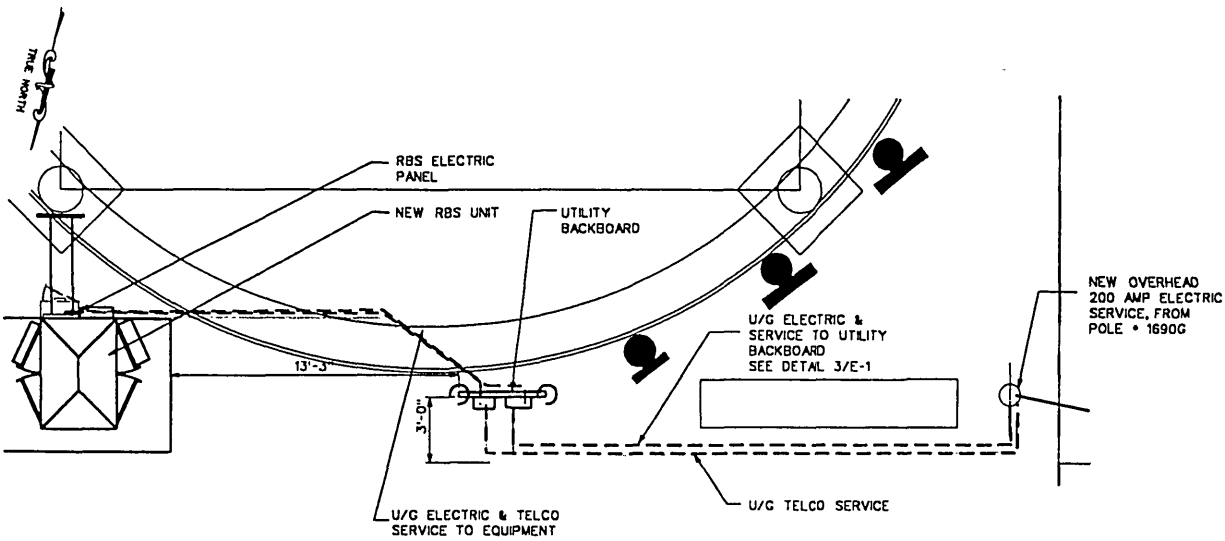
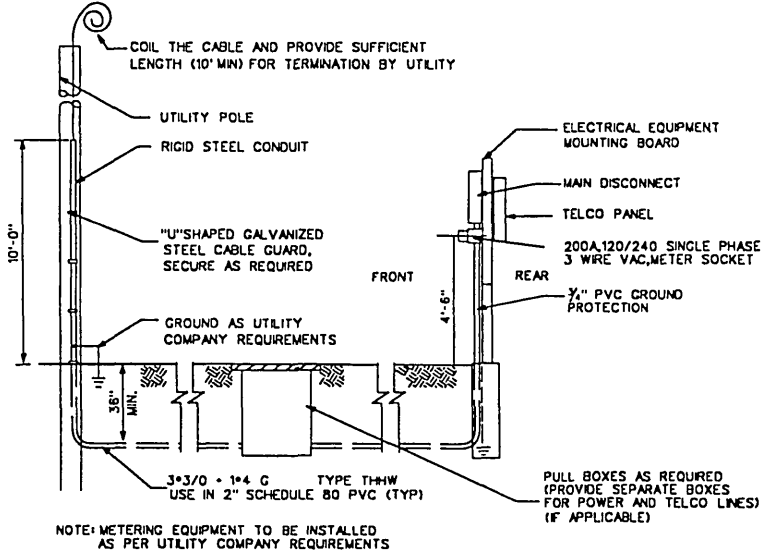


ELECTRICAL NOTES

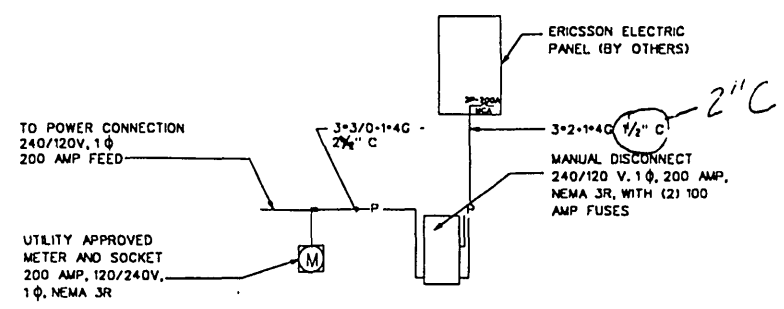
1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONARY CIRCUMSTANCES SURROUNDING THE PROJECT.
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.
9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE-STOPPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. OUTDOOR WALL PENETRATIONS SHALL BE SEALED WATER-TIGHT USING SILICONE SEALANT.
11. LOCATE ALL PENETRATIONS SUCH THAT ALL REINFORCEMENT CONTAINED WITHIN THE EXISTING BUILDING CONSTRUCTION REMAINS INTACT AND UNDISTURBED. SUBMIT LOCATING METHOD TO THE PROJECT MANAGER FOR APPROVAL PRIOR TO EXECUTION.
12. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.
13. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC 110-14(c).
14. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C., OR SHALL WITHSTAND FAULT SHORT CIRCUIT CURRENT ESTABLISHED BY THE UTILITY.
15. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.
16. CONDUIT:
- a. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
- b. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL. FITTINGS SHALL BE CLAMP RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
- c. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
- d. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
- e. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS EXCEPT WHERE PERMITTED BY CODE TO OMT.
17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNOCCUPIED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.
20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.
21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.



