

PROJECT NOTES

- SITE INFORMATION OBTAINED FROM THE FOLLOWING:
 - SURVEY ENTITLED "CELL SITE SURVEY PHI BIG OAK" PREPARED BY COLLIERS ENGINEERING OF MT. LAUREL, NJ DATED 01/13/23.
 - LIMITED FIELD OBSERVATION BY COLLIERS ENGINEERING & DESIGN ON SEPTEMBER 22, 2022.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- THE PROPOSED FACILITY WILL CAUSE AN INSIGNIFICANT OR "DE-MINIMUS" INCREASE IN STORM WATER RUNOFF, THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
- NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
- THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).
- THE FACILITY DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
- CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTHS WITH RF ENGINEERING PRIOR TO INSTALLATION.
- ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
- CONTRACTOR MUST FIELD LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
- CONSTRUCTION SHALL NOT COMMENCE UNTIL COMPLETION OF A PASSING STRUCTURAL ANALYSIS CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. THE STRUCTURAL ANALYSIS IS TO BE PERFORMED BY OTHERS.
- CONTRACTOR SHALL CONTACT STATE SPECIFIC ONE CALL SYSTEM THREE WORKING DAYS PRIOR TO ANY EARTH MOVING ACTIVITIES.



**SITE NAME: PHI BIG OAK ROAD
375 STONY HILL ROAD
MORRISVILLE, PA 19067
BUCKS COUNTY**



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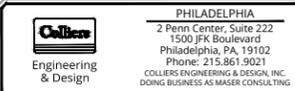
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Peter Michael Albano
PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER
LICENSE NUMBER: PE092542
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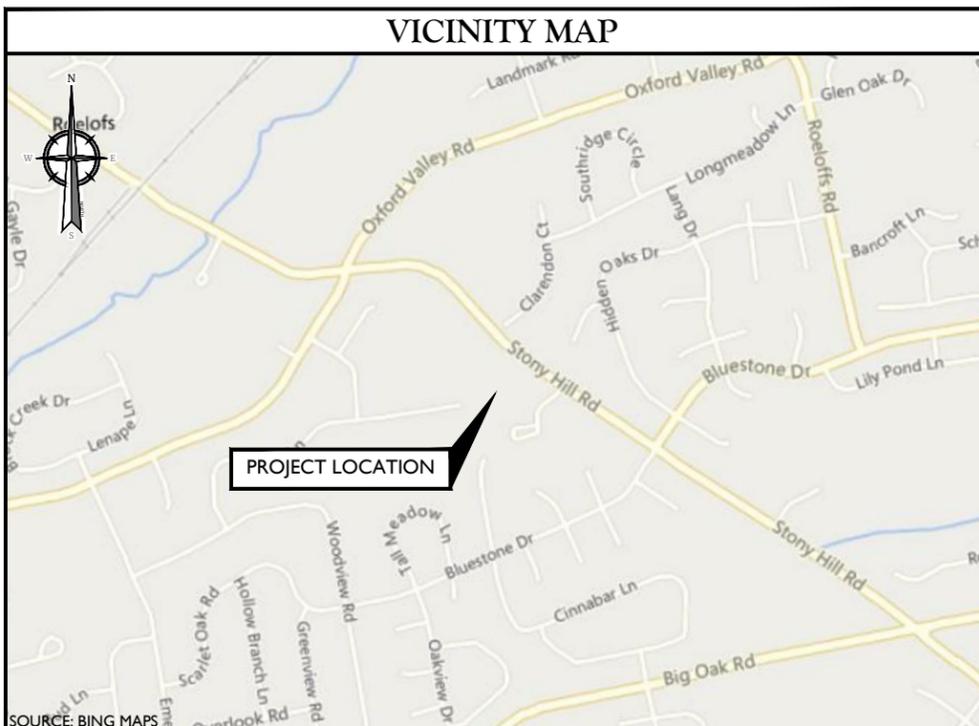
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BUCKS COUNTY



TITLE SHEET

T-1



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 CODES.

1. PENNSYLVANIA UNIFORM CONSTRUCTION CODE, INCORPORATING THE 2018 INTERNATIONAL BUILDING CODE	8. INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS 81 IEEE C2 LATEST EDITION
2. 2017 NATIONAL ELECTRICAL CODE - NFPA 70	9. TELCORDIA GR-1275
3. 2018 INTERNATIONAL FIRE CODE	10. ANSI T1.31 I
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION 360-16	11. PROPOSED USE: UNMANNED TELECOM FACILITY HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.
5. AMERICAN CONCRETE INSTITUTE	12. CONSTRUCTION TYPE: IIB
6. TIA-222-H	13. USE GROUP: U
7. TIA 607 FOR GROUNDING	

PROJECT INFORMATION

SITE INFORMATION
 LATITUDE: N 40° 12' 36.57" (NAD 83)
 LONGITUDE: W 74° 51' 03.95" (NAD 83)
 GROUND ELEVATION: 194± AMSL (NAVD 88)
 JURISDICTION: LOWER MAKEFIELD
 COUNTY: BUCKS COUNTY
 APN: 20-034-008

APPLICANT
 COMPANY: CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS
 ADDRESS: 512 TOWNSHIP LINE ROAD BUILDING 2, FLOOR 3
 CITY, STATE, ZIP: BLUE BELL, PA 19422

PROPERTY OWNER
 OWNER: BETH EL SYNAGOGUE
 ADDRESS: 375 STONY HILL ROAD
 CITY, STATE, ZIP: LOWER MAKEFIELD, PA 19067

SITE ACQUISITION
 COMPANY: WIRELESS ACCESS TECHNOLOGIES, INC.
 CONTACT: SUE MANCHEL
 PHONE: (267) 253-2762

CONSTRUCTION MANAGER
 COMPANY: CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS
 ADDRESS: 512 TOWNSHIP LINE ROAD, BUILDING 2, FLOOR 3
 CITY, STATE, ZIP: BLUE BELL, PA 19422
 CONTACT: ERIC FISHER
 PHONE: (267) 431-9887

ENGINEERING COMPANY
 COMPANY: COLLIERS ENGINEERING & DESIGN, INC
 ADDRESS: 2000 MIDLANTIC DRIVE, SUITE 100
 CITY, STATE, ZIP: MT. LAUREL, NJ 08054
 CONTACT: MATT GRAUBART, P.E.
 PHONE: (856) 797-0412
 E-MAIL: MATTHEW.GRAUBART@COLLIERSENG.COM

LOCATION INFORMATION

POWER PROVIDER
 COMPANY: PECO
 NAME: 1-800-494-4000

TELEPHONE PROVIDER
 COMPANY: VERIZON
 NAME: 1-800-837-4966

POLICE
 COMPANY: YARDLEY BORO POLICE DEPARTMENT
 ADDRESS: 56 S MAIN ST
 CITY, STATE, ZIP: YARDLEY, PA 19067
 PHONE: (215) 493-2782

FIRE
 COMPANY: YARDLEY MAKEFIELD FIRE CO. STATION 80
 ADDRESS: 664 STONY HILL RD
 CITY, STATE, ZIP: YARDELY, PA 19067
 NAME: (215) 493-4212

IN CASE OF EMERGENCY, CALL 9-1-1

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PHI BIG OAK ROAD 02/23/23 PA 19067

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NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



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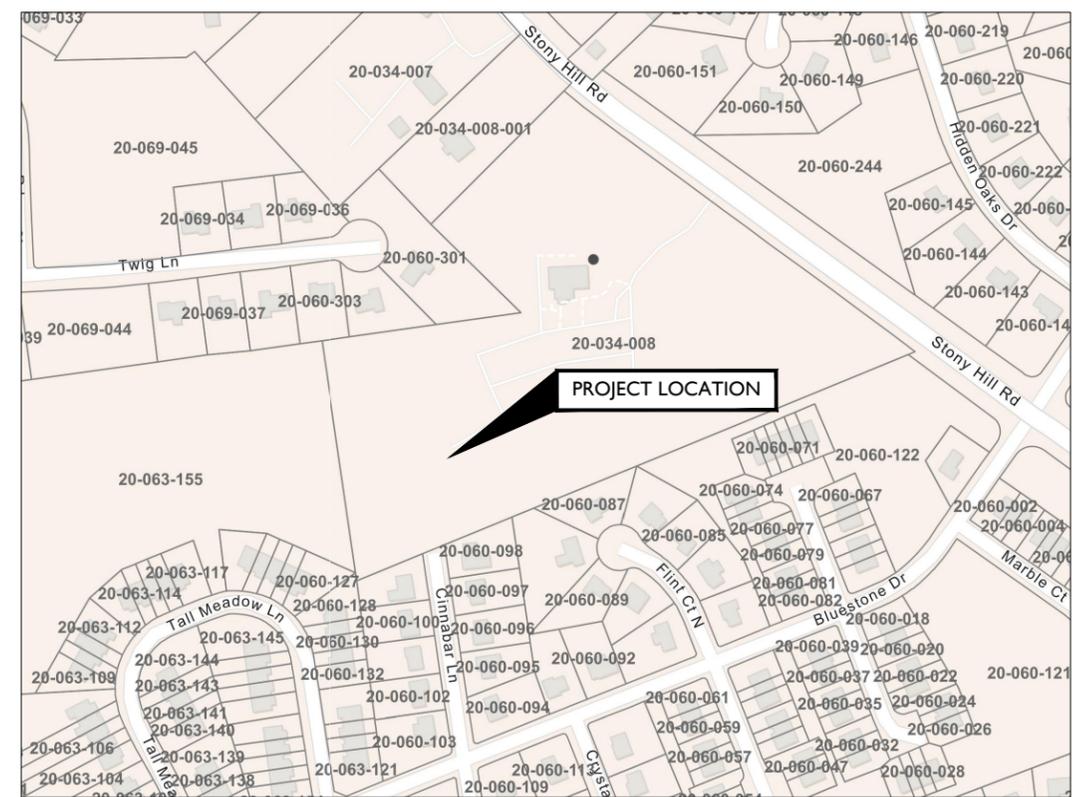
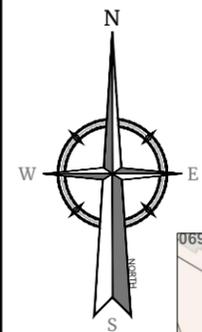
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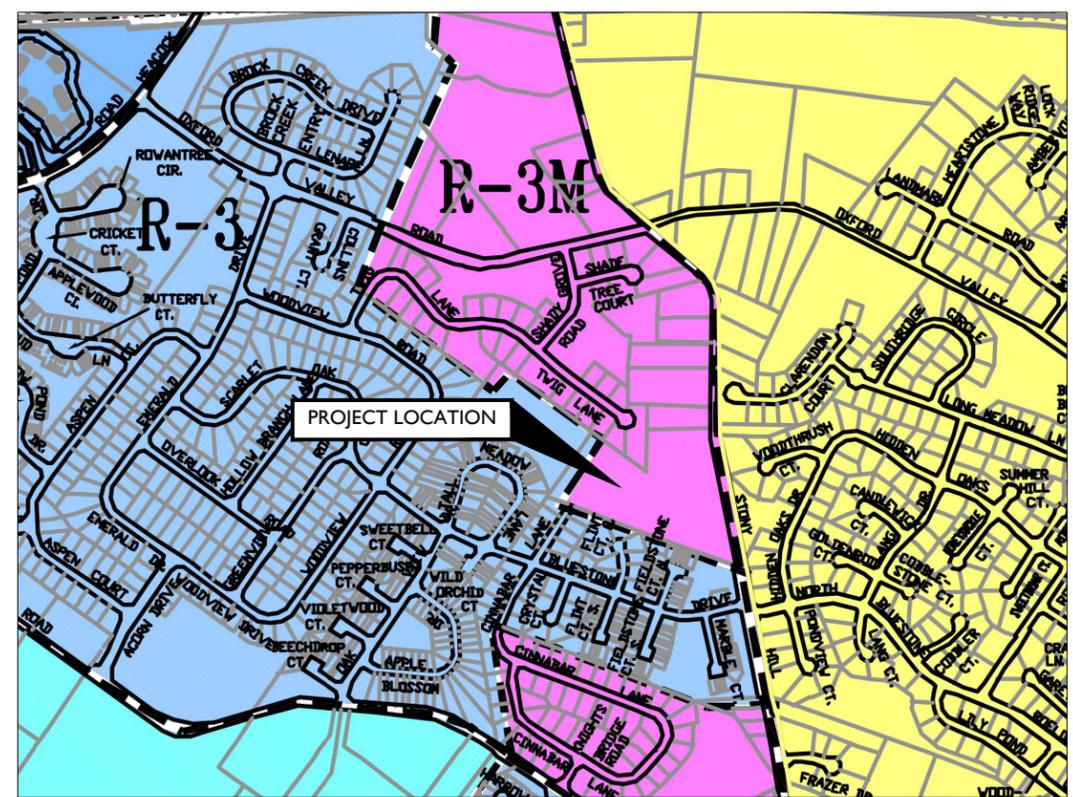
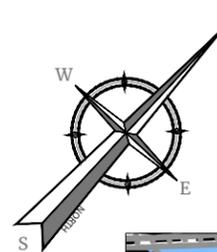
SHEET TITLE:
ZONING INFORMATION

