

PROJECT INFORMATION

ZONING CLASSIFICATION: R.O.W.  
USE GROUP: U (UTILITY & MISCELLANEOUS)  
APPLICABLE CODES: 2015 INTERNATIONAL BUILDING CODE  
2014 NATIONAL ELECTRIC CODE (NFPA 70)  
  
ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE ABOVE CODES AS ADOPTED BY THE GOVERNING AUTHORITIES.  
  
SCOPE OF WORK: PROVIDE NEW DAS EQUIPMENT ON PEPCO POLE.



Crown Castle NG Atlantic LLC  
Jurisdiction: Montgomery County  
LGY-020m2

Distributed Antenna System (DAS) Node  
Pepco Utility Pole Attachment

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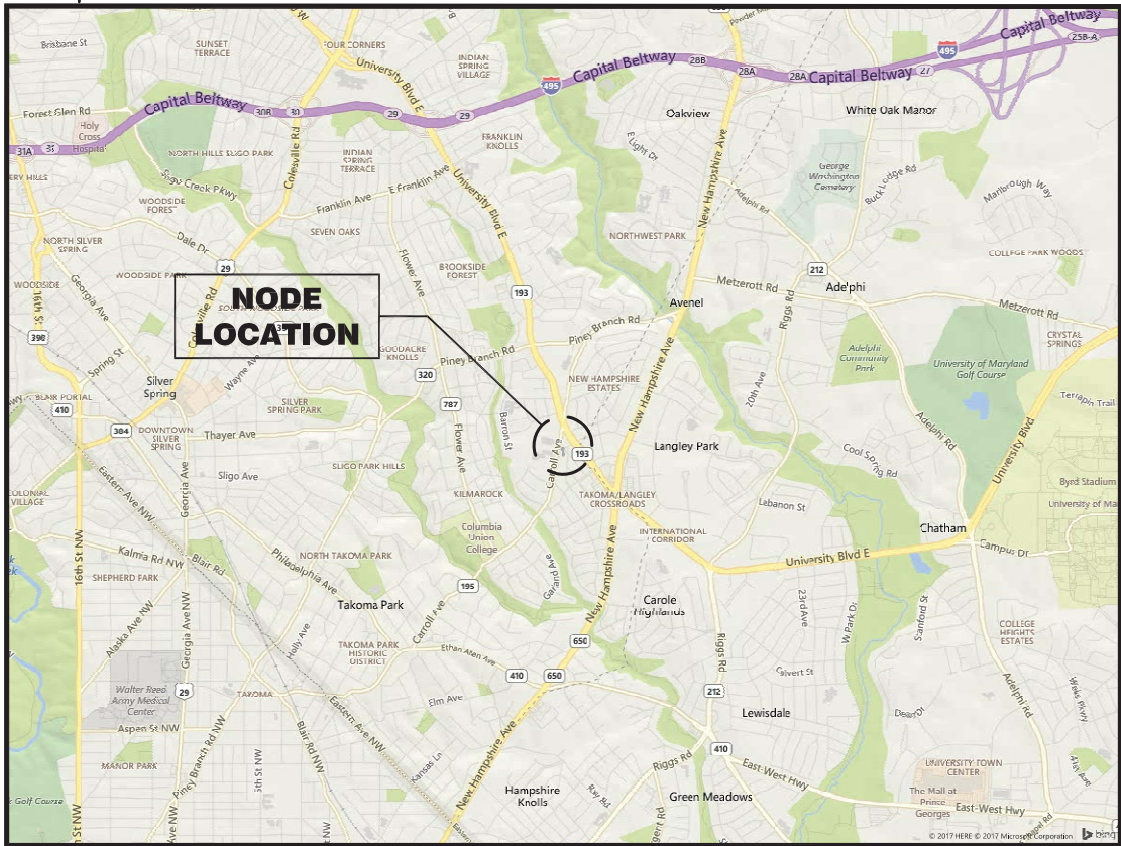
NODE:

LGY-020m2

TITLE:

CROWN CASTLE NG ATLANTIC LLC  
902 Merrimac Drive  
Takoma Park, MD 20912

Jurisdiction: Takoma Park

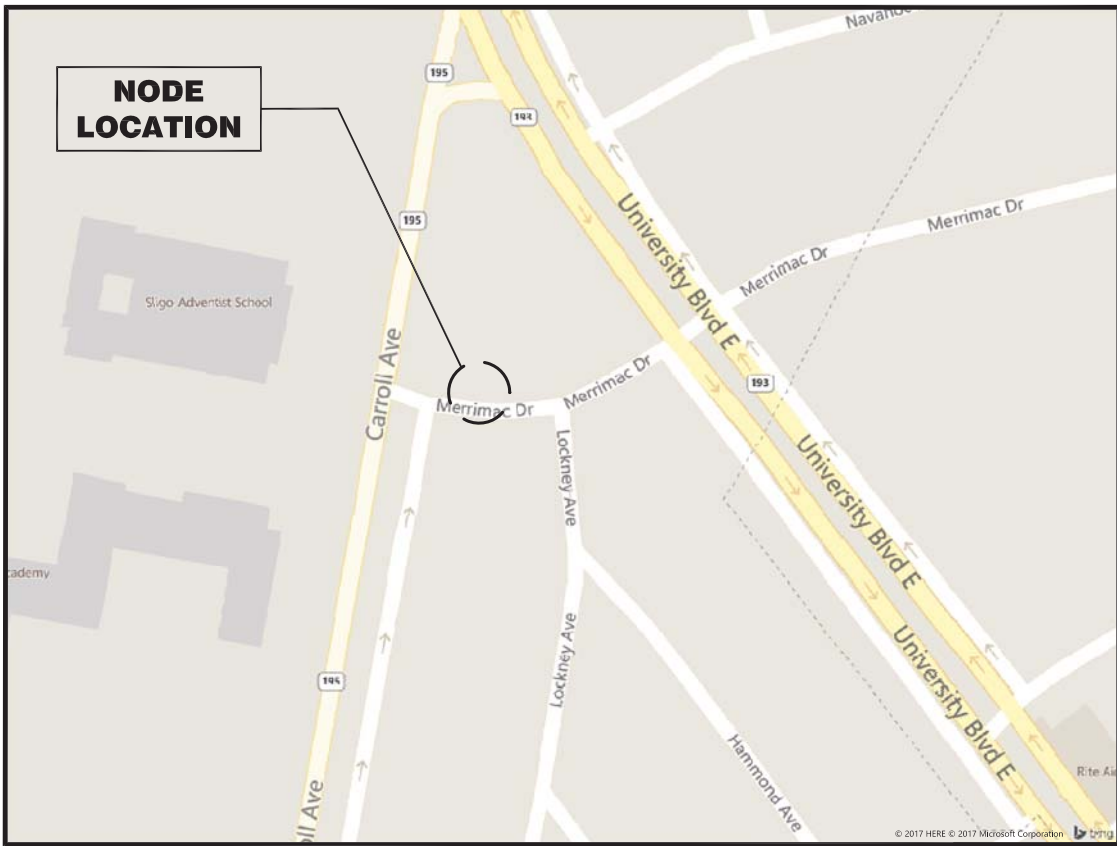


NOT TO SCALE

GENERAL VICINITY MAP

Latitude: 38.992436° N (38° 59' 32.77")

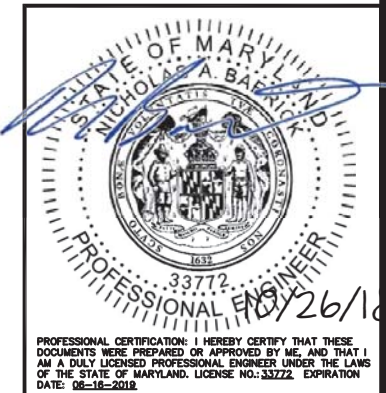
Longitude: -76.992459° W (-76° 59' 32.85")



NOT TO SCALE

NODE PLACEMENT

902 Merrimac Drive  
Takoma Park, MD 20912  
Pepco Wood Pole  
#802422-090050



REVISIONS	NO.	DATE	DESCRIPTION	BY	MCP
	0	12/11/17	ISSUED FOR REVIEW		
	1	01/09/18	ISSUED FOR PERMITTING		
	2	01/10/18	REVISED PER COMMENTS		
	3	04/17/18	REVISED PER COMMENTS		
	4	08/30/18	REVISED PER COMMENTS		
	5	09/13/18	REVISED PER NEW POLE		
	6	10/26/18	REVISED PER COMMENTS		

DRAWN BY:	MCP
CHECKED BY:	GT
APPROVED BY:	NB
DRAWING DATE:	10/26/18

PROJECT NUMBER:	02157492.15
NODE BU:	N/A
SCALE:	AS SHOWN

SHEET NUMBER
1



CROWN CASTLE NG ATLANTIC LLC

1 --- GENERAL PROVISIONS

1.1 --- CONTRACT OVERVIEW

1. THE INTENTION OF THE DOCUMENTS IS TO SHOW THE COMPLETE INSTALLATION AND TO INCLUDE ALL LABOR AND MATERIALS NECESSARY, WHETHER OR NOT SPECIFICALLY INDICATED, FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT. THE INTENT OF THIS DOCUMENT IS NOT TO DESIGNATE THE MEANS AND METHODS OF PROCEDURE OF THE WORK. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES, STANDARDS AND SUPPLEMENTS:

- IBC --- INTERNATIONAL BUILDING CODE
- AISC --- AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS
- IEEE --- INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
- NEC --- NATIONAL ELECTRICAL CODE
- NEMA --- NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
- UL --- UNDERWRITERS LABORATORIES
- NSPC --- NATIONAL STANDARD PLUMBING CODE
- IMC --- INTERNATIONAL MECHANICAL CODE
- NFPA --- NATIONAL FIRE PROTECTION ASSOCIATION
- OSHA --- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- ANS/TIA --- TELECOMMUNICATIONS INDUSTRY ASSOCIATION
- ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND ORDINANCES

THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.

3. THE ENGINEERING DRAWINGS SHOW PRINCIPAL AREAS WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT. INCIDENTAL WORK MAY ALSO BE NECESSARY IN AREAS NOT SHOWN ON THE ENGINEERING DRAWINGS DUE TO CHANGES AFFECTING EXISTING ELECTRICAL OR OTHER SYSTEMS. SUCH INCIDENTAL WORK SHALL ALSO BE A PART OF THIS CONTRACT. INSPECT THOSE AREAS AND ASCERTAIN WHAT IS NEEDED TO DO THAT WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

4. NO DETAIL DRAWINGS. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE.

5. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK HOWEVER, NO CHANGE THAT ALTER THE CHARACTER INTENT OF THE DESIGN WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT A CHANGE ORDER.

6. GENERAL CIVIL, STRUCTURAL, ELECTRICAL AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

7. THE GENERAL NOTES CONTAINED HEREIN ARE PART OF THE PLANS AND SPECIFICATIONS, AND ARE TO BE COMPLIED WITH IN ALL RESPECTS. THE MOST RESTRICTIVE OF THE NOTES SHALL GOVERN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND ASCERTAIN WHAT IS NEEDED TO DO THAT WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

8. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENT TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.

9. REPRESENTATION OF TRUE NORTH OTHER THAN THOSE FOUND ON THE PLOT OF THE SURVEY DRAWING SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF THE TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF THE SURVEY DRAWING AND ANY SURVEYOR'S RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND ASCERTAIN WHAT IS NEEDED TO DO THAT WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

10. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS, AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.

11. THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THIS REQUIREMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS SUCH AS OSHA COMPLIANCE DURING THE PROGRESS OF THE WORK. THE ENGINEER WILL NOT ADVISE NOR PROVIDE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.

13. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY OF THE SECURITY OF THE SITE UNTIL COMPLETION OF THE CONSTRUCTION.

14. 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.

15. THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THE JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT TO AVOID DELAYS IN THE CONTRACT SCHEDULE OR OTHER WORK PERFORMED IN THE VICINITY OF THE CONSTRUCTION AREA.

16. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE TO THE PROPERTY OWNER WELL IN ADVANCE OF THE STARTING DATE OF THE WORK. THE OWNER SHALL ALSO BE NOTIFIED OF A CHANGE IN THE CONSTRUCTION SCHEDULE.

17. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.

18. EACH CONTRACTOR IS RESPONSIBLE FOR FULFILLING THE BUILDING PERMIT AT THE LOCAL JURISDICTION AS THE CONTRACTOR OF RECORD, AND SHALL PROVIDE THE JURISDICTION WITH ALL PERMIT REQUIRED TO OPERATE AS THE CONTRACTOR IN THIS JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATIONS, ETC. PRIOR TO BEGIN THE WORK.

19. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 48 HOURS OF NOTICE SHALL BE GIVEN TO AUTHORITIES. AN EXTENSION IN THE CONTRACT SCHEDULE WILL NOT BE GRANTED DUE TO DELAY CAUSED BY THE CONTRACTOR'S NEGLIGENCE.

20. EACH CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF CONTRACTOR LICENSES, BONDS AND INSURANCES. DOCUMENTATION SHALL BE PROVIDED TO THE OWNER PRIOR TO THE WORK.

21. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTOR RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILTS CHANGES, REVISIONS, ADDENDUM, OR CHANGE ORDERS.

22. THE CONTRACTOR IS TO PROVIDE THE OWNER WITH A FULL SET OF RECORD DRAWINGS WITH ACTUAL DIMENSIONS, ROUTING AND CIRCUITS UPON COMPLETION OF CONSTRUCTION.

23. THE CONTRACTOR IS TO CONTACT BOTH LOCAL POWER AND TELEPHONE UTILITY COMPANIES BEFORE CONSTRUCTION BEGINS TO ORDER SERVICE, OBTAIN AND PAY ALL FEES ASSOCIATED WITH CONSTRUCTION. SCHEDULE INSTALLATION OF SERVICE, COORDINATE SCHEDULE RUM/MAINTENANCE POINT AND OBTAIN A FIELD MATERIALS THAT MAY BE SUPPLIED BY THE UTILITY COMPANIES AND INSTALLED BY THE CONTRACTORS.

24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK AND THE PROTECTION OF ALL WORK DURING CONSTRUCTION TO AVOID DAMAGE, COLLAPSE, DISTORTION, MISALIGNMENT AND ALTERATION OF ROOFING WARRANTIES.

25. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.

26. THE CONTRACTOR SHALL MONITOR ALL EXISTING STRUCTURES DURING CONSTRUCTION.

27. THE CONTRACTOR SHALL COORDINATE THE FINAL DIMENSIONS OF ANY TYPE OF BEAM LAYOUT WITH THE FOOTPRINT OF THE NEW EQUIPMENT BEFORE ORDERING ANY MATERIALS.

28. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN SAFE CONDITIONS PRIOR TO INSTALLATIONS, AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT.

29. ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY LOCATION AND IN A MANNER THAT WILL NOT OBSTRUCT THE FLOW OF OTHER WORK RELATED OR NOT TO THIS CONTRACT. ANY EQUIPMENT OR MATERIAL STORAGE MUST MEET ALL RECOMMENDATIONS OF THE MANUFACTURER. THE CONTRACTOR SHALL INSPECT THOROUGHLY ALL MATERIALS AND EQUIPMENT PRIOR TO FINAL INSTALLATION. DAMAGED EQUIPMENT OR MATERIALS SHALL NOT BE INSTALLED PERMANENTLY.

30. ALL MATERIALS SHALL BE INSTALLED PER THE MANUFACTURERS INSTRUCTIONS.

31. EXCEPT FOR WARNING SIGNS SUCH AS NO TRESPASSING AND SIGNS THAT STATE OWNERSHIP AND EMERGENCY TELEPHONE NUMBERS, NO SIGN SHALL BE LOCATED ON THE TOWER.

