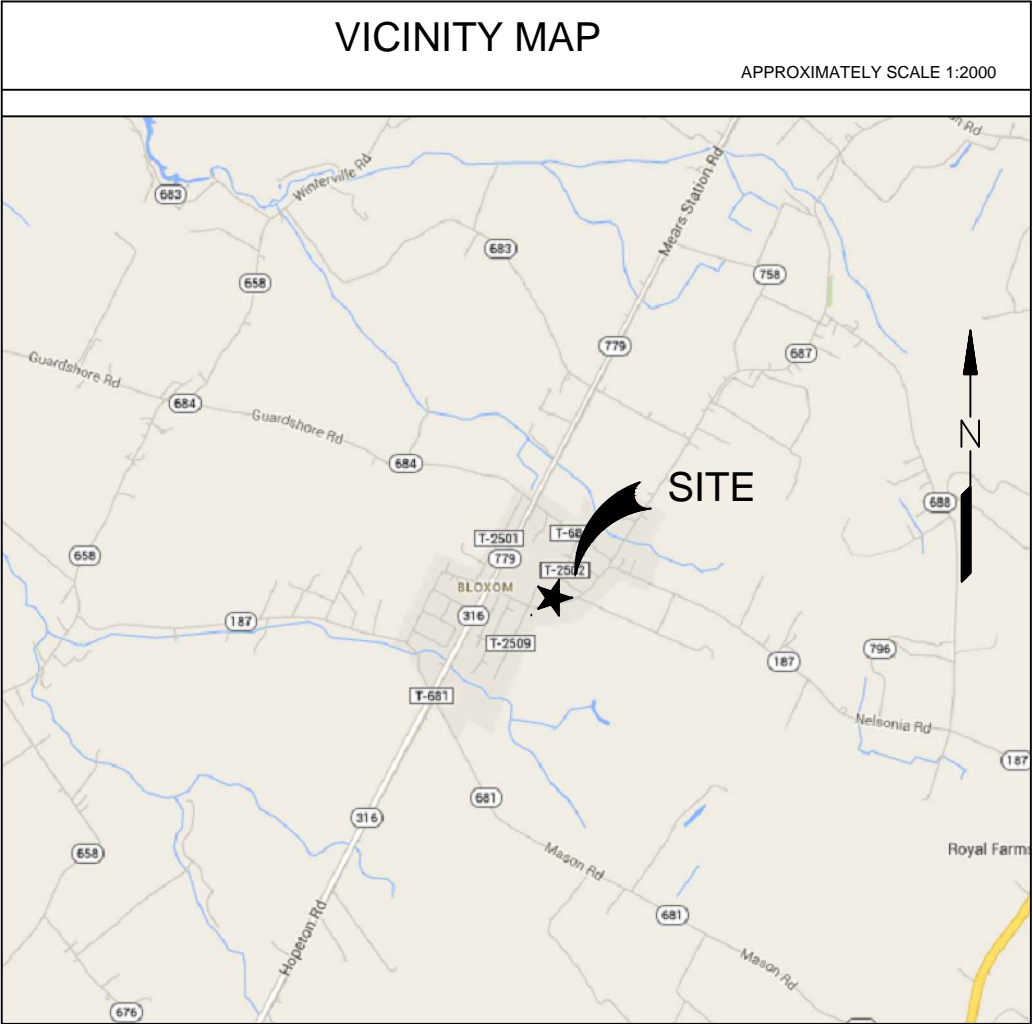




EASTERN SHORE

SITE ADDRESS:
26129 SHOREMAN DRIVE
BLOXOM, VIRGINIA
23308



SITE INFORMATION	
SITE NAME:	EASTERN SHORE
SITE ADDRESS:	26129 SHOREMAN DRIVE BLOXOM, VIRGINIA 23308
SITE OWNER:	EASTERN SHORE BROADBAND AUTHORITY 4174 LANKFORD HIGHWAY EXMORE, VIRGINIA 23350
GEOGRAPHIC (2C) COORDINATES:	
LATITUDE:	N 37° 49' 46.03" (NAD 83)
LONGITUDE:	W 075° 37' 14.57" (NAD 83)
GROUND ELEVATION:	23.6' AMSL (NAD 83)
TOWER TYPE:	MONOPOLE
TOWER HEIGHT:	100' AGL (123.6' AMSL)
OVERALL HEIGHT:	105' AGL (128.6' AMSL)
LAND OWNER:	TOWN OF BLOXOM
TAX PARCEL #:	69A-A-159
DEED BOOK/PAGE:	448/164 & 357/415
PARCEL AREA:	0.854 ACRES
JURIDISTINCTION:	ACCOMACK COUNTY
FLOOD ZONE DETERMINATION: (BASED ON FLOOD INSURANCE RATE MAPS PROVIDED BY FEMA)	
FIRM MAP#:	51001C0475F
EFFECTIVE DATE:	MARCH 16, 2009
FIRM ZONE:	"X"

PROJECT DESCRIPTION	
THIS PROJECT CONSISTS OF THE INSTALLATION OF NEW EASTERN SHORE BROADBAND AUTHORITY TOWER, EQUIPMENT CABINET, ANTENNAS ON NEW TOWER, AND ALL ASSOCIATED INSTALLATIONS.	
SHEET INDEX	
T-1	TITLE SHEET
C-1	GENERAL NOTES, LEGEND & ABBREVIATIONS
C-2	SITE PLAN
C-3	SITE LAYOUT
C-4	GRADING & EROSION CONTROL
C-5	TOWER ELEVATION & DETAILS
C-6	COMPOUND FENCE DETAILS
S-1	STRUCTURAL NOTES
S-2	STRUCTURAL PLAN & DETAILS
E-1	ELECTRICAL PLAN, NOTES & DETAILS
E-2	COMPOUND GROUND PLAN
E-3	GROUNDING, PANEL SCHEDULE, ONE-LINE DIAGRAM

EASTERN SHORE BROADBAND AUTHORITY

4174 LANKFORD HIGHWAY
EXMORE, VIRGINIA 23350


DESIGNED BY:
A Z ENGINEERING
A PROFESSIONAL COMPANY

441 PALLETS ROAD
VIRGINIA BEACH, VIRGINIA 23454
PHONE: 757-672-2339
EMAIL: azoto@cox.net

SITE INFO.:

EASTERN SHORE

26129 SHOREMAIN DRIVE
BLOXOM, VIRGINIA
23308

DESIGN:	ARIAN ZOTO P.E.	
PROJECT NUMBER:	14-301	
SUBMITTALS		
	FINAL CONSTRUCTION DWGS.	09/20/2014
SHEET NAME:		
SHEET NO.:		

T-1

CODE COMPLIANCE	
ALL WORK SHALL BE PERFORMED AND MATERIALS 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 THESE CODES:	
1. 2009 VIRGINIA UNIFORM STATEWIDE BUILDING CODE. 2. 2009 INTERNATIONAL BUILDING CODE 3. 2009 INTERNATIONAL MECHANICAL CODE. 3. ANSI/EIA-222-G LIFE SAFETY CODE. 4. 2009INTERNATIONAL RESIDENTIAL CODE. 5. CITY AND/OR COUNTY ORDINANCES. 6. 2009 INTERNATIONAL PLUMBING CODE. 7. NFPA 70 2008. 8. 2009 INTERNATIONAL FUEL GAS CODE. 9. LOCAL BUILDING CODE(S).	
PROJECT DIRECTORY	
APPLICANT:	EASTERN SHORE BROADBAND AUTHORITY 4174 LANKFORD HIGHWAY EXMORE, VIRGINIA 23350 NICHOLAS PASCARETTI, PROJECT MANAGER (914) 388-1448
ENGINEER:	A Z ENGINEERING 441 PALLETS ROAD VIRGINIA BEACH, VIRGINIA 23454 ARIAN ZOTO, PE (757) 672-2339

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.
2. THE ARCHITECT/ENGINEER HAS MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING IN WRITING THE VERIZON WIRELESS REPRESENTATIVE OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF THE CONTRACTOR'S PROPOSAL OF PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES, THE CONTRACTOR SHALL PRICE THE MORE COSTLY OF EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE IN WRITING.
4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.
5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO BECOME FAMILIAR WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS OTHERWISE NOTED OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATION ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY, OR LOCAL GOVERNMENT AUTHORITY.
11. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVEMENTS, CURBING, ETC., DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
12. THE CONTRACTOR SHALL MAINTAIN THE GENERAL WORK AREA AS CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
13. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.
14. THE CONTRACTOR SHALL NOTIFY THE VERIZON WIRELESS REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL THE CONFLICT IS RESOLVED BY THE VERIZON WIRELESS REPRESENTATIVE.
15. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC., ON THE JOB.

ABBREVIATIONS & SYMBOLS LIST

1P, 2P, & 3P	SINGLE POLE, TWO POLE, & THREE POLES
A/C	AIR CONDITIONING
ADJ	ADJUSTABLE
AFF	ABOVE FINISH FLOOR
AGL	ABOVE GROUND LEVEL
APPROX	APPROXIMATELY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWG	AMERICAN WIRE GAUGE
A OR AMP	AMPERE
BLDG	BUILDING
BLK	BLOCK
BMR	BASE MOBILE RADIO
B/S	BUILDING STANDARD
CU	COPPER
CO	CLEAN OUT
C	CONDUIT SIZE AS NOTED
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CLR	CLEAR
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
DB	DEED BOOK
DBL	DOUBLE
DIA, Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DET, DETL	DETAIL
DWG	DRAWING
DEF	DUAL ELEMENT FUSES
E	EAST
EA	EACH
EL, ELEV	ELEVATION
ELECT	ELECTRICAL
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST/EX	EXISTING
EXT	EXTERIOR
EMT	ELECTRICAL METALLIC TUBING
EC	EMPTY CONDUIT
FIN	FINISH
FLUOR	FLUORESCENT
FLR	FLOOR
FT	FOOT
GRS	GALVANIZED STEEL CONDUIT
G OR GRD	GROUND
GA	GAUGE
GALV	GALVANIZE(D)
GC	GENERAL CONTRACTOR
GPS	GLOBAL POSITIONING SYSTEM
GWB	GYPSUM WALL BOARD
HARD/WD	HARDWOOD
HEC	HIGH STRENGTH
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
ID	INSIDE DIA.
IN	INCH
INFO	INFORMATION
INS	INSULATION
KW	KILOWATTS
LB(S)	POUND(S)
LG	LONG
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MFR	MANUFACTURER
MGR	MANAGER
MIN	MINIMUM
MISC	MISCELLANEOUS
MPH	MILES PER HOUR
MTD	MOUNTED

NEUT	NEUTRAL
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
OHT/OHP	OVERHEAD TELEPHONE/OVERHEAD POWER
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
OZ	OUNCE
PG	PAGE
PIN(F)	PIN FOUND
PIN(S)	PIN SET
PJF	POLYVINYL JOINT FILLER
PLYWD	PLYWOOD
PR	PAIR
PROJ	PROJECT
PROP	PROPERTY
PSI	PER SQUARE INCH
PSF	PER SQUARE FOOT
PT	PRESSURE TREATED
PVC	SCHEDULE 40 PLASTIC CONDUIT.
RAD	RADIATION
RECEPT	RECEPTACLE
REQ'D	REQUIRED
RM	ROOM
RO	ROUGH OPENING
S	SOUTH
SW	SWITCH
SCH	SCHEDULE
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
STL	STEEL
STRUCT	STRUCTURAL
SUSP	SUSPENDED
THRD	THREADED
THRU	THROUGH
TM	TAX MAP
TNND	TINNED
TOC	TOP OF CONCRETE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UG	UNDERGROUND
VERT	VERTICAL
VIF	VERIFY IN FIELD
VT	VINYL TILE
W/	WITH
WDW	WINDOW
W	WEST
W/O	WITHOUT
W	WATTS
WP	WEATHERPROOF
XFRM	TRANSFORMER