SHEET NUMBER:
Z-1



TAX MAP

SCALE: 1" = 200' FOR 22"X34"
(SCALE: 1" = 400' FOR 11"X17")



LEGEND

- DISTRICT BOUNDARY
- R-RP RESIDENTIAL-RESOURCE PROTECTION
- R-1 RESIDENTIAL LOW DENSITY
- R-2 RESIDENTIAL MEDIUM DENSITY
- R-3 RESIDENTIAL SINGLE FAMILY HIGH DENSITY
- R-3M SINGLE FAMILY HIGH DENSITY MODIFIED
- R-4 RESIDENTIAL MULTIPLE FAMILY HIGH DENSITY
- C-1 COMMERCIAL NEIGHBORHOOD SHOPPING
- C-2 COMMERCIAL HIGHWAY SERVICES
- C-3 GENERAL BUSINESS/INDUSTRIAL
- H/C HISTORIC - COMMERCIAL
- O/R OFFICE RESEARCH
- TELECOMMUNICATION FACILITY OVERLAY DISTRICT
- SPECIAL OFF-PREMISES ADVERTISING SIGN (SOPAS) OVERLAY DISTRICT
- TRADITIONAL NEIGHBORHOOD DEVELOPMENT (TND) OVERLAY DISTRICT

ZONING MAP

SCALE: 1" = 600' FOR 22"X34"
(SCALE: 1" = 1200' FOR 11"X17")

VICINITY MAP

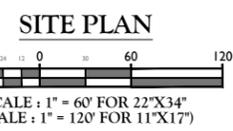
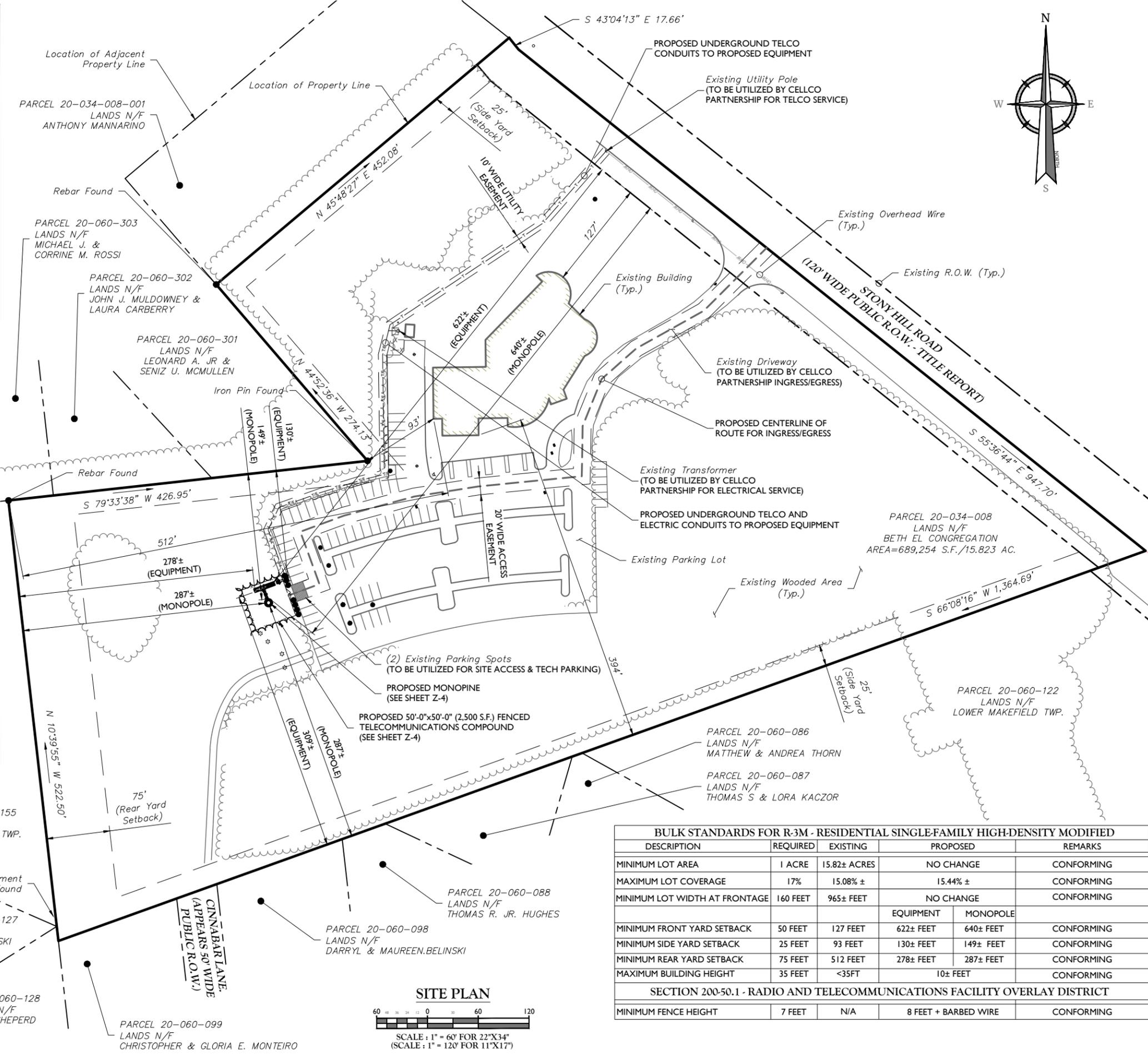


SITE NOTES

1. THIS PROPOSAL IS FOR AN UNMANNED TELECOMMUNICATIONS FACILITY CONSISTING OF THE PLACEMENT OF PANEL ANTENNAS ON A PROPOSED MONOPINE AND EQUIPMENT CABINETS ON A PROPOSED CONCRETE PAD, AN OUTDOOR STANDBY GENERATOR AND ASSOCIATED APPURTENANCES WITHIN A PROPOSED FENCED COMPOUND.
2. EXTERIOR SIGNS ARE NOT PROPOSED EXCEPT AS REQUIRED BY THE FCC.
3. DISTURBANCE UNDER THIS PROPOSAL: 4,779 ± S.F.
4. RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
5. CONTRACTOR SHALL CONTACT STATE SPECIFIC ONE CALL SYSTEM THREE WORKING DAYS PRIOR TO ANY EARTH MOVING ACTIVITIES.
6. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.
7. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS & INSPECTIONS REQUIRED FOR CONSTRUCTION.
8. SUBCONTRACTOR SHALL DETERMINE EXACT ROUTE OF ANY UNDERGROUND CONDUIT, IF REQUIRED.
9. THIS PROJECT WILL NOT REQUIRE STREETS OR PROPERTY TO BE DEDICATED FOR PUBLIC USE.
10. THIS PROJECT WILL NOT REQUIRE PERMANENT MONUMENTS.
11. ACCORDING TO THE FEMA FLOOD INSURANCE RATE MAPS OF LANCASTER COUNTY, PA (ALL JURISDICTIONS), FLOOD ZONE PANEL 453 OF 532 DATED 03/16/2015, ALL PROPOSED IMPROVEMENTS ARE LOCATED WITHIN ZONE X - AREA OF MINIMAL FLOOD HAZARD.
12. THE PROPOSED INSTALLATION WILL GENERATE ONE (1) VEHICLE TRIP FOR ROUTINE MAINTENANCE EVERY FOUR (4) TO SIX (6) WEEKS.

LEGEND

	Existing Subject Property Line
	Existing Right of Way
	Existing Edge of Gravel Road
	Existing Structure
	Existing Tree Line
	Existing Overhead Wire Line
	Existing Fence Line
	Existing Features
	Zoning Boundary
	Setback Line
	PROPOSED CHAIN LINK FENCE
	PROPOSED TREE LINE
	PROPOSED FEATURES
	PROPOSED UNDERGROUND ELECTRIC/TELCO UTILITY LINES



BULK STANDARDS FOR R-3M - RESIDENTIAL SINGLE-FAMILY HIGH-DENSITY MODIFIED

DESCRIPTION	REQUIRED	EXISTING	PROPOSED	REMARKS
MINIMUM LOT AREA	1 ACRE	15.82± ACRES	NO CHANGE	CONFORMING
MAXIMUM LOT COVERAGE	17%	15.08% ±	15.44% ±	CONFORMING
MINIMUM LOT WIDTH AT FRONTAGE	160 FEET	965± FEET	NO CHANGE	CONFORMING
			EQUIPMENT MONOPOLE	
MINIMUM FRONT YARD SETBACK	50 FEET	127 FEET	622± FEET 640± FEET	CONFORMING
MINIMUM SIDE YARD SETBACK	25 FEET	93 FEET	130± FEET 149± FEET	CONFORMING
MINIMUM REAR YARD SETBACK	75 FEET	512 FEET	278± FEET 287± FEET	CONFORMING
MAXIMUM BUILDING HEIGHT	35 FEET	<35FT	10± FEET	CONFORMING
SECTION 200-50.1 - RADIO AND TELECOMMUNICATIONS FACILITY OVERLAY DISTRICT				
MINIMUM FENCE HEIGHT	7 FEET	N/A	8 FEET + BARBED WIRE	CONFORMING

