



SITE VICINITY MAP



LOCAL MAP

NOTES:

- 1) CONTRACTOR SHALL NOTIFY OWNER FOR ACCESS TO SITE.
- 2) KEEP GATES LOCK AT ALL TIMES.
- 3) CONTRACTOR SHALL VERIFY ALL THE PLANS AND EXISTING CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.



ALABAMA ONE-CALL
STATE WIDE CALL: 811
CALL BEFORE YOU DIG



SE SHELBY

18103 HWY 145
SHELBY, AL 35143

N 33° 04' 26.06" (33.0739°)
W 86° 34' 26.15" (-86.5739°)

EXISTING 300' GUYED TOWER

PREPARED FOR:



MOTOROLA

1700 BELLE MEADE COURT
LAWRENCEVILLE, GEORGIA 30043

PHONE: 770-673-5087
FAX: 770-333-9690

PREPARED BY:



TOGETHER PLANNING A BETTER TOMORROW

158 BUSINESS CENTER DRIVE
BIRMINGHAM, AL 35244
TEL: 205-252-6985 FAX: 205-320-1504

PROJECT INFORMATION

SITE OWNER: SBA PROPERTIES
8051 CONGRESS AVE.
BOCA RATON, FL 33487
(205) 313-2419

SITE OWNER NUMBER: AL15345-A

JURISDICTION: SHELBY COUNTY

APPLICANT ALLCOMM WIRELESS, INC.
4116 1st AVENUE NORTH
BIRMINGHAM, AL 35222

ENGINEER: DWAIN DREHER
205-271-4031

JEREMY SHARIT, PE
158 BUSINESS CENTER DRIVE
BIRMINGHAM, AL 35244

POWER: ALABAMA POWER
TELCO: AT&T

DRAWING INDEX

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CA#: AL 2244-E

**PRELIMINARY
DRAWING**
(NOT VALID UNLESS
STAMPED AND SIGNED)



SNW # 11-2206.4



DESCRIPTION:
ISSUED FOR CLIENT REV.

DATE
08/16/17

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SE SHELBY

TITLE SHEET &
PROJECT INFORMATION

DESIGNED: JDS
DRAWN: WSM
CHECKED: JDS

JOB #: AL15345-A

T1

GENERAL REQUIREMENTS:

1. GENERAL

1.1. SUMMARY OF WORK

THE WORK SHALL CONSIST OF, BUT NOT BE LIMITED TO, THE INSTALLATION OF AN EQUIPMENT SHELTER, GENERATOR, ANTENNAS AND LINES, GROUNDING, ELECTRICAL WORK, ETC., ASSOCIATED WITH THE MOTOROLA EQUIPMENT AS INDICATED ON DRAWINGS AND AS SPECIFIED HEREIN. CONTRACTOR SHALL SUPPLY ALL PERMANENT MATERIALS/EQUIPMENT REQUIRED AND ALL LABOR, EQUIPMENT, TOOLS, UTILITIES, MINOR HARDWARE/MATERIALS, TRANSPORTATION AND FACILITIES NECESSARY FOR PROPER EXECUTION AND COMPLETION OF SERVICES AND INSTALL WORK, WHETHER TEMPORARY OR PERMANENT. CONTRACTOR SHALL BE OBLIGATED TO PERFORM ALL THE WORK OUTLINED IN THESE DRAWINGS IN ACCORDANCE WITH THE CONTRACT AGREEMENT, FEDERAL REGULATIONS, STATE REQUIREMENTS, LOCAL CODES, COMMERCIAL/INDUSTRY STANDARDS, DETAILED SCOPE OF WORK AND THE DOCUMENTS IDENTIFIED BELOW. IN CASE OF A CONFLICT BETWEEN THE ABOVE LISTED DOCUMENTS REGARDING STANDARDS OF WORK, THE MORE STRINGENT CRITERIA SHALL APPLY. ANY ADDITIONAL COSTS OR DELAYS RESULTING FROM CORRECTION OF THE WORK TO COMPLY WITH THE ABOVE REQUIREMENT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

1.2. SITE VISIT

CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE ITSELF WITH THE SCOPE OF WORK REQUIRED PER THE DRAWINGS AND ALL LOCAL CONDITIONS AND LAWS AND REGULATIONS THAT MAY IN ANY MANNER AFFECT THE PRICE, PROGRESS AND PERFORMANCE OF WORK, INCLUDING ANY COSTS ASSOCIATED WITH IT. THE CONTRACTOR SHALL ALSO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND NOTIFY THE MOTOROLA REPRESENTATIVE. OF ANY DISCREPANCIES OR INTERFERENCES WHICH AFFECT THE WORK OF THIS CONTRACT.

1.3. STANDARDS AND CODES

THE FOLLOWING DOCUMENTS (LATEST REVISION) SHALL BE CONSIDERED TO BE SPECIFICATION AND ARE INCORPORATED HEREIN BY REFERENCE. IN THE EVENT OF CONFLICT BETWEEN THE REQUIREMENTS OF THIS SPECIFICATION AND THE REQUIREMENTS OF THE REFERENCED DOCUMENTS, THE STRICTER SPECIFICATION SHALL GOVERN. WHERE PROVISIONS OF THE CODES AND STANDARDS ARE IN CONFLICT WITH THE BUILDING CODE IN FORCE FOR THIS PROJECT, THE BUILDING CODE SHALL GOVERN.

A. AMERICAN CONCRETE INSTITUTE:

- ACI 301 – "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
- ACI 305 "HOT WEATHER CONCRETING".
- ACI 306 "COLD WEATHER CONCRETING".
- ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- ACI 614 "RECOMMENDED PRACTICE FOR MEASURING, MIXING AND PLACING CONCRETE".
- ACI 311 "RECOMMENDED PRACTICE FOR CONCRETE INSPECTION".
- ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".
- ACI 613 "RECOMMENDED PRACTICE FOR SELECTING PROPORTIONS FOR CONCRETE".

B. AMERICAN NATIONAL STANDARDS INSTITUTE:

- ANSI Z2359 REQUIREMENTS FOR PERSONAL FALL ARREST SYSTEMS, SUBSYSTEMS AND COMPONENTS
- ANSI Z287.1 OCCUPATIONAL AND EDUCATIONAL EYE AND FACE PROTECTION
- ANSI Z289.1 PROTECTIVE. HEADWEAR FOR INDUSTRIAL WORKERS –REQUIREMENTS
- ANSI/IEEE C95.1 SAFETY LEVELS WITH RESPECT TO HUMAN EXPOSURE TO RADIO FREQUENCY ENEWSM
- ANSI/TLA/EIA STANDARD 222: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.

C. AMERICAN INSTITUTE OF STEEL CONSTRUCTION:

- AISC MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION: LATEST EDITION

D. AMERICAN SOCIETY FOR TESTING AND MATERIALS:

- ASTM A615 – "SPECIFICATION FOR DEFORMED AND PLAIN BILLET STEEL BARS FOR CONCRETE REINFORCEMENT".
- ASTM C94–80 – "SPECIFICATION FOR READY–MIX CONCRETE".
- ASTM C39–77 – "SPECIFICATION FOR TEST FOR COMPREHENSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMEN".
- ASTM C33 – "SPECIFICATION FOR CONCRETE AGGREGATES".
- ASTM C150 – "SPECIFICATION FOR PORTLAND CEMENT".
- ASTM C172 – "SAMPLING FRESH CONCRETE".
- ASTM C143 – "SLUMP OF PORTLAND CEMENT CONCRETE".
- ASTM D698–91 – "TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT".
- ASTM D1556–64 – "DENSITY OF SOIL IN PLACE BY THE SAND–CONE METHOD".
- ASTM O1557 – "TEST FOR MOISTURE–UNIT WEIGHT RELATIONS OF SOILS AND SOIL–AGGREGATE MIXTURES USING 10–LB. HAMMER AND 18–IN. DROP".
- (PROCEDURE C)
- ASTM D2487 – "STANDARD CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)"
- ASTM D2922 – "DENSITY OF SOIL AND SOIL AGGREGATE IN PLACE BY NUCLEAR METHODS SHALLOW DEPTH".
- ASTM D2940 – "STANDARD SPECIFICATION FOR GRADED AGGREGATE MATERIAL FOR BASES OR SUB–BASES FOR HIGHWAYS ON AIRPORTS"

E. AMERICAN WELDING SOCIETY:

- AWS D12.1 – "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL, METAL INSERTS AND CONNECTIONS IN REINFORCED CONCRETE CONSTRUCTION".

F. CONCRETE REINFORCING STEEL INSTITUTE:

- "MANUAL OF STANDARD PRACTICE"

G. FEDERAL AVIATION ADMINISTRATION:

- DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR, AC 70/7460–10: OBSTRUCTION MARKING AND LIGHTING. DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR,
- 150–5345–43, FM/DOD SPECIFICATION L–856: HIGH INTENSITY OBSTRUCTION LIGHTING SYSTEMS.

H. FEDERAL COMMUNICATIONS COMMISSION:

- FEDERAL COMMUNICATIONS COMMISSION – RULES AND REGULATIONS PART 17: CONSTRUCTION, MARKING AND LIGHTING OF ANTENNA STRUCTURES.
- STRUCTURAL STEEL PAINTING COUNCIL:
- SSPC–SP–1–63: SPECIFICATION FOR PAINTING STEEL STRUCTURES.

I. STRUCTURAL STEEL PAINTING COUNCIL:

- SSPC–SP–1–63: SPECIFICATION FOR PAINTING STEEL STRUCTURES.

J. MOTOROLA R56 STANDARDS AND GUIDELINES FOR COMMUNICATIONS SITES (B VERSION 2005).

K. MOTOROLA'S CML WORKS BID SPECIFICATIONS

L

NATIONAL FIRE PROTECTION ASSOCIATION:

- NFPA 1 – FIRE PREVENTION CODE
- NFPA 70 – NATIONAL ELECTRICAL CODE
- NFPA 101 – LIFE SAFETY CODE
- NFPA 111 – STANDARD ON STORED ELECTRICAL ENEWSM, EMERGENCY AND STANDBY POWER SYSTEMS
- NFPA 780 – STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS

A. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION:

- OSHA 1926
- OSHA DIRECTIVES CPL 2–1.29 – INTERIM INSPECTION PROCEDURES DURING COMMUNICATION TOWER CONSTRUCTION ACTIVITIES.

N. ALABAMA STATEWIDE BUILDING CODE

1.4. NOTICE TO PROCEED

WHEN THE SITE IS READY FOR INSTALLATION, MOTOROLA SHALL ISSUE A NOTICE TO PROCEED TO THE CONTRACTOR. UPON RECEIPT OF THE NOTICE OF PROCEED, THE CONTRACTOR SHALL SUBMIT TO MOTOROLA A SCHEDULE REFLECTING THE WORK PLAN. THE CONTRACTOR SHALL ADVISE THE MOTOROLA REPRESENTATIVE. IMMEDIATELY OF ANY SCHEDULE CHANGES. THE CONTRACTOR SHALL ADJUST HIS WORK, AS REQUIRED, TO COORDINATE WITH THE MOTOROLA INSTALLATION TEAM IF THE SCHEDULES OVERLAP.

1.5. MOTOROLA REPRESENTATIVE.

MOTOROLA SHALL DESIGNATE A REPRESENTATIVE. THIS PERSON IS THE ONLY CONTACT POINT AUTHORIZED TO MAKE ANY CHANGES TO THE CONTRACT PROVISIONS OR THE PLANS AND SPECIFICATIONS. ANY CHANGES MADE BY THE CONTRACTOR ARE AT THE CONTRACTOR'S RESPONSIBILITY AND RISK.

1.6. CONTRACTORS FIELD REPRESENTATIVE.

CONTRACTOR SHALL ASSIGN A FIELD REPRESENTATIVE. WHO IS FAMILIAR WITH THESE SPECIFICATIONS AND WILL REPRESENT THE CONTRACTOR AND HAVE THE AUTHORITY TO ACT FOR THE CONTRACTOR AND SUPERVISE ALL CONSTRUCTION ACTIVITIES. THE FIELD REPRESENTATIVE. SHALL BE AVAILABLE WHEN CONSTRUCTION ACTIVITIES BEGIN, THE FIELD REPRESENTATIVE. SHALL BE THE PRIMARY POINT OF CONTACT FOR MOTOROLA DURING THE CONSTRUCTION PHASE OF THE WORK.

1.7. PROJECT MEETINGS

THE CONTRACTOR SHALL CONDUCT THE FINAL (PRE–CONSTRUCTION) MEETING (INCLUDING ALL SUB–CONTRACTORS) WITH THE MOTOROLA REPRESENTATIVE. WITHIN TWO WEEKS AFTER AWARD OF THE CONTRACT. SUBSEQUENTLY, THE CONTRACTOR SHALL PROVIDE PROGRESS SCHEDULED UPDATES TO MOTOROLA ON A WEEKLY BASIS.