∠	ANGLE
&	AND
℄	CENTER LINE
℄	PROPERTY LINE, PLATE
@	AT
#	NUMBER

LEGEND

EXISTING	NEW	
<div>CONC.</div>	<div></div>	CONCRETE
<div>-----</div>		PROPERTY LINE
<div>- - - - -</div>		SETBACK LINE
	<div>- - - . - -</div>	LEASE AREA
<div>- . - . - . -</div>	<div>- . - - - . -</div>	EASEMENT
	<div></div>	BUILDING (FOOTPRINT)
<div>⌀ P/P</div>		POWER POLE
<div>⚡ L/P</div>		LIGHT POLE
<div>□ TELE</div>		TELEPHONE PEDESTAL
<div>— EOE —</div>		OVERHEAD ELECTRIC
<div></div>		CONTOURS
	<div>14.5</div>	SPOT ELEVATION
<div></div>		ASPHALT
	<div>- x - x - x -</div>	FENCE
		CENTER OF DITCH
		TOP OF DITCH/SWALE SLOPE
		RAILROAD TRACKS
		TEMPORARY BENCHMARK
	<div></div>	GRAVEL
		TREELINE
	<div></div>	TREE
	<div></div>	SHRUB
<div>SF—SF—</div>		SILT FENCE
	<div>N</div>	NORTH ARROW
<div>1 C-1</div>		= ELEVATION REFERENCE
<div>1 C-1</div>		= SECTION REFERENCE
<div>1 C-1</div>		= DETAIL REFERENCE

EASTERN SHORE
BROADBAND AUTHORITY

4174 LANKFORD HIGHWAY
EXMORE, VIRGINIA 23350

DESIGNED BY:

A Z ENGINEERING

A PROFESSIONAL COMPANY

441 PALLETS ROAD
VIRGINIA BEACH, VIRGINIA 23454
PHONE: 757-672-2339
EMAIL: azoto@cox.net

SITE INFO.:

EASTERN SHORE

26129 SHOREMAIN DRIVE
BLOXOM, VIRGINIA
23308

DESIGN:	ARIAN ZOTO P.E.
PROJECT NUMBER:	14-301
SUBMITTALS	
<div>⚠</div> FINAL CONSTRUCTION DWGS.	09/20/2014

SHEET NAME:

GENERAL NOTES
LEGEND &
ABBREVIATIONS

SHEET NO.:
C-1

SITE PLAN NOTES

TOPOGRAPHIC INFORMATION WAS TAKEN FROM A TOPOGRAPHIC SURVEY PERFORMED BY "SHORELINE SURVEYORS" DATED AUGUST 14, 2013.

THIS SITE PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE SEARCH/REPORT AND MAY NOT SHOW ANY/ALL EASEMENTS AND RESTRICTIONS OF RECORD THAT MAY EFFECT THE SUBJECT PROPERTY.

PROPERTY IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.

THIS SITE APPEARS TO BE LOCATED IN THE F.I.R.M. ZONE "X" AS SHOWN ON FEMA COMMUNITY PANEL NUMBER 51001C0475F EFFECTIVE DATE MARCH 16, 2009.

NO SUBSURFACE INVESTIGATION WAS PERFORMED BY A Z ENGINEERING.

THERE ARE NO JURISDICTIONAL WETLANDS ON THE SUBJECT PARCEL. NO WETLAND AREAS HAVE BEEN DELINEATED.

ALL PHYSICAL EVIDENCE OF UTILITIES SHOWN ON THIS SITE PLAN ARE FROM SURFACE EVIDENCE.

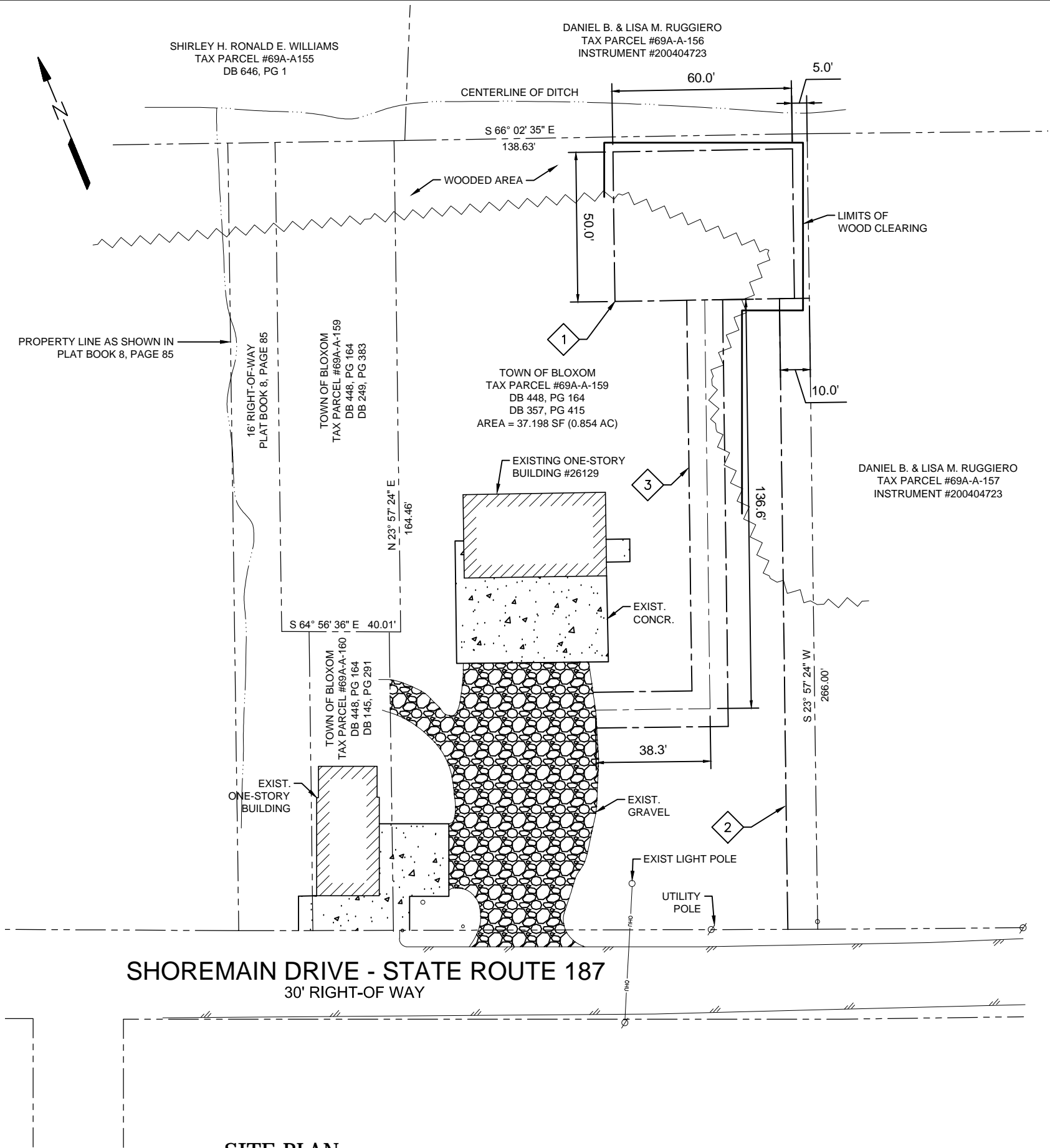
SITE PLAN NOTES

- 1

PROPOSED 50.0' X 60.0' LEASE AREA. SEE C-3 FOR SITE LAYOUT.
- 2

PROPOSED 10.0' WIDE UTILITY EASEMENT.
- 3

PROPOSED 12.0' WIDE GRAVEL ACCESS ROAD.



EASTERN SHORE
BROADBAND AUTHORITY

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EXMORE, VIRGINIA 23350

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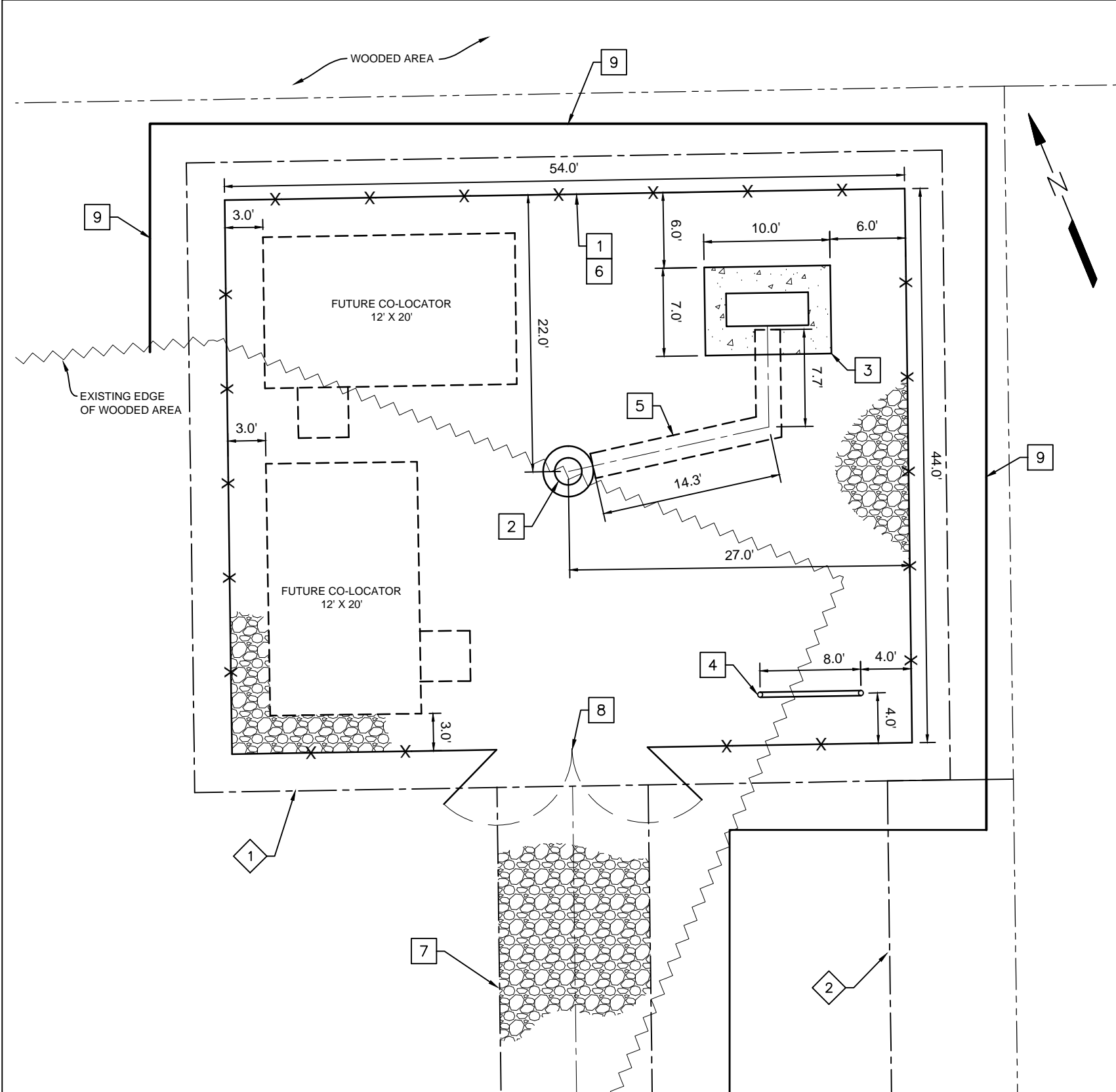
SUBMITTALS
FINAL CONSTRUCTION DWGS. 09/20/2014

SHEET NAME:

SITE PLAN

SHEET NO.:

C-2



SITE LAYOUT

SCALE: 1 : 10

SITE NOTES

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL ASSUME THE RESPONSIBILITY OF LOCATING ANY UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA OF CONSTRUCTION THAT ARE NOT SHOWN ON THESE PLANS. BEFORE YOU DIG, CALL "MISS UTILITY" AT 8-1-1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING, AT HIS EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AT THE FIRST PHASE OF CONSTRUCTION AND CHECKED PERIODICALLY TO ENSURE THEY ARE FUNCTIONING AS INDICATED.
3. THE STOCKPILING OF EXCESS MATERIAL ON SITE WILL NOT BE ALLOWED.
4. ANY VEGETATED AREA DISTURBED BY CONSTRUCTION SHALL BE TOPSOILED AND SEEDED TO RESTORE A PERMANENT VEGETATIVE COVER.
5. THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH OSHA REQUIREMENTS.
6. THE CONTRACTOR IS RESPONSIBLE FOR SITE LAYOUT AND CONSTRUCTION STAKING. LOCATION OF EXISTING STRUCTURES AND UTILITIES MUST BE CONFIRMED BY THE CONTRACTOR.
7. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES OR ORDINANCES.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WITH MATCHING MATERIALS ANY PAVEMENT, DRIVEWAYS, WALKS, CURBS, ETC. THAT MAY BE CUT, OR THAT ARE DAMAGED DURING CONSTRUCTION.