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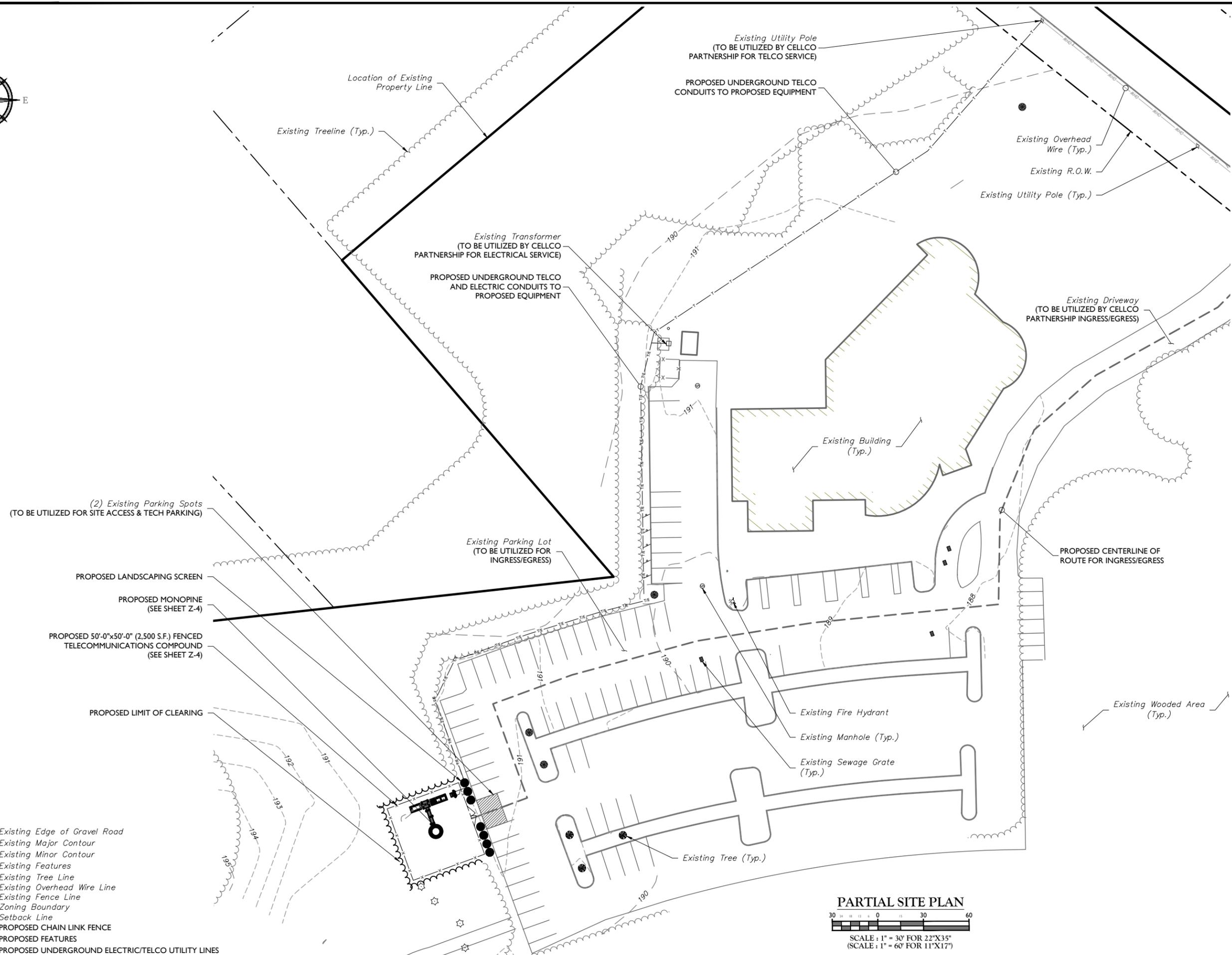
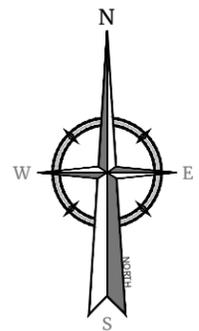
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SHEET TITLE:
SITE PLAN AND SITE NOTES

SHEET NUMBER:
Z-2



- LEGEND**
- Existing Edge of Gravel Road
 - - - 195 Existing Major Contour
 - - - 194 Existing Minor Contour
 - Existing Features
 - Existing Tree Line
 - OHW Existing Overhead Wire Line
 - Existing Fence Line
 - · - · - Zoning Boundary
 - Setback Line
 - x - x - PROPOSED CHAIN LINK FENCE
 - PROPOSED FEATURES
 - - - T/E PROPOSED UNDERGROUND ELECTRIC/TELCO UTILITY LINES

PARTIAL SITE PLAN
 SCALE: 1" = 30' FOR 22"X35"
 (SCALE: 1" = 60' FOR 11"X17")

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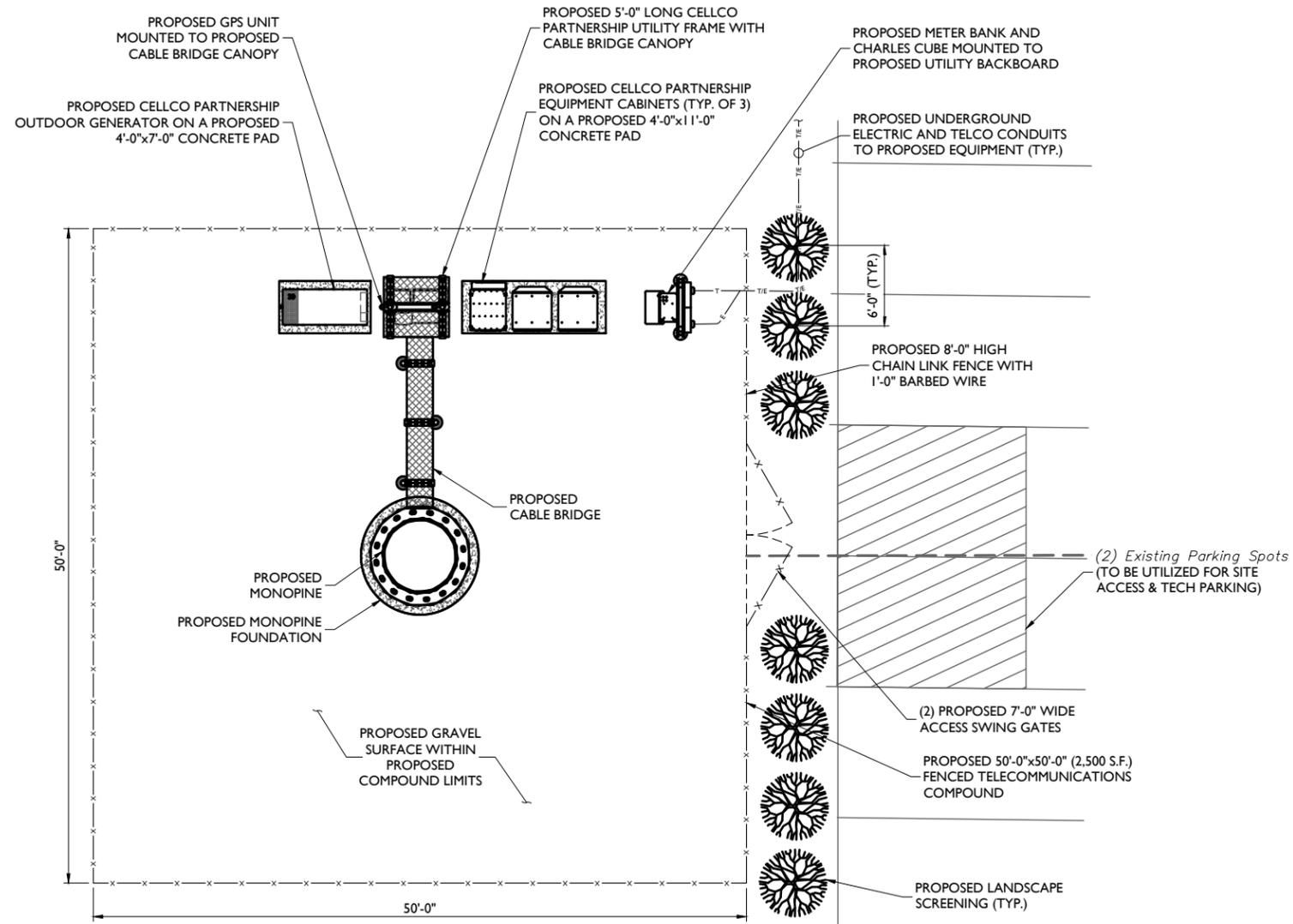
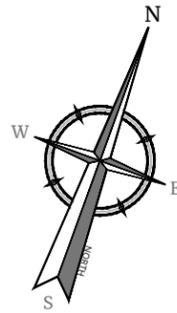
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PARTIAL SITE PLAN

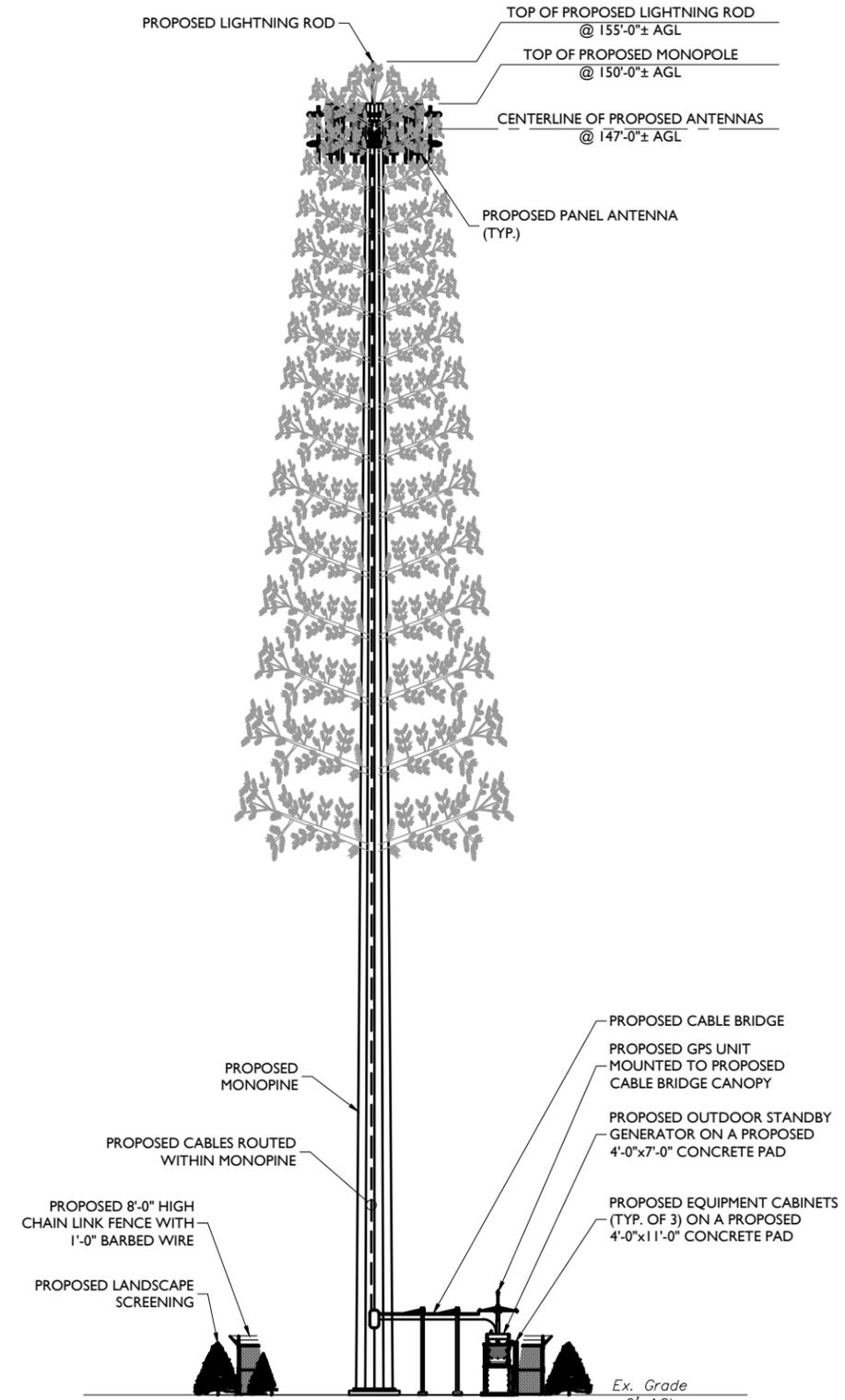
Z-3



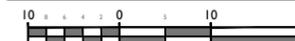
COMPOUND PLAN



SCALE : 1" = 6' FOR 22"x34"
(SCALE : 1" = 12' FOR 11"x17")