32. ALL EQUIPMENT SHALL BE INSTALLED LEVEL AND PLUMB.

1.2 EXISTING CONDITIONS AND STRUCTURES

1. BEFORE BEGINNING WORK AT THE SITE, THE CONTRACTOR SHALL INSPECT THE EXISTING COMPOUND OR BUILDING AND DETERMINE THE EXTENT OF EXISTING FINISHES, SPECIALTIES, EQUIPMENT AND OTHER ITEMS WHICH MUST BE REMOVED AND REINSTALLED DUE TO DIFFERENCES BETWEEN THE EXISTING CONDITIONS AND THE DESIRED CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY.

2. BY SUBMITTING A BID FOR THIS WORK, THE CONTRACTOR ACKNOWLEDGES THAT HE HAS THOROUGHLY REVIEWED AND UNDERSTOOD THE CONSTRUCTION DOCUMENTS, VISITED THE SITE AND IS FAMILIAR WITH THE CONDITIONS ENCOUNTERED AT THE SITE.

3. THE CONTRACTOR, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING WHICH SUCH THE CONTRACTOR MIGHT NOT HAVE FULLY INFORMED HIMSELF PRIOR TO BIDDING.

4. NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST, OR OF DIFFICULTIES THAT MAY BE ENCOUNTERED OR OF ANY OTHER RELEVANT MATTER CONCERNING THE WORK TO BE PERFORMED WILL BE ACCEPTED AS A REASON FOR ANY FAILURE OR OMISSION ON THE PART OF THE CONTRACTOR TO FULFILL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

5. IT IS UNDERSTOOD BY THE OWNER THAT THE CONTRACTOR IN SUBMITTING HIS BID, WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE OF THE PROJECT TO DETERMINE THE EXISTING CONDITIONS AND THE DESIRED CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY.

6. THE LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND ACCEPTS FULL RESPONSIBILITY FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR FAILURE TO LOCATE ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK.

7. SHOULD ANY ERROR OR INCONSISTENCY APPEAR IN THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK MUST MAKE MENTION OF THE SAME TO THE ENGINEER AND OWNER FOR PROPER ADJUSTMENT AND IN NO CASE PROCEED WITH THE WORK IN UNCERTAINTY OR WITH INSUFFICIENT DRAWINGS.

8. THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR CONSIDERING WORK TO BE ALLOWED DUE TO DIFFERENCES BETWEEN THE EXISTING CONDITIONS AND THE DESIRED CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE PROJECT, INCLUDING SAFETY.

9. TRADE, PRODUCT NAMES OR MANUFACTURER'S NAMES OR CATALOG NUMBERS AND INDICATIONS OF EXISTING PRODUCT TYPES SHOWN ON THE DRAWINGS ARE BELIEVED TO BE ACCURATE. IF THEY ARE DISCOVERED TO BE INACCURATE, NOTIFY ENGINEERS IMMEDIATELY AND DO NOT PROCEED WITHOUT INSTRUCTIONS.

10. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGES WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGES TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE COST OF REPAIRING OR REPLACING ANY DAMAGED AREAS.

11. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES AND EFFORTS TO PROTECT THE STRUCTURAL INTEGRITY OF EXISTING STRUCTURES. WHEN WORK IS PERFORMED IN THE VICINITY OF EXISTING STRUCTURE, THE STRUCTURAL INTEGRITY AND STABILITY SHALL BE MONITORED AT ALL TIMES DURING EVERY PHASE OF THE CONSTRUCTION.

12. 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.

13. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.

14. WHERE INDICATED ON THE PLANS, THE CONTRACTOR SHALL PAINT ALL NEW ANTENNAS SHOULDERS AND RELATED MOUNTING HARDWARE TO MATCH THE EXISTING ADJACENT SURFACES. THE CONTRACTOR SHALL NOT USE A METAL BASED PAINT FOR ANTENNAS. ALL SURFACE CONTAMINATION SHALL BE REMOVED PRIOR TO PAINTING NEW SURFACES.

15. 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. BEFORE YOU DIG, DRILL OR BLAST, CALL THE UNDERGROUND SERVICES ALERT NUMBER AT THE REQUIRED TIME.

16. ALL EXISTING ACTIVE SEWER, WATER GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK SHALL BE PROTECTED AT ALL TIMES, WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PER DRILLING AROUND OR NEAR UTILITIES. THE CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

17. IF AN INACTIVE ELECTRICAL, TELEPHONE, SEWER, WATER OR ANY OTHER UTILITY ARE ENCOUNTERED AND INTERFERE WITH THE EXECUTION OF THE WORK, THE CONTRACTOR IS TO RESOLVE THE UTILITY AND CAP, PLUG OR OTHERWISE TERMINATE THE UTILITY AT A POINT WHERE IT NO LONGER CONFLICTS WITH THE WORK. THE UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE UTILITY COMPANIES RECOMMENDATIONS AND LOCAL AGENCY REGULATIONS.

18. ALL LIABILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEMS IS MADE.

19. MAINTAIN FLOW FOR ALL EXISTING UTILITIES.

20. 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.

21. PROTECT FINISHED SURFACES INCLUDING JAMBS AND HEADS OF OPENINGS USED AS PASSAGEWAYS THROUGH WHICH EQUIPMENT AND MATERIALS WILL PASS.

22. PROVIDE PROTECTION FOR EQUIPMENT ROOM SURFACES PRIOR TO ALLOWING EQUIPMENT OR MATERIALS TO BE MOVED OVER SUCH SURFACES.

23. MAINTAIN FINISHED SURFACES CLEAN, UNARMED AND SUITABLY PROTECTED UNTIL JOB SITE IS ACCEPTED BY THE OWNER.

24. IN THE EVENT OF DAMAGE TO AN EXISTING STRUCTURE, THE CONTRACTOR SHALL NOTIFY THE OWNER OR ITS REPRESENTATIVE IMMEDIATELY, AND THEN PROMPTLY MAKE ALL REPLACEMENTS AND REPAIRS TO THE SATISFACTION OF THE OWNER. THE OWNER MAY ELECT TO USE A THIRD PARTY CONTRACTOR TO PERFORM THE REPAIRS. EXPENSES ASSOCIATED WITH THE REPAIRS AND REPLACEMENTS SHALL BE PAID BY THE GENERAL CONTRACTOR SELECTED FOR THIS CONTRACT.

25. ADDITIONAL TIME REQUIRED TO SECURE REPLACEMENT AND MAKE REPAIRS WILL NOT BE CONSIDERED BY THE OWNER TO JUSTIFY AN EXTENSION IN THE CONTRACT TIME FOR COMPLETION.

1.3 ACCESS

1. USE MOST DIRECT ROUTE FROM PUBLIC STREET AS AGREED TO BY COMPOUND OR BUILDING OWNER FOR ACCESS TO AN EXISTING BUILDING INTERIOR, USE LOADING DOCK AS AGREED TO BY BUILDING OWNER.

2. COORDINATE WITH SITE OWNER CONSTRUCTION SCHEDULE & SITE ACCESS. ENSURE THAT THE OWNER OF PARENT PARCEL IS NOTIFIED IN WRITING OF CONSTRUCTION ACTIVITIES.

3. A LIST OF WORKERS INVOLVED IN THIS PROJECT SHALL BE PROVIDED TO THE PROPERTY OWNER OR ITS REPRESENTATIVE.

4. THE CONTRACTOR SHALL COORDINATE ALL SPECIAL CONSIDERATIONS OF CONSTRUCTION SUCH AS NOISY OPERATION, INTERRUPTION OF ANY MECHANICAL AND/OR ELECTRICAL SERVICES, MATERIAL DELIVERIES AND STORAGE, STAGING AREA, CRANE LIFTS WITH THE OWNER PRIOR TO THE START OF THE WORK.

5. THE CONTRACTOR SHALL COORDINATE WITH AN OWNER REPRESENTATIVE, THE TEMPORARY REMOVAL OF FENCE, LANDSCAPING & ANY EXPECTED DAMAGE TO ACCESS ROAD OR ADJACENT REPAIR OF PROPERTY PRIOR TO COMMENCING THE WORK.

6. THE CONTRACTOR SHALL COORDINATE WORK HOURS & STAGING AREAS WITH OWNER.

7. CONTRACTOR TO NOTIFY PROPERTY OWNER OF CONSTRUCTION START DATE WELL IN ADVANCE OF CONSTRUCTION.

1.4 SITE MAINTENANCE

1. REMOVE STANDING OR REACTIVE MATERIALS FROM NEW AND EXISTING SURFACES IMMEDIATELY. REMOVE HAZARDOUS ACCUMULATIONS OF DEBRIS PROMPTLY, AT LATEST ONLY, CONTINUE STOP PRODUCING OPERATIONS DURING CUTTING, DRILLING, PAINTING AND FINISHING. THERE SHOULD BE NO OVER SPRAYING PAINT IN PARKING AREA, VACUUM IMMEDIATELY AFTER COMPLETION.

2. THERE SHALL NOT BE ANY CREATION OF NOISE OUTSIDE THE NORMAL HOURS OF 7 AM TO 6 PM, UNLESS OTHERWISE AGREED UPON WITH THE OWNER. NOISE SHOULD BE KEPT TO A MINIMUM LEVEL OF CONSTRUCTION.

3. NOISE AND DUSTING BUILDING STRUCTURE VIBRATION GENERATED BY CONSTRUCTION PROCEDURES, EQUIPMENT, TOOL, AND OPERATIONS ARE TO BE KEPT TO A PRACTICABLE MINIMUM. WHERE USE OF HIGH NOISE LEVEL EQUIPMENT IS UNAVOIDABLE, AND CAN BE HEARD, OFFENSIVE TO HOURS BEFORE 7 AM, AND AFTER 6 PM, MONDAY THROUGH FRIDAY OR AS AGREED TO BY BUILDING OWNER.

4. THE CONTRACTOR IS TO PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OR 2 ABC WITHIN 75FT OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA.

5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A NEAT AND ORDERLY SITE, YARD AND GROUNDS, REMOVE AND DISPOSE LEGALLY OFF SITE ALL RUBBISH, WASTE AND ALL FOREIGN SUBSTANCES. REMOVE PETROCHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS TO A SMOOTH EVEN-TEXTURED SURFACE.

6. AT PROJECT COMPLETION, REMOVE TEMPORARY SERVICES, CONSTRUCTION EQUIPMENT, TOOLS AND FACILITIES, MUCKUPS, TEMPORARY STRUCTURES, SURPLUS MATERIALS, DEBRIS, AND RUBBISH FROM BUILDING OWNERS PROPERTY. PUT SITE IN NEAT, ORDERLY CONDITION, READY FOR USE. LEAVE ROOF AREAS, PIPE SPACES AND OTHER SPACES CLEAN AND FREE FROM DEBRIS ON A DAILY BASIS.

7. THE SITE AND/OR BUILDING STRUCTURE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION IN ORDER TO PREVENT UNAUTHORIZED ENTRY OF THE EXISTING STRUCTURE DURING ALL PHASES OF THE DEMOLITION AND CONSTRUCTION AND SHALL PROVIDE, IF REQUIRED, SIGNED & SEALED SHOP DRAWINGS, BY A REGISTERED PROFESSIONAL ENGINEER, FOR THE SHORING OF ALL WALLS, BEAMS, SLABS, ROOF JOISTS, OR OTHER ELEVATED STRUCTURAL ITEMS, THAT ARE HAVING THE SUPPORT BELOW NOTED FOR DEMOLITION.

8. ANY DAMAGE DUE TO DEMOLITION, OR OTHER CONSTRUCTION ACTIVITIES, DONE TO ANY EXISTING SURFACE TO REMAIN SHALL BE REPAIRED TO MATCH EXISTING AT NO ADDITIONAL COST TO THE OWNER.

1.5 TEMPORARY FACILITIES

1. THE CONTRACTOR SHALL CONSIDER THAT WATER, POWER AND LIGHT ARE NOT AVAILABLE AT THIS SITE. WHEN PERMANENT POWER IS ESTABLISHED, ALL CONTRACTORS MAY USE THE SERVICE CONNECTION FOR PRODUCTION WORK ONLY, PROVIDED THAT ELECTRICAL CORDS AND CONNECTIONS ARE FURNISHED BY THE CONTRACTORS AND ARE DISCONNECTED AND PROPERLY STORED DURING NON-WORKING HOURS.

2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.

2 - DEMOLITION AND EXISTING STRUCTURAL ALTERATION

2.1 DEMOLITION SPECIFICS

1. GENERAL CONTRACTOR IS TO DEMOLISH AND REMOVE FROM SITE (AND DISPOSE OF APPROPRIATELY) ALL ITEMS NOTED FOR DEMOLITION IN THE ARCHITECTURAL, CIVIL, ELECTRICAL AND/OR STRUCTURAL DRAWINGS, INCLUDING BELOW GRADE FOUNDATION AND STRUCTURES. CONTRACTOR SHALL COORDINATE WITH THE OWNER REPRESENTATIVE THE DISPOSAL OF EQUIPMENT & MATERIALS.

2. GENERAL CONTRACTOR IS TO EXERCISE UTMOST CARE DURING DEMOLITION AND PROMPTLY INFORM THE ENGINEER OF ANY DEVIATION TO THE EXISTING STRUCTURE FROM WHAT IS SHOWN IN THESE PLANS PRIOR TO PROCEEDING WITH THE WORK.

3. GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SHORING, BRACING, PROVIDING LATERAL SUPPORT, AND FOR MAINTAINING THE INTEGRITY OF THE EXISTING STRUCTURE DURING ALL PHASES OF THE DEMOLITION AND CONSTRUCTION AND SHALL PROVIDE, IF REQUIRED, SIGNED & SEALED SHOP DRAWINGS, BY A REGISTERED PROFESSIONAL ENGINEER, FOR THE SHORING OF ALL WALLS, BEAMS, SLABS, ROOF JOISTS, OR OTHER ELEVATED STRUCTURAL ITEMS, THAT ARE HAVING THE SUPPORT BELOW NOTED FOR DEMOLITION.

4. ANY DAMAGE DUE TO DEMOLITION, OR OTHER CONSTRUCTION ACTIVITIES, DONE TO ANY EXISTING SURFACE TO REMAIN SHALL BE REPAIRED TO MATCH EXISTING AT NO ADDITIONAL COST TO THE OWNER.

2.2 CUTTING & PATCHING

1. DO NOT DRILL OR CUT EXISTING FLOOR JOISTS, BEAMS, COLUMNS OR OTHER STRUCTURAL ELEMENTS UNLESS SPECIFICALLY INDICATED. DRILL SLABS WHERE APPROVED. CORE DRILL THROUGH CONCRETE SLAB LINE DRILL FOR RECTANGULAR OPENINGS. MAKE ALL NEW HOLES OR OPENINGS OF PROPER SIZE FOR CONDUITS, DUCTS, PIPES AND OTHER ITEMS PASSING THROUGH OPENINGS. MAKE ALL NEW HOLES OR OPENINGS BE WEATHER TIGHT OR FIRE SAFE AS REQUIRED BY LOCAL BUILDING CODES & ORDINANCES.

2. PREPARE, SUBMIT AND RECEIVE APPROVAL OF SLEEVES AND OPENING DRAWINGS BEFORE LOCATING SLEEVES AND OPENINGS IN NEW CONSTRUCTION AND BEFORE DRILLING EXISTING STRUCTURE. SHOW EACH OPENING AND SLEEVE IN THE ENTIRE PROJECT.

3. SEAL WATER TIGHT AND PROTECT WITH FIRE PROOFING MATERIALS NEW SLEEVES AND OPENINGS THROUGH ROOFS, FLOORS AND INVERTICAL CHASES AS REQUIRED BY CODE AND INDUSTRY STANDARDS. ALL FLOOR AND WALL PENETRATIONS SHALL BE SEALED WITH FIRE RATED COMPOUND MEETING UL C840S45.

4. THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.

5. WHERE CUTTING OF EXISTING SURFACES OR REMOVAL OF EXISTING FINISHES IS REQUIRED TO PERFORM THE WORK UNDER THIS CONTRACT AND A NEW FINISH IS NOT INDICATED, FILL RESULTING OPENINGS AND PATCH THE SURFACE AFTER DOING THE WORK AND FINISH TO MATCH ADJACENT EXISTING SURFACES.

6. EXCEPT IN SPACE WHERE NO WORK UNDER THIS CONTRACT IS REQUIRED, ENCLOSE EXISTING AND NEW CONDUITS, DUCTS, PIPES AND SIMILAR ITEMS IN FURNISHING WHERE SUCH ITEMS PASS THROUGH FINISHED SPACES WHETHER OR NOT FURNISHING IS INDICATED.

7. ALL CONCRETE AND MASONRY PENETRATIONS SHALL BE DONE USING ROTARY ACTION ONLY (NO HAMMERING ACTION). X-RAYS ARE TO BE TAKEN PRIOR TO DRILLING.

8. CORE LOCATIONS IF REQUIRED SHALL BE CHOSEN SO AS TO AVOID CUTTING ANY REINFORCING BARS. FIRESTOP FLOOR OR WALL PENETRATION WITH TWO HOUR RATED SEALING TO MEET UL C840S45. PROVIDE WEATHERPROOFING OF ANY ROOF PENETRATIONS.

9. REPAIR, PATCH, FINISH AND/OR REFINISH AS APPLICABLE TO MATCH ADJACENT EXISTING FINISHES THOSE EXISTING SURFACES DAMAGED OR NEW PROPOSED SURFACES DURING PERFORMANCE OF THE WORK UNDER THIS CONTRACT.

10. WHERE CONDUITS, DUCTS, PIPES AND SIMILAR ITEMS ARE SHOWN TO BE INSTALLED IN EXISTING WALLS OR PARTITIONS NEATLY CHASE THE WALLS OR PARTITIONS. INSTALL THE TIMES AND PATCH THE WALLS OR PARTITIONS TO MAKE THE INSTALLATION NOT DISCERNIBLE IN THE FINISHED WORK.

11. WHERE A NEW CUTTING IS NOT SCHEDULED, INSTALL NEW CONDUITS AND PIPES IN EVERY CASE, AND NEW DUCT WHERE POSSIBLE ABOVE EXISTING CEILING, REMOVE EXISTING CEILING AS NECESSARY. AFTER INSTALLATION OF CONCEALED WORK, REINSTALL REMOVED CEILING AND PATCH AND REFINISH TO MATCH ADJACENT UNDEMOLISHED CEILING.

12. REPAIR ALL METAL SURFACES THAT HAVE BEEN CUT OR DAMAGED BY REMOVING ANY EXISTING RUST AND APPLYING COLD GALVANIZATION.

3 --- SITE WORK

3.1 CLEARING AND GRUBBING

1. CLEARING OF TREES AND VEGETATION ON THE SITE SHOULD BE HELD TO A MINIMUM. ONLY THE TREES NECESSARY FOR THE CONSTRUCTION OF THE FACILITY SHALL BE REMOVED. ANY DAMAGES TO PROPERTY OUTSIDE THE CONSTRUCTION LIMIT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

2. THE CONTRACTOR SHALL PROTECT EXISTING TREES, VEGETATION, LANDSCAPING MATERIALS AND SITE IMPROVEMENTS NOT SCHEDULED FOR CLEARING OR REMOVAL WHICH MIGHT BE DAMAGED BY CONSTRUCTION ACTIVITIES.

3. TRIM EXISTING TREES AND VEGETATION AS RECOMMENDED BY THE ARBORIST FOR PROTECTION DURING CONSTRUCTION.

4. CLEAR AND GRUB STUMPS, VEGETATION, DEBRIS, RUBBISH, DESIGNATED TREES AND SITE IMPROVEMENT.

5. STRIP AND STOCKPILE TOPSOIL.

6. PROTECT TEMPORARILY ADJACENT PROPERTY, STRUCTURES, BENCHMARKS AND MONUMENTS.

7. MARK DESIGNATED TREES AND VEGETATION DURING CONSTRUCTION ACTIVITIES & PROVIDE TEMPORARY EROSION CONTROL SILTATION CONTROL AND DUST CONTROL.

8. REMOVE AND LEGALLY DISPOSE OF CLEARED MATERIALS.

3.2 EXCAVATION AND BACKFILL

1. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATION APPROVED BY GOVERNING AGENCIES PRIOR TO DISPOSAL.

2. ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS AS DEFINED BY THE OWNER'S REPRESENTATIVE ON THE DRAWINGS OR GEOTECHNICAL REPORT RECOMMENDATIONS.

3. THIS PROJECT INCLUDES:

- EXCAVATION, TRENCHING, FILLING, COMPACTING AND GRADING FOR STRUCTURES, SITE IMPROVEMENTS, ACCESS ROAD AND UTILITIES.
- ALL MATERIALS FOR SUBBASE, DRAINAGE FILL, BACK FILL AND GRAVEL FOR SLABS, PAVEMENT AND IMPROVEMENTS.
- ROCK EXCAVATION WITHOUT BLASTING.
- SUPPLY OF ADDITIONAL MATERIALS FROM OFF SITE AS REQUIRED.
- REMOVAL AND LEGAL DISPOSAL OF EXCAVATED MATERIALS AS REQUIRED.

4. FILL LAYERS THAT REQUIRE COMPACTION SHALL HAVE A MAXIMUM THICKNESS OF 6 INCHES.

5. THE COMPACTING UNDER STRUCTURES, BUILDING SLABS, STEPS, PAVEMENT AND WALKWAYS SHALL BE 95% MAXIMUM DENSITY, ASTM D-1557, TESTED IN EACH OF THE COMPACTING LAYERS AT EACH COMPACTING SITE, OR AT LEAST IN EACH 1000CU. YD PER YARDS OF MATERIAL VOLUME.

6. THE COMPACTING UNDER LAWNS OR UNPAVED AREAS SHALL BE 85% MAXIMUM DENSITY, ASTM D1557.

7. THE COMPACTED LAYERS SHALL NOT EXCEED 8 INCHES.

8. AREAS THAT DO NOT MEET ASTM D-1557 REQUIREMENTS MUST BE RECOMPACTED AT THE CONTRACTOR'S EXPENSES.

9. ALL TRENCH EXCAVATIONS AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH OSHA REGULATIONS FOR CONSTRUCTION.

10. WHERE UNDESIRABLE SOIL CONDITIONS EXIST, LINE THE GRUBBED AREAS WITH GEOTEXTILE FABRIC (MIRAFI 500X OR APPROVED EQUIVALENT) PRIOR TO PLACING FILL OR BASE MATERIAL.

11. THE USE OF EXPLOSIVE IS PROHIBITED ON SITE.

12. ALL EXCAVATION ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIAL HORIZONTAL UNDISTURBED AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUND WATER. DETERMINING FOR EXCESS GROUND WATER SHALL BE PROVIDED IF REQUIRED.

13. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH OTHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPLING COMPOSITE THICKNESS.

14. BACK FILL SHALL USE APPROVED MATERIALS CONSISTING OF LOAM, SANDY CLAY, SAND, GRAVEL OR SOFT SHALE AND SHALL BE FREE FROM CLODS OR STONES OVER 2 1/2".

15. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE AND BEFORE BACK FILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIALS SUCH AS VEGETATION, DEBRIS, TRASH AND ANY FOREIGN MATERIAL.

3.3 DRAINAGE

1. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE AWAY FROM BUILDING OR EQUIPMENT ON THE SITE AT ALL TIMES. SILT AND EROSION CONTROL SHALL BE MAINTAINED ON THE DOWNSTREAM SIDE OF THE SITE AT ALL TIMES. ANY DAMAGE TO ADJACENT PROPERTIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSES.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.

3. ANY DRAIN, FIELD TILE OR DRAINAGE STRUCTURE ENCOUNTERED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL OR BETTER CONDITION AFTER CONSTRUCTION AND BE NOTED ON THE RECORD DOCUMENTS.

3.4 EROSION CONTROL

1. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA THIS MAY INCLUDE SUCH MEASURES AS SILT FENCE, STRAW BILES, SEDIMENT BARRIERS AND CHECK DAMS.

2. EROSION CONTROL MEASURES MAY BE REQUIRED IN ADDITION TO THOSE SHOWN ON DRAWINGS WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS.

3. PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH ENTRY TO OR FROM THE SITE.

4. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT OF WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE AS CONDITIONS DEMAND. REPAIR AND/OR CLEAN OUT OF ANY STRUCTURES COMPLETELY STABILIZED WITH PERMANENT VEGETATION AND ALL ROADS AND DRIVEWAYS HAVE BEEN COMPLETED. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.

5. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCES/EXITS, ALL PERIMETER EROSION CONTROL DEVICES AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.

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11.5 HOLES, SLEEVES AND OPENINGS

1. GENERAL: PROVIDE ALL ROLLS, SLEEVES AND OPENINGS REQUIRED FOR THE COMPLETION OF WORK AND RESTORE ALL DAMAGED SURFACES TO MATCH SURROUNDING SURFACES.
2. CONDUIT PENETRATIONS: SIZE CORE-DRILLED HOLES SO THAT AN ANNUAL SPACE OF NOT LESS THAN 1/4 INCH AND NOT MORE THAN 1 INCH IS LEFT AROUND THE CONDUIT, PIPE, ETC. WHEN OPENINGS ARE CUT IN LIEU OF CORE-DRILLED, PROVIDE SLEEVE IN ROUGH OPENING. SIZE SLEEVES TO PROVIDE AN ANNUAL SPACE OF NOT LESS THAN 1/4 INCH AND NOT MORE THAN 1 INCH AROUND THE CONDUIT, PIPE, ETC. PATCH AROUND SLEEVES TO MATCH SURROUNDING SURFACE.
3. PROVIDE APPROPRIATE WEATHERPROOFING MATERIALS FOR PENETRATIONS NEEDING TO BE SEALED FROM POTENTIAL WATER INTRUSION. PROVIDE FIREPROOF MATERIALS FOR PENETRATIONS REQUIRING A FIRE RATED SEAL REFER TO CUTTING AND PATCHING NOTES UNDER SECTION 1 --- GENERAL.
4. IF ANY ROOFTOP WORK IS TO BE PERFORMED, THE CONTRACTOR SHALL USE THE BUILDING OWNER'S APPROVED ROOFING CONTRACTOR TO PREVENT VOIDING ANY EXISTING ROOFING WARRANTIES. ANY DAMAGE TO THE EXISTING ROOFING MEMBRANE SHALL BE REPAIRED IMMEDIATELY TO AVOID MOISTURE INTRUSION INTO THE BUILDING SHEL.
5. GENERAL: PROVIDE ALL CUTTING, DRILLING, FITTING AND PATCHING NECESSARY FOR ACCOMPLISHING THE WORK. THIS INCLUDES REMOVAL AND REPLACEMENT OF DEFECTIVE WORK AND WORK NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
6. REPAIRS: REPAIR ANY AND ALL DAMAGE TO WORK OF OTHER TRADES CAUSED BY CUTTING AND PATCHING OPERATIONS, USING SKILLED MECHANICS OF THE TRADES INVOLVED.
7. DO NOT CUT MAJOR STRUCTURAL ELEMENTS WITHOUT APPROVAL. PATCHING SHALL BE OF QUALITY EQUAL TO AND OF MATCHING APPEARANCE OF EXISTING CONSTRUCTION.

11.6 CONDUCTORS

1. USE BEST CONDUCTIVITY COPPER WITH TYPE XXHH-2 INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE PRESSURE-TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER. ALUMINUM CONDUCTORS SHALL BE USED.
2. NO BX, MC OR ROMEX CABLE SHALL BE PERMITTED.
3. EACH END OF EVERY POWER, GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND), 1/2INCH PLASTIC ELECTRICAL TAP WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
4. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL. REMOVE SHARP EDGES.
5. ALL CONDUIT SIZES SPECIFIED IN THIS DOCUMENT WERE DONE SO TAKING INTO ACCOUNT THE USE OF COPPER CONDUCTORS.

11.7 ELECTRICAL SERVICE

1. GENERAL: COMPLY WITH AND CO-ORDINATE ALL REQUIREMENTS OF THE UTILITY COMPANY.
2. SHORT CIRCUIT RATINGS: PROVIDE EQUIPMENT WITH HIGHER FAULT CURRENT RATINGS AS NEEDED TO MATCH UTILITY COMPANY AVAILABLE FAULT CURRENT.
3. CONTRACTOR TO VERIFY UTILITY CO. FAULT CURRENT AND ENSURE THAT ALL EQUIPMENT MEETS FAULT CURRENT (AT A MINIMUM ALL EQUIPMENT TO BE 10,000 A/C).
4. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS WITH THE ELECTRIC UTILITY RELATIVE TO A TIMELY INSTALLATION OF THE NEW SERVICE AND PAYING ALL ASSOCIATED FEES.
5. IDENTIFICATION: IDENTIFY SERVICE DISCONNECTION MEANS WITH PERMANENT NAMEPLATE.
6. THE LOCATION SHOWN FOR A UTILITY POLE OR CONNECTION TO NEW UTILITIES IS FOR CONCEPTUAL USE ONLY. THE CONTRACTOR SHALL COORDINATE THE ACTUAL LOCATION WITH THE ELECTRIC UTILITY.
7. LOCATION AND ARRANGEMENTS: DRAWINGS INDICATE DIAGRAMMATICALLY THE DESIRED LOCATION OF EQUIPMENT, FIXTURES, OUTLETS, ETC., AND ARE NOT TO BE SCALED. PROPER JUDGEMENT MUST BE EXERCISED IN THE EXECUTION TO ENSURE THE BEST POSSIBLE INSTALLATION.
8. PANEL AND DISTRIBUTION BOARD IDENTIFICATION: SWITCHBOARDS, PANELBOARDS, TRANSFORMERS AND DISTRIBUTION SECTIONS SHALL BE IDENTIFIED WITH ENGRAVED, WHITE ON BLACK, LAMINATED, RIGID PHENOLIC NAMEPLATES WITH 1/2 INCH CHARACTERS, SECURELY AFFIXED TO FACE OF CABINET.

11.8 TELEPHONE SERVICE

1. GENERAL: INSTALLATION SHALL BE IN ACCORDANCE WITH TELEPHONE UTILITY COMPANY'S RULES AND REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS WITH THE TELEPHONE UTILITY RELATIVE TO A TIMELY INSTALLATION OF THE INCOMING TELEPHONE SERVICES AND PAYING ALL ASSOCIATED FEES.
3. METALLIC CONDUIT OF TUBING FOR T1 LINES SHALL BE BONDED TO GROUND ON BOTH ENDS.
4. THE LOCATION SHOWN FOR A TELEPHONE POLE OR CONNECTION TO THE TELCO DEMARC IS FOR CONCEPTUAL USE ONLY. THE CONTRACTOR SHALL COORDINATE THE ACTUAL LOCATION WITH THE TELEPHONE UTILITY.

11.9 CHECKOUT, TESTING AND ADJUSTING

1. 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.
2. POWER CONDUCTORS: CONTRACTOR SHALL CONDUCT A CONTINUITY AND INSULATION TEST ON CONDUCTORS BETWEEN SERVICE DISCONNECT SWITCH AND LOAD CENTER.
3. WHEN SITE POWER IS DERIVED FROM A 3-PHASE SOURCE, LOAD READINGS WILL BE TAKEN AND RECORDED TO MAINTAIN A BALANCED LOAD AT THE PRIMARY SOURCE. RECORDS SHALL BE RETURNED TO THE OWNER'S REPRESENTATIVE.