SITE PLAN NOTES

- 1 PROPOSED 50.0' X 60.0' LEASE AREA.
- 2 PROPOSED 10.0' WIDE UTILITY EASEMENT.

CONSTRUCTION NOTES

- 1 PROPOSED 44.0' X 54.0' FENCED AND GRAVELED COMPOUND AREA.
- 2 PROPOSED 100' MONOPOLE TOWER WITH 4' LIGHTING ROD; 105' TOTAL. DESIGNED BY OTHERS.
- 3 PROPOSED 7.0' X 10' EQUIPMENT CONCRETE PAD. SEE S-2 FOR DETAILS.
- 4 PROPOSED 8' WIDE UTILITY STAND.
- 5 PROPOSED ICE-BRIDGE. SEE E-4 FOR DETAILS.
- 6 PROPOSED METALLIC FENCE. SEE C-6 FOR DETAILS.
- 7 PROPOSED 12' GRAVEL ACCESS ROAD.
- 8 PROPOSED 12' ENTRANCE GATE.
- 9 PROPOSED LIMITS OF WOODED AREA CLEARING.

EASTERN SHORE
BROADBAND AUTHORITY

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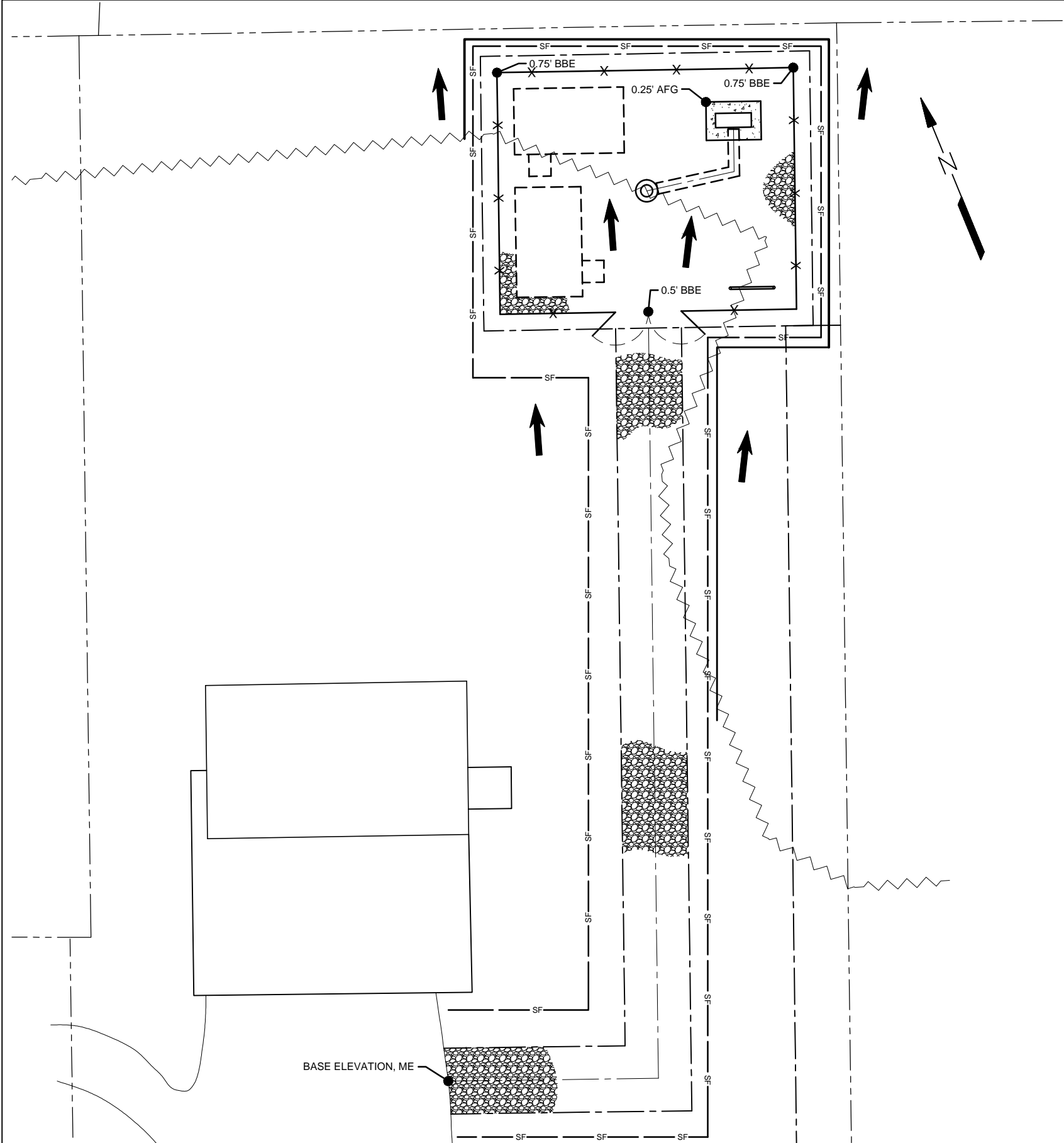
FINAL CONSTRUCTION DWGS. 09/20/2014

SHEET NAME:

SITE LAYOUT

SHEET NO.:

C-3



GRADING & EROSION CONTROL

SCALE: 1 : 20

EROSION AND SEDIMENT CONTROL NOTES

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (4VAC50-30).

ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION. THE NAME OF THE RESPONSIBLE LAND DISTURBER MUST BE PROVIDED TO THE PLAN-APPROVING AUTHORITY PRIOR TO ACTUAL ENGAGEMENT IN LAND-DISTURBING ACTIVITY SHOWN ON THE APPROVED SITE PLAN. IF THE NAME IS NOT PROVIDED PRIOR TO ENGAGING IN THE LAND-DISTURBING ACTIVITY THE PLAN'S APPROVAL WILL BE REVOKED.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN-APPROVING AUTHORITY.

ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN-APPROVING AUTHORITY.

ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED, AFTER WHICH, UPON APPROVAL OF THE PLAN-APPROVING AUTHORITY, THE CONTROLS SHALL BE REMOVED. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

ES-8: DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST EVERY 2 WEEKS AND IMMEDIATELY AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

ES-10: THE CONTRACTOR IS RESPONSIBLE FOR THE DAILY REMOVAL OF SEDIMENT THAT HAS BEEN TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE.

ES-11: SEEDING OPERATIONS SHALL BE INITIATED WITHIN 7 DAYS AFTER REACHING FINAL GRADE OR UPON SUSPENSION OF GRADING OPERATIONS FOR ANTICIPATED DURATION OF GREATER THAN 30 DAYS OR UPON COMPLETION OF GRADING OPERATIONS FOR A SPECIFIC AREA.

ES-12: THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOILS WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS, OR HARM ANIMAL OR PLANT LIFE.

EROSION CONTROL NARRATIVE

THIS PROJECT CONSISTS OF THE CONSTRUCTION OF CONCRETE FOUNDATION FOR NEW EQUIPMENT SHELTER, AND POWER GENERATOR; INSTALLATION OF EQUIPMENT SHELTER, POWER GENERATOR, CABLE'S ICE-BRIDGE AND ASSOCIATED ANTENNAS ON EXISTING TOWER. AN EXISTING ENTRANCE ONTO SHOREMAIN DRIVE WILL BE UTILIZED TO ACCESS THIS SITE. EXISTING DRAINAGE PATTERNS WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.

THE COMPOUND IS GRATED AT SLOPE 2-3%, AND STABILIZED WITH 6 INCHES OF GRAVEL PLACED ON A WEED INHIBITING GEOTEXTILE.

THERE ARE NO AREAS THAT HAVE THE POTENTIAL FOR SERIOUS EROSION PROBLEMS.

EROSION CONTROL MEASURES ARE TO BE IN PLACE PRIOR SITE CLEARING AND GRADING ACTIVITIES. ALL UNGRAVELED AREAS ARE TO BE SEEDED ACCORDING TO STATE REGULATIONS WITHIN SEVEN (7) DAYS AFTER ROUGH GRADING OPERATIONS ARE COMPLETED. PERIMETER SILT FENCE WILL SERVE AS THE PRIMARY EROSION AND SEDIMENT CONTROL DEVICES DURING THE ENTIRE CONSTRUCTION PROCESS.

LEGEND

—SF—	SILT FENCE
BBE	BELLOW BASE ELEVATION
AFG	ABOVE EXISTING FINISHED GRADE
ME	MATCH EXISTING ELEVATION OF THE EXISTING PAD
➔	DIRECTION OF RUNNING WATERS

EASTERN SHORE BROADBAND AUTHORITY

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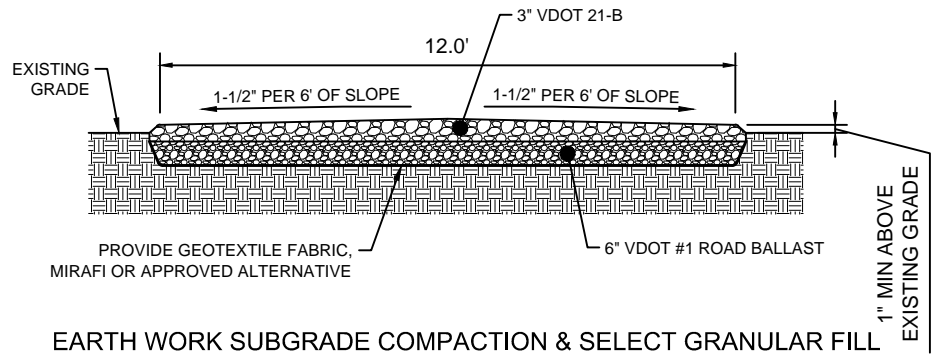
FINAL CONSTRUCTION DWGS. 09/20/2014

SHEET NAME:

GRADING & EROSION CONTROL

SHEET NO.:

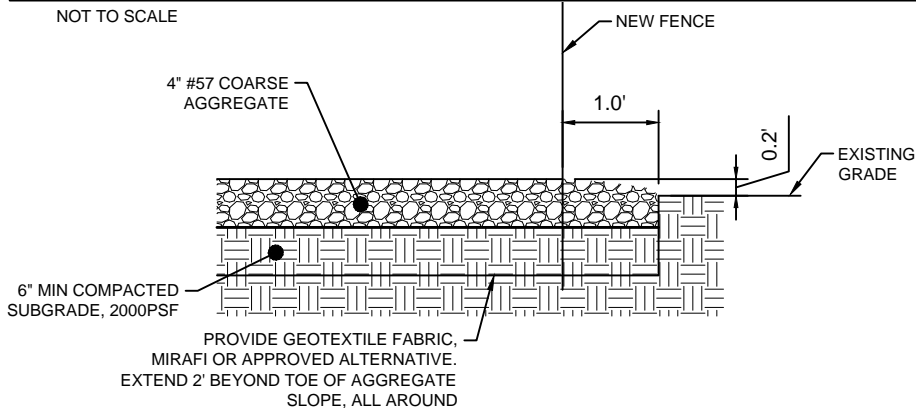
C-4



EARTH WORK SUBGRADE COMPACTION & SELECT GRANULAR FILL

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEARING & GRUBBING THE CONSTRUCTION SITE AND ROADWAY AREAS. THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL REPORT WHEN NECESSARY PREPARED FOR THIS SITE FOR SITE WORK PREPARATION & FOUNDATION WORK. AS A MINIMUM THE TOP 3" OF GRADE SHALL BE REMOVED. THE EXPOSED SUBGRADE COMPACTED TO 2000 PSF, AND GEOTEXTILE FABRIC BE USED AS NOTED ON DRAWINGS.
- 2. ALL SELECT GRANULAR FILL SHALL BE COMPACTED TO A 95% COMPACTION AT A MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 OR WITHIN PLUS OR MINUS 3% OF OPTIMUM MOISTURE CONTENT.