ELEVATION PLAN VIEW



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

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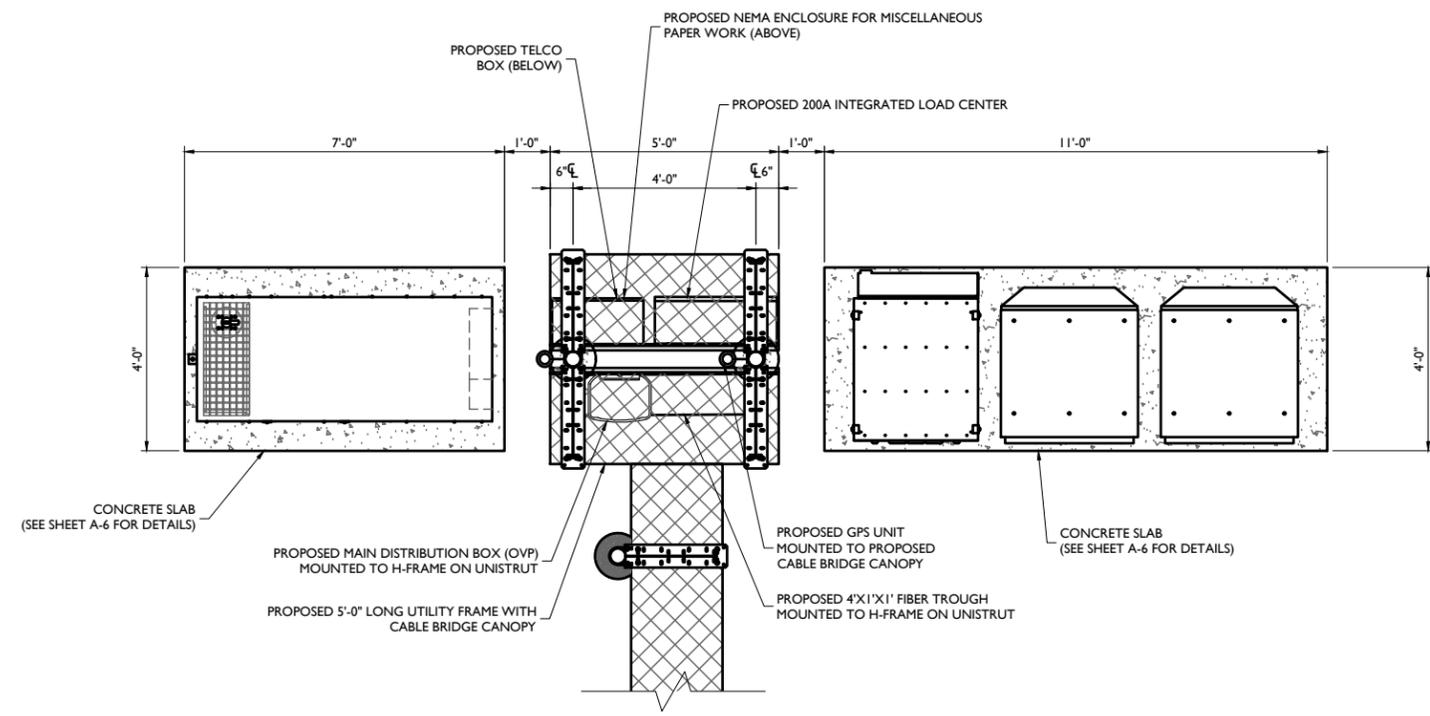
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SHEET TITLE:
CONSTRUCTION DETAILS

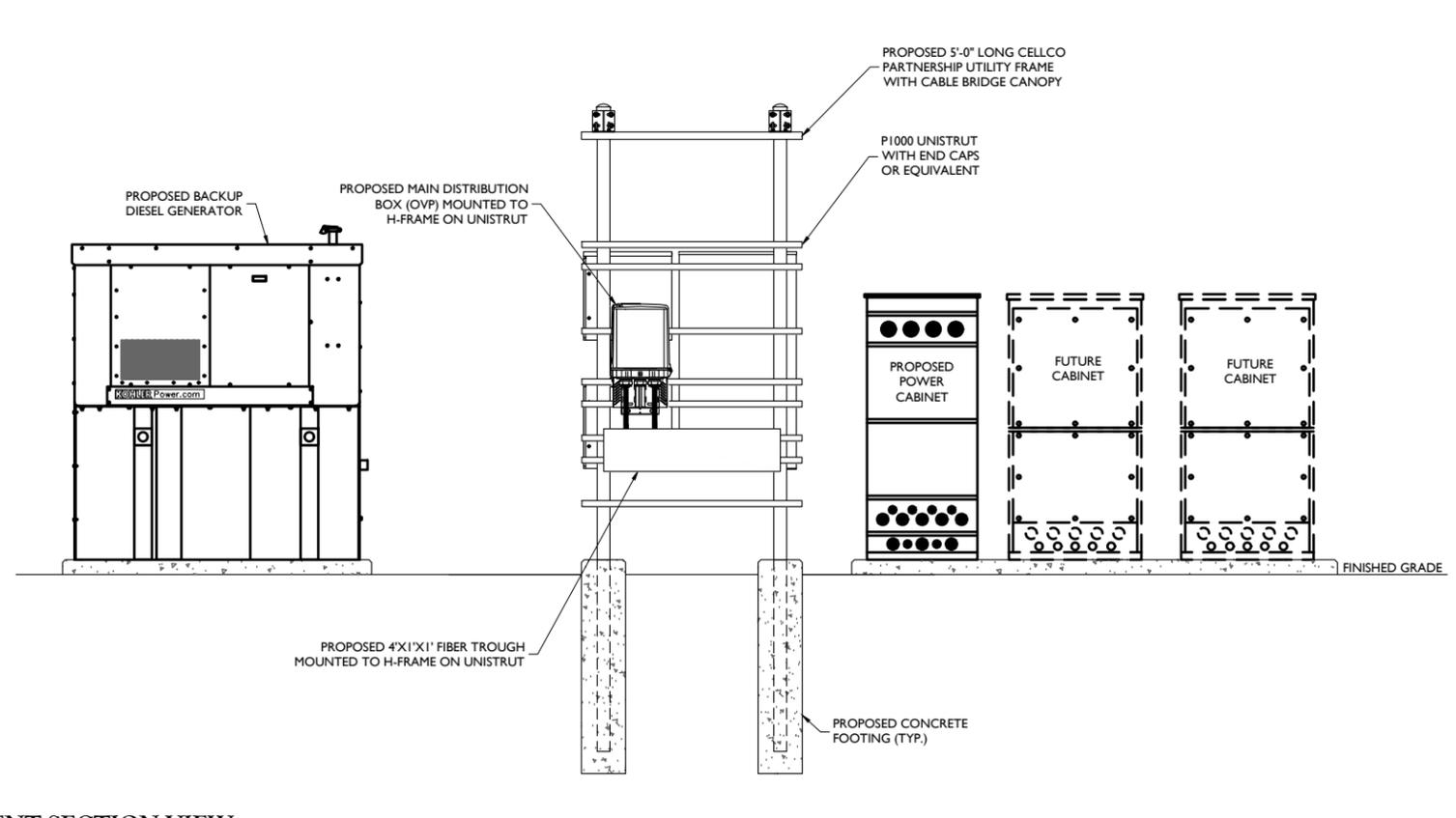
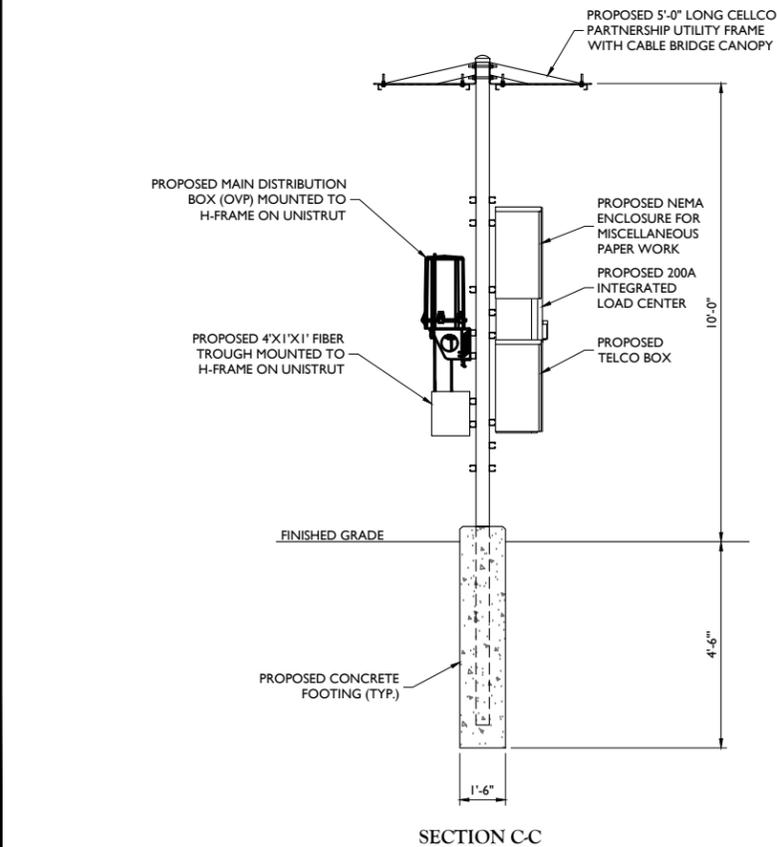
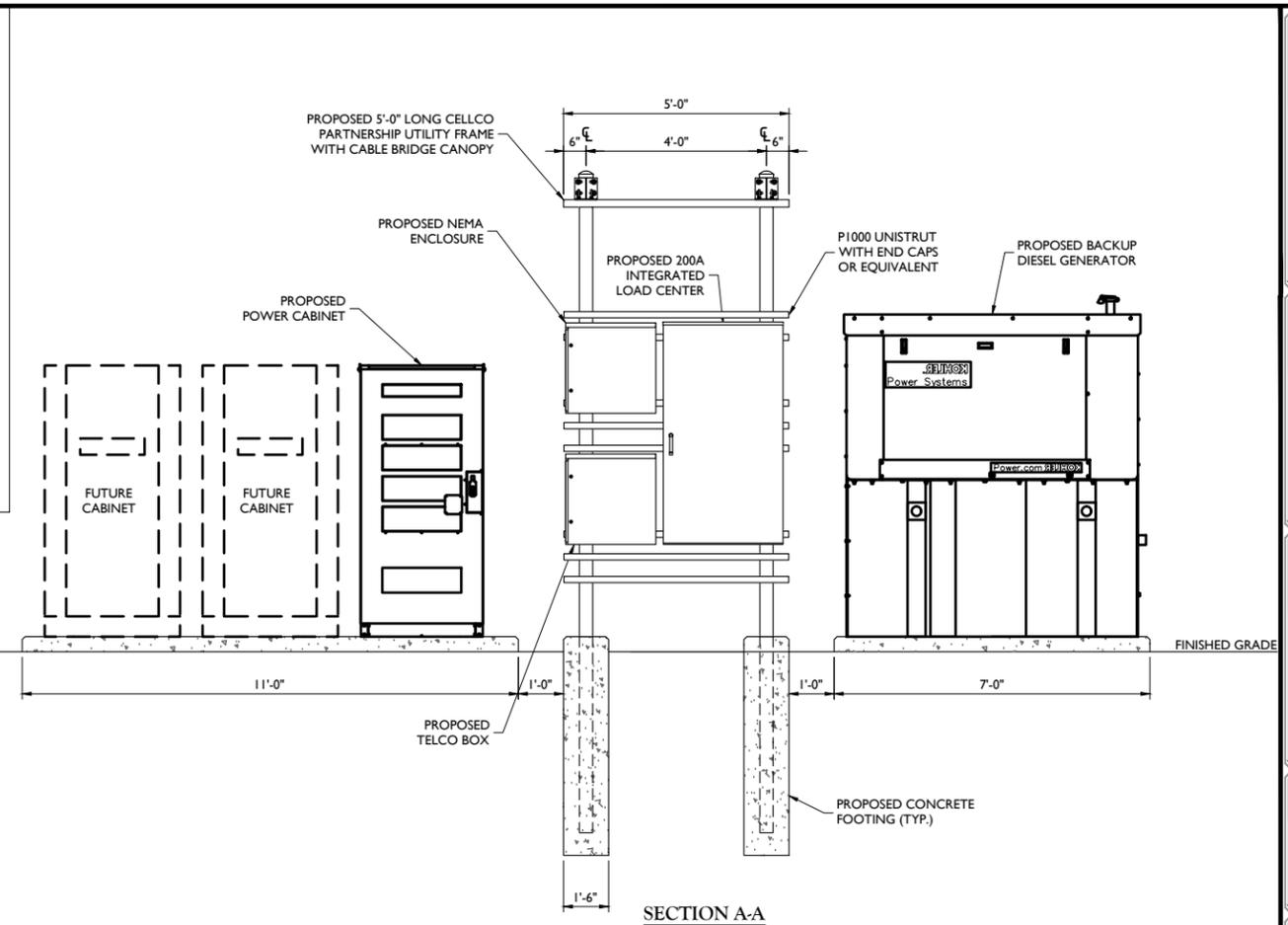
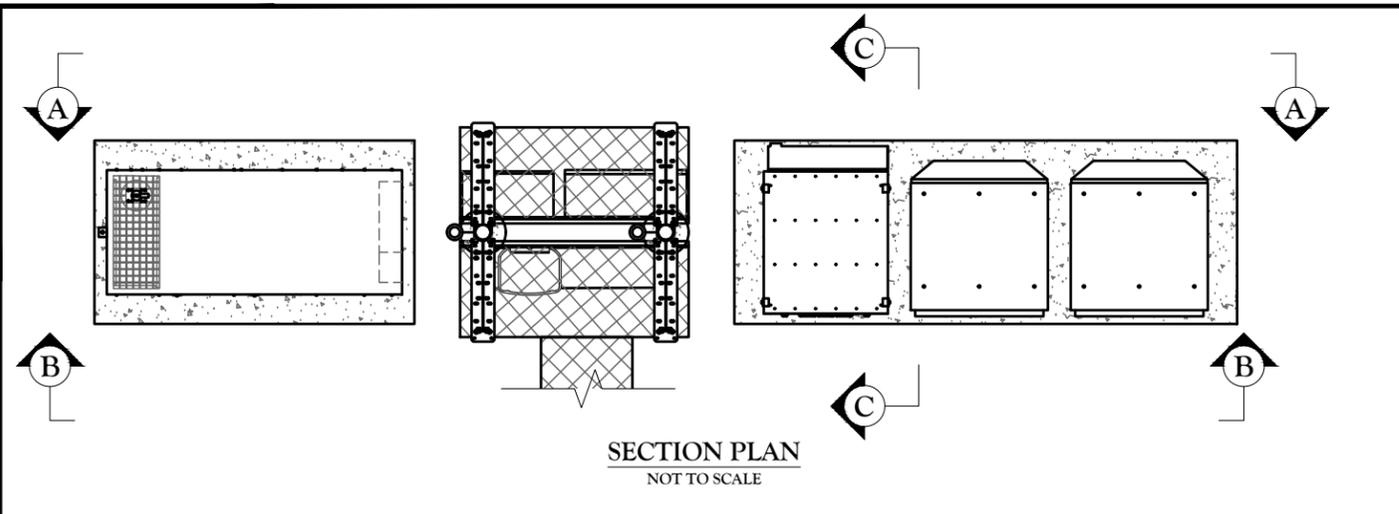
SHEET NUMBER:
A-1



