GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS NEW

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE INSTALLATION AND OPERATION OF ANTENNAS AND ASSOCIATED EQUIPMENT & CABINETS FOR AT&T'S WIRELESS TELECOMMUNICATIONS

SITE INFORMATION

PROPERTY OWNER: ADDRESS:

POWDER MOUNTAIN EDEN, UT 84310

SITE CONTACT

COLINTY LATITUDE (NAD 83)

41° 22' 10.76" N

WEBER

LONGITUDE (NAD 83) 111° 45' 50.03" W

ZONING JURISDICTION WEBER COUNTY

ZONING CLASSIFICATION

PARCEL #:

POWER COMPANY: ROCKY MTN POWER

TELEPHONE COMPANY:

(801) 232-0953

ENIKO BARTHA (972) 358-5732

C.L.

RF ENGINEER:

SITE ACQUISITION CONTACT:

CONSTRUCTION MANAGER: TROY HALL

CONTACT INFORMATION

ENGINEER:

TECHNOLOGY ASSOCIATES 9847 SOUTH 500 WEST SANDY, UT 84070

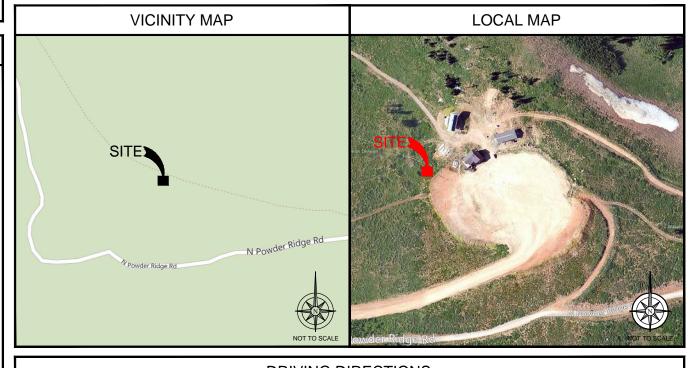
CONTACT:

JEFF VANDERVEEN (801) 910-2965



POWDER MOUNTAIN

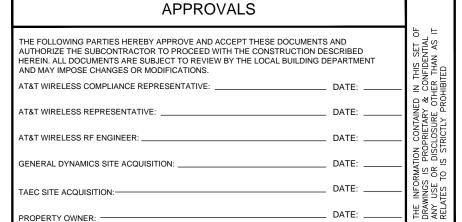
NSB MONOPOLE



DRIVING DIRECTIONS

STARTING FROM AT&T OFFICE; 4393 RIVERBOAT ROAD, TAYLORSVILLE, UT:

- DEPART RIVERBOAT RD TOWARD UT-266 W / W 4500 S
- TURN LEFT ONTO UT-266 E / W 4500 S
- TAKE RAMP LEFT FOR I-15 N
- KEEP STRAIGHT ONTO I-15 N / I-84 W
- AT EXIT 344, TAKE RAMP RIGHT AND FOLLOW SIGNS FOR UT-39
- TURN RIGHT ONTO UT-39 / W 12TH ST / W 1200 S
- TURN LEFT ONTO UT-158
- KEEP RIGHT TO STAY ON UT-158 / N UT-158
- 9. TURN RIGHT ONTO SUGAR PINE DR ROAD NAME CHANGES TO N POWDER RIDGE RD
- 11. FOLLOW ROAD UP TO HIDDEN LAKE EXPRESS
- 12. SITE IS LOCATED ON WEBER COUNTY SIDE OF COUNTY LIN E



GENERAL DYNAMICS CONSTRUCTION MANAGER: ____

	DRAWING INDEX				
SHEET NO:	DESCRIPTION:				
T-1	TITLE SHEET				
T-2	GENERAL NOTES				
T-3	GENERAL NOTES				
T-4	GENERAL NOTES				
T-5	SIGNAGE & NOTES				
C-1	OVERALL SITE PLAN				
C-1.1	ENLARGED SITE PLAN				
C-2	EQUIPMENT & ANTENNA PLANS				
C-3	SOUTHWEST & SOUTHEAST ELEVATIONS				
C-4	DETAILS				
C-5	DETAILS				
E-1	ELECTRICAL NOTES & ONE-LINE DIAGRAM				
G-1	GROUNDING PLANS				
G-2	GROUNDING DETAILS				
RF-1	DETAILS				
RF-1.1	DETAILS				

DO NOT SCALE DRAWINGS

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME





CALL AT LEAST TWO WORKING DAYS BEFORE YOU DIG



4393 RIVERBOAT ROAD, SUITE #400 TAYLORSVILLE, UTAH 84123

GENERAL DYNAMICS formation Technology

1152 W 2400 S, SUITE C SALT LAKE CITY, UTAH 84119



UTAH MARKET OFFICE

9847 SOUTH 500 WEST SANDY, UTAH 84070 (801) 463-1020

REV	DATE	DESCRIPTION	BY
Α	6/03/2013	ISSUED FOR 90% CONSTRUCTION	NSV
В	7/03/2013	ISSUED FOR 90% CONSTRUCTION	NSV
С	7/10/2013	ISSUED FOR 100% CONSTRUCTION	NSV
D	7/25/2013	ISSUED FOR 100% CONSTRUCTION	NSV
Е	7/31/2013	ISSUED FOR 100% CONSTRUCTION	NSV
F	8/26/2013	ISSUED FOR 100% CONSTRUCTION	NSV

TO ALTER THIS DOCUMENT.

POWDER MOUNTAIN

POWDER MOUNTAIN EDEN. UT 84310 NSB MONOPOLE

SHEET TITLE

TITLE SHEET

GENERAL CONSTRUCTION NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:
 OWNER ATAT
- SUBCONTRACTOR CONTRACTOR (CONSTRUCTION)
- 2. ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
- 3. GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE NEW WORK AND SHALL MAKE PROVISIONS GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FILELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION, ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT / FROINEET PRIOR TO THE TO WORK.
- 4. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES, GENERAL CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- 5. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- UNLESS OTHERWISE, THE WORK SHALL INCLUDE FURNISHING, MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- 7. PLANS ARE NOT TO BE SCALED, THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO BE FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING WITH THE WORK, DETAILS ARE INTENDED TO SOWN DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ARCHITECT, FLORINGER PRIOR TO PROCEEDING WITH WORK
- 3. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S
- IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE SPACE FOR APPROVAL BY THE ARCHITECT / ENGINEER PRIOR TO PROCEEDING.
- 10. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
- 11. GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLES.
- 12. ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWNIGS.
- 13. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. SUBCONTRACTOR SHALL KEEP AREA CLEAN. HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
- 14. WORK PREVIOUSLY COMPLETED IS REPRESENTED BY LIGHT SHADED LINES AND NOTES. THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. SUBCONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVINITE FROM THE DRAWING PRIOR TO THE BEGINNING CONSTRUCTION.
- 15. SUBCONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- 16. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BY REPAIRED AT THE SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- 17. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 18. GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND SUBCONTRACTORS TO THE SITE AND / OR BUILDING.
- 19. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
- THE GENERAL CONTRACTOR SHALL MAINTAIN, IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
- 21. THE GENERAL CONTRACTOR AND SUBCONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A TO 2-A-108-C AND SHALL BE WITHIN 5-FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
- 22. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED ENH ARCHITECT! FINGINEER. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES, SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS SHALL INCLIDE, BUT NOT BE LIMITED, TO: A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, D) TRENCHING & EXCAVATION.
- 23. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ARCHITECT / ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND / OR LOCAL UTILITIES.
- 24. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OF DRIVEWAY, SHALL BY GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- 25. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION, EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
- 26. NO FILL OR EMBANKMENT MATERIAL SHALL BY PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- 27. THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BY BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL, PRE-APPROVED BY THE LOCAL JURISDICTION.
- 28. ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
- 29. ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
- 30. SUBCONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
- 31. SUBCONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
- 32. THE NEW FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE, AND IS NOT FOR HUMAN HABITAT (NO HANDICAP ACCESS REQUIRED).
- 33. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
- 34. NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE NEW.
- 35. ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION AT&T MOBILITY GROUNDING STANDARD 'TECHNICAL SPECIFICATION FOR CONSTRUCTION OF WIRELESS SITES' AND 'TECHNICAL SPECIFICATION FOR FACILITY GROUNDING.' IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.
- 36. SUBCONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF SUBCONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
- 37. SUBCONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
- INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OF PROCEEDING WITH CONSTRUCTION.
- 39. NO WHITE STROBIC LIGHTS ARE PERMITTED. LIGHTING, IF REQUIRED, WILL MEET FAA STANDARDS AND REQUIREMENTS.
- ALL COAXIAL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
 NO NOISE, SMOKE, DUST, OR VIBRATION WILL RESULT FROM THIS FACILITY. (DISREGARD THIS NOTE IF THIS SITE HAS A GENERATIVE).
- GENERATOR)

 42. NO ADDITIONAL PARKING TO BE NEW. EXISTING ACCESS AND PARKING TO REMAIN, UNLESS NOTED OTHERWISE.
- 43. NO LANDSCAPING IS NEW AT THIS SITE, UNLESS NOTED OTHERWISE.

SITE WORK & DRAINAGE

PART 1 - GENERAL

CLEARING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS REQUIRED TO COMPLETE THE NEW WORK SHOWN IN THESE PLANS.

1.1 REFERENCES:

- A. DOT (STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION CURRENT EDITION).
- B. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS).
- C. OSHA (OCCUPATION SAFETY AND HEALTH ADMINISTRATION).

1.2 INSPECTION AND TESTING:

- A. FIELD TESTING OF EARTHWORK COMPACTION AND CONCRETE CYLINDERS SHALL BE PERFORMED BY SUBCONTRACTORS INDEPENDENT TESTING LAB. THIS WORK IS TO BE COORDINATED BY THE SUBCONTRACTOR.
- B. ALL WORK SHALL BY INSPECTED AND RELEASED BY THE GENERAL CONTRACTOR WHO SHALL CARRY OUT THE GENERAL INSPECTION OF THE WORK WITH SPECIFIC CONCERN TO PROPER PERFORMANCE OF THE WORK AS SPECIFIED AND / OR CALLED FOR ON THE DRAWINGS. IT IS THE SUBCONTRACTOR'S RESPONSIBILITY TO REQUEST TIMELY INSPECTIONS PRIOR TO PROCEEDING WITH FURTHER WORK THAT WOULD MAKE PARTS OF WORK INACCESSIBLE OR DIFFICULT TO INSPECT.

1.3 SITE MAINTENANCE AND PROTECTION

- A. PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE SUBCONTRACT.
- B. AVOID DAMAGE TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.
- C. KEEP SITE FREE OF ALL PONDING WATER.
- D. PROVIDE EROSION CONTROL MEASURES IN ACCORDANCE WITH STATE DOT AND EPA REQUIREMENTS.
- E. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS, AND SIMILAR DEVICES NECESSARY TO PROTECT AGAINST THEFT FROM PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.
- F. EXISTING UTILITIES: DO NOT INTERRUPT EXISTING SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE ENGINEER AND THEN ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICES HAVE BEEN PROVIDED.
- G. PROVIDE A MINIMUM 48-HOUR NOTICE TO THE ENGINEER AND RECEIVE WRITTEN NOTICE TO PROCEED BEFORE INTERRUPTING ANY UTILITY SERVICE.