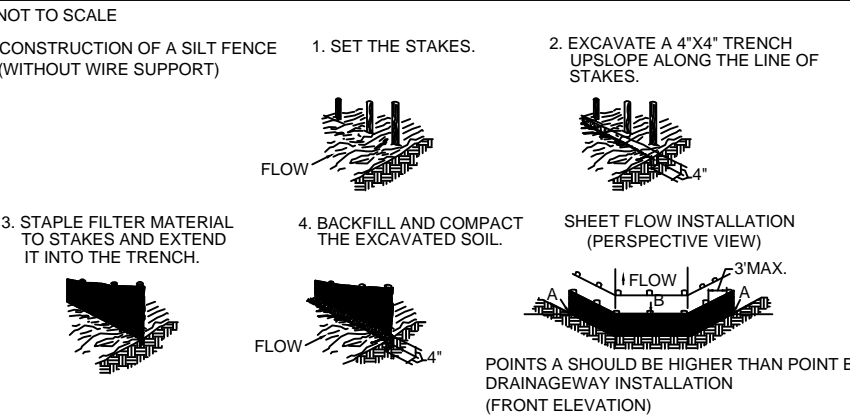
TYPICAL ACCESS ROAD CROSS SECTION



EARTH WORK SUBGRADE COMPACTION & SELECT GRANULAR FILL

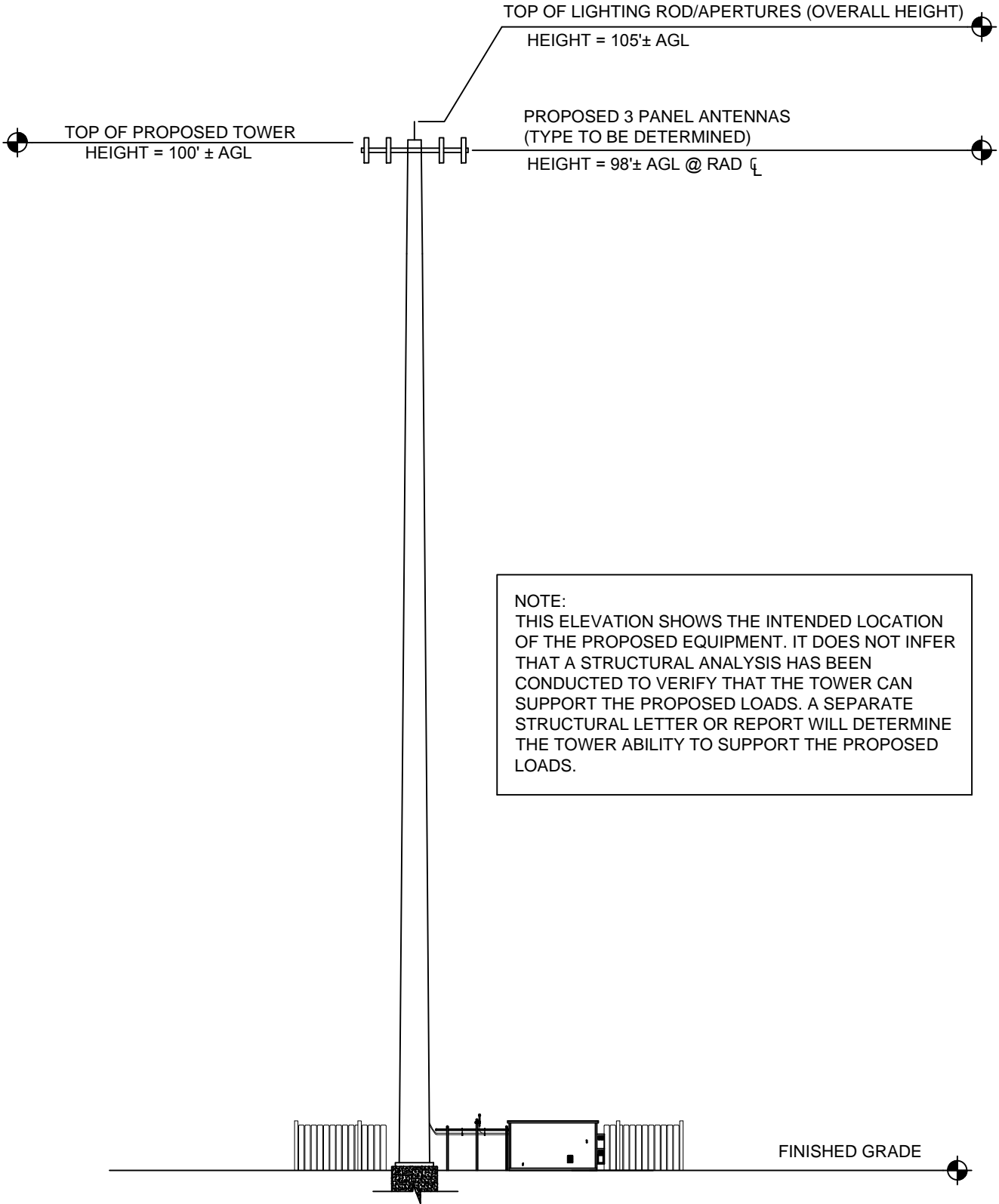
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- 2. ALL SELECT GRANULAR FILL SHALL BE COMPACTED TO A 95% COMPACTION AT A MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 OR WITHIN PLUS OR MINUS 3% OF OPTIMUM MOISTURE CONTENT.

TYPICAL GRAVEL COMPOUND CROSS SECTION



SILT FENCE FABRIC SHALL BE 36" TALL, STAKED WITH 2" X 2" X 5" HARDWOOD STAKES ON 6' CENTERS.

SILT FENCE



TOWER ELEVATION VIEW

NOT TO SCALE

EASTERN SHORE
BROADBAND AUTHORITY

4174 LANKFORD HIGHWAY
EXMORE, VIRGINIA 23350

DESIGNED BY:
A Z ENGINEERING
A PROFESSIONAL COMPANY

441 PALLETS ROAD
VIRGINIA BEACH, VIRGINIA 23454
PHONE: 757-672-2339
EMAIL: azoto@cox.net

SITE INFO.:

EASTERN SHORE

26129 SHOREMAIN DRIVE
BLOXOM, VIRGINIA
23308

DESIGN: ARIAN ZOTO P.E.
PROJECT NUMBER: 14-301

SUBMITTALS

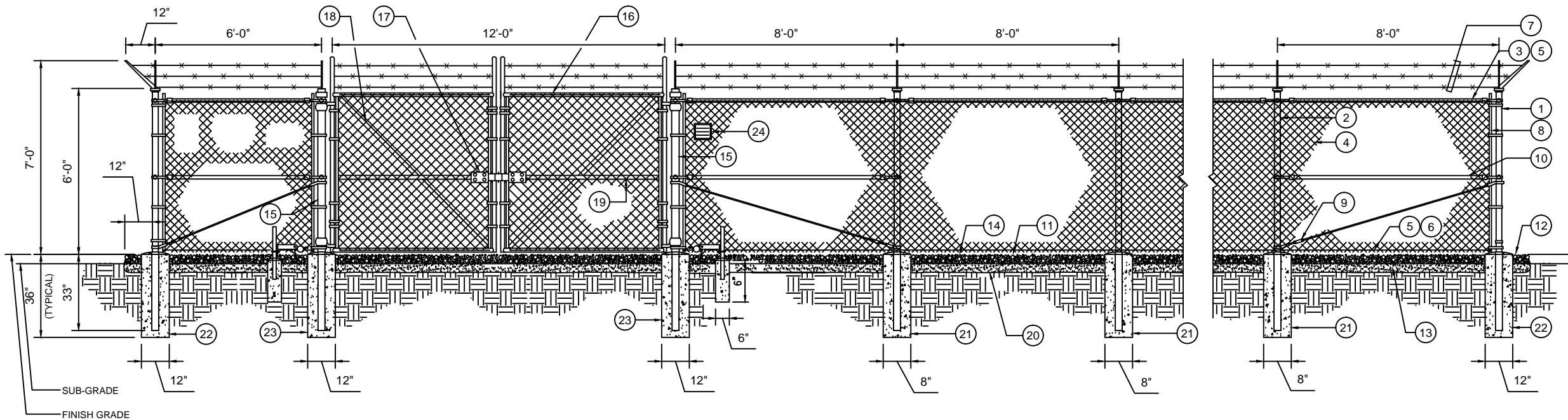
FINAL CONSTRUCTION DWGS.	09/20/2014

SHEET NAME:

TOWER ELEVATION
& DETAILS

SHEET NO.:

C-5



1
C-6
COMPOUND FENCE DETAIL
NOT TO SCALE

REFERENCE NOTES:

- 1 CORNER, END OR PULL POST 3" NOMINAL SCHEDULE 40 PIPE.
- 2 LINE POST: 2 1/2" SCHEDULE 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" OC
- 3 TOP RAIL & BRACE RAIL: 1 1/2" PIPE, PER ASTM-F1083.
- 4 FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- 5 TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX. 24" INTERVALS.
- 6 TENSION WIRE: 9 GA GALVANIZED STEEL.
- 7 BARBED WIRE: DOUBLE STRAND 12-1/2" OD TWISTED WIRE TO MATCH WITH FABRIC 14 GA, 4 POINT BARBS SPACED ON APPROXIMATELY 5" CENTERS.
- 8 STRETCHER BAR.
- 9 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
- 10 FENCE CORNER POST BRACE: 1 5/8" DIA EACH CORNER EACH WAY.
- 11 1 1/2" MAXIMUM CLEARANCE FROM GRADE.
- 12 4" FINISH OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.
- 13 6" COMPACTED 95% BASE MATERIAL OR AS DETERMINED BY CONSTRUCTION MANAGER DURING BID WALK.
- 14 FINISH GRADE SHALL BE UNIFORM AND LEVEL.
- 15 GATE POST 4". SCHEDULE 40 PIPE, FOR GATE WIDTHS UP THRU 7 FEET OR 14 FEET FOR DOUBLE SWING GATE, PER ASTM-F1083.
- 16 GATE FRAME: 1 1/2" PIPE, PER ASTM-F1083.
- 17 GATE LOCKING DEVICE (OFCI)

- 18 1-1/2 PAIR INDUSTRIAL MALLEABLE IRON OFFSET PIN HINGE (PAGE-WILSON M-6 OR EQUAL)
- 19 GATE FRAME BRACE
- 20 GEOTEXTILE FABRIC
- 21 LINE POST: CONCRETE FOUNDATION (2000 PSI)
- 22 CORNER POST: CONCRETE FOUNDATION (2000 PSI)
- 23 GATE POST: CONCRETE FOUNDATION (2000 PSI)
- 24 KNOX BOX MODEL 3205 RAPID ENTRY SYSTEM MOUNTED TO FENCE EXTERIOR BY U-BOLTS.