EQUIPMENT LAYOUT



SCALE : 1" = 2' FOR 22"X34"
(SCALE : 1" = 4' FOR 11"X17")



EQUIPMENT SECTION VIEW

SCALE: 1" = 2' FOR 22"X34"
SCALE: 1" = 4' FOR 11"X17"

SECTION B-B



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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE: AS SHOWN	JOB NUMBER: 22960040A			
REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
A	01/24/23	ISSUED FOR REVIEW	FAC	MEG

Peter Michael Albano
PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER
LICENSE NUMBER: PE092542
COLLIERS ENGINEERING & DESIGN, INC.

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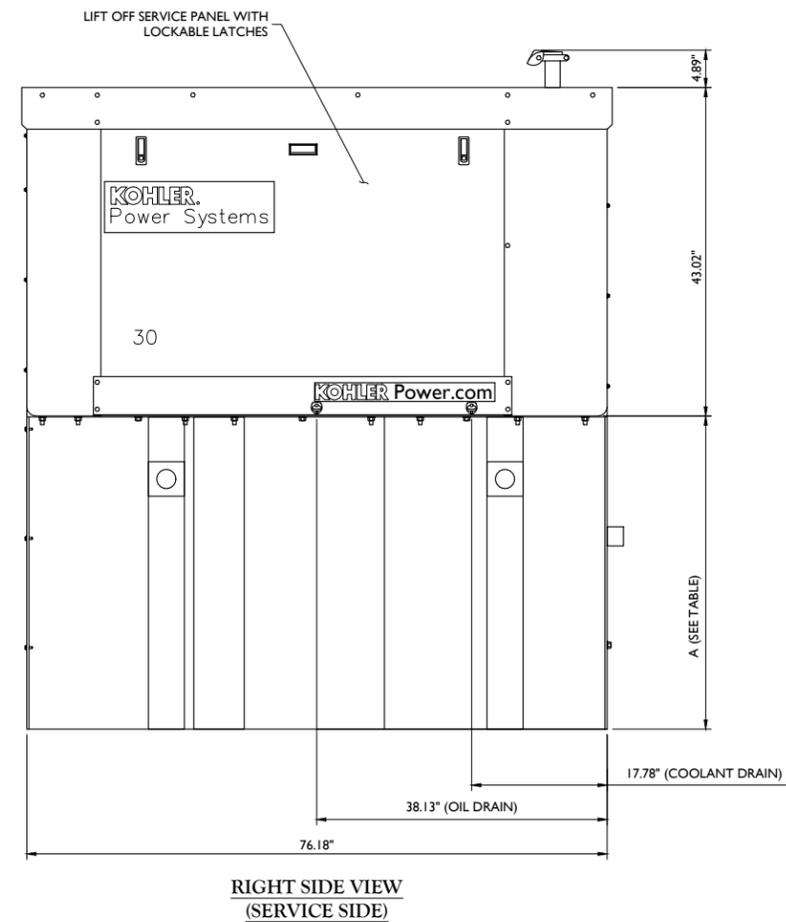
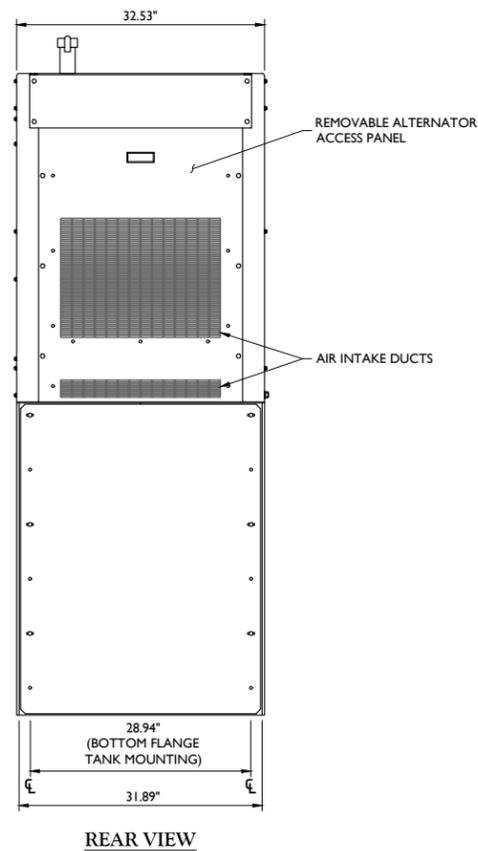
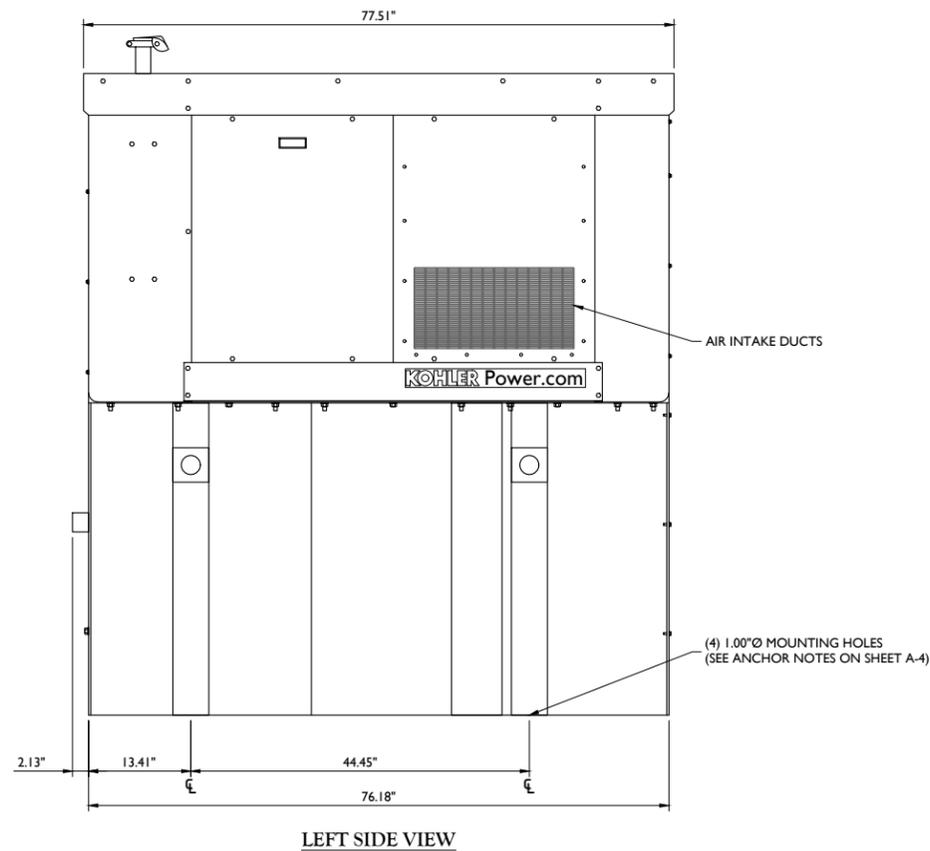
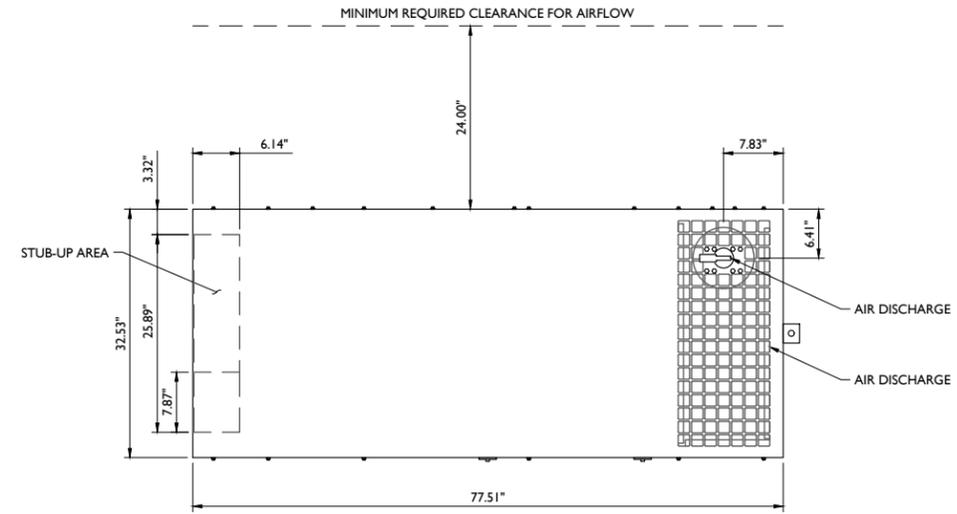
SITE NAME:
PHI BIG OAK ROAD
375 STONY HILL ROAD
MORRISVILLE, PA 19067
BUCKS COUNTY

