

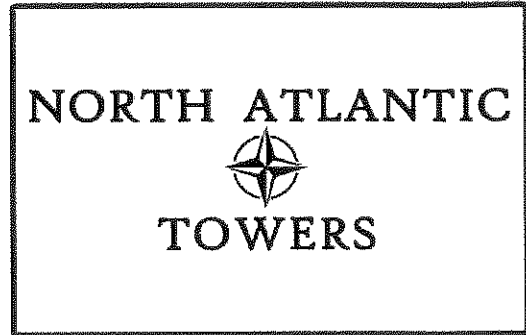
**PROJECT DESCRIPTION:**

CONSTRUCTION OF PUBLIC UTILITY/PERSONAL WIRELESS SERVICE FACILITY CONSISTING OF A MONOPINE TOWER, INITIALLY (1) EQUIPMENT SHELTER, AND A UTILITY BACKBOARD WITHIN A FENCED COMPOUND. NO WATER OR SEWER IS REQUIRED.

**CODE COMPLIANCE:**

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:

- |  |                           |
|--|---------------------------|
| 1. CT BUILDING CODE                                  | 6. UNIFORM PLUMBING CODE  |
| 2. UNIFORM BUILDING CODE                             | 7. NATIONAL ELECTRIC CODE |
| 3. BUILDING OFFICIALS AND CODE ADMINISTRATORS (BOCA) | 8. LOCAL BUILDING CODE    |
| 4. UNIFORM MECHANICAL CODE                           | 9. CITY/COUNTY ORDINANCES |
| 5. ANSI/TIA/EIA-222-G                                | 10. CTDOT CODE            |



**WATERTOWN  
SITE ID: CT1140  
655 BASSETT RD.  
WATERTOWN, CT 06795**

**NOTE:**

1. PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH TOWN OF WATERTOWN TOWN ENGINEER.

2. INFINIGY SHALL OVERSEE ALL DRAINAGE AND CONTROL STRUCTURES, AS WELL AS PERFORM PERIODIC INSPECTIONS FOLLOWING ANY RAINFALL > 0.25 IN. ADDITIONAL STABILIZATION MEASURES MAY BE REQUIRED. ALL INSPECTION REPORTS TO BE SUBMITTED TO THE TOWN AND THE CSC.

**PROJECT INFORMATION**

SITE NAME: WATERTOWN  
 SITE ID: CT1140  
 SITE ADDRESS: 655 BASSETT ROAD  
 WATERTOWN, CT 06795  
 ZONING JURISDICTION: TOWN OF WATERTOWN  
 ZONING CLASSIFICATION: R-90; RESIDENTIAL  
 PARCEL I.D. (M/B/L/U): 15/25/3///  
 ACCOUNT NUMBER: 3592  
 PARCEL SIZE: ± 51.53 ACRES  
 CONSTRUCTION AREA: ± 63,000 SQ FT (INCL. LINKFIELD RD UPGRADE)  
 LATITUDE: 41° 39' 26" N (APPROX.)  
 LONGITUDE: 73° 08' 11" W (APPROX.)

**PROJECT DIRECTORY**

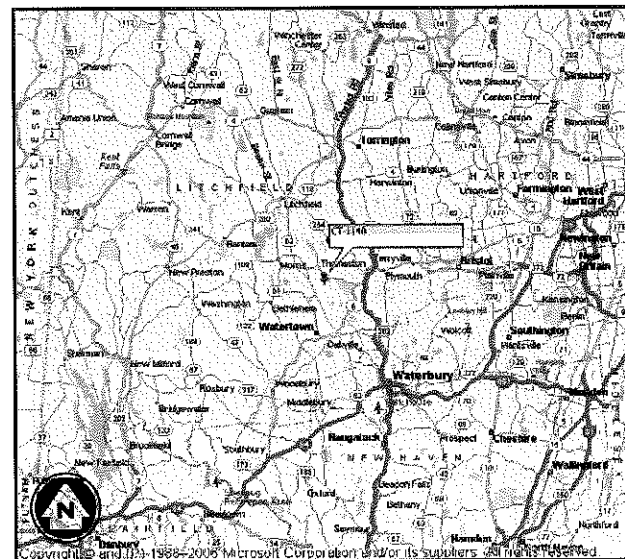
PROPERTY OWNER: GUSTAFSON FRANK E EST/FRANK E JR & ALAN R CO EXEC'S/FRANK E, ALAN R, PETER  
 (860) 274-5002  
 APPLICANT: NORTH ATLANTIC TOWERS  
 1001 3RD AVE WEST, SUITE 420  
 BRADENTON, FL 34205  
 DAN SHRIVER  
 (941) 757-5010  
 ENGINEER: INFINIGY ENGINEERING PLLC  
 11 HERBERT DRIVE  
 LATHAM, NY 12110  
 A.J. DeSANTIS  
 (518) 690-0790  
 ATTORNEY: CUDDY & FEDER LLP  
 445 HAMILTON STREET, 14TH FLOOR  
 WHITE PLAINS, NY 10601  
 LUCIA CHIOCCHIO, ESQ  
 (914) 761-1300

POWER COMPANY: UNITED ILLUMINATING

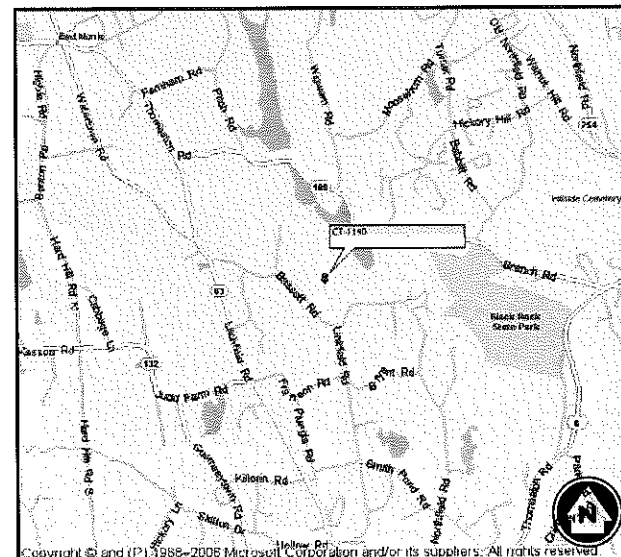
TELCO COMPANY: TBD

**DRAWING INDEX**

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VICINITY MAP  
N.T.S.



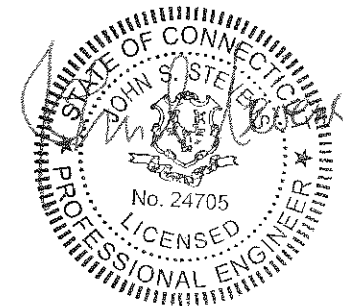
LOCATION MAP  
N.T.S.

**infinigy**  
engineering

11 HERBERT DRIVE  
LATHAM, NY 12110  
OFFICE #: (518) 690-0790  
FAX #: (518) 690-0793

PROPOSED TOWER HEIGHT: ±130' AGL  
 LATITUDE: 41° 39' 26" N (APPROX.)  
 LONGITUDE: 73° 08' 11" W (APPROX.)  
 ELEVATION: ±833' AGL (APPROX.)

**LITCHFIELD COUNTY, CONNECTICUT**



**DIG ALERT:**

CALL FOR UNDERGROUND UTILITIES PRIOR TO DIGGING:  
1-888-922-4455

**EMERGENCY:**

CALL 911

**GENERAL NOTES**

- 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.
- DO NOT CHANGE SIZE NOR SPACING OF STRUCTURAL ELEMENTS.
- DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
- DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- 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.
- EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- 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.
- 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.
- 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
- 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.
- THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
- 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.
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
- 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.
- 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.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE OSHA REGULATIONS FOR CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
- 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.
- MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
- ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS AS DEFINED BY THE OWNER OR OWNER'S REPRESENTATIVE ON THE DRAWINGS.
- CONTRACTOR SHALL GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE EQUIPMENT PAD AND THE TOWER.
- ALL IMPROVEMENTS TO CONFORM WITH LOCAL JURISDICTION CONSTRUCTION STANDARDS AND SPECIFICATIONS, LATEST EDITION.

**STRUCTURAL STEEL NOTES**

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
- 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.
- 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.
- DO NOT PLACE HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
- CONNECTIONS:
  - 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.
  - BOLTED CONNECTIONS SHALL USE BEARING TYPE GALVANIZED ASTM A325 BOLTS (3/4" DIA) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
  - NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. GALVANIZED ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
  - CONNECTION DESIGN BY FABRICATOR WILL BE SUBJECT TO REVIEW AND APPROVAL BY ENGINEER.

**CONCRETE NOTES**

- 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";
- MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
- 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.
- MAXIMUM AGGREGATE SIZE SHALL BE 1".
- 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
- REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315.
- 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.
- 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.

- A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
- 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.
- CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
- ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301.
- DO NOT WELD OR TACKWELD REINFORCING STEEL.
- 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.
- LOCATE ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION AS ACCEPTABLE TO ENGINEER. PLACE REINFORCEMENT CONTINUOUSLY THROUGH JOINT.
- REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- 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.
- DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- DO NOT ALLOW CONCRETE SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 14 DAYS AFTER PLACEMENT.
- 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
UNDERGROUND ELECTRIC	FENCE	-----x-x-x-----
UNDERGROUND TELEPHONE	UNDERGROUND ELECTRIC	-----
OVERHEAD WIRES	UNDERGROUND TELEPHONE	-----
250	OVERHEAD TELEPHONE	-----
202	OVERHEAD ELECTRIC	-----
120.5 OR 120.5 x	5' OR 10' CONTOUR LINE	-----250-----
	1' OR 2' CONTOUR LINE	-----202-----
	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	⊙ ⊙ ⊙
	REPRESENTS DETAIL NUMBER	⊠
	REF. DRAWING NUMBER	⊠

**nfining**  
Engineering

11 Herbert Drive  
Latham, NY 12110  
OFFICE: (518) 690-0790  
FAX: (518) 690-0793

JOHN S. STEVENS  
No. 24705  
LICENSED PROFESSIONAL ENGINEER

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8	REVISED PER COMMENTS	MJB	3/27/13
5	REVISED PER COMMENTS	JLM	3/21/13
4	REVISED PER COMMENTS	MJB	11/19/12
3	REVISED PER COMMENTS	MJB	10/24/12
2	BASSETT ROAD ENTRANCE	AJD	8/24/12
1	REVISED PER COMMENTS	AJD	7/27/12
0	ISSUED FOR REVIEW	AJD	5/30/12
No.	Submitted / Revision	App'd	Date

Drawn: MJB Date: 5/30/12  
Designed: AJD Date: 5/30/12  
Checked: AJD Date: 5/30/12

Project Number: 226-015

Project Title: **WATERTOWN CT1140**  
855 BASSETT RD  
WATERTOWN, CT 06795

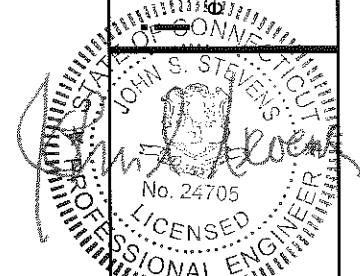
Prepared For: NORTH ATLANTIC TOWERS

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Date: 3/27/13

Drawing Title: **GENERAL NOTES**

Drawing Number: **C1**



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1	REVISED PER COMMENTS	AJD	7/27/12
0	ISSUED FOR REVIEW	AJD	5/30/12

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 Checked: AJD Date: 5/30/12

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**WATERTOWN**  
**CT1140**  
 655 BASSETT RD  
 WATERTOWN, CT 06795

Prepared For:

**NORTH ATLANTIC TOWERS**

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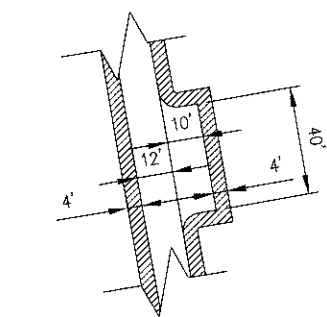
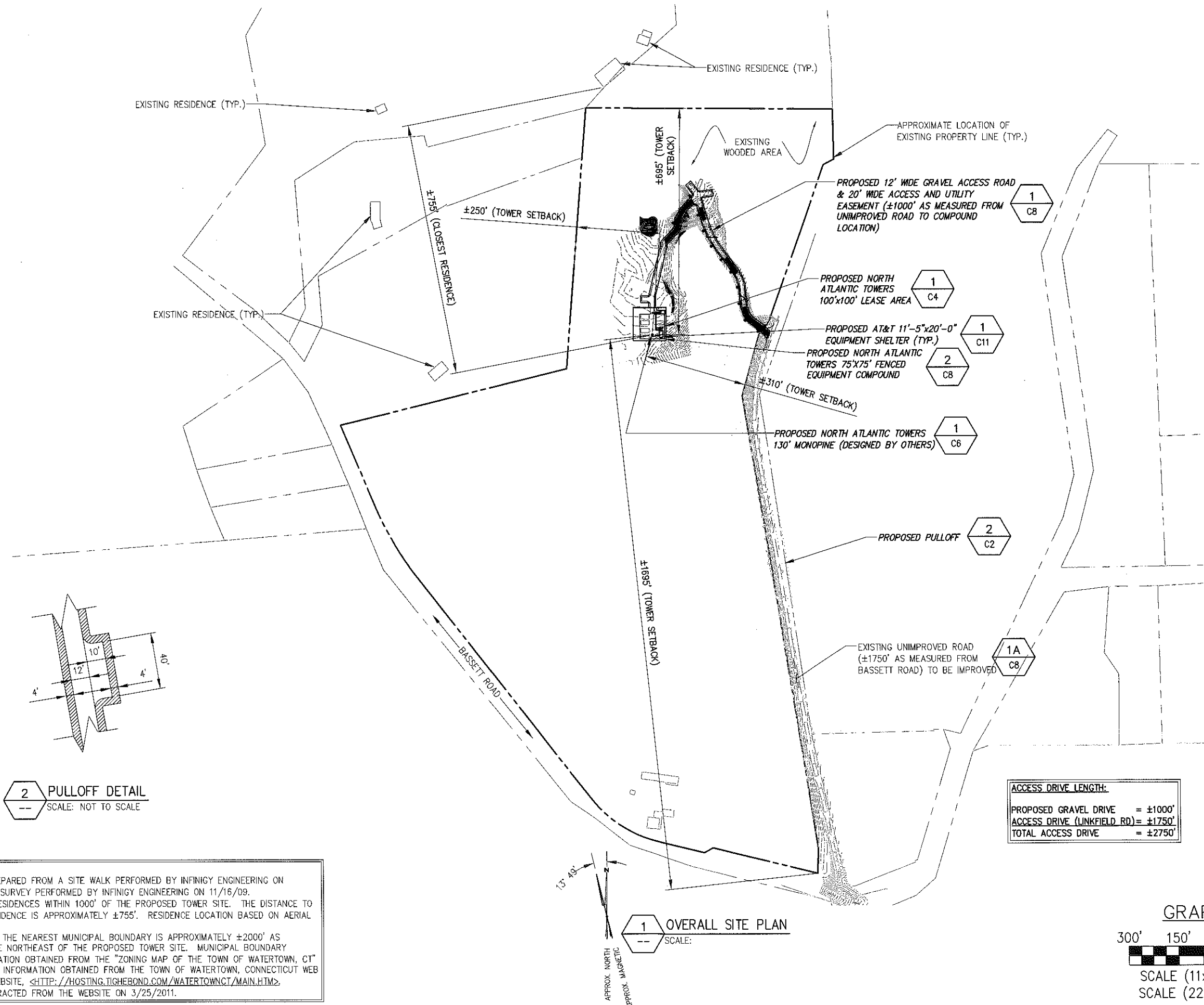
Date:  
 3/27/13

Drawing Title:

**OVERALL SITE PLAN**

Drawing Number:

**C2**



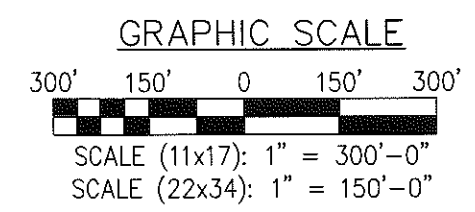
**2 PULLOFF DETAIL**  
 SCALE: NOT TO SCALE

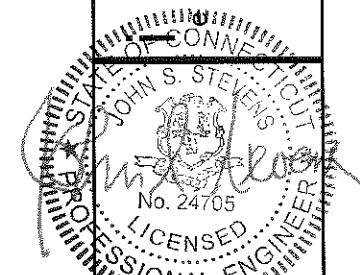
1. NOTES:
- BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING ON 9/23/09, AND A SURVEY PERFORMED BY INFINIGY ENGINEERING ON 11/16/09.
  - THERE ARE (5) RESIDENCES WITHIN 1000' OF THE PROPOSED TOWER SITE. THE DISTANCE TO THE CLOSEST RESIDENCE IS APPROXIMATELY ±755'. RESIDENCE LOCATION BASED ON AERIAL PHOTOGRAPHY.
  - THE DISTANCE TO THE NEAREST MUNICIPAL BOUNDARY IS APPROXIMATELY ±2000' AS MEASURED TO THE NORTHEAST OF THE PROPOSED TOWER SITE. MUNICIPAL BOUNDARY LOCATION INFORMATION OBTAINED FROM THE "ZONING MAP OF THE TOWN OF WATERTOWN, CT" ABUTTING PARCEL INFORMATION OBTAINED FROM THE TOWN OF WATERTOWN, CONNECTICUT WEB MAPPING G.I.S. WEBSITE, <[HTTP://HOSTING.TIGHEBOND.COM/WATERTOWNCT/MAIN.HTM](http://HOSTING.TIGHEBOND.COM/WATERTOWNCT/MAIN.HTM)>. INFORMATION EXTRACTED FROM THE WEBSITE ON 3/25/2011.

**1 OVERALL SITE PLAN**  
 SCALE:

ACCESS DRIVE LENGTH:

PROPOSED GRAVEL DRIVE	= ±1000'
ACCESS DRIVE (LINKFIELD RD)	= ±1750'
TOTAL ACCESS DRIVE	= ±2750'





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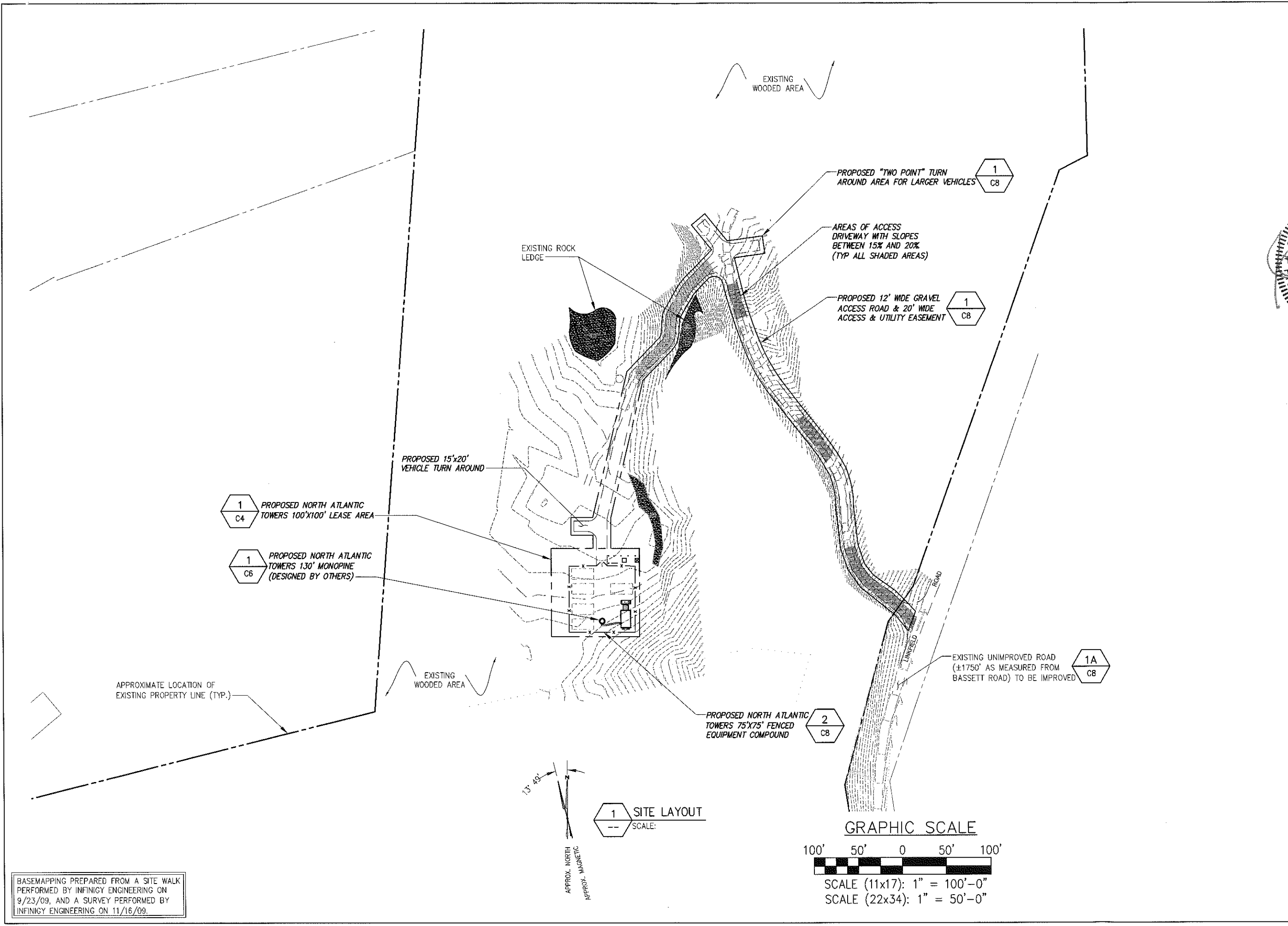
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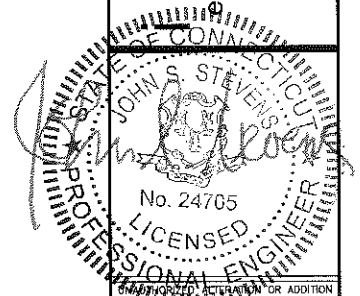
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Date: 3/27/13  
**CD**

Drawing Title:  
**SITE LAYOUT**

Drawing Number:  
**C3**



BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINGY ENGINEERING ON 9/23/09, AND A SURVEY PERFORMED BY INFINGY ENGINEERING ON 11/16/09.