PART 2 - PRODUCTS

- 2.1 SUITABLE BACKFILL: ASTM D2321 (CLASS I, II, III OR IVA) FREE FROM FROZEN LUMPS, REFUSE, STONES, OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
- 2.2 NON-POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM D2321 (CLASS III, IVA OR IVB) COARSE AGGREGATE. FREE FROM FROZEN LUMPS, REFUSE, STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSUITABLE FOR BACKFILL.
- 2.3 POROUS GRANULAR EMBANKMENT AND BACKFILL: ASTM 52321 (CLASS IA, IB OR II) COARSE AGGREGATE FREE FROM FROZEN LUMPS, REFUSE STONES OR ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION OR OTHER MATERIAL THAT MAY MAKE THE INORGANIC MATERIAL UNSULTABLE FOR BACKFILL.
- 2.4 SELECT STRUCTURAL FILL: GRANULAR FILL MATERIAL MEETING THE REQUIREMENTS OF ASTM E850-95, FOR USE AROUND UNDER STRUCTURES WHERE STRUCTURAL FILL MATERIAL ARE REQUIRED.
- 2.5 GRANULAR BEDDING AND TRENCH BACKFILL: WELL GRADED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM D2487 (SE OR SW-SM).
- 2.6 COARSE AGGREGATE FOR ACCESS ROAD SUB-BASE COURSE SHALL CONFORM ASTM D2940
- 2.7 UNSUITABLE MATERIAL: HIGH AND MODERATELY PLASTIC SILTS AND CLAYS (LL>45). MATERIAL CONTAINING REFUSE, FROZEN LUMPS, DEMOLISHED BITUMINOUS MATERIAL, VEGETATIVE MATTER, WOOD, STONES IN EXCESS OF 3 INCHES IN ANY DIMENSIONS AND DEBRIS AS DETERMINED BY THE CONSTRUCTION MANAGER. TYPICALLY WILL BE SOILS CLASSIFIED BY ASTM AS PT, MH, CH, OH, ML, AND OL.
- 2.8 GEOTEXTILE FABRIC: MIRAFI 500X OR APPROVED EQUAL.
- 2.9 PLASTIC MARKING TAPE: SHALL BE ACID AND ALKALI RESISTANT POLYETHYLENE FILM SPECIFICALLY MANUFACTURED FOR MARKING THE LOCATING UNDERGROUND UTILITIES IN INCHES WIDE WITH A MINIMUM THICKNESS OF 0.004 INCHES. TAPE SHALL HAVE MINIMUM STRENGTH OF 1500 PSI IN BOTH DIRECTIONS AND MANUFACTURED WITH INTEGRAL CONDUCTORS, FOIL BACKING OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN BURIED UP TO 3 FEET DEEP. THE METALLIC CORE OF THE TAPE SHALL BE ENCASED IN A PROTECTIVE JACKET OR PROVIDED WITH OTHER MEANS TO PROTECT IT FROM CORROSION. TAPE COLOR SHALL BE RED FOR ELECTRIC UTILITIES AND ORANGE FOR TELECOMMUNICATION UTILITIES.

PART 3 - EXECUTION

3.1 GENERAL:

- A. BEFORE START GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL, MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH CONDITION THAT IN THE EVENT OF RAIN THE SITE WILL BE DRAINED AT ANY TIME.
- B. BEFORE ALL SURVEY, LAYOUT, STAKING, AND MARKING, ESTABLISH AND MAINTAIN ALL LINE, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK.
- C. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STUMPS, RUBBISH, OTHER DEBRIS, AN
 - REMOVE THE FOLLOWING MATERIALS TO A DEPTH OF NO LESS THAT 12 INCHES BELOW THE ORIGINAL GROUND SURFACE: ROOTS, STUMPS, AND OTHER DEBRIS, BRUSH AND REFUSE EMBEDDED IN OR PROTRUDING THROUGH THE GROUND SURFACE, RAKE, DISK, OR PLOW THE AREA TO A DEPTH OF NO LESS THAN 6 INCHES, AND REMOVE TO A DEPTH OF 12 INCHES ALL ROOTS AND OTHER DEBRIS THEREBY EXPOSED.
- REMOVE TOPSOIL MATERIAL COMPLETELY FROM THE SURFACE UNTIL THE SOIL NO LONGER MEETS THE DEFINITION OF TOPSOIL. AVOID MIXING TOPSOIL WITH SUBSOIL OR OTHER UNDESIRABLE MATERIALS.
- EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED TILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING, AND DEMOLITION WORK COMPLETELY WITH SUITABLE FILL.
- D. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.
- E. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND / OR TRENCHED TO VERIFY THE LOCATIONS OF FEATURES ON THE DRAWINGS AND TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER ITEM THAT MIGHT INTERFERE WITH THE NEW CONSTRUCTION NOTIFY THE CONSTRUCTION AND ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.
- F. SEPARATE AND STOCK PILE ALL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. ALL EXCESS EXCAVATED AND UNSUITABLE MATERIALS SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.

3.2 BACKFILL:

- A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, INCLUDING EXPIRATION OF THE SPECIFIED MINIMUM CURING PERIOD FOR CAST-IN-PLACE CONCRETE, BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISHED GRADE.
 - PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL BE REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS AND UNSUITABLE MATERIALS.
 - 2. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL WHEN REQUIRED IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8-INCHES LOOSE THICKNESS AND COMPACTED. WHERE HAND OPERATED COMPACTORS ARE USED, THE FILL MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 4 INCHES IN LOOSE DEPTH AND COMPACTED.
 - 3. WHENEVER THE DENSITY TESTING INDICATES THAT THE CONTRACTOR HAS NOT OBTAINED THE SPECIFIED DENSITY, THE SUCCEEDING JAVER SHALL NOT BE PLACED DUTIL THE SPECIFICATION REQUIREMENTS ARE MET UNLESS OTHERWISE AUTHORIZED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL TAKE WHATEVER APPROPRIATE ACTION IS NECESSARY, SUCH AS DISKING AND DRYING, ADDING WATER, OR INCREASING THE COMPACTIVE EFFORT TO MEET THE MINIMUM COMPACTION REQUIREMENTS.
- B. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.3 TRENCH EXCAVATION:

- A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE GENERAL CONTRACTOR. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS.
- B. EXTEND THE TRENCH WIDTH A MINIMUM OF 7 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CONDUIT.
- C. WHEN SORE YIELDING, OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, BACKFILL AT THE REQUIRED TRENCH TO A DEPTH OF NO LESS THAN 12 INCHES BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.

3.4 TRENCH BACKFII

- A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWING AND THE UTILITY REQUIREMENTS.
- B. NOTIFY THE GENERAL CONTRACTOR 24 HOURS IN ADVANCE OF BACKFILLING.
- C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.
- D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6-INCHES UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACE AROUND CONDUITS.
- E. PROTECT CONDUIT FROM LATERAL MOVEMENT, IMPACT DAMAGE OR UNBALANCED LOADING
- F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 8-INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.
- G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GRATER THAT THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAT A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.5 AGGREGATE ACCESS POA

- A. CLEAR, GRUB, STRIP AND EXCAVATE FOR THE ACCESS ROAD TO THE LINES AND GRADES INDICATED ON THE DRAWINGS, SCARIFY TO A DEPTH OF 6 INCHES AND PROOF-ROLL. ALL HOLES, RUTS, SOFT PLACES AND OTHER DEFECTS SHALL BE CORRECTED.
- B. THE ENTIRE SUBGRADE SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 1557.
- C. AFTER PREPARATION OF THE SUBGRADE IS COMPLETE THE GEOTEXTILE FABRIC (MIRAFI 500XI) SHALL BE INSTALLED TO THE LIMITS INDICATED ON THE DRAWINGS BY ROLLING THE FABRIC OUT LONGITUDINALLY ALONG THE ROADWAY THE FABRIC SHALL NOT BE DRAGGED ACROSS THE SUBGRADE. PLACE THE ENTIRE ROLL IN A SINGLE OPERATION, ROLLING OUT AS SMOOTHLY AS POSSIBLE.
 - OVERLAPS PARALLEL TO THE ROADWAY WILL BE PERMITTED AT THE CENTERLINE AND AT LOCATIONS BEYOND THE ROADWAY SURFACE WIDTH (I.E. WITHIN THE SHOULDER WIDTH) ONLY. NO LONGITUDINAL OVERLAPS SHALL BE LOCATED BETWEEN THE CENTERLINE AND THE SHOULDER, PARALLEL OVERLAPS SHALL BE A MINIMUM OF 3 FEET WIDE.
 - 2. TRANSVERSE (PERPENDICULAR TO THE ROADWAY) OVERLAPS AT THE END OF A ROLL. SHALL OVERLAP IN THE DIRECTION OF THE AGGREGATE PLACEMENT (PREVIOUS ROLL ON TOP) AND SHALL HAVE A MINIMUM LENGTH OF 3 FEET.
- 3. ALL OVERLAPS SHALL BE PINNED WITH STAPLES OF NAILS A MINIMUM OF 10 INCHES. LONG TO INSURE POSITIONING DURING PLACEMENT OF AGGREGATE. PIN LONGITUDINAL SEAMS AT 25 FOOT CENTERS AND TRANSVERSE SEAMS EVERY 5 FEET.

 D. THE AGGREGATE BASE AND SUFFACE COURSES SHALL BE CONSTRUCTED IN LAYERS NOT MORE THAN 4 INCH (COMPACTED)
 THICKNESS, AGGREGATE TO BE PLACED ON GEOTEXTILE FABRIC SHALL BE END DUMPED ON THE FABRIC FROM THE FREE END OF
 THE FABRIC OR OVER PREVIOUSLY PLACED AGGREGATE. THE FIRST LIFT SHALL BE BLADED DOWN TO A THICKNESS OF 8 INCHES
 PRIOR TO COMPACTION. AT NO TIME SHALL EQUIPMENT, EITHER TRANSPORTING THE AGGREGATE OR GRADING THE AGGREGATE OR GRADING THE AGGREGATE OR GRADING THE AGGREGATE OR THE AGGREGATE OR GRADING THE AGGREGATE.

 BE PERMITTED ON THE ROADWAY WITH LESS THAT 4 INCHES OF MATERIAL COVERING THE FABRIC.
- E. THE AGGREGATE SHALL BE IMMEDIATELY COMPACTED TO NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE PROCTOR TEST, ASTM 0 1557 WITH A TAMPING ROLLER, OR WITH A PNEUMATIC TIRED ROLLER, OR WITH A VIBRATORY MACHINE OR ANY COMBINATION OF THE ABOVE. THE TOP LAYER SHALL BE GIVEN A FINAL ROLLING WITH A THREE-WHELL OR TANDEM ROLLER.

FINISH GRADING:

- A. PERFORM ALL GRADING TO PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION, GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY
- B. UTILIZE SATISFACTORY FILL MATERIAL, RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR REPLACEMENTS OF REMOVED UNSUITABLE MATERIALS.
- C. ACHIEVE FINISHED GRADE BY PLACING A MINIMUM OF 4 INCHES OF 1/2" 3/4" CRUSHED STONE ON TOP SOIL STABILIZER FABRIC.
- D. REPAIR ALL ACCESS ROADS AND SURROUND AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

3.7 ASPHALT PAVING ROAD:

A. DIVISION 600 - KDOT FLEXIBLE PAVEMENT (UPDATE PER LOCAL DOT)

B. SECTION 403 - MODOT ASPHALT CONCRETE PAVEMENT

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IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

POWDER MOUNTAIN
POWDER MOUNTAIN
EDEN, UT 84310
NSB MONOPOLE

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GENERAL
NOTES

ELECTRICAL NOTES:

PART I - GENERAL 1.1 GENERAL CONDITIONS

- A. CONTRACTOR SHALL INSPECT THE EXISTING SITE CONDITIONS PRIOR TO SUBMITTING BIDS. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE SUBCONTRACTORS FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN
- B. THE SUBCONTRACTOR SHALL OBTAIN PERMITS, LICENSES, MAKE ALL DEPOSITS, AND PAY ALL FEES REQUIRED FOR THE CONSTRUCTION PERFORMANCE FOR THE WORK UNDER THIS SECTION.
- C. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL SYSTEMS AND COMPONENTS COVERED UNDER THIS SECTION. THE SUBCONTRACTOR SHALL VERIFY ALL DIMENSIONS. DRAWINGS SHALL NOT BE SCALED TO DETERMINED DIMENSIONS

1.2 LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES.

A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AND ALL APPLICABLE LOCAL LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES. CONDUIT BENDS SHALL BE THE RADIUS BEND FOR THE TRADE SIZE OF CONDUIT IN COMPULANCE WITH THE LATEST EDITIONS OF NEC.