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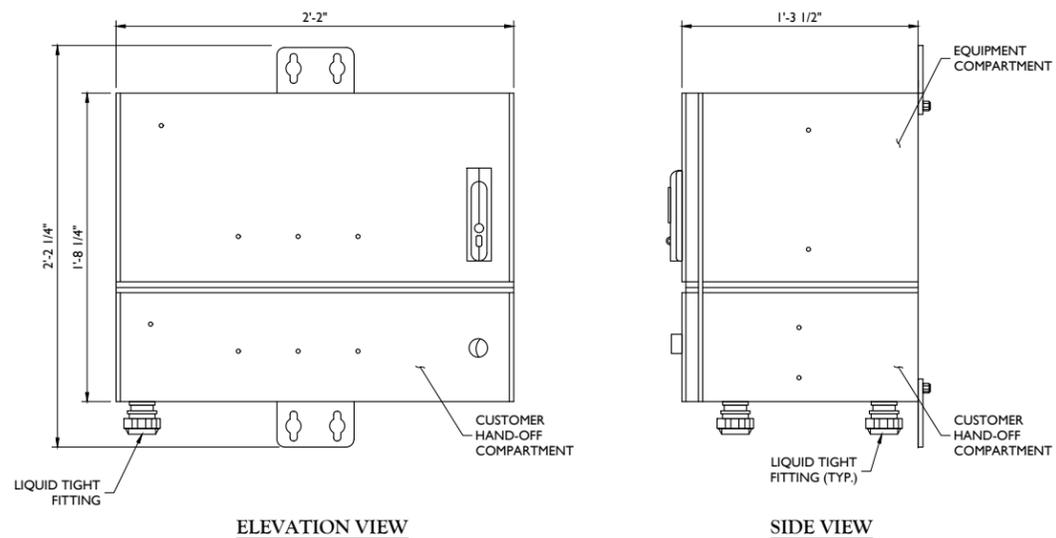
NOTES:

1. THE RIGHT SIDE OF THE GENERATOR IS SERVICE ACCESSIBLE.
2. 6 AMP BATTERY CHARGER.
3. 120VAC ENGINE BLOCK HEATER.
4. GENERATOR MUST BE GROUNDED.
5. SOUND ATTENUATED ENCLOSURE STANDARD WITH GENERATOR.
6. MUST ALLOW FREE FLOW OF DISCHARGE AIR AND EXHAUST.
7. MUST ALLOW FREE FLOW OF AIR INTAKE.
8. EASY ACCESS SERVICE PANEL IS LOCATED ON THE RIGHT SIDE OF THE GENERATOR ONLY.
9. BASE TANK REQUIRES ALL STUB-UPS TO BE IN THE REAR TANK STUB-UP AREA.
10. SEE TABLE FOR SUB-BASE FUEL TANK CAPACITY.
11. TANK EQUIPPED WITH FIRE SAFETY VALVE ON FUEL SUPPLY LINE.
12. IT IS THE RESPONSIBILITY OF THE INSTALLATION TECHNICIAN TO ENSURE THAT THE GENERATOR INSTALLATION COMPLIES WITH ALL APPLICABLE CODES, STANDARDS AND REGULATIONS.
13. GENERATOR IS INSTALLED ON UL-142 RATE DOUBLE WALL SUB-BASE FUEL TANK.
14. 65.4 dBA @ 23 FT (7 M) @ 100% LOAD WITH SOUND ENCLOSURE.

GENSET	TANK P/N	TANK HEIGHT (A)	DESCRIPTION	ASSEMBLY WEIGHT
30REOZK	GM97093-MA2	41.0"	SKID/TANK, 203 GAL	2,114 LBS



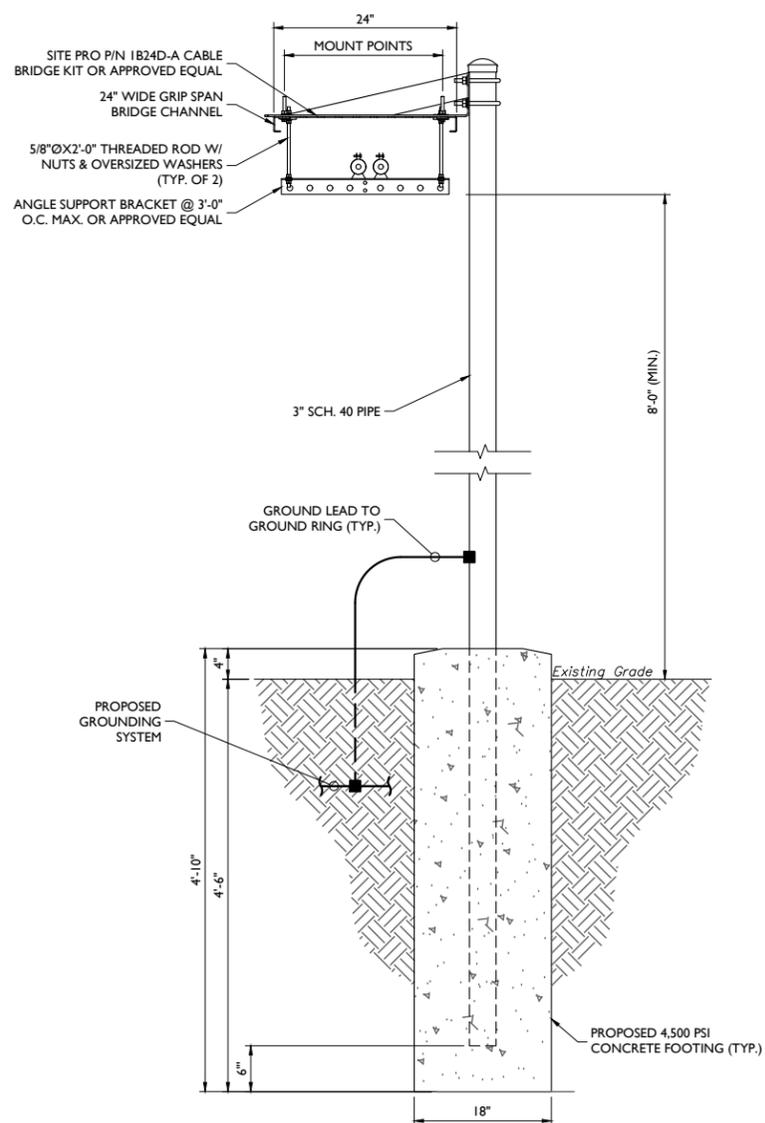
DIESEL SOUND ENCLOSURE WITH LIFT OFF PANEL
30kW KOHLER DIESEL GENERATOR DETAIL
NOT TO SCALE



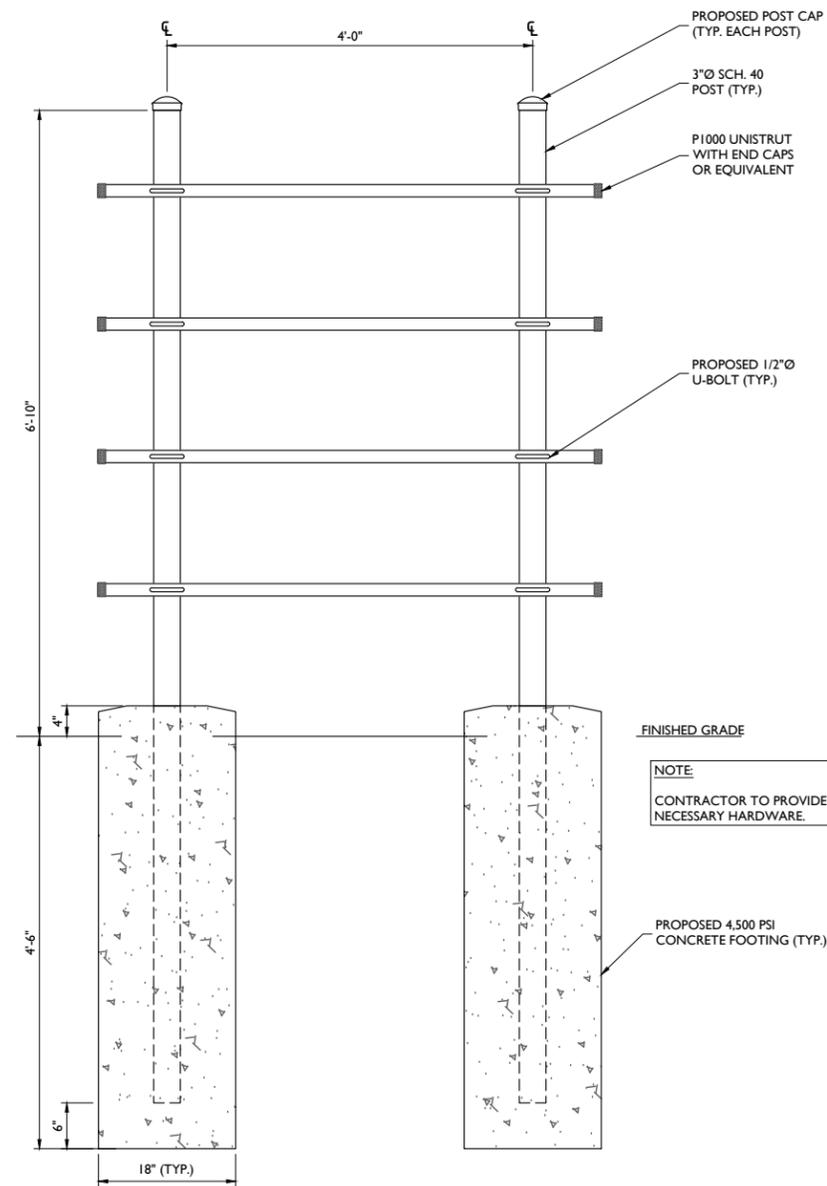
ELEVATION VIEW

SIDE VIEW

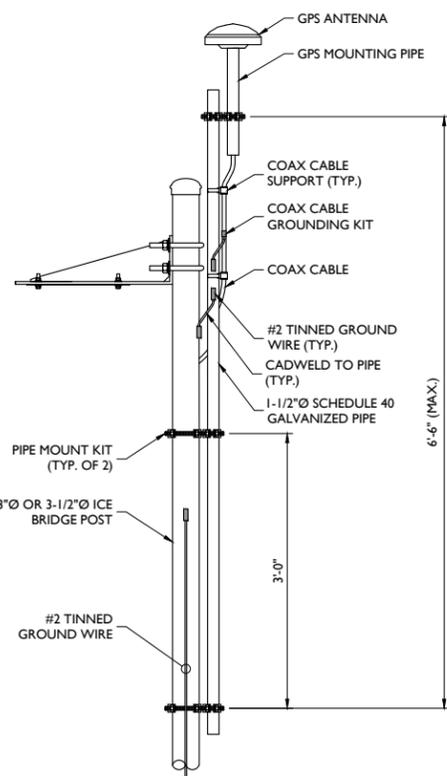
CHARLES INDUSTRIES RL2000A CUBE
NOT TO SCALE