1 ELECTRICAL SERVICE PLAN
1/4" = 1'



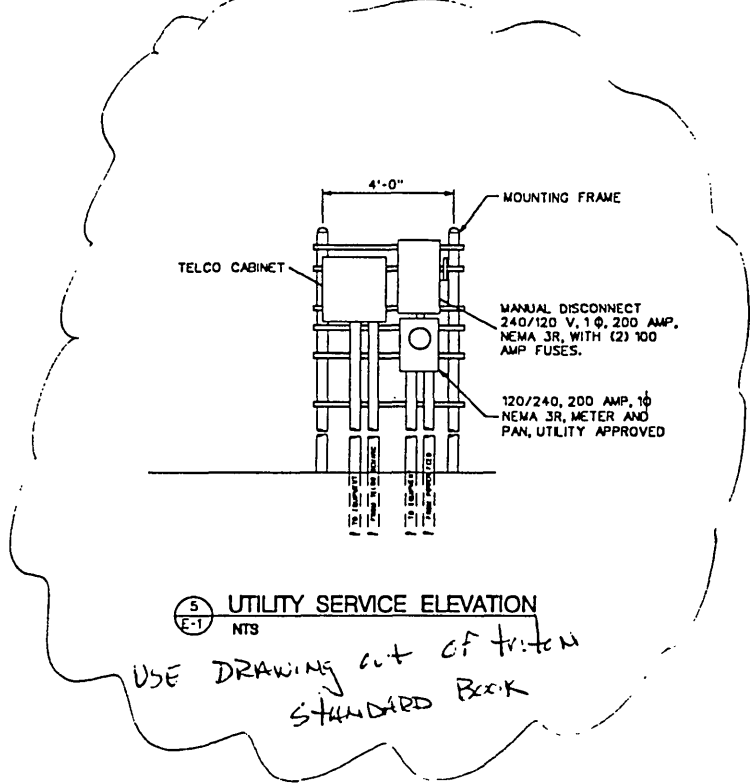
2 ELECTRIC SERVICE ENTRANCE DETAIL
NTS



3 POWER DIAGRAM
NTS

LEGEND

- SAFETY DISCONNECT SWITCH
■ PANEL BOARD
M KILOWATT HOUR METER
T TRANSFORMER
C CIRCUIT BREAKER
M T MANUAL TRANSFER SWITCH
⊕ WEATHERPROOF LIGHT FIXTURE
⊖ WEATHERPROOF LIGHT SWITCH
- ⊙ AC GENERATOR CONNECTOR
⊙ WEATHERPROOF GFIDUPLEX RECEPTACLE
COPPER GROUND BAR 1/4"x4"x12"
• EXOTHERMIC WELD CONNECTION
○ COMPRESSION FITTING GROUND CONNECTION
□ COAXIAL CABLE SHIELD GROUND KIT CONNECTION
⊙ 1/2" x 8" COPPER-CLAD STEEL GROUND ROD W/ INSPECTION WELL
• 1/2" x 8" COPPER-CLAD STEEL GROUND ROD
- G — GROUND
— E — ELECTRIC
— T — TELCO
- A AMPERE
C CONDUIT
E.M.T. ELECTRICAL METALLIC TUBING
G GROUND
GFI GROUND FAULT INTERRUPTING
KWH KILOWATT HOUR
MCB MAIN CIRCUIT BREAKER
MLO MAIN LUGS ONLY
- NF NON-FUSIBLE
P POLE
SN SOLID NEUTRAL
SW SWITCH
V VOLT
W WIRE
CGB COLLECTOR GROUND BAR
MGB MAIN GROUND BAR



5 UTILITY SERVICE ELEVATION
NTS

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CONST. : JIM MOORE
RF : ALBERT LAI
A&E : ROBERT BLASSCYK

SCHEDULE OF REVISIONS		
7		
6		
5		
4	12/7/98	CONSTRUCTION
3	8/7/98	CONSTRUCTION
2	7/27/98	CONSTRUCTION
1	6/29/98	CONSTRUCTION
0	8/5/98	TTV
REV. NO.	DATE	DESCRIPTION OF CHANGES
DRAWN BY: MSD		CHECKED BY: JMT
SCALE: NOTED		JOB NO: 98256
FIRST ISSUE: 6/30/98		PRINT DATE: 12/7/98

APPROVALS

Triton _____
LANDLORD _____
LEASING _____
R.F. _____
ZONING _____
CONSTRUCTION _____
BSE _____

CITY WATER TANK
SITE ID #RO-1405A
REDWOOD ROAD
ROANOKE, VA

DRAWING TITLE:
**ELECTRICAL PLAN,
RISER, DETAILS &
NOTES**

DRAWING SHEET:
E-1

SHEET NO. 6 OF 7

[Signature]
WILLIAM J. DEN, JR., PE
VA PROFESSIONAL ENGINEER LICENSE #10370

SITE #RO-1405A SITE #RO-1405A SITE #RO-1405A SITE #RO-1405A