1.3 REFERENCES

- A. THE PUBLICATIONS LISTED BELOW ARE PART OF THIS SPECIFICATION. EACH PUBLICATION SHALL BE THE LATEST REVISION AND ADDENDUM IN EFFECT ON THE DATE. THIS SPECIFICATION IS ISSUED FOR CONSTRUCTION UNLESS OTHERWISE NOTED. EXCEPT AS MODIFIED BY THE REQUIREMENT SPECIFIED HEREIN OR THE DETAILS OF THE DRAWINGS, WORK INCLUDED IN THIS SPECIFICATION SHALL CONFORM TO THE APPLICABLE PROVISION OF THESE PUBLICATIONS.
 - 1. ANSI/IEEE (AMERICAN NATIONAL STANDARDS INSTITUTE)
 - 2. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
 - 3. ICE (INSULATED CABLE ENGINEERS ASSOCIATION

 - 4. NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION)
 - 5. NEPA (NATIONAL FIRE PROTECTION ASSOCIATION)
 - 6. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)
 - 7. UL (UNDERWRITERS LABORATORIES, INC.
- 8. AT&T MOBILITY GROUNDING STANDARD ND-00071

1.4 SCOPE OF WORL

- A. WORK UNDER THIS SECTION SHALL CONSIST OF FURNISHING ALL LABOR, MATERIAL, AND ASSOCIATED SERVICES REQUIRED TO COMPLETE REQUIRED CONSTRUCTION AND BE OPERATIONAL.
- B. ALL ELECTRICAL EQUIPMENT UNDER THIS CONTRACT SHALL BE PROPERLY TESTED, ADJUSTED, AND ALIGNED BY THE SUBCONTRACTOR.
- C. THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATING, DRAINING, TRENCHING, BACKFILLING, AND REMOVAL OR EXCESS DIRT.
- D. THE SUBCONTRACTOR SHALL FURNISH TO THE OWNER WITH CERTIFICATES OF A FINAL INSPECTION AND APPROVAL FROM THE INSPECTION AUTHORITIES HAVING JURISDICTION.
- E. THE SUBCONTRACTOR SHALL PREPARE A COMPLETE SET OF AS-BUILT DRAWINGS, DOCUMENT ALL WIRING EQUIPMENT CONDITIONS, AND CHANGES WHILE COMPLETING THIS CONTRACT. THE AS-BUILT DRAWINGS SHALL BE SUBMITTED AT COMPLETION OF THE PROJECT.

PART 2 - PRODUCTS

2.1 GENERAL:

- A. ALL MATERIALS AND EQUIPMENT SHALL BE UL LISTED, NEW AND FREE FROM DEFECTS.
- B. ALL ITEMS OF MATERIALS AND EQUIPMENT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED.
- C. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OR APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- D. ALL OVER CURRENT DEVICES HAVE AN INTERRUPTING CURRENT RATING EQUAL TO OR GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 10,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT

2.2 MATERIALS AND EQUIPMENT

- 1. RIGID METAL CONDUIT (RMC) SHALL BE HOT DIPPED GALVANIZED INSIDE AND OUTSIDE INCLUDING ENDS AND THREADS AND ENAMELED OR LACQUERED IN ADDITION TO GALVANIZING.
- 2. LIQUID TIGHT FLEXIBLE METAL CONDUIT SHALL BE UL LISTED.
- 3. CONDUIT CLAMPS, STRAPS AND SUPPORTS SHALL BE STEEL OR MALLEABLE IRON. ALL FITTINGS SHALL BE COMPRESSION AND CONCRETE TIGHT TYPE. GROUNDING BUSHINGS WITH INSULATED THROATS SHALL BE INSTALLED ON ALL CONDUIT TERMINATIONS.
- 4. NON-METALLIC CONDUIT AND FITTINGS SHALL BE SCHEDULE 40 PVC. INSTALL USING SOLVENT CEMENT TYPE JOINTS AS RECOMMENDED BY THE MANUFACTURER.

B. CONDUCTORS AND CABLE

- CONDUCTORS AND CABLE SHALL BE FLAME RETARDANT, MOISTURE AND HEAT RESISTANT THERMOPLASTIC, SINGLE CONDUCTOR, COPPER, TYPE THHN/THWN-2, 600 VOLT, SIZE AS INDICATED, 12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR USED.
- 2. 10 AWG AND SMALLER CONDUCTOR SHALL BE SOLID OR STRANDED AND 8 AWG AND LARGER CONDUCTOR SHALL BE STRANDED
- 3. SOLDERLESS, COMPRESSION TYPE CONNECTORS SHALL BE USED FOR TERMINATION OF ALL STRANDED CONDUCTORS.
- 4. STRAIN-RELIEF SUPPORTS GRIPS SHALL BE HUBBELL KELLEMS OR APPROVED EQUAL. CABLES SHALL BE SUPPORTED IN
- ACCORDANCE WITH THE NEC AND CABLE MANUFACTURER'S RECOMMENDATIONS
- 5. ALL CONDUCTORS SHALL BE TAGGED AT BOTH ENDS OF THE CONDUCTOR, AT ALL PULL BOXES, J-BOXES, EQUIPMENT AND CABINETS AND SHALL BE IDENTIFIED WITH APPROVED PLASTIC TAGS (ACTION CRAFT, BRADY, OR APPROVED EQUAL).

1. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, DEAD - FRONT, QUICK - MAKE, QUICK - BREAK, EXTERNALLY OPERABLE, HANDLE LOCKABLE AND INTERLOCK WITH COVER IN CLOSED POSITION, RATING AS INDICATED, UL LABELED FURNISHED IN NEMA 3R ENCLOSURE, SQUARE - D OR APPROVED EQUAL.

D. CHEMICAL ELECTROLYTIC GROUNDING SYSTEM:

- 1. INSTALL CHEMICAL GROUNDING AS REQUIRED. THE SYSTEM SHALL BE ELECTROLYTIC MAINTENANCE FREE ELECTRODE CONSISTING OF RODS WITH A MINIMUM OF 2 AWG CU EXOTHERMALLY WELDED PIGTAIL, PROTECTIVE BOXES, AND BACKFILL MATERIAL. MANUFACTURER SHALL BE LYNCOLE XIT GROUNDING ROD TYPES KZ (*)CS OR IXE-(*)CS (*) ELNGTH AS REQUIRED.
- 2. GROUND ACCESS BOX SHALL BE A POLY-PLASTIC BOX FOR NON-TRAFFIC APPLICATIONS, INCLUDING BOLT DOWN FLUSH COVER WITH BREATHER' HOLES, XIT MODEL #XB-22. ALL DISCONNECT SWITCHES AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED LAMICOID NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS ID NUMBERING, AND THE ELECTRICAL
- 3. BACKFILL MATERIAL SHALL BE LYNCONITE AND LYNCOLE GROUNDING GRAVEL.

E. SYSTEM GROUNDING:

- 1. ALL GROUNDING COMPONENTS SHALL BE TINNED AND GROUNDING CONDUCTOR SHALL BE 2 AWG BARE, SOLID, TINNED, COPPER ABOVE GRADE GROUNDING CONDUCTORS SHALL BE INSULATED WHERE NOTED.
- 2. GROUNDING BUSES SHALL BE BARE, TINNED, ANNEALED COPPER BARS OF RECTANGULAR CROSS SECTION, STANDARD BUS BARS MGB, SHALL BE FURNISHED AND INSTALLED BY THE SUBCONTRACTOR. THEY SHALL NOT BE FABRICATED OR MODIFIED IN THE FIELD. ALL GROUNDING BUSES SHALL BE IDENTIFIED WITH MINIMUM 3/4" LETTERS BY WAY OF STENCILING OR DESIGNATION PLATE.
- 3. CONNECTORS SHALL BE HIGH CONDUCTIVITY, HEAVY DUTY, LISTED AND LABELED AS GROUNDED CONNECTORS FOR THE MATERIALS USED. USE TWO HOLD COMPRESSION LUGS WITH HEAT SHRINK FOR MECHANICAL CONNECTIONS.
- 4. EXOTHERMIC WELDED CONNECTIONS SHALL BE PROVIDED IN KIT FORM AND SELECTED FOR THE SPECIFIC TYPES, SIZES AND COMBINATIONS OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.
- GROUND RODS SHALL BE COPPER CLAD STEEL WITH HIGH STRENGTH STEEL CORE AND ELECTROLYTIC GRADE COPPER OUTER SHEATH, MOLTEN WELDED TO CORE, 5/8" X 10'-0'. ALL GROUNDING RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES.
- 6. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS IN COMPLIANCE WITH THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, DISCONNECT SWITCHES, STARTERS, AND EQUIPMENT CABINETS.

- 1. THE SUBCONTRACTOR SHALL PROVIDE OTHER MATERIALS, THOUGH NOT SPECIFICALLY DESCRIBED, WHICH ARE REQUIRED FOR A COMPLETELY OPERATIONAL SYSTEM AND PROPER INSTALLATION OF THE WORK.
- 2. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC.

G. PANELS AND LOAD CENTERS:

1. ALL PANEL DIRECTORIES SHALL BE TYPEWRITTEN.

PART 3 - EXECUTION

3.1 GENERAL

- A. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
- B. EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT OR WATER, AND AGAINST CHEMICAL OR MECHANICAL INJURY DURING INSTALLATION AND CONSTRUCTION PERIODS.

- A. ALL LABOR FOR THE INSTALLATION OF MATERIALS AND EQUIPMENT FURNISHED FOR THE ELECTRICAL SYSTEM SHALL BE INSTALLED BY EXPERIENCED WIRE MEN, IN A NEAT AND WORKMANLIKE MANNER.
- B. ALL ELECTRICAL EQUIPMENT SHALL BE ADJUSTED, ALIGNED AND TESTED BY THE SUBCONTRACTOR AS REQUIRED TO PRODUCE THE
- C. UPON COMPLETION OF WORK, THE SUBCONTRACTOR SHALL THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, REMOVE ALL LABELS AND ANY DEBRIS, CRATING, OR CARTONS AND LEAVE THE INSTALLATION FINISHED AND READY FOR OPERATION.

3.3 COORDINATION:

A. THE SUBCONTRACTOR SHALL COORDINATE THE INSTALLATION OF ELECTRICAL ITEMS WITH THE OWNER - FURNISHED EQUIPMENT DELIVERY SCHEDULE TO PREVENT UNNECESSARY DELAYS IN THE TOTAL WORK.

3.4 INSTALLATION:

A. CONDUIT

- 1. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN CONDUIT AS SPECIFIED. NO CONDUIT OR TUBING OF LESS THAN 3/4 INCH TRADE SIZE.
- 2. PROVIDE RIGID PVC SCHEDULE 80 CONDUITS FOR ALL RISERS, RMC OTHERWISE NOTED. EMT MAY BE INSTALLED FOR EXTERIOR CONDUITS WHERE NOT SUBJECT TO PHYSICAL DAMAGE.
- 3. THE INSTALLATION OF SCHEDULE 40 PVC AND RMC CONDUITS SHALL BE 24 INCHES MINIMUM DEPTH. ALL 90 DEGREE BENDS SHALL BE RMC. EXPANSION JOINTS ARE REQUIRED ON ALL CONDUIT RISERS.
- 4. USE GALVANIZED FLEXIBLE STEEL CONDUIT WHERE DIRECT CONNECTION TO EQUIPMENT WITH MOVEMENT, VIBRATION, OR FOR EASE OF MAINTENANCE. USE LIQUID TIGHT, FLEXIBLE METAL CONDUIT FOR OUTDOOR APPLICATIONS. INSTALL SALVANIZED FLEXIBLE STEEL CONDUIT AT ALL POINTS OF CONNECTION TO EQUIPMENT MOUNTED ON SUPPORT TO ALLOW FOR EXPANSION AND CONTRACTION.
- 5. A RUN OF CONDUIT BETWEEN BOXES OR EQUIPMENT SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF THREE QUARTER-BENDS. CONDUIT BEND SHALL BE MADE WITH THE UL LISTED BENDER OR FACTORY 90 DEGREE ELBOWS MAY BE USED.
- 6. FIELD FABRICATED CONDUITS SHALL BE CUT SQUARE WITH A CONDUIT CUTTING TOOL AND REAMED TO PROVIDE A SMOOTH INSIDE SURFACE.
- 7. PROVIDE INSULATED GROUNDING BUSHING FOR ALL CONDUITS.
- 8. SUBCONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL CONDUITS DURING CONSTRUCTION. TEMPORARY OPENING IN THE CONDUIT SYSTEM SHALL BE PLUGGED OR CAPPED TO PREVENT ENTRANCE OF MOSTURE OR FOREIGN MATTER. SUBCONTRACTOR SHALL REPLACE ANY CONDUITS CONTAINING FOREIGN MATERIALS THAT CANNOT BE REMOVED.
- 9. ALL CONDUITS SHALL BE SWABBED CLEAN BY PULLING AN APPROPRIATE SIZE MANDREL THROUGH THE CONDUIT BEFORE LLATION OF CONDUCTORS OR CABLES. CONDUIT SHALL BE FREE OF DIRT AND DEBR

10.INSTALL PULL STRINGS IN ALL CLEAN EMPTY CONDUITS. IDENTIFY PULL STRINGS AT EACH END.