GENERAL NOTES:

1. INSTALL FENCING PER ASTM F-567
2. INSTALL SWING GATES PER ASTM F- 900
3. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
4. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE 1 1/2" GALV. (HOT DIP, ASTM A120 GRADE "A" STEEL). ALL GATE FRAMES SHALL BE WELDED. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALV. (OR EQUAL).
5. ALL OPEN POSTS SHALL HAVE END-CAPS.
6. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.
7. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.

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FINAL CONSTRUCTION DWGS. 09/20/2014

SHEET NAME:

COMPOUND
FENCE
DETAILS

SHEET NO.:

C-6

GENERAL NOTES

1. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER DRAWINGS. COORDINATE THE WORK OF OTHER TRADES INCLUDING, BUT NOT LIMITED TO, THE REQUIREMENTS FOR SLEEVES, INSERTS, HOLES, AND ANCHORS.
2. REPORT DISCREPANCIES IN DIMENSIONS BETWEEN DIFFERENT DRAWINGS TO THE ENGINEER PRIOR TO BEGINNING WORK IN AREAS THAT WILL BE AFFECTED.
3. DETAILS APPLY NOT ONLY WHERE SPECIFICALLY INDICATED OR REFERENCED, BUT ALSO IN ALL OTHER CASES WHERE THE NATURE OF THE CONSTRUCTION REQUIRES THEIR USE. DETERMINE APPLICABILITY FROM DESCRIPTIVE TITLES OR FROM THE SIMILARITY OF A CONSTRUCTION CONDITION TO ANOTHER CONDITION WHERE THE DETAIL IS SPECIFICALLY INDICATED OR REFERENCED.
4. PROVIDE TEMPORARY BRACING AND SHORING OF THE STRUCTURE AND COMPONENTS UNTIL ALL COMPONENTS ARE ERECTED AND ALL CONNECTIONS ARE FULLY MADE, AS NECESSARY, TO ENSURE STABILITY DURING CONSTRUCTION.
5. VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ETC., NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE STRUCTURE TO THE EXISTING STRUCTURE. TAKE ALL MEASUREMENTS NECESSARY FOR PROPER FABRICATION AND ERECTION OF STRUCTURAL MEMBERS.
6. BEFORE PROCEEDING WITH ANY WORK WITHIN THE EXISTING STRUCTURE, BECOME FAMILIAR WITH THE STRUCTURAL CONDITIONS OF THE EXISTING STRUCTURE. PROVIDE ALL NECESSARY SAFEGUARDS TO MAINTAIN ALL PARTS OF THE STRUCTURE IN A SAFE CONDITION AT ALL TIMES DURING THE PROCESS OF CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING STRUCTURE THAT ARE TO REMAIN.
7. WHERE EXISTING CONSTRUCTION THAT IS TO REMAIN IN PLACE, BE RE-USED, OR REMAIN THE PROPERTY OF THE OWNER IS DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION, REPLACE WITH NEW OR REPAIR TO ITS ORIGINAL CONDITION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE ENGINEER. ADDITIONAL COSTS SHALL BE BORNE BY THE CONTRACTOR.
8. REPRODUCTION OF THE CONTRACT DRAWINGS SHALL NOT BE USED AS SHOP DRAWINGS UNDER ANY CIRCUMSTANCE.
9. ALL ITEMS SHOWN IN THESE DRAWINGS ARE NEW CONSTRUCTION UNLESS SPECIFICALLY NOTED AS EXISTING.
10. DIMENSIONS GIVEN FOR THE EXISTING STRUCTURE AND COMPONENTS THEREOF ARE APPROXIMATE AND ARE PROVIDED FOR ESTIMATING PURPOSES ONLY. DETAIL WORK SHALL BE BASED ON THE CONTRACTOR'S FIELD MEASUREMENTS.

CONCRETE NOTES

1. CONCRETE CONSTRUCTION SHALL COMPLY WITH PROVISIONS OF THE FOLLOWING CODES, SPECIFICATIONS, AND STANDARDS: AMERICAN CONCRETE INSTITUTE (ACI) 301-99, SPECIFICATIONS FOR STRUCTURAL CONCRETE; ACI 318-02, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".
2. CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. SUBMIT MIX DESIGN FOR APPROVAL.
3. CONCRETE MATERIALS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

PORTLAND CEMENT

FLY ASH

(NOT TO EXCEED 15% OF CEMENT BY WEIGHT)

NORMAL WEIGHT AGGREGATES

WATER

AIR-ENTRAINING ADMIXTURE

WATER REDUCING ADMIXTURES

RETARDING ADMIXTURE

WATER-REDUCING AND RETARDER ADMIXTURES

HIGH-RANGE, WATER-REDUCING ADMIXTURES

HIGH-RANGE-WATER REDUCING AND RETARDER ADMIXTURES

ACCELERATING ADMIXTURE

ASTM C 150, TYPE I

ASTM C 618, TYPE F

ASTM C 33

POTABLE

ASTM C 260

ASTM C 494, TYPE A

ASTM C 494, TYPE B

ASTM C 494, TYPE F

ASTM C 494, TYPE D

ASTM C 494, TYPE F

ASTM C 494, TYPE E
4. REINFORCING STEEL SHALL BE DEFORMED BARS IN ACCORDANCE WITH ASTM A-615, GRADE 60. REINFORCING MARKED CONTINUOUS SHALL BE LAPPED IN ACCORDANCE WITH ACI 318-02.
5. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 82 AND A 185. LAP ONE FULL MESH SPACING AND TIE.
6. SUPPORT REINFORCING AND WELDED WIRE FABRIC ON METAL CHAIRS OR BOLSTERS.
7. MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE IN ACCORDANCE WITH ACI 318-02 UNLESS OTHERWISE INDICATED.
8. ALL COLD WEATHER CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 306R, "COLD WEATHER CONCRETING".
9. ALL HOT WEATHER CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 305R, "HOT WEATHER CONCRETING".
10. CURING COMPOUND SHALL COMPLY WITH ASTM C 309, TYPE I, CLASS B.
11. CONTRACTOR MAY SUBSTITUTE COLLATED FIBRILLATED POLYPROPYLENE OFELIN FIBERS, REFERRED TO AS FIBER MESH, IN PLACE OF WELDED WIRE FABRIC.

EXCAVATION NOTES

1. SELECT FILL MATERIAL: ASTM D 2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM, OR A COMBINATION OF THESE GROUP SYMBOLS; FREE OF WASTE, FROZEN MATERIALS, AND VEGETATION, WITH LESS THAN 5 PERCENT BY WEIGHT RUBBLE. RUBLE SHALL BE NO LARGER THAN 4 INCHES IN ANY DIRECTION.
2. PIER SHALL NOT BE PLACED IN FROZEN GROUND.
3. DESIGN ALLOWABLE SOIL BEARING PRESSURE IS 2000 PSF ON SUITABLE RESIDUAL SOIL OR PROPERLY COMPACTED STRUCTURAL FILL. STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698).
4. AFTER EXCAVATIONS ARE MADE, THE BOTTOMS SHALL BE INSPECTED TO VERIFY THAT THE SUPPORTING SOILS ARE SUITABLE FOR BEARING AND ARE CAPABLE OF SUPPORTING THE DESIGN ALLOWABLE PRESSURE OF 2000 PSF.

STRUCTURAL NOTES

1. STRUCTURAL LOADS ARE IN ACCORDANCE WITH THE IBC 2012 AND ASCE 7-10.
2. DESIGN LOAD CRITERIA:

A. GRAVITY LOADS:

B. EQUIPMENT LOADS:

C. GROUND SNOW LOAD :

D. CONCRETE PAD LIVE LOAD:

E. WIND LOADS:

F. BASIC WIND SPEED:

G. VELOCITY PRESSURE:

H. EXPOSURE CATEGORY:

I. IMPORTANCE FACTOR:

4,000 LBS

30 PSF

100 PSF

120 MPH

15 PSF

C

1.0
3. INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED BY FIELD MEASUREMENT AND FROM STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ENGINEER, IN WRITING, OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.
4. BEFORE PROCEEDING WITH ANY WORK WITHIN THE EXISTING STRUCTURE, THE CONTRACTOR SHALL FAMILIARIZE HIM/HERSELF WITH THE STRUCTURAL CONDITIONS OF THE EXISTING STRUCTURE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY SAFEGUARDS, TO MAINTAIN ALL PARTS OF THE STRUCTURE IN A SAFE CONDITION AT ALL TIMES DURING THE PROCESS OF CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE STRUCTURE WHICH ARE TO REMAIN.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIMENSIONS, ELEVATIONS, ETC., NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE STRUCTURE TO THE EXISTING STRUCTURE.
6. NORTH ARROW ON PLANS REFERS TO TRUE NORTH. CONTRACTOR SHALL VERIFY NORTH AND INFORM ARCHITECT/ENGINEER OF ANY DISCREPANCY BEFORE STARTING CONSTRUCTION.

STEEL NOTES

1. ALL STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH THE AISC "STEEL CONSTRUCTION MANUAL", THIRTEENTH EDITION, INCLUDING CURRENT REVISIONS.
2. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

WIDE FLANGE SHAPES

SQUARE AND RECTANGULAR HSS

ROUND HSS

PLATES AND ANGLES

THREADED ROD

HIGH STRENGTH BOLTS

ANCHOR BOLTS

PIPE

ASTM A992

ASTM A500 GRADE B

ASTM A501 GRADE B

ASTM A36

ASTM A36

ASTM A325

ASTM F1554

ASTM A53 GRADE B
3. GRATING SIZE SHALL BE 1-1/4" X 3/8" (BEARING BARS) SPACED 1-13/16" OC WITH 3/8" X 1/2" (CROSS BARS) SPACED AT 4" OC. ALL GRATING COMPONENTS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.ALL WELDING SHALL BE IN ACCORDANCE WITH THE LATEST AWS STRUCTURAL WELDING CODE. ALL WELDERS SHALL DISPLAY PROPER CERTIFICATION OF QUALIFICATION.
4. HOLES SHALL NOT BE FLAME CUT THRU STEEL, UNLESS APPROVED BY ENGINEER.
5. WELDS SHALL BE MADE WITH E-70XX ELECTRODES UNLESS NOTED OTHERWISE.
6. ALL STEEL IS TO BE GALVANIZED ACCORDING TO ASTM A123, ASTM A153/A 153M OR ASTM A653, G90, AS APPLICABLE.
7. REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT CONFORMING TO ASTM A780 BY APPLICATION STICK, THICK PASTE MATERIAL OF ZINC PAINT SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIALS IS APPLIED WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTE. SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF EXCESS MATERIAL.