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No.	Submit / Revision	App'd	Date
6	REVISED PER COMMENTS	M.B.	3/27/13
5	REVISED PER COMMENTS	J.M.	3/21/13
4	REVISED PER COMMENTS	M.B.	11/19/12
3	REVISED PER COMMENTS	M.B.	10/24/12
2	BASSETT ROAD ENTRANCE	A.D.	9/24/12
1	REVISED PER COMMENTS	A.D.	7/27/12
0	ISSUED FOR REVIEW	A.D.	5/30/12

Drawn: M.B. Date: 5/30/12  
 Designed: A.D. Date: 5/30/12  
 Checked: A.D. Date: 5/30/12

Project Number: 226-015

Project Title:  
**WATERTOWN CT1140**  
 855 BASSETT RD  
 WATERTOWN, CT 06795

Prepared For:

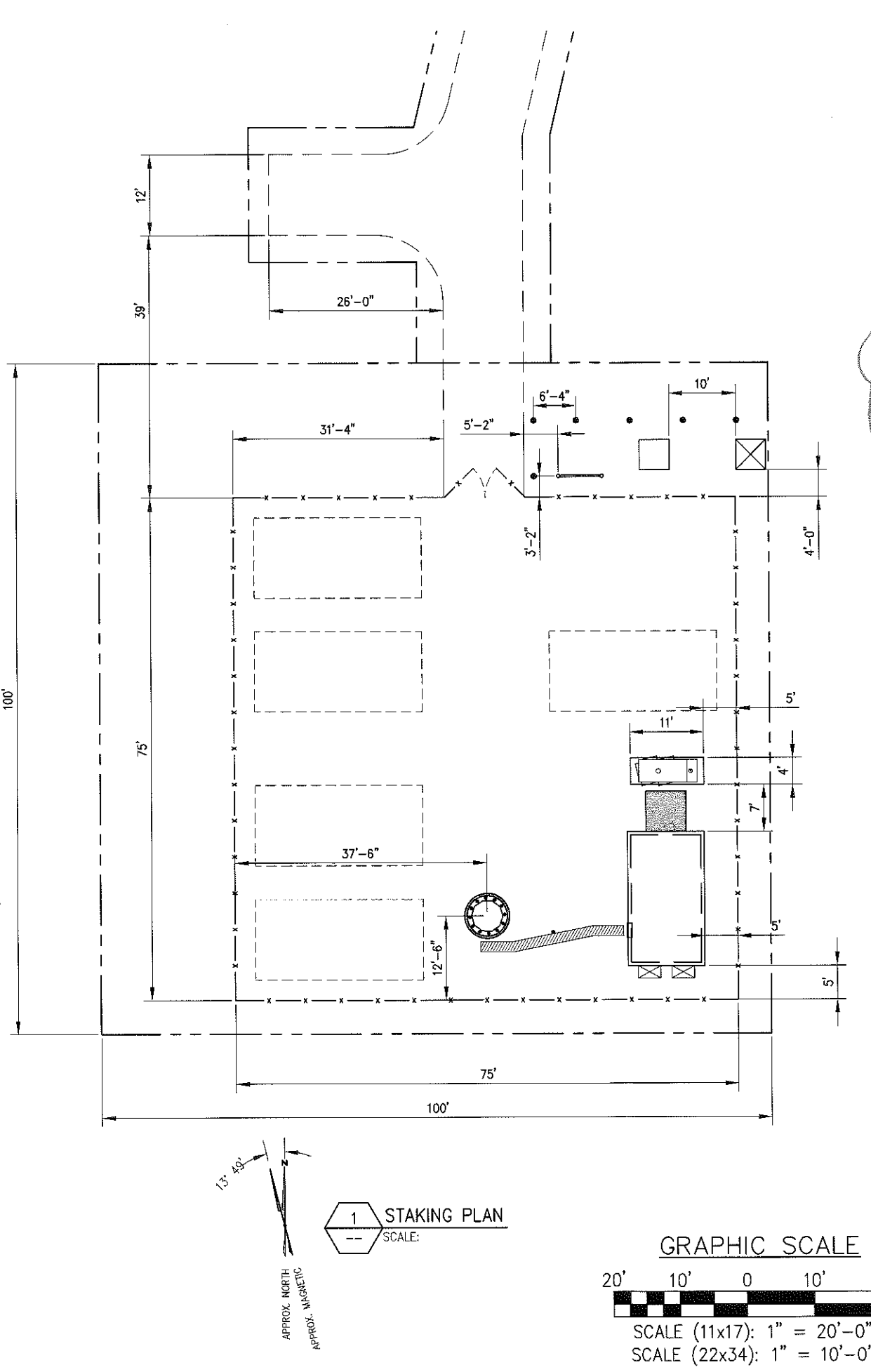
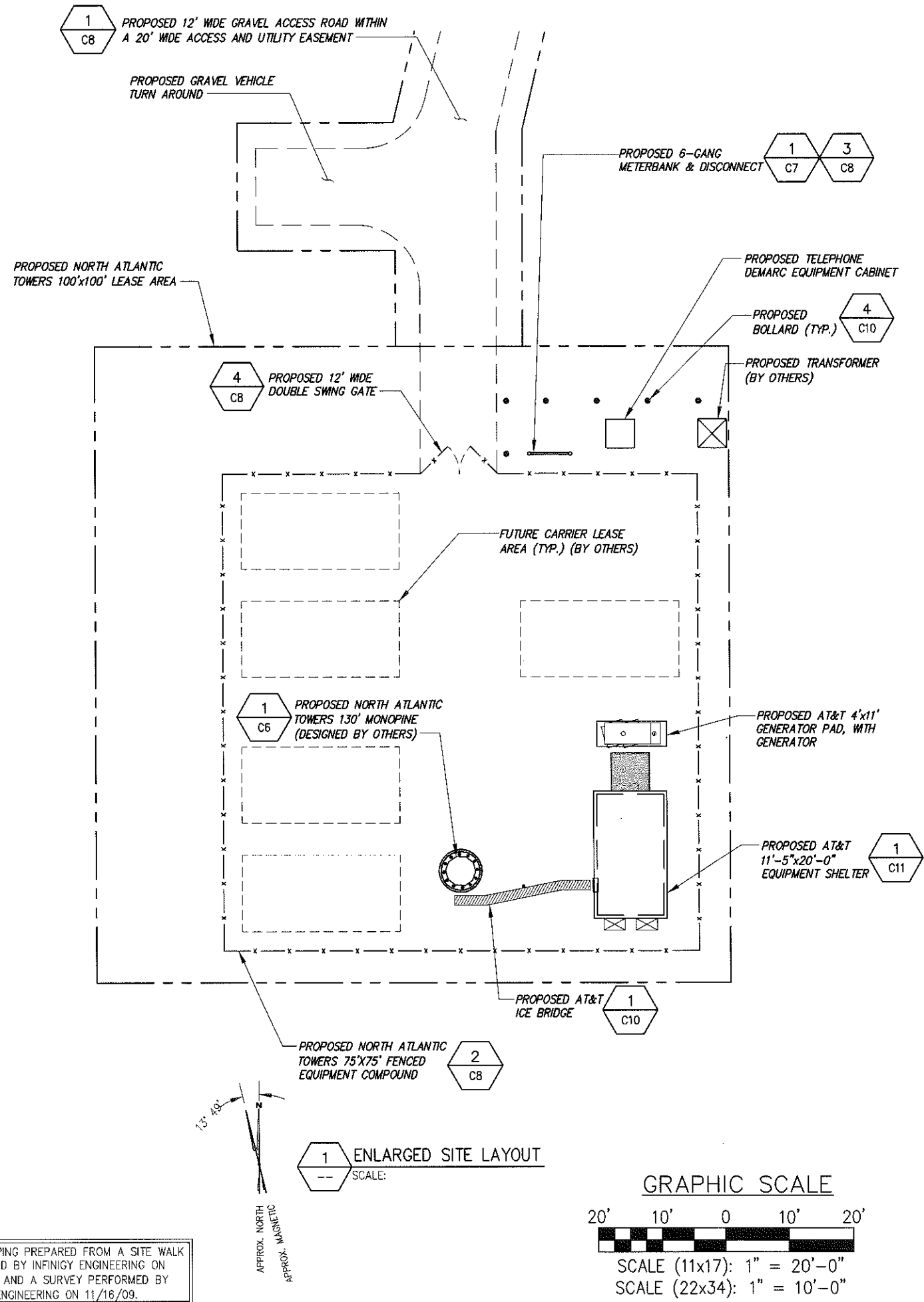
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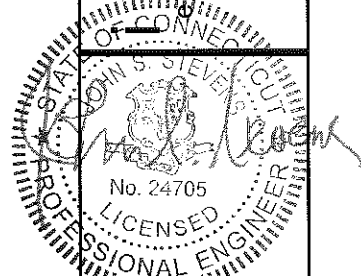
Drawing Scale: AS NOTED  
 Date: 3/27/13  
**CD**

Drawing Title:  
**ENLARGED SITE LAYOUT**

Drawing Number:  
**C4**



BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINITY ENGINEERING ON 9/23/09, AND A SURVEY PERFORMED BY INFINITY ENGINEERING ON 11/16/09.



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3	REVISED PER COMMENTS	M.B.	10/24/12
2	BASSETT ROAD ENTRANCE	A.D.	9/24/12
1	REVISED PER COMMENTS	A.D.	7/27/12
0	ISSUED FOR REVIEW	A.D.	5/30/12

Drawn: M.B. Date: 5/30/12  
Designed: A.D. Date: 5/30/12  
Checked: A.D. Date: 5/30/12

Project Number: 226-015

Project Title:  
**WATERTOWN**  
CT1140  
655 BASSETT RD  
WATERTOWN, CT 06795

Prepared For:

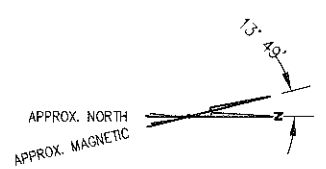
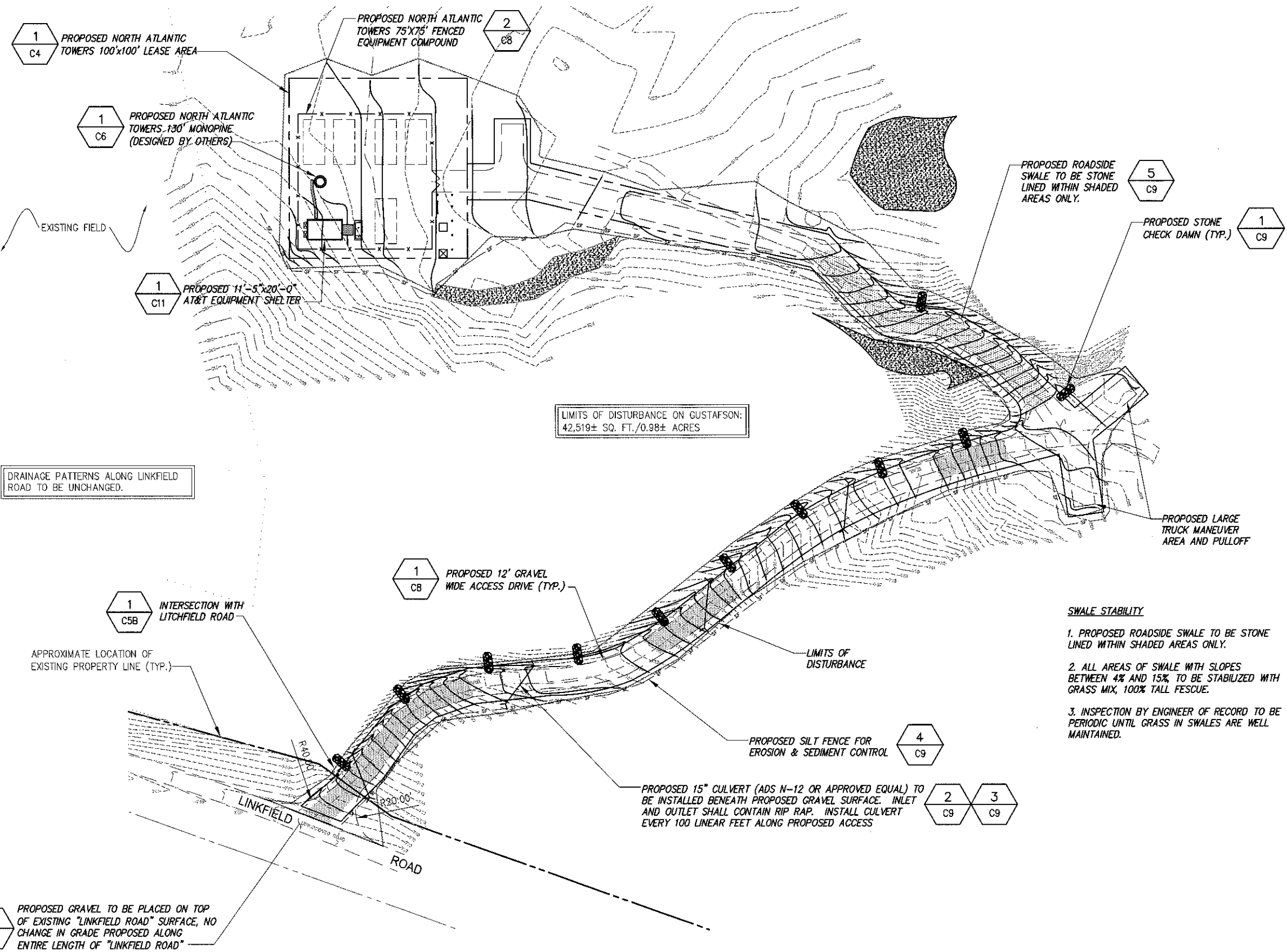
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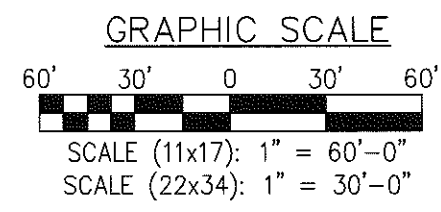
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Date: 3/27/13  
**CD**

Drawing Title:  
**GRADING PLAN**

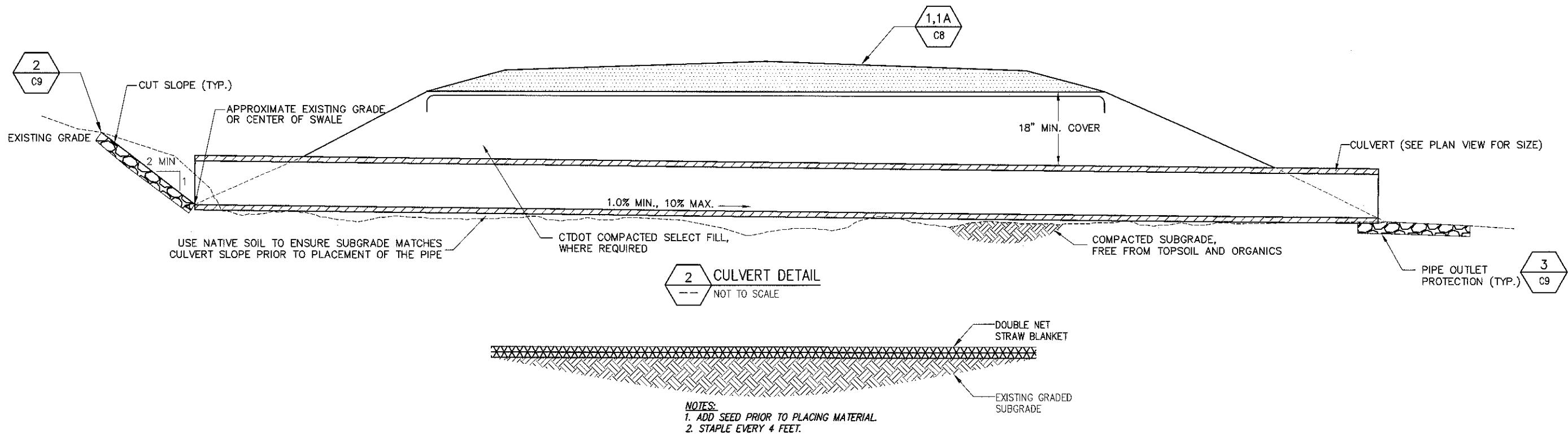
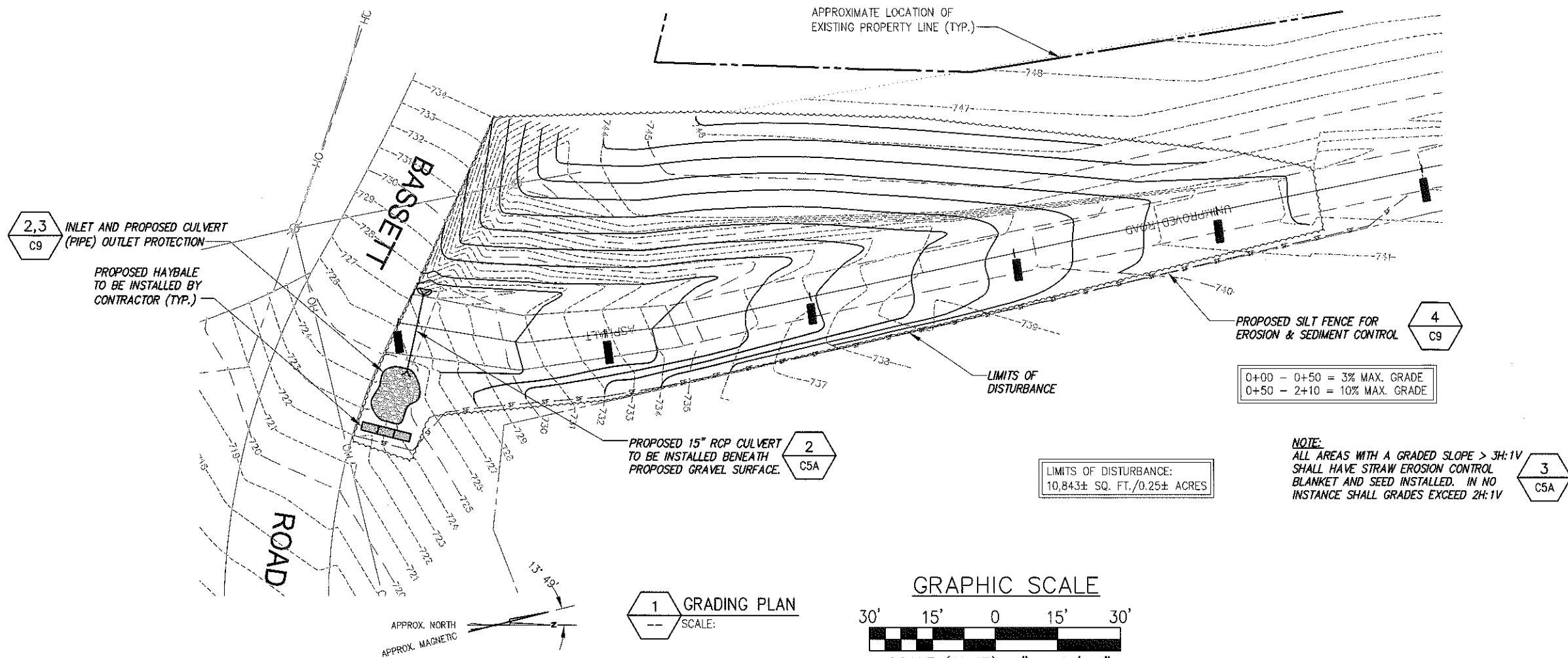
Drawing Number:  
**C5**



**1** GRADING PLAN  
SCALE:



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BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING ON 9/23/09, AND A SURVEY PERFORMED BY INFINIGY ENGINEERING ON 11/16/09.

