITE ID SIGN
18" HIGH X 24" WIDE
(OPERATIONS PROVIDED)

1 OVERALL SIGN PLACEMENT PLAN VIEW
NOT TO SCALE

2 TYPICAL SIGNS AND SPECIFICATIONS
NOT TO SCALE



3 SITE SIGNAGE FRONT GATE VIEW
NOT TO SCALE

SIGNAGE NOTES:
1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.

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Project Number:
502-005

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SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For:
Eco-Site

Drawing Title:
SITE SIGNAGE DETAILS

Drawing Scale:
Date: 3/15/18
CD

Drawing Number:
C14

GRADING & EXCAVATING NOTES:

1. ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUNDWATER. DEWATERING FOR EXCESS GROUNDWATER SHALL BE PROVIDED IF REQUIRED.
2. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
3. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
4. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACKFILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.
5. –USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND
   –BE FREE FROM CLODS OR STONES OVER 2–1/2" MAXIMUM DIMENSIONS
   –BE PLACED IN 6" LAYERS AND COMPACTED TO 95% STANDARD PROCTOR EXCEPT IN GRASSED/LANDSCAPED AREAS, WHERE 90% STANDARD PROCTOR
6. REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW, STRIP, OR BREAK UP SLOPED SURFACES STEEPER THAN THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE–CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.
7. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
8. REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES OF GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL MAY BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE, SUBJECT TO ENGINEER'S APPROVAL.
9. DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED/REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
10. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS.
11. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
12. ALL CUT AND FILL SLOPES SHALL BE MAXIMUM 2 HORIZONTAL TO 1 VERTICAL.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR MONITORING SITE VEHICLE TRAFFIC AS TO NOT ALLOW VEHICLES LEAVING THE SITE TO TRACK MUD ONTO PUBLIC STREETS. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING PUBLIC STREETS DUE TO MUDDY VEHICLES LEAVING THE SITE.

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. THE SOIL EROSION AND SEDIMENT CONTROL MEASURES AND DETAILS AS SHOWN HEREIN AND STIPULATED WITHIN STATE STANDARDS SHALL BE FOLLOWED AND INSTALLED IN A MANNER SO AS TO MINIMIZE SEDIMENT LEAVING THE SITE.
2. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. CONTRACTOR SHALL CLEAN OUT ALL SEDIMENT PONDS WHEN REQUIRED BY THE ENGINEER OR THE LOCAL JURISDICTION INSPECTOR. CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
6. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.
7. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
8. SILT BARRIERS TO BE PLACED AT DOWNSTREAM TOE OF ALL CUT AND FILL SLOPES.
9. ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.
10. CONTRACTOR SHALL REMOVE ALL EROSION & SEDIMENT CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.
11. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND–DISTURBING ACTIVITIES.

SEEDING GUIDELINES:

FINAL STABILIZATION OF ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED, SHALL BE LOAMED AND SEEDED. LOAM SHALL BE PLACED AT A MINIMUM COMPACTED DEPTH OF 4". RECOMMENDED SEEDING DATES FOR PERMANENT VEGETATION SHALL BE BETWEEN JUNE 15 THROUGH AUGUST 1 AND SEPTEMBER 15 THROUGH OCTOBER 15. TEMPORARY VEGETATIVE MEASURES SHALL CONSIST OF AN ANNUAL OR PERENNIAL RYE GRASS WITH RECOMMENDED SEEDING DATES BEING FROM JUNE 1 THROUGH AUGUST 15 AND SEPTEMBER 30 THROUGH NOVEMBER 30.