- 11. INSTALL 2" HIGHLY VISIBLE AND DETECTABLE TAPE 12" ABOVE ALL UNDERGROUND CONDUITS AND CONDUCTORS.
- 12. CONDUITS SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE AGAINST COLLECTION OF TRAPPED CONDENSATION.
- 13 PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS TO ALLOW FOR RACEWAYS AND CABLES TO BE ROUTED THROUGH THE PROVIDE CORE DIVISIONS AS NECESSARY FOR PENERIALIDING TO ALLOW FOR RACEWAYS ASSLESS TO BE ROUTED INFOORMING THE BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE EFFECTIVELY SEALED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FIRE STOPS AT FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE, AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS PURPOSE.

B. CONDUCTORS AND CABLE:

1. ALL POWER WIRING SHALL BE COLOR CODED AS FOLLOWS:

DESCRIPTION	208/240/120 VOLT SYSTEMS
PHASE A	
PHASE C	
NEUTRAL	
CROHNDING	

- 2. SPLICES SHALL BE MADE ONLY AT OUTLETS, JUNCTION BOXES, OR ACCESSIBLE RACEWAY CONDULETS APPROVED FOR THIS PURPOSE.
- 3. PULLING LUBRICANTS SHALL BE UL APPROVED. SHALL USE NYLON OR HEMP ROPE FOR PULLING CONDUCTOR OR CABLES INTO THE
- 4. CABLES SHALL BE NEATLY TRAINED, WITHOUT INTERLACING, AND BE OF SUFFICIENT LENGTH IN ALL BOXES & EQUIPMENT TO PERMIT MAKING A NEAT ARRANGEMENT. CABLES SHALL BE SECURED IN A MANNER TO AVOID TENSION ON CONDUCTORS OF TERMINALS. CONDUCTORS SHALL BE PROTECTED FROM MECHANICAL INJURY AND MOISTURE. SHARP BENDS OVER CONDUIT BUSHINGS ARE PROHIBITED. DAMAGED CABLES SHALL BE REMOVED AND REPLACED AT THE SUBCONTRACTOR'S EXPENSE.

1. INSTALL DISCONNECT SWITCHES LEVEL AND PLUMB. CONNECT TO WIRING SYSTEM AND GROUNDING SYSTEM AS INDICATED

D. GROUNDING

- 1. ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING MANUFACTURER, AT&T MOBILITY GROUNDING STANDARD ND-00071, ND-00135, AND THE NATIONAL
- 2. PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION
- 3. ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOOPED OR SHARPLY BENT. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUNDING CONDUCTORS SHALL NOT BE LOOPED OR SHARPLY BENT, ROOTE GROUNDING CONNECTIONS GROUND IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.
- 4. BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEFT IN HEIGHT AND WHERE THE MAIN GROUNDING CONDUCTORS ARE DULLINISD ANUMUN NEW LOWERS GREATER THAN 75 FEET IN HEIGHT AND WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE SUBCONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING SING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 20 AWG COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS LIGHTNING PROTECTION SYSTEM, AND BUILDING STEEL COLUMNS LIGHTNING PROTECTION SYSTEM, AND BUILDING STATE LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).
- 5. TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS, BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
- SUBCONTRACTOR SHALL VERIFY THE LOCATIONS OF GROUNDING TIE-IN-POINTS TO THE EXISTING GROUNDING SYSTEM. ALL
 UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMICWELD PROCESS AND INSTALLED IN ACCORDANCE
 WITH THE MANUFACTURERS INSTRUCTIONS.
- 7. ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS, EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION BEFORE BEING PERMANENTLY CONCEALED.
- 8. APPLY CORROSION-RESISTANCE FINISH TO FIELD CONNECTIONS AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DESTROYED. USE KOPR-SHIELD ANTI-OXIDATION COMPOUND ON ALL COMPRESSION GROUNDING CONNECTIONS 9. A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.

10. BOND ALL INSULATED GROUNDING BUSHING WITH A BARE 6 AWG GROUNDING CONDUCTOR TO A GROUND BAR

- 11. DIRECT BURIED GROUNDING CONDUCTORS SHALL BE INSTALLED AT A NOMINAL DEPTH OF 36" MINIMUM BELOW GRADE, OR 6" BELOW THE FROST LINE, USE GREATER OF THE TWO DISTANCES.
- 12. ALL GROUNDING CONDUCTORS EMBEDDED IN OR PENETRATING CONCRETE SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT.
- 13. THE INSTALLATION OF CHEMICAL ELECTROLYTIC GROUNDING SYSTEM IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. REMOVE SEALING TAPE FROM LEACHING AND BREATHER HOLES. INSTALL PROTECTIVE BOX FLUSH WITH GRADE.
- 14. DRIVE GROUND RODS UNTIL TOPS ARE A MINIMUM DISTANCE OF 36" DEPTH OR 6" BELOW FROST LINE, USING THE GREATER OF THE
- 15.IF COAX ON THE ICE BRIDGE IS MORE THAN 6 FT. FROM THE GROUNDING BAR AT THE BASE OF THE TOWER, A SECOND GROUNDING BAR WILL BE NEEDED AT THE END OF THE ICE BRIDGE, TO GROUND THE COAX CABLE GROUNDING KITS AND IN-LINE ARRESTERS.
- 16. SUBCONTRACTORS SHALL REPAIR, AND/OR REPLACE EXISTING GROUNDING SYSTEM COMPONENTS DAMAGED DURING

3.5 ACCEPTANCE TESTING

- A. CERTIFIED PERSONNEL USING CERTIFIED EQUIPMENT SHALL PERFORM REQUIRED TESTS AND SUBMIT WRITTEN TEST REPORTS UPON COMPLETION.
- B. WHEN MATERIAL AND/OR WORKMANSHIP IS FOUND NOT TO COMPLY WITH THE SPECIFIED REQUIREMENTS, THE NON-COMPLYING ITEMS SHALL BE REMOVED FROM THE PROJECT SITE AND REPLACED WITH ITEMS COMPLYING WITH THE SPECIFIED REQUIREMENTS PROMPTLY AFTER RECEIPT OF NOTICE FOR NON-COMPLIANCE.

- ALL FEEDERS SHALL HAVE INSULATION TESTED AFTER INSTALLATION, BEFORE CONNECTION TO DEVICES. THE CONDUCTORS SHALL
 TEST FREE FROM SHORT CIRCUITS AND GROUNDS. TESTING SHALL BE FOR ONE MINUTE USING 1000V DC. PROVIDE WRITTEN
 DOCUMENTATION FOR ALL TESTS LISTED TO SUBCONTRACTOR.
- 2. PRIOR TO ENERGIZING CIRCUITRY, TEST WIRING DEVICES FOR ELECTRICAL CONTINUITY AND PROPER POLARITY CONNECTIONS.
- 3. MEASURE AND RECORD VOLTAGES BETWEEN PHASES AND BETWEEN PHASE CONDUCTORS AND NEUTRALS. SUBMIT A REPORT OF MAXIMUM AND MINIMUM VOLTAGES.
- 4. PERFORM GROUNDING TEST TO MEASURE GROUNDING RESISTANCE OF GROUNDING SYSTEM USING THE IEEE STANDARD 3-POINT "FALL-OF-POTENTAL" METHOD. PROVIDE PLOTTED TEST VALUES AND LOCATION SKETCH. NOTIFY THE ENGINEER IMMEDIATELY IF MEASURED VALUE IS OVER 5 OHMS.



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POWDER MOUNTAIN POWDER MOUNTAIN

SHEET TITLE **GENERAL**

NOTES

EDEN. UT 84310

NSB MONOPOLE

- THIS FACILITY IS EXEMPT FROM HANDICAP REQUIREMENTS PER 2010 CBC SECTION 1105B.3.4 EXCEPTION #1. THIS FACILITY IS NON-OCCUPIABLE SPACE AND ENTERED ONLY BY SERVICE PERSONNEL. THIS SPACE IS NOT FOR HUMAN OCCUPANCY.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES, CONFLICTS OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING BIDS, AND PROCEEDING WITH ANY WORK.
- THE CONTRACTOR SHALL NOTIFY ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, & NOTES PRIOR TO STARTING CONSTRUCTION. INCLUDING BUT NOT LIMITED BY DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECTENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE STUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK. CONTACT USA DIG ALERT @ 811
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE 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 EXPENSE OF REPAIRING OR REPLACING ANY DAMAGED AREAS.
- 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'S RESPONSIBILITY TO SUBJURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANCES, REVISIONS, ADDENDA, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE ASSEMBLY THE ARCHITECT OR THE ENSIFER RESPONSIBLE OF THE PROJECT AT THE CONCLUSION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE.
- 8. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
- ALL CONSTRUCTION THROUGH THE PROJECT SHALL CONFORM TO THE LATEST C.B.C. AND ALL OTHER GOVERNING CODES, INCLUDING THE CALIFORNIA ADMINISTRATIVE CODES TITLE 8, 19, AND 24. THE MOST RESTRICTIVE CODE SHALL GOVERN.
- 10. THE CONTRACTOR AND SUBCONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS INCLUDING ALL OSHA
- 11. WHEN REQUIRED STORAGE OF MATERIALS OCCURS, THEY SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDINO PRESENT.
- 12. 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 AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILLED BY THE OWNER OR AUTHORIZED AGENT. CONTRACTOR SHALL OBTAIN THE PERMIT AND MAKE FINIAL PAYMENT OF SAID DOCUMENT.
- 14. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE. DRAWINGS ARE NOT TO BE SCALED UNDER ANY CIRCUMSTANCES.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS, OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL OR U.L. APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
- NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
- THE CONTRACTOR IS TO PROVIDE PORTABLE FIRE EXTINGUISHERS HAVING A MINIMUM 2A:10-B:C RATING WITHIN 75FT. OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA. (2010 CFC SECTION 906-1-1 & 7 AND SECTION 906.3:1)
- MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR APPROVING THE RESULTS.
- 20. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
- 21. ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
- BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY GRADING AND CONSTRUCTION EFFORT AS MANDATED BY THE GOVERNING AGENCY.
- 23. ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT SHALL BE NOTIFIED FOR CLARIFICATIONS.

GENERAL FIRE NOTES:

- BUILDINGS UNDERGOING CONSTRUCTION, ALTERATION, OR DEMOLITION SHALL BE IN ACCORDANCE WITH 2010 CFC SECTION 1401 AND ALL GOVERNING CODES
- ADDRESS SHALL BE PROVIDED FOR ALL NEW AND EXISTING BUILDINGS IN A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY. (2010 CFC SECTION 505.1)
- 3. DECORATIVE MATERIALS SHALL BE MAINTAINED IN A FLAME-RETARDANT CONDITION.(2010 CFC SECTION 807-1.2)
- PORTABLE FIRE EXTINGUISHERS: AT LEAST ONE FIRE EXTINGUISHER WITH A MINIMUM RATING OF 2-A-10B:C SHALL BE PROVIDED WITHIN 75 FEET MAXIMUM TRAVEL DISTANCE FOR EACH 6,000 SQUARE FEET OR PORTION THEREOF ON EACH FLOOR.(2010 CFC SECTION 906.1.1 & 7 AND SECTION 906.3.1)

ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION	ABBREVIATION	DEFINITION
A.B. ABV. ACCA ADD'L A.F.F. A.F.G. ALUM. ALT. ANT. APPRX. ARCH. AWG. BLNG. BLK. BLKG. BM. B.N. BTCW. B.O.F. B'U CAB. CANT. C.I.P. C.I.G. CLR. CONC. CONN. CONST. CONT. d DBL. DEPT. D.F. DIA. DIAG. DIM. DIAG. DIM. DWG. DWG.	ANCHOR BOLT ABOVE ANTENNA CABLE COVER ASSEMBLY ADDITIONAL ABOVE FINISHED FLOOR ABOVE FINISHED FLOOR ABOVE FINISHED GRADE ALUMINUM ALTERNATE ANTENNA APPROXIMATE(LY) AMERICAN WIRE GAUGE BUILDING BLOCK BLOCKING BEAM BOUNDARY NAILING BARE TINNED COPPER WIRE BOTTOM OF FOOTING BACK-UP CABINET CABINET CANTILEVER(ED) CAST IN PLACE CEILING CLEAR COLUMN CONSTRUCTION CONSTRUCTION CONSTRUCTION CONTRUCTION CONTR	FAB. F.F. F.G. FIN. FLR. FDN. F.O.C. F.O.W. F.O.S. F.O.W. F.S. FT.() FTG. G. G.I. GLB.(GLU-LAM) GPS GRND. HOR. HGR. HT. ICGB. IN.(") INT. LB.(#) LB. LF. L. MAS. MAX. M.B. MECH. MFR. MIN. MISC. MTL. (N)	FABRICATION(OR) FINISH FLOOR FINISH FLOOR FINISH GRADE FINISHSHED) FLOOR FOUNDATION FACE OF CONCRETE FACE OF MASONRY FACE OF STUD FACE OF WALL FINISH SURFACE FOOTIFEET) FOOTING GROWTH (CABINET) GAUGE GALVANIZE(D) GROUND FAULT CIRCUIT INTERRUPTER GLUE LAMINATED BEAM GLOBAL POSITIONING SYSTEM GROUND HEADER HANGER HANGER HEIGHT ISOLATED COPPER GROUND BUS INCH(ES) INTERIOR POUND(S) LAG BOLTS LINEAR FEET (FOOT) LONG(ITUDINAL) MASONRY MAXIMUM MACHINE BOLT MECHANICAL MINIMUM MACHINE BOLT MECHANICAL MINIMUM MISCELLANEOUS METAL NEW MISCELLANEOUS METAL NEW MISCELLANEOUS METAL NEW MISCELLANEOUS METAL NEW	PWR. QTY. RAD.(R) REF. REINF. REQD. RGS. RRU. SCH. SHT. SIM. SPEC. SQ. S.S. STD. STL. STRUC. TEMP. THK. TMA T.O.A. T.O.C. T.O.F. T.O.F. T.O.S. T.O.W. TYP. U.G. U.I U.I.O. V.I.F. W WV. WP. WT. E	POWER (CABINET) QUANTITY RADIUS REFERENCE REINFORCEMENT(ING) REQUIRED RIGID GALVANIZED STEEL RADIO REMOTE UNIT SCHEDULE SHEET SIMILAR SPECIFICATION(S) SQUARE STAINLESS STEEL STANDARD STEEL STANDARD STEEL STANDARD STEEL STRUCTURAL TEMPORARY THICK(NESS) TOWER MOUNTED AMPLIFIER TOE NAIL TOP OF AUTHORISE TOP OF FOUNDATION TOP OF PLATE (PARAPET) TOP OF STEEL TOP OF WALL TYPICAL UNDER GROUND UNDERWRITERS LABORATORY UNLESS NOTED OTHERWISE VERIFY IN FIELD WIDE(WIDTH) WITH WOOD WEATHERPROOF WEIGHT CENTERLINE PLATE
EA. EL.	EACH ELEVATION	NÓ.(#) N.T.S.	NUMBER NOT TO SCALE		

ELEVATION
ELECTRICAL
ELEVATOR
ELECTRICAL METALLIC TUBING
EDGE NAIL
ENGINEER
EQUAL
EXPANSION NOT TO SCALE
ON CENTER
OPENING
PRECAST CONCRETE
PERSONAL COMMUNICATION SERVICES
PLYWOOD
POWER PROTECTION CABINET
PRIMARY RADIO CABINET

POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH PRESSURE TREATED at&t

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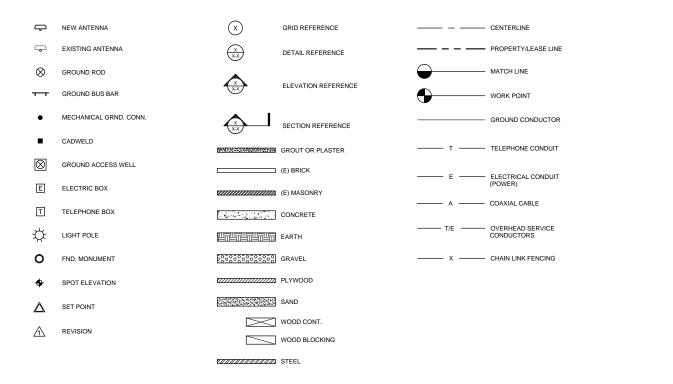


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		D	7/25/2013	ISSUED FOR 100% CONSTRUCTION	NSV
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,		В	7/03/2013	ISSUED FOR 90% CONSTRUCTION	NSV
,		Α	6/03/2013	ISSUED FOR 90% CONSTRUCTION	NSV
	Ш	חבוע	DATE	DECODIDATION	51/

2 **ABBREVIATIONS**



TO ALTER THIS DOCUMENT.

POWDER MOUNTAIN POWDER MOUNTAIN EDEN. UT 84310 NSB MONOPOLE

> SHEET TITLE **GENERAL** NOTES

SHEET NUMBER

3

GENERAL NOTES LEGEND

ELEV. EMT. E.N. ENG. EQ. EXP.

EXST.(E) EXT.



Bevond This Point vou are entering a controlled area where RF emissions may exceed the FCC General Population Exposure Limits

Follow all posted signs and site guidelines for working in RF environment.

Ref: 47CFR 1.1307 (b)

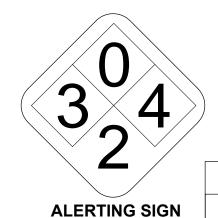
CAUTION



Bevond This Point vou are entering a controlled area where RF emissions may exceed the FCC Occupational Exposure Limits.

Ref: 47CFR 1.1307 (b)

SITE NUMBER



S

Α

Υ

В

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C

K

ALERTING SIGNS

WARNING!

SERIOUS "RF" BURN HAZARD!

MAINTAIN AN ADEQUATE CLEARANCE BETWEEN TOWER

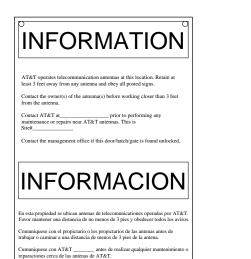
FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN A RADIO FREQUENCY ENVIRONMENT COULD RESULT IN SERIOUS INJURY. CONTACT CURRENT MAY EXCEED LIMITS PRESCRIBED IN ANSI/EEE C95.1-1992 FOR CONTROLLED ENVIRONMENTS.

atak.

ALERTING SIGN

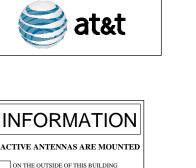
PROPERTY OF AT&T **AUTHORIZED** PERSONNEL ONLY IN CASE OF EMERGENCY, OR PRIOR TO PERFORMING MAINTENANCE ON THIS SITE, CALL 800-638-2822 AND REFERENCE CELL

INFO SIGN #5



INFO SIGN #1

Favor de comunicarse con la oficina de la administración del odificio si esta puerta o compuerta se encuentra sin candado.



FROM THESE ANTENNAS

STAY BACK A MINIMUM

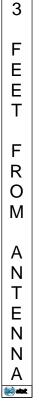
OF 3 FEET

BEHIND THE PANEL

ON THIS STRUCTURE

INFO SIGN #2

INFO SIGN #4



STRUCTURE TYPE INFO SIGN #1 INFO SIGN #2 INFO SIGN #3 INFO SIGN #4 INFO SIGN #5 **TOWERS** ENTRANCE GATE SHELTER DOORS ON THE SHELTER DOOR OR ON ONE ON THE SIDE OF CLIMBING SIDE OF ON BACKSIDE OF MONOPOLE/MONOPINE/MONOPALM OUTDOOR THE TOWER ANTENNAS ANTENNAS ON THE OUTDOOR EQUIPMENT CABINET ENTRANCE GATE ON THE SHELTER SHELTER DOORS OR ON THE OUTDOOR DOOR OR ON ONE CLIMBING SIDE OF THE TOWER ON BACKSIDE OF ANTENNAS ON THE SIDE OF ANTENNAS SCE TOWERS/TOWERS WITH HIGH VOLTAGE OUTDOOR EQUIPMENT CABINETS CABINET ENTRANCE GATE SHELTER DOORS ON THE SHELTER ON THE POLE, NO DOOR OR ON ONE LESS THAN 3FT BELOW THE ON BACKSIDE OF ON THE SIDE OF LIGHT POLES/FLAG POLES OUTDOOR ANTENNAS ON THE OUTDOOR EQUIPMENT ENTRANCE GATE ON THE SHELTER ON THE POLE, NO SHELTER DOORS DOOR OR ON ONE LESS THAN 3FT BELOW THE UTILITY WOOD POLES (JPA) ON BACKSIDE OF ON THE SIDE OF OUTDOOR EQUIPMENT ON THE OUTDOOR ANTENNA CABINETS CABINET ENTRANCE GATE ON THE SHELTER ON THE POLE, NO LESS THAN 3FT SHELTER DOORS OR DOOR OR ON ONE OUTDOOR MICROCELLS MOUNTED ON NON-JPA POLES BELOW THE ON THE OUTDOOR FOUIPMENT ANTENNA **ROOF TOPS** AT ALL ACCESS POINTS OF THE ROOF ON ANTENNAS CONCEALED ANTENNAS X ANTENNAS MOUNTED FACING OUTSIDE X X THE BUILDING ANTENNAS ON SUPPORT STRUCTURE Х Х ROOFTOP GRAPH: RADIATION AREA IS WITHIN 3FT FROM ADJACENT TO Х RADIATION IS BEYOND 3FT FROM ADJACENT TO YELLOW STRIPING AS TO ROOF VIEW GRAPH ANTENNA EACH ANTENNA ADJACENT TO ON THE SHELTER ACCESS TO ANTENNAS IF ON BACKSIDE OF ON THE SIDE OF DOOR OR ON ONE OUTDOOR EQUIPMENT **CHURCH STEEPLES** STEEPLE ANTENNAS ARE CONCEALED ADJACENT TO ANTENNAS IF ACCESS TO ON THE SIDE OF DOOR OR ON ONE WATER STATIONS ANTENNAS ARE ANTENNAS OUTDOOR CONCEALED EQUIPMENT

GENERAL SIGNAGE GUIDELINES

STRIPING

NOTICE SIGN

IF GP MAX VALUE OF MPE AT

ANTENNA LEVEL IS: 0-99%: NOTICE

SIGN; OVER 99% CAUTION SIGN AT NO LESS THAN 3FT BELOW ANTENNA AND 9FT ABOVE GROUND

NOTICE OR CALITION SIGN AT NO

LESS THAN 9FT ABOVE GROUND: ONLY IF THE EXPOSURE EXCEEDS

EXPOSURE AT 6FT ABOVE GROUND

ITHER NOTICE OR CAUTION SIGN (BASED ON ROOFVIEW RESULTS) AT ANTENNAS/BARRIER

90% OF THE GENERAL PUBLIC

CAUTION SIGN

AT THE HEIGHT OF THE FIRST

CLIMBING STEP.

MIN. 9FT ABOVE GROUND

OF THE FIRST

CLIMBING STEP, MIN. 9FT ABOVE

GROUND

I. EITHER NOTICE OR CAUTION SIGNS NEED TO BE POSTED AT EACH SECTOR AS CLOSE AS POSSIBLE TO: THE OUTER EDGE OF THE STRIPED OFF AREA OR THE OUTER ANTENNAS OF THE SECTOR.

2. IF ROOFVIEW SHOWS: ONLY BLUE= NOTICE SIGN, BLUE AND YELLOW= CAUTION SIGN, ONLY YELLOW= CAUTION SIGN TO BE INSTALLED.

3. SHOULD THE REQUIRED STRIPING ARE INTERFERE WITH ANY STRUCTURES OR EQUIPMENT (A/C, VENTS, ROOF HATCH, DOORS, OTHER ANTENNAS, DISHES, ETS.), PLEASE NOTIFY AT&T TO MODIFY THE STRIPING AREA, PRIOR TO STARTING THE WORK.



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	D	7/25/2013	ISSUED FOR 100% CONSTRUCTION	NSV
ı	Е	7/31/2013	ISSUED FOR 100% CONSTRUCTION	NSV
H	F	8/26/2013	ISSUED FOR 100% CONSTRUCTION	NSV

TO ALTER THIS DOCUMENT.