**infinigy**  
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STATE OF CONNECTICUT  
JOHN S. STEVENS  
No. 24705  
LICENSED PROFESSIONAL ENGINEER

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6	REVISED PER COMMENTS	A.J.D.	3/21/13
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3	REVISED PER COMMENTS	M.B.	10/24/12
2	BASSETT ROAD ENTRANCE	A.J.D.	9/24/12
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Project Number: 228-015

Project Title:  
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655 BASSETT RD  
WATERTOWN, CT 06795

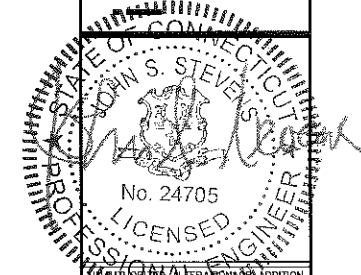
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Drawing Title:  
**GRADING @ BASSETT ROAD**

Drawing Number:  
**C5A**



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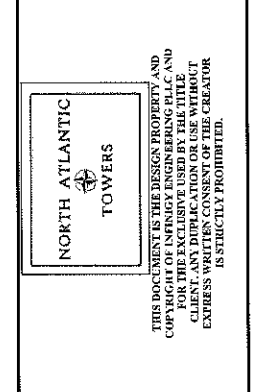
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0	ISSUED FOR REVIEW	A.O.	5/30/12

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 Checked: A.B. Date: 5/30/12

Project Number: 226-015

Project Title:  
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 CT1140  
 655 BASSETT RD  
 WATERTOWN, CT 06795

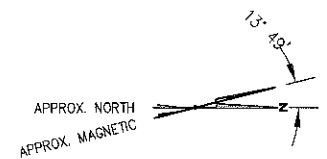
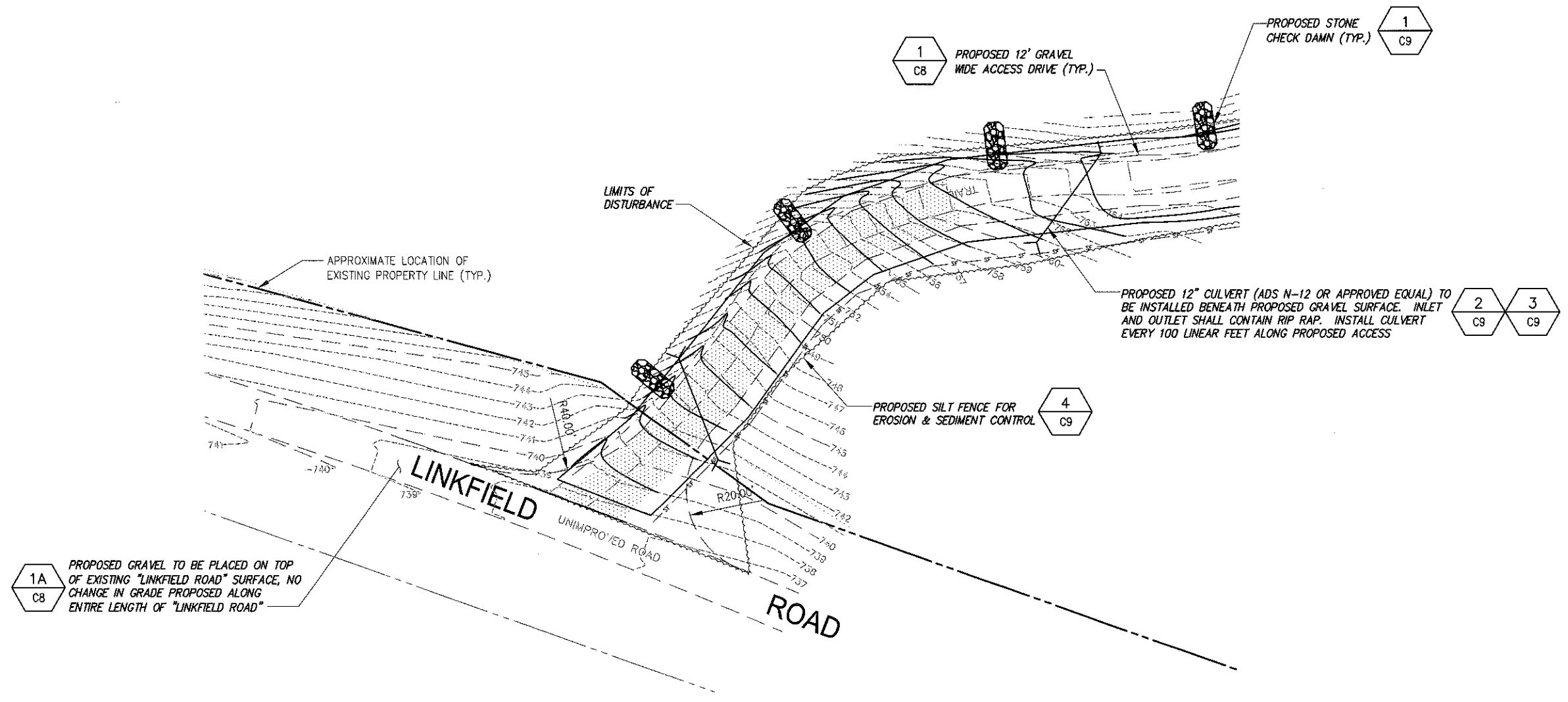
Prepared For:



Drawing Scale: AS NOTED  
 Date: 3/27/13  
**CD**

Drawing Title:  
**GRADING @ LINKFIELD ROAD**

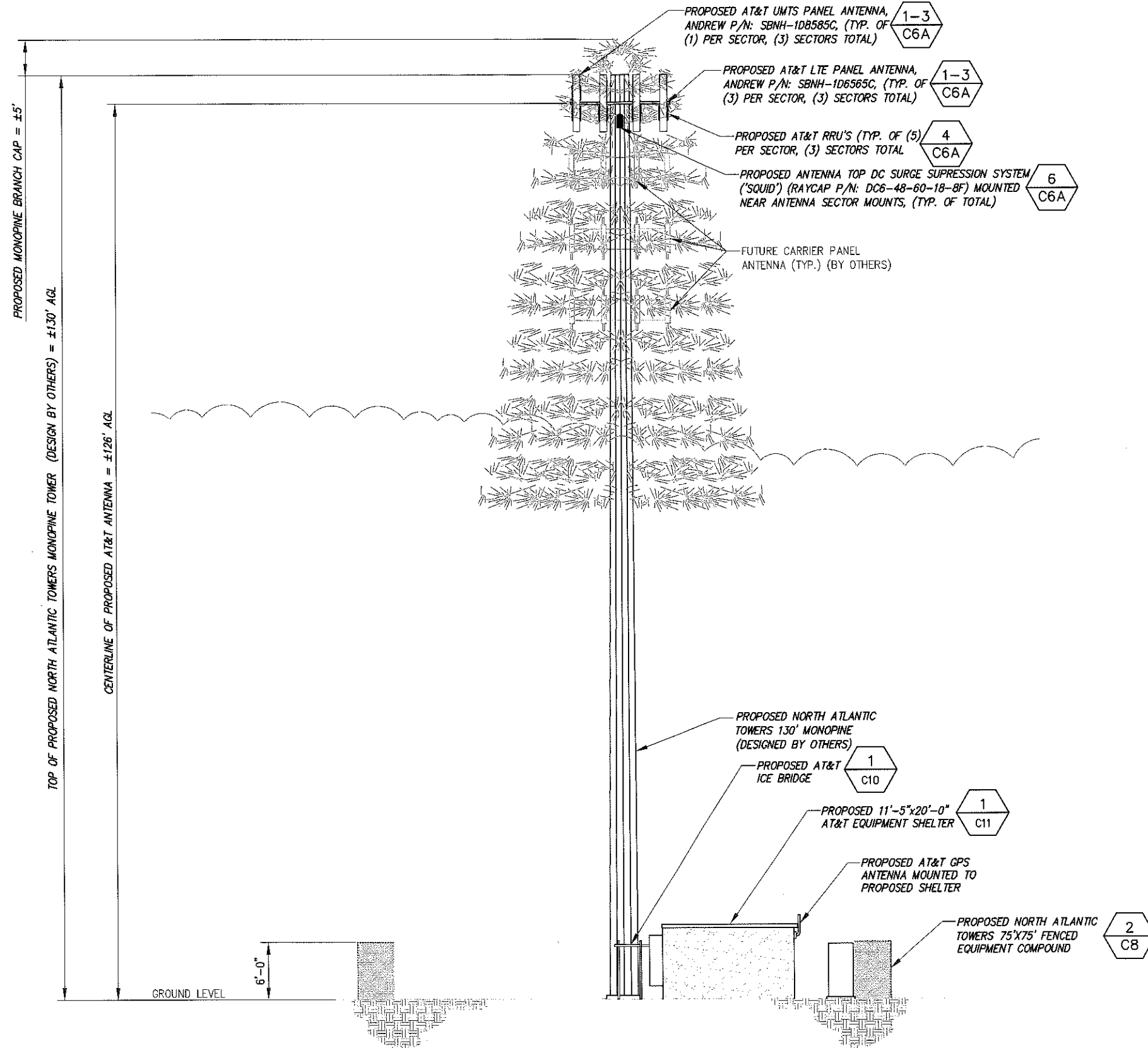
Drawing Number:  
**C5B**



1 GRADING PLAN  
 SCALE:

BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING ON 9/23/09, AND A SURVEY PERFORMED BY INFINIGY ENGINEERING ON 11/16/09.





STRUCTURAL ANALYSIS NOT COMPLETED AT TIME OF ISSUANCE OF THESE DRAWINGS. THE STRUCTURAL ANALYSIS MUST BE COMPLETED PRIOR TO CONSTRUCTION.

PROPOSED ANTENNA RAD CENTER IS PRELIMINARY AND IS SUBJECT TO CHANGE WITH FINAL RF CONFIGURATION BY RF ENGINEER.

1 TOWER ELEVATION VIEW  
-- NOT TO SCALE

**Infinity Engineering**  
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1	REVISED PER COMMENTS	AJD	7/27/12
0	ISSUED FOR REVIEW	AJD	5/30/12
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 655 BASSETT RD  
 WATERTOWN, CT 06795

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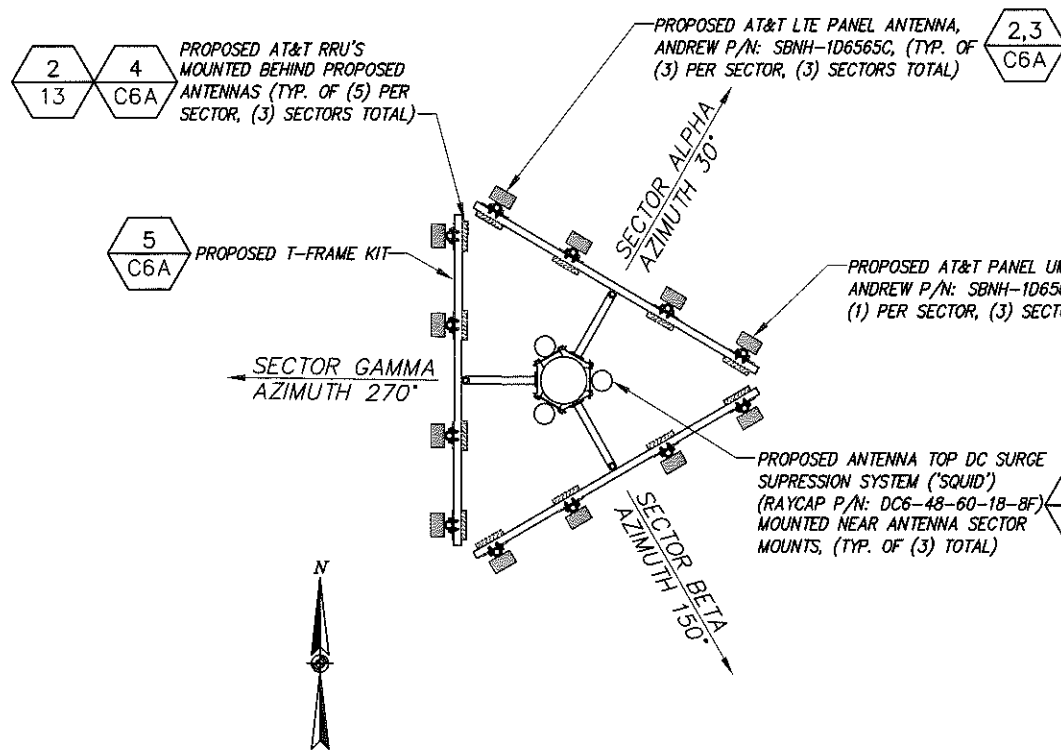
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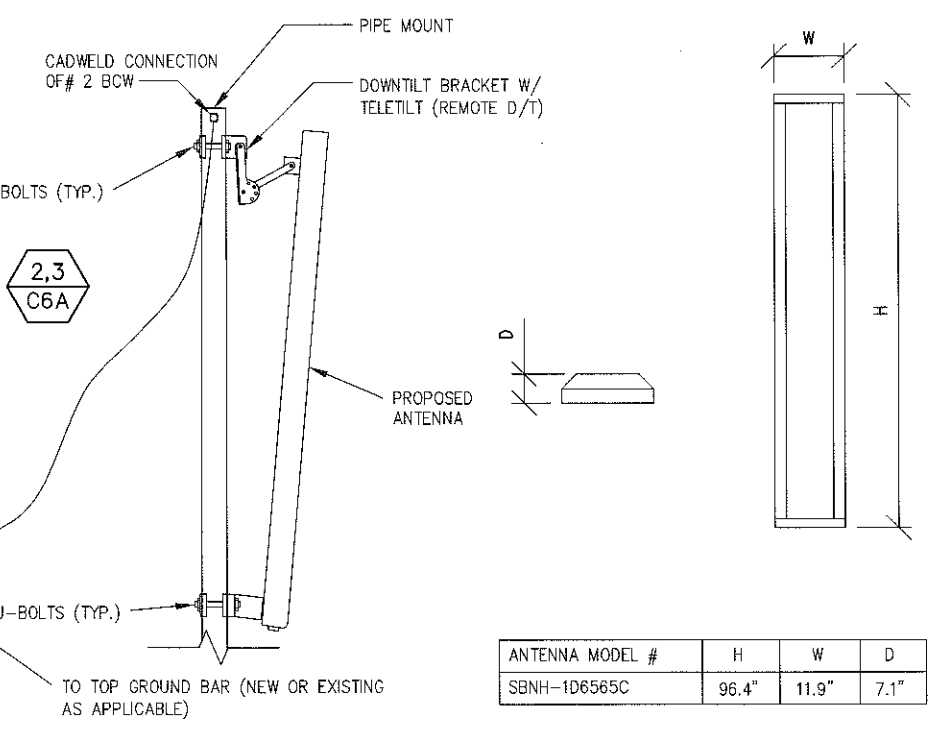
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Drawing Number: **C6**



**NOTES**

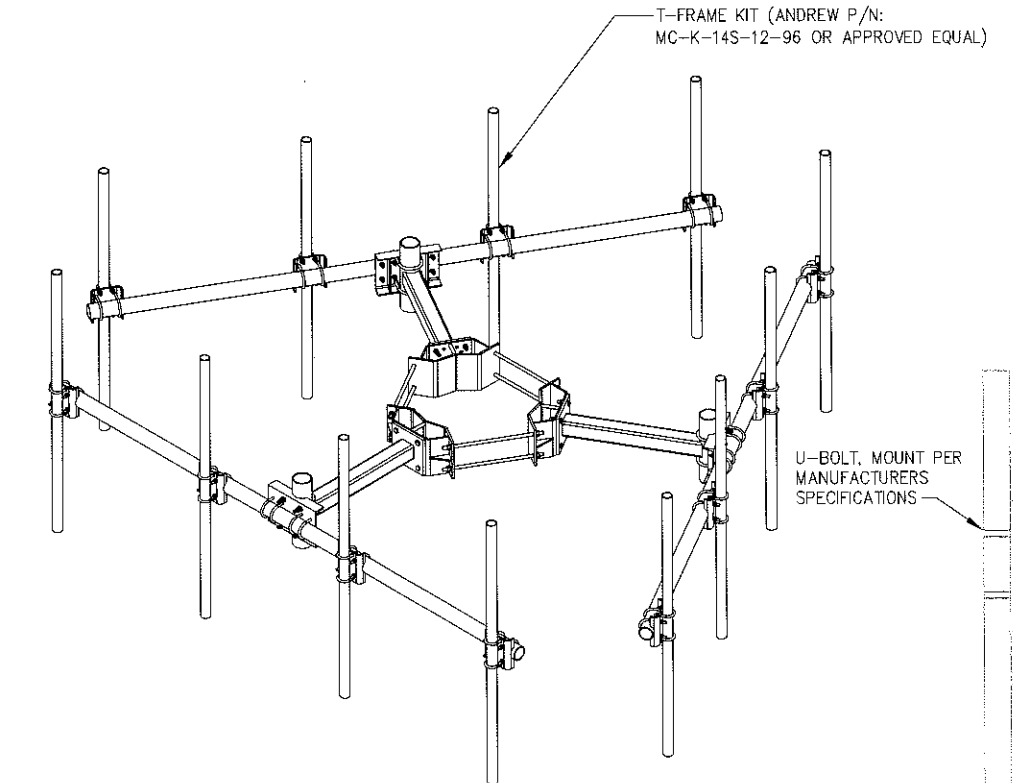
1. ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO HEIGHT ABOVE GROUND ELEVATION AT CENTER OF TOWER.
2. CONTRACTOR SHALL OBTAIN AND REVIEW RF DATA/CONFIGURATION FROM AT&T WIRELESS RF ENGINEER AND COORDINATE WITH AT&T WIRELESS CONSTRUCTION MANAGER THE FURNISHMENT AND INSTALLATION OF ANTENNAS AND APPROPRIATE DOWNTILT BRACKETS.
3. ANTENNA MOUNTS, WAVEGUIDE LADDER, AND ALL OTHER TOWER SPECIFIC MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR, UNLESS SPECIFICALLY NOTED OTHERWISE.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT EXISTING EQUIPMENT AND STRUCTURES. ANY DAMAGE WILL BE REPAIRED AT THE CONTRACTORS EXPENSE. CONTRACTOR SHALL NOT LEAVE THE SITE UNSECURED AT ANY TIME.
5. CONTRACTOR SHALL COMPILE A SCHEDULE OF ALL NECESSARY TOWER SPECIFIC MATERIALS (ANTENNA MOUNTS, WAVEGUIDE LADDER, MOUNTING HARDWARE, COAXIAL CABLES, ANTENNAS, ETC.) AND PROVIDE TO AT&T WIRELESS CONSTRUCTION MANAGER FOR USE IN TOWER STRUCTURAL ANALYSIS (IF APPLICABLE).



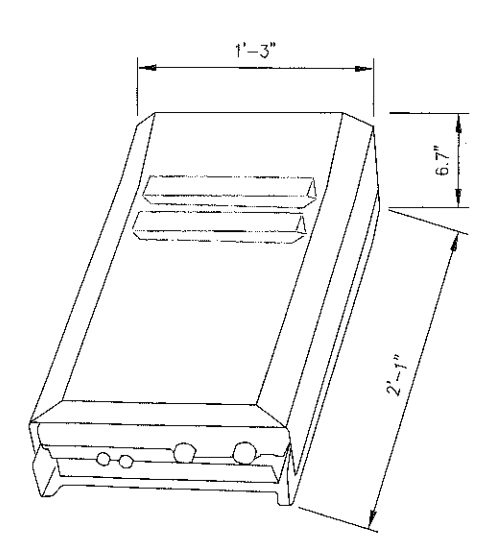
**2 AT&T ANTENNA PIPE MOUNT**  
NOT TO SCALE

**3 AT&T ANTENNA DIMENSIONS**  
NOT TO SCALE

**4 RRU: ERICSSON/LTE**  
NOT TO SCALE



**5 T-FRAME DETAIL**  
NOT TO SCALE



NET WEIGHT: 44 LBS  
 COLOR: GRAY AS MANUFACTURED  
 NOMINAL VOLTAGE: -48 VDC

NOTE: ABOVE DIMENSIONS AND WEIGHTS ARE WITH SOLAR SHIELD FOR OUTDOOR INSTALLATION

PROPOSED ANTENNA CONFIGURATION AND COAXIAL CABLE SCHEDULE						
SECTOR	BAND	ANTENNA	ANTENNA Q HEIGHT	AZIMUTH	FEEDER TYPE	FEEDER LENGTH
ALPHA	LTE	(3) SBNH-1D6565C	126' AGL	30°	FIBER/POWER	±170'
	UMTS	(1) SBNH-1D6565C				
BETA	LTE	(3) SBNH-1D6565C	126' AGL	150°	FIBER/POWER	±170'
	UMTS	(1) SBNH-1D6565C				
GAMMA	LTE	(3) SBNH-1D6565C	126' AGL	270°	FIBER/POWER	±170'
	UMTS	(1) SBNH-1D6565C				

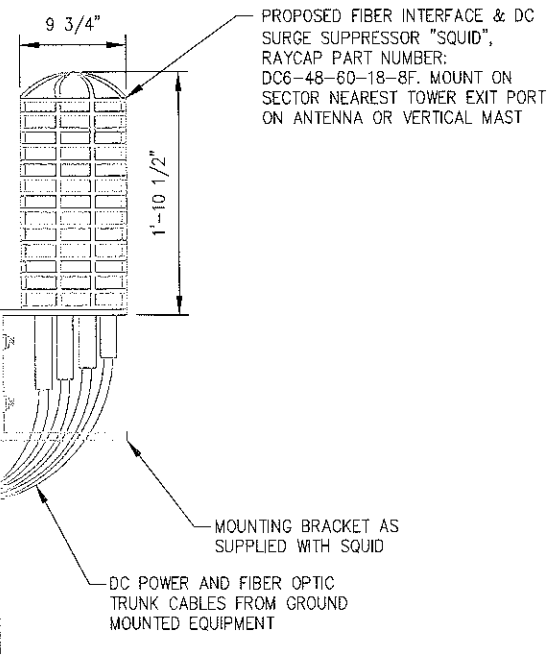
FEEDER LENGTH INCLUDES A BUFFER OF 15%.

CONTRACTOR TO VERIFY RF DATA WITH CONSTRUCTION MANAGER AND/OR RF ENGINEER PRIOR TO INSTALLATION.

NOTE: DETAIL ABOVE SHOWN FOR INFORMATIONAL PURPOSES. EXACT MODEL MAY DIFFER BASED ON TOWER DESIGN. TOWER MANUFACTURER TO PROVIDE ANTENNA SUPPORT DETAIL.

**1 AT&T ANTENNA ORIENTATION PLAN**  
NOT TO SCALE

**6 SQUID MOUNTING DETAIL**  
NOT TO SCALE



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1	REVISOR	
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No.	Submit/Revision	App'd Date

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Project Title: WATERTOWN CT1140  
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 WATERTOWN, CT 06795

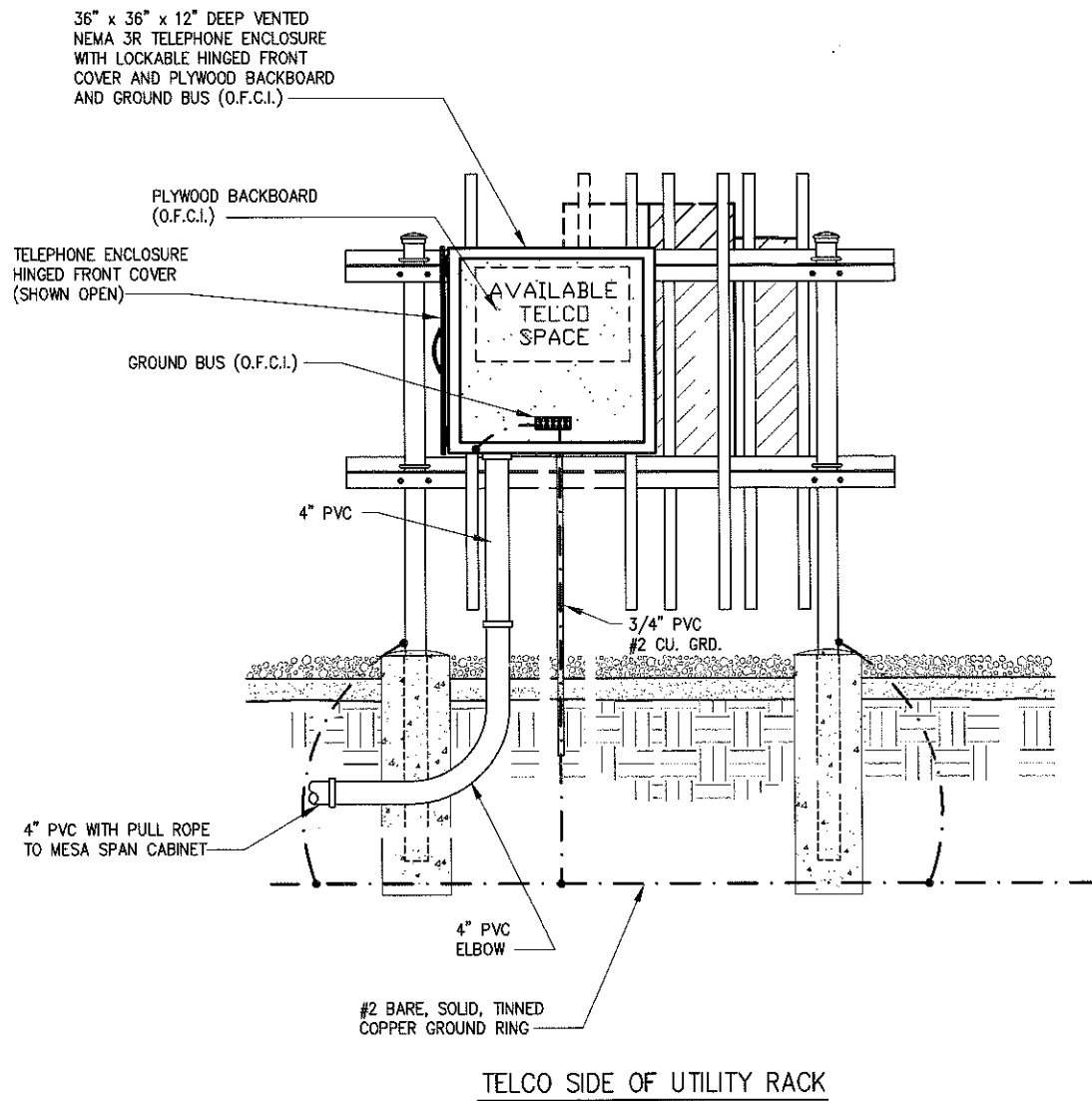
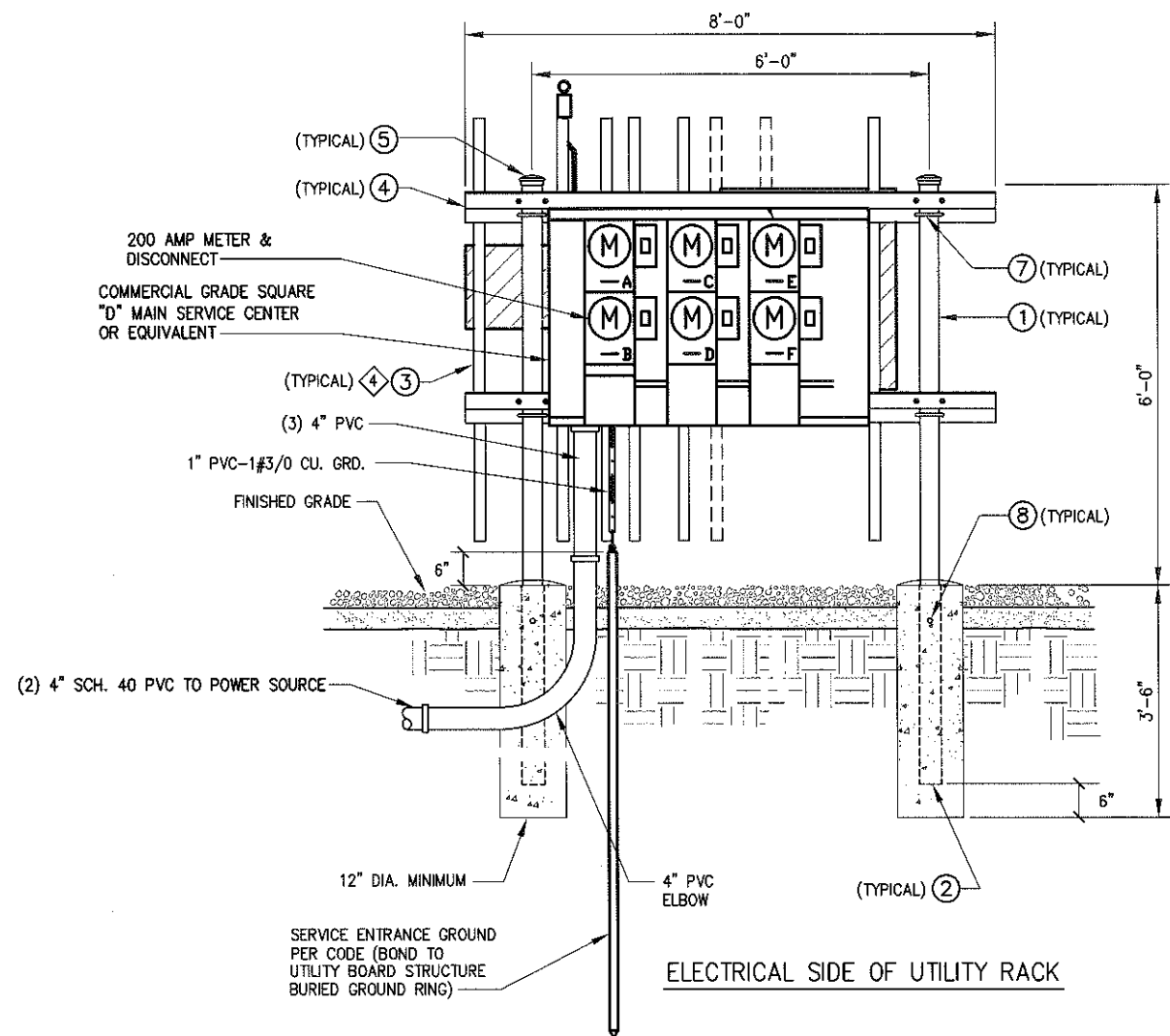
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Drawing Title: **ANTENNA DETAILS**

Drawing Number: **C6A**



PARTS LIST - O.F.C.I.		
ITEM	DESCRIPTION	QTY.
①	84" x 3.5" O.D. PIPE	2
②	36" INSERT	2
③	VERTICAL MEMBER	9
④	HORIZONTAL MEMBER	4
⑤	3-1/2" O.D. PIPE CAP	2
⑥	3/8" ANGLE ADAPTOR	38
⑦	1/2 x 3-5/8 x 5" GALV. U-BOLT ASSY.	8
⑧	1/2 x 1-1/2" GALV. BOLT ASSY.	2
⑨	3/8 x 3/4" GALV. BOLT ASSY.	38
⑩	3/8" GALV. FLAT WASHER	38

\* NOT SHOWN  
 + TO PREVENT CORROSION, ENSURE THAT THE PIPE SLEEVE IS COMPLETELY BELOW GROUND LEVEL AND ENCASED IN CONCRETE.

1 UTILITY RACK DETAILS  
 NOT TO SCALE

- NOTES:
- UNLESS OTHERWISE NOTED, ALL UNDERGROUND PVC TO BE SCH 40.
  - ALL ABOVE GRADE PVC TO BE SCH 40. ALL CONNECTIONS TO BE SCH 40 PVC OR SEALTIGHT. VERIFY WITH CONSTRUCTION MANAGER PRIOR TO BID.
  - ALL WIRE CONNECTIONS & CONDUITS TO BE SUPPLIED BY CONTRACTOR UNLESS OTHERWISE NOTED OR SPECIFIED BY CONSTRUCTION MANAGER.
- ④ ADDITIONAL ANGLE ADAPTORS (NOT SHOWN) ARE USED TO MOUNT SERVICE BOXES TO THE VERTICAL MEMBERS.

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

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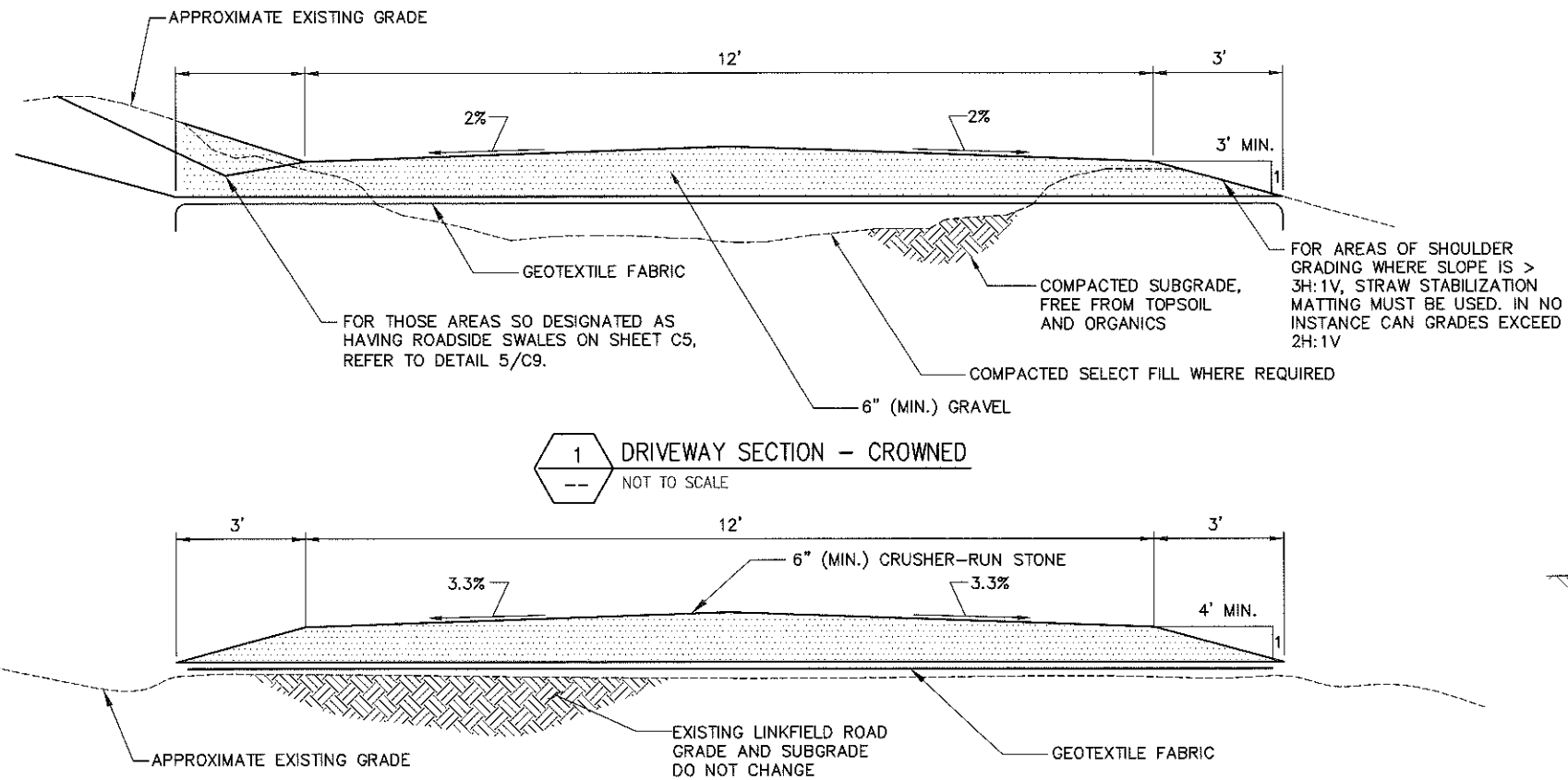
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Drawing Title: **DETAILS**

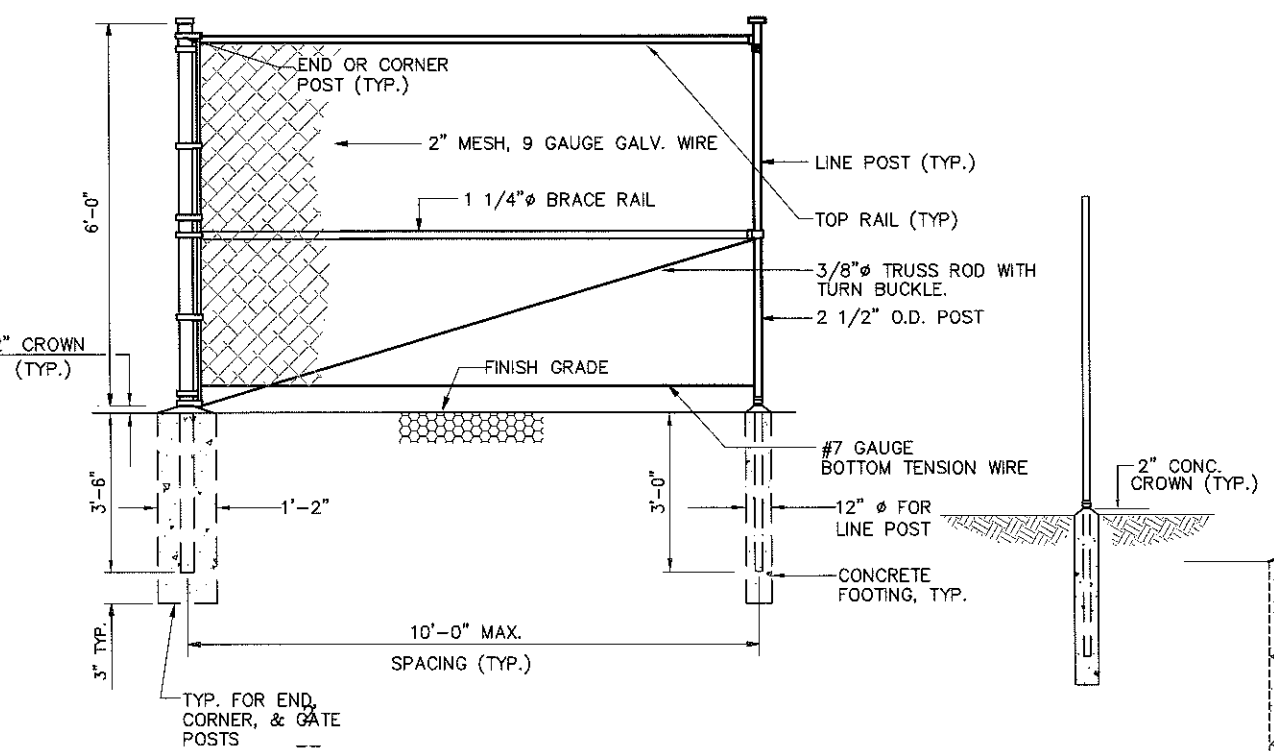
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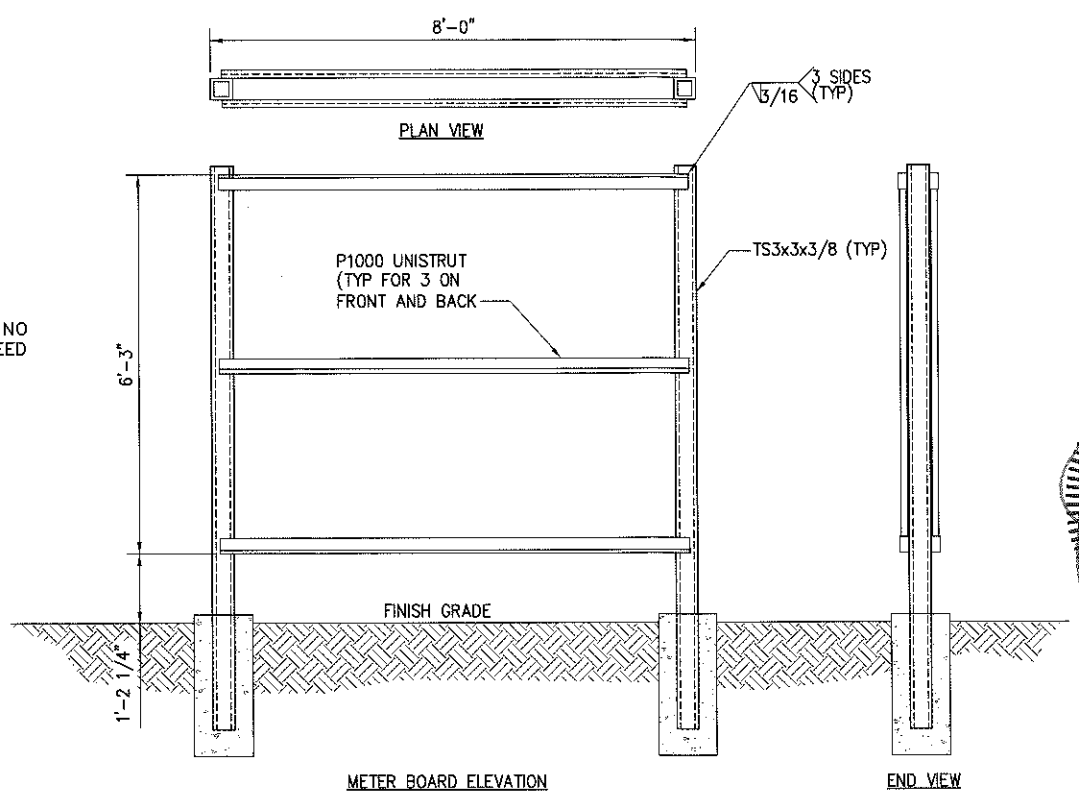
**1** DRIVEWAY SECTION - CROWNED  
NOT TO SCALE

1. ANY TREE TRIMMING ALONG LINKFIELD ROAD TO BE COORDINATED WITH TOWN OF WATERTOWN PRIOR TO TRIMMING ACTIVITY.
2. DRAINAGE PATTERNS ALONG LINKFIELD ROAD TO BE UNCHANGED.