EVALUATE PROPOSED COVER MATERIAL

BEFORE SPREADING COVER MATERIAL OVER THE DESIGNATED AREA, OBTAIN A REPRESENTATIVE SOIL SAMPLE AND SUBMIT TO A REPUTABLE SOIL TESTING LABORATORY FOR CHEMICAL AND PHYSICAL ANALYSIS. THE PRELIMINARY TEST IS NECESSARY TO DETERMINE THE REQUIRED INORGANIC AND/OR ORGANIC AMENDMENTS THAT ARE NEEDED TO ASSIST IN ESTABLISHING THE SEED MIXTURE IN AN ENVIRONMENTALLY AND ECONOMICALLY SOUND MANNER. THE RESULTS WILL GIVE THE COVER MATERIAL CHARACTERISTICS SUCH AS pH AND FERTILIZATION NEEDS. THESE RESULTS SHALL BE KEPT ON–SITE B THE CONTRACTOR AND AVAILABLE FOR REVIEW BY THE COUNTY.

SEED BED PREPARATION

PROPOSED COVER MATERIAL SHOULD BE SPREAD EVENLY OVER THE SITE AREA IN A MINIMUM 4" LIFT VIA BULLDOZER/BUCKET LOADER. USING THE INFORMATION FROM THE SOIL ANALYSIS, CAREFULLY CALCULATE THE QUANTITIES OF LIMESTONE AND PRE–PLANT FERTILIZER NEEDED PRIOR TO APPLYING. PRE–PLANT AMENDMENTS CAN BE APPLIED WITH A BROADCAST AND/OR DROP SEEDER AND INCORPORATED WITH AN OFFSET DISK, YORK RAKE, AND/OR HAND RAKE. AFTER INCORPORATION THE PRE–PLANT SOIL AMENDMENTS, THE SEED BED SHOULD BE SMOOTH AND FIRM PRIOR TO SEEDING. THE FOLLOWING SEED MIXTURES SHALL BE USED AS NOTED:

SEED MIXTURE

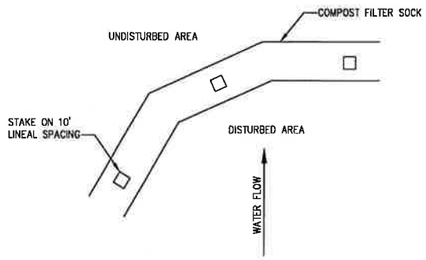
SPECIES/VARIETY	LBS/ACRE
CREEPING RED FESCUE	20
KENTUCKY BLUEGRASS	20
PERENNIAL RYEGRASS	5

SEED TIME AND METHOD

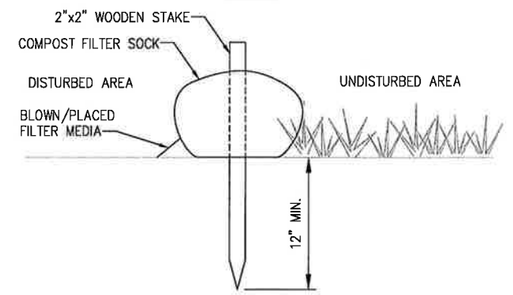
THE PREFERRED TIME FOR SEEDING THE COOL SEASON MIXTURE IS LATE SUMMER. SOIL AND AIR TEMPERATURES ARE IDEAL FOR SEED GERMINATION AND SEEDING GROWTH. WEED COMPETITION IS REDUCED BECAUSE SEEDS OF MANY WEED SPECIES GERMINATE EARLIER IN THE GROWING SEASON. ADDITIONALLY, HERBICIDE USE IS GREATLY REDUCED. HOWEVER, SEEDING MAY BE DONE AT ANY OF THE ABOVE NOTED TIMES.

MULCHING

NEWLY SEEDED AREAS SHOULD BE MULCHED TO INSURE ADEQUATE MOISTURE FOR SUCCESSFUL TURF ESTABLISHMENT AND TO PROTECT AGAINST SURFACE MOVEMENT OF SEDIMENT–BOUND AGROCHEMICALS AND SOIL EROSION. IF MULCHING PROCEDURES ARE NOT SPECIFIED ON PLANS, APPLY GOOD QUALITY STRAW OR HAY AT A RATE OF 2 BALES/1000 SQ. FT. OTHER COMMERCIALLY AVAILABLE MULCHES CAN BE USED.