11.10 RACEWAY SYSTEMS/CONDUIT

1. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT. UNDERGROUND PVC CONDUIT SHALL TRANSITION TO RIGID GALVANIZED STEEL CONDUIT OR SCHEDULE 80 PVC CONDUIT BEFORE RISING ABOVE GRADE OR CONCRETE SLAB. EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL (RGS) CONDUIT OR SCHEDULE 80 PVC CONDUIT.
2. GRS CONDUITS, WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT.
3. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
4. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (RIGID PVC SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
5. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
6. PULL AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS -- 200 LB. TEST POLYETHYLENE CORD.
7. ALL CONDUIT BENDS SHALL BE MINIMUM OF 24 INCH RADIUS.
8. ALL METALLIC RACEWAYS SHALL BE GROUNDED PER NEC.
9. THE CONTRACTOR SHALL FIELD VERIFY THE BEST AND LEAST DISRUPTIVE ROUTING OF CONDUITS, CABLE TRAYS AND DUCTS. CONDUIT ROUTING IS SHOWN AS A GUIDE ONLY, ACTUAL CONDUIT PLACEMENT IS TO BE DONE IN A PROFESSIONAL MANNER.

11.11 BELOW GRADE

1. THIS SITE INCLUDES NEW CRITICAL UNDERGROUND ELECTRIC, TELEPHONE AND OTHER SERVICES IN THE VICINITY OF OTHER UNDERGROUND SERVICES AND EQUIPMENT SUPPORTS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID SERVICE DISRUPTION TO THESE FACILITIES. THE CONTRACTOR SHALL ALSO CONTACT ELECTRIC AND TELEPHONE, AND ALL OTHER APPROPRIATE AGENCIES PRIOR TO EXCAVATION AT THIS SITE.
2. PRIOR TO EXCAVATION, A UTILITY MARK OUT SHALL BE DONE TO LOCATE EXISTING UNDERGROUND UTILITIES. ALL UNDERGROUND UTILITIES MUST BE LOCATED AND MARKED OUT PRIOR TO ANY EXCAVATION WORK BEING PERFORMED. PHOTOS SHALL BE TAKEN AT ALL UNDERGROUND WORK AND GIVEN TO THE CARRIER DURING THE SITE'S HANDOFF.
3. ALL TRENCHING AND EXCAVATION WITHIN EXISTING COMPOUNDS MUST BE PERFORMED BY HAND IN ACCORDANCE WITH THE OWNER'S SPECIFICATIONS. ANY OTHER METHODS OF DIGGING MUST FIRST BE APPROVED BY THE CONSTRUCTION MANAGER.
4. ALL LOW VOLTAGE CONDUIT (600V OR LESS) SHALL HAVE A MINIMUM BURIAL DEPTH OF 24". ALL HIGH VOLTAGE CONDUIT (600V OR MORE) SHALL HAVE A MINIMUM BURIAL DEPTH OF 36".
5. UNDERGROUND CONDUIT SHALL BE ENCASED IN REINFORCED CONCRETE IN AREAS OF VEHICLE TRAFFIC. CONCRETE ENCASEMENT SHALL BE 3" MINIMUM ALL AROUND AND BETWEEN CONDUITS.
6. ALL BURIED CONDUIT SHALL BE IDENTIFIED WITH ELECTRICAL MARKER TAPE. TAPE SHALL BE PLACED 12" ABOVE CONDUIT FOR EASY IDENTIFICATION.

11.12 EQUIPMENT

1. THE MAIN CIRCUIT BREAKER SHALL BE RATED FOR STANDARD A.I.C. RATING HIGHER THAN INCOMING EQUIPMENT A.I.C.
2. ALL EQUIPMENT SHALL BE BRACED FOR STANDARD A.I.C. RATING HIGHER THAN INCOMING FROM UTILITY CO.
3. THE CONTRACTOR SHALL PROVIDE AN ITEMIZED CERTIFICATION TO THE CARRIER OF ALL EQUIPMENT AND RELATED HARDWARE, SPECIFIED TO BE PURCHASED AND INSTALLED BY THE CONTRACTOR, WARED DATED WITHIN 24 HRS OF THE NOTICE TO PROCEED.
4. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH ITS VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT D NUMBERS (E.G. PANELBOARD AND CIRCUIT D'S).
5. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING: SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND BE RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER-PROTECTED (WP OR BETTER) OUTDOORS.
6. NONMETALLIC RECEPTACLE SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2, AND BE RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER-PROTECTED (WP OR BETTER) OUTDOORS.

11.13 TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS)

1. TVSS DEVICES FOR AC POWER SHALL BE INSTALLED IN ALL EXISTING FACILITIES THAT ARE MISSING TVSS DEVICES OR HAVE UNSUITABLE TVSS DEVICES.
2. THE AC POWER COMMON MODE SURGE SUPPRESSOR SHALL BE CONNECTED TO THE COMMERCIAL POWER INPUT SIDE OF THE MANUAL TRANSFER SWITCH.
3. IN MARKETS WITH LIGHTNING ZONE 3+ OR + TO 4, RF TVSS DEVICE SHALL BE INSTALLED AT THE ENTRANCE TO THE SHELTER OR AS CLOSE AS POSSIBLE TO THE BTS CABINET FOR OUTDOOR SITES, TO PROTECT AGAINST LIGHTNING AND TRANSIENT VOLTAGES.
4. A T1 TRANSPORT TVSS DEVICE SHALL BE INSTALLED AT ALL SITES BETWEEN THE MU AND THE BTS.

13-RF AND TOWER APPURTENANCE INSTALLATION RELATED NOTES

13.1 COAXIAL CABLE REQUIREMENTS:

1. GENERAL: PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY FOR RECEIVING, INSTALLING, TESTING, AND ADJUSTING ANTENNA CABLES FROM THE ANTENNA TO THE CONNECTIONS AT THE BASE TRANSMISSION SYSTEM (BTS). THIS SHALL INCLUDE ALL EQUIPMENT SHOWN OR REQUIRED FOR A COMPLETE OPERATING SYSTEM, ANTENNA, ANTENNA CABLES, CONNECTORS, AND FITTING SHALL BE THIRD PARTY FURNISHED COMPONENTS AS SHOWN ON THE BILL OF MATERIALS.
2. CABLE HANGERS SHALL BE INSTALLED AT A MAXIMUM 4' SPACING.
3. INSTALLATION:
  - A. COAXIAL CABLE LENGTHS SHALL BE FIELD MEASURED. INSTALLER SHALL NOTIFY CARRIER PRIOR TO PURCHASE OF CABLE OF THE OVERALL LENGTH REQUIRED.
  - B. COAXIAL CABLE TYPE AND DIAMETER SHALL BE VERIFIED WITH CARRIER.
  - C. COAXIAL CABLES SHALL BE LABELED IN ACCORDANCE WITH CARRIER ELECTRICAL MATERIALS AND METHODS SPECIFICATIONS. ALL MAIN CABLES WILL BE COLOR CODED AT FOUR LOCATIONS: A) AT ANTENNA PRIOR TO JUMPER, B) AT THE BOTTOM OF THE TOWER, C) EXTERIOR PART OF THE WAVE GUIDE ENTRY PORT (AT THE SHELTER/CABINET WALL), D) INTERIOR OF THE SHELTER/CABINET.
  - D. PROVIDE AT LEAST 6" OF SLACK IN THE MAIN COAXIAL CABLES AT THE ANTENNA END TO PROVIDE FOR FUTURE CONNECTOR REPLACEMENT.
  - E. INSTALL CONNECTORS TO COAXIAL CABLE AT BOTH ENDS (ANTENNA END AND BTS LOCATION).
  - F. UPON SUCCESSFUL COMPLETION OF THE SWEEP TEST, THE CONTRACTOR SHALL PROVIDE A WEATHERTIGHT SEAL ON THE COAX CABLES.
  - G. THE MINIMUM BENDING RADIUS FOR ALL ANTENNA CABLES SHALL BE AS SHOWN BELOW OR PER THE MANUFACTURER, WHICHEVER IS MORE CONSERVATIVE:

CABLE	IN AIR OR CABLE TRAY	IN CONDUIT
1/2"	5'	10'
7/8"	10'	18'
1-5/8"	20'	28'
4. CABLES SHALL BE INSTALLED WITH THE MINIMUM NUMBER OF BENDS. CABLE SHALL NOT BE LEFT UNTERMINATED IN THE FIELD.
5. GROUNDING:
  - A. ALL MAIN CABLES WILL BE GROUNDED AT: A) THE ANTENNA, B) MIDDLE OF THE CABLE RUN IF OVER 200', C) PRIOR TO ENTERING EQUIPMENT SHELTER/CABINET (WITHIN 1' OF ENTRY).
  - B. GROUNDING KITS -- AFTER INSTALLATION OF GROUND STRIPS, THE CONNECTIONS SHALL BE MADE WEATHER TIGHT USING WEATHERPROOF KITS AS IDENTIFIED. GROUND PITIALS SHALL BE BROUGHT OUT IN THE DOWNWARD DIRECTION FROM THE CONNECTION TO THE ANTENNA CABLE WITHOUT ANY SHARP BENDS (MINIMUM RADIUS 10") AND CONNECTION SHALL BE MADE TO GROUNDING SYSTEM.

13.2 ANTENNA REQUIREMENTS:

1. AZIMUTHS ARE ORIENTED CLOCKWISE FROM TRUE NORTH.
2. CONTRACTOR SHALL VERIFY ANTENNA TYPE, AZIMUTHS, AND DOWNTILTS WITH THE CARRIER PRIOR TO CONSTRUCTION.
3. THE MINIMUM DISH RAD CENTER HEIGHT ABOVE THE ROOF SHALL BE 6'-8".

13.3 TOWER CLIMBING SAFETY GUIDELINES

1. TOWER CLIMBERS MUST HAVE COMPLETED A NATE CERTIFIED CLIMBING TRAINING COURSE PER CONTRACT SPECIFICATIONS PRIOR TO WORK ON THIS STRUCTURE.
2. CONTRACTOR MUST COMPLY WHY THE STANDARD "RF POWER AND LOCKOUT/TAGOUT" PROCEDURES BEFORE ALLOWING CLIMBERS.
3. TOWER CLIMBERS WILL NOT BE ALLOWED TO ACCESS TOWER IN ADVERSE WEATHER CONDITIONS, INCLUDING HIGH WINDS, LIGHTNING, RAIN, AND SNOW ICE OR DURING NIGHT TIME.
4. CONTRACTOR OR CLIMBERS SHALL IMMEDIATELY REPORT ANY CLIMBING EQUIPMENT OR CONDITIONS JUDGED INADEQUATE OR UNSAFE.
5. EMERGENCY NUMBERS SHALL BE POSTED ON SITE AND ADVERTISED TO CLIMBERS BEFORE THE BEGINNING OF THE WORK.
6. SAFETY MEETINGS SHALL TAKE PLACE EVERY MORNING BEFORE THE WORK DAY BEGINS.

20 -- SITE SPECIFIC NOTES

20.1 GENERAL

1. CONSTRUCTION INCLUDES:

- INSTALLATION OF COMMUNICATION EQUIPMENT
- ANTENNAS AND MOUNT INSTALLATION ON STRUCTURE

2. THE PROFESSIONALS INVOLVED ON THIS PROJECT ARE AS FOLLOWS:

- ENGINEER  
KCI TECHNOLOGIES, INC.  
11850 WEST MARKET PLACE  
SUITE A  
FULTON, MD 20759

14 -- FOUNDATION

14.1 GENERAL

1. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTIONS AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION.
2. PRIOR TO INITIATING EARTHWORK OPERATIONS, GROUNDING WATER AND SURFACE WATER CONTROL MEASURES NEED TO BE TAKEN.
3. THE CONTRACTORS SHALL PROVIDE ADEQUATE SLOPING, SHORING, AND BRACING FOR ALL EXCAVATION TO PROTECT ADJACENT STRUCTURES AND COMPLY WITH LOCAL CODES, ORDINANCES, OSHA AND ANSI REQUIREMENTS.
4. PRIOR TO CONSTRUCTION OF ANY PERMANENT STRUCTURE, THE SITE SHALL BE STRIPPED OF ALL SURFACE VEGETATION, TOP SOIL, AND ORGANIC MATERIAL. ALL WET, SOFT, LOOSE FROZEN, OR OTHERWISE UNDESIRABLE SOIL SHALL BE REMOVED.
5. THE CONTRACTOR IS TO PREVENT SURFACE WATER FROM ENTERING EXCAVATIONS, PUDDLE AND FLOW FLOODING ADJACENT PROPERTIES DURING CONSTRUCTION. CONTRACTOR IS ALSO RESPONSIBLE FOR PREVENTING SOFTENING OF THE FOUNDATION SOILS PRIOR TO PLACING CONCRETE.
6. THE EXPOSED SUB GRADE SHALL BE PROOF-ROLLED WITH MEDIUM WEIGHT ROLLERS OR OTHER APPROVED EQUIPMENT TO DETERMINE IF ANY POCKETS OF SOFT, COMPRESSIBLE SOIL EXISTS BELOW THE EXPOSED SUB GRADE. WHEREVER SUCH MATERIALS IS ENCOUNTERED, THE AREA SHALL BE UNDERCUT TO SUITABLE SOIL, AS DIRECTED BY A QUALIFIED ENGINEER.
7. ALL STRUCTURAL FILL EXTENDING FROM SUITABLE SUB GRADE TO BOTTOM OF FOUNDATIONS OR FLOOR SLABS SHALL CONSIST OF GRANULAR MATERIAL AND WITH 3% TO 10% BY DRY WEIGHTPASSING THE U.S. STD #200 SIEVE SIZE, COMPACTED TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 IN LAYERS NOT EXCEEDING 12".
8. THE SOIL PREPARATION, INCLUDING FOOTING EXCAVATION, FILL, BACK FILL AND COMPACTING SHALL BE DONE FOLLOWING THE RECOMMENDATION CONTAINED IN IS0 2015.
9. PROPORTION OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON CONDITIONS EXPECTED AT THE SITE AS A MINIMUM , CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI (20.77 MPa) IN 28 days.
10. CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE STATE REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
11. WELDING IS PROHIBITED ON REINFORCING STEEL EMBEDMENTS.
12. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES (76 MM) UNLESS OTHERWISE NOTED. APPROVED SPACERS SHALL BE USED TO INSURE A 3 INCH (76 MM) MINIMUM COVER ON REINFORCEMENT.
13. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL NOT EXCEED 3 INCHES (76 MM) NOR BE LESS THAN 2 INCHES (51 MM).
14. FOOTING IS DESIGNED TO BEAR ON EXISTING NATURALLY OCCURRING NON-EXPANSIVE SOILS OR ENGINEERED FILL CAPABLE OF SAFELY SUSTAINING 200 PSF.
15. FOUNDATION DESIGN HAS BEEN DEVELOPED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES WITHIN THE LIMITS OF THE SUBSURFACE DATA PRESCRIBED BY GOVERNING CODE.