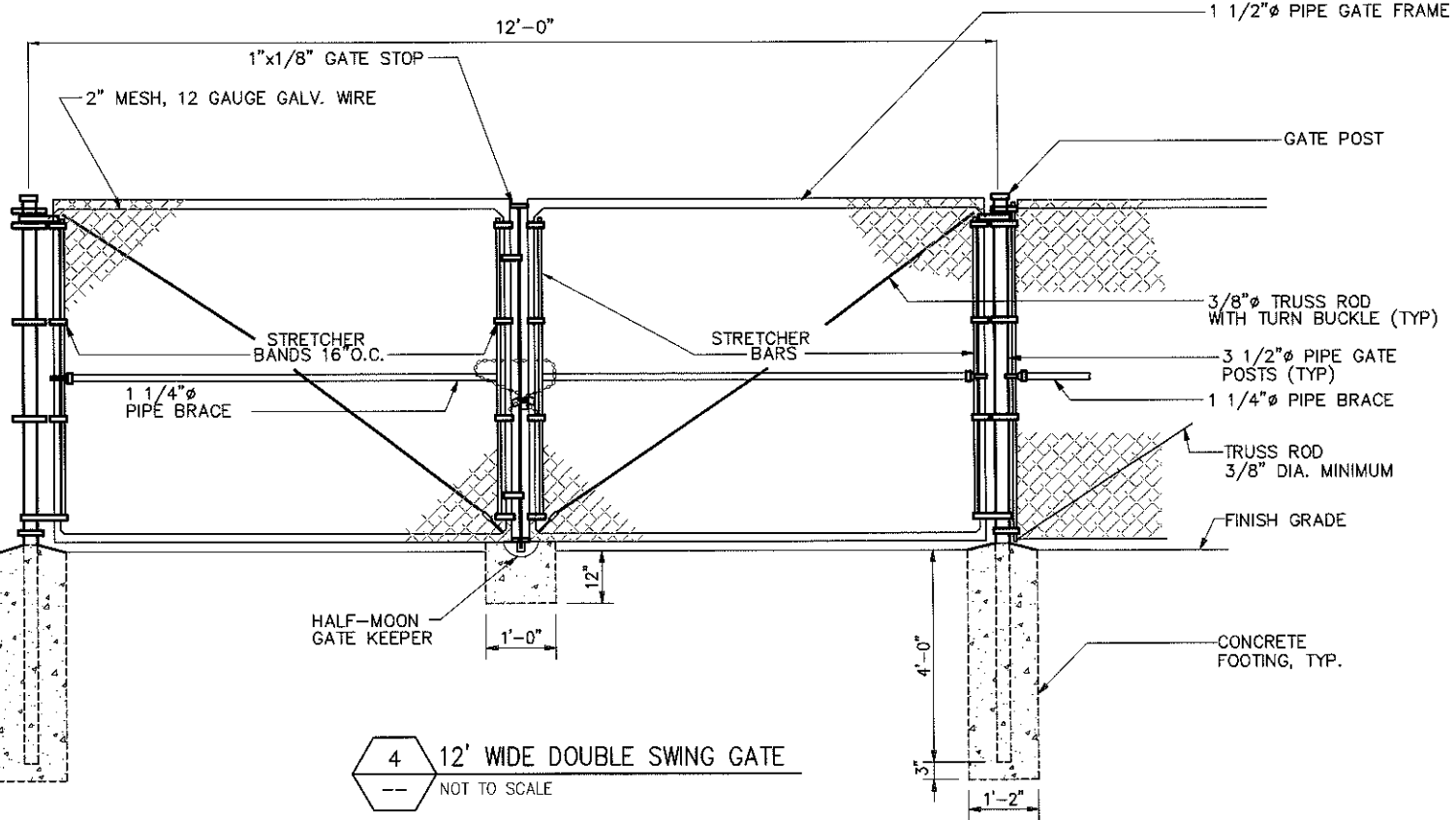
**1A** DRIVEWAY SECTION ON LINKFIELD ROAD - CROWNED  
NOT TO SCALE



**2** CHAIN LINK FENCE DETAIL (ELEVATION)  
NOT TO SCALE



**3** 8'-0" WIDE METER BOARD FABRICATION DETAIL  
NOT TO SCALE



**4** 12' WIDE DOUBLE SWING GATE  
NOT TO SCALE

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STATE OF CONNECTICUT  
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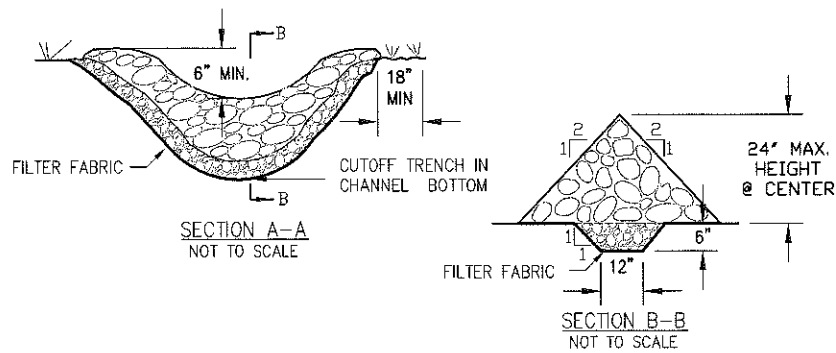
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Designed: AJD Date: 5/30/12  
Checked: AJD Date: 5/30/12

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Project Title: WATERTOWN CT1140  
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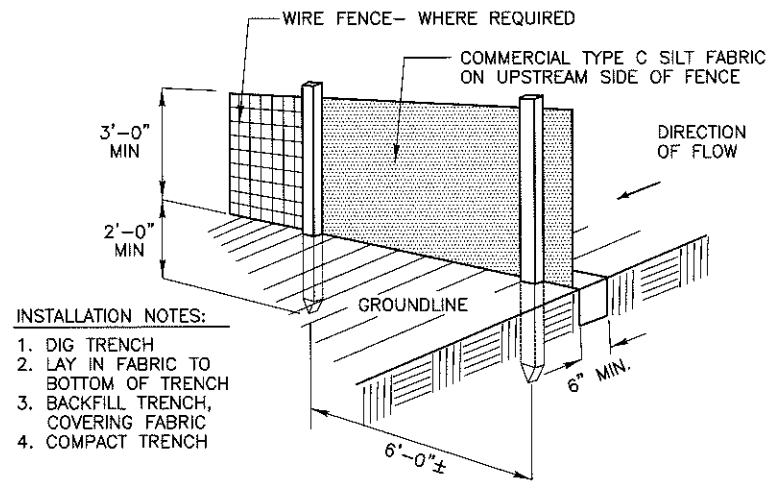
Drawing Scale: AS NOTED  
Date: 3/27/13  
Drawing Title: DETAILS  
Drawing Number: C8



**CONSTRUCTION SPECIFICATIONS**

- STONE WILL BE PLACED ON A FILTER FABRIC LAYER IN THE TRENCH TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE EROSION AND SEDIMENT CONTROL PLAN.
- EXTEND THE STONE A MINIMUM OF 18 INCHES BEYOND THE DITCH SIDE SLOPES TO PREVENT CUTTING AROUND THE DAM. ENSURE CREST IS 6" LOWER THAN SIDES.
- PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH A STONE SPLASH PAD OR EXTEND THE FILTER FABRIC LAYER.
- ENSURE THAT CHANNEL APPURTENANCES (i.e. CULVERTS OR CATCH BASINS) BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
- MAINTENANCE - REMOVE ACCUMULATED SEDIMENT FROM BEHIND CHECK DAMS, REPAIR ANY SIDE SLOPES THAT HAVE ERODED, AND REPLACE ANY OF THE DISPLACED STONE.

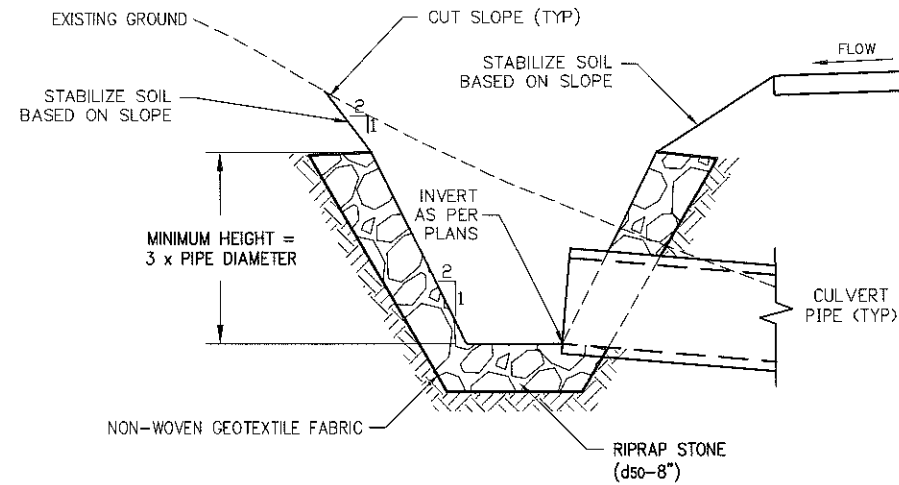
**1 STONE CHECK DAMS**  
NOT TO SCALE



**CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**

- |  |   |
|--|---|
| 1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.                          | POSTS: STEEL EITHER T OR U TYPE.  |
| 2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. | FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING. AS DIRECTED BY JURISDICTION |
| 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.      | FILTER CLOTH: FILTER X, MIRAFI 100X' STABILINKA T140N OR APPROVED EQUAL.    |
| 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULDGES" DEVELOP IN THE SILT FENCE.     | PREFABRICATED UNIT: GEOFAB, ENVIROFENCE OR APPROVED EQUAL.                  |
| 5. ALL SILT FENCE MATERIALS MUST BE LISTED ON THE CURRENT STATES D.O.T. QUALIFIED PRODUCTS LIST                |   |

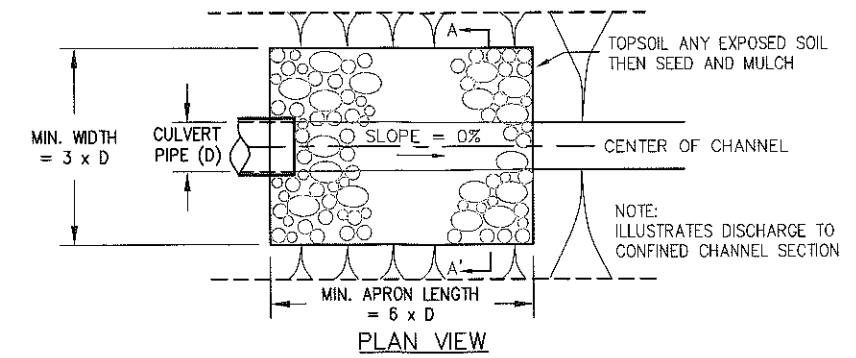
**4 SILT FENCE DETAIL**  
NOT TO SCALE



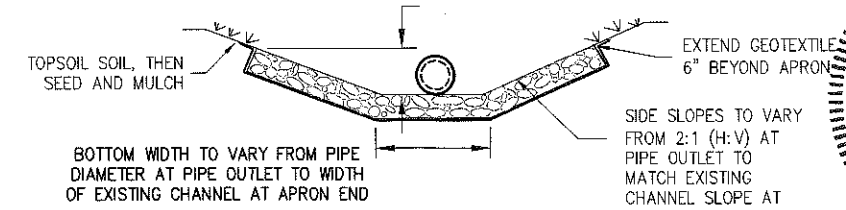
**CROSS SECTION**  
NOT TO SCALE

**2 CULVERT INLET PROTECTION**  
NOT TO SCALE

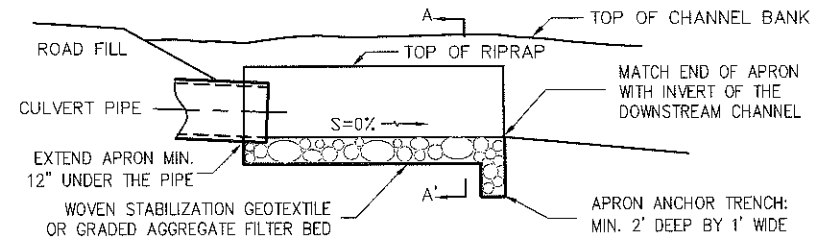
FOR DETAILS 2, 3 & 5, THICKNESS OF THE RIPRAP TO BE 1.5x MAXIMUM STONE SIZE BUT NOT < 12 INCHES.



**PLAN VIEW**



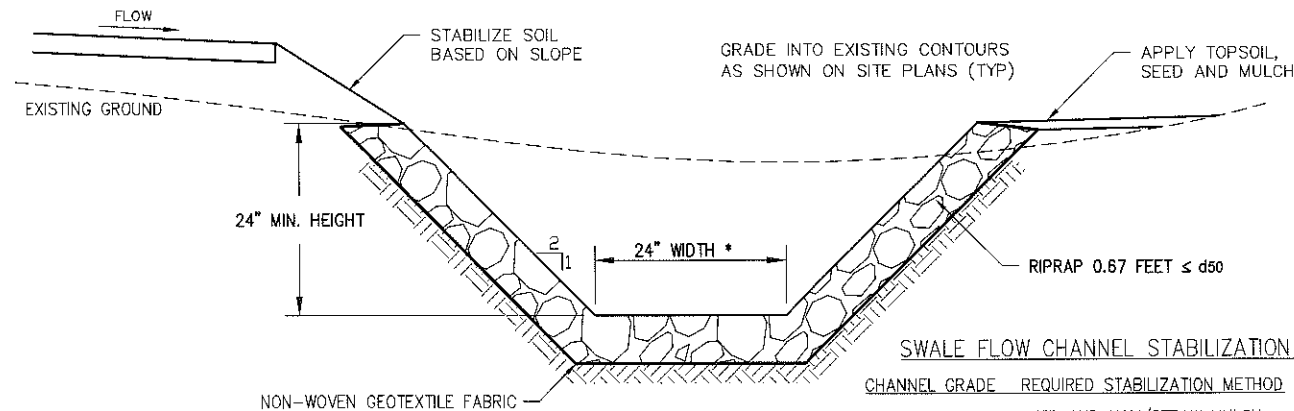
**CROSS SECTION A-A'**



**PROFILE VIEW**

NOTE:  
1. RIP-RAP TO BE d50-8" NOMINAL DIA. STONE.

**3 CULVERT (PIPE) OUTLET PROTECTION**  
NOT TO SCALE



**CROSS SECTION**  
NOT TO SCALE

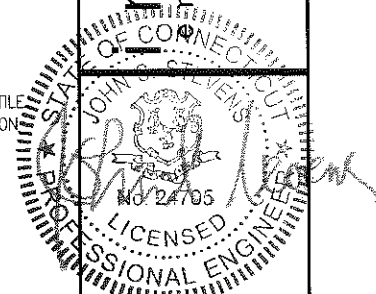
**SWALE FLOW CHANNEL STABILIZATION**

CHANNEL GRADE	REQUIRED STABILIZATION METHOD
1.0% - 5.0%	SEED AND HAY/STRAW MULCH
5.0% - 15.0%	SEED AND ROLLED EROSION CONTROL MAT
15.0% - 20.0%	d50-8"

\* SEE GRADING PLAN FOR LOCATIONS OF SWALES AND ADDITIONAL DIMENSIONS WITH ELEVATIONS

**5 ROADSIDE SWALE**  
NOT TO SCALE

**ministry engineering**  
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2	BASSETT ROAD ENTRANCE	AJD	9/24/12
1	REVISED PER COMMENTS	AJD	7/27/12
D	ISSUED FOR REVIEW	AJD	5/30/12

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Designed: AJD Date: 5/30/12  
Checked: AJD Date: 5/30/12

Project Number 226-015

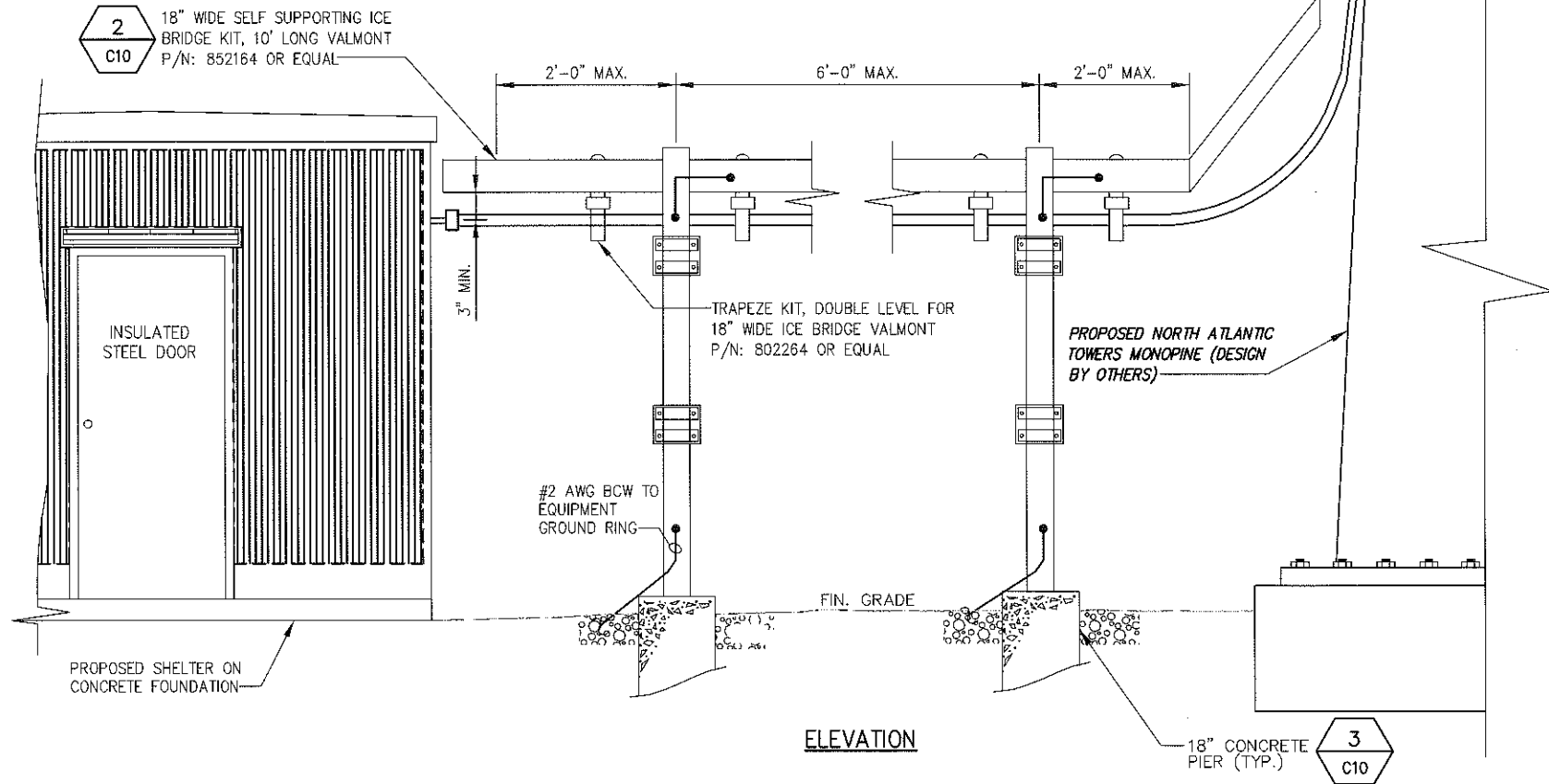
Project Title  
**WATERTOWN CT1140**  
855 BASSETT RD  
WATERTOWN, CT 06795

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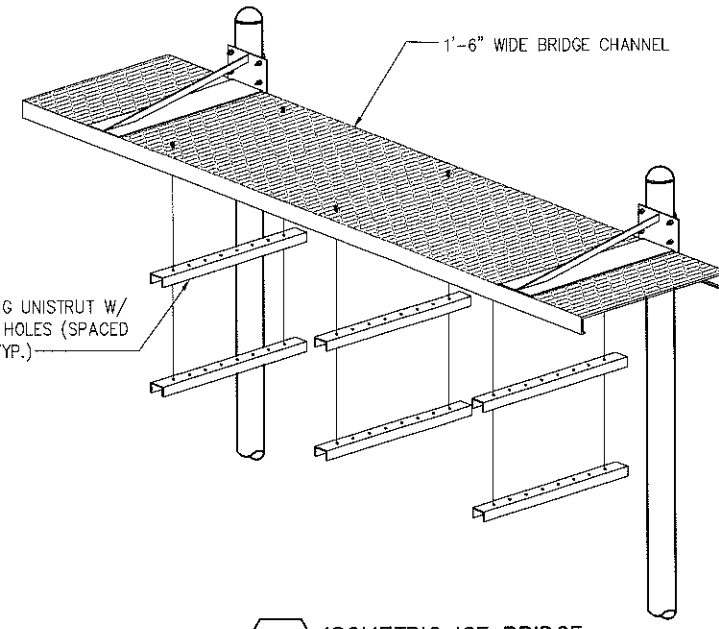
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**DETAILS**

Drawing Number  
**C9**

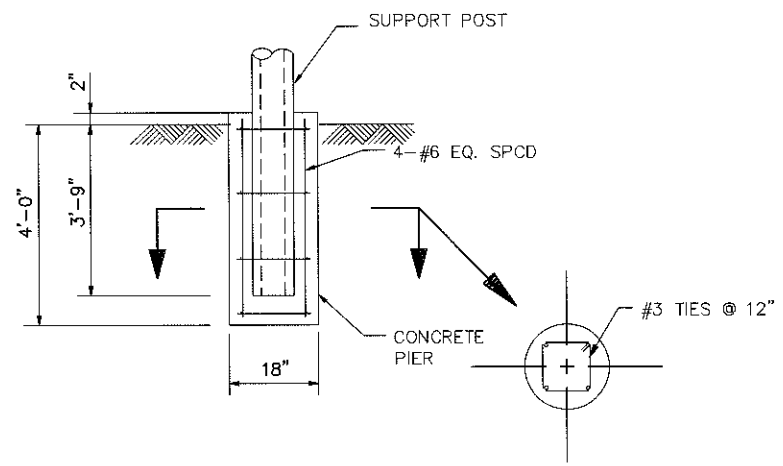


ELEVATION

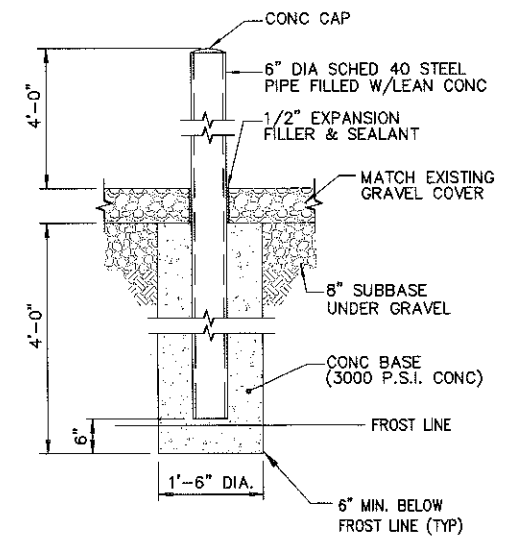
18" CONCRETE PIER (TYP.) **3 C10**



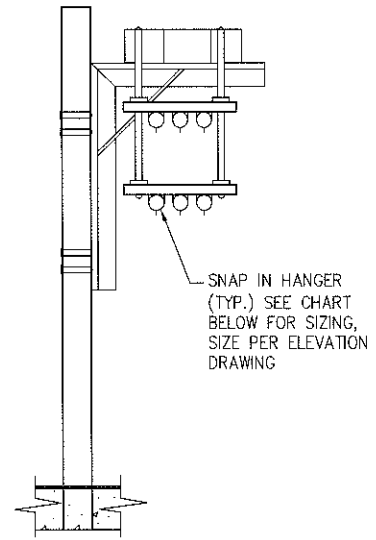
**2 ISOMETRIC ICE BRIDGE**  
NOT TO SCALE



**3 SUPPORT POST FOOTING**  
NOT TO SCALE



**4 BOLLARD DETAIL**  
NOT TO SCALE



SECTION

**NOTES:**

1. WHEN USING VALMONT COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 19 FEET FOR 20 FEET BRIDGE CHANNEL, OR 9 FEET FOR 10 FEET BRIDGE CHANNEL.
2. WHEN USING VALMONT COMPONENTS FOR SPLICING BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2 FEET FROM THE SUPPORT.
3. WHEN USING VALMONT COMPONENTS, SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGES, WITH A MAXIMUM CANTILEVER DISTANCE OF 2 FEET FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.
4. CUT BRIDGE CHANNEL SECTIONS SHOULD HAVE RAW EDGES TREATED WITH A MATERIAL TO RESTORE THE EDGES TO THE ORIGINAL CHANNEL, OR EQUIVALENT, FINISH.
5. ICE BRIDGES MAY BE CONSTRUCTED WITH COMPONENTS FROM MANUFACTURERS OTHER THAN PIROD, PROVIDED THE MANUFACTURER'S INSTALLATION GUIDELINES ARE FOLLOWED.
6. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.
7. ATTACH FLANGED END OF SUPPORT POST TO CONCRETE PAD USING 4 - 3/8" DIA. HILT-HY 150 ADHESIVE ANCHORS. PROVIDE MINIMUM OF 4 1/2" EMBEDMENT.
8. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS SHOWN ON SITE SPECIFIC DRAWINGS OR STANDARD DETAILS REQUIRE ENGINEERING APPROVAL.