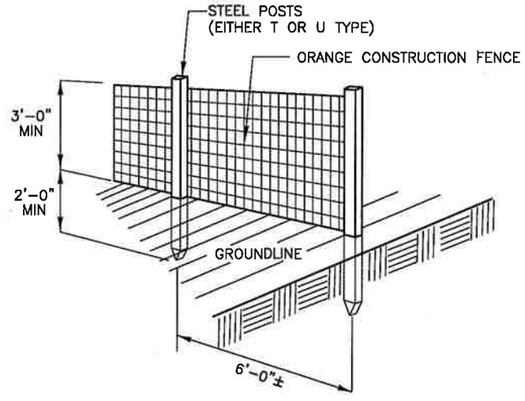
PLAN



SECTION

NOTES:
1. FILTER SOCK SHALL BE INSTALLED ON EXISTING LEVEL GRADE.
2. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
4. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
5. BIODEGRADABLE FILTER SOCK SHALL BE REPLACED AFTER 6 MONTHS; PHOTO DEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
6. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

1 COMPOST FILTER SOCK
NOT TO SCALE



2 CONSTRUCTION FENCE DETAIL
NOT TO SCALE

INFINIGY
1033 Watervliet Shaker Road | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
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STATE OF CONNECTICUT
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Project Number: 502-005

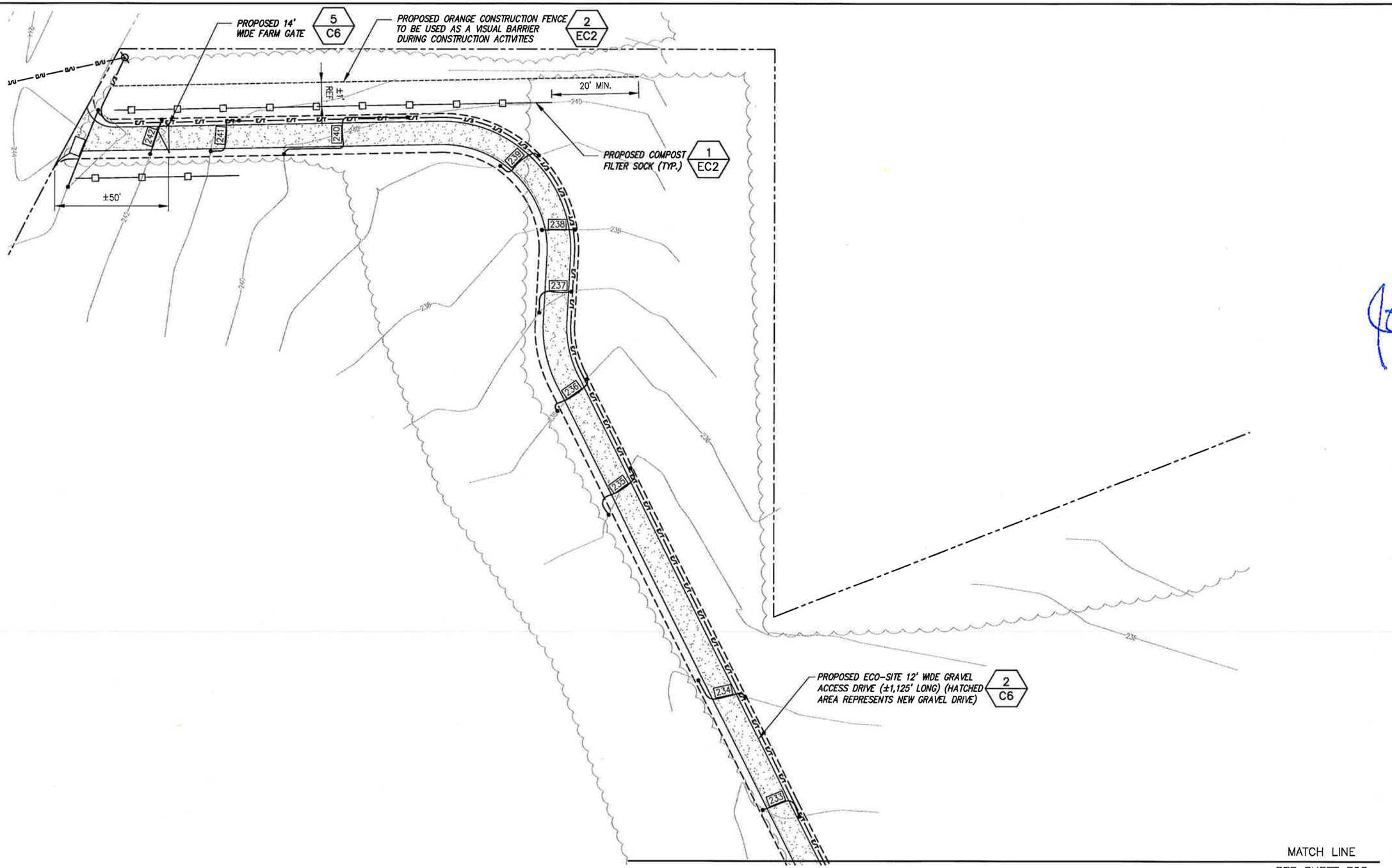
Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