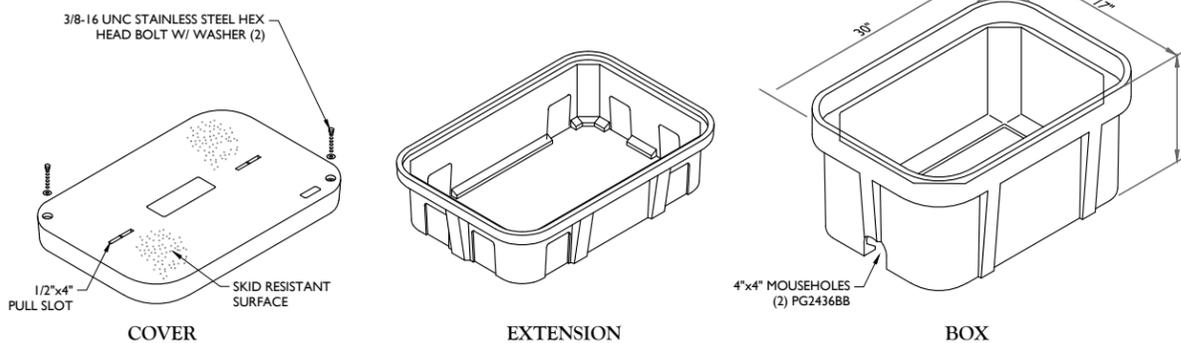
CABLE BRIDGE DETAIL
NOT TO SCALE



BACKBOARD DETAIL
NOT TO SCALE



GPS MOUNTING DETAIL
NOT TO SCALE



PULL BOX DETAIL
NOT TO SCALE

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BUCKS COUNTY

Colliers Engineering & Design
PHILADELPHIA
2 Penn Center, Suite 222
1500 FFK Boulevard
Philadelphia, PA, 19102
Phone: 215.861.9021
COLLIERS ENGINEERING & DESIGN, INC.
DOING BUSINESS AS MASER CONSULTING

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
A-4

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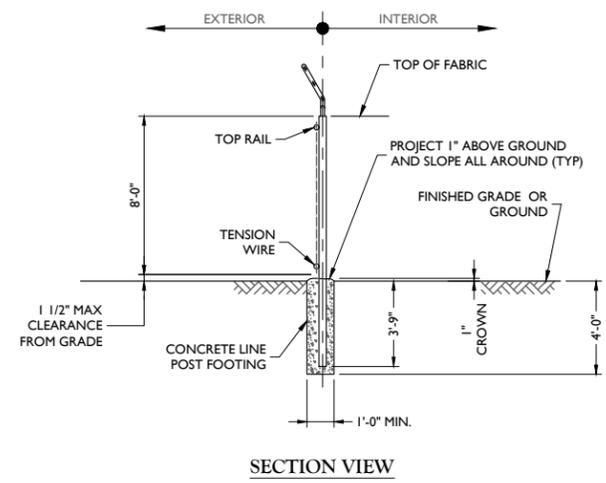
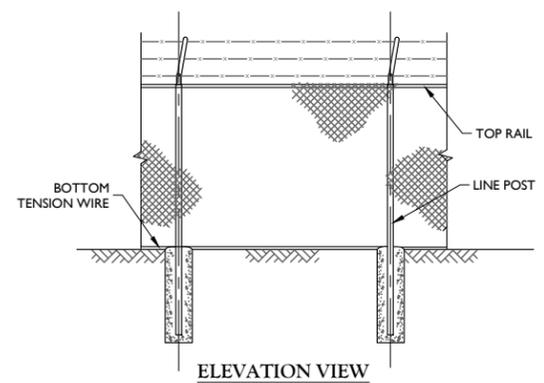
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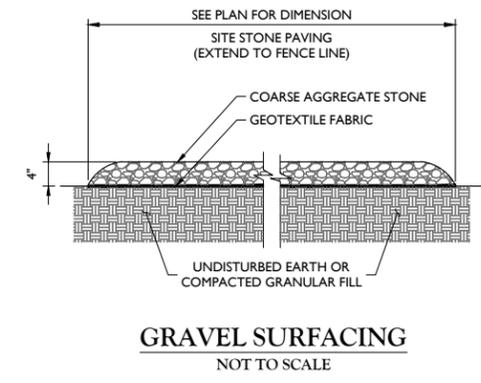
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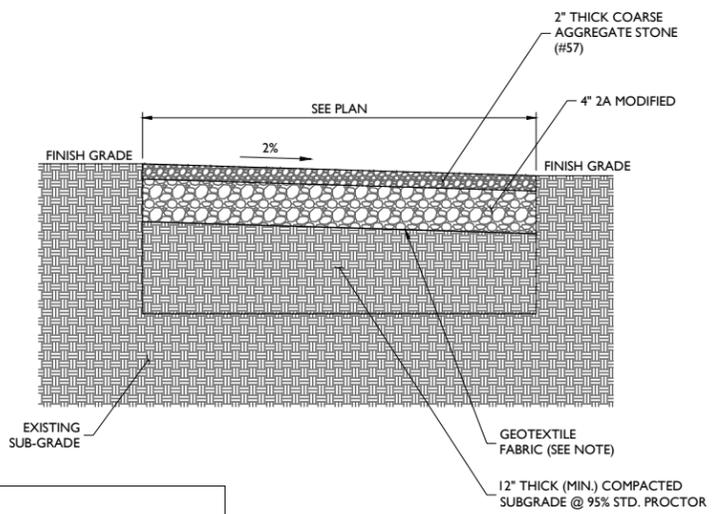
SHEET NUMBER:
A-5



WOVEN WIRE FENCE DETAIL
NOT TO SCALE

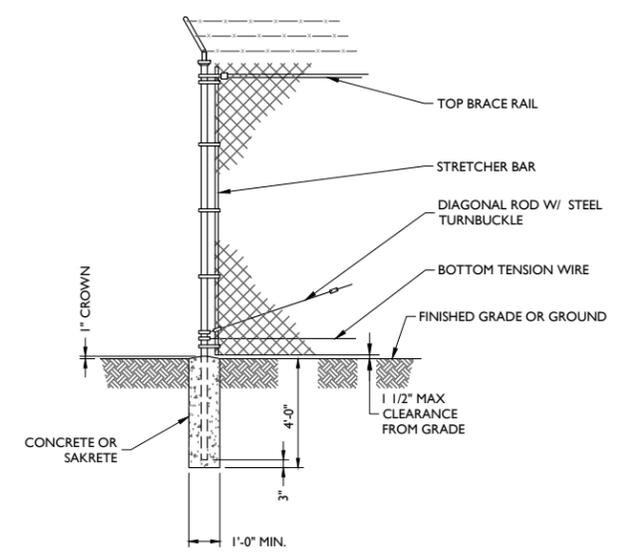


GRAVEL SURFACING
NOT TO SCALE



NOTE:
GEOTEXTILE FABRIC IS TO BE MIRAFI 500X
WOVEN WIRE FABRIC OR APPROVED EQUAL.

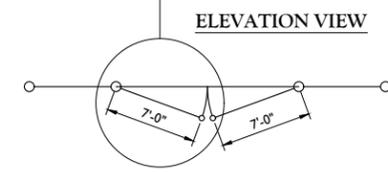
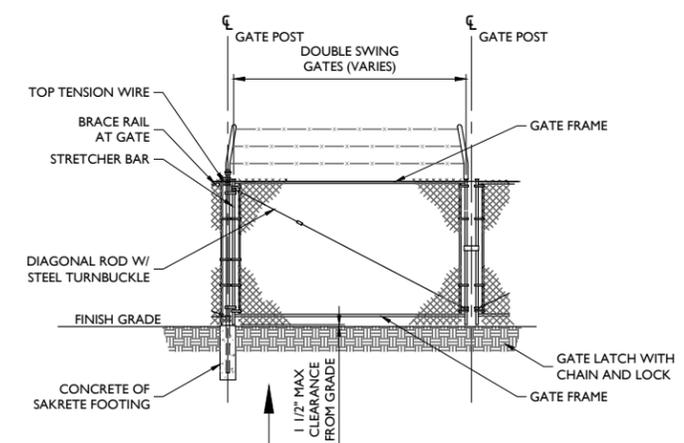
GRAVEL DRIVEWAY SURFACING
NOT TO SCALE



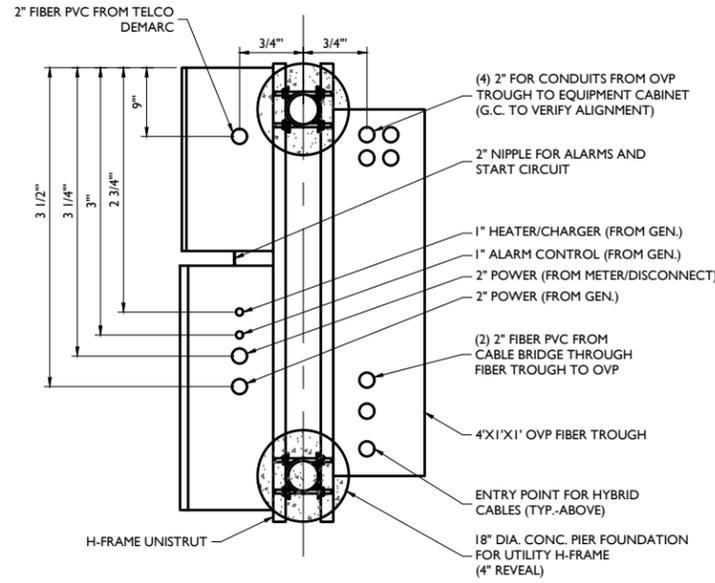
**WOVEN WIRE CORNER,
GATE, END, OR PULL POST**
NOT TO SCALE

FENCE NOTES:

- GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 3"Ø SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 7 FEET OR 14 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
- LINE POST: 2-3/8"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
- GATE FRAME: 1 1/2"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
- TOP RAIL & BRACE RAIL: 1 1/4"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
- FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392 CLASS I.
- TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
- TENSION WIRE: 7 GA. GALVANIZED STEEL.
- BARBED WIRE: 3 STRANDS OF DOUBLE STRANDED 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
- GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK.
- LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
- HEIGHT = 8'-0" VERTICAL DIMENSION WITH 1'-0" BARBED WIRE.
- ALL WORK SHALL CONFORM WITH THE PROJECT SPECIFICATIONS.