16. FOUNDATION SHALL BE FORMED WITH PLYWOOD OR METAL PANELS SUFFICIENT FOR STRUCTURAL AND VISUAL REQUIREMENTS. FORMS SHALL BE STRUCTURALLY ADEQUATE TO WITHSTAND UNCURED CONCRETE PRESSURE. FORMS SHALL BE REMOVED ONCE CONCRETE HAS ATTAINED 75% OF ITS ULTIMATE STRENGTH.
17. THE CONTRACTOR SHALL EXPECT SUBMERGED DRILLING CONDITIONS FOR DEEP FOUNDATION CONSTRUCTION SUCH AS DRILLED PIERS OR DEADMAN ANCHORS AND SHALL MOBILIZE ACCORDINGLY.
18. FOUNDATION INSTALLATION SHALL BE SUPERVISED BY PERSONNEL KNOWLEDGEABLE AND EXPERIENCED WITHIN THE PROPOSED FOUNDATION TYPE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED INSTALLATION PRACTICES.
19. FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASE ON CONDITIONS EXISTING AT THE SITE.
20. CONCRETE SHALL BE PLACED IN A MANNER THAT WILL PREVENT SEGREGATION OF CONCRETE MATERIALS, INFILTRATION OF WATER OR SOIL, AND OTHER OCCURENCES WHICH MAY DECREASE THE STRENGTH OR DURABILITY OF THE FOUNDATION.
21. FREE FALL CONCRETE MAY BE USED PROVIDED FALL IS VERTICAL DOWN WITHOUT HITTING SIDES OF EXCAVATION, FORM WORK, REINFORCING BARS, FORM TIES, OR TO THE OBSTRUCTIONS. UNDER NO CIRCUMSTANCES SHALL CONCRETE FALL THROUGH WATER.
22. FOUNDATION DESIGN ASSUMES CONTINUOUS CONCRETE PLACEMENT WITHOUT CONSTRUCTION JOINTS.
23. TOP OF FOUNDATION OUTSIDE LIMITS OF ANCHOR BOLTS SHALL BE SLOPED OFF DRAIN WITH A FLOATED FINISH. AREA INSIDE LIMITS OF ANCHOR BOLTS SHALL BE LEVEL WITH A SCRATCHED FINISH.
24. EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/32"/4" (1MM X 16MM) MINIMUM.
25. INTIMATE CONTACT BETWEEN CONCRETE AND SOIL--WALLS OF PAD IS ESSENTIAL FOR ADEQUATE FOUNDATIONS PERFORMANCE. THE CONCRETE SHOULD BE APPROPRIATELY VIBRATED DURING CONSTRUCTION.
26. THE CONTRACTOR MIGHT HAVE TO BUILD THE FOUNDATION WITH SUBMERGED CONDITIONS AND SHALL MOBILIZE ACCORDINGLY.
27. ALL EXISTING GROUNDING RINGS AND DEVICES EXPOSED BY EXCAVATION OR REGRAVING SHALL BE REPLACED AND PROPERLY CONNECTED TO EXISTING SYSTEM PER NEC OR LOCAL JURISDICTION REQUIREMENTS.

14.2 FOOTING FOUNDATION

1. THE BOTTOM AND FRONT BEARING SURFACES OF THE ANCHOR BLOCK SHOULD BEAR AGAINST UNDISTURBED SOIL. IF THIS CONDITIONS CANNOT BE MET BACK FILL MATERIAL MUST BE THOROUGHLY COMPACTED IN 8" LAYERS.
2. THE ANCHOR RODS MUST BE INSTALLED AS SHOWN AND SECURED IN SPECIFIED POSITION BEFORE CONCRETE IS POURED.
3. FOOTING MUST BE PROPERLY BACK FILLED PRIOR TO BEGINNING OF PLATFORM ERECTION.
4. THE FOUNDATION SHOWN SHALL BE CONSTRUCTED AS A MASS MEMBER. MEASURES SHALL BE TAKEN TO COPE WITH THE GENERATION OF HEAT AND ATTENDANT VOLUME CHANGE SO AS TO MINIMIZE CRACKING.

14.3 ANCHOR BLOCK FOUNDATION

1. THE ANCHOR ORIENTATION AND LOCATION WITH RESPECT TO TOWER MUST BE LAID OUT AS SHOWN ON PLAN.
2. THE BOTTOM AND FRONT BEARING SURFACES OF THE ANCHOR BLOCK SHOULD BEAR AGAINST UNDISTURBED SOIL. IF THIS CONDITION CANNOT BE MET AND FORMS ARE USED, FORMS MUST BE REMOVED AND BACK FILL MATERIAL THOROUGHLY COMPACTED IN 8" LAYERS.
3. THE ANCHOR RODS MUST BE INSTALLED AS SHOWN AND SECURED IN SPECIFIED POSITION BEFORE CONCRETE IS POURED. BACK FILL COMPLETELY WITH ANCHOR ROD SECURED IN POSITION.
4. ANCHORS MUST BE PROPERLY BACK FILLED PRIOR TO BEGINNING OF TOWER ERECTION.
5. THE FOUNDATION SHOWN SHALL BE CONSTRUCTED AS A MASS MEMBER. MEASURES SHALL BE TAKEN TO COPE WITH THE GENERATION OF HEAT AND ATTENDANT VOLUME CHANGE SO AS TO MINIMIZE CRACKING.
6. FOR ANCHOR BLOCK TYPE FOUNDATIONS, THE PORTION OF ALL STEEL ANCHORS, FROM TOP OF ANCHOR BLOCK TO GROUND LEVEL, SHALL BE COATED WITH BUTENUM. DESIGN ASSUMES PERIODIC INSPECTIONS WILL BE PERFORMED OVER THE LIFE OF THE STRUCTURE TO DETERMINE IF ADDITIONAL ANCHOR CORROSION PROTECTION MEASURES MUST BE IMPLEMENTED BASED ON OBSERVED SITE-SPECIFIC CONDITIONS.
7. NO FILL SHALL BE REMOVED FROM THE COMPRESSION SIDE OF EXISTING ANCHORS IN A RADIUS OF 45 FT.

14.4 DRILLED SHAFT

1. REINFORCING CAGES SHALL BE BRACED TO RETAIN PROPER DIMENSIONS DURING HANDLING AND THROUGHOUT PLACEMENT OF CONCRETE. WHEN TEMPORARY CAGES ARE UTILIZED, BRACING SHALL BE ADEQUATE TO RESIST FORCES OCCURRING FROM THE FLOWING CONCRETE DURING CASING EXTRACTION.
2. CONCRETE COVERED FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL NOT EXCEED 3 INCHES (76 MM) NOR BE LESS THAN 2 INCHES (51 MM).
3. SPACERS SHALL BE ATTACHED INTERMITTENTLY THROUGHOUT THE ENTIRE LENGTH OF VERTICAL REINFORCING CAGES TO INSURE CONCENTRIC PLACEMENT OF CAGES IN EXCAVATIONS.
4. FOUNDATION DESIGN HAS BEEN BASED ON THE GEOTECHNICAL ENGINEERING REPORT. CONTRACTOR SHALL CONFORM TO THE PROVISIONS OF THE GEOTECHNICAL STUDY FOR THIS SITE.
5. COMPANY PROVIDING GEOTECHNICAL REPORT TO OBSERVE AND APPROVE IN WRITING DRILLING OF PIER AND POURING OF CONCRETE. COPIES OF WRITTEN APPROVAL SHALL BE SENT TO KCI TECHNOLOGIES, INC. CONTRACTOR SHALL PROVIDE ADEQUATE ASSISTANCE AND MATERIALS TO ACCOMPLISH THIS REQUIREMENT.
6. FOUNDATION DESIGN MODIFICATIONS MAY BE REQUIRED IN THE EVENT OF THE FOLLOWING DESIGN PARAMETERS ARE NOT APPLICABLE FOR THE SUBSURFACE CONDITIONS ENCOUNTERED.
7. FOR FOUNDATION AND ANCHOR TOLERANCES REFER TO TOWER MANUFACTURER DRAWINGS FOR SPECIFIC JOB NUMBER AND DATE. IN ABSENCE OF MORE SPECIFIC INFORMATION, THE CONTRACTOR MAY USE THE FOLLOWING:

TOWER FOUNDATION:

- LOCATION: 1/24 OF SHAFT DIAMETER (MAX.)
- OUT OF PLUMB: 1.5% OF SHAFT LENGTH NOT TO EXCEED 12.5% PF SHAFT DIAMETER OR 12"
- CONCRETE CUT OFF ELEVATION: +/- 1/2"

PLATFORM FOUNDATION:

- LOCATION: 1" IN PLAN
- OUT OF PLUMB: 2"
- CONCRETE CUT OFF ELEVATION: +/- 1/2"

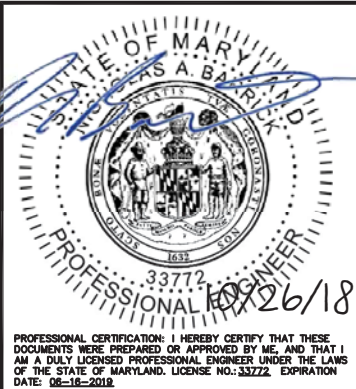
7. FOUNDATION DESIGN ASSUMES CASING, IF USED, WILL NOT BE LEFT IN PLACE. EQUIPMENT, PROCEDURES AND PROPORTIONS OF CONCRETE MATERIALS AND PLACEMENT SHALL NOT BE ADVERSELY DISTURBED UPON CASING REMOVAL.
8. DRILLING FLUID, IF USED, SHALL BE FULLY DISPLACED BY CONCRETE AND SHALL BE DETRIMENTAL TO CONCRETE OR SURROUNDING SOIL. CONTAMINATED CONCRETE SHALL BE REMOVED FROM TOP OF FOUNDATION AND REPLACED WITH FRESH CONCRETE.
9. INTIMATE CONTACT BETWEEN CONCRETE AND SOIL--WALLS OF DRILLED SHAFT IS ESSENTIAL FOR ADEQUATE FOUNDATION PERFORMANCE. THE CONCRETE SHOULD BE APPROPRIATELY VIBRATED DURING CONSTRUCTION.
10. FOUNDATION DESIGN HAS BEEN BASED ON THE GEOTECHNICAL ENGINEERING REPORT AS FOLLOWS:

- A. AXIAL UPLIFT.
- B. AXIAL (GROSS) COMPRESSION (SUPERIMPOSED PLUS DOWNLOAD PLUS PIER SELF WEIGHT) IS WITHIN ALLOWABLE PILE COMPRESSION CAPACITY BASED ON THE COMBINED ACTION OF THE PILE END ULTIMATE BEARING AND THE PILE ULTIMATE SKIN FRICTION WITH THEIR RESPECTIVE SAFETY FACTORS.
- C. LATERAL STABILITY IS BASED ON AN ALLOWABLE SOIL PASSIVE SOIL WITH A MINIMUM SAFETY FACTOR OF 2 OF THE REPORT SOIL STRATA TO RESIST THE INDICATED BASE SHEAR AND OVERTURNING MOMENT.

11. DRILLED PIER INSTALLATION SHALL BE OBSERVED AND APPROVED IN WRITING BY GEOTECHNICAL ENGINEER PROVIDING GEOTECHNICAL REPORT.
12. TOWER BASE REACTIONS ARE GIVEN BY TOWER MANUFACTURER FOR TOWER SIZE, TYPE, AND SPECIFIC JOB NUMBER LISTED.
13. FOR ANCHOR BOLTS AND TEMPLATES, SEE TOWER MANUFACTURER. DRAWINGS PROVIDED BY THE TOWER MANUFACTURER REPRESENTATIVE.
14. THE SHAFT CASING SHALL BE A STEEL PIPE ASTM A252, GRAD 2 OR ASTM A36.

LEGEND AND ABBREVIATIONS

- |       |  |
|-------|--|
| AHJ   | AUTHORITY HAVING JURISDICTION                  |
| AWG   | AMERICAN WIRE GAUGE                            |
| BWC   | BARE COPPER WIRE                               |
| BTS   | BASE TRANSMISSION SYSTEM                       |
| COGBE | COAX ISOLATED GROUND BAR, EXTERNAL             |
| DIA.  | DIAMETER                                       |
| EMT   | ELECTRICAL METALLIC TUBING                     |
| GEN   | GENERATOR                                      |
| GPS   | GLOBAL POSITIONING SYSTEM                      |
| MGB   | MASTER ISOLATED GROUND BAR                     |
| NEC   | NATIONAL ELECTRIC CODE, LATEST ADOPTED EDITION |
| PVC   | POWER PROTECTION CABINET                       |
| PVC   | POLY VINYL CHLORIDE                            |
| RGS   | RIGID GALVANIZED STEEL                         |
| TYP   | TYPICAL  |



NODE:

LGY-020m2

TITLE:

CROWN CASTLE NG ATLANTIC LLC  
902 Merrimac Drive  
Takoma Park, MD 20912

Jurisdiction: Takoma Park



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	5	09/13/18	REVISED PER NEW POLE		
	6	10/26/18	REVISED PER COMMENTS		

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APPROVED BY:	NB
DRAWING DATE:	10/26/18

PROJECT NUMBER:	02157492.15
NODE BU:	N/A
SCALE:	AS SHOWN

SHEET NUMBER
SP-2

NODE:  
**LGY-020m2**

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CROWN CASTLE NG ATLANTIC LLC  
902 Merrimac Drive  
Takoma Park, MD 20912  
Jurisdiction: Takoma Park



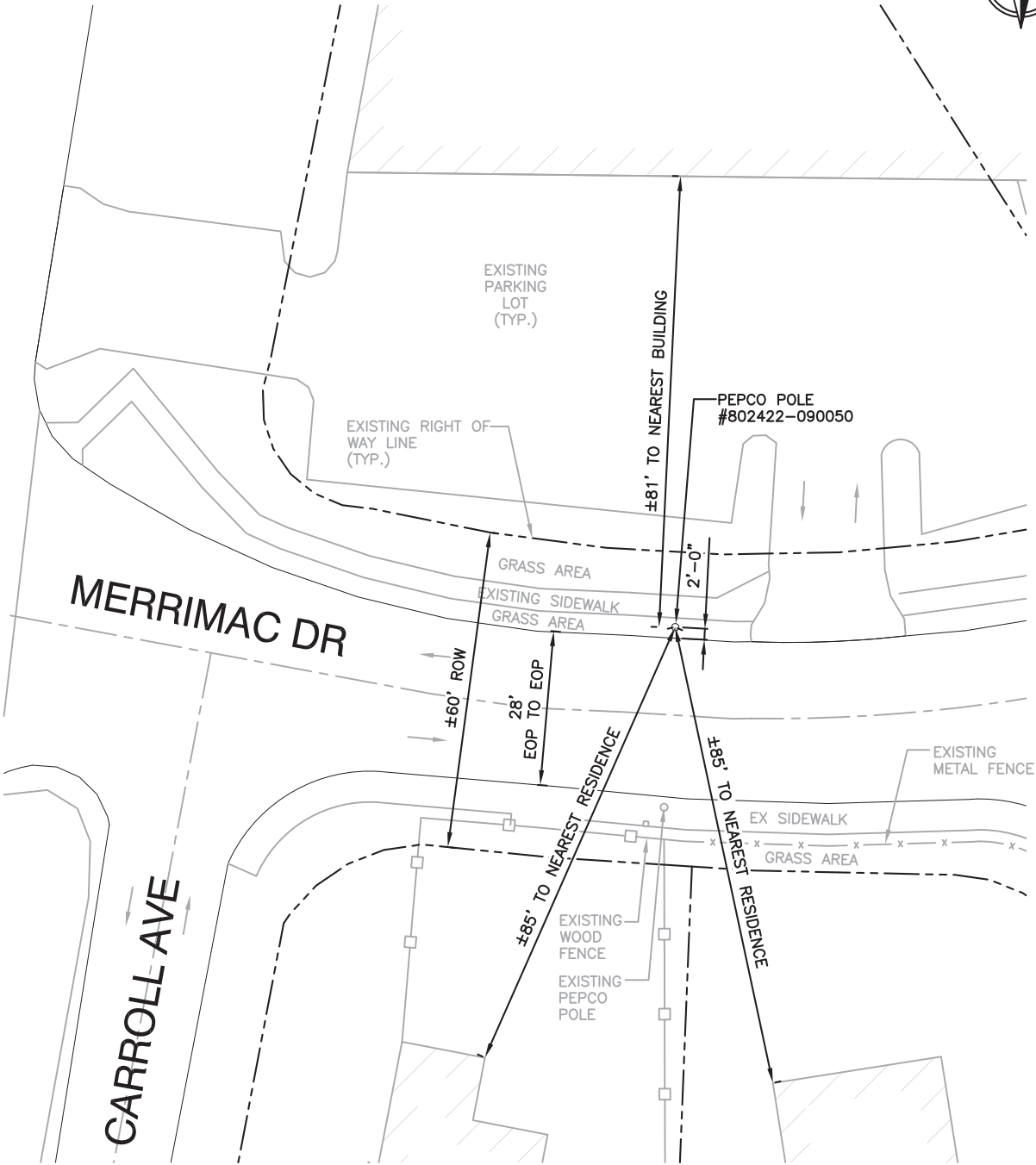
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2