Drawing Title:
GRADING & EROSION SEDIMENT CONTROL NOTES & DETAILS

Drawing Scale:
Date: 3/15/18
CD

Drawing Number:
EC1



1 GRADING PLAN
SCALE: AS NOTED

CUT AND FILL QUANTITIES:

- ALONG ACCESS DRIVE THE AMOUNT OF CUT IS TO BE EQUAL TO THE AMOUNT OF FILL
- AT THE COMPOUND THE AMOUNT OF CUT AND FILL IS ESTIMATED TO BE:
  CUT – 36 CUBIC YARDS
  FILL = 9 CUBIC YARDS

DRAWING SCALE

50 25' 0 25' 50'

SCALE (11x17): 1" = 50'–0"
SCALE (22x34): 1" = 25'–0"

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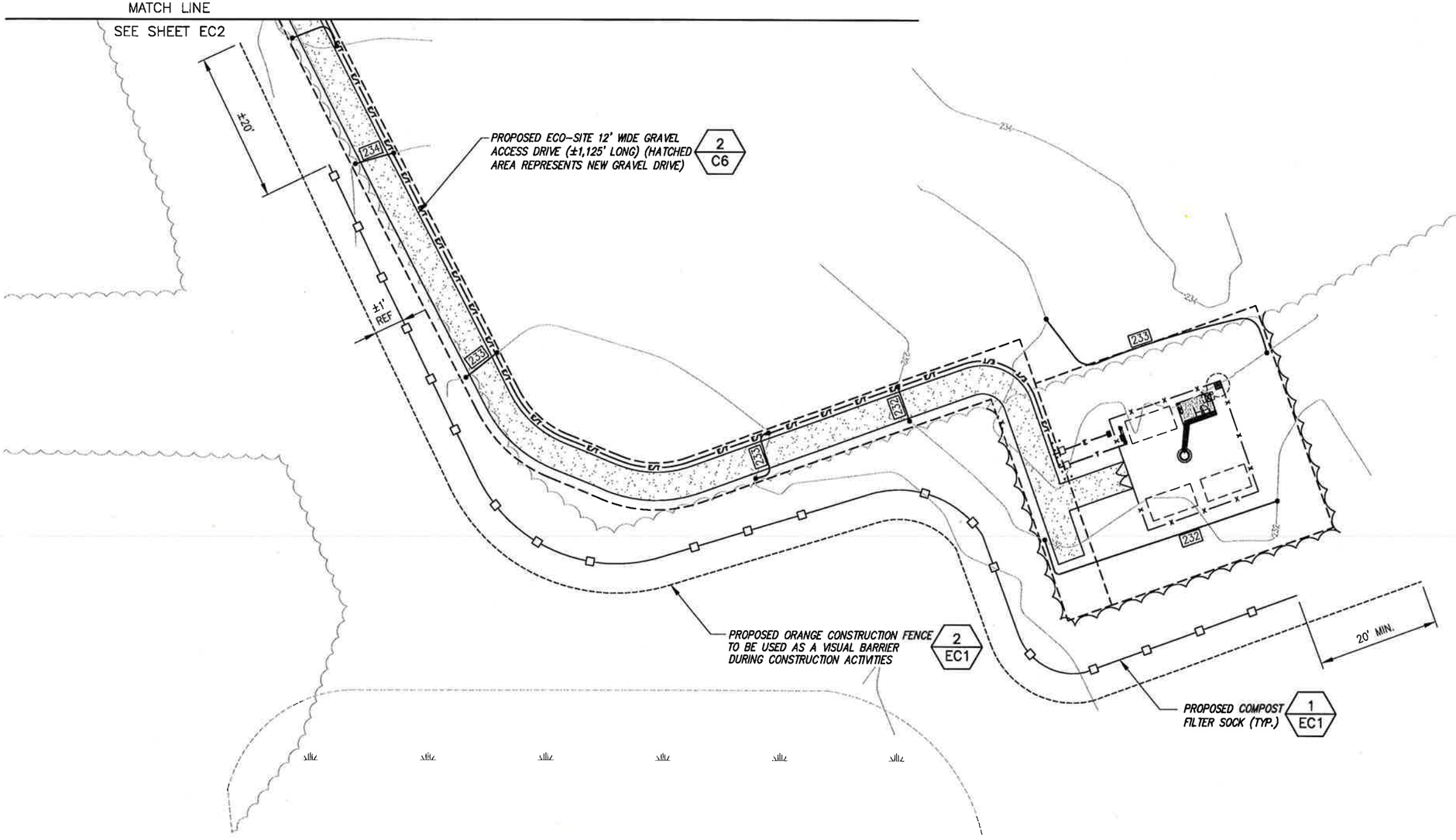
Drawing Title: GRADING PLAN

Drawing Scale: —
Date: 3/15/18

CD

Drawing Number: **EC2**

MATCH LINE
SEE SHEET EC2



APPROX. NORTH

1 GRADING PLAN
SCALE: AS NOTED

CUT AND FILL QUANTITIES:
- ALONG ACCESS DRIVE THE AMOUNT OF CUT IS TO BE EQUAL TO THE AMOUNT OF FILL.
- AT THE COMPOUND THE AMOUNT OF CUT AND FILL IS ESTIMATED TO BE:
  CUT – 36 CUBIC YARDS
  FILL = 9 CUBIC YARDS

DRAWING SCALE
50 25' 0 25' 50'
SCALE (11x17): 1" = 50'-0"
SCALE (22x34): 1" = 25'-0"

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Mobile

STATE OF CONNECTICUT
JOHN S. STEVENS
APR 27 2018
No. 24705
LICENSED PROFESSIONAL ENGINEER

No.	Submittal / Revision	App'd	Date
1	REVISED PER COMMENTS	SKB	3/15/18
0	FOR PERMIT	SKB	3/27/18

Drawn: SKB Date: 3/27/18
Designed: AJD Date: 3/27/18
Checked: AJD Date: 3/27/18

Project Number: 502-005

Project Title:
SOMERS
CT-0005A
248 HALL HILL ROAD
SOMERS, CT 06071

Prepared For: Eco-Site

Drawing Title:
GRADING PLAN (CON'T)

Drawing Scale:
Date: 3/15/18
CD

Drawing Number:
EC3