**1 ICE BRIDGE DETAIL**  
NOT TO SCALE

**SNAP IN HANGER SIZING CHART**

SIZE	ANDREW P/N
7/8"	436807
1-5/8"	439849

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JOHN S. STELLINGMA  
No. 24705  
LICENSED PROFESSIONAL ENGINEER

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2	A.D.	9/24/12
1	A.D.	7/27/12
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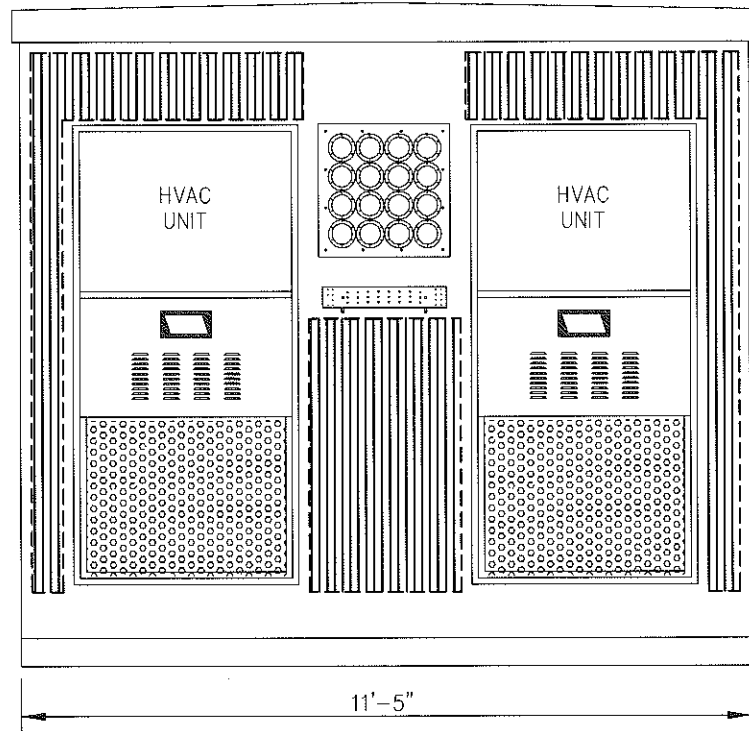
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Project Number: 228-015  
Project Title: WATERTOWN CT1140  
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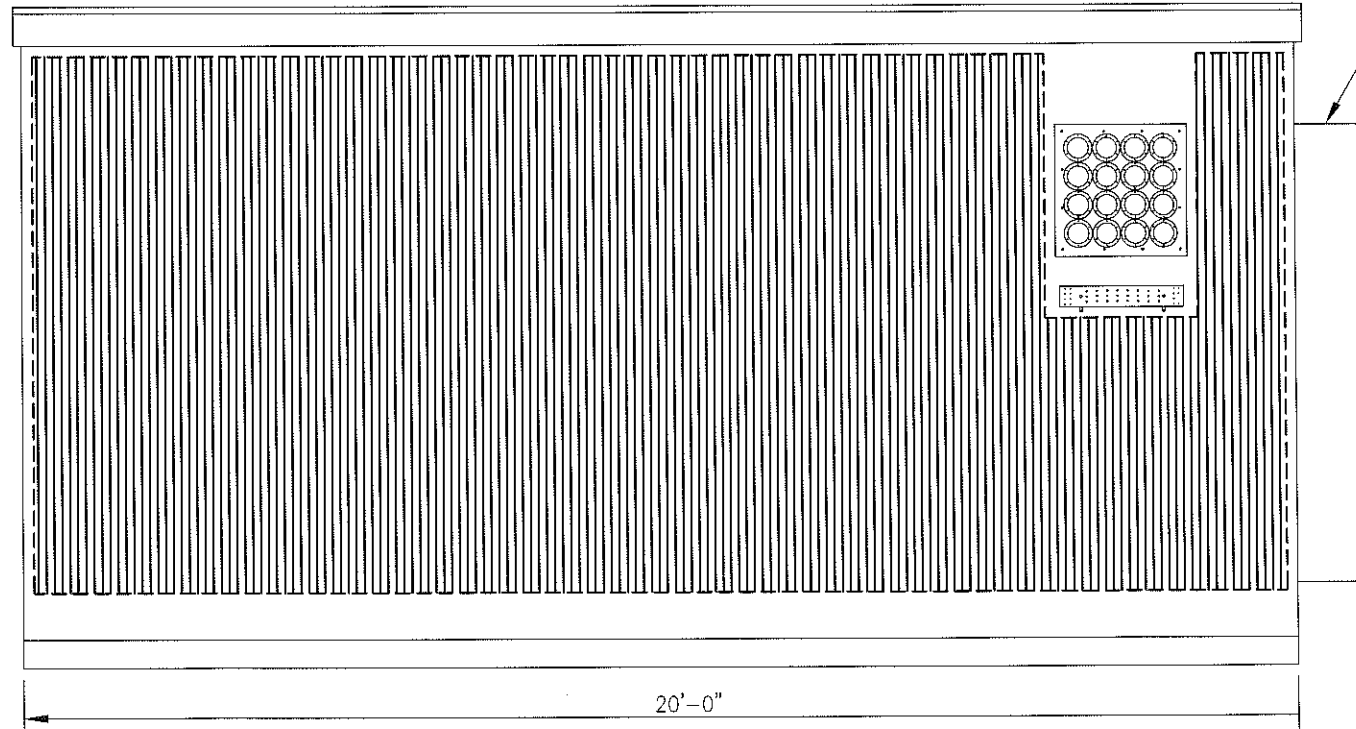
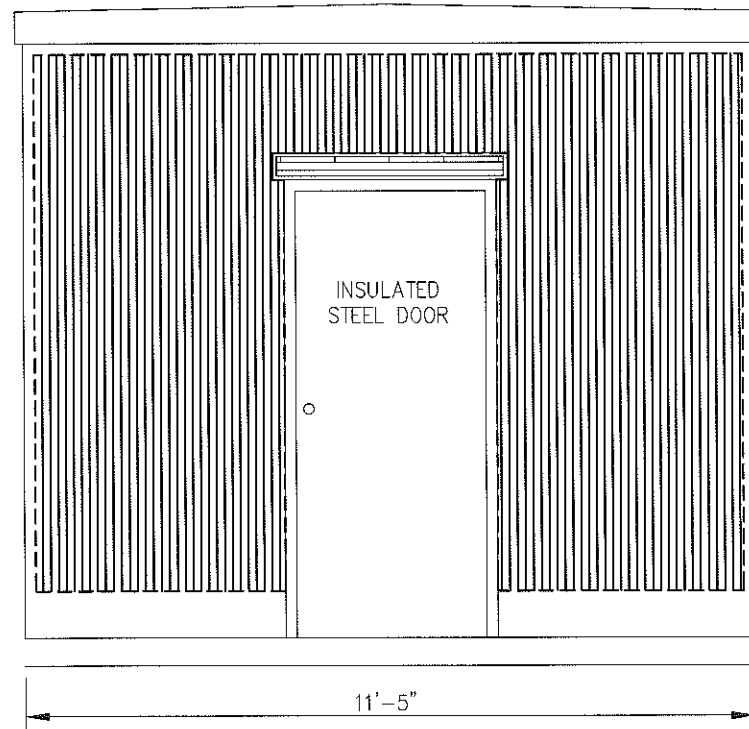
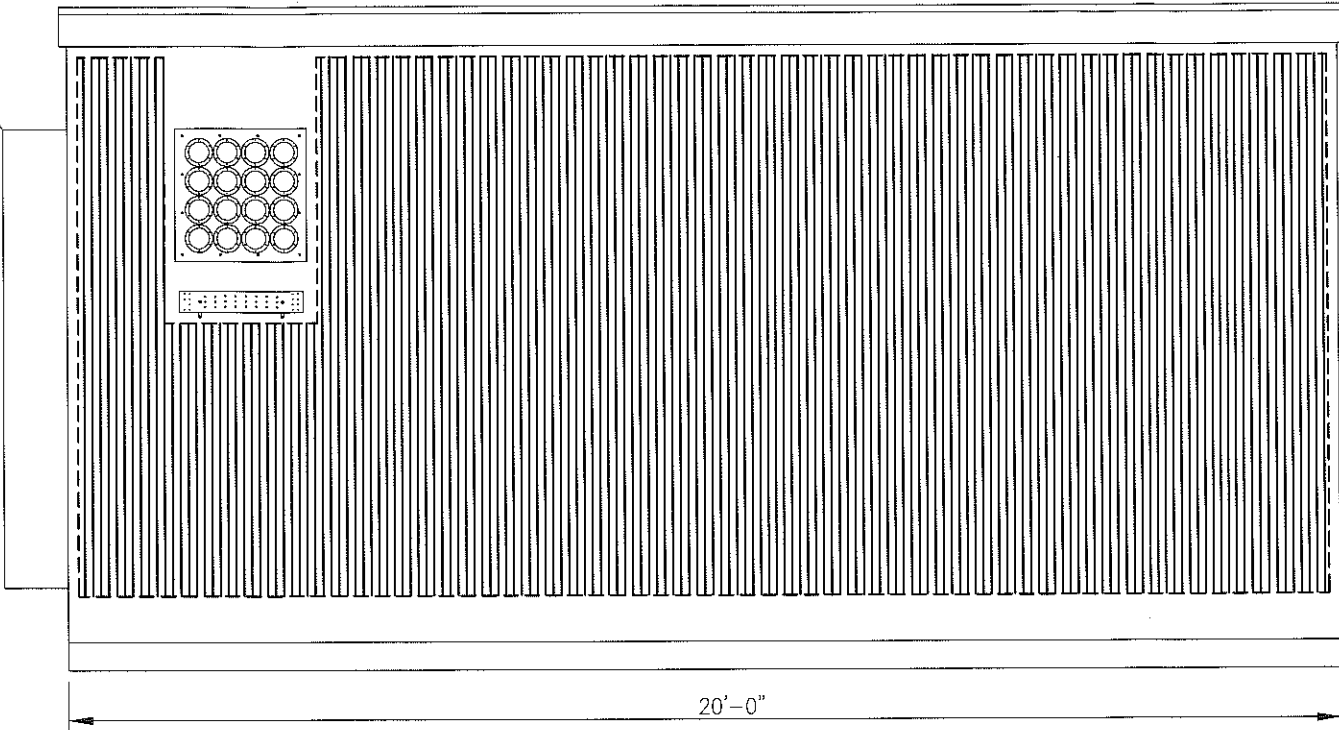
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Drawing Title: **DETAILS**  
Drawing Number: **C10**



HVAC UNIT

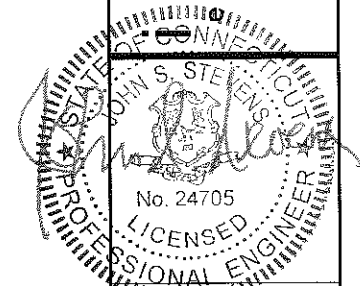


HVAC UNIT

NOTE: THE SHELTER SHOWN IS OF A TYPICAL LAYOUT ONLY. CONTRACTOR TO REFER TO FINAL MANUFACTURER'S SHELTER DESIGN DRAWINGS FOR EXACT DIMENSIONS, EQUIPMENT LOCATIONS AND CONDUIT PENETRATIONS, ETC., PRIOR TO CONSTRUCTION.

1 TYPICAL EQUIPMENT BUILDING  
 -- NOT TO SCALE

**nfinig**  
 engineering  
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 Latham, NY 12110  
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 FAX: (518) 690-0793



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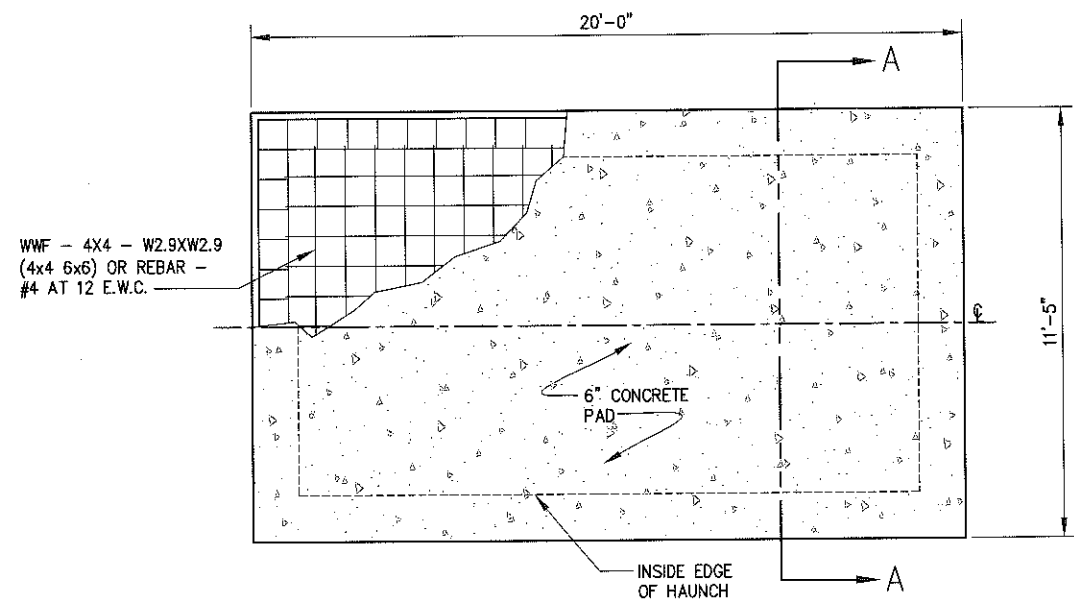
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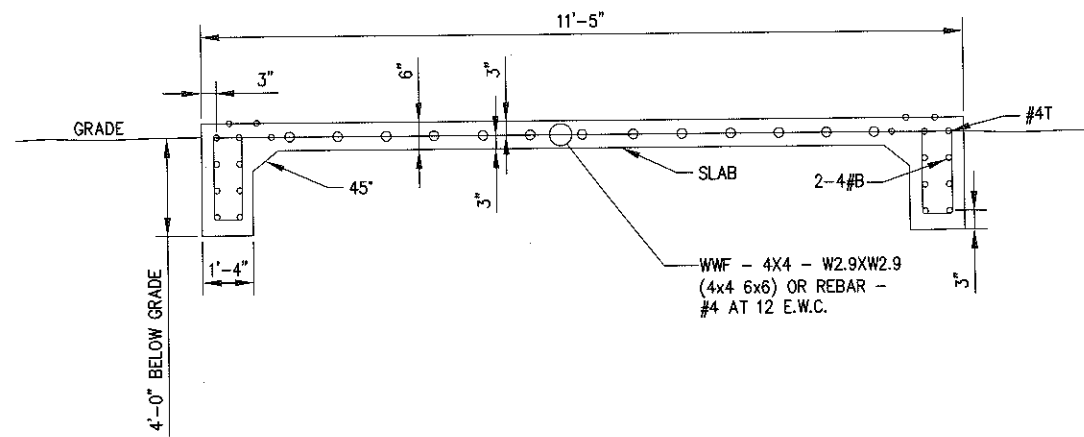
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Drawing Title: **SHELTER DETAILS**

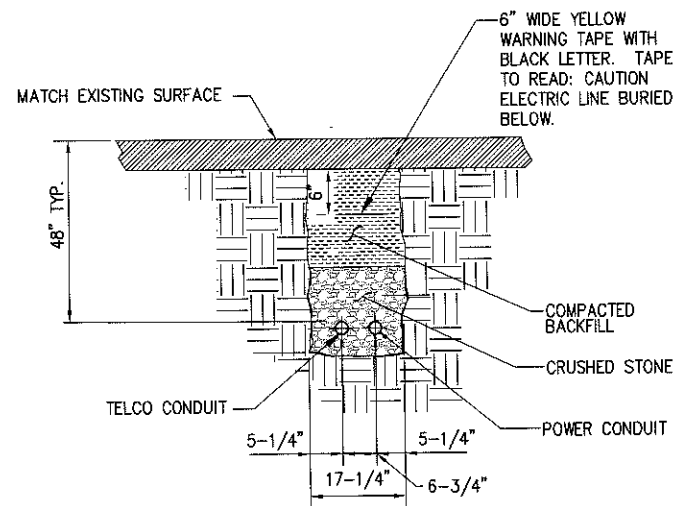
Drawing Number: **C11**



1 SHELTER FOUNDATION PLAN  
-- NOT TO SCALE



SECTION A-A



- 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.

2 CONDUIT TRENCH DETAIL  
-- NOT TO SCALE

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

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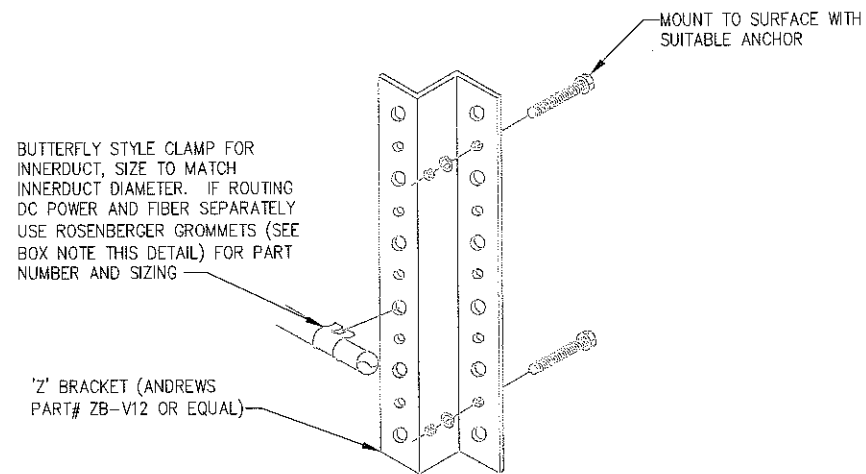
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Drawing Title: **DETAILS**

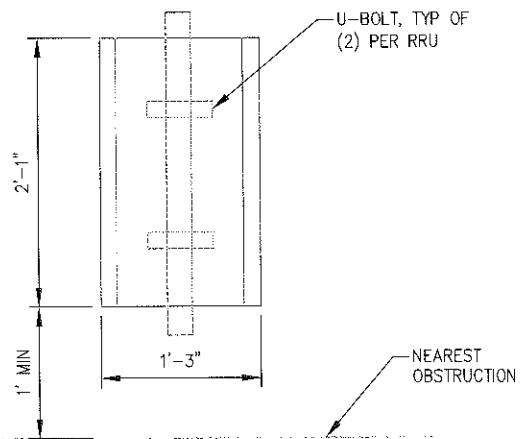
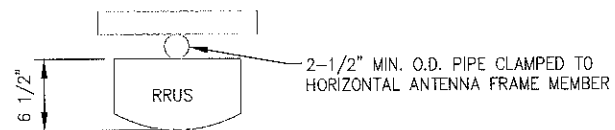
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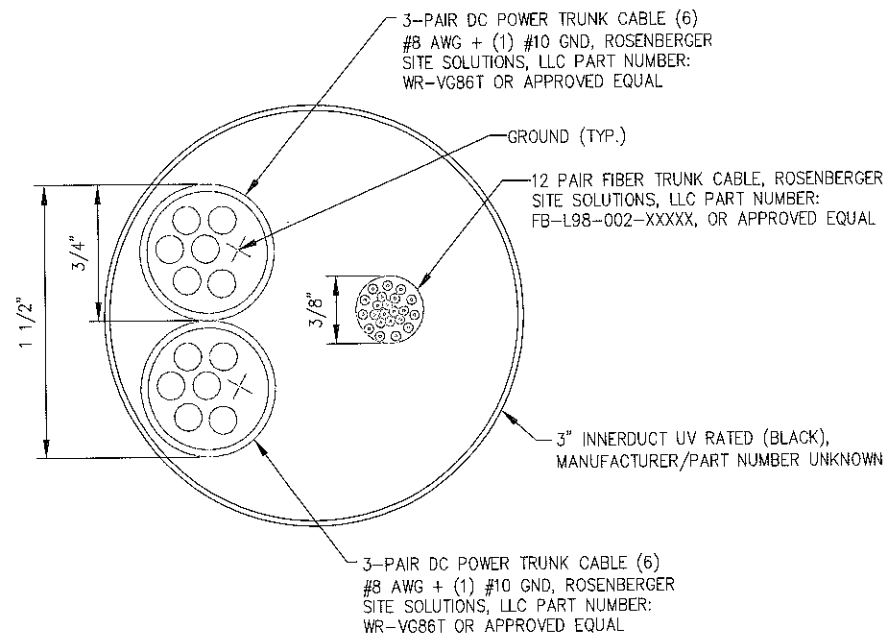
SINGLE FIBER 7MM/.28"
USE GROMMET
ROSENBERGER: CX603-HA0711
ANT: 13854 WITH 7/8" SNAPSTACK SNAP-INS
SINGLE PAIR DC POWER 15.4MM/.61"
USE GROMMET
ROSENBERGER: CX603-HA1117
ANT: 13854 WITH 7/8" SNAPSTACK SNAP-INS



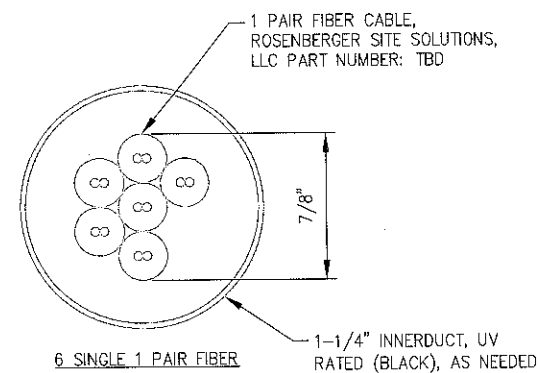
**1** FIBER/POWER SUPPORT DETAIL  
NOT TO SCALE



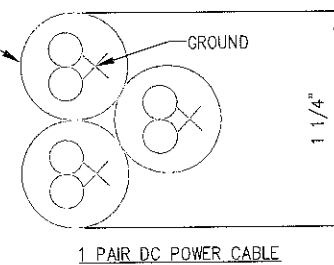
**2** RRU MOUNTING DETAIL  
NOT TO SCALE



FIBER/DC POWER TRUNK CABLE ROUTING



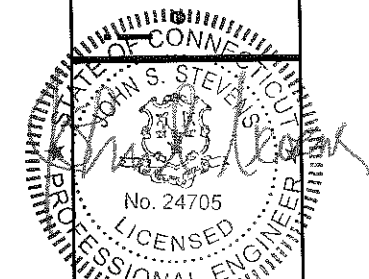
1 PAIR DC POWER CABLES, ROSENBERGER SITE SOLUTIONS, LLC PART NUMBER: WR-VG82ST-BRDA OR APPROVED EQUAL. ROUTE FROM "SQUID" TO PROPOSED RRU. (1 CABLE PER RRU, 6 TOTAL)



**3** LTE POWER AND FIBER TOWER ATTACHMENT DETAIL  
NOT TO SCALE

**nfinigy**  
engineering

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Project Title  
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WATERTOWN, CT 06795

Prepared For

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**CODED DRAWING NOTES:**

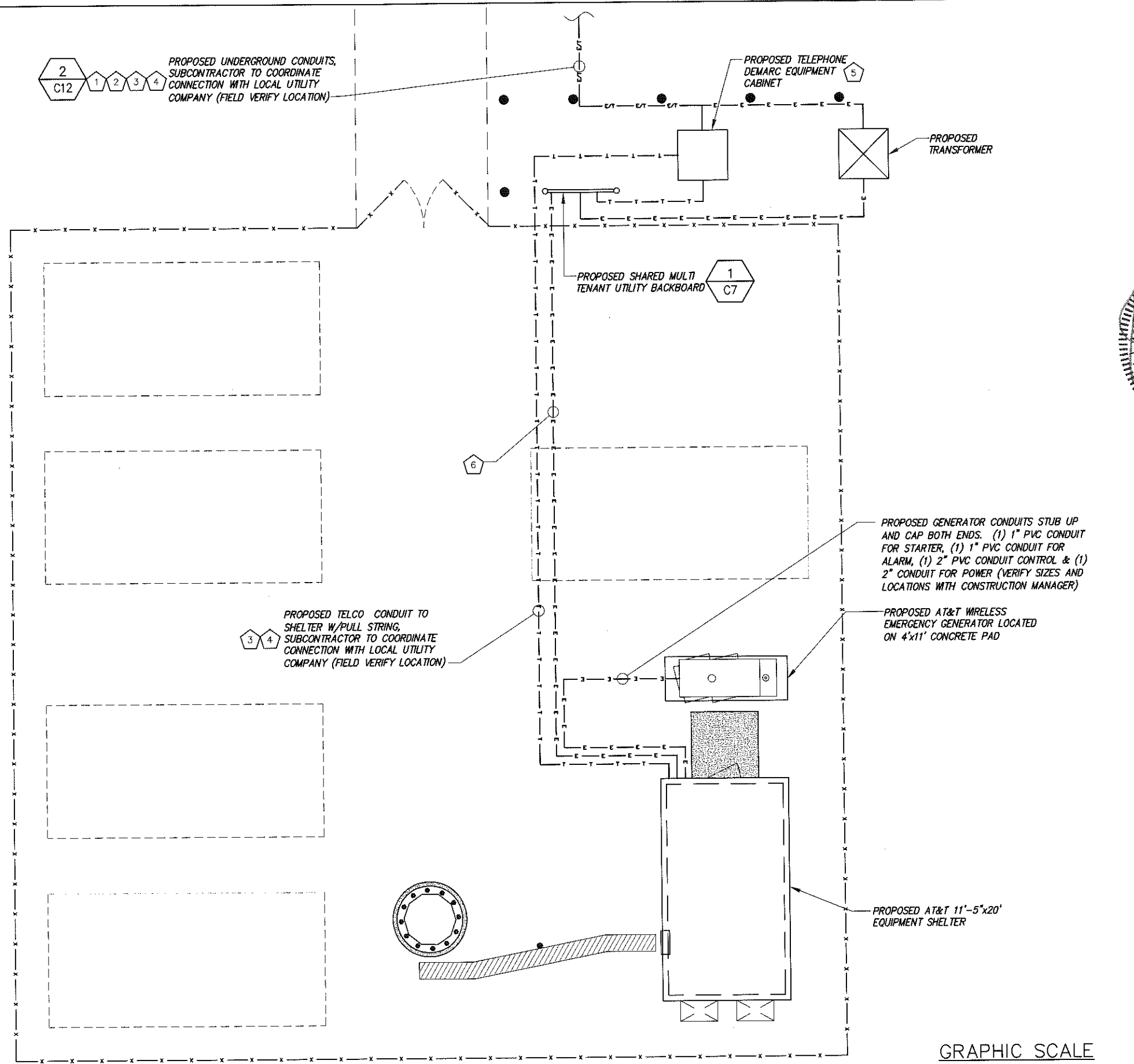
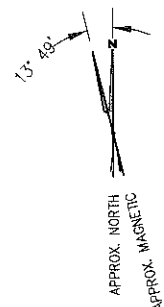
- 1 COORDINATE EXACT LOCATION WITH UTILITY COMPANY. STUB UP POWER AND TELEPHONE CONDUITS AS DIRECTED BY UTILITY COMPANY. REFER TO EQUIPMENT SPECIFICATIONS FOR ELECTRICAL REQUIREMENTS.
- 2 (2) 4" SCH 40 PVC POWER CONDUITS WITH PULLWIRE FROM PROPOSED EQUIPMENT AREA TO EXISTING POWER SOURCE. EXACT ROUTING TO BE COORDINATED WITH UTILITY COMPANY AND CONTRACTOR TO FIELD COORDINATE CONDUIT STUB-UP LOCATION. STUB-UP 6" ABOVE GRADE AT EXISTING POWER SOURCE & EQUIPMENT AREA.
- 3 (2) 4" SCH 40 PVC TELCO CONDUITS WITH PULL STRINGS. EXACT ROUTING AND STUB-UP LOCATION TO BE FIELD COORDINATED WITH UTILITY COMPANY. STUB-UP 6" ABOVE GRADE AT TELCO DEMARC & EQUIPMENT AREA.
- 4 ALL TELCO CONDUITS SHALL USE LONG SWEEPS AT BENDS.
- 5 PROPOSED TELEPHONE DEMARC EQUIPMENT CABINET & BASE PLATE
- 6 2" C. W/(3) #3/0 + #6 GND.

**ABBREVIATIONS**

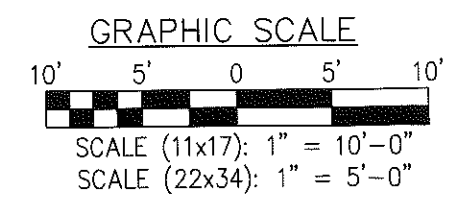
AWG	AMERICAN WIRE GAUGE
BFG	BELOW FINISH GRADE
BTS	BARE TINNED STRANDED
C	CONDUIT
CAB	CABINET
DLO	DIESEL LOCOMOTIVE CABLE
DWG	DRAWING
EGR	EXTERIOR GROUND RING
EIGB	EXTERIOR ISOLATED GROUND BAR
G	GROUND
HALO	INTERIOR GROUND RING
MIGB	MAIN ISOLATED GROUND BAR
MGN	MULTI-GROUNDED NEUTRAL
MSC	MOBILE SWITCHING CENTER
MTSO	MOBILE TELEPHONE SWITCHING OFFICE
PVC	POLYVINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL
SS	STAINLESS STEEL
SST	SELF SUPPORTING TOWER
TGR	TOWER GROUND RING
TYP.	TYPICAL

**GENERAL ELECTRICAL NOTES:**

- 1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE AND ALL LOCAL AND STATE CODES, LAWS, AND ORDINANCES.
- 2. ALL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 UNLESS OTHERWISE INDICATED. CONDUITS EXPOSED ABOVE GROUND SHALL BE RIGID GALVANIZED STEEL. ALL UNDERGROUND CONDUIT SHALL TRANSITION FROM PVC TO RIGID ABOVE GRADE. PROVIDE 36" SEPARATION BETWEEN UNDERGROUND POWER AND TELEPHONE CONDUITS. SUPPLY UTILITY MARKING TAPE BURIED 12" BELOW GRADE ALONG ENTIRE LENGTH OF UNDERGROUND CONDUITS.
- 3. ALL CONDUCTORS SHALL BE COPPER WITH THHN/THWN INSULATION. CONTROL CONDUCTORS SHALL BE STRANDED, POWER & LIGHTING CONDUCTORS SHALL BE SOLID FOR #10 & #12 CONDUCTORS AND STRANDED FOR ALL OTHER SIZES.
- 4. ELECTRICAL DRAWINGS ARE IN PART DIAGRAMMATIC. COORDINATE ELECTRICAL WORK WITH SITE CONDITIONS.
- 5. LOCATE ALL UNDERGROUND UTILITIES BEFORE TRENCHING. IF CONFLICTS ARISE, CONTACT UTILITY COMPANY AND ENGINEER IMMEDIATELY.
- 6. ALL EXPOSED CONDUITS SHALL HAVE WEATHERPROOF CAPS NOT DUCT TAPE.



1 SITE UTILITY LAYOUT  
SCALE:



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JOHN S. STEVENSON  
No. 24705  
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WATERTOWN, CT 06795

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Drawing Title: **SITE UTILITY LAYOUT**  
Drawing Number: **E1**

**GENERAL NOTES:**

**1. INSPECTIONS**

- A. GENERAL: DURING AND UPON COMPLETION OF THE WORK, ARRANGE AND PAY ALL ASSOCIATED INSPECTIONS OF ALL ELECTRICAL WORK INSTALLED UNDER THIS CONTRACT IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT. INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND ORDINANCES, UTILITY COMPANY REQUIREMENTS, AND THE LATEST EDITION OF NEC, NFC, NEMA, OSHA, SBC, AND UL.
- B. INSPECTIONS REQUIRED: AS PER THE LAWS AND REGULATIONS OF THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
- C. INSPECTION AGENCY: APPROVED BY THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
- D. CERTIFICATES: SUBMIT ALL REQUIRED INSPECTION CERTIFICATES.

**2. HANGERS AND SUPPORTS**

- A. MATERIALS: ALL HANGERS, SUPPORTS, FASTENERS AND HARDWARE SHALL BE ZINC COATED OR OF EQUIVALENT CORROSION RESISTANCE BY TREATMENT OR INHERENT PROPERTY, AND SHALL BE MANUFACTURED PRODUCTS DESIGNED FOR THE APPLICATION. PRODUCTS FOR OUTDOOR USE SHALL BE HOT DIP GALVANIZED.
- B. TYPES: HANGERS, STRAPS, RISER SUPPORTS, CLAMPS, U-CHANNEL, THREADED RODS, ETC. AS INDICATED OR REQUIRED.
- C. INSTALLATION: RIGIDLY SUPPORT AND SECURE ALL MATERIALS, RACEWAY AND EQUIPMENT TO BUILDING STRUCTURE USING HANGERS, SUPPORTS AND FASTENERS SUITABLE FOR THE USE, MATERIALS AND LOADS ENCOUNTERED. PROVIDE ALL NECESSARY HARDWARE. PROVIDE CONDUIT SUPPORTS AT MAXIMUM 5 FT. O.C.
- D. STRUCTURAL MEMBERS: DO NOT CUT, DRILL, OR WELD ANY STRUCTURAL MEMBER EXCEPT AS SPECIFICALLY APPROVED BY THE ENGINEER.
- E. MISCELLANEOUS SUPPORTS: PROVIDE ANY ADDITIONAL STRUCTURAL SUPPORT STEEL BRACKETS, ANGLES, FASTENERS AND HARDWARE AS REQUIRED TO ADEQUATELY SUPPORT ALL ELECTRICAL MATERIALS AND EQUIPMENT.
- F. ONE HOLE STRAPS SHALL NOT BE USED FOR CONDUITS LARGER THAN 3/4 INCH.

**3. ENCLOSURES**

- A. NEMA 3R

**4. HOLES, SLEEVES AND OPENINGS**

GENERAL: PROVIDE ALL HOLES, SLEEVES, AND OPENINGS REQUIRED FOR THE COMPLETION OF WORK AND RESTORE ALL SURFACES DAMAGED TO MATCH SURROUNDING SURFACES.

**5. CUTTING AND PATCHING**

- A. GENERAL: PROVIDE ALL CUTTING, DRILLING, FITTING AND PATCHING NECESSARY FOR ACCOMPLISHING THE WORK. THIS INCLUDES ANY AND ALL WORK NECESSARY TO: UNCOVER WORK TO PROVIDE FOR THE INSTALLATION OF ILL TIMED WORK, REMOVE AND REPLACE DEFECTIVE WORK AND WORK NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- B. REPAIRS: REPAIR ANY AND ALL DAMAGE TO WORK OF OTHER TRADES CAUSED BY CUTTING AND PATCHING OPERATIONS, USING SKILLED MECHANICS OF THE TRADES INVOLVED.

**6. RACEWAY SYSTEMS**

- A. FOR INITIAL ANCHOR TENANT: ALL CONDUIT AND ALL CONDUIT ELBOWS SHALL BE SCHEDULE 40 PVC UNLESS NOTED OTHERWISE.
- B. FOR FUTURE CARRIERS: ALL ABOVE GRADE CONDUIT AND ALL CONDUIT ELBOWS SHALL BE RIGID GALVANIZED STEEL UNLESS NOTED OTHERWISE. ALL BELOW GRADE CONDUIT (EXCEPT ELBOWS) SHALL BE SCHEDULE 40 PVC.
- C. TOWER LIGHT CIRCUIT FROM CONTROLLER TO LIGHTS SHALL BE SCHEDULE 40 PVC. RACEWAY BURIAL DEPTH SHALL BE AS PER NEC. USE CLEAN SAND BACKFILL FOR ALL BURIED RACEWAY SYSTEMS.

**7. CONDUCTORS**

USE 98% CONDUCTIVITY COPPER WITH TYPE XHHW-2 INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG, STRANDED CONDUCTORS FOR WIRE LARGER THAN NO. 8. USE PRESSURE-TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER, SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.

**8. ELECTRIC SERVICE**

- A. GENERAL: COMPLY WITH AND COORDINATE ALL REQUIREMENTS OF THE UTILITY COMPANY.
- B. SHORT CIRCUIT RATINGS: PROVIDE EQUIPMENT WITH HIGHER FAULT CURRENT RATINGS AS NEEDED TO MATCH UTILITY COMPANY AVAILABLE FAULT CURRENT.

**9. TELEPHONE SERVICE**

- A. GENERAL: INSTALLATION SHALL BE IN ACCORDANCE WITH TELEPHONE UTILITY COMPANY'S RULES AND REGULATIONS. UTILIZE LONG SWEEP BENDS IN ALL TELEPHONE CONDUITS.

**10. GROUNDING SYSTEM**

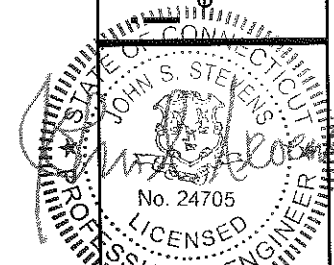
- A. INSTALLATION: INSTALL AS INDICATED ON THE DRAWINGS AND AS REQUIRED. OWNER'S REPRESENTATIVE WILL INSPECT CADWELDS AND CONDUCT MEGGER TEST PRIOR TO BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED. USE CLEAN SAND AND CLAY BACKFILL FOR BURIED GROUND CONDUCTORS

**11. CHECKOUT, TESTING AND ADJUSTING**

- A. CORRECTION/REPLACEMENT: AFTER TESTING BY CONTRACTOR, OWNER OR ENGINEER, CORRECT ANY DEFICIENCIES AND REPLACE MATERIALS AND EQUIPMENT SHOWN TO BE DEFECTIVE OR UNABLE TO PERFORM AT DESIGN OR RATED CAPACITY.
- B. POWER CONDUCTORS: CONTRACTOR SHALL CONDUCT A CONTINUITY & INSULATION TEST ON CONDUCTORS BETWEEN SERVICE DISCONNECT SWITCH & POWER CABINET.
- C. WHEN SITE POWER IS DERIVED FROM 3 PHASE SOURCE LOAD READINGS WILL BE TAKEN AND RECORDED TO MAINTAIN A BALANCED LOAD AT THE PRIMARY SOURCE. RECORDS SHALL BE TURNED TO THE OWNER'S REPRESENTATIVE.