POWDER MOUNTAIN POWDER MOUNTAIN EDEN. UT 84310

NSB MONOPOLE

SHEET TITLE **SIGNAGE** & NOTES

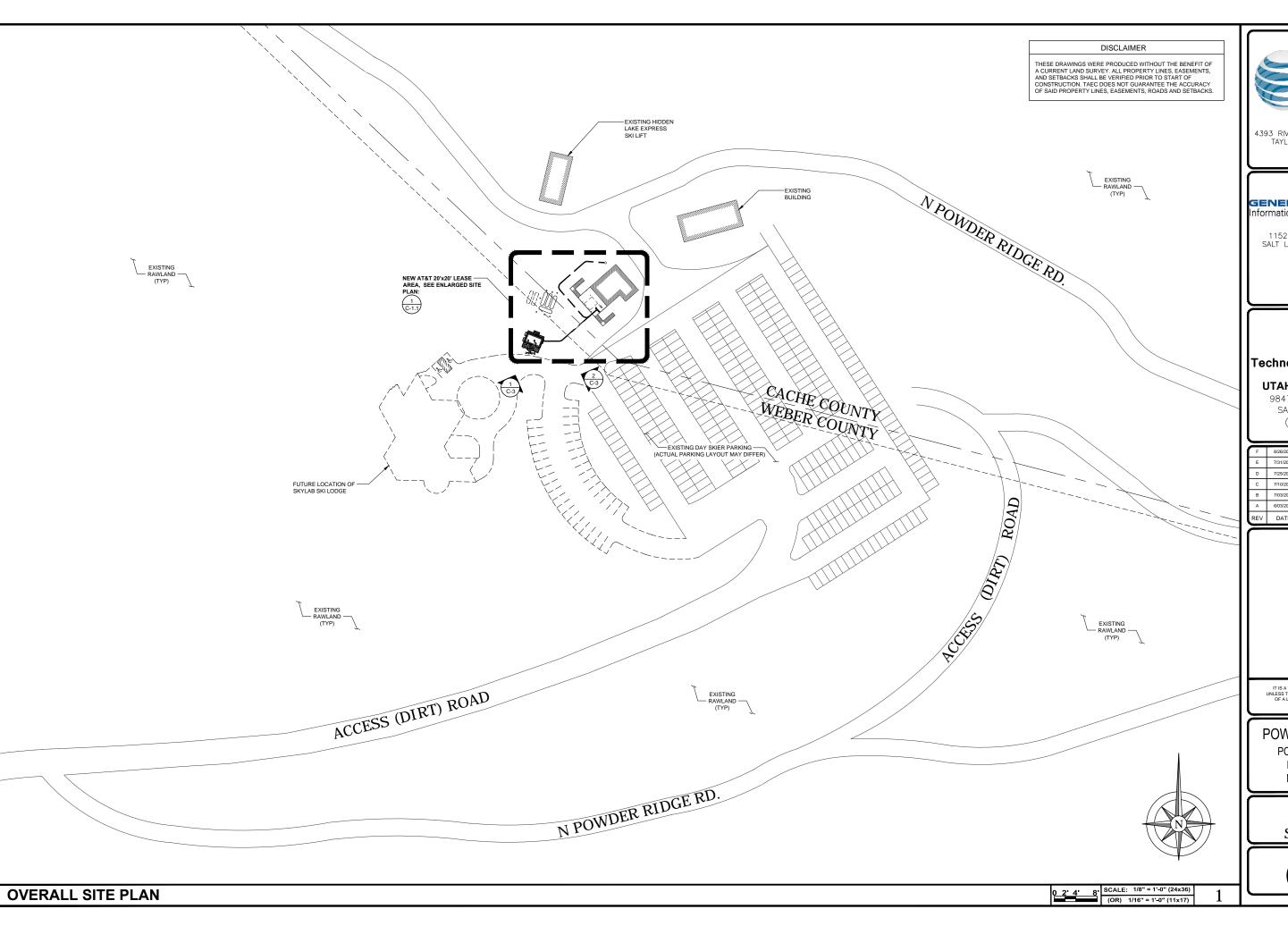
SHEET NUMBER

GENERAL NOTES

CAUTION SIGN AT THE ANTENNAS

CAUTION SIGN AT

THE ANTENNAS





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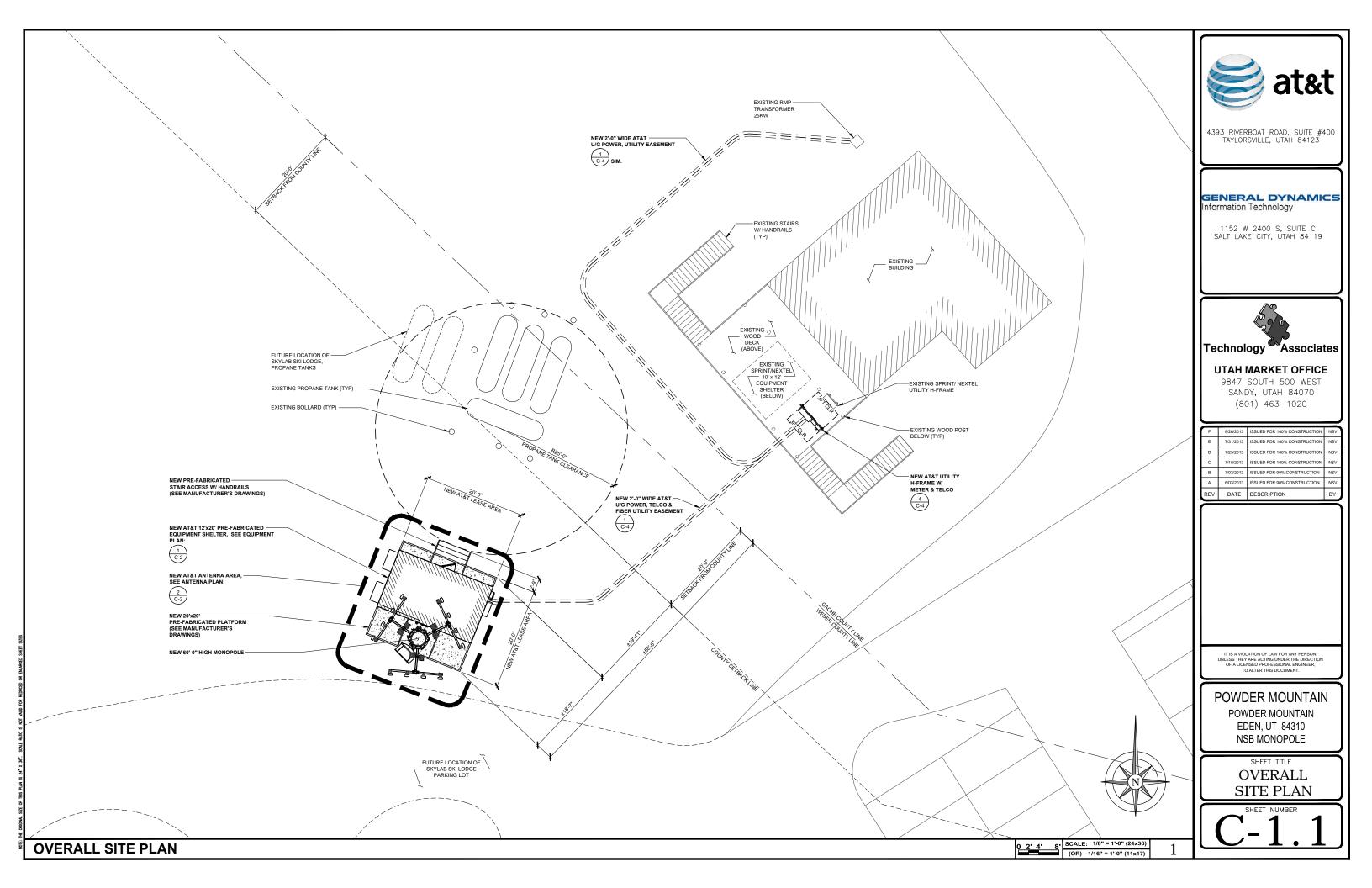
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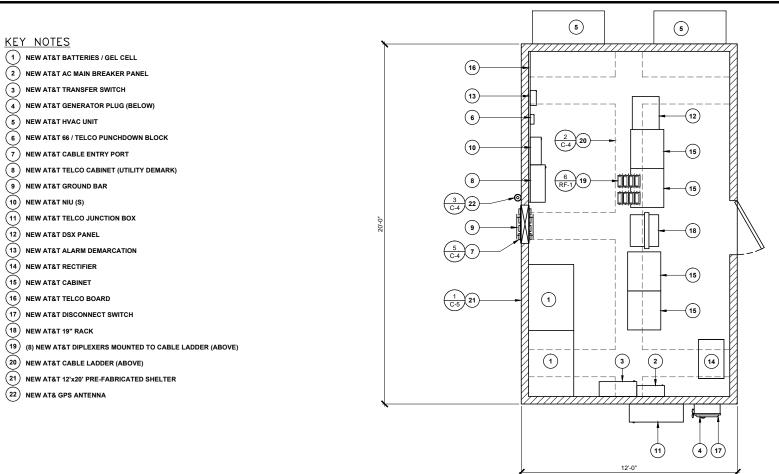
POWDER MOUNTAIN

POWDER MOUNTAIN EDEN, UT 84310 NSB MONOPOLE

SHEET TITLE

OVERALL SITE PLAN





NOTE:

AT&T SHALL VERIFY & APPROVE ALL EQUIPMENT & CABINET LOCATIONS PRIOR TO THEIR INSTALLATION.



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TO ALTER THIS DOCUMENT.

POWDER MOUNTAIN POWDER MOUNTAIN

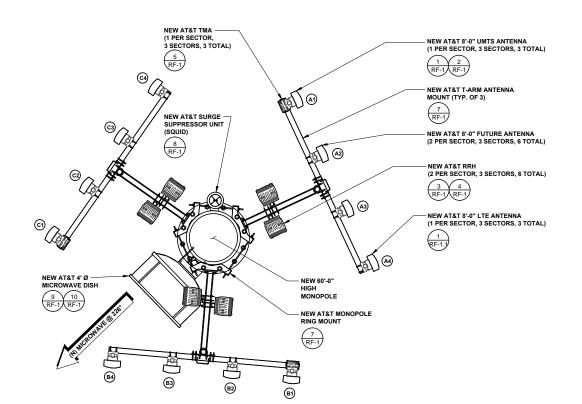
EDEN, UT 84310 NSB MONOPOLE

SHEET TITLE

EQUIPMENT & ANTENNA PLANS

SHEET NUMBER

0 1' 2' 3' SCALE: 3/8" = 1'-0" (24x36) **EQUIPMENT PLAN**



	AUTENIA 7/05	TEOL 1101 001	ANTENNA	Т	RANSMISS	ION CABLE
SECTOR	ANTENNA TYPE	TECHNOLOGY	AZIMUTH	QTY.	LENGTH	TYPE
A1	NEW ANTENNA	UMTS	65°	1	80'	FIBER
A2	FUTURE ANTENNA		TO BE DE	TERMI	NED	
A3	FUTURE ANTENNA	FUTURE ANTENNA TO BE DETERMINED				
(A4)	A4 NEW ANTENNA LTE 65° 1 80'		80'	FIBER		
B1	NEW ANTENNA	UMTS	185°	1	80'	FIBER
B2	FUTURE ANTENNA		TO BE DE	TERMI	NED	
B3	FUTURE ANTENNA		TO BE DE	TERMI	NED	
B4	NEW ANTENNA	LTE	185°	1	80'	FIBER
(1)	NEW ANTENNA	UMTS	305°	1	80'	FIBER
@	FUTURE ANTENNA		TO BE DE	TERMI	NED	
<u> </u>	FUTURE ANTENNA	TO BE DETERMINED				
(C4)	NEW ANTENNA	LTE	305°	1	80'	FIBER

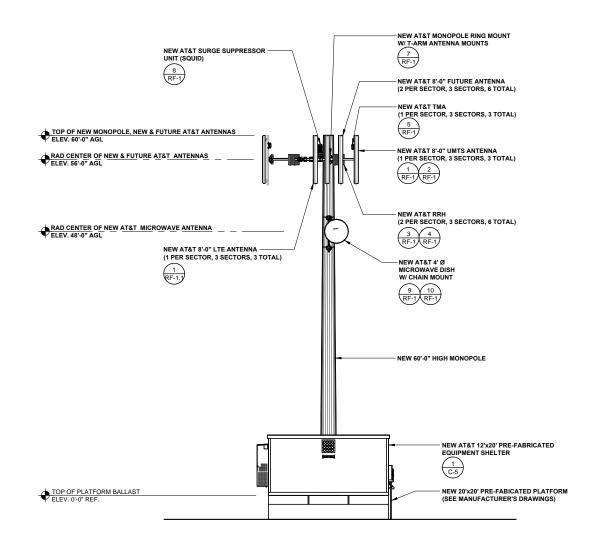
NOTE TO CONTRACTOR:
ANTENNA CLEARANCE AND MOUNTING TO BE FIELD VERIFIED PRIOR TO CONSTRUCTION WITH FINAL ANTENNA
SPECIFICATIONS, MOUNTING HARDWARE, AND RF DESIGN. ANTENNA PIPE MOUNT MODIFICATION MAY BE REQUIRED.

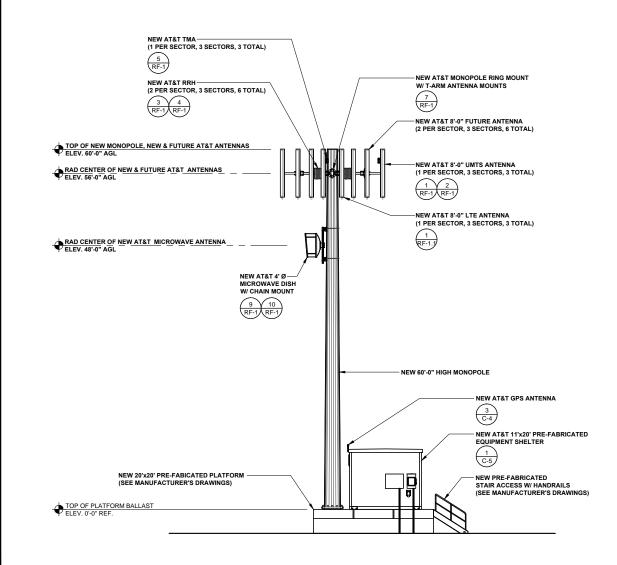
NOTE:

AT&T SHALL VERIFY & APPROVE ALL ANTENNA TYPES & ANTENNA LOCATIONS PRIOR TO THEIR INSTALLATION.

ANTENNA PLAN

0 1' 2' 3' SCALE: 3/8" = 1'-0" (24x36)







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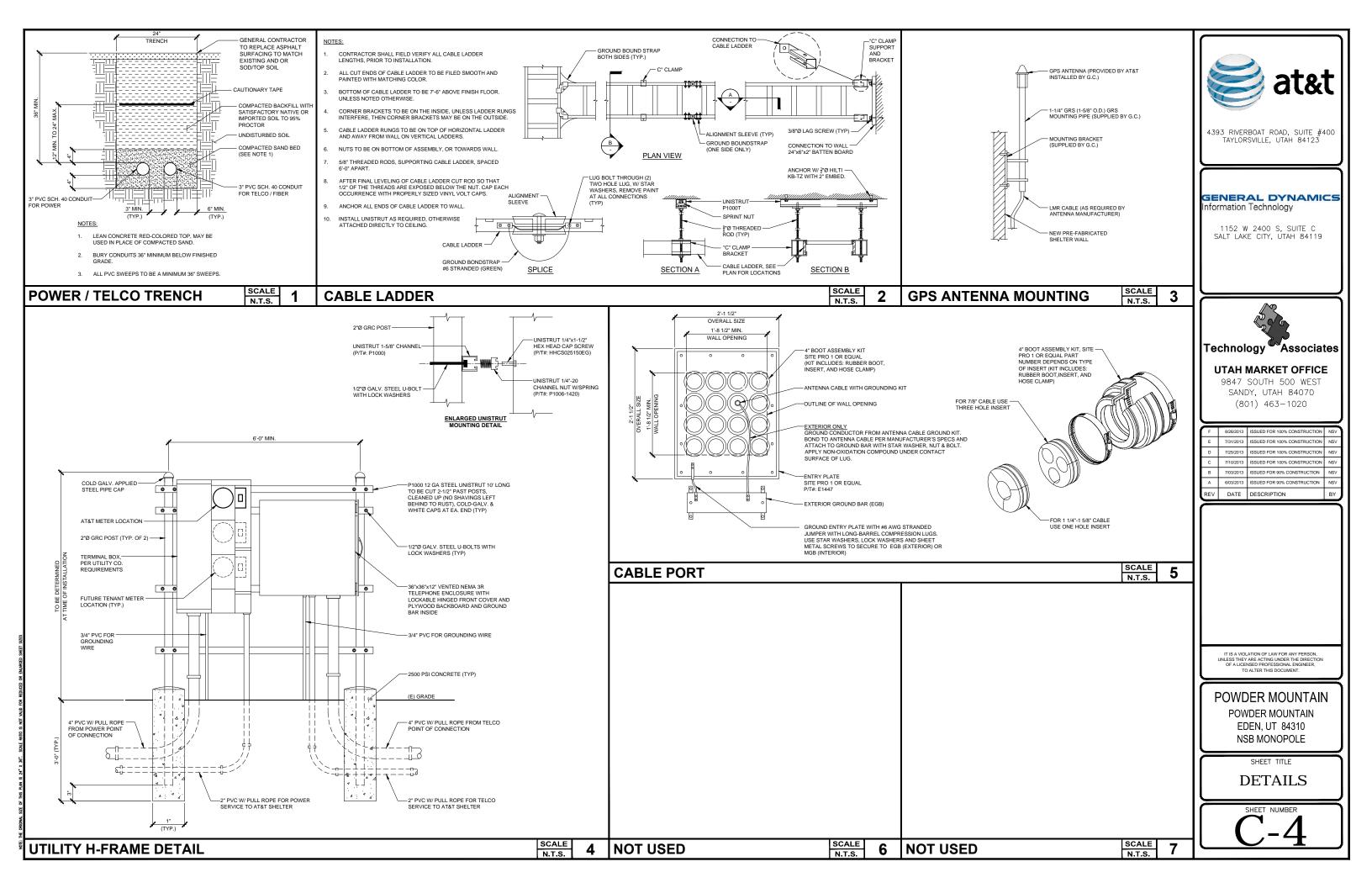
POWDER MOUNTAIN

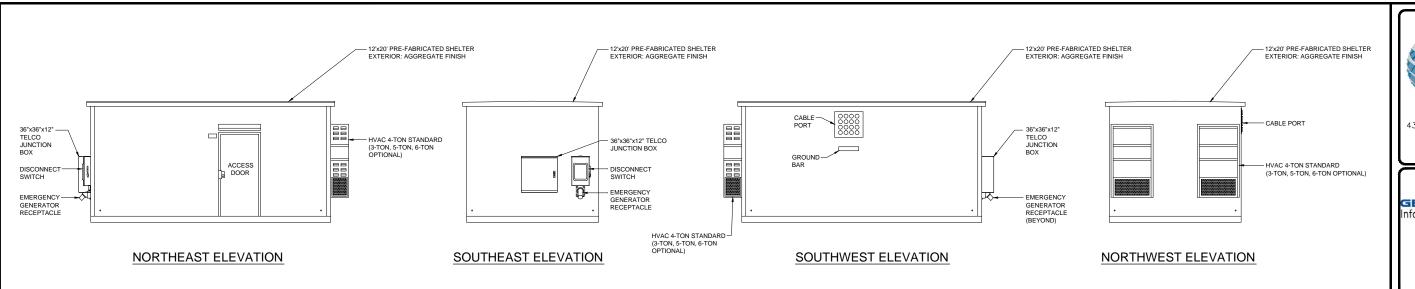
POWDER MOUNTAIN EDEN, UT 84310 NSB MONOPOLE

SHEET TITLE
SOUTHWEST
& SOUTHEAST
ELEVATIONS

SHEET NUMBER

0 2' 4' 8' SCALE: 1/8" = 1'-0" (24x36) (OR) 1/16" = 1'-0" (11x17)





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Technology ***Associates

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Α	6/03/2013	ISSUED FOR 90% CONSTRUCTION	NSV
REV	DATE	DESCRIPTION	BY

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

POWDER MOUNTAIN

POWDER MOUNTAIN EDEN, UT 84310 NSB MONOPOLE

SHEET TITLE

DETAILS

SHEET NUMBER

SHELTER ELEVATIONS N.T.S.

NOT USED

SCALE N.T.S.

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ELECTRICAL NOTES

- WIRING SHALL BE AWG COPPER WITH THHN/THWN OR FOUIVALENT INSULATION, #12 MINIMUM INSTALLED IN 3/4" MINIMUM RACEWAY, SIGNAL WIRING SHALL BE INSULATED #22 AWG, NO BX OR ROMEX CABLE IS PERMITTED. RACEWAY SHALL BE SURFACE MOUNTED.
- WIRING DEVICES AND EQUIPMENT SHALL BE UL LISTED SPECIFICATION GRADE.
- MATERIALS SHALL BE NEW AND CONFORM TO THE APPLICABLE STANDARDS ESTABLISHED FOR EACH ITEM BY THE ORGANIZATIONS USED BELOW

 - I TEM BY THE ORGANIZATIONS USED BELOW.

 -AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)

 -UNDERWRITER'S LABORATORY (UL)

 -NATIONAL ELECTRICAL MANUFACTURING ASSOCIATION (NEMA)

 -AMERICAN STANDARDS ASSOCIATION (ASA)

 -NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
- INSTALLATION OF MATERIALS SHALL COMPLY WITH CURRENT REGULATIONS ADOPTED BY LOCAL
- JURISDICTION INCLUDING BUT NOT LIMITED TO:

 -THE NATIONAL ELECTRICAL CODE (NFPA 70)

 -THE NATIONAL ELECTRICAL CODE (NFPA 70)

 -THE NATIONAL ELECTRICAL SAFETY CODE (ANSI C-2)

 -THE LIFE SAFETY CODE (NFPA 101)
- -LOCAL BUILDING CODES

ELECTRICAL NOTES

ONE-LINE DIAGRAM

- THE ENTIRE SYSTEM SHALL BE SOLIDLY GROUNDED USING LOCKNUTS AND BONDING NUTS ON CONDUITS AND PROPERLY BONDED GROUND CONDUCTOR. RECEPTACLES AND EQUIPMENT BRANCH CIRCUITS SHALL BE GROUNDED WITH A FULL-SIZED EQUIPMENT GROUNDING CONDUCTOR RUN IN THE CIRCUIT'S CONDUIT.
- OUTLET AND JUNCTION BOXES SHALL BE HOT DIPPED GALVANIZED, ZINC-COATED, OR CADMIUM PLATED STEEL NOT LESS THAN 4" SQUARE AND SUITABLE FOR THE TYPE SERVICE AND OUTLET. OUTLET AND JUNCTION BOXES SHALL BE SURFACE MOUNTED AND LABELED WITH BRANCH CIRCUIT BREAKER NUMBER.
- LABEL ALL EQUIPMENT SERVED FROM AT&T PANEL BOARD WITH LABELS SIZED IN
- OUTDOOR CONDUCTORS ABOVE GROUND SHALL BE INSTALLED IN RIGID GALVANIZED STEEL OR INTERMEDIATE METAL CONDUIT UNLESS NOTED OTHERWISE. HORIZONTAL OUTDOOR CONDUCTORS BELOW GRADE SHALL BE INSTALLED IN RIGID SCHEDULE 40 PVC.
- CONTRACTOR TO PROVIDE AND INSTALL ENGRAVED LABEL WITH 1/2" MINIMUM LETTERS ON THE AT&T METER SOCKET ENCLOSURE.

SYMBOLS

 \boxtimes GROUND ROD WITH ACCESS \otimes GROUND ROD

M UTILITY METER

CIRCUIT BREAKER

FUSE

© GENERATOR LIGHT SWITCH

COMPRESSION, CLAMP, OR DOUBLE HOLE LUG TYPE GROUND CONNECTION EXOTHERMIC CONNECTION (CADWELD) TO GROUND RING AND COMPRESSION TO GROUND HALO **GROUNDING WIRE, DASHED LINE INDICATES**

DETAIL NO.2 ON SHEET E3

TELEPHONE LINE, DASHED LINE INDICATES UNDERGROUND COAXIAL CABLE, DASHED LINE INDICATES UNDERGROUND

ANTENNA COAX DETAIL REFERENCE

ABBREVIATIONS

ACCA AWG BTCW ANTENNA CABLE COVER ASSEMBLY AMERICAN WIRE GAUGE BARE TINNED COPPER WIRE CIGBE COAX INSULATED GROUND BAR EXTERNAL DRAWING NEW OR EX. GEN GFI EXISTING S.L.D. GROUND FAULT CIRCUIT INTERUPTER TMLP GLOBAL POSITIONING SYSTEM

INTERIOR GROUND RING (HALO)
MASTER ISOLATED GROUND BAR NEW (PROVIDE AND INSTALL PERSONAL COMMUNICATION SERVICE POWER PROTECTION CABINET PRIMARY RADIO CABINET POLYVINYL CHLORIDE CONDUIT
RIGID GALVANIZED STEEL RACEWAY SINGLE LINE DIAGRAM VERIZON WIRELESS LIMITED PARTNERSHIP TELEPHONE

WEATHERPROOF EQUIPMENT

SCALE

N.T.S.

SCALE

N.T.S.