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BROADBAND AUTHORITY

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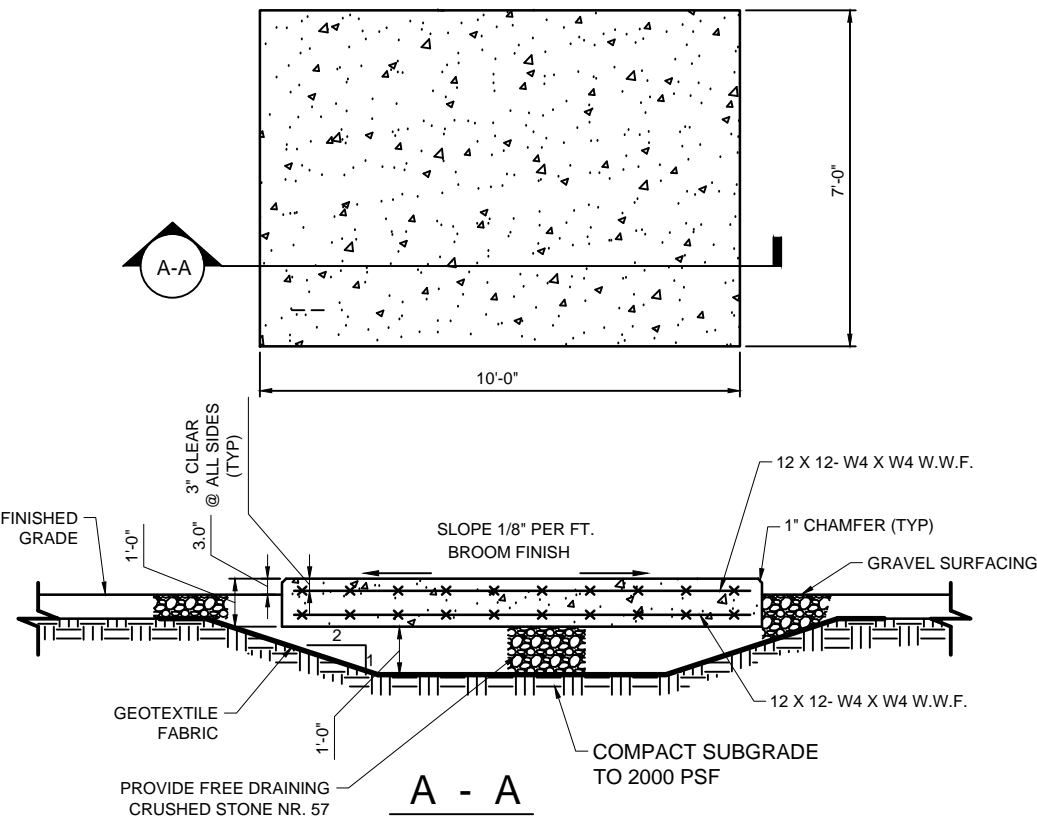
	FINAL CONSTRUCTION DWGS.	09/20/2014

SHEET NAME:

STRUCTURAL
NOTES

SHEET NO.:

S-1



1
S-2

CONCRETE PAD PLAN & DETAILS

SCALE: 1/4" = 1'-0"

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	FINAL CONSTRUCTION DWGS.	09/20/2014

SHEET NAME:

**STRUCTURAL
PLAN & DETAILS**

SHEET NO.:

S-2

ELECTRIC PLAN

SCALE: 1/8" = 1-0'

ELECTRIC NOTES

- 1

Ø4" PVC (SCH40) C FOR INCOMING POWER. COORDINATE WITH POWER COMPANY FOR THE WIRING SIZE.
- 2

PROVIDE 4-GANG METER BASE. COORDINATE W/POWER COMPANY.
- 3

PROVIDE METER IN NEW 4-GANG METER BASE. COORDINATE W/POWER COMPANY.
- 4

PROVIDE CIRCUIT BREAKER ENCLOSURE, SERVICE ENTRANCE RATED 240V, 200A, 1Ø, NEMA 3R, MIN.22KAIC. PROVIDE GROUND PER NEC.
- 5

Ø3" PVC (SCH40) C WIT (3)#3/0, CU, THWN & 1#6, CU, THWN GND. TRANSITION TO Ø3" RMC C ABOVE THE GROUND. MIN. 30" BFG.
- 6

Ø4" PVC (SCH40) C FOR FIBER CABLE RUN FROM FIBER CABINET TO EQUIPMENT CABINET.
- 7

NEW UTILITY STAND. SEE DETAIL SHEET E-2.
- 8

NEW POWER PANEL. 240V, 200A, 1Ø, NEMA 3R.
- 9

Ø4" PVC (SCH40) C FOR FUTURE FIBER CABLE.
- 10

Ø3" PVC (SCH40) C FOR FUTURE POWER.
- 11

STUB-UP AND COVER FOR FUTURE USE.

ELECTRICAL LEGEND

- EXISTING PANELBOARD
- NEW PANELBOARD
- GROUND BAR
- JUNCTION BOX
- POWER WIRING, 2FF12, 1FF12-1/2" C MIN
- GROUNDING WIRING
- DISCONNECT SWITCH
- EQUIPMENT CONNECTION
- LIGHTING FIXTURE
- DUPLEX RECEPTACLE, 20A, 120V
- LIGHTING SWITCH, 20A, 120A
- EXIT LIGHT

ELECTRICAL ABBREVIATIONS

- A

AMPERE
- ATS

AUTOMATIC TRANSFER SWITCH
- BFG

BELLOW FINISHED GRADE
- C

CONDUIT
- CU

COPPER
- CB

CIRCUIT BREAKER
- (E)

EXISTING
- EMT

ELECTRICAL METALLIC TUBING
- GND

GROUND
- RMC

RIGID METAL CONDUIT
- KAIC

THOUSAND AMPERE INTERRUPT. CURRENT
- MLO

MAIN LUGS ONLY
- P

POLE
- V

VOLT

ELECTRICAL SPECIFICATIONS

A. BASIC ELECTRICAL REQUIREMENTS:

1. THE WORK INCLUDES FURNISHING AND INSTALLING THE MATERIAL, EQUIPMENT AND SYSTEMS COMPLETE AS SPECIFIED AND/OR INDICATED ON THE DRAWINGS. THE ELECTRICAL INSTALLATIONS, WHEN FINISHED, SHALL BE COMPLETE AND COORDINATED AND READY FOR SATISFACTORY SERVICE.
2. ALL WORK UNDER THIS CONTRACT SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE MUNICIPAL, STATE AND LOCAL ELECTRICAL CODES THAT GOVERN EACH PARTICULAR TRADE AND THE NATIONAL ELECTRICAL CODE.
3. THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL EQUIPMENT INSTALLATION WITH ALL TRADES AND OWNER'S EQUIPMENT.
4. THE CONTRACTOR SHALL MAKE APPLICATION AND PAY ALL CHARGES FOR ALL NECESSARY PERMITS, LICENSES, AND INSPECTIONS AS REQUIRED UNDER THE ABOVE CODES. UPON COMPLETION OF THE WORK, THE CUSTOMARY CERTIFICATIONS OF APPROVAL SHALL BE FURNISHED.
5. NO MATERIALS OR EQUIPMENT SHALL BE USED IN THE WORK UNTIL APPROVED. ALL MATERIALS SHALL BE UL LISTED. ALL EQUIPMENT SHALL BE RATED MINIMUM 22KAIC.
6. THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS AND SHALL INSPECT THE EXISTING CONDITIONS OF THE SITE. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.
7. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL INSTALLATIONS. DETAILS OF PROPOSED DEPARTURES DUE TO ACTUAL FIELD CONDITIONS OR OTHER CAUSES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION. REWORK OF COMPLETED ITEMS DUE TO IMPROPER FIELD COORDINATION SHALL BE AT THE CONTRACTORS EXPENSE.

B. WIRES AND CABLES:

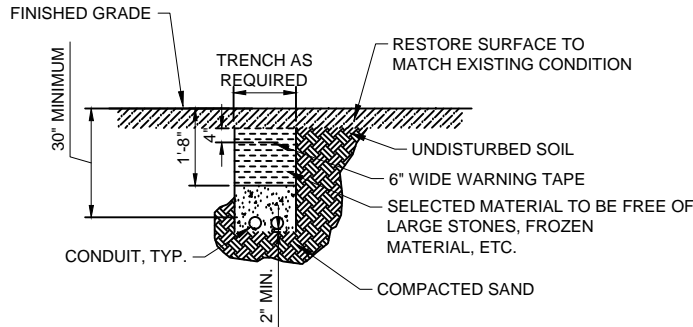
1. BUILDING WIRE, UNLESS OTHERWISE INDICATED, SHALL BE 600 VOLT, TYPE THWN INSULATION FOR INTERIOR AND EXTERIOR USE. CONDUCTORS SHALL BE SOFT DRAWN COPPER OF NOT LESS THAN 98% CONDUCTIVITY. NO ROMEX OR AC (BX) CABLE WILL BE ALLOWED ON THE PROJECT.
2. NO WIRE SMALLER THAN NO. TWELVE (12) AWG SHALL BE USED UNLESS OTHERWISE INDICATED. CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND FROM TERMINAL BOARD TO POINT OF FINAL CONNECTION, AND NO SPLICE SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES. ALL CONDUCTORS SHALL BE OF THE SIZES AS INDICATED. ALL WIRES NO. EIGHT (8) AWG AND LARGER SHALL BE STRANDED. THE CONTRACTOR SHALL MAKE WIRING CONNECTIONS OF ALL ELECTRICAL EQUIPMENT REQUIRING ELECTRICAL SERVICE. WIRES AND CABLES SHALL BE AS MANUFACTURED BY PIRELLI, ROYAL, AND TRIANGLE OR EQUIVALENT.
3. ALL WIRING SHALL BE COLOR CODED, MATCH EXISTING SYSTEM COLOR CODING WHERE APPLICABLE.

C. GROUNDING:

1. PROVIDE GROUND FOR ALL RACEWAYS, DEVICES, AND UTILIZATION EQUIPMENT PERMANENTLY AND EFFECTIVELY IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, AS HEREINAFTER SPECIFIED. ALL GROUNDING AND BONDING CONNECTIONS SHALL BE SOLDERLESS.
2. PROVIDE INSULATED GROUNDING CONDUCTORS FOR FEEDER AND BRANCH CIRCUIT WIRING AS CALLED FOR ON THE PLANS. PROVIDE GROUNDING BLOCKS, TERMINALS, ETC. FOR CONNECTION OF GROUND WIRE IN ALL DISTRIBUTION EQUIPMENT.
3. RESISTIVITY/EGR INSPECTION - 24-HOUR NOTICE SHALL BE GIVEN TO BEFORE THE COMPLETION OF THE EGR TO ALLOW FOR AN OPEN TRENCH INSPECTION OF THE SYSTEM AND TO WITNESS THE GROUND FIELD RESISTIVITY TEST. A THREE ELECTRODE FALL OF POTENTIAL TEST IS REQUIRED WITH AN EXPECTED READING OF LESS THAN 5 OHMS. A RESISTIVITY TEST REPORT, WITH A COPY OF THE TEST UNIT'S MOST RECENT CALIBRATION CERTIFICATION IS REQUIRED.

D. CONDUIT:

1. CONDUIT INSIDE BUILDING SHALL BE EMT. CONDUIT BELOW GRADE SHALL BE PVC SCHEDULE 40, MINIMUM 18" BELLOW GRADE. CHANGE PVC TO RMC PRIOR TO RISING ABOVE GRADE. PENETRATE EXTERIOR WALLS WITH RMC.
2. CONDUIT SHALL BE UL LISTED AND APPROVED FOR ITS INTENDED USE.