1.8. MATERIALS

CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AS REQUIRED FOR COMPLETE SYSTEMS INCLUDING: ALL PARTS OBVIOUSLY OR REASONABLY INCIDENTAL TO A COMPLETE INSTALLATION, WHETHER SPECIFICALLY INDICATED OR NOT. ALL SYSTEMS SHALL BE COMPLETELY ASSEMBLED, TESTED, ADJUSTED AND DEMONSTRATED TO BE READY FOR OPERATION PRIOR TO MOTOROLA'S ACCEPTANCE. MATERIALS AND WORKMANSHIP SHALL BE THE BEST OF THEIR RESPECTIVE KINDS (AS DEFINED BY INDUSTRY STANDARDS), FREE OF DEFECTS AND ALL MATERIALS SHALL BE NEW AND UNUSED IN ALL CASES, UNLESS OTHERWISE SPECIFIED, WHERE THE NAME OF A CONCERN OR MANUFACTURER IS MENTIONED ON DRAWINGS OR IN SPECIFICATIONS IN REFERENCE TO A REQUIRED SERVICE OR PRODUCT, AND NO QUALIFICATIONS OR SPECIFICATION OF SUCH IS INCLUDED, THEN THE MATERIAL SPECIFICATIONS, DETAILS OF MANUFACTURE, FINISH, ETC., SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICE, DIRECTION OR SPECIFICATIONS. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

1.9. VERIFICATION OF EXISTING CONDITIONS

BEFORE STARTING ANY OPERATION, THE CONTRACTOR SHALL EXAMINE EXISTING WORK, OR WORK PERFORMED BY OTHERS, TO WHICH RRS WORK IS TO ADJOIN OR BE APPLIED, AND SHALL REPORT TO MOTOROLA PROJECT MANAGER ANY CONDITIONS THAT WILL PREVENT SATISFACTORY ACCOMPLISHMENT OF HIS WORK. PRIOR TO COMMENCING ANY EXCAVATION OR GRADING, THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF ALL SURVEY DATA AS INDICATED IN THE PLANS AND SPECIFICATIONS AND/OR AS PROVIDED BY MOTOROLA. SHOULD THE CONTRACTOR DISCOVER ANY INACCURACIES, ERRORS, OR OMISSIONS IN THE SURVEY MTA, HE SHALL IMMEDIATELY NOTIFY THE MOTOROLA REPRESENTATIVE. IN ORDER THAT PROPER ADJUSTMENTS CAN BE ANTICIPATED AND ORDERED. FAILURE TO NOTIFY THE MOTOROLA REPRESENTATIVE OF DEFICIENCIES, ERRORS OR FAULTS PRIOR TO COMMENCEMENT OF WORK SHALL CONSTITUTE ACCEPTANCE THEREOF AND WAIVER OF ANY CLAIMS OF UNSUITABILITY, ERRORS, OMISSIONS OR INACCURACIES. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING ALL ESTABLISHED SURVEY CONTROL POINTS. IF THE CONTRACTOR OR ANY OF HIS SUB–CONTRACTORS MOVE OR DESTROY ANY SURVEY CONTROL POINTS, THE COST INCURRED BY THE LAND OWNER OR MOTOROLA TO RE–ESTABLISH THEM WILL BE BORNE BY THE CONTRACTOR.



SMW #: 11-2206.4

MOTOROLA



#	DATE	DESCRIPTION:	ISSUED FOR CLIENT REV.						
0	08/16/17								

SE SHELBY
TITLE SHEET &
PROJECT INFORMATION

CA#: AL 2244-E

**PRELIMINARY
DRAWING**
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DESIGNED: JDS
DRAWN: WSM
CHECKED: JDS

JOB #: AL15345-A

T2

THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR SHALL MEET ALL OF THE REGULATORY REQUIREMENTS OF THE JURISDICTION GOVERNING CONSTRUCTION.

THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR ARRANGING WITH MOTOROLA FOR AN INSPECTION PRIOR TO COVERING UP ALL WORK THAT WILL BE COVERED IN FINISHED CONDITION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MANAGE THE SEQUENCE OF WORK AND REQUEST THE INSPECTIONS IN A TIMELY MANNER. THE CONTRACTOR SHALL NOT REQUEST AN INSPECTION UNLESS ALL OF THE RELATED WORK HAS BEEN COMPLETED. WORK SHALL NOT PROCEED TO THE NEXT STEP UNTIL THE PREVIOUS STEP HAS BEEN INSPECTED AND APPROVED BY THE LOCAL INSPECTORS AND THE MOTOROLA REPRESENTATIVE. THE PRESENCE OF THE OWNER OR MOTOROLA REPRESENTATIVE ON THE JOB SITE IN NO WAY RELIEVES THE CONTRACTOR OF THE ASSOCIATED RESPONSIBILITIES OF THE JOB. ANY WORK WHICH DOES NOT MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS WILL BE CORRECTED OR REMOVED SOLELY AT THE CONTRACTOR'S EXPENSE.

- FOUNDATIONS EXCAVATION AND REBAR: TO BE MADE AFTER TRENCHES ARE EXCAVATED AND FORMS ERECTED, REINFORCEMENT PLACED, COMPACTION TESTED, SOIL TREATED, VAPOR BARRIER PLACED, AND ESSENTIALLY READY FOR CONCRETE PLACEMENT
- GROUNDING: TO BE MADE AFTER THE BELOW GROUND CADWELD CONNECTIONS HAVE BEEN COMPLETED, PRIOR TO COVERING UP THE TRENCHES.
- ELECTRICAL WORK WITHIN WALLS: TO BE MADE AFTER THE ROOF, FRAMING, FIRELOCKING AND BRACING IS IN PLACE PRIOR TO THE INSTALLATION OF INSULATION OR WALL/CEILING MEMBRANES.

1.12 SAFETY

THE CONTRACTOR, HIS EMPLOYEES, ANY SUB-CONTRACTORS, VENDORS, THEIR RESPECTIVE EMPLOYEES AND CONTRACTOR'S VISITORS SHALL COMPLY WITH ALL SAFETY STANDARDS, ACCIDENT PREVENTION REGULATIONS AND ENVIRONMENTAL REGULATIONS PROMULGATED BY FEDERAL, STATE OR LOCAL AUTHORITIES HAVING JURISDICTION AND SHALL AT ALL TIMES CONDUCT ALL OPERATIONS UNDER THE CONTRACT IN A MANNER TO AVOID THE RISK OF BODILY HARM TO ANY PERSONS AND THE RISK OF DAMAGE TO ANY PROPERTY, EQUIPMENT OR MATERIAL SUCH PARTIES SHALL ALSO COMPLY WITH ANY SAFETY PROGRAMS AND/OR RULES PROMULGATED BY OWNER AND/OR MOTOROLA.

THE CONTRACTOR SHALL ACKNOWLEDGE ALL OR PORTIONS OF THE WORK MAY INVOLVE POSSIBLE EXPOSURE OF CONTRACTOR, SUB-CONTRACTORS, AND THEIR RESPECTIVE EMPLOYEES, AGENTS, INVITEES, LICENSEES AND OTHER VISITORS TO THE JOBSITE AND/OR MOTOROLA PREMISES TO ELECTRO-MAGNETIC ENFEM (EME) WHILE PERFORMING WORK UNDER THIS CONTRACT, ESPECIALLY IF WORK IS PERFORMED ON EXISTING ANTENNA TOWERS OR BUILDING TOPS WHERE ANTENNAS ARE LOCATED. THE CONTRACTOR REPRESENTS THAT CONTRACTOR, SUBCONTRACTORS, AND ALL OF THEIR RESPECTIVE EMPLOYEES, AGENTS, INVITEES, LICENSEES, AND OTHER AUTHORIZED REPRESENTATIVES WHO ARE PERFORMING SERVICES UNDER THIS AGREEMENT WILL COMPLY WITH ALL ANSI AND ANY OTHER APPLICABLE EME STANDARDS, RULES OR REGULATIONS, INCLUDING, BUT NOT LIMITED TO THOSE RULES OR REGULATIONS IMPOSED OR SUGGESTED BY MOTOROLA. IF ANY.

THE CONTRACTOR SHALL ADHERE TO ALL OSHA RULES, REGULATIONS AND ADOPTED POLICIES. ALL CONTRACTOR PERSONNEL SHALL HAVE UNDERGONE ELECTROMAGNETIC ENVSWM (EME) TRAINING FOR PERSONNEL WORKING IN THE VICINITY OF ACTIVE ANTENNAS. AS SUCH IT IS RECOMMENDED THAT MONITORS BE USED BY THE TOWER PERSONNEL TO MONITOR EXPOSURE LEVELS. EME LEVELS AT THE SITE EXCEED THE MAXIMUM PERMISSIBLE EXPOSURE LIMITS. THE CONTRACTOR SHALL COORDINATE WITH THE INDIVIDUALS RESPONSIBLE FOR USE OF THE TRANSMITTER TO MAKE SURE THAT THE EQUIPMENT IS DEACTIVATED BEFORE WORK CAN BE RESUMED, WITHOUT CAUSING A SERIOUS DISRUPTION OF THE SERVICE.

THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, VEGETATION, AND RUBBISH, AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. WHENEVER THE WORK-SITE IS LEFT UNATTENDED, THE CONTRACTOR SHALL BLOCK THE OPENING WITH WARNING TAPE TO DISCOURAGE TRESPASSING. THE PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE AT THE CONCLUSION OF SITE WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LANDSCAPE GRADING AND SEEDING OF THE DISTURBED SOIL. THE CONTRACTOR SHALL USE LOCAL GRASS SEED TO STABILIZE SOIL AND SHALL COVER DISTURBED AREAS WITH HAY MULCH TO REDUCE RUNOFF OF SEDIMENT TO DOWNSTREAM AREAS. THE CONTRACTOR SHALL RESTORE THE SITE TO ITS ORIGINAL CONDITION. ALL SLOPES AND DISTURBED AREAS NOT RECEIVING AGGREGATE SURFACING ARE TO BE PREPARED AND BROADCAST SEEDS AND FERTILIZED FOR EROSION PROTECTION. SEEDING FOR AREAS DISTURBED SHALL BE ESTABLISHED SEASONALLY AS REQUIRED BY LOCAL CODES.

THE CONTRACTOR SHALL EXERCISE ALL CARE TO AVOID DAMAGE OR INTERRUPTION OF EXISTING UNDERGROUND OR OVERHEAD ELECTRIC SERVICES, UNDERGROUND GROUNDING AND FUEL LINES, EQUIPMENT AND BUILDINGS ON THE SITE, PLUS OFF SITE SERVICES, BURIED OR OVERHEAD, SURROUNDING THE EXISTING OR EXPANDED COMPOUND. ANY PROPERTY DAMAGE CAUSED BY THE CONTRACTOR OR HIS OPERATIONS SHALL BE CORRECTED AND/OR RESTORED TO THE SATISFACTION OF THE PROPERTY OWNER(S) AND MOTOROLA AT NO ADDITIONAL COST TO THE PROPERTY OWNER OR MOTOROLA.

THE CONTRACTOR AND/OR SUB-CONTRACTORS SHALL DEMONSTRATE TO MOTOROLA THAT ALL SYSTEMS AND SUB-SYSTEMS INSTALLED UNDER THIS CONTRACT, OPERATE PROPERLY PRIOR TO THE FINAL ACCEPTANCE INSPECTION. PROVIDE THE OPERATIONS AND MAINTENANCE MANUALS AT THIS TIME.

THE CONTRACTOR SHALL KEEP UP-TO-DATE MARKED-UP PRINTS OF THE PROJECT DRAWINGS, UPON COMPLETION OF WORK AT THE SITE, THE CONTRACTOR SHALL REVIEW THE COMPLETED AS-BUILT DRAWINGS, AND ASCERTAIN THAT ALL DATA FURNISHED ON THE DRAWINGS IS ACCURATE AND TRULY REPRESENTS THE WORK AS ACTUALLY INSTALLED. MARKINGS INDICATING CHANGES TO THE DRAWINGS SHALL BE RED OR GREEN AND CLEARLY VISIBLE. TWO (2) SETS OF "AS-BUILT" DRAWINGS SHALL BE FURNISHED TO THE MOTOROLA REPRESENTATIVE AT THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL ALSO SHOW THE FOLLOWING:

- MODIFICATIONS TO SITE LAYOUT.
- GROUNDING SYSTEM LAYOUT.
- UNDERGROUND FUEL LINE RUN.
- UNDERGROUND TEL.CO CABLE RUN.
- UNDERGROUND ELECTRICAL RUN.

WHERE THE CONTRACTOR IS RESPONSIBLE FOR SUPPLYING THE SITE EQUIPMENT (SHELTER, ISOLATION TRANSFORMER, GENERATOR, ECT.) THAT REQUIRES PERIODIC MAINTENANCE, THE CONTRACTOR SHALL INCLUDE ALL OPERATION AND MAINTENANCE MANUALS AND ALL AS-BUILT DRAWINGS WHICH FULLY DESCRIBE THE ACTUAL INSTALLED EQUIPMENT.

THE CONTRACTOR IS REQUIRED TO SUBMIT THE RESULTS OF ALL TESTS REQUIRED BY THE PROJECT SPECIFICATIONS AND DRAWINGS THAT FALL WITHIN HIS SCOPE OF WORK TO THE MOTOROLA REPRESENTATIVE WITHIN FIVE (5) DAYS OF THE TEST. THE CONTRACTOR IS REQUIRED TO SUBMIT TEST PROCEDURES NINETY (90) DAYS PRIOR TO THE TESTS BEING CONDUCTED. IN GENERAL, THE CONTRACTOR SHALL SUBMIT THE FOLLOWING TEST RESULTS:

- CONCRETE COMPRESSION TEST FOR ALL CONCRETE WORK.
- TIME DOMAIN REFLECTOMETER (TDR) / SWEEP TEST FOR ANTENNA AND TRANSMISSION LINE INSTALLATION WORK.
- FUEL LINE LEAKAGE TEST FOR FUEL TANK AND PIPING INSTALLATION WORK.
- SLUMP TEST FOR CONCRETE WORK.
- GROUNDING RESISTANCE TEST FOR GROUNDING WORK.
- ANY OTHER TEST THAT MAY BE REQUIRED.

THE MOTOROLA REPRESENTATIVE WILL PROVIDE A CERTIFICATE OF COMPLETION AND APPROVE FINAL PAYMENT WHEN ALL PUNCH-LIST ITEMS HAVE BEEN CORRECTED AND ALL SYSTEMS ARE ACCEPTABLE. AFTER FINAL PAYMENT, CONTRACTOR WILL SIGN A RELEASE OF LIEN.

ALL WORK PERFORMED BY THE CONTRACTOR IN COMPELLING THE SCOPE IDENTIFIED ON THE DRAWINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL COMPLETION OF THE PROJECT. THIS GUARANTEE SHALL COVER ALL MATERIALS, EQUIPMENT OR WORKMANSHIP WHICH IN THE OPINION OF MOTOROLA IS RENDERED DEFECTIVE OR INFERIOR OR NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT DURING THE GUARANTEE PERIOD. IF, WITHIN THE GUARANTEE PERIOD, REPAIRS OR CHANGES ARE REQUIRED TO CORRECT THE GUARANTEE WORK, THEN UPON RECEIPT OF NOTICE, THE CONTRACTOR SHALL PROMPTLY AND WITHOUT EXPENSE TO MOTOROLA OR COUNTY, PROCEED TO:

- *PLACE IN SATISFACTORY CONDITION ALL OF SUCH GUARANTEED WORK AND CORRECT ALL DEFECTS THEREIN.
*MAKE GOOD ALL DAMAGES TO THE STRUCTURE OR SITE OR EQUIPMENT OR CONTENTS THEREOF, WHICH, IN THE OPINION OF THE MOTOROLA, IS THE RESULT OF THE USE OF MATERIALS, EQUIPMENT, OR WORKMANSHIP WHICH ARE INFERIOR, DEFECTIVE, OR NOT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT;
*MAKE GOOD ANY WORK, MATERIALS OR EQUIPMENT, AND ADJACENT STRUCTURES DISTURBED IN FULFILLING THE GUARANTEE.



#	DATE	DESCRIPTION:
0	08/16/17	ISSUED FOR CLIENT REV.

SE SHELBY

GENERAL
NOTES

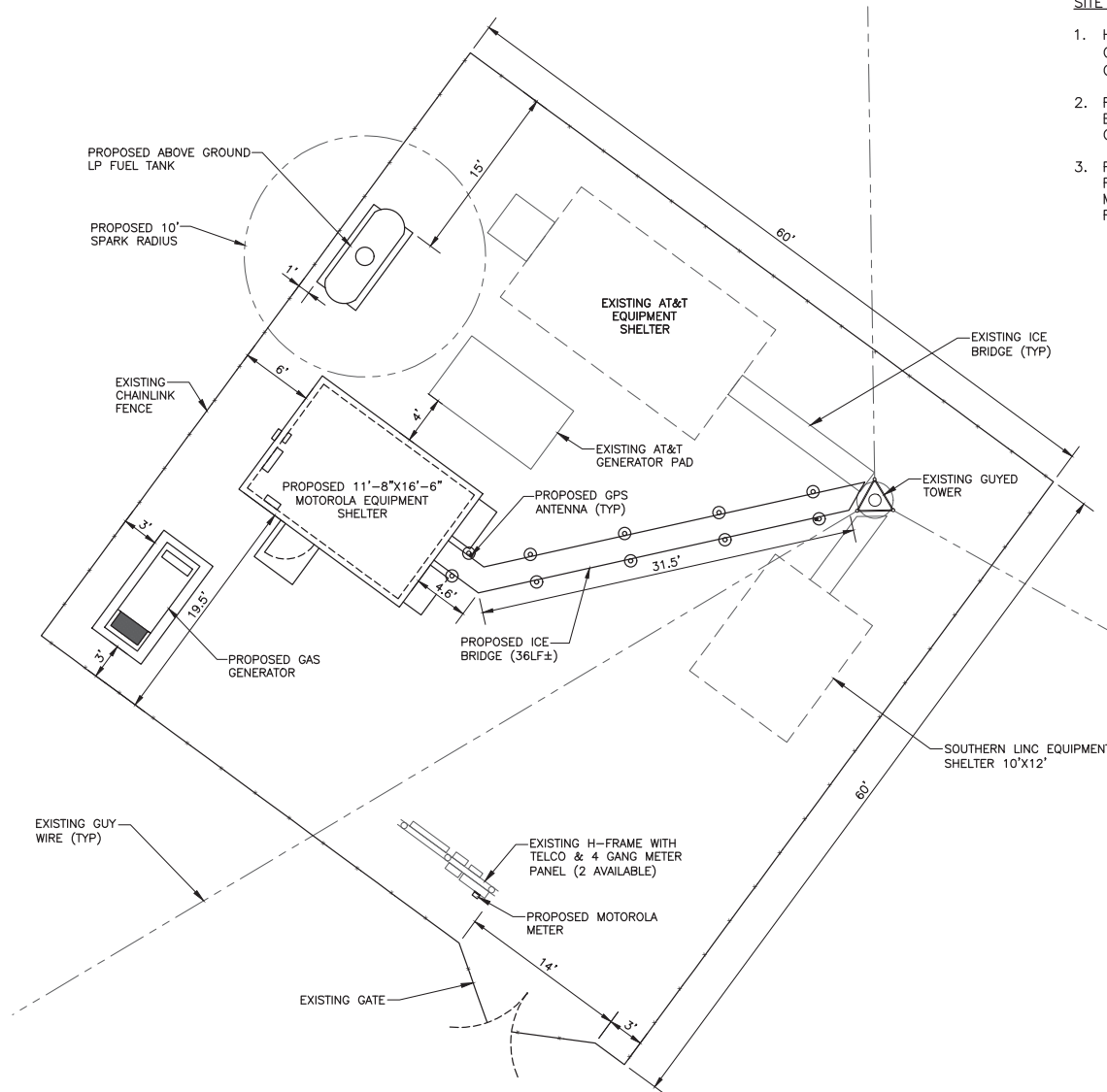
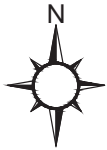
CA#: AL 2244-E

**PRELIMINARY
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(NOT VALID UNLESS
STAMPED AND SIGNED)

DESIGNED: JDS
DRAWN: WSM
CHECKED: JDS

JOB #: AL15345-A

T3



SITE NOTES:

1. HAND DIG IN AREAS SUSPECTED TO CONTAIN EXISTING GROUNDING CONDUCTORS, GROUND RODS, POWER/TELCO CABLES OR OTHER BURIED SITE UTILITIES/ELEMENTS.
2. REPAIR AT NO ADDITIONAL EXPENSE DAMAGE TO ALL EXISTING SITE ELEMENTS, REPAIR AS DIRECTED BY THE CONSTRUCTION MANAGER.
3. REPAIR AT NO ADDITIONAL EXPENSE ANY CONSTRUCTION RELATED DAMAGE TO SITE. REPAIR DAMAGED AREA TO MATCH EXISTING PRECONSTRUCTION CONDITION OR AS REQUIRED BY PROJECT MANAGER.

1 SITE LAYOUT
C1 SCALE: 1"=10'



SMW #: 11-2206.4

MOTOROLA



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08/16/17

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SE SHELBY

SITE LAYOUT

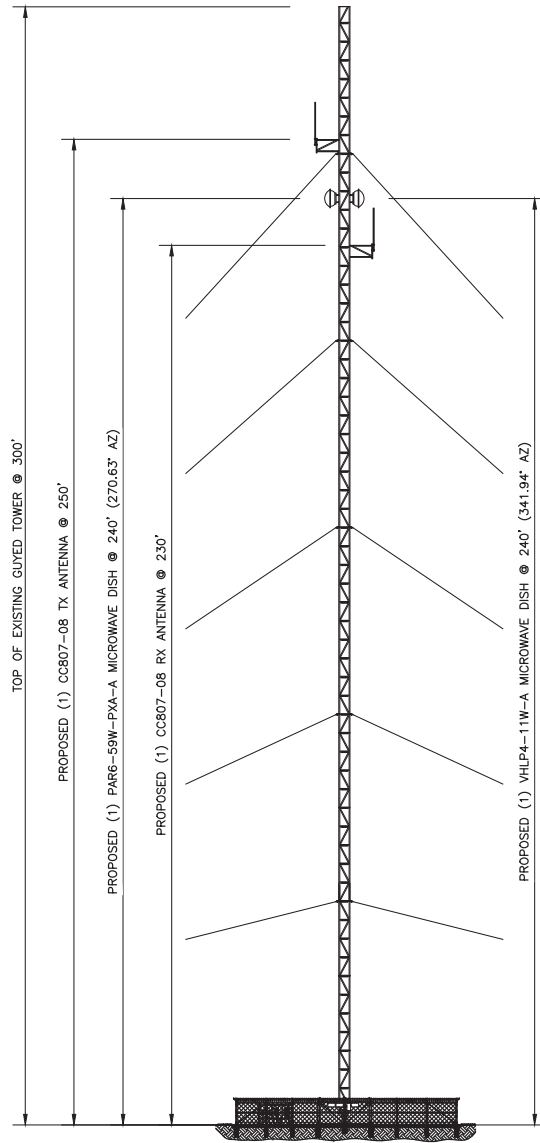
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STAMPED AND SIGNED)

DESIGNED: JDS
DRAWN: WSM
CHECKED: JDS

JOB #: AL15345-A

C1



1
C2 TOWER ELEVATION
SCALE: NOT TO SCALE

EQUIPMENT AND COAXIAL CABLE SCHEDULE

ANTENNA	ACRONYM	BAND 1	BAND 2	BAND 3
RECEIVED ANTENNA 1	RX1	GREEN		
RECEIVED ANTENNA 2	RX2	GREEN	GREEN	
TRANSMIT ANTENNA 1	TX1	RED		
TRANSMIT ANTENNA 2	TX2	RED	RED	
TRANSMIT ANTENNA 3	TX3	RED	RED	RED
GPS	GPS	BLUE		
MOBILE TEST ANTENNA	TST	BROWN		
TRANSCIVE ANTENNA 1	TR1	RED	GREEN	
TRANSCIVE ANTENNA 2	TR2	RED	GREEN	GREEN
TRANSCIVE ANTENNA 3	TR3	RED	RED	GREEN
STROBE CALBE MASTER	MLT	YELLOW		
STROBE CABLE SLAVE 1	SLT1	WHITE		
STROBE CABLE SLAVE 2	SLT2	WHITE	WHITE	
MAIN MW DISH PATH #1 - AZIMUTH 0-120	MW11	GREEN	WHITE	
MAIN MW DISH PATH #2 - AZIMUTH 0-120	MW21	GREEN	YELLOW	
MAIN MW DISH PATH #3 - AZIMUTH 0-120	MW31	GREEN	ORANGE	
DIVERSITY MW DISH PATH #1 - AZIMUTH 0-120	DM11	GREEN	WHITE	WHITE
DIVERSITY MW DISH PATH #2 - AZIMUTH 0-120	DM21	GREEN	YELLOW	YELLOW
DIVERSITY MW DISH PATH #3 - AZIMUTH 0-120	DM31	GREEN	ORANGE	ORANGE
MAIN MW DISH PATH #1 - AZIMUTH 121-240	MW12	BLUE	WHITE	
MAIN MW DISH PATH #2 - AZIMUTH 121-240	MW22	BLUE	YELLOW	
MAIN MW DISH PATH #3 - AZIMUTH 121-240	MW32	BLUE	ORANGE	
DIVERSITY MW DISH PATH #1 - AZIMUTH 121-240	DM12	BLUE	WHITE	WHITE
DIVERSITY MW DISH PATH #2 - AZIMUTH 121-240	DM22	BLUE	YELLOW	YELLOW
DIVERSITY MW DISH PATH #3 - AZIMUTH 121-240	DM32	BLUE	ORANGE	ORANGE
MAIN MW DISH PATH #1 - AZIMUTH 241-360	MW13	BROWN	WHITE	
MAIN MW DISH PATH #2 - AZIMUTH 241-360	MW23	BROWN	YELLOW	
MAIN MW DISH PATH #3 - AZIMUTH 241-360	MW33	BROWN	ORANGE	
DIVERSITY MW DISH PATH #1 - AZIMUTH 241-360	DM13	BROWN	WHITE	WHITE
DIVERSITY MW DISH PATH #2 - AZIMUTH 241-360	DM23	BROWN	YELLOW	YELLOW
DIVERSITY MW DISH PATH #3 - AZIMUTH 241-360	DM33	BROWN	ORANGE	ORANGE

2
C2 EQUIPMENT AND COAXIAL CABLE SCHEDULE
SCALE: NOT TO SCALE

NOTES:

- ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP AND BOTTOM OF THE TOWER (BEFORE THE CABLE MAKES HORIZONTAL TRANSITION AND NEAR THE ENTRY PORT ON THE SHELTER. ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO 75 FT.
- THE CONTRACTOR SHALL CONDUCT A SWEEP TEST ON ALL THE NEWLY INSTALLED TRANSMISSION LINES TO DETERMINE THE CABLE CONDUCTOR RESISTANCE, CABLE INSERTION LOSS, REFLECTION AND STIMULUS RESPONSE MEASUREMENTS.
- DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE BUILDING.
- ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA, JUST BEFORE ENTERING THE BUILDING AS WELL AS INSIDE THE BUILDING, BEFORE CONNECTING TO THE SURGE SUPPRESSORS. FOR COLOR CODING SCHEME SEE 2/C-2.

CA#: AL 2244-E

**PRELIMINARY
DRAWING**
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SMW #: 11-2206.4

MOTOROLA



DESCRIPTION:
ISSUED FOR CLIENT REV.

DATE
08/16/17

#

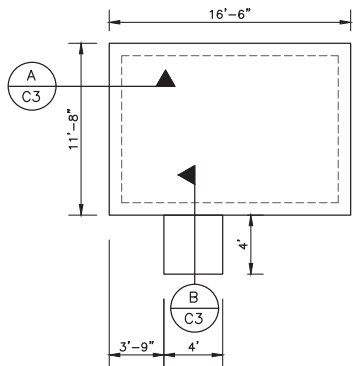
SE SHELBY

TOWER ELEVATION

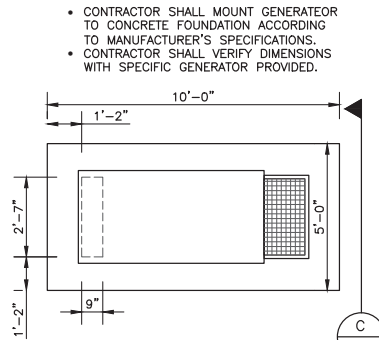
DESIGNED: JDS
DRAWN: WSM
CHECKED: JDS

JOB #: AL15345-A

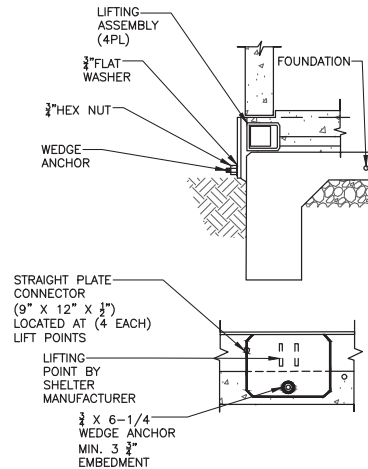
C2



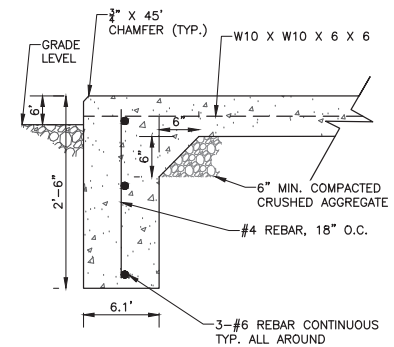
1
C3 EQUIPMENT SHELTER FOUNDATION
SCALE: NOT TO SCALE



2
C3 GENERATOR FOUNDATION
SCALE: NOT TO SCALE

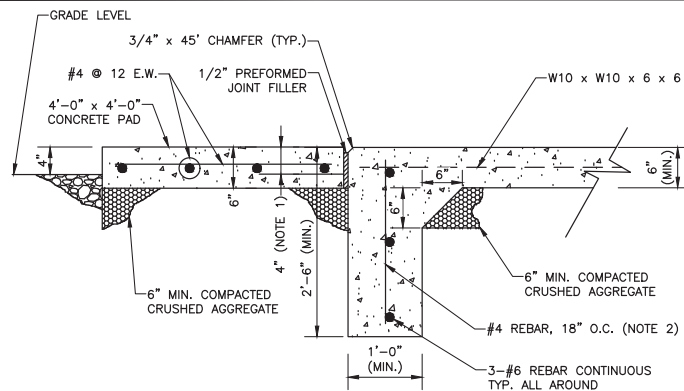


3
C3 SHELTER ATTACHMENT
SCALE: N.T.S.



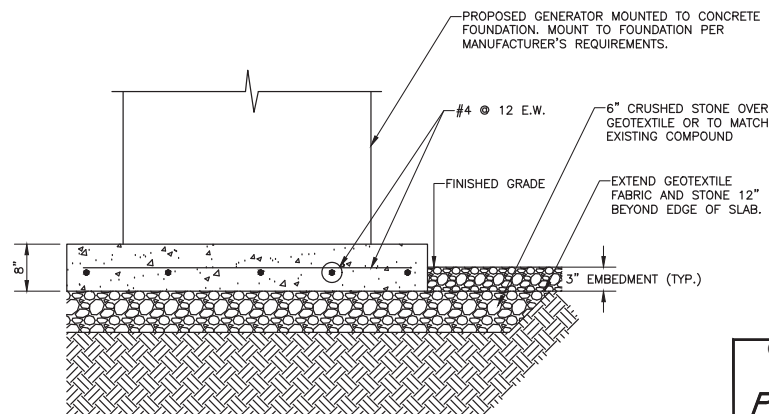
- * CONTRACTOR SHALL GRADE SITE TO PROVIDE LEVEL FOUNDATION FOR SHELTER.
- * IF SOUND ROCK IS ENCOUNTERED, PREVENTING INSTALLATION OF SHELTER MAT PERIMETER FOOTING, CONTRACTOR MAY DRILL AND GROUT #4 REBAR AT 18" CENTER INTO ROCK. DRILL A MINIMUM OF 12" INTO SOUND ROCK AND ANCHOR REBAR WITH HIGH STRENGTH GROUT.

3
C3 SECTION
SCALE: N.T.S.



- NOTES:**
1. CONTRACTOR SHALL GRADE SITE TO PROVIDE LEVEL FOUNDATION FOR SHELTER.
 2. IF SOUND ROCK IS ENCOUNTERED, PREVENTING INSTALLATION OF SHELTER MAT PERIMETER FOOTING, CONTRACTOR MAY DRILL AND GROUT #4 REBAR AT 18" CENTER INTO ROCK. DRILL A MINIMUM OF 12" INTO SOUND ROCK AND ANCHOR REBAR WITH HIGH STRENGTH GROUT.

B
C3 SECTION
SCALE: N.T.S.



- NOTES:**
- CONCRETE SHALL BE 3000 PSI, AIR ENTRAINED WITH THE NEUTRALIZED VINSOL SERIN, DAREX AEA OR SIKA AEA. THE AIR ENTRAINMENT AGENT SHALL COMPLY WITH ASTM C260, LATEST EDITION WITH MINIMUM ENTRAINMENT AIR OF 3% TO 5%.

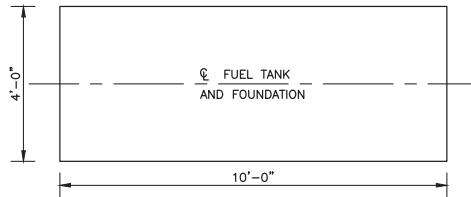
C
C3 SECTION
SCALE: N.T.S.

CA#: AL 2244-E

**PRELIMINARY
DRAWING**
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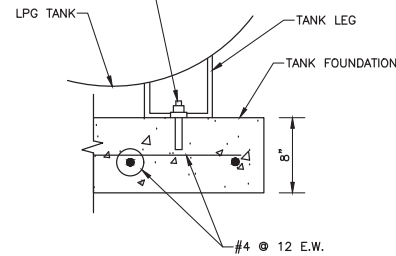
* CONTRACTOR SHALL MOUNT LPG TANK
TO CONCRETE FOUNDATION ACCORDING
TO MANUFACTURER'S SPECIFICATIONS

* CONTRACTOR SHALL VERIFY
DIMENSIONS WITH SPECIFIC LPG TANK
PROVIDED



1 LPG FUEL TANK FOUNDATION
C3A SCALE: N.T.S.

HILTI KWIK ANCHOR BOLT
ITEM NUMBER: 000453746
MIN EMBED: 3 1/4"



2 TANK LEG ATTACHMENT
C3A SCALE: N.T.S.

NOTES:

1. CONCRETE SHALL ATTAIN A MINIMUM COMPRESSED STRENGTH OF 3,000 PSI IN 28 DAYS, AIR ENTRAINED WITH THE NEUTRALIZED VINSOL SERIN, DAREX AEA OR SIKKA AEA. THE AIR ENTRAINED AGENT SHALL COMPLY WITH ASTM C260, LATEST EDITION WITH MINIMUM ENTRAINED AIR OF 3% TO 5%.
2. CONTRACTOR SHALL GRADE SITE TO PROVIDE LEVEL FOUNDATION FOR SHELTER.
3. IF SOUND ROCK IS ENCOUNTERED, PREVENTING INSTALLATION OF SHELTER MAT PERIMETER FOOTING, CONTRACTOR MAY DRILL AND GROUT #4 REBAR AT 18" CENTER INTO ROCK. DRILL A MINIMUM OF 12" INTO SOUND ROCK AND ANCHOR REBAR WITH HIGH STRENGTH GROUT.
4. REINFORCING STEEL SHALL CONFORM TO ASTM 615 GRADE 60 SPECIFICATIONS AND BE ACCORDANCE WITH ACI-318.
5. TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. MINIMUM OF THREE CYLINDERS SHALL BE TAKEN FOR EACH CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH ASTM C39.
6. FOUNDATION DESIGN BASED ON AN ALLOWABLE SOIL BEARING PRESSURE 1500 psf.
7. SEE SHELTER MANUFACTURER DRAWINGS FOR ADDITIONAL SHELTER DETAILS.

CA#: AL 2244-E

**PRELIMINARY
DRAWING**
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SMW #: 11-2206.4

MOTOROLA



DESCRIPTION:
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08/16/17

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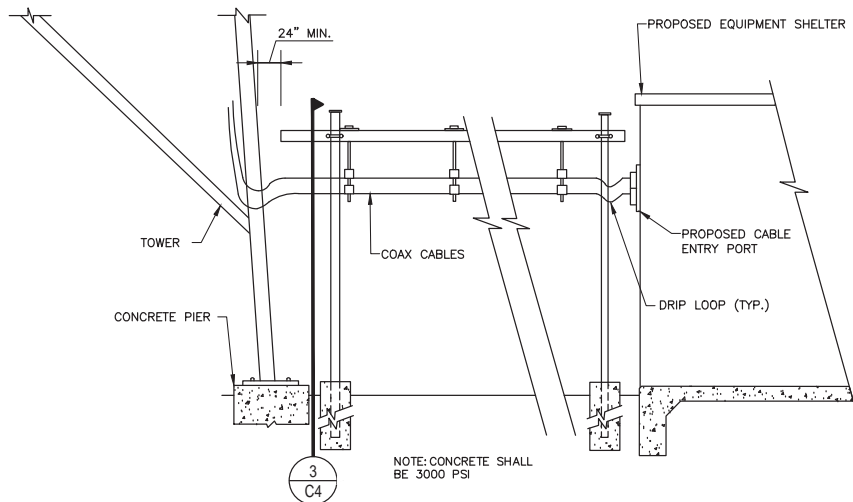
SE SHELBY

FOUNDATION
DETAILS

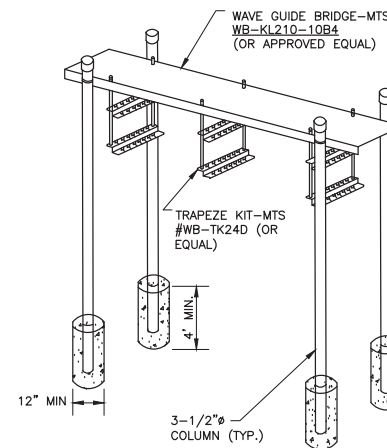
DESIGNED: JDS
DRAWN: WSM
CHECKED: JDS

JOB #: AL15345-A

C3A



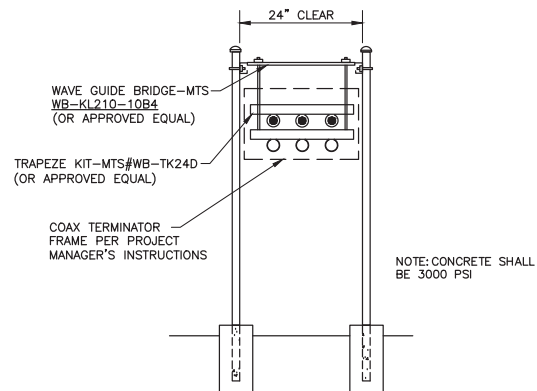
1 ICE BRIDGE ELEVATION (SIDE)
SCALE: NOT TO SCALE



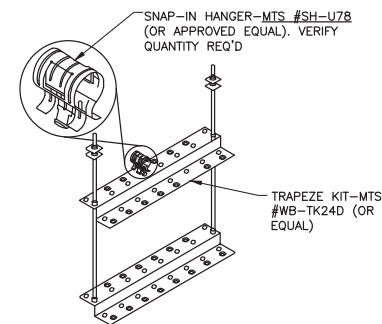
NOTES:

1. CONCRETE SHALL BE 3000 PSI.

2 ICE BRIDGE DETAIL
SCALE: NOT TO SCALE



3 ICE BRIDGE ELEVATION (FRONT)
SCALE: NOT TO SCALE



4 TRAPEZE KIT DETAIL
SCALE: NOT TO SCALE

CA#: AL 2244-E

**PRELIMINARY
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1. NOTES:
RGS8 CABLE SUPPLIED WITH GPS/RUBIDIUM.
2. LINE LENGTHS ARE THE LENGTHS OF CABLE PROVIDED BY MOTOROLA.
3. ANTENNA INSTALLER TO PROVIDE ALL ANTENNA & TRANSMISSION LINE HARDWARE ASSOCIATED W/ MOUNTING.
4. ALL ANTENNA HEIGHTS ARE REFERENCED TO THE BASE OF THE ANTENNA.
5. THE RECEIVE AND TRANSMIT ANTENNA SYSTEMS HAVE 6 GROUND CLAMP KITS (NOT SHOWN FOR CLARITY) ALONG THE MAIN TRANSMISSION LINE TO MEET R56 STANDARDS. GROUND CLAMP SHALL BE INSTALLED ON THE COAX CABLE AT THE TOP OF THE TOWER, BOTTOM OF THE TOWER, CABLE ENTRY PORT INTO THE SHELTER AND MIDPOINT OF TOWER.

REF	DESCRIPTION
A	1/4" SUPERFLEX CABLE - ANDREW #FSJ1-50A
B	1/2" SUPERFLEX CABLE - ANDREW #FSJ1-50
C	1/4" LDF CABLE - ANDREW #LDF1-50
D	3/8" LDF CABLE - ANDREW #LDF2-50
E	1/2" LDF CABLE - ANDREW #LDF4-50A
F	7/8" AVA CABLE - ANDREW #AVA5-50
G	1-1/4" LDF CABLE - ANDREW #LDF6-50
H	1-5/8" AVA CABLE - ANDREW #AVA7-50
AA	1/4" SUPERFLEX BNC MALE CABLE CONNECTOR - ANDREW #F1PBM
AB	1/4" N MALE SUPERFLEX CONNECTOR - ANDREW #F1PNMV2-H
AC	1/4" N FEMALE SUPERFLEX FLARE CONNECTOR - ANDREW #F1PNE
BA	1/2" N MALE SUPERFLEX CONNECTOR - ANDREW #F4PNMV2-H
BB	1/2" N FEMALE SUPERFLEX CONNECTOR - ANDREW #F4PNE
BC	1/2" SC MALE SUPERFLEX CONNECTOR - ANDREW #44SPCW
BD	1/2" 7-16 DIN MALE SUPERFLEX CONNECTOR - ANDREW #F4PDMV2-C
CA	1/4" LDF N MALE CABLE CONNECTOR - ANDREW #L1PNM-H
CB	1/4" LDF N FEMALE CABLE CONNECTOR - ANDREW #L1PNE
CD	3/8" LDF N MALE CABLE CONNECTOR - ANDREW #L2PNM-H
DB	3/8" LDF N FEMALE CABLE CONNECTOR - ANDREW #L2PNE
DC	3/8" LDF TNC MALE CABLE CONNECTOR - ANDREW #L42EWT
EA	1/2" LDF N MALE CABLE CONNECTOR - ANDREW #L4PNM-H
EB	1/2" LDF N FEMALE CABLE CONNECTOR - ANDREW #L4PNE
EC	1/2" LDF 7-16 DIN MALE CONNECTOR - ANDREW #L4PDM
FA	7/8" LDF N MALE CABLE CONNECTOR - ANDREW #L5PNM-RPC
FB	7/8" LDF N FEMALE CABLE CONNECTOR - ANDREW #L5PNE-RPC
GA	1-1/4" LDF N MALE CABLE CONNECTOR - ANDREW #L6PNM-RPC
GB	1-1/4" LDF N FEMALE CABLE CONNECTOR - ANDREW #L6PNE-RPC
HA	1-5/8" LDF N MALE CABLE CONNECTOR - ANDREW #L7PNM-RPC
HB	1-5/8" LDF N FEMALE CABLE CONNECTOR - ANDREW #L7PNE-RPC
HC	1-5/8" LDF LC MALE CABLE CONNECTOR - ANDREW #L47M
HD	1-5/8" LDF 7-16 DIN FEMALE CABLE CONNECTOR - ANDREW #L7PDF-RPC
JA	RGS5 N FEMALE CABLE CONNECTOR - FURNISHED WITH CABLE

CA#: AL 2244-E



DESCRIPTION:

ANTENNA COMPONENTS DETAIL

DESIGNED:	JDS
DRAWN:	WSM
CHECKED:	JDS
JOB #: AL15345-A	

A1

PAR6-59W-PXA-A
MICROWAVE DISH NO. 1
- 240° AFG 270.63° AZ

NON-TUNABLE CONNECTOR

GROUND KIT (TOP OF TOWER)

HOISTING KIT (TOP OF TOWER)

GROUND KIT (AT 75'-0" INTERVALS FROM TOP OF RUN TOWARD GROUND)

GROUND KIT (BOTTOM OF TOWER WITHIN 6'-0" OF TRANSITION POINT)

GROUND KIT (AT CABLE ENTRY POINT TO SHELTER)

NON-TUNABLE CONNECTOR

CONNECTOR PRESSURE WINDOW

2'-0" FLEX-TWIST

RADIO

2 PORT MANIFOLD

DEHYDRATOR

MOSCAD ALARM

NOTE:

GROUND KITS SHALL BE INSTALLED ON THE COAX CABLE (EWP52) AT THE TOP OF THE TOWER, BOTTOM OF THE TOWER, CABLE ENTRY POINT INTO THE SHELTER AND FOR EVERY 75' OF CABLE RUN.

VHLP4-11W-A
MICROWAVE DISH NO. 2
- 240° AFG 341.94° AZ

NON-TUNABLE CONNECTOR

GROUND KIT (TOP OF TOWER)

HOISTING KIT (TOP OF TOWER)

GROUND KIT (AT 75'-0" INTERVALS FROM TOP OF RUN TOWARD GROUND)

GROUND KIT (BOTTOM OF TOWER WITHIN 6'-0" OF TRANSITION POINT)

ELLIPTICAL WAVEGUIDE COAX CABLE,
ANDREW #EWP52

EXTERIOR OF SHELTER

INTERIOR OF SHELTER

GROUND KIT (AT CABLE ENTRY POINT TO SHELTER)

NON-TUNABLE CONNECTOR

CONNECTOR PRESSURE WINDOW

1/4" TUBING

2'-0" FLEX-TWIST

RADIO

2 PORT MANIFOLD

DEHYDRATOR

MOSCAD ALARM

CA#: AL 2244-E

**PRELIMINARY
DRAWING**
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SMW #: 11-2206.4

MOTOROLA



DESCRIPTION:
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DATE
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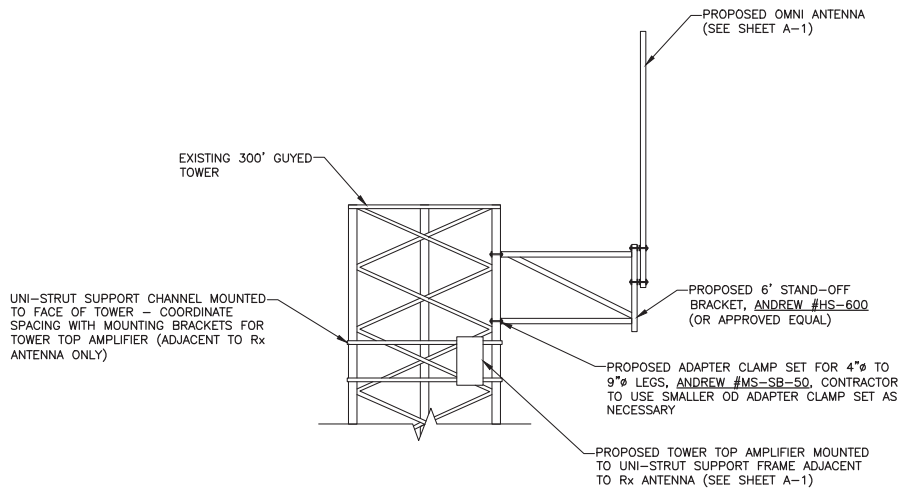
SE SHELBY

MICROWAVE
PLACEMENT DETAILS

DESIGNED: JDS
DRAWN: WSM
CHECKED: JDS

JOB #: AL15345-A

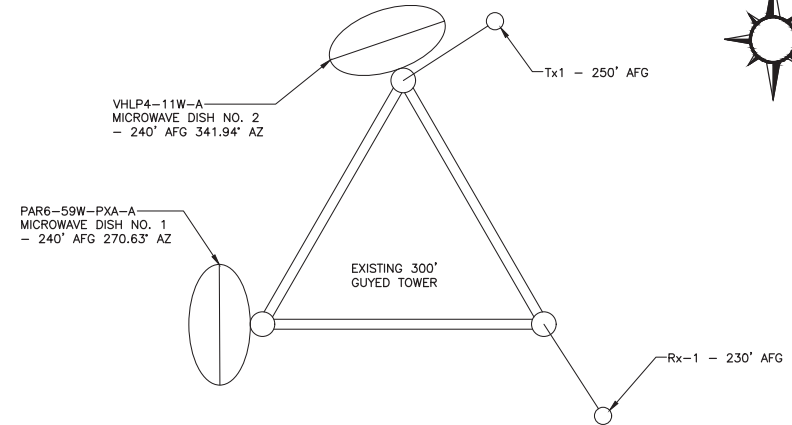
A2



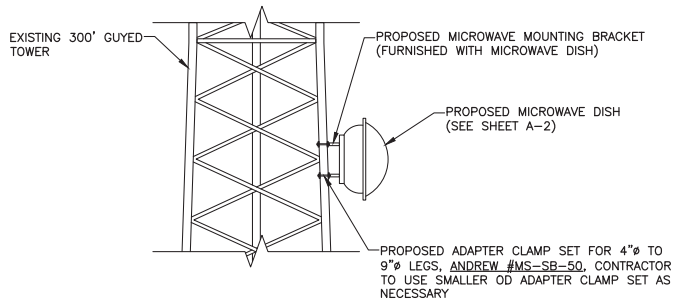
1
A3 Rx ANTENNA AND TOWER TOP AMPLIFIER MOUNTING DETAIL
NOT TO SCALE

NOTES:

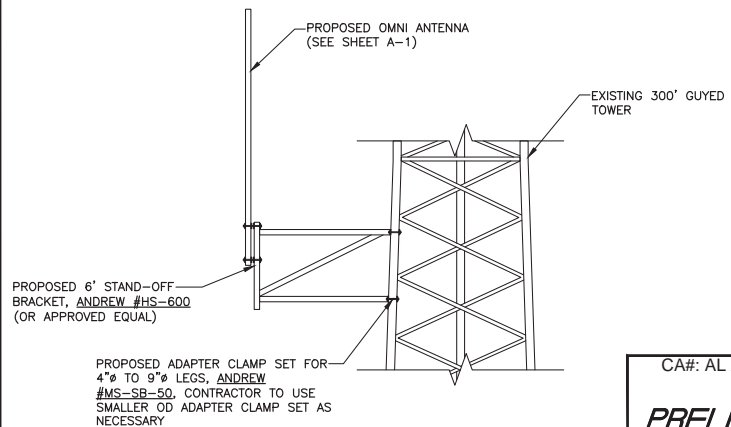
1. MOUNT OMNI ANTENNAS ON 6 FOOT SIDE ARMS



2
A3 ANTENNA ORIENTATION PLAN
NOT TO SCALE



3
A3 MICROWAVE DISH MOUNTING DETAIL
NOT TO SCALE



4
A3 Tx ANTENNA MOUNTING DETAIL
NOT TO SCALE

CA#: AL 2244-E

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SMW #: 11-2206.4

MOTOROLA



DESCRIPTION:
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08/16/17

#

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20

SE SHELBY
ANTENNA/MICROWAVE
ORIENTATION AND
MOUNTING DETAILS

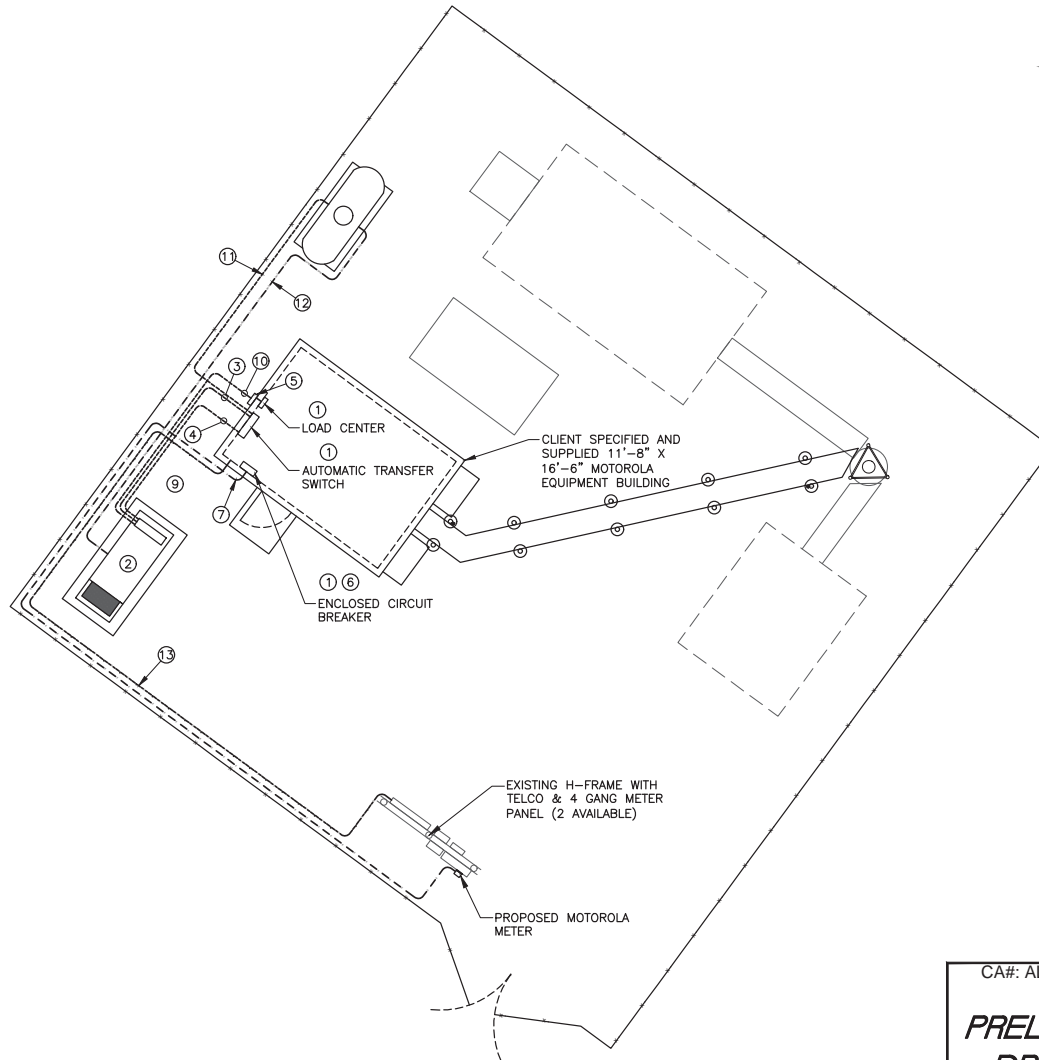
DESIGNED: JDS
DRAWN: WSM
CHECKED: JDS

JOB #: AL15345-A

A3

ELECTRICAL KEY NOTES

- ① ELECTRICAL/TELCO DISTRIBUTION EQUIPMENT PROVIDED WITH EQUIPMENT SHELTER.
- ② CLIENT SPECIFIED AND PROVIDED 120/240V, 1 PHASE, 3-WIRE, 50kW LP FUEL GENERATOR WITH WEATHERPROOF HOUSING. COORDINATE OVERCURRENT PROTECTION WITH MANUFACTURER.
- ③ PROVIDE AND EXTEND (1) 1" SCHEDULE 40 PVC CONDUIT BELOW GRADE FROM PROPOSED GENERATOR TO PROPOSED MOTOROLA EQUIPMENT SHELTER ATS FOR EXTENSION OF GENERATOR CONTROL/ALARM SIGNAL WIRING. COORDINATE THE QUANTITY/ SIZE OF CONTROL WIRING WITH ACTUAL DEVICES FURNISHED WITH THE GENERATOR. STUB CONDUITS UP 12" ABOVE GRADE AT GENERATOR. SEE SHEET C3 FOR LOCATION OF CONDUIT STUB-UP AT GENERATOR FOUNDATION.
- ④ PROVIDE AND EXTEND (3)#3/0 + (1)#2 GROUND FOR GENERATOR SERVICE CONDUCTORS IN 2" SCHEDULE 40 PVC CONDUIT FROM PROPOSED GENERATOR TO AUTOMATIC TRANSFER SWITCH IN PROPOSED EQUIPMENT SHELTER VIA 3" EQUIPMENT SHELTER PENETRATION. FIELD VERIFY AND COORDINATE EXACT LOCATION OF SHELTER PENETRATION.
- ⑤ PROVIDE A 12" SQUARE WEATHERPROOF JUNCTION BOX, HOFFMAN #A-12126GSC (OR APPROVED MOUNTED ON THE EXTERIOR OF THE SHELTER OVER THE 2" CONDUIT PENETRATION (COORDINATE EXACT LOCATION WITH SHELTER) FOR ROUTING OF BATTERY CHARGER/WATER JACKET HEATER WIRING INTO THE PANEL BOARD.
- ⑥ SERVICE ENTRANCE RATED ENCLOSED CIRCUIT BREAKER (FURNISHED WITH SHELTER), 200A, 2 POLE, 3-WIRE, 240/120, 111 VOLTS. CONTRACTOR TO COORDINATE ENCLOSED CIRCUIT BREAKER FAULT CURRENT RATING WITH UTILITY COMPANY. CIRCUIT BREAKER INTERRUPTING RATING SHALL EXCEED AVAILABLE FAULT CURRENT PROVIDED BY UTILITY COMPANY.
- ⑦ PROVIDE AND EXTEND (3)#3/0 + (1)#2 GROUND IN PROPOSED 2" CONDUIT BETWEEN PROPOSED UTILITY METER AND SERVICE ENTRANCE RATED ENCLOSED CIRCUIT BREAKER (FURNISHED WITH SHELTER). COORDINATE LOCATION OF CONDUIT PENETRATION INTO SHELTER. SEE DETAIL 2/E3.
- ⑧ NOT USED
- ⑨ ANY DEVIATIONS FROM THE WIRING/CONDUIT WORK SHOWN DUE TO A PARTICULAR MANUFACTURER'S REQUIREMENTS SHALL BE MADE AT NO COST TO MOTOROLA. SEAL ALL UNUSED EQUIPMENT SHELTER PENETRATIONS.
- ⑩ PROVIDE AND EXTEND 1-1" SCHEDULE 40 PVC CONDUIT MINIMUM 24" BELOW FINISHED GRADE FROM PROPOSED GENERATOR TO PROPOSED EQUIPMENT SHELTER LOADCENTER VIA WEATHERPROOF JUNCTION BOX FOR EXTENSION OF WATER JACKET HEATER AND BATTERY CHARGER CIRCUIT WIRING. COORDINATE THE EXACT QUANTITY/SIZE OF CONDUCTORS WITH GENERATOR SUPPLIER. FIELD VERIFY AND COORDINATE EXACT LOCATION OF CONDUIT STUB-UP AT GENERATOR PAD.
- ⑪ FIELD VERIFY AND COORDINATE WITH MOTOROLA REPRESENTATIVE TO PROVIDE (1) 1" SCHEDULE 40 PVC CONDUIT WITH NYLON PULL STRING MINIMUM 24" BELOW GRADE FROM LP FUEL TANK TO CLIENT SUPPLIED MOTOROLA EQUIPMENT SHELTER FOR EXTENSION OF LP TANK LEVEL ALARM WIRING. CONTRACTOR TO TRANSITION TO 1" RIGID GALVANIZED STEEL CONDUIT FOR ALL ABOVEGROUND CONDUIT. PROVIDE EPOXY SEAL-OFFS IN ACCESS DOMES AND IN THE EQUIPMENT BUILDING AS PER NEC AND NFPA CODE. COORDINATE THE QUANTITY/SIZE OF CONDUCTORS WITH FUEL TANK SUPPLIER AND MOTOROLA REPRESENTATIVE. SEE SHEET P1.
- ⑫ ROUTE LP GAS LINE IN 2-1/2" SCHEDULE 40 PVC CONDUIT MINIMUM 24" BELOW FINISHED GRADE FROM LP TANK TO GENERATOR FUEL INLET CONNECTION. SEE PIPING LAN, SHEET P1.
- ⑬ PROVIDE AND EXTEND 2-2" EMPTY SCHEDULE 40 PVC CONDUIT BELOW GRADE AND TRANSITION TO 2-2" RIGID GALVANIZED STEEL CONDUIT ABOVE GRADE WITH (1) NYLON PULL STRING (CONDUIT TRANSOMON BEGINS MINIMUM 18" BELOW FINISHED GRADE) OR AS REQUIRED BY TELEPHONE COMPANY. SEE DETAIL 2/E3.



1
E2
UTILITY SITE PLAN
SCALE: 1"=10'

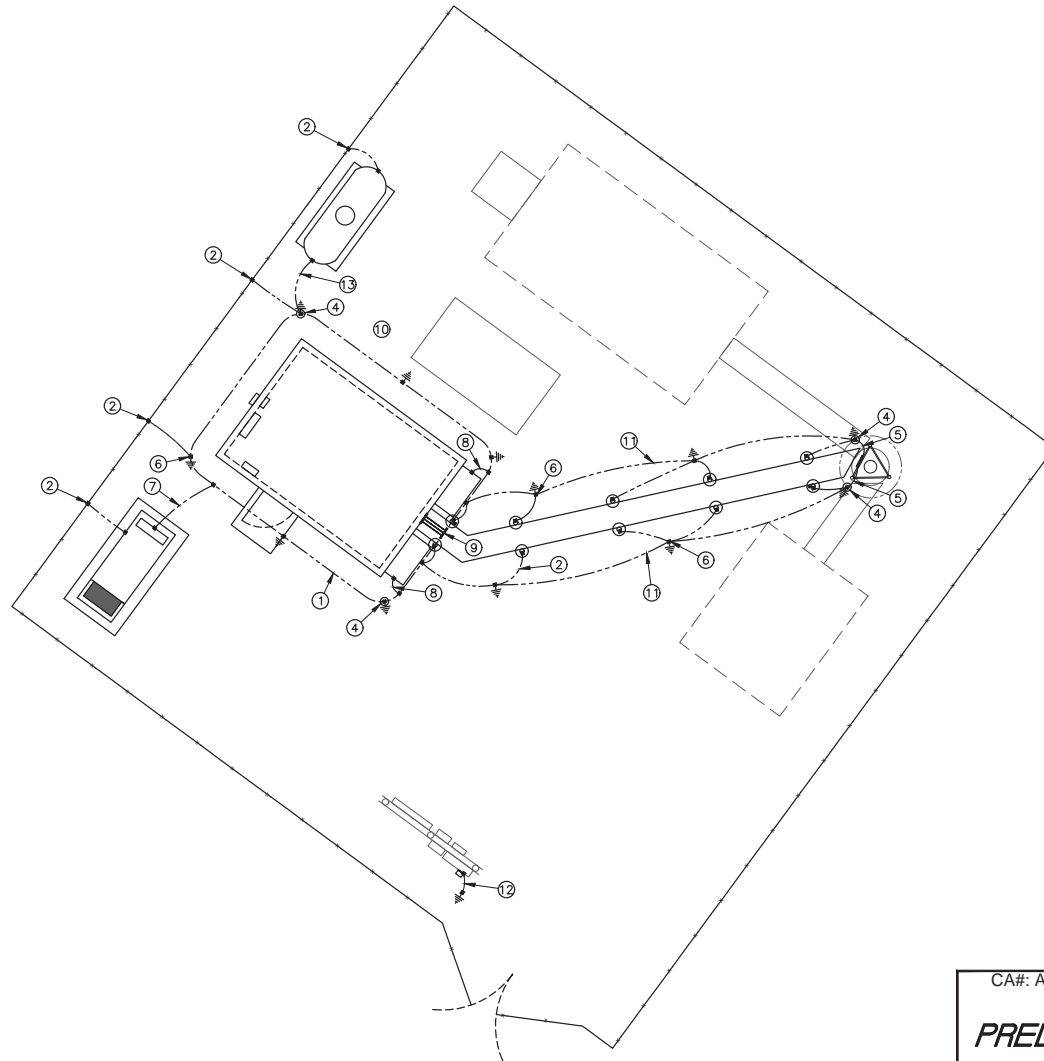


SMW # 11-2206.4	
DESCRIPTION:	ISSUED FOR CLIENT REV.
DATE	08/16/17
#	0
SE SHELBY ELECTRICAL SPECS & ONE-LINE DIAGRAM	
DESIGNED:	JDS
DRAWN:	WSM
CHECKED:	JDS
JOB #: AL15345-A	

CA#: AL 2244-E
**PRELIMINARY
DRAWING**
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FLAG NOTES THIS SHEET:

1. PROVIDE A #2 AWG SOLID, BARE, TINNED COPPER GROUND RING. ALL EXTERIOR GROUNDING CONDUCTORS SHALL BE BURIED A MINIMUM OF 30" BELOW GRADE (OR 6" BELOW FROST LINE, WHICHEVER IS GREATER). THE GROUND RING SHALL BE INSTALLED 3'-0" AWAY FROM FOUNDATIONS (MINIMUM UNLESS SHOWN OTHERWISE ON DRAWINGS), WHERE REQUIRED DUE TO SOIL CONDITIONS AND THE PRESENCE OF ROCK, THE ROUTING OF THE GROUND RING MAY BE ADJUSTED (WITH APPROVAL FROM THE MOTOROLA REPRESENTATIVE). ALL BONDS TO THE BURIED GROUND RING SHALL BE WITH EXOTHERMIC WELDS. BACKFILL WITH TERRAFILL GROUND ENHANCEMENT MATERIAL OR APPROVED EQUAL.
2. BOND FENCE AND WAVEGUIDE POSTS TO BURIED GROUND RING. EXOTHERMICALLY WELD A #2 AWG SOLID, BARE, TINNED COPPER GROUND CONDUCTOR TO THE EXISTING FENCE POST AT 12" ABOVE GRADE AND BOND TO THE BURIED GROUND RING. PROVIDE CONDUCTOR LENGTH AS REQUIRED TO MAKE CONNECTION. BOND FENCE POST TO FENCE GATE AS SHOWN USING A WELDING CABLE GROUNDING STRAP (IF APPLICABLE). SEE DETAILS 1/E5 AND 2/E5.
3. NOT USED.
4. PROVIDE 6" DIAMETER PVC INSPECTION SLEEVE WITH WATERTIGHT REMOVABLE COVER IN LOCATION SHOWN. SEE GROUND ROD INSPECTION WELL DETAIL 1/E3, FOR TYPICAL GROUND RING INSPECTION SLEEVE. NOTE: INSPECTION SLEEVE CAN BE USED AS A TEST WELL FOR GROUND WATER LEVEL INSPECTION AND GROUND RESISTANCE TESTING.
5. INSTALL GROUNDING CONDUCTOR(S) FROM THE BURIED GROUND RING FOR CONNECTION TO THE GROUND BAR AT BOTTOM OF TOWER. VERIFY EXACT LOCATION OF GROUNDING BAR AND PROPER CONDUCTOR LENGTH. EXOTHERMICALLY WELD (2) #2 AWG SOLID, BARE, TINNED COPPER GROUNDING CONDUCTOR (LENGTH AS REQUIRED) TO THE GROUND BAR. GROUNDING CONDUCTORS MUST BE HELD AWAY FROM TOWER BY USING STAND-OFFS OR ROUTING THE CONDUCTORS IN FLEXIBLE PVC CONDUIT. COORDINATE LOCATION WITH MOTOROLA CONSTRUCTION MANAGER. SEE GROUND BAR DETAIL 2/E4.
6. INSTALL 5/8" X 8'-0" LONG COPPERCLAD STEEL GROUND RODS. SPACING BETWEEN RODS NOT TO EXCEED 16'-0" (NON-LINEAR). TYPICAL FOR ALL GROUND RODS SHOWN, UNLESS NOTED OTHERWISE. SEE GROUND ROD INSPECTION WELL DETAIL, SHEET E3. BACKFILL WITH TERRAFILL GROUND ENHANCEMENT MATERIAL OR APPROVED EQUAL.
7. BOND NEW 50KW GENERATOR FRAME TO EQUIPMENT SHELTER GROUND RING. EXOTHERMICALLY WELD A #2 AWG SOLID, BARE, TINNED COPPER CONDUCTOR BETWEEN GROUND RING, GROUND ROD AND GENERATOR FRAME. USE EXOTHERMIC WELD FOR CONNECTION TO GENERATOR FRAME. GENERATOR IS NOT SEPARATELY DERIVED SYSTEM.
8. EXOTHERMICALLY WELD #2 AWG SOLID, BARE, TINNED COPPER GROUND CONDUCTORS FOR A/C UNITS (PROVIDED WITH SHELTER) TO EQUIPMENT SHELTER GROUND RING.
9. BOND SHELTER GROUNDING SYSTEM (SEE DETAIL 3/E3) TO SHELTER BURIED GROUND RING.
10. SYSTEM GROUND RESISTANCE SHALL NOT EXCEED 10 OHMS. A FALL-OF-POTENTIAL TEST SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH MOTOROLA SPECIFICATION R56.
 - A.) PERFORM THREE TESTS AT EACH SITE.
 - B.) CONTRACTOR SHALL PROVIDE A WRITTEN REPORT ON FORMS PROVIDED WITHIN THE MOTOROLA SPECIFICATION R56 CONSISTING OF THE FOLLOWING: SITE NAME, ADDRESS AND IDENTIFICATION NUMBER, DESCRIPTION OF SITE SOIL AND MOISTURE CONDITION, DESCRIPTION OF WEATHER, MODEL NUMBER OF TESTING EQUIPMENT, DATE OF LAST CALIBRATION, SITE SKETCH SHOWING LOCATION OF TEST PROBES, AND ALL FIELD DATA COLLECTED (READINGS, RANGE, TEST, MILLIAMPS, ETC.).
 - C.) CONTRACTOR SHALL NOTIFY THE MOTOROLA REPRESENTATIVE IF THERE ARE ANY DIFFICULTIES PERFORMING SYSTEM RESISTANCE TESTS OR IF MEASUREMENTS ARE ABOVE 10 OHMS. THE MOTOROLA REPRESENTATIVE SHALL PROVIDE INSTRUCTION TO THE CONTRACTOR TO INSTALL ADDITIONAL GROUNDING MEASURES TO MEET THE 10 OHM REQUIREMENT.
11. BOND EQUIPMENT SHELTER GROUND RING TO TOWER GROUND RING WITH #2 AWG SOLID BARE TINNED COPPER GROUND CONDUCTOR. TYPICAL FOR TWO LOCATIONS, BACKFILL WITH TERRAFILL GROUND ENHANCEMENT MATERIAL OR APPROVED EQUAL.
12. EXOTHERMICALLY WELD #2 AWG SOLID BARE TINNED COPPER ELECTRICAL SERVICE GROUND ELECTRODE CONDUCTOR TO GROUND ROD WHERE SHOWN ON PLANS, AND MECHANICALLY BOND USING COMPRESSION LUG AS REQUIRED TO METER ENCLOSURE.
13. FUEL TANKS INSTALLED OUTSIDE OF THE BUILDING, WITHIN 6'-0" OF THE BUILDING, SHALL BE BONDED TO THE NEAREST PRACTICAL LOCATION ON THE GROUNDING ELECTRODE SYSTEM. FUEL TANKS INSTALLED MORE THAN 6'-0" AWAY FROM THE BUILDING, SHELTER, EQUIPMENT HOUSING, OR CABINET GROUNDING ELECTRODE SYSTEM SHALL BE BONDED TO THE SHELTER GROUND RING AND HAVE AN ADDITIONAL GROUND ROD INSTALLED NEAR THE GENERATOR AND BONDED TO THE GENERATOR.
14. NOT USED



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E2 GROUNDING PLAN
SCALE: 1"=10'



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SE SHELBY
GROUNDING PLAN

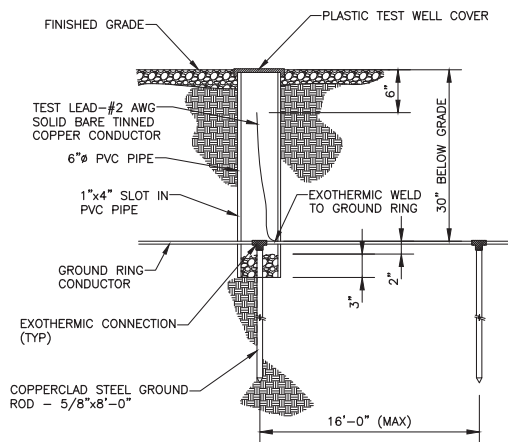
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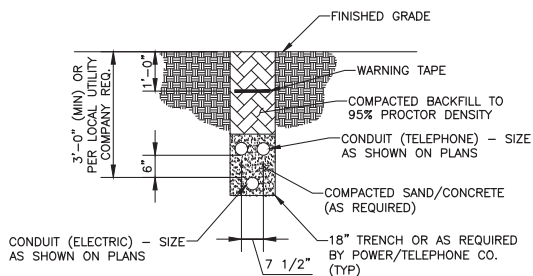
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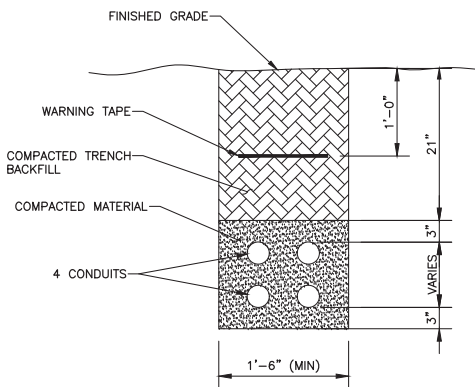
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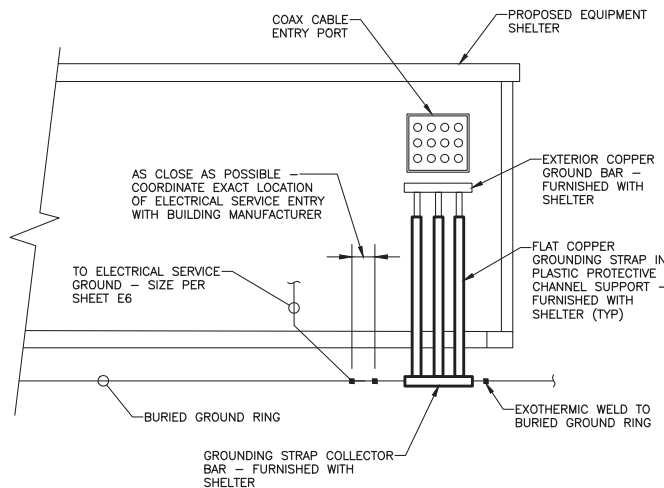
1 GROUND ROD INSPECTION WELL DETAIL
E3 NOT TO SCALE



2 UTILITIES TRENCHING DETAIL
E3 NOT TO SCALE



3 TYPICAL ELECTRICAL COMM./CONTROLS TRENCH
E3 NOT TO SCALE



4 SHELTER GROUNDING DETAIL
E3 NOT TO SCALE

GENERAL GROUNDING NOTES:

- ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALL SHALL BE IN 3/4" PVC CONDUIT. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTOR SLEEVES.
- GROUND ALL EXPOSED METALLIC OBJECTS ON MULTI-TENANT METER/TELCO CENTER USING A TWO-HOLE NEMA DRILLED CONNECTOR SUCH AS THOMAS & BETTS #32207 OR APPROVED EQUAL.
- THE CONTRACTOR SHALL NOTIFY THE MOTOROLA REPRESENTATIVE WHEN THE GROUND RING IS INSTALLED SO THAT THE REPRESENTATIVE CAN INSPECT GROUND RING BEFORE IT IS CONCEALED.
- ALL EXTERIOR GROUNDING CONDUCTORS INCLUDING GROUND RING SHALL BE #2 AWG SOLID BARE TINNED COPPER. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. THE RADIUS OF ANY BEND SHALL NOT BE LESS THAN 8" AND THE INCLUSIVE ANGLE OF ANY BEND SHALL NOT EXCEED 90°. GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD THE BURIED GROUND RING.
- ALL BELOW GROUND EXTERNAL CONNECTIONS SHALL BE EXOTHERMICALLY WELDED. ALL EXOTHERMIC WELDS TO BURIED GROUND RING SHALL BE THE PARALLEL-TYPE, EXCEPT FOR THE GROUND RODS WHICH ARE TEE-TYPE EXOTHERMIC WELDS. REPAIR ALL GALVANIZED SURFACES THAT HAVE BEEN DAMAGED BY EXOTHERMIC WELDING. USE SPRAY GALVANIZING SUCH AS HOLUB ELECTROSOL #15-501.
- WHERE MECHANICAL CONNECTORS (TWO-HOLE OR CLAMP) ARE USED, APPLY A LIBERAL PROTECTIVE COATING OF A CONDUCTIVE ANTI-OXIDE COMPOUND ON ALL CONNECTORS. PROVIDE LOCK WASHERS ON ALL MECHANICAL CONNECTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT. THOROUGHLY REMOVE ALL PAINT AND CLEAN ALL DIRT FROM SURFACES REQUIRING GROUNDING CONNECTORS. REPAINT TO MATCH EXISTING AFTER CONNECTION IS MADE TO MAINTAIN CORROSION RESISTANCE. ALL GROUND CONNECTIONS SHALL BE APPROVED FOR THE TYPES OF METALS BEING ATTACHED TO.
- THE CONTRACTOR SHALL COORDINATE AS REQUIRED TO HAVE A UTILITY COMPANY REPRESENTATIVE AT THE SITE TO DISCONNECT THE UTILITY NEUTRAL FROM GROUNDING SYSTEM DURING FINAL INSPECTION SO THAT REQUIRED TESTING ON THE GROUND SYSTEM CAN BE PERFORMED. THE CONTRACTOR SHALL PROVIDE NOTICE TO THE MOTOROLA REPRESENTATIVE (TWO) DAYS PRIOR TO FINAL TESTING. IF THE CONTRACTOR FAILS TO MAKE UTILITY COMPANY REPRESENTATIVE AVAILABLE DURING THE FINAL TESTING, THE CONTRACTOR SHALL PAY THE COST FOR AN INDEPENDENT GROUNDING CONSULTANT TO PERFORM THE GROUND RESISTANCE TEST. GROUNDING CONSULTANT SHALL BE SELECTED BY THE MOTOROLA REPRESENTATIVE. IF THE UTILITY COMPANY REPRESENTATIVE FAILS TO APPEAR DUE TO NO FAULT OF THE CONTRACTOR, NO PENALTY SHALL APPLY.
- A RESISTANCE TO GROUND OF (10) OHMS OR LESS IS REQUIRED FOR ALL MOTOROLA SITES. THE CONTRACTOR SHOULD RETAIN HIS OWN TESTER AT HIS OWN EXPENSE. SCHEDULE FINAL MEGGER TEST SUCH THAT THE MOTOROLA REPRESENTATIVE CAN BE PRESENT FOR FIELD VERIFICATION. REFER TO THE MOTOROLA MASTER SPECIFICATION FOR MEGGER TESTING PROCEDURES, IF THE FINAL GROUNDING RESISTANCE MEASUREMENT EXCEEDS 10 (TEN) OHMS, THE CONTRACTOR SHALL NOTIFY THE MOTOROLA REPRESENTATIVE.
- ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
- THE GROUND WIRES SHALL BE RUN STRAIGHT FOR MINIMUM INDUCTANCE AND VOLTAGE DROP. SINCE CABLE BENDS INCREASE INDUCTANCE, THE MINIMUM REQUIRED BENDING RADIUS IS 8 INCHES WHEN BENDS ARE UNAVOIDABLE. ALL METAL WORK WITHIN 10 FEET OF THE GROUND RING SHALL BE DIRECTLY BONDED TO THIS GROUND SYSTEM, WITHOUT USING SERIES OR DASHY CHAIN CONNECTION ARRANGEMENTS.
- PAINT, ENAMEL, LACQUER AND OTHER ELECTRICALLY NON-CONDUCTIVE COATINGS SHALL BE REMOVED FROM THREADS AND SURFACE AREAS WHERE CONNECTIONS ARE MADE TO ENSURE GOOD ELECTRICAL CONTINUITY.
- CONNECTIONS BETWEEN DISSIMILAR METALS SHALL NOT BE MADE UNLESS THE CONDUCTORS ARE SEPARATED BY A SUITABLE MATERIAL THAT IS A PART OF THE ATTACHMENT DEVICE. ONLY ATTACHMENT DEVICES LISTED AND APPROVED FOR USE WITH THE SPECIFIC DISSIMILAR METALS MAY BE USED FOR THIS PURPOSE.
- ALL BELOW GRADE GROUND SYSTEM CONDUCTORS SHALL BE A MINIMUM DEPTH OF 30" (OR 6" BELOW THE FROST LINE, WHICHEVER IS GREATER).