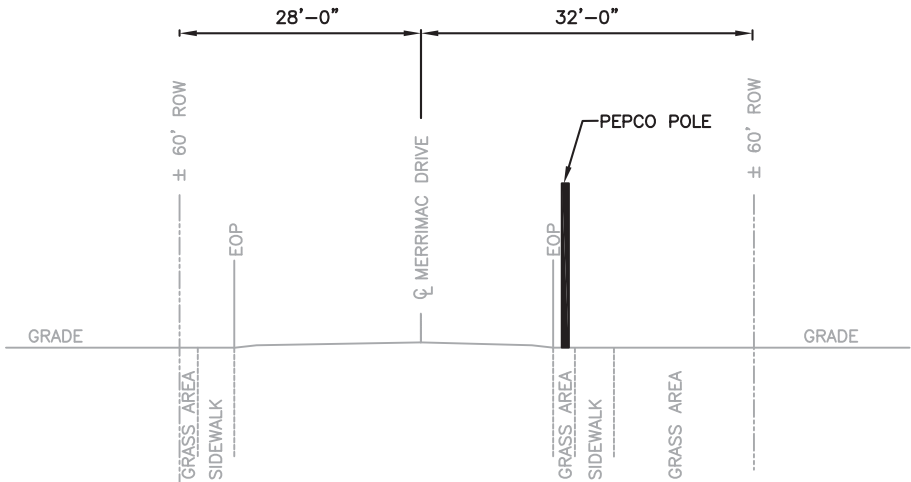
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25 MPH



SITE PLAN

SCALE: 1"=30'

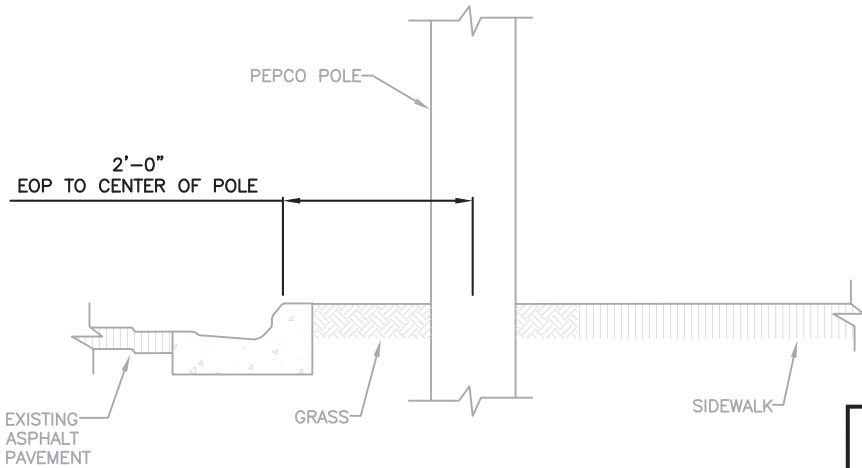
1



TYPICAL PROFILE VIEW

SCALE: NOT TO SCALE

2



CURB ELEVATION VIEW

SCALE: NOT TO SCALE



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO.: 33772, EXPIRATION DATE: 08-18-2019.

10/26/18

NODE:

LGY-020m2

TITLE:

CROWN CASTLE NG ATLANTIC LLC  
902 Merrimac Drive  
Takoma Park, MD 20912

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SHEET NUMBER
3

TOP OF POLE — 48'–4"————

PRIMARY POWER — 38'–5"————

GUY WIRE — 36'–8"————

SECONDARY POWER/GUY WIRE — 27'–9"————

COMMUNICATION/GUY WIRE — 23'–2"————

COMMUNICATION/GUY WIRE — 22'–2"————

COMMUNICATION WIRE — 21'–2"————

STREET LEVEL

SIDEWALK

EXISTING POLE  
LOOKING WEST

TOP OF POLE — 48'–4"————

PRIMARY POWER — 38'–5"————

GUY WIRE — 36'–8"————

SECONDARY POWER/GUY WIRE — 27'–9"————

COMMUNICATION/GUY WIRE — 23'–2"————

COMMUNICATION/GUY WIRE — 22'–2"————

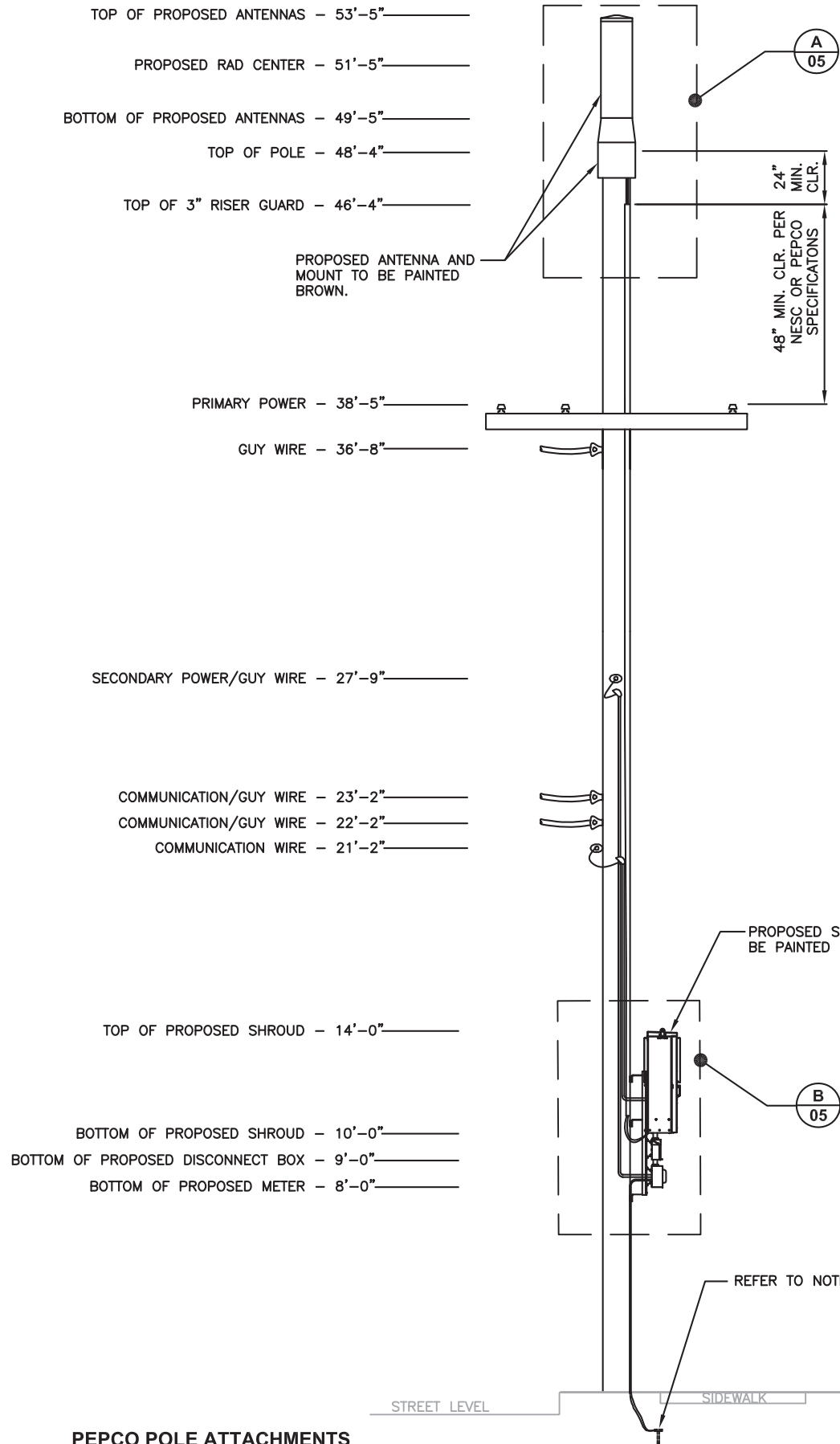
COMMUNICATION WIRE — 21'–2"————

GROUND LEVEL  
ELEV.=0.0' AGL

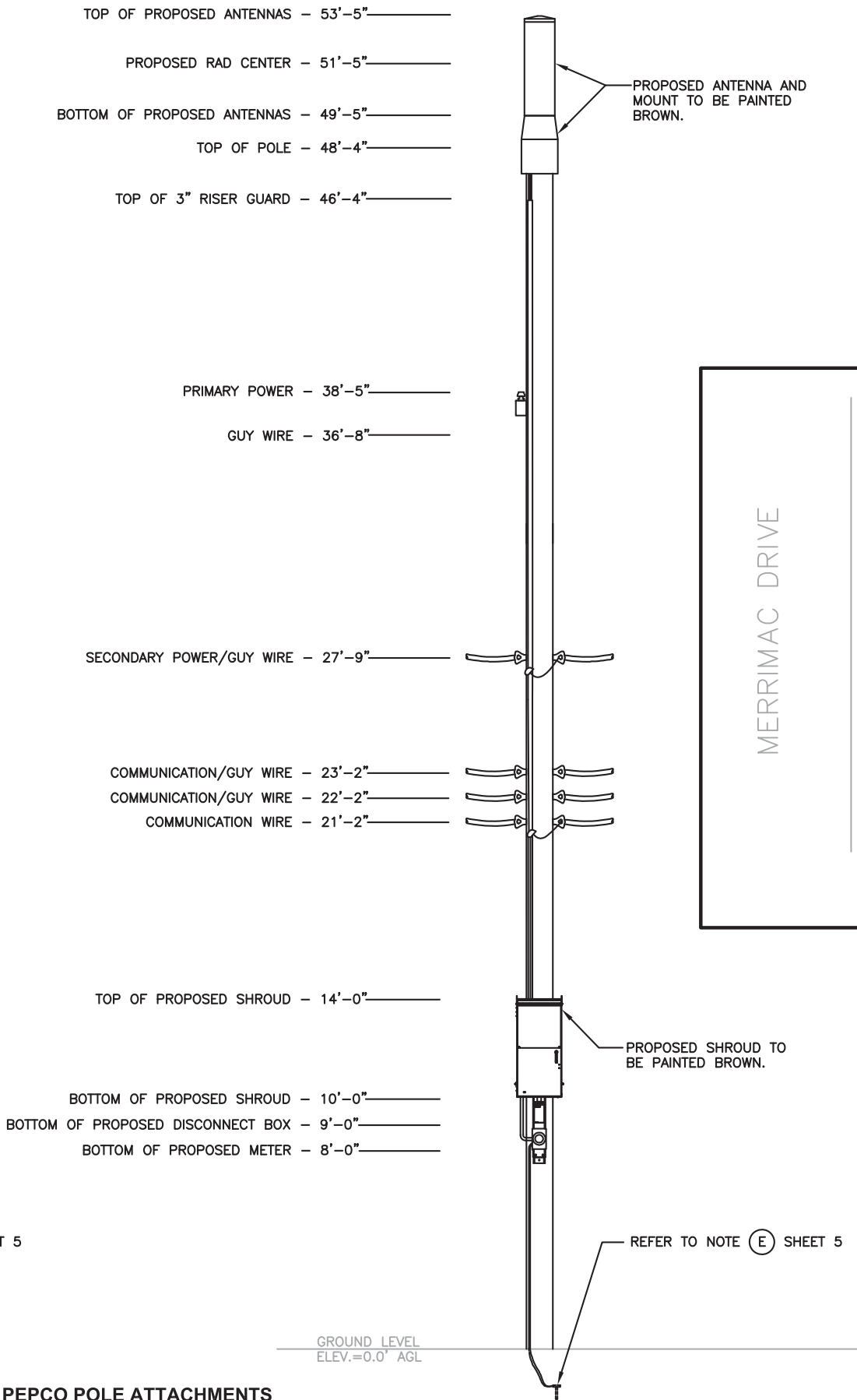
EXISTING POLE  
LOOKING SOUTH



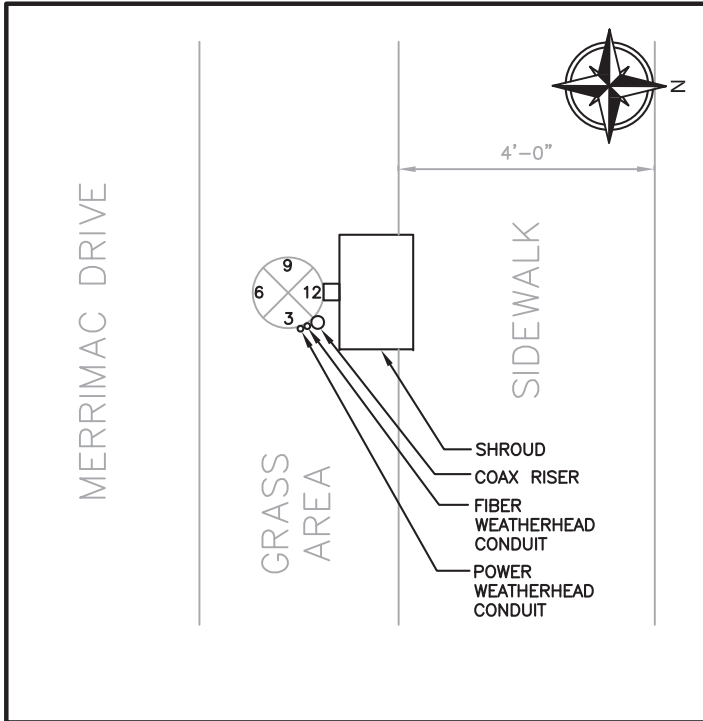




PEPCO POLE ATTACHMENTS  
LOOKING WEST



PEPCO POLE ATTACHMENTS  
LOOKING SOUTH



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SHEET NUMBER
4

NODE:

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SHEET NUMBER

5



EXISTING POLE



PROPOSED EQUIPMENT SHOWN







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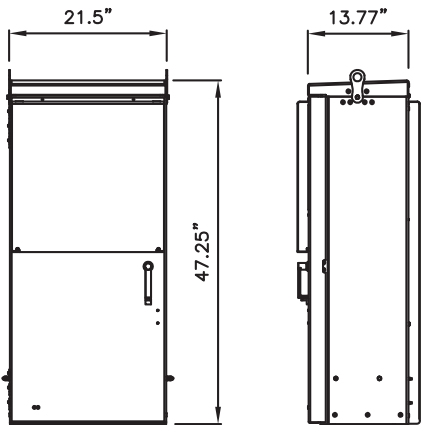
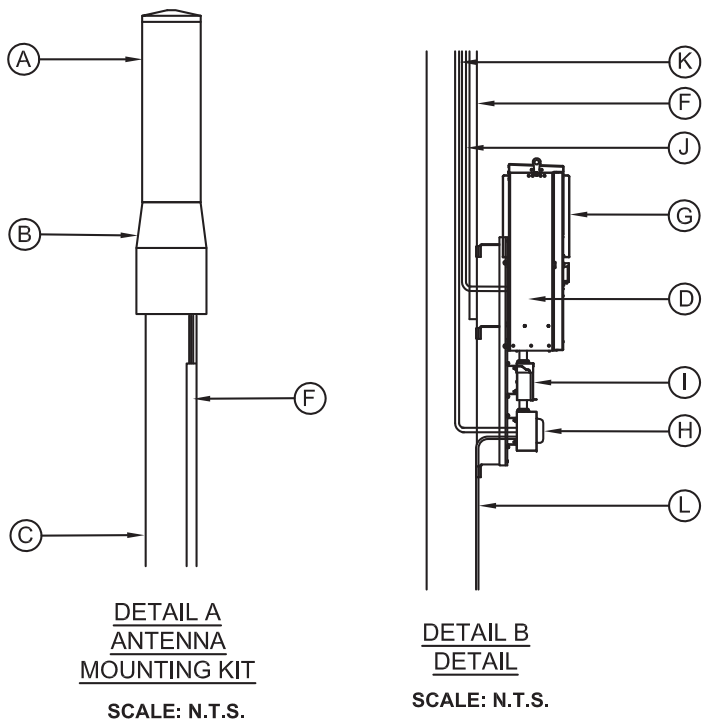
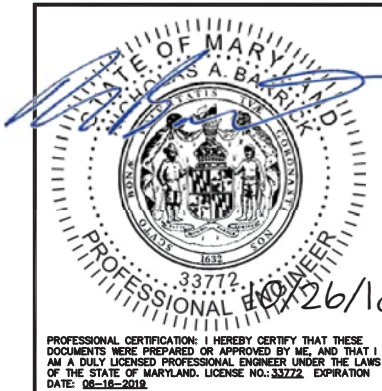
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SCALE:	AS SHOWN

SHEET NUMBER	6
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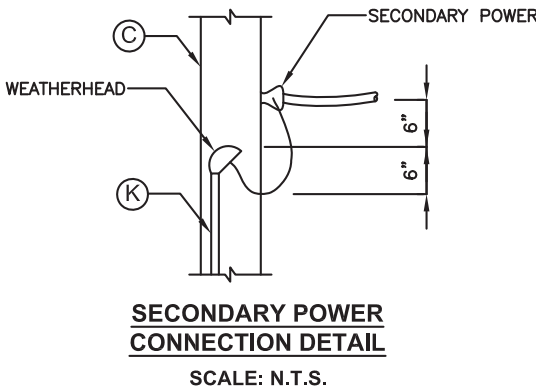
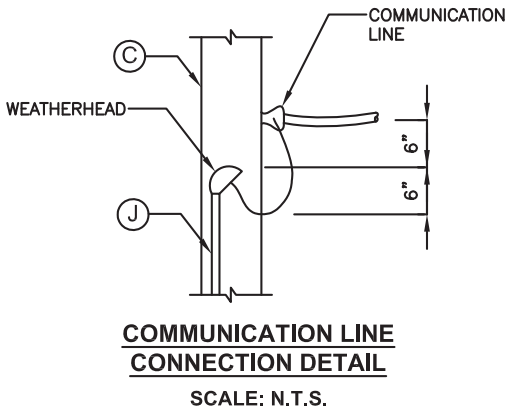
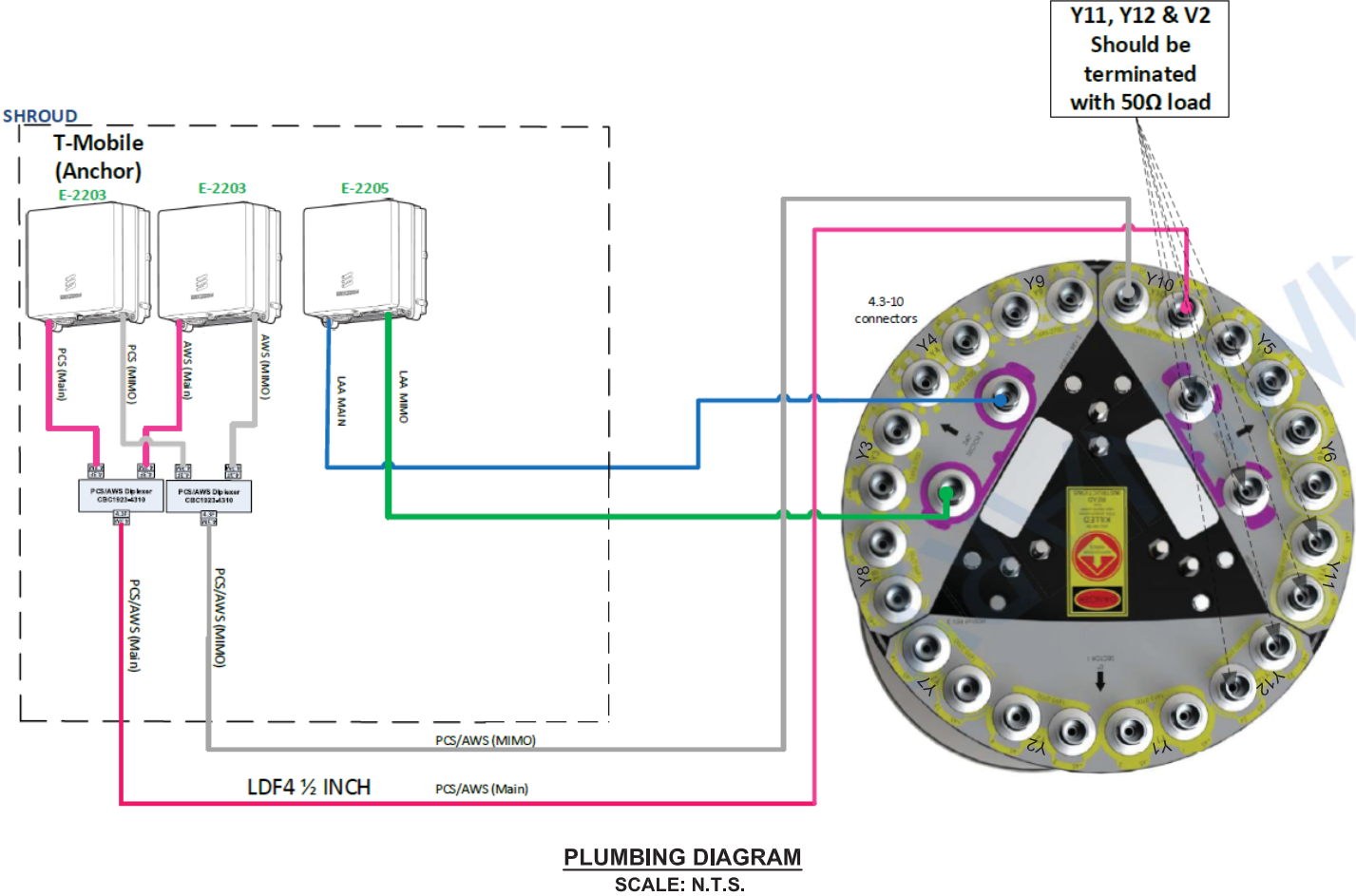
- (A) 1 - AMPHENOL CANISTER  
48"HX14.6"W (4.52 CUBIC FEET) -  
50 LBS. AMPHENOL MODEL  
6U4MTSP1X12Fxs0
- (B) INSTALL NEW CONCEAL FAB POLE  
TOP MOUNTING BRACKET,  
UNIVERSAL SLEEVE MOUNT AND  
POLE TOP SKIRT ASSEMBLY.
- (C) PEPCO 48'-4" WOOD POLE
- (D) INSTALL NEW:  
(2) ERICSSON 2203 RADIO.  
(7.87"x7.87"x3.94"  
(HXWXD) - 10LBS)  
(1) ERICSSON 2205 RADIO.  
(7.87"x7.87"x3.94"  
(HXWXD) - 11LBS)  
DUS 317
- (E) PROPOSED GROUND ROD, 5/8"x8'  
LONG CU. POINTED BURIED BELOW  
GRADE
- (F) 3" RISER GUARD WITH COAXIAL  
CABLES AND #2 AWG GREEN  
INSULATED TINNED COPPER  
GROUND CONDUCTOR
- (G) INSTALL NEW LOSH 50 CABINET  
PER MANUFACTURER'S  
RECOMMENDATIONS.  
47.25" X 21.5" X 13.77"  
(HXWXD) 104 LBS, 8.16 CUBIC  
FEET
- (H) INSTALL NEW 100A METER
- (I) MAIN DISCONNECT PANEL BOX  
(100A LOAD W/120/240V VAC  
SINGLE PHASE BREAKERS.  
12.65"x8.88"x4.27"  
(HXWXD) - 10LBS  
SQUARE D MODEL Q0816L100RB  
OR APPROVED EQUAL.
- (J) PVC CONDUIT WITH FIBER
- (K) 3/4" PVC CONDUIT WITH (3) #3  
AWG, #6 AWG GRD. IN 3/4"C.
- (L) 1 - #2 AWG GREEN INSULATED  
TINNED COPPER GROUND  
CONDUCTOR

## DRAWING NOTES



SHROUD VOLUME - 8.16 CUBIC FEET

**LOSH 50 SHROUD DETAIL**  
SCALE: N.T.S.









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SCALE:	AS SHOWN

SHEET NUMBER	8
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WEIGHT	27lbs (12.3kg)
HEIGHT	25-5/8" (651mm)
WIDTH	12.76" (324mm)
LENGTH	12.76" (324mm)



**PROPRIETARY INFORMATION**  
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Project:  
  
RD-14-0703  
POLE TOP EXTENSION

Drawn By:	Date:	Ckd By:	Date:
JGL	07/30/14	DOC	07/30/14

Rev:	Date:	Description:	Apd:
A	07/30/14	NEW RELEASE	DOC
B	09/17/14	SLOTS ADDED	DOC
C	06/26/15	SLOTS WIDENED	DOC

**DO NOT**  
SCALE DWG

DECIMAL	ANGLE	FRACTION
X.X ± 0.050	X ± 1°	± 1/16"
X.XX ± 0.020	X.X ± 0.5°	
X.XXX ± 0.010		

Consultant:

Consultant:

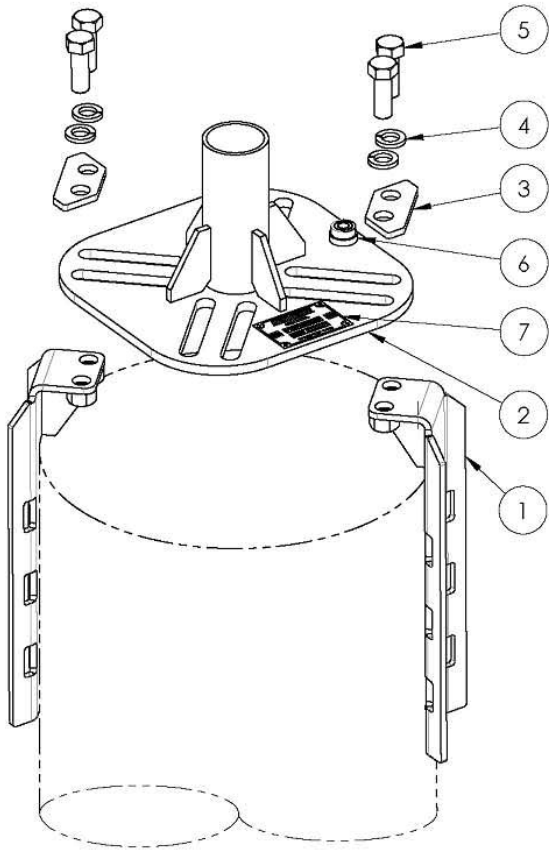
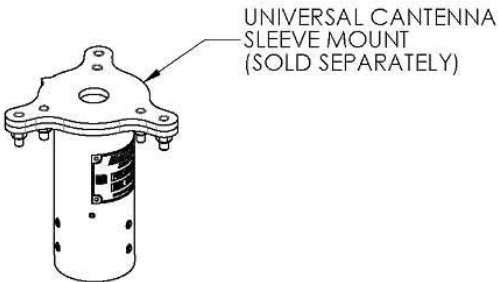
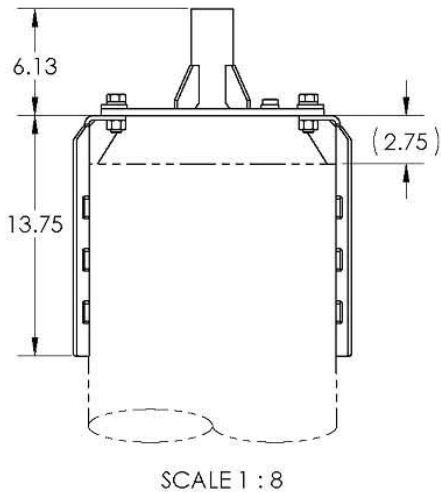
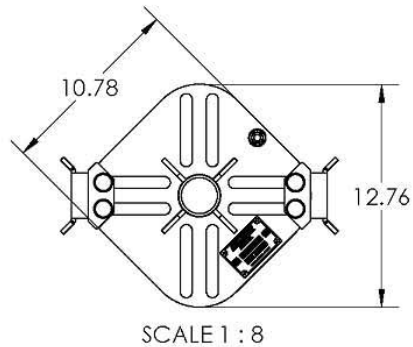
Sheet Title:  
  
WIDE DIA. POLE TOP  
MOUNTING BRACKET,  
BROWN

Sheet Scale:	Sheet:	Rev:
1:5	1 OF 1	C

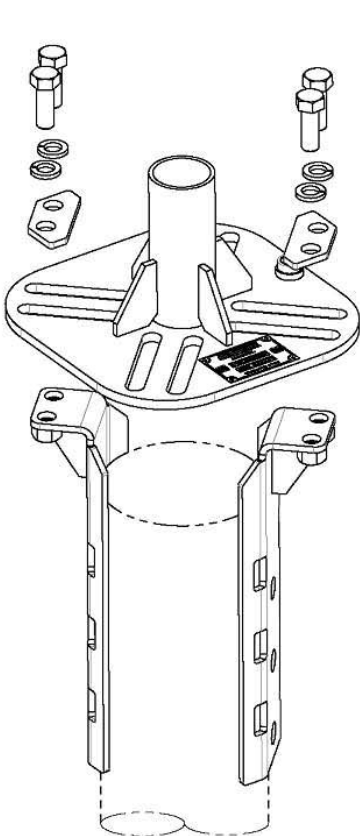
Drawing / Part Number:  
  
003002



ITEM NO.	QTY.	PART NUMBER	REV.	DESCRIPTION
1	2	003167	B	LEG, WELDMENT, WIDE DIA. POLE TOP BRACKET, BROWN
2	1	002905	A	MAST WELDMENT, 6" LG, BROWN
3	2	002795	A	ECCENTRIC WASHER PLATE, BROWN
4	4	002680	A	WASHER, SPLIT LOCK, 5/8", 18-8 SS, PAS
5	4	002906	A	HHBT, 5/8"-11 UNC X 1 3/4" LG, PT, HEX, A325, GALV
6	1	002951	A	BULL'S EYE PLASTIC VIAL LEVEL
7	1	002953	A	NAMEPLATE, LABEL, ADHESIVE BACKED