UNDERGROUND CONDUITS DETAIL

NOT TO SCALE

EASTERN SHORE BROADBAND AUTHORITY

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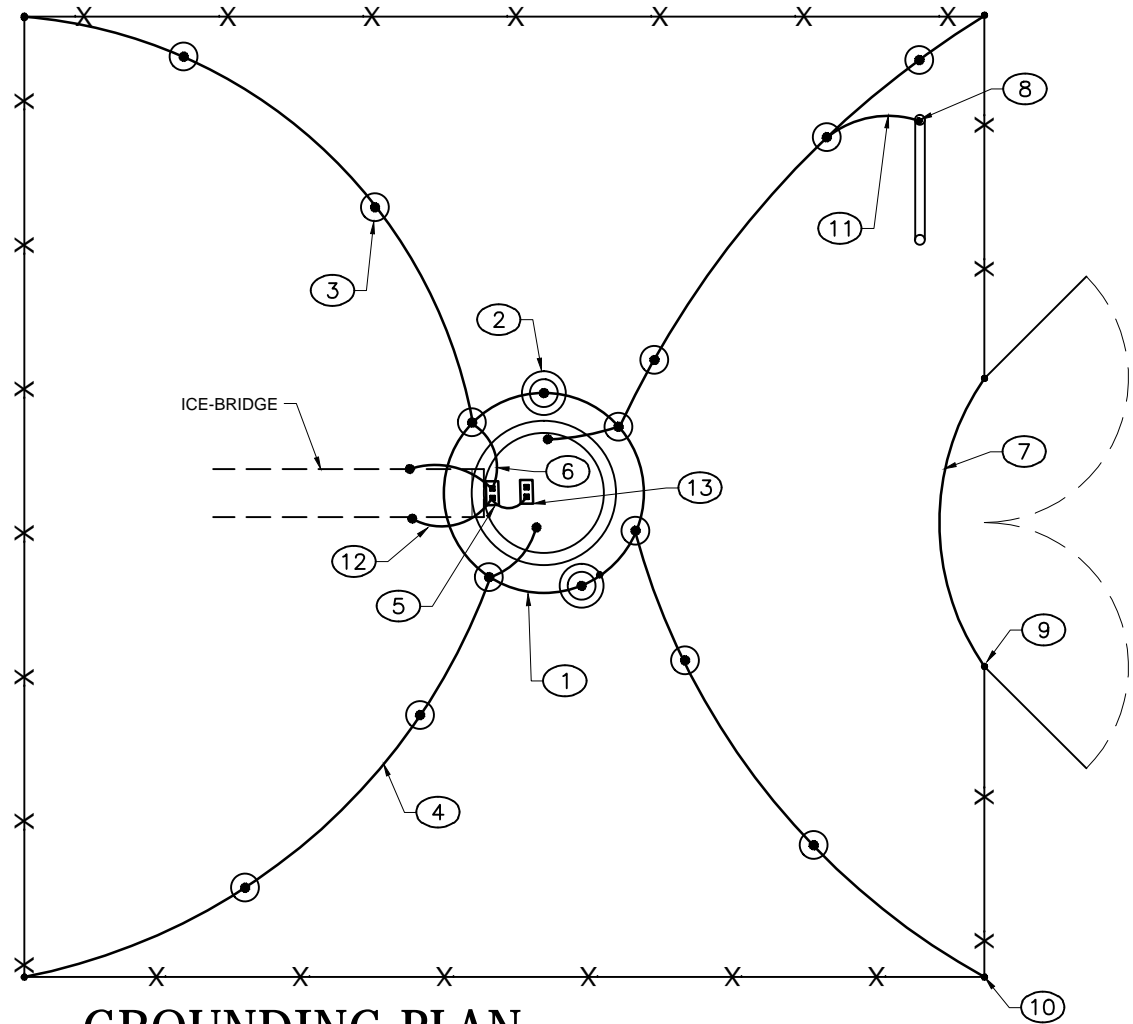
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SHEET NAME:

ELECTRIC PLAN, NOTES & DETAILS

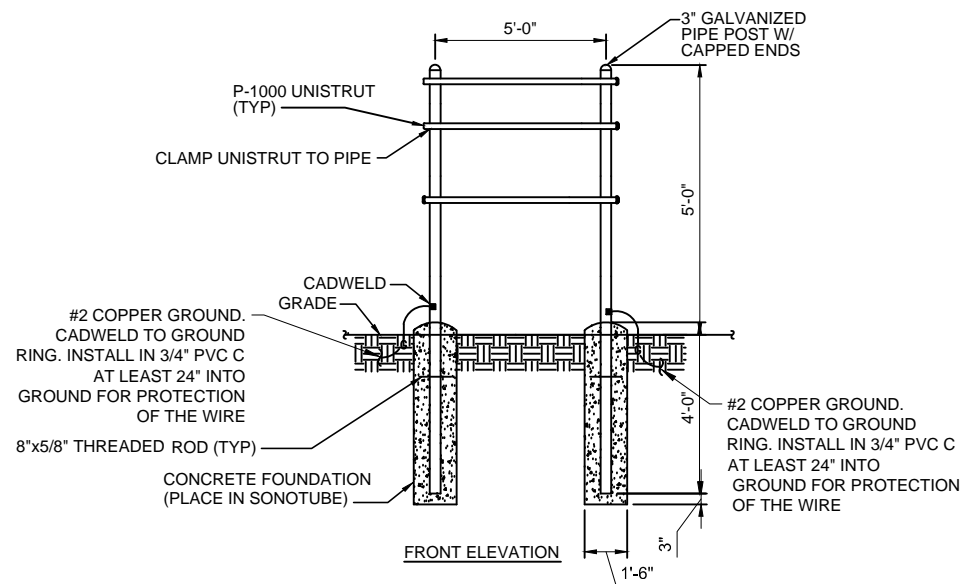
SHEET NO.:

E-1



GROUNDING PLAN

SCALE: 1/8" = 1-0'



NOTE: CONTRACTOR SHALL VERIFY AVAILABLE SHORT CIRCUIT CURRENT AT THE SERVICE TRANSFORMER'S SECONDARY TERMINALS.

NEW SERVICE STAND ELEVATION

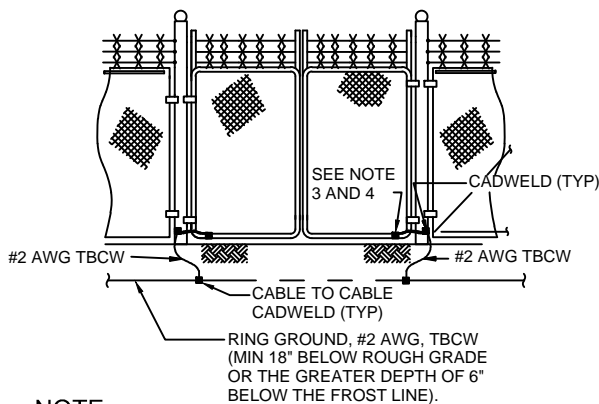
NOT TO SCALE

GENERAL GROUNDING NOTES

- ALL #2 TINNED COPPER GROUND WIRE ABOVE THE GRADE SHALL BE SHEATHED IN 3/4" GRAY PVC CONDUIT, SEAL TOP WITH GRAY 20 YEAR SILICON CAULK. INSTALL CONDUIT TO CADWELD CONNECTION AT GROUND RING.
- INDICATED DRAWING LOCATIONS ARE FOR SCHEMATIC PURPOSE ONLY. EXACT LOCATION SHOULD BE VERIFIED BY CONTRACTOR.
- GROUND RING TO BE PLACED A MINIMUM DISTANCE OF 2' FROM ANY CONCRETE FOUNDATION.
- FENCE TO BE CONNECTED TO GROUND RING AT ALL CORNERS WITH CADWELD AT FENCE POST AND GROUND ROD.
- TOWER LEG TO BE CONNECTED TO GROUND ROD IN TOWER RING. CADWELD TO TOWER LEG, 3' ABOVE BASE PLATE.
- GATE LEAF TO BE CADWELDED TO GATE POST WITH 2/0 WELDING CABLE.
- CADWELD A #2 LEAD FROM GATE POST TO GATE POST.
- ALL GROUND LEADS TO GROUND RING CONNECTIONS SHALL BE AT A GROUND ROD.

REFERENCE NOTES

- #2 TINNED SOLID COPPER TOWER GROUND RING, TYP.
- INSPECTION WELL. SEE DETAIL THIS SHEET.
- GROUND ROD (TYP). SEE DETAIL THIS SHEET.
- #2 TINNED SOLID COPPER GROUND WIRE FROM GROUND RING TO FENCE..
- 1/4" x 4" x 12" TOWER BOTTOM GROUND BAR. MOUNT AT TOWER CROSSBAR.
- #2 TINNED SOLID COPPER GROUND WIRE FROM GROUND RING TO TOWER GROUND BAR (TYP OF 2).
- #2 TINNED SOLID COPPER FROM GATE POST TO GATE POST.
- #2/0 COPPER SERVICE GROUND.
- GATE GROUNDING. SEE DETAIL THIS SHEET SHEET.
- FENCE TO BE CONNECTED TO GROUND RING AT ALL CORNERS WITH CADWELD AT FENCE POST AND GROUND ROD. SEE DETAIL THIS SHEET.
- CONNECT SERVICE GROUND TO TOWER GROUND RING.
- #2 TINNED SOLID COPPER GROUND WIRE FROM TOWER BOTTOM GROUND BAR TO ICE BRIDGE POST.
- 1/4" x 4" x 12" TOWER TOP GROUND BAR. MOUNT AT TOWER CROSSBAR.

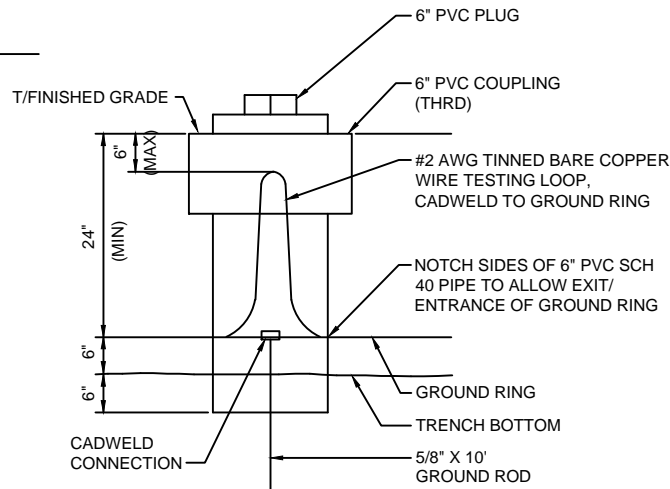


NOTE:

- THE #2 AWG, TBCW, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST, ABOVE GRADE.
- BOND EACH HORIZONTAL POLE/BRACE TO EACH OTHER AND TO EACH VERTICAL POLE BONDED TO THE EXTERIOR GROUND RING
- GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE COPPER BRAID BURNDY TYPE B WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
- GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

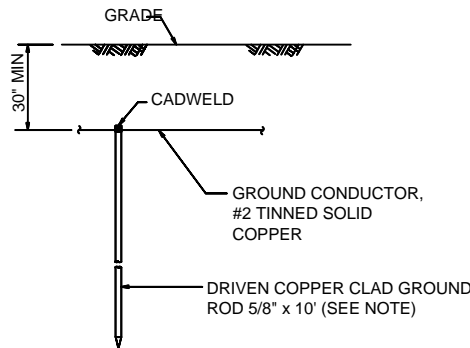
GATE GROUNDING DETAIL

NOT TO SCALE



INSPECTION PORT DETAIL

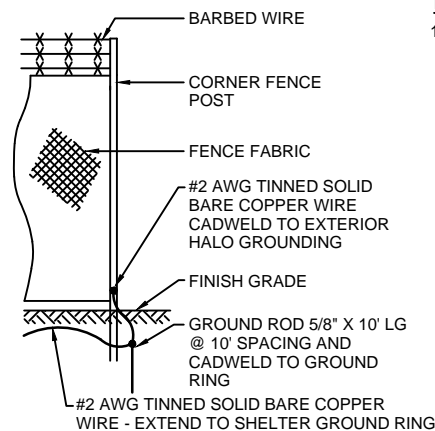
NOT TO SCALE



NOTE: PROVIDE ADDITIONAL GROUND RODS AS REQUIRED TO ACHIEVE MAXIMUM 5 OHMS RESISTANCE.

GROUND ROD DETAIL

NOT TO SCALE



FENCE GROUNDING DETAIL

NOT TO SCALE

NOTE:

- EACH METALLIC FENCE POST MUST BE CONNECTED TO THE GROUND RING WITH THE CONNECTION AS SHOWN TO THE LEFT FOR CORNER FENCE POST. IF A METALLIC FENCE RAIL SPANS FROM POST TO POST, CONNECTIONS CAN BE LIMITED TO NO MORE THAN 20' MAX DISTANCE PER CONNECTION.