4393 RIVERBOAT ROAD, SUITE #400 TAYLORSVILLE, UTAH 84123

GENERAL DYNAMICS

formation Technology

1152 W 2400 S, SUITE C SALT LAKE CITY, UTAH 84119



SANDY, UTAH 84070 (801) 463-1020

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UTAH MARKET OFFICE 9847 SOUTH 500 WEST

TO ALTER THIS DOCUMENT.

POWDER MOUNTAIN

POWDER MOUNTAIN EDEN. UT 84310 NSB MONOPOLE

SHEET TITLE

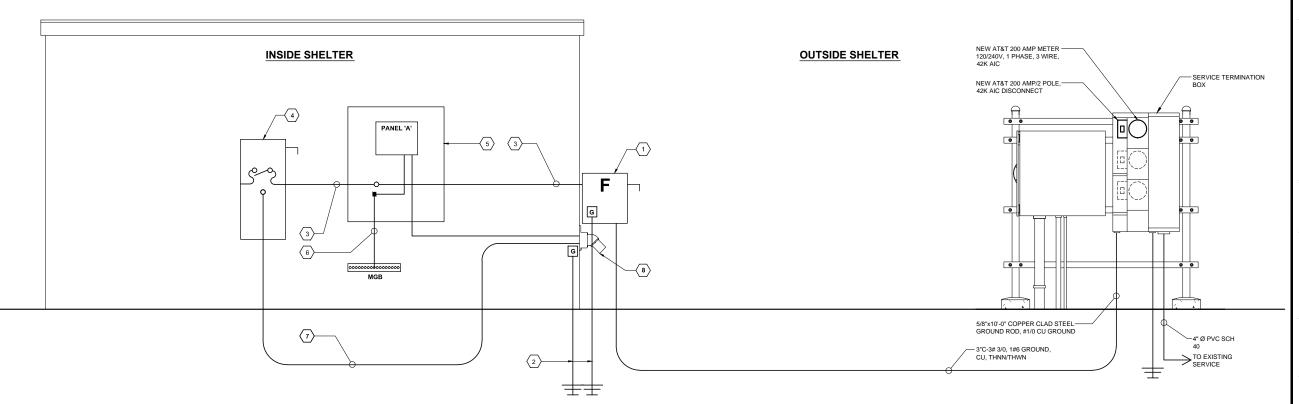
ELECTRICAL NOTES & ONE-LINE DIAGRAM

SHEET NUMBER

KEY NOTES:

- NEW 200 AMPHERE, 120/240 VOLT, 2-POLE 3-WIRE, HEAVY DUTY
 FUSED DISCONNECT SWITCH. SIEMENS # SN324 OR SQUARE "D" #H224N,
 NEMA 3R ENCLOSURE, CLASS RKI, 200 AMP FUSES, BUSSMANN TYPE
 LPN-RK, C.L., D.E., T.D.
- NEW 5/8"Ø x 10'-0" COPPER CLAD STEEL GROUND ROD AND #1/0 CU GROUND. BOND TO GROUND GRID.
- (3) NEW 2"C-3#3/0, 1#6 GROUND, CU, THHN/THWN.

- NEW AUTOMATIC TRANSFER SWITCH, GENERAC MODEL #0049402, 200 AMP, 120/240 VOLT, 1-PHASE, 3-WIRE, 2 POLE, 42 KAIC.
- NEW INTEGRATED LOADCENTER (PANEL 'A') WITH 200 AMP/2-POLE. 120/240 VOLT, 42KAIC MANUAL TRANSFER SWITCH PROVIDED BY SHELTER MANUFACTURER.
- 6 NEW 1/2"C 1#2 CU BOND TO MASTER GROUND BAR "MGB"
- NEW 2-1/2"C 3#3/0, 1#6 GROUND, CU, THHN/THWN
- 8 GENERATOR RECEPTACLE
- NEW 1"C 3#10, 1#10 GROUND, CU, THHN/THWN GENERATOR SUPPORT BRANCH CIRCUITS

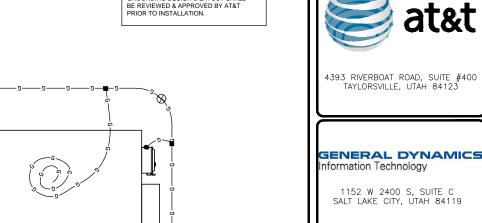


- GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE CURRENTLY IN EFFECT FOR THE AUTHORITY HAVING
- 2. ALL GROUNDING DEVICE SHALL BE U.L. LISTED FOR THEIR INTENDED USE.
- GROUND WIRES SHALL BE TINNED #2 AWG BARE SOLID COPPER UNLESS OTHERWISE NOTED.
- CONNECTIONS OF ALL GROUND WIRES TO THE GROUND RING SHALL BE EXOTHERMIC (CAD-WELDED), UNLESS OTHERWISE NOTED. AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AT&T WIRELESS BROADBAND STANDARDS.
- GROUNDING CONDUCTORS SHALL BE ROUTED ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. WHEN REQUIRED, GROUND LEADS SHALL BE BENT TO A MINIMUM OF 8" RADIUS.
- WHERE GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO THE GROUND RING. INSTALL WIRE IN 3/4* HEAVY WALL LIQUID TIGHT FLEXIBLE CONDUIT FROM CONNECTION POINT TO 5* BELOW GRADE AND SEAL THE TOP WITH SILICONE SEALANT.
- ALL GROUND BARS SHALL BE TINNED, 1/4° COPPER, SECTOR BARS 2°, COLLECTOR AND MGB BARS 4°, OF SUFFICIENT LENGTH TO ACCOMMODATE ALL REQUIRED CONNECTIONS WITHOUT DOUBLING LIGS, AND EACH INSTALLED WITH ISOLATORS. WHEN CONNECTING GROUND BARS (WITHIN 10 FEET OF GRADE) DIRECTLY TO THE GROUND RING, 2 EA. #2 SOLID DOWNLEADS SHALL BE CAD-WELDED TO THE GROUND BAR, 1 AT EACH OPPOSITE BOTTOM CORNER, AND EACH SHALL RUN IN 34" HEAVY WALL LIQUID TIGHT FLEXIBLE CONDUIT FROM GROUND BAR DOWN TO THE GROUND RING, WHEN CONNECTING SECTOR GROUND BARS, DAISY-CHAIN THE GROUND BARS AND RUN 1 EA. #2 AWG STRANDED COPPER WIRE WITH THWN INSULATION FROM THE MIDDLE GROUND BAR TO THE GROUND RING AND CAD-WELD TO THE RING.
- WHEN ATTACHING STRANDED GROUND LEADS TO THE GROUND BARS, 2 HOLE COMPRESSION LUGS SHALL BE USED, PROTECT WITH WEATHERPROOF HEAT SHRINK, AND WITH A THIN COAT OF "KOP'R SHIELD" OR EQUIVALENT PROPERLY APPLIED AND ATTACHED ONLY WITH STAINLESS STEEL
- WHEN GROUNDING EQUIPMENT ENCLOSURES, PANELS, FRAMES, AND OTHER METAL APPARATUS, A #6 AWG STRANDED COPPER WIRE WITH THWN INSULATION SHALL BE ATTACHED UTILIZING A 2 HOLE COMPRESSION TYPE LUG, PROTECTED WITH WEATHERPROOF HEAT A CLEAN AND CORROSION FREE METALLIC SURFACE UTILIZING STAINLESS STEEL SELF-TAPPING SCREWS AS NOTED IN NOTE 10 BELOW.
- 10. PREPARE ALL BONDING SURFACES FOR GROUND CONNECTIONS BY REMOVING ANY AND ALL. PAINT AND CORROSION TO SHINY METAL. FOLLING CAD-WELDED CONNECTIONS TO NON-COPPER SURFACES, APPLY ONE COAT OF ANY ANTI-OXIDIZING PAINT, "COLD GALV" OR EQUIVALENT
- GROUND RODS SHALL BE COPPER-CLAD STEEL 5/8"x10', SPACED NO LESS THAN 10' ON CENTER.
- 12. ALL GROUND SYSTEM CONDUCTORS AND CONDUITS SHALL BE SECURED UTILIZING ONLY NONMETALLIC, NON-CONDUCTIVE, UV RATED CLAMPS,
- WHEN REQUIRED. THE CONTRACTOR SHALL ENGAGE THE SERVICES OF AN INDEPENDENT TESTING FIRM TO VERIFY LITILIZING A MEGGER TEST. THAT THE RESISTANCE TO EARTH OF THE NEW GROUND SYSTEM IS EQUAL TO OR LESS THAN 5 (OHMS). A COPY OF THE COMPLETE TESTING REPORT SHALL BE PROVIDED TO THE AT&T REPRESENTATIVE.
- ALL MATERIALS AND HARDWARE SHALL BR INSTALLED IN A WORKMAN-LIKE MANNER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, AND DEFINED IN NFPA-70 AND APPROVED BY A,H,J,

KEY NOTES:

- 1) UPPER GROUND BAR: EXTEND #2 TINNED CU WIRE TO LOWER GROUND BAR AND MAKE MECHANICAL LUG CONNECTION.
- EXOTHERMIC WELD.
- GROUND OF INTERNAL GROUND RING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING THROUGH 1/2*0 PVC SLEEVE INTO EQUIPMENT SHELTER FOR CONNECTION TO INTERIOR HALO GROUND RING. TYPICAL AT 4 BUILDING CORNERS
- $\begin{tabular}{lll} \hline 4 & $\underline{\mbox{GROUND ROD:}}$ & COPPERCLAD STEEL, 5/8"Ø TEN (10) FEET LONG. \\ \hline \end{tabular}$
- 5 ICE BRIDGE SUPPORT POST GROUNDING: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING TO ALL ICE BRIDGE SUPPORT POSTS AND EXOTHERMIC ALL WELD. EXOTHERMIC ALLY WELD.
- LOWER GROUND BAR: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND UP TO THE GROUND BAR AND MAKE AN EXOTHERMIC WELD AT GROUND RING. UP TO THE GROUND BAR AND MAKE AN EACH TEATH OF THE SECURE GROUND BAR DIRECTLY TO TOWER WITH STAINLESS STEEL
- 8 CELL REFERENCE GROUND BAR: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING UP TO THE CELL REFERENCE GROUND BAR (INSIDE SHELTER) AND MAKE A MECHANICAL COMMISSION. AND MAKE A MECHANICAL CONNECTION.
- TELCO GROUND BAR: EXTEND #2 TINNED CU WIRE FROM BURIED GROUND RING UP TO TELCO GROUND BAR (INSIDE SHELTER) AND MAKE A MECHANICAL CONNECTION.

GROUNDING DESIGN & LAYOUT SHALL



SCALE

N.T.S.



9847 SOUTH 500 WEST SANDY, UTAH 84070 (801) 463-1020

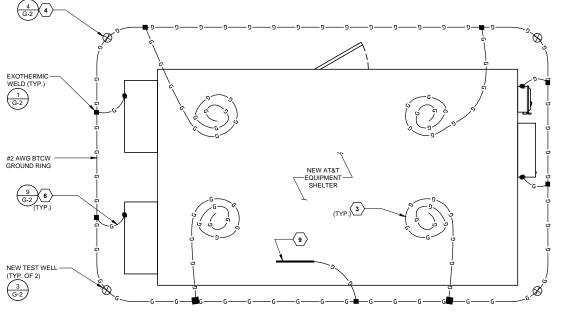
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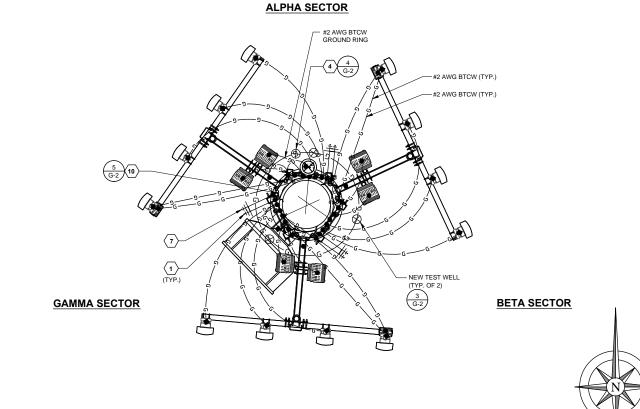
POWDER MOUNTAIN POWDER MOUNTAIN EDEN, UT 84310 NSB MONOPOLE

SHEET TITLE GROUNDING **PLANS**

SHEET NUMBER



EQUIPMENT GROUNDING



NOTES ANTENNA GROUNDING SCALE N.T.S.