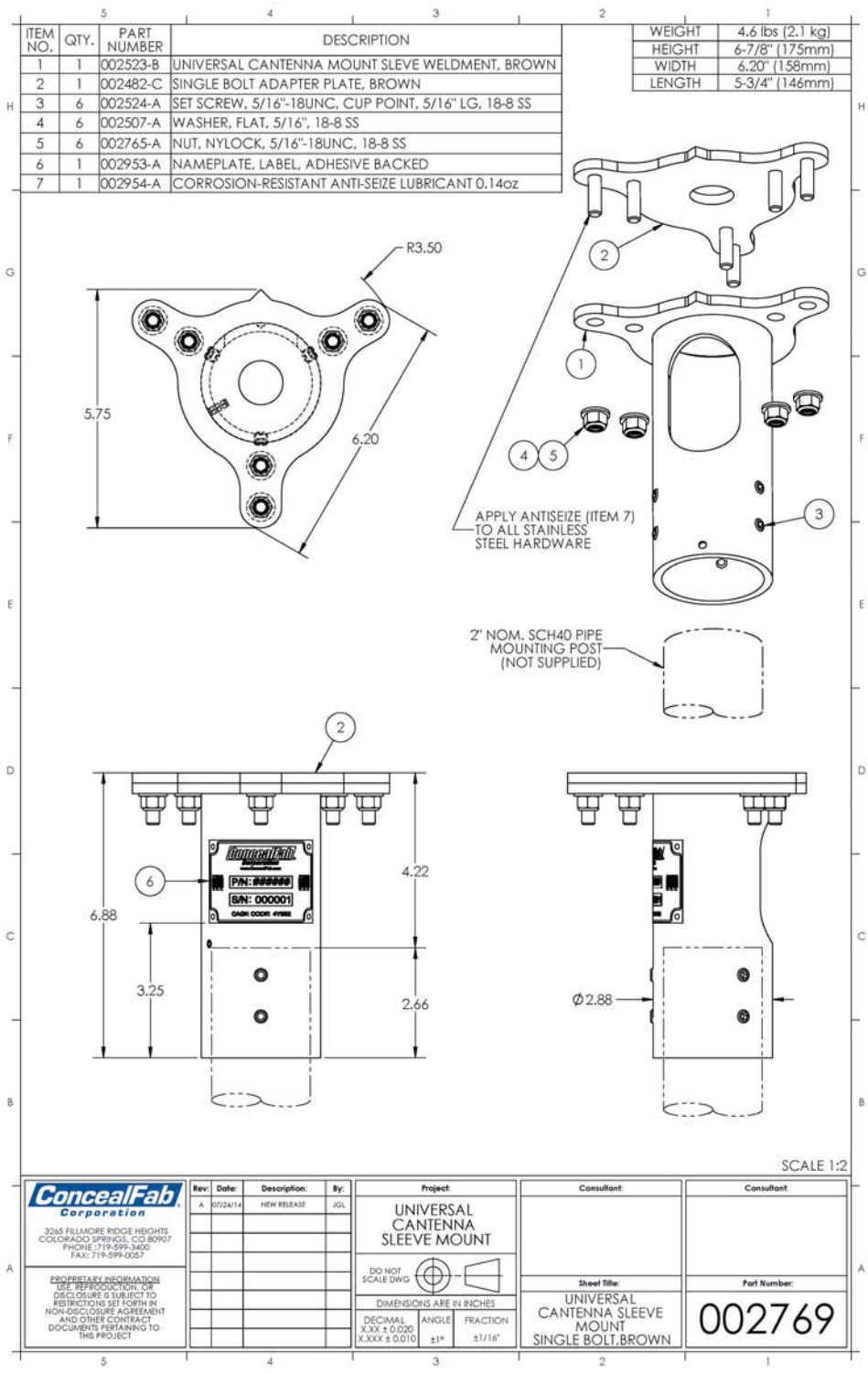


ARRANGEMENT FITS POLES  
7-1/8" Ø TO 14-1/8" Ø



ALTERNATIVE LEG ARRANGEMENT  
TO FIT SMALLER POLES  
5-1/4" Ø TO 7-1/8" Ø

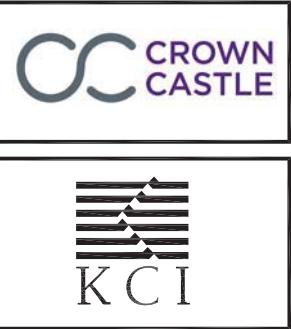




NODE:  
**LGY-020m2**

TITLE:  
CROWN CASTLE NG ATLANTIC LLC  
902 Merrimac Drive  
Takoma Park, MD 20912

Jurisdiction: Takoma Park



REVISIONS	NO.	DATE	DESCRIPTION	BY	MCP
	0	12/11/17	ISSUED FOR REVIEW		
	1	01/09/18	REVISED PER COMMENTS		
	2	01/10/18	REVISED PER COMMENTS		
	3	04/17/18	REVISED PER COMMENTS		
	4	08/30/18	REVISED PER COMMENTS		
	5	09/13/18	REVISED PER NEW POLE		
	6	10/26/18	REVISED PER COMMENTS		

DRAWN BY	MCP
CHECKED BY	GT
APPROVED BY:	NB
DRAWING DATE:	10/26/18

PROJECT NUMBER:	02157492.15
NODE BU:	N/A
SCALE:	AS SHOWN

SHEET NUMBER
9

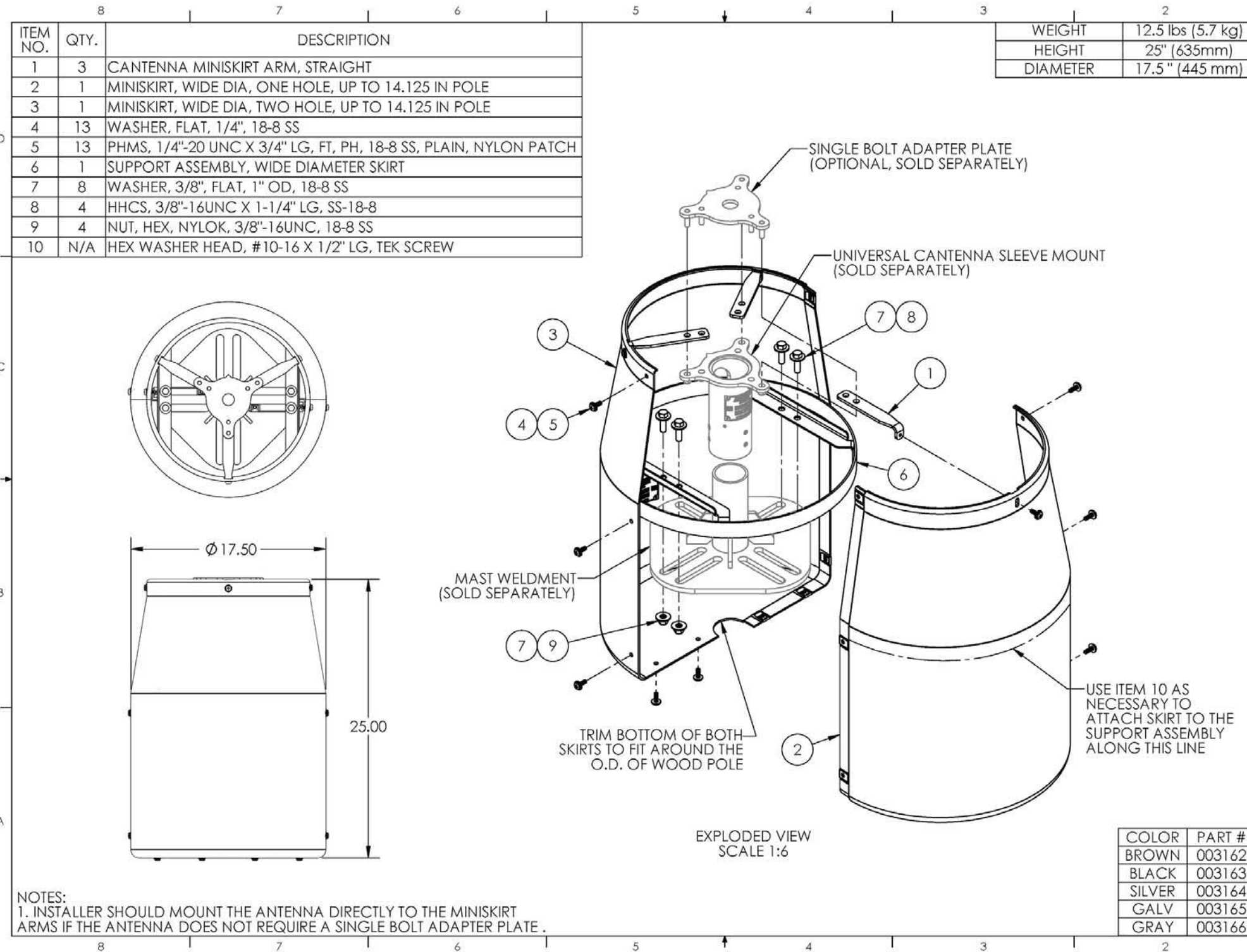




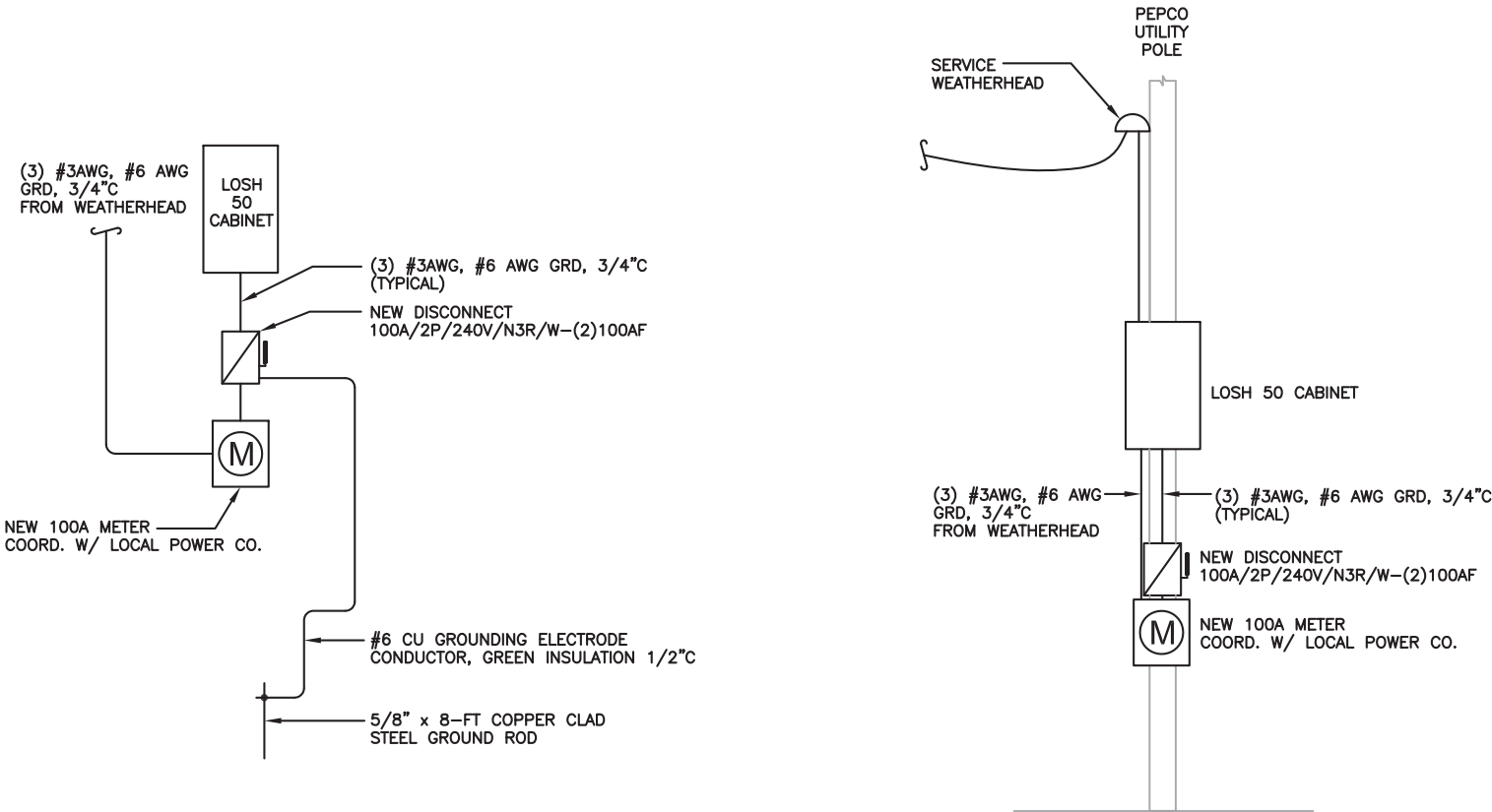
REVISIONS	NO.	DATE	DESCRIPTION	BY	MCP
	A	12/11/17	ISSUED FOR REVIEW		
	0	12/14/17	ISSUED FOR PERMITTING		
	1	01/09/18	REVISED PER COMMENTS		
	2	01/10/18	REVISED PER COMMENTS		
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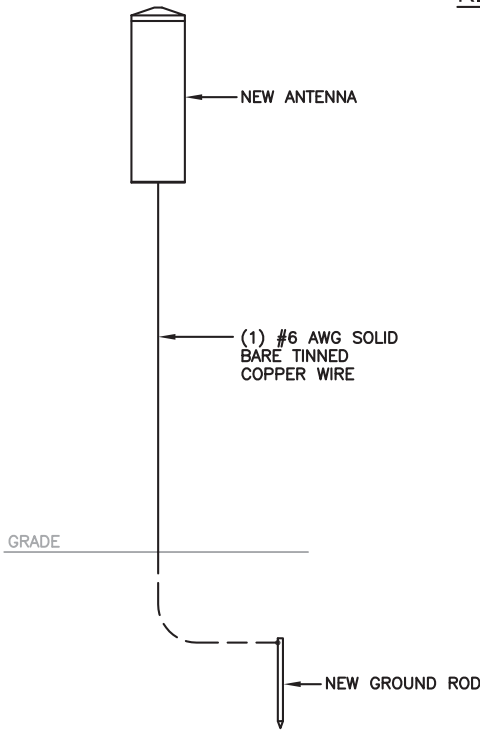






ONE-LINE DIAGRAM  
SCALE: N.T.S.

RISER DIAGRAM  
SCALE: N.T.S.



ANTENNA GROUNDING SCHEMATIC  
SCALE: N.T.S.

Product Data Sheet



**QO816L100RB**  
Load Center , 100A, Fixed - Factory installed main lugs, 120/240VAC

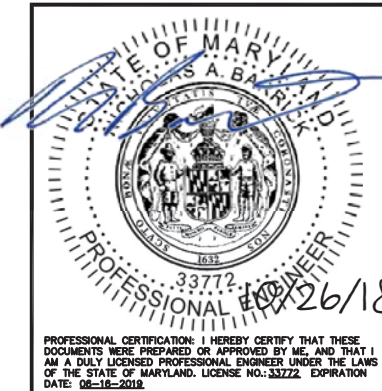
**SQUARE D**  
by **Schneider Electric**

List Price \$231.00 USD  
Availability Stock Item: This item is normally stocked in our distribution facility.

Technical Characteristics	
Ampere Rating	100A
Maximum Single Pole Circuits	16
Application	Designed to meet residential, commercial and industrial requirements to protect electrical systems, equipment and people.
Approvals	UL Listed
Cover Type	Surface
Bus Material	Tin Plated Aluminum
Enclosure Type	Outdoor/Rainproof
Box Number	2R
Enclosure Rating	NEMA 3R
Grounding Bar	Order separately
Short Circuit Current Rating	10kA
Main Type	Fixed - Factory installed main lugs
Voltage Rating	120/240VAC
Wire Size	#8 to 1 AWG(Al/Cu)
Maximum Tandem Circuit Breakers	8
Phase	1-Phase
Wiring Configuration	3-Wire
Depth	4.27 Inches
Height	12.65 Inches
Width	8.88 Inches
Spaces	8

Notes:  
70A (max) branch circuit breaker and 70A (max) back fed main circuit breaker.

Shipping and Ordering	
Category	00101 - Load Centers, 1 Phase, NEMA1 & 3R, 2 - 8 Circuit, Type QO
Discount Schedule	DE3A
GTIN	00785901785750
Package Quantity	1
Weight	9.73 lbs.
Availability Code	Stock Item: This item is normally stocked in our distribution facility.
Returnability	Y
Country of Origin	MX



NODE:  
**LGY-020m2**

TITLE:  
CROWN CASTLE NG ATLANTIC LLC  
902 Merrimac Drive  
Takoma Park, MD 20912  
Jurisdiction: Takoma Park



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DRAWING DATE:	10/26/18

PROJECT NUMBER:	02157492.15
NODE BU:	N/A
SCALE:	AS SHOWN

SHEET NUMBER  
**11**