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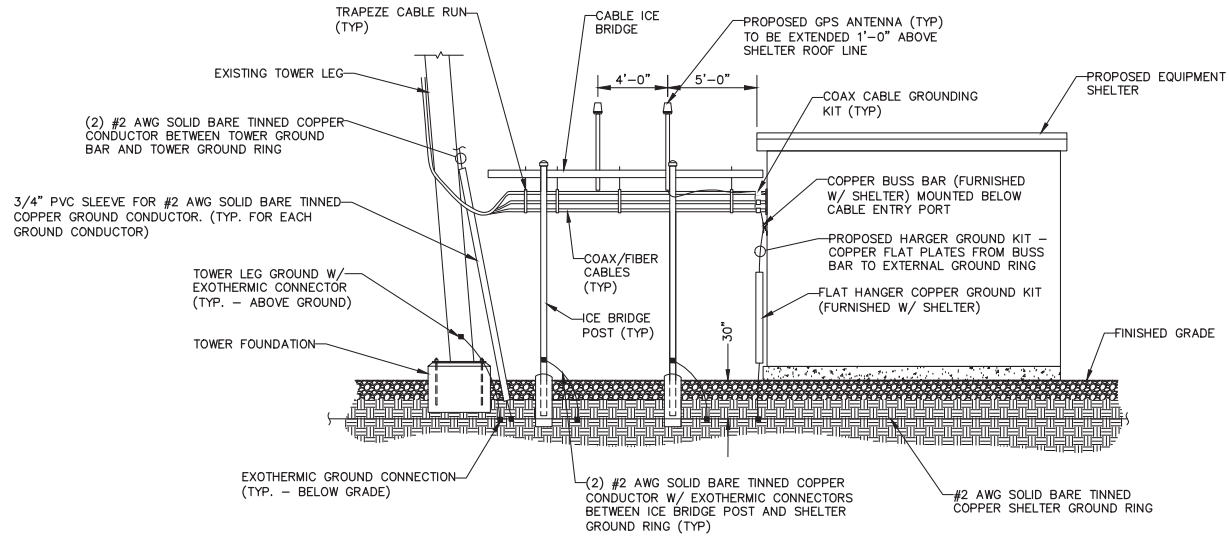
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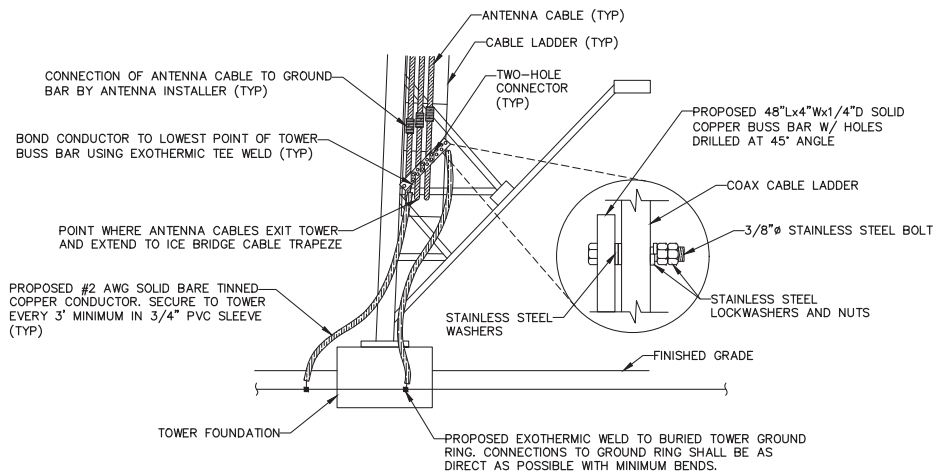
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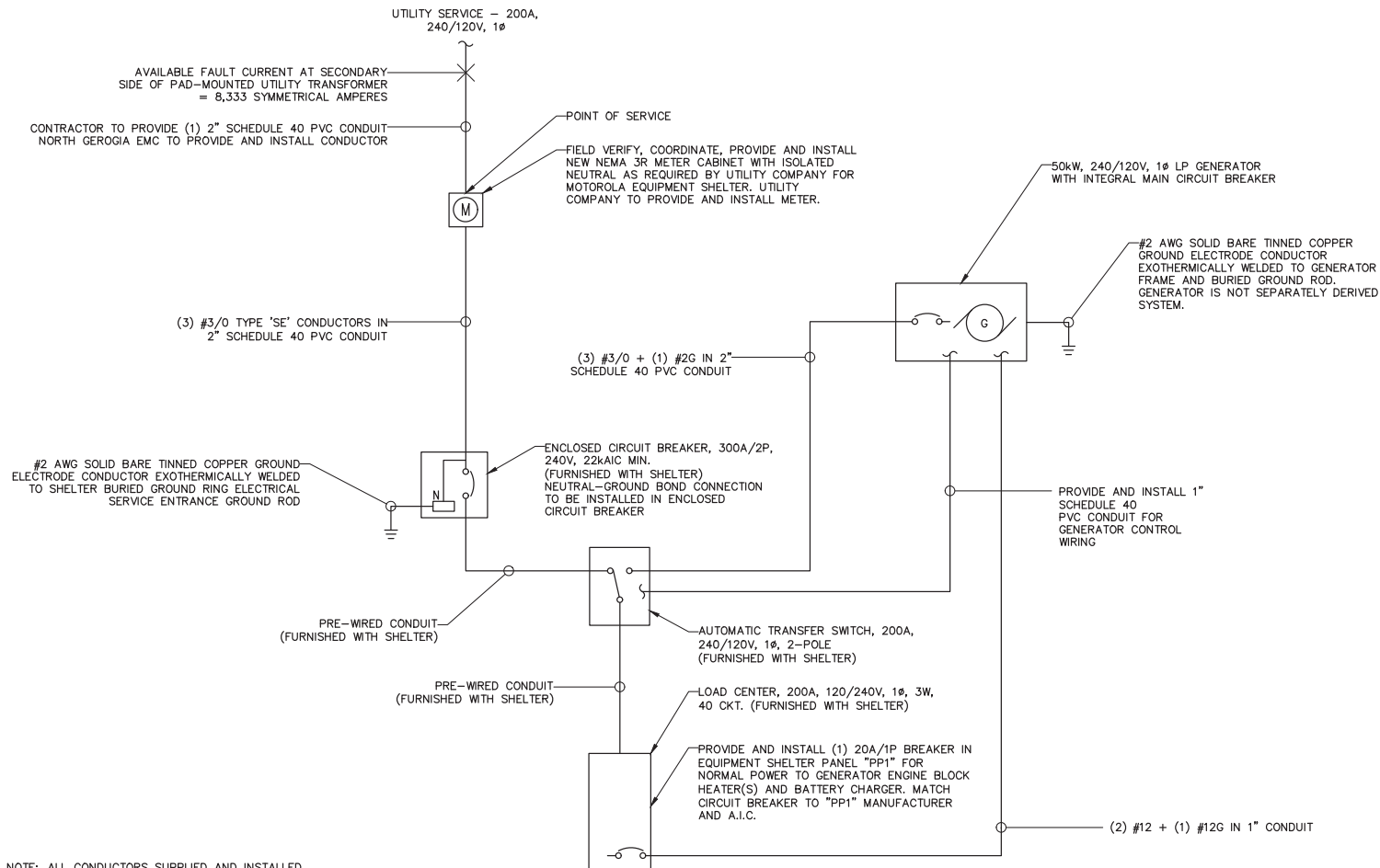
E3



1 TOWER GROUNDING DETAIL
E4 NOT TO SCALE



2 TOWER BOTTOM GROUND BAR MOUNTING DETAIL
E4 NOT TO SCALE



NOTE: ALL CONDUCTORS SUPPLIED AND INSTALLED
BY CONTRACTOR TO HAVE "THWN-2" INSULATION
UNLESS NOTED OTHERWISE.

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E6

ELECTRICAL SINGLE LINE DIAGRAM
SCALE: N.T.S.

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SHELBY MOTOR WIRING, INC.
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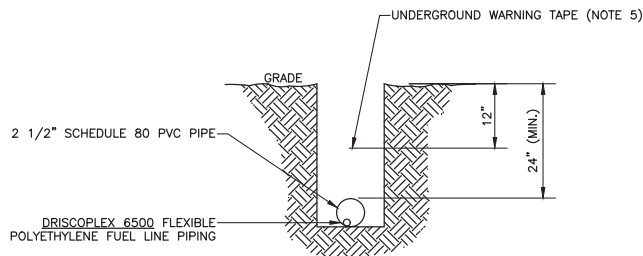
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ELECTRICAL SINGLE
LINE DIAGRAM

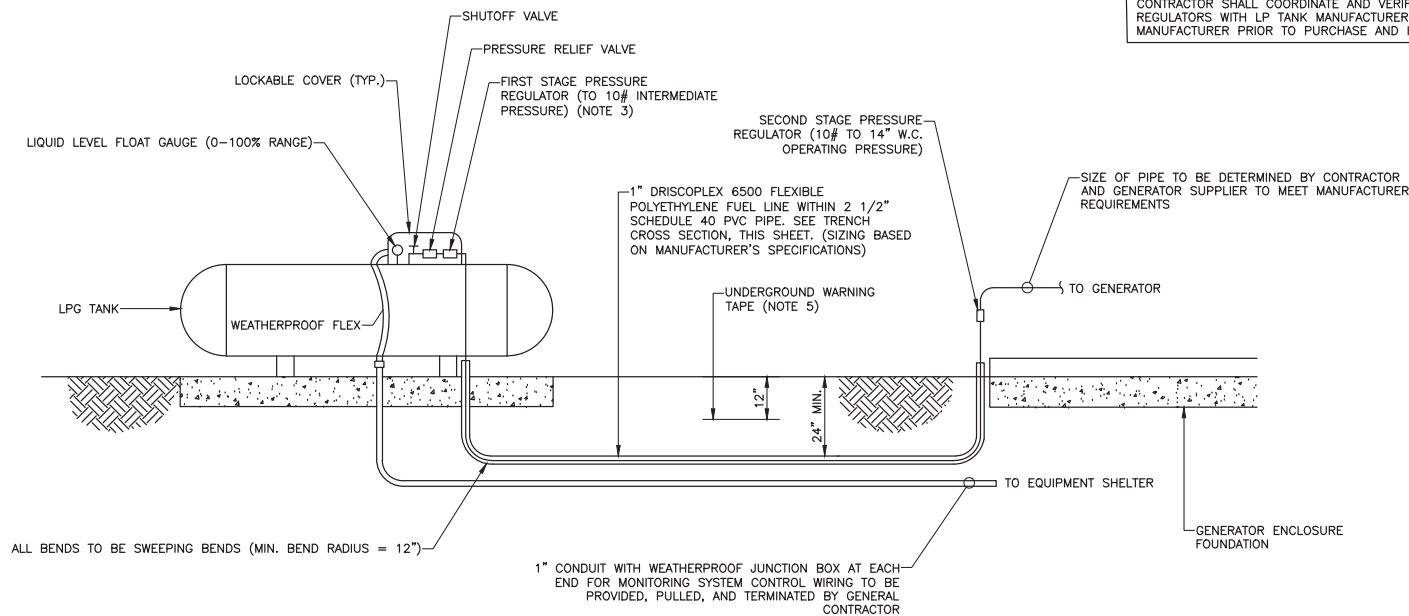
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E6



2 TRENCH CROSS SECTION
SCALE: N.T.S.



1 LPG TANK AND PIPING INSTALLATION DETAILS
SCALE: N.T.S.

NOTES:

1. ALL WORK AND MATERIALS TO COMPLY WITH NFPA 58, NFPA 54, ALABAMA BUILDING CODES, LOCAL BUILDING CODES, MANUFACTURER'S WRITTEN INSTRUCTIONS, AND OWNER'S SPECIFIC REQUIREMENTS. IF CONFLICTS EXIST BETWEEN THESE DOCUMENTS, CONTACT THE ENGINEER FOR ADDITIONAL INSTRUCTIONS.
2. ALL COPPER FITTINGS SHALL BE BRAZED JOINTS.
3. HIGH PRESSURE REGULATOR SHALL DELIVER SUFFICIENT CAPACITY AT 10 PSI TO MEET GENERATOR MANUFACTURER CAPACITY REQUIREMENTS AT 5"-14" H2O.
4. COORDINATE PIPE SIZE PER TANK SUPPLIER REQUIREMENTS.
5. UNDERGROUND YELLOW DETECTABLE ~~PRESQ~~ WARNING TAPE OR EQUIVALENT.
6. CONTRACTOR SHALL MAKE FINAL PIPING CONNECTIONS TO THE GENERATOR MANUFACTURER PROVIDED PIPING. PROVIDE EPOXY SEAL-OFFS IN ALARM PENETRATION AND IN THE GENERATOR ENCLOSURE.
7. SITE DEVELOPMENT CONTRACTOR SHALL COORDINATE THE EXACT QUANTITY/SIZE OF CONDUCTORS WITH GENERATOR SUPPLIER FROM FUEL TANK MONITORING EQUIPMENT INTO BUILDING TO THE ALARM PUNCH BLOCK.

CONTRACTOR SHALL COORDINATE AND VERIFY PIPE SIZE AND REGULATORS WITH LP TANK MANUFACTURER AND GENERATOR MANUFACTURER PRIOR TO PURCHASE AND INSTALLATION



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MOTOROLA



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PIPING
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