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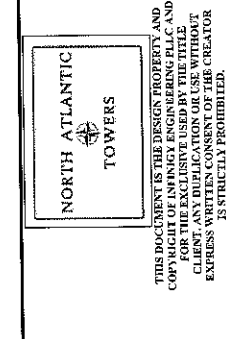
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5	REVISED PER COMMENTS	JLM	3/21/13
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0	ISSUED FOR REVIEW	AJD	5/30/12

Drawn: MJB Date: 5/30/12  
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Project Number: 226-015

Project Title:  
**WATERTOWN**  
**CT1140**  
655 BASSETT RD  
WATERTOWN, CT 06795

Prepared For:



Drawing Scale: AS NOTED  
Date: 3/27/13  
**CD**

Drawing Title:  
**ELECTRICAL**  
**NOTES**

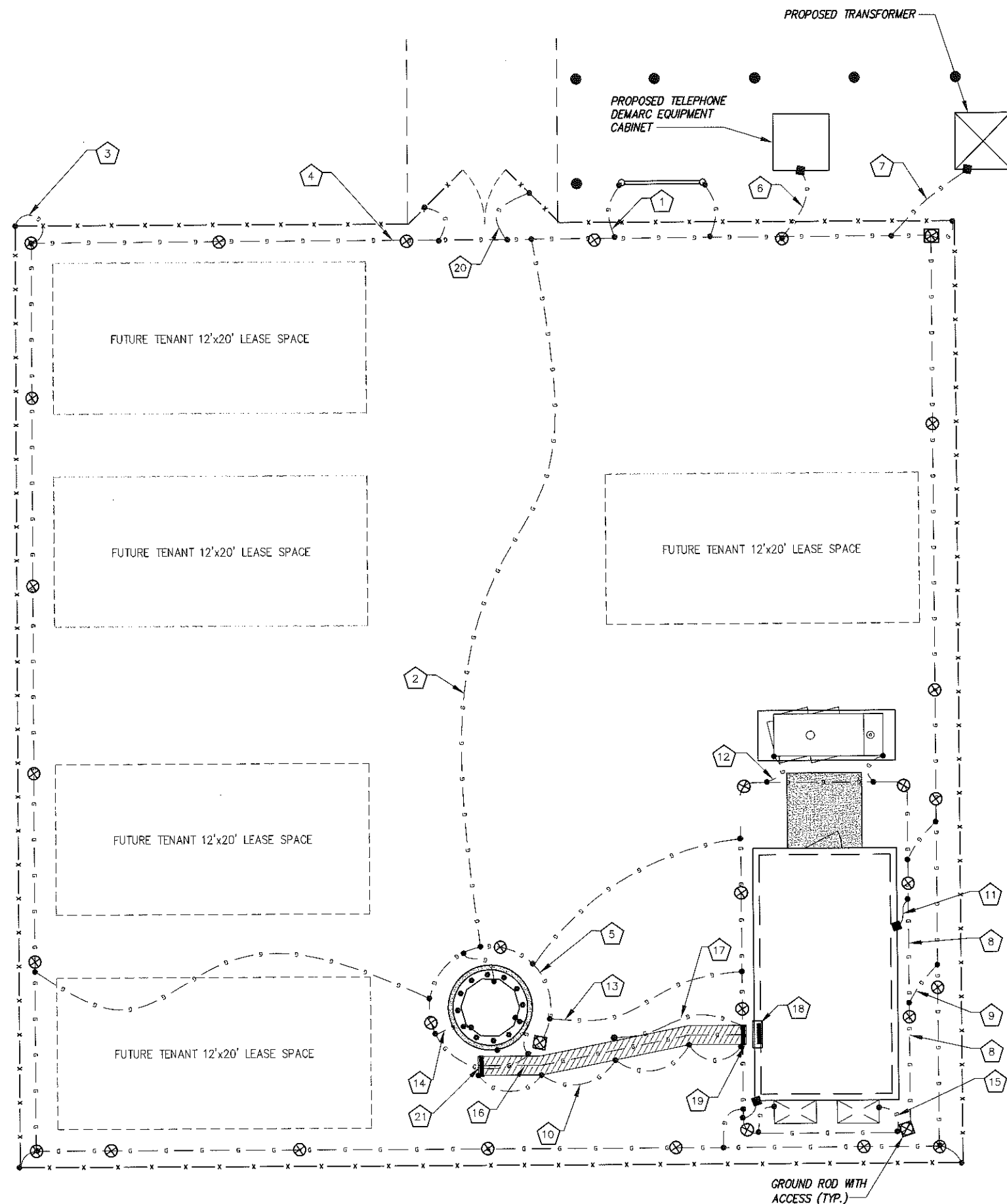
Drawing Number:  
**E2**

**CODED DRAWING NOTES**

- 1 BOND NEW UTILITY BACKBOARD TO GROUND RING WITH #2 SOLID TINNED BCW IN TWO PLACES.
- 2 BOND PROPOSED TOWER GROUND RING TO PROPOSED COMPOUND GROUND RING WITH #2 SOLID TINNED BCW. IN 2 PLACES
- 3 BOND PROPOSED GROUND RING TO PROPOSED FENCE WITH #2 SOLID TINNED BCW. (TYP. OF ALL POSTS)
- 4 PROPOSED COMPOUND GROUND RING WITH #2 SOLID TINNED BCW.
- 5 PROPOSED TOWER GROUND RING WITH #2 SOLID TINNED BCW.
- 6 BOND PROPOSED GROUND RING TO PROPOSED TELEPHONE DEMARC EQUIPMENT CABINET WITH #2 SOLID TINNED BCW.
- 7 BOND PROPOSED GROUND RING TO PROPOSED TRANSFORMER WITH #2 SOLID TINNED BCW.
- 8 PROPOSED SHELTER GROUND RING WITH #2 SOLID TINNED BCW.
- 9 BOND PROPOSED SHELTER GROUND RING TO PROPOSED COMPOUND GROUND RING WITH #2 SOLID TINNED BCW (TYP. OF (2) PLACES).
- 10 PROPOSED ICE BRIDGE GROUND WITH #2 SOLID TINNED BCW GROUNDED EACH ICE BRIDGE POST WITH #2 SOLID TINNED BCW. (TYP. EACH POST)
- 11 BOND PROPOSED SHELTER GROUND RING TO PROPOSED SHELTER WITH #2 SOLID TINNED BCW (TYP. OF (2) PLACES).
- 12 BOND PROPOSED SHELTER GROUND RING TO PROPOSED GENERATOR WITH #2 SOLID TINNED BCW (PER MANUFACTURE SPEC.)
- 13 BOND PROPOSED TOWER GROUND RING TO PROPOSED SHELTER GROUND RING WITH #2 SOLID TINNED BCW IN 2 PLACES
- 14 BOND PROPOSED TOWER GROUND RING TO PROPOSED TOWER WITH #2 SOLID TINNED BCW. (TYP. OF (3) PLACES)
- 15 BOND PROPOSED HVAC UNITS TO PROPOSED GROUND RING WITH #2 SOLID TINNED BCW.
- 16 PROPOSED GROUND WIRE FROM ANTENNA SECTOR GROUND BARS WITH #2 SOLID TINNED BCW.
- 17 BOND PROPOSED GPS ANTENNA TO PROPOSED SHELTER GROUND RING WITH #2 SOLID TINNED BCW.
- 18 BOND INTERIOR GROUND BARS TO GROUND RING IN 2 PLACES.
- 19 BOND PROPOSED EXTERIOR GROUND BAR AT SHELTER TO GROUND RING WITH #2 SOLID TINNED BCW IN TWO PLACES.
- 20 BOND PROPOSED GROUND RING TO PROPOSED FENCE GATE WITH #2 SOLID TINNED BCW (TYP.)
- 21 PROPOSED TOWER GROUND BAR. BOND TO TOWER GROUND RING IN 2 PLACES.

**GROUNDING SYMBOLS**

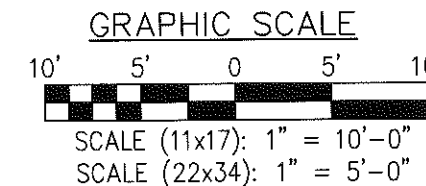
- ⊗ GROUND ROD
- ACCESS WELL
- ⊗ GROUND ROD WITH ACCESS
- COMPRESSION TYPE CONNECTION
- EXOTHERMIC WELDS TYPE CONNECTION
- G- #2 SOLID TINNED BCW BURIED GROUND CABLE
- ⬆ APPROX. NORTH
- ⬆ APPROX. MAGNETIC
- # INDICATES CODED NOTE
- GROUND BAR



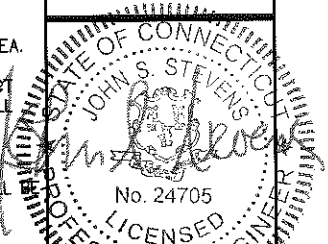
**1 SITE UTILITY LAYOUT**  
SCALE:

**GENERAL GROUNDING NOTES:**

1. TO ENSURE PROPER BONDING, ALL CONNECTIONS SHALL BE AS FOLLOWS:  
- #2 BARE TINNED SOLID COPPER CONDUCTOR:  
EXOTHERMIC WELDS TO RODS OR GROUND RING  
- LUGS AND BUS BAR (UNLESS NOTED OTHERWISE):  
SANDED CLEAN, COATED WITH OXIDE INHIBITOR AND BOLTED FOR MAXIMUM SURFACE CONTACT. ALL LUGS SHALL BE COPPER (NO ALUMINUM SHALL BE PERMITTED). PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
2. ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALLS SHALL BE IN 3/4" PVC CONDUIT. SEAL AROUND CONDUIT THROUGH WALLS. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTORS.
3. OWNER'S REPRESENTATIVE WILL INSPECT EXOTHERMIC WELDS AND CONDUCT MEGGER TEST PRIOR TO BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED.
4. DO NOT INSTALL GROUND RING OUTSIDE OF LEASED AREA.
5. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS SHALL BE A MINIMUM 8" RADIUS AND NO GREATER THAN 90 DEGREES.
6. ALL EXOTHERMIC WELDS TO BURIED GROUND RING SHALL THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH SHALL BE THE TEE TYPE.
7. BOND SERVICE CONDUITS TO GROUND RING AS THEY CROSS. DO NOT EXOTHERMICALLY WELD TO CONDUITS.
8. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.
9. THE MINIMUM SPACING BETWEEN GROUND RODS SHALL BE 10'-0" (MAX. 15'-0").
10. BOND CIGBE TO EXTERNAL GROUND RING WITH 2 RUNS OF #2 BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND "CADWELD" THE OTHER END TO THE EXTERNAL GROUND ROD.
11. THE PREFERRED LOCATION FOR COAX GROUNDING IS AT THE BASE OF THE TOWER PRIOR TO THE COAX BEND. BONDING IS SHOWN ON THE ICE BRIDGE DUE TO DIFFICULTY WITH WELDING OR ATTACHING TO TOWER. CONTRACTOR SHALL ADVISE CONSTRUCTION MANAGER PRIOR TO PLACING CIGBE ON ICE BRIDGE IF MOUNTING TO TOWER IS POSSIBLE.
12. BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250-30.



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0	ISSUED FOR REVIEW	AJD	5/30/12

Drawn: MJB Date: 5/30/12  
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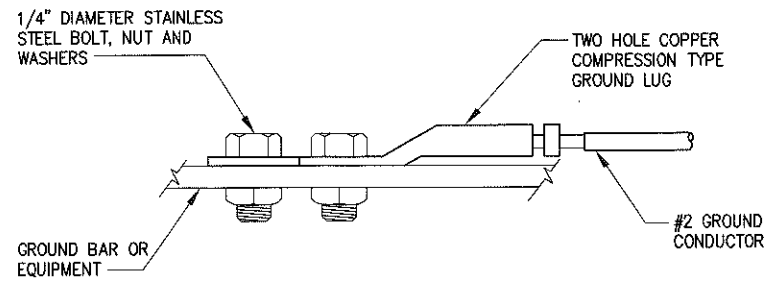
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655 BASSETT RD  
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Prepared For: **NORTH ATLANTIC TOWERS**  
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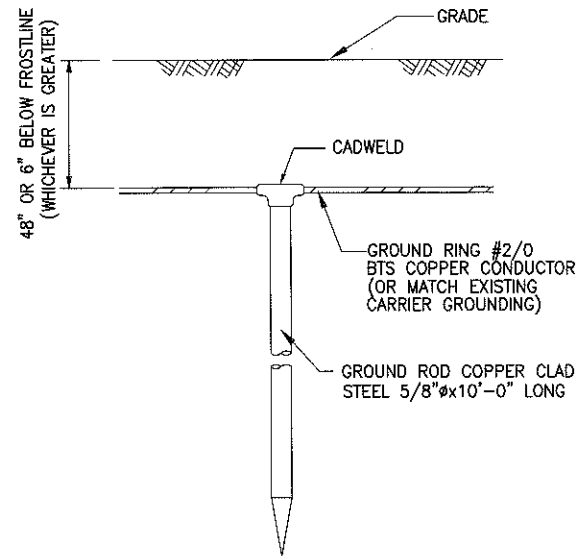
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Drawing Number: **E3**

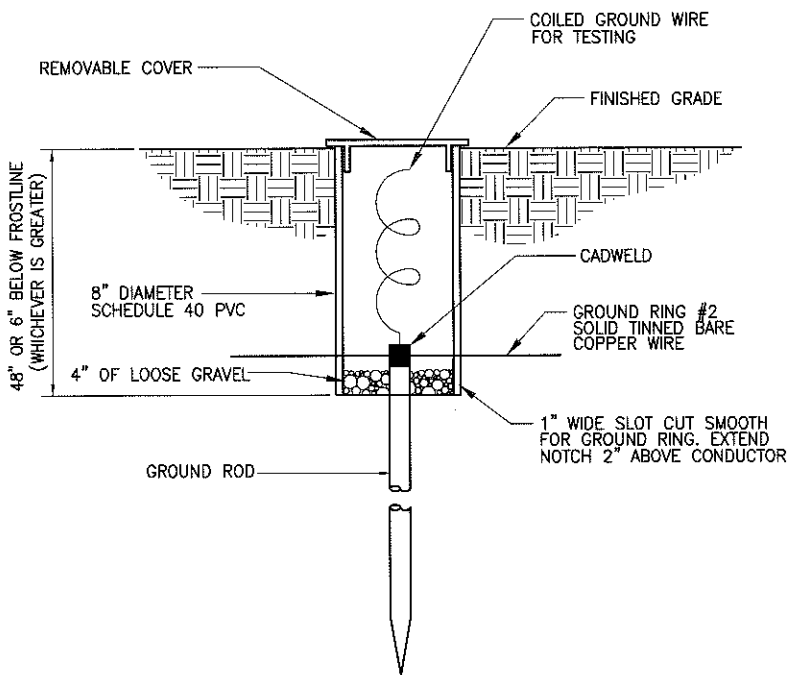


NOTE:  
ALL MECHANICAL EXTERNAL TERMINATION SURFACES SHALL BE TREATED WITH T&B KOPR-SHIELD CP8 ANTI-OXIDATION COMPOUND.

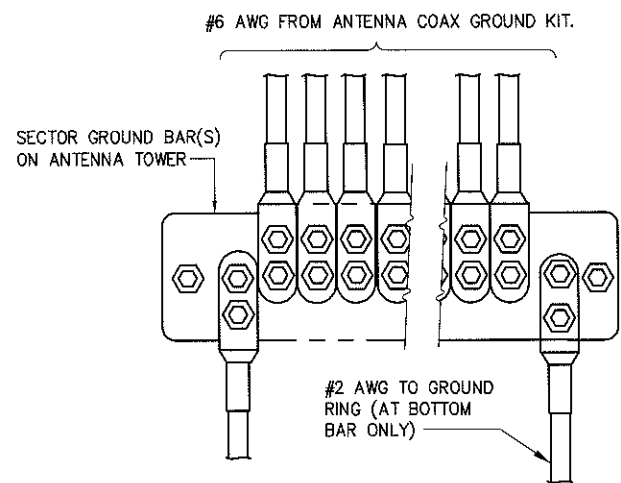
1 EQUIPMENT GROUND CONNECTION  
--- NOT TO SCALE



4 GROUND ROD DETAIL  
--- NOT TO SCALE



2 INSPECTION SLEEVE DETAIL  
--- NOT TO SCALE



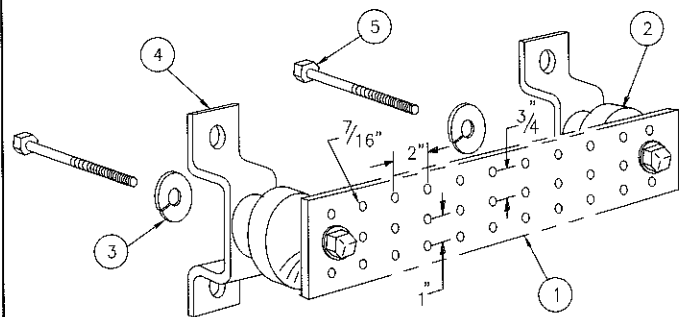
5 ANTENNA GROUND WIRE INSTALLATION  
--- NOT TO SCALE

NOTES:

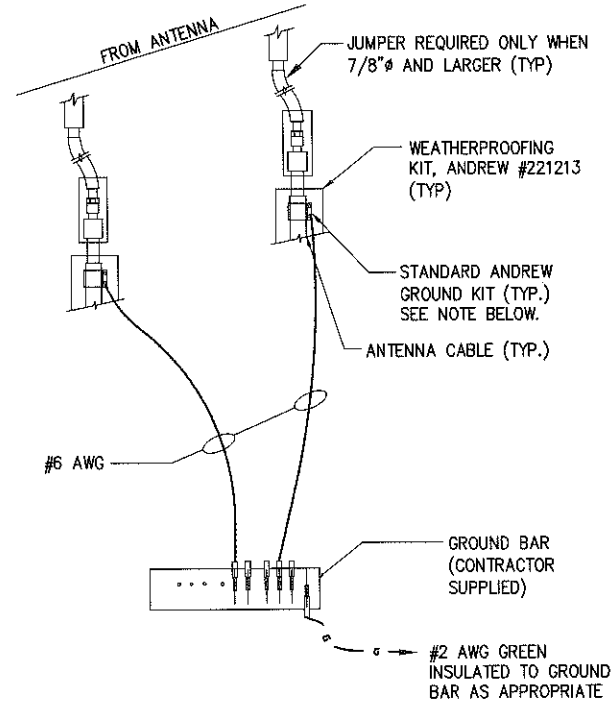
1. COPPER GROUND BAR 1/4"x4"x14" 2-HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. SIMILAR INSTALLATION FOR TOP AND BOTTOM TOWER GROUND BARS AND FOR COAX ENTRY PORT GROUND BARS.

LEGEND

- 1 - TINNED COPPER GROUND BAR, 1/4"x 4"x 24"
- 2 - INSULATORS (NO INSULATORS ON TOWER)
- 3 - 5/8" LOCK WASHERS
- 4 - MOUNTING BRACKET (MOUNT HORIZONTAL ON VERTICAL CABLE LADDER)
- 5 - 5/8-11 X 1" H.H.C.S.BOLTS

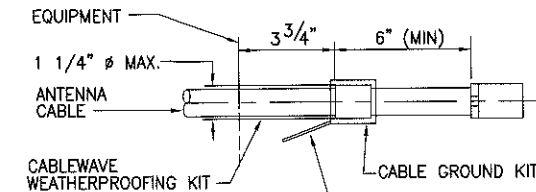


3 TINNED GROUND BAR DETAIL  
--- NOT TO SCALE

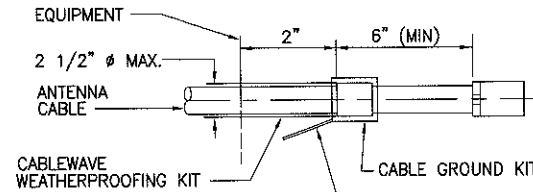


NOTE:  
DO NOT INSTALL CABLE GROUND KIT AT A BEND ALWAYS DIRECT GROUND WIRE DOWN TO GIGBE.

6 CONNECTION OF GROUND WIRES TO GROUNDING BARS @ ANTENNAS  
--- NOT TO SCALE



#6 AWG STRANDED COPPER GROUND WIRE (GROUNDED TO GROUND BAR) (STANDARD CABLEWAVE GROUNDING KIT)

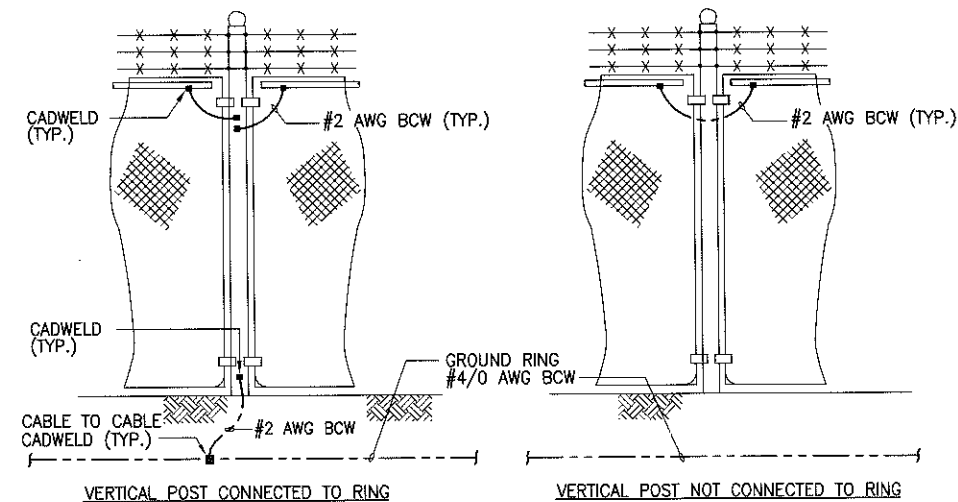


#6 AWG STRANDED COPPER GROUND WIRE (GROUNDED TO GROUND BAR) (STANDARD CABLEWAVE GROUNDING KIT)

TO ANTENNA CABLE

NOTE:  
DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

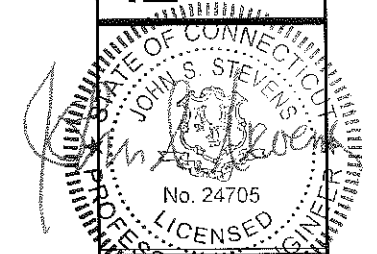
7 CABLE GROUND KIT CONNECTION  
--- NOT TO SCALE



NOTES

1. VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FOOT STRAIGHT RUN OF FENCE.
2. HORIZONTAL POLES SHALL BE BONDED TO EACH OTHER.
3. BOND EACH HORIZONTAL POLE/BRACE TO EACH OTHER AND TO EACH VERTICAL POST THAT IS BONDED TO THE EXTERIOR GROUND RING.

8 FENCE GROUNDING  
--- NOT TO SCALE



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No. 24705  
LICENSED PROFESSIONAL ENGINEER

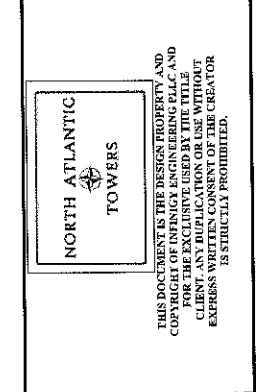
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Drawing Title  
**GROUNDING DETAILS**

Drawing Number  
**E4**