



ABBREVIATIONS	
TPS	TWISTED PAIR SHIELDED
PA	ONE PA/INTERCOM CABLE
2PA	TWO PA/INTERCOM CABLES
FSS	FUSED SAFETY SWITCH
NFSS	NON-FUSED SAFETY SWITCH
SST	STAINLESS STEEL
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RVSS	REDUCED VOLTAGE SOLID STATE
VFD	VARIABLE FREQUENCY DRIVE
L_O_R	LOCAL_OFF_REMOTE
H_O_A	HAND_OFF_AUTO
MOL	MOTOR OPERATED LOUVER
W.T.	WALK THRU
PCC	POINT OF COMMON COUPLING
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLC-R	REMOTE RACK (FOR PLC)
SP. C.	SPARE CONDUIT
PBU	POLYMER BLENDING UNIT
LCS	LOCAL CONTROL STATION
TTS	TWISTED TRIAD SHIELDED
ATT	AUTO-TRANSFORMER TEMPERATURE SWITCH
LO	LOCK-OUT

EQUIPMENT/DEVICE LOCATION SYMBOLS	
*	LOCATED AT MCC, COMBINATION STARTER, OR BYPASS STARTER
△	LOCATED IN FIELD
○	NOT USED
□	LOCATED AT VFD

MISC PLAN VIEW SYMBOLS	
ⓔ	EQUIPMENT CONNECTION
⊗	GROUND ROD
Ⓢ	CONCRETE ENCASED DUCT BANK IDENTIFIER. # DENOTES NUMBER. SEE DUCT BANK SCHEDULE.
Ⓢ	CONDUIT AND WIRE (SEE LEGEND)
□	INSTRUMENT TRANSMITTER

COMMUNICATIONS	
☎	TELEPHONE AND NETWORK CONNECTION WALLPLATE
☎	PAGER RECEPTACLE
☎	HORN/LIGHT DEVICE

**GENERAL NOTES:**

- UNLESS SPECIFICALLY NOTED OTHERWISE, ALL UNDERGROUND CONCRETE ENCASED ELECTRICAL CONDUITS SHALL BE PER STANDARD DETAIL 1611801.
- THE INSTALLATION OF ALL CONCRETE ENCASED ELECTRICAL CONDUITS SHALL COMPLY WITH ACI 318, SECTION 6.3. CONTRACTOR SHALL SUPPLY EXPANSION JOINT FITTINGS AS REQUIRED FOR THERMAL EXPANSION AND DEFLECTION.
- BOND ALL NEW CONCRETE ENCASED GROUND CONDUCTORS TO EXISTING GROUND CONDUCTORS IN ALL MANHOLES, PULL BOXES, CABLE TRAYS, AND SIMILAR LOCATIONS WHERE APPLICABLE.
- UNLESS OTHERWISE SPECIFIED OR NOTED, ALL WALL MOUNTED ELECTRICAL PANELS, ENCLOSURES, AND SIMILAR EQUIPMENT SHALL BE MOUNTED 6'-6" (MAX) FROM THE TOP OF THE PANEL TO FINISHED FLOOR OR GRADE.
- UNLESS OTHERWISE NOTED, ALL LIGHTING SWITCHES, CONTROL SWITCHES, AND SIMILAR EQUIPMENT SHALL BE MOUNTED WITH THEIR CENTERLINE APPROXIMATELY 4'-0" ABOVE FINISHED FLOOR, SLAB, OR GRADE. THERMOSTATS SHALL BE MOUNTED 4'-4" ABOVE FINISHED FLOOR.
- A SEPARATE EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED FOR EACH CIRCUIT (SEPARATE CONDUCTOR IN THE CONDUIT). THE CONDUCTOR SHALL BE TERMINATED AT THE PROPER DEVICE, TERMINAL OR LUG AT THE POWER SOURCE (MCC GROUND BUS, PANELBOARD GROUND BUS, ETC.). GROUND CONDUCTOR SIZE SHALL BE PER THE LATEST EDITION OF THE NEC.
- UNLESS SPECIFICALLY NOTED OTHERWISE, EXISTING PAVEMENT SHALL BE SAW CUT AND REMOVED TO ALLOW FOR THE INSTALLATION OF NEW ELECTRICAL DUCTBANKS. AFTER INSTALLATION, REPLACE PAVEMENT WITH NEW TO MATCH ORIGINAL CONDITIONS.

				DESIGNED	BRL
				DRAWN	BRL
				CHECKED	
3	RECORD DRAWING	JAN 2006	RLT	PROJ. ENGR.	DAN
2	CONSTRUCTION	JAN 2004	RLT		
1	REGULATORY APPROVAL	NOV 2003	RLT		
NO.	ISSUED FOR	DATE	BY	APPROVED	

THIS DOCUMENT ORIGINALLY ISSUED  
FOR CONSTRUCTION AND SEALED BY  
ROBERT S. DIFIORE, SEAL NO. 22769

**RECORD DRAWING**

THIS DRAWING HAS BEEN MODIFIED TO REFLECT FIELD  
CHANGES REPORTED BY THE CONTRACTOR OR ANOTHER  
PARTY, BUT NOT VERIFIED BY THE CERTIFYING ENGINEER.  
THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY  
GERALD J. RATASKY, 026535. THIS MEDIA SHALL NOT  
BE CONSIDERED A CERTIFIED DOCUMENT.

THIS DOCUMENT ORIGINALLY ISSUED  
FOR CONSTRUCTION AND SEALED BY  
RONALD L. TAYLOR, SEAL NO. 024649

**Hazen and Sawyer**  
Environmental Engineers & Scientists  
4011 WestChase Blvd, Raleigh, North Carolina 27607

**CITY OF ROANOKE  
VIRGINIA**

**REGIONAL WATER POLLUTION CONTROL PLANT  
PROCESS TRAIN IMPROVEMENTS**

**ELECTRICAL  
LEGEND AND GENERAL NOTES**

THE SCALE BAR SHOWN BELOW MEASURES ONE INCH LONG ON THE ORIGINAL DRAWING.	DATE JANUARY 2004 H & S JOB NUMBER 30788C	CONTRACT NUMBER C	DRAWING NUMBER E1
--	---	----------------------	----------------------