EASTERN SHORE BROADBAND AUTHORITY

4174 LANKFORD HIGHWAY
EXMORE, VIRGINIA 23350

DESIGNED BY:

A Z ENGINEERING

A PROFESSIONAL COMPANY

441 PALLETTS ROAD
VIRGINIA BEACH, VIRGINIA 23454
PHONE: 757-672-2339
EMAIL: azoto@cox.net

SITE INFO.:

EASTERN SHORE

26129 SHOREMAIN DRIVE
BLOXOM, VIRGINIA
23308

DESIGN: ARIAN ZOTO P.E.

PROJECT NUMBER: 14-301

SUBMITTALS

FINAL CONSTRUCTION DWGS. 09/20/2014

SHEET NAME:

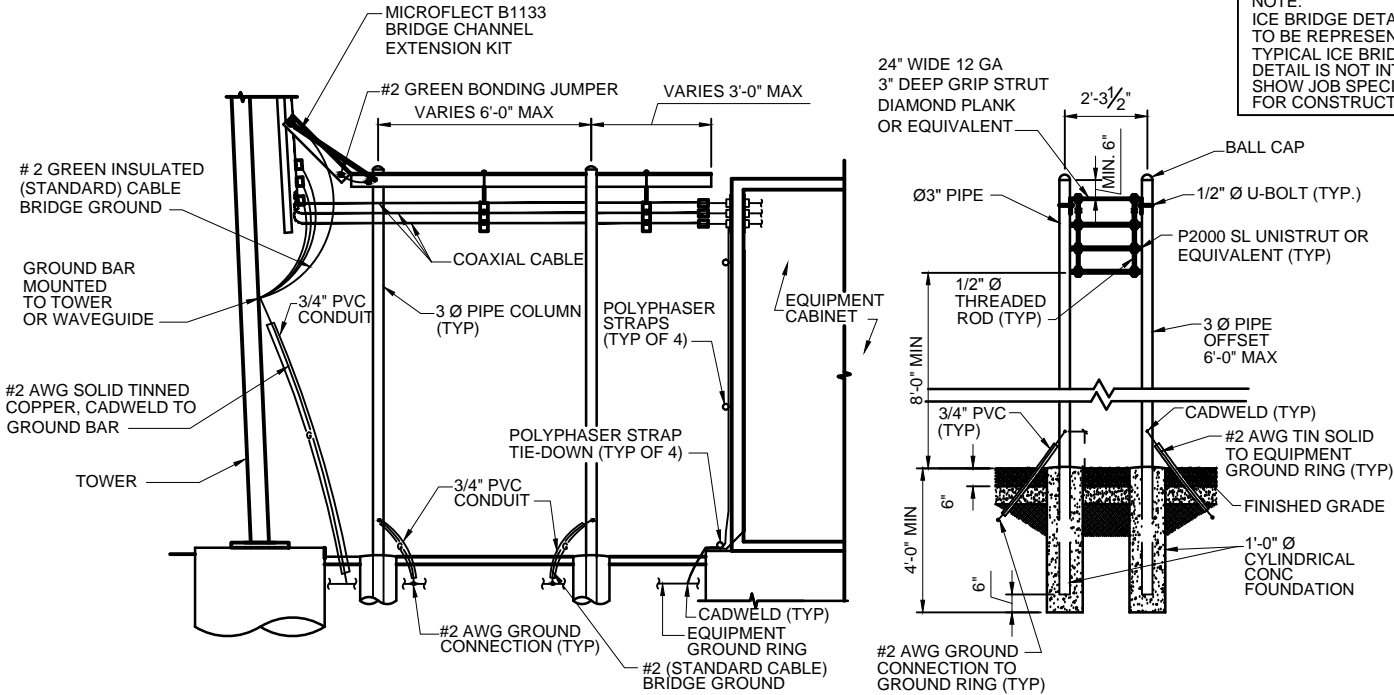
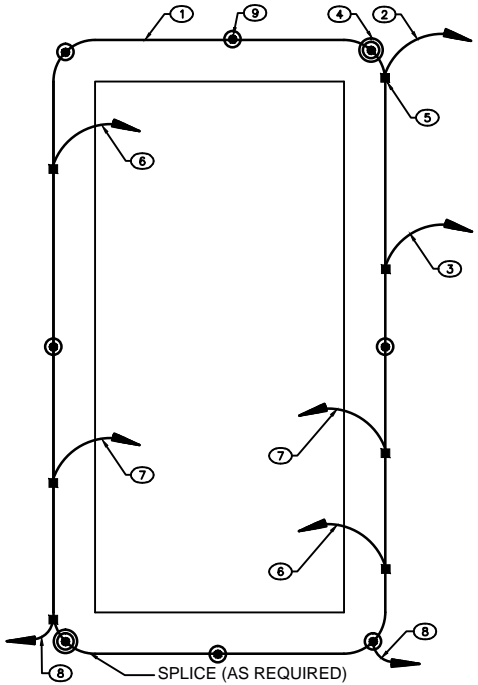
COMPOUND GROUND PLAN

SHEET NO.:

E-2

CONCRETE PAD/EQUIPMENT GROUND RING PLAN NOTES

- ① #2 BARE, TINNED SOLID COPPER GROUND 24" BELOW GRADE (MIN).
② CADWELD 3" ABOVE GRADE TO FENCE POST WITHIN 6'. SEE DETAIL SHEET E-2.
③ #2 BARE, TINNED SOLID COPPER GROUND LEAD FROM DISCONNECT.
④ INSPECTION PORT 6" DIA PVC SCH. 40 WITH COUPLING & CAP (2 REQ'D) OPPOSITE ENDS (TYP OF 2). SEE DETAIL SHEET E-2.
⑤ CADWELD (TYP).
⑥ #2 BARE, TINNED SOLID COPPER GROUND LEAD TO PAD REINFORCMENT.
⑦ #2 BARE, TINNED SOLID COPPER GROUND LEAD TO EQUIPMENT GROUND.
⑧ #2 BARE, TINNED SOLID COPPER GROUND LEAD TO TOWER GROUND RING.
⑨ GROUND ROD, TYP. SEE DETAIL SHEET E-2.

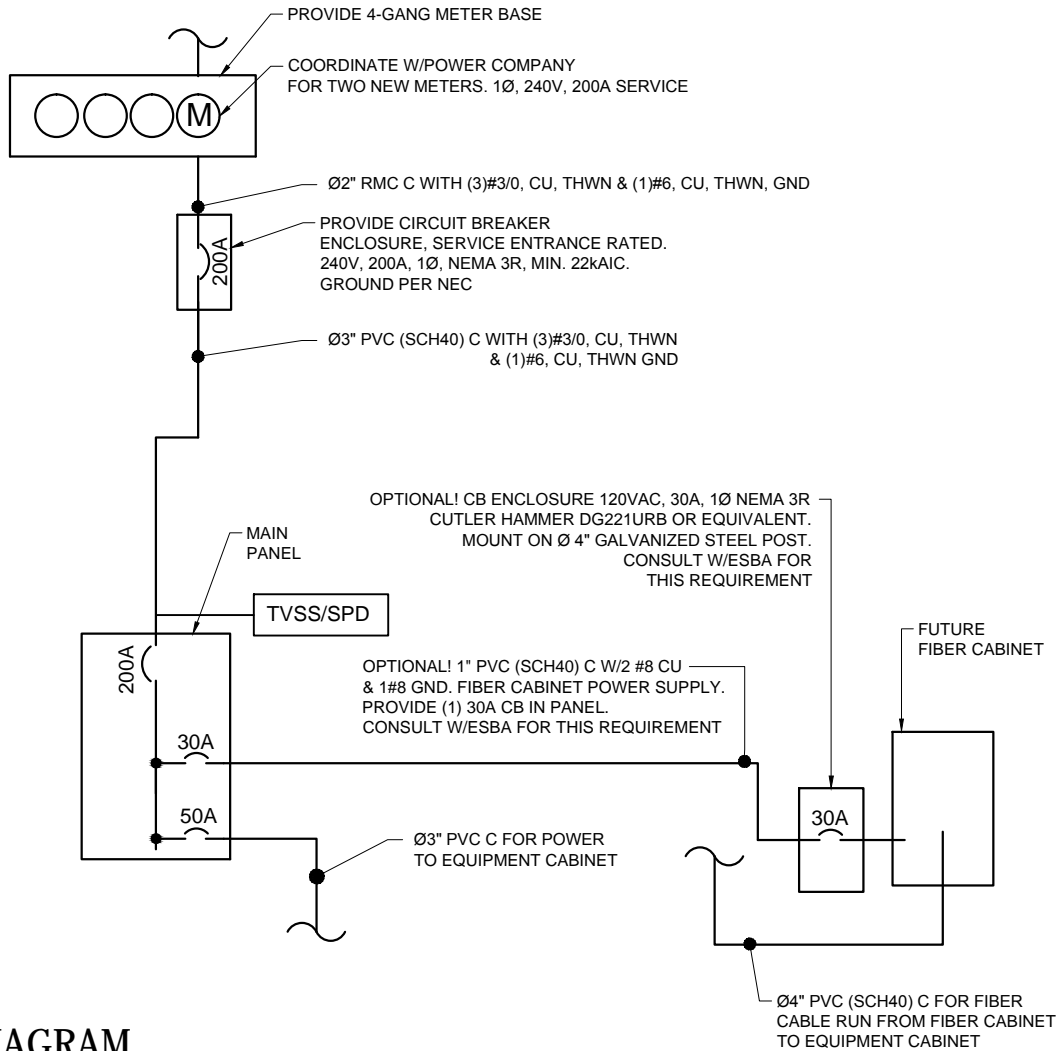


NOTE:
ICE BRIDGE DETAIL IS INTENDED
TO BE REPRESENTATIVE, SHOWING
TYPICAL ICE BRIDGE CONSTRUCTION.
DETAIL IS NOT INTENDED TO
SHOW JOB SPECIFIC DIMENSIONS
FOR CONSTRUCTION.

ICE-BRIDGE GROUNDING/STRUCTURAL DETAILS

SCALE: NOT TO SCALE

- NOTE: 1. CONTRACTOR TO FOLLOW STRICTLY ALL MANUFACTURER INSTRUCTION DURING INSTALLATION OF NEW EQUIPMENTS.
2. ENTRANCE OF NEW CONDUIT ON EQUIPMENT IS SHOWN FOR SCHEMATIC PURPOSES. CONTRACTOR TO FIND THE BEST WAY TO ROUTE ALL NEW ELECTRICAL CONDUITS.



ONE-LINE DIAGRAM

SCALE: NOT TO SCALE

POWER PANEL											
ENCLOSURE: SURFACE, 3R											
120/240 V, 200 A, 1Ø, 3-W, MAIN CB, MIN. 22kAIC											
	LOAD NAME	WIRE	BREAKER		LOAD (VA)				BREAKER		WIRE
			P	TRIP	PHASE A		PHASE B		TRIP	P	
1	EQUIP. CABINET # 1	-	-	EQ	4560	4560			EQ	-	-
3							4560	4560			2
5	SPARE						1600		20	1	10
7	SPARE										
9	TVSS		2	200							
11											
13	SPARE										
15	SPARE										
17	SPARE										
19	SPARE										
TOTAL LOAD (VA)					4560	6160					
AMPERES PER PHASE					38	51					
AMPERES X 125%					48	64					

EASTERN SHORE
BROADBAND AUTHORITY

4174 LANKFORD HIGHWAY
EXMORE, VIRGINIA 23350

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SUBMITTALS

FINAL CONSTRUCTION DWGS. 09/20/2014

SHEET NAME:

GROUNDING,
PANEL SCHEDULE,
ONE-LINE DIAGRAM

SHEET NO.:

E-3