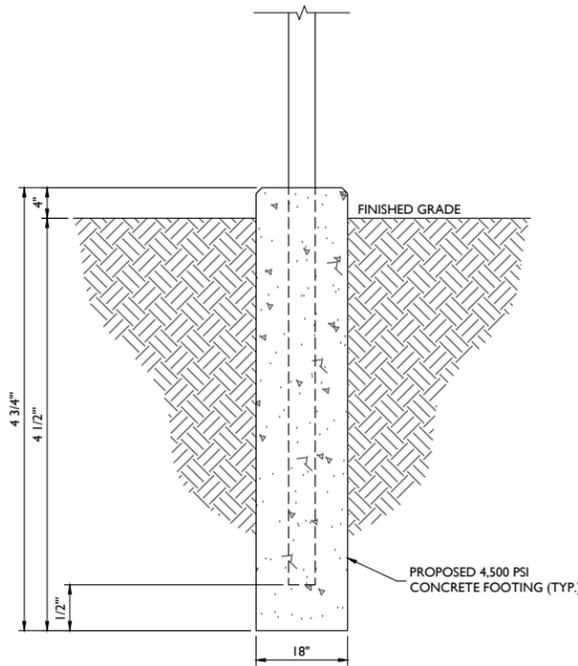
WOVEN WIRE SWING GATE, DOUBLE
NOT TO SCALE



EQUIPMENT SECTION VIEW

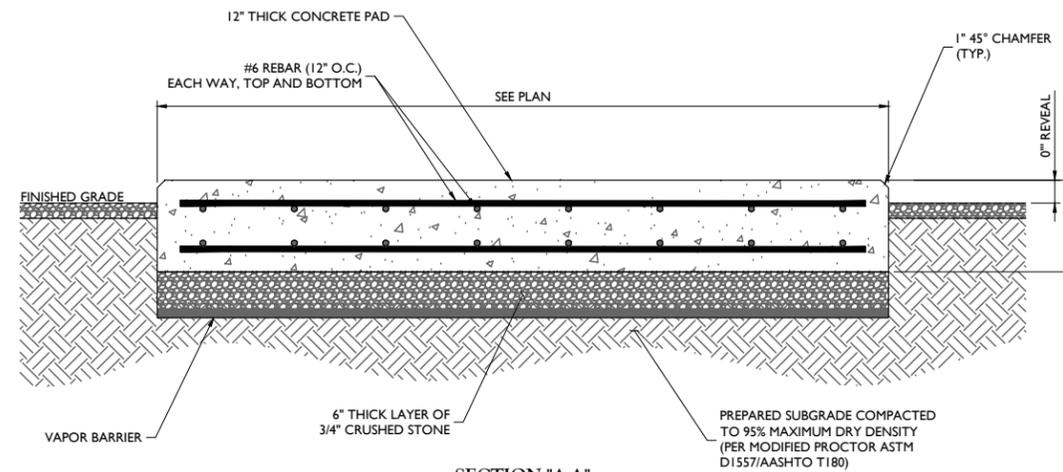


SCALE : 1" = 1' FOR 22"X34"
 (SCALE : 1" = 2' FOR 11"X17")



UTILITY FRAME FOUNDATION DETAIL

NOT TO SCALE



SECTION "A-A"

CONCRETE EQUIPMENT PAD DETAILS

NOT TO SCALE

CONCRETE NOTES:

DESIGN INFORMATION:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336A, ASTM A184, ASTM A185 AND THE DESIGN & CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. THE DESIGN SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE AS SHOWN ON SHEET T-1.

EARTHWORK:

1. FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON (UNDISTURBED RESIDUAL SOILS/COMPACTED STRUCTURAL FILL), CAPABLE OF SAFELY SUPPORTING AN ALLOWABLE BEARING PRESSURE OF 1,500 PSF. IF FOUNDATION CONDITIONS PROVE UNACCEPTABLE AT ELEVATIONS SHOWN, EXCAVATION SHALL BE CARRIED DEEPER AND SHALL BE BACKFILLED WITH LEAN CONCRETE TO PLAN FOOTING BOTTOM, OR REDISIGN OF FOUNDATIONS WILL BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
2. DESIGN FURNISH AND INSTALL TEMPORARY SHEETING, SHORING, AND DRAINAGE TO MAINTAIN THE EXCAVATION AND PROTECT SURROUNDING STRUCTURES AND UTILITIES.

3. THOROUGHLY COMPACT ALL BOTTOM OF FOOTINGS PRIOR TO PLACING ANY CONCRETE.

CONCRETE:

1. FORMWORK

- 1.a. CONCRETE CONSTRUCTION SHALL CONFORM TO "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS." (ACI 301-89).
- 1.b. FORMWORK SHALL CONFORM TO ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"

2. REINFORCEMENT

- 2.a. REINFORCING STEEL ASTM A615, GRADE 60. WELDED WIRE ASTM A185 (FLAT SHEET). LAPS 40 BAR DIAMETERS UNLESS NOTED. BARS SHALL BE SECURELY HELD IN ACCURATE POSITION BY SUITABLE ACCESSORIES, TIE BARS, SUPPORT BARS, ETC. HOOK LENGTHS SHALL BE 12 BAR DIAMETERS.
- 2.b. CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED.

2.b.1. FOOTINGS AND SLABS CAST AGAINST GROUND	3"
2.b.2. CONCRETE TO BE IN CONTACT WITH GROUND OR WEATHER AT BARS GREATER THAN 5"	2"
2.b.3. AT BARS #5 OR LESS	1 1/2"
2.b.4. CONCRETE NOT TO BE EXPOSED TO GROUND OR WEATHER BEAMS, GIRDERS, AND COLUMNS	1 1/2"
2.b.5. SLABS AND WALLS	3/4"

2.c. CAST IN PLACE CONCRETE

- 2.c.1. MINIMUM 28 DAY CYLINDER STRENGTH AND MAXIMUM SLUMP, PRIOR TO ADDITION F SUPER PLASTICIZERS, AS FOLLOWS:

2.c.1.1. CLASS I FOOTINGS	4500 PSI	3"
2.c.1.2. CLASS III INTERIOR ELEVATED SLABS AND WALLS	4000 PSI	4"
2.c.1.3. CLASS V OTHER WORK	4000 PSI	4"
2.c.1.4. CLASS VI LEAN CONCRETE FOR OVEREXCAVATION OF FOUNDATIONS	2000 PSI	N/A
- 2.c.2. MIX DESIGN TO BE IN ACCORDANCE WITH ACI 318, CHAPTER 5. NO CALCIUM CHLORIDE ADMIXTURE CONTAINING CHLORIDES SHALL BE USED IN ANY CONCRETE
- 2.c.3. COARSE AGGREGATE FOR NORMAL WIEGHT CONCRETE SHALL CONFORM TO ASTM C33 SIZE #57. COARSE AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C330 GRADED 3/4" TO 1/4".
- 2.c.4. COLD WEATHER PLACEMENT SHALL COMPLY WITH ACI 306.1
- 2.c.5. HOT WEATHER PLACEMENT SHALL COMPLY WITH ACI 305 R.
- 2.c.6. CHAMFER ALL EXPOSED EDGES 3/4"
- 2.c.7. THE MAXIMUM TEMPERATURE OF ALL CONCRETE AT DELIVERY TO THE SITE SHALL BE 85°F
- 2.c.8. TOTAL DELIVERY TIME SHALL BE LESS THAN 75 MINUTES.

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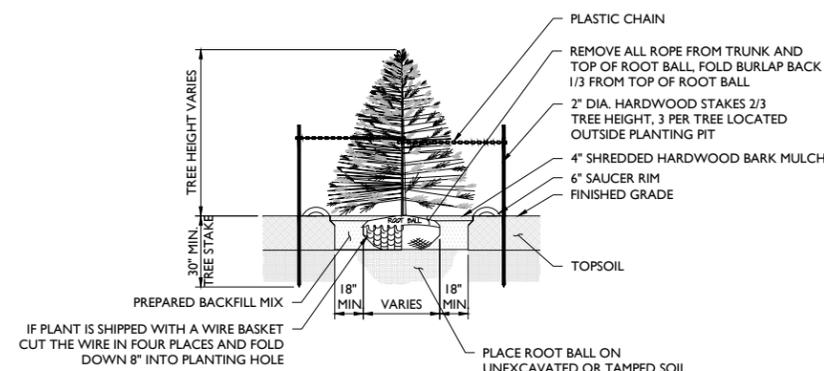
SHEET TITLE:
CONSTRUCTION DETAILS

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A-7

LANDSCAPE MAINTENANCE NOTES:

- REFER TO THE ENGINEERING PLANS FOR ADDITIONAL INFORMATION REGARDING THE SITE DEVELOPMENT.
- CONTRACTOR TO REMOVE ANY EXISTING TREE OR SHRUB FROM THE PROPOSED COMPOUND.
- ALL PLANT MATERIAL SHALL CONFORM TO ALL LOCAL LAND DEVELOPMENT REGULATIONS AND ORDINANCES.
- ALL LANDSCAPE PLANTING AREAS SHALL BE MULCHED WITH 4" MINIMUM DEPTH OF SHREDDED HARDWOOD MULCH, EXCEPT TURF AREAS.
- ALL TREES AND SHRUBS SHALL BE GUARANTEED FOR A PERIOD OF 18 MONTHS FROM THE DATE OF PLANTING.
- ALL PLANTING OPERATIONS SHALL BE DONE IN THE APPROPRIATE WEATHER AFTER FINAL GRADING HAS OCCURRED. B&B MATERIAL MAY BE PLANTED AT ANY TIME WHEN THE SOIL AND BACKFILL ARE NOT FROZEN OR IN AN UNSUITABLE CONDITION. OTHER KINDS OF PLANTS SHALL BE PLANTED AT TIMES OF THE YEAR DICTATED BY GOOD HORTICULTURAL PRACTICES AND AVAILABILITY OF PLANT MATERIAL.
- NEWLY INSTALLED TREES AND SHRUBS SHALL BE IRRIGATED WEEKLY FOR THE FIRST GROWING SEASON.
- IN THE EVENT OF ANY DISCREPANCIES WITH THIS PLAN, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY FOR REVIEW AND RESOLUTION.
- BACKFILL MATERIAL FOR PLANTING AREAS SHALL BE COMPOSED OF 80% TOPSOIL AMENDED WITH 10% PEAT MOSS AND 10% FULLY COMPOSTED HORSE OR COW MANURE.
- THE QUALITY AND SIZE OF PLANT MATERIAL, SPREAD OF THE ROOTS AND THE SIZE OF THE ROOT BALL SHALL BE IN ACCORDANCE WITH "AMERICAN STANDARDS FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
- ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY. THEY SHALL HAVE NORMAL, WELL-DEVELOPED BRANCHES AND VIGOROUS FIBROUS ROOT SYSTEMS. ALL PLANTS SHALL BE NURSERY-GROWN, UNLESS OTHERWISE STATED. ALL PLANTS WHICH ARE FOUND UNSUITABLE IN GROWTH OR CONDITION, OR WHICH ARE NOT TRUE TO NAME, SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE PLANTS.
- PLANTS SHALL BE MEASURED AS THEY STAND IN THEIR NATURAL POSITION. STOCK FURNISHED SHALL BE A FAIR AVERAGE OF THE MINIMUM SIZES SPECIFIED OR OF THE RANGE GIVEN IN THE U.S.D.A STANDARDS FOR NURSERY STOCK. LARGER PLANTS CUT BACK TO SIZES SPECIFIED SHALL NOT BE ACCEPTED.
- ALL PRECAUTIONS CUSTOMARY IN GOOD TRADE PRACTICES SHALL BE TAKEN IN PREPARING PLANTS FOR MOVING. ALL BALLED AND BURLAPPED PLANTS SHALL BE DUG TO MEET OR EXCEED U.S.D.A. STANDARDS FOR NURSERY STOCK.
- PLANTS SHALL BE PACKED, TRANSPORTED AND HANDLED WITH UTMOST CARE TO ENSURE ADEQUATE PROTECTION AGAINST INJURY. EACH SHIPMENT SHALL BE CERTIFIED BY STATE AND FEDERAL AUTHORITIES TO BE FREE FROM DISEASES AND INFESTATION.
- IN ORDER TO ACHIEVE THE EFFECT ESTABLISHED IN THE PLANTING PLAN, UNIFORMITY OF PLANT MATERIAL IS DESIRED. THE PLANT MATERIAL SHALL BE OF THE SAME SIZE, AGE AND CULTIVAR, AND SHALL HAVE BEEN OBTAINED FROM THE SAME NURSERY.

SCIENTIFIC	COMMON NAME	PLANTING HEIGHT	SPACING	TYPE	TOTAL NUMBER
THUJA OCCIDENTALIS	EASTERN ARBORVITAE	6'-8'	PER PLAN	B&B	7



NOTES:

- NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
- PLANTING DEPTH SHALL BE THE SAME OR HIGHER AS GROWN IN NURSERY.

EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE