

ELECTRICAL GENERAL NOTES

- 1) ALL ELECTRICAL EQUIPMENT AND INSTALLATION WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL MASSACHUSETTS STATE AND LOCAL TOWN BUILDING AND ELECTRICAL CODES APPLICABLE SECTIONS. ALL ELECTRICAL PERMITS AND INSPECTIONS AND ANY ASSOCIATED APPROVAL COSTS SHALL BE OBTAINED AND PAID FOR BY THE ELECTRICAL CONTRACTOR.
- 2) ALL ELECTRICAL MATERIAL SHALL BE OF THE HIGHEST QUALITY SPECIFICATION GRADE AND UL LISTED. THE ELECTRICAL CONTRACTOR SHALL SUBMIT ALL ELECTRICAL MATERIAL SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND ACCEPTABILITY PRIOR TO RELEASE AND INSTALLATION. NO ROUGH WIRING SHOULD BE STARTED UNTIL SPECIFIED WIRING DIAGRAMS HAVE BEEN SUBMITTED AND APPROVED BY THE ENGINEER.
- 3) ALL ELECTRICAL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LOCAL ELECTRICAL INSPECTOR REQUIREMENTS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSPECTOR REQUIREMENTS PRIOR TO ANY ELECTRICAL CONSTRUCTION. ANY MISCOORDINATION REVISIONS SHALL BE PROVIDED BY THE EC AT NO ADDITIONAL COST TO THE OWNER.
- 4) ALL ELECTRICAL CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE SPECIFIED PROJECTS CONSTRUCTION PHASING PLAN. THE ELECTRICAL CONTRACTOR'S WORK INCLUDES TEMPORARY POWER FOR CONSTRUCTION. ALL TEMPORARY POWER SHALL BE TYPED. THE EXISTING FLORENCE SAWYER SCHOOL BLDG. ALL TEMPORARY POWER SHALL BE METERED AND PAID BY THE GENERAL CONTRACTOR.
- 5) ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL HAVE ENGRAVED PLASTIC NAMEPLATES. ALL NEW AND EXISTING PANELBOARDS CIRCUIT DIRECTORIES SHALL BE TYPED. ALL WIRING SHALL BE IDENTIFIED BY ALPHA-NUMERICAL TAGS AND COLOR CODING.
- 6) THE ELECTRICAL CONTRACTOR SHALL PROVIDE "AS-BUILT" ELECTRICAL DRAWINGS AND INTERCONNECTION WIRING DIAGRAMS ELECTRICAL DRAWINGS. THE ELECTRICAL WORK SHALL NOT BE CONSIDERED SUBSTANTIALLY COMPLETE UNTIL ALL ELECTRICAL DRAWINGS HAVE BEEN SUBMITTED AND REVIEWED TO BE ACCEPTABLE BY THE ENGINEER. NO ROUGH WIRING SHALL COMMENCE UNTIL THE INTERCONNECTION WIRING DIAGRAMS HAVE BEEN SUBMITTED AND APPROVED.
- 7) ALL ELECTRICAL POWER CONDUCTORS SHALL BE COPPER WITH INSULATION AS SPECIFIED. THE MINIMUM CONDUCTOR SIZE FOR POWER CIRCUITS SHALL BE NO 12 AWG. RACEWAYS SHALL BE TERMINATED WITH FLEXIBLE RACEWAYS TO EQUIPMENT FOR BOTH VIBRATION ISOLATION AND EQUIPMENT MAINTENANCE.
- 8) ALL ELECTRICAL EQUIPMENT AND WIRING SHALL BE COORDINATED WITH BOTH THE EXISTING AND PROPOSED BUILDING GENERAL/MECHANICAL/ELECTRICAL CONSTRUCTION.
- 9) ALL MATERIAL AND CONSTRUCTION WORK SHALL BE ROUGH AND FINAL INSPECTED BY THE ENGINEER AND TOWN CODE ENFORCEMENT OFFICIALS PRIOR TO ACCEPTANCE AND PAYMENTS. ALL CIRCUITS AND EQUIPMENT SHALL BE VERIFIED FOR PROPER WIRING AND OPERATION. ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL (PARTS AND LABOR) FOR ONE YEAR AFTER FINAL WRITTEN ACCEPTANCE BY THE ENGINEER. EC SHALL FIELD DEMONSTRATE TO THE ENGINEER ALL EQUIPMENT, CONTROLS, ALARMS, ETC PRIOR TO FINAL ACCEPTANCE.
- 10) CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND BUILDING CONDITIONS. ALL "AS-SUPPLIED" ELECTRICAL EQUIPMENT AND WIRING MUST BE FULLY COORDINATED BY THE EC PRIOR TO RELEASE AND INSTALLATION.
- 11) THE EQUIPMENT LAYOUTS, CONDUIT/WIRE SIZES AND WIRING DIAGRAM REPRESENTS A SUGGESTED DESIGN BASED UPON GENERALLY AVAILABLE ELECTRICAL EQUIPMENT SIZES AND WIRING REQUIREMENTS. THIS ALSO APPLIES TO EQUIPMENT PROVIDED BY OTHERS BUT WIRED BY THE ELECTRICAL CONTRACTOR. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE ELECTRICAL CONTRACTOR TO ACCOMMODATE ACTUALLY INSTALLED EQUIPMENT. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL EQUIPMENT WIRING REQUIREMENTS, PRIOR TO ANY CONSTRUCTION. DIFFERING EQUIPMENT LOCATIONS OR WIRING DUE TO INCOMPLETE COORDINATION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AT NO ADDITIONAL COSTS TO THE OWNER.

- 12) CONDUIT AND WIRE AS INDICATED BY THE CONDUIT/WIRE SCHEDULE SHALL BE RGS, IMC OR PVC AS SPECIFIED FOR DIFFERENT AREAS. IN ADDITION, ALL CONDUIT AND WIRE NOT SHOWN INTERCONNECTING THE LIGHTING, RECEPTACLES, LV SYSTEMS AND EQUIPMENT SHALL BE AS SPECIFIED. GENERALLY, THE TYPES OF WIRING PER BUILDING AREA ARE AS FOLLOWS:
IN THE BUILDING AREAS, GENERALLY ALL ELECTRICAL WIRING SHALL BE EXPOSED (UNLESS INDICATED ON THE DRAWINGS) AND NOT CONCEALED WITHIN FLOORS AND WALLS TO ALLOW FOR THE FUTURE CORING OF FLOORS AND WALLS FOR THE INSTALLATION OF NEW WIRING.
A) USE TYPE "PVC-40" RACEWAYS FOR ALL CONCEALED WIRING IN ELECTRICAL UNDERGROUND DUCTBANKS AND CONCRETE FLOORS.
B) USE TYPE "EMT" RACEWAYS FOR ALL INSIDE NEMA "1" BUILDING OR ELECTRICAL ENCLOSURES AREAS.
C) USE TYPE "RGS" RACEWAYS FOR ALL EXTERIOR EXPOSED NEMA "3R" AREAS.
D) USE TYPE "PVC-80" RACEWAYS FOR INSIDE NEMA "4X" PUMP VAULTS.
- 13) CONDUIT AND WIRE NOT SHOWN INTERCONNECTING THE FIRE ALARM, INTRUSION, TELEPHONE, DATA, PUBLIC ADDRESS, CONTROL ROOM ACCESS AND INTRUSION MONITORING SYSTEMS SHALL BE PROVIDED AS INDICATED ON THE SYSTEMS RISER DIAGRAMS AND ASSOCIATED WIRING DETAILS.
- 14) PANELBOARD 3-PHASE BRANCH CIRCUIT HOMERUNS SHALL BE INSTALLED IN RACEWAYS WITH OVERSIZED NO 10 NEUTRALS OR INSTALLED WITH SEPARATE PHASE NEUTRAL CONDUCTORS.
- 15) OUTLET BOXES, SWITCHES, RECEPTACLES, PULL/JUNCTION BOXES, TERMINAL BOXES, ETC. SHALL BE PROVIDED WITH NEMA ENCLOSURES AS FOLLOWS:
A) INTERIOR NEMA "1" LOCATIONS = SHEET GALV STEEL METAL
B) EXTERIOR NEMA "3R" LOCATIONS = CAST GALV IRON METAL *
C) TANKS NEMA "4X" LOCATIONS = PVC/FRP NON-METAL
* OUTDOOR ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE EITHER ALUMINUM OR STAINLESS STEEL.
- 16) ALL WIRING PENETRATIONS THRU FIRE OR SMOKE RATED WALLS AND FLOORS SHALL BE SEALED WITH FIRE/SMOKE UL LISTED STOPPING CAULKING. ALL WIRING CROSSING BUILDING EXPANSION JOINTS SHALL HAVE EXPANSION FITTINGS. FOR LOCATIONS OF FIRE/SMOKE RATED WALLS AND EXPANSION JOINTS REFER TO THE APPLICABLE ARCHITECTURAL AND STRUCTURAL DRAWINGS. ALL FIRE/SMOKE STOPPING SHALL BE FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR.
- 17) ALL EQUIPMENT WIRING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL RECOMMENDED INSTALLATION AND WIRING PRIOR TO ANY ROUGH AND FINAL WIRING TERMINATIONS. ALL ELECTRICAL EQUIPMENT INSTALLATION AND WIRING SHALL BE CERTIFIED BY THE MANUFACTURER'S REPRESENTATIVE PRIOR TO ENERGIZING BY THE ELECTRICAL CONTRACTOR.
- 18) EC'S WORK INCLUDES ALL NECESSARY TECHNICAL ASSISTANCE DURING THE PUMP STATIONS STARTUP AND FIELD TESTING INCLUDING BUT NOT LIMITED TO FIELD MEASURING VOLTAGES, AMPERES, RESISTANCES, ETC. VIA ELECTRICAL METERS PROVIDED BY THE EC.

ELECTRICAL DEMOLITION NOTES

- 1) THE ELECTRICAL DEMOLITION WORK GENERALLY INCLUDES THE ELECTRICAL CONTRACTOR TO PREFORM A FIELD SURVEY OF THE AFFECTED BUILDINGS AND SITE ELECTRICAL SYSTEMS (I.E. - POWER, LIGHTING, TELEPHONE, DATA, I&C, ETC.) IN ORDER TO REVISE AS INDICATED ON THE ELECTRICAL DRAWINGS. THE EC SHALL PROVIDE ALL NECESSARY DEMOLITION /RELOCATION /RECONSTRUCTION OF ALL AFFECTED ELECTRICAL EQUIPMENT AND WIRING. THIS INCLUDES TEMPORARY CONSTRUCTION PWR, ETC NOTE, THERE ARE EXISTING ELECTRICAL DRAWINGS WHICH ARE NOT "AS-BUILT".
- 2) THE ELECTRICAL DEMOLITION WORK SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR IN CO-OPERATION WITH THE OTHER TRADES AND AS SCHEDULED AND APPROVED BY THE GENERAL CONTRACTOR/ENGINEER/TOWN MANAGERS. THE ELECTRICAL DEMO WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE OVER-ALL PROJECT PHASING PLAN. IT SHOULD BE NOTED ONE OF THE FIRST ITEMS IS THE FIELD SURVEY WHICH MUST BE COMPLETED PRIOR TO ANY CONSTRUCTION.
- 3) THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING THE BID TO FAMILIARIZE THE EC WITH THE EXISTING CONDITIONS AND THE EXTENT OF THE WORK. NO EXTRA COMPENSATION WILL BE ALLOWED FOR WORK REQUIRED TO BE PERFORMED OR TO OVERCOME EXISTING CONDITIONS, BY FAILURE TO VISIT THE SITE. COPIES OF AVAILABLE EXISTING ELECTRICAL DRAWINGS WILL BE PROVIDED TO THE EC BY THE PROCESS ENGINEER AFTER CONTRACT AWARD.
- 4) THE ELECTRICAL FIELD SURVEY OF THE EXISTING ELECTRICAL EQUIPMENT AND WIRING SHALL BE DOCUMENTED BY THE EC AND PROVIDED TO THE ENGINEER FOR RECORDS AS PART OF THE ELECTRICAL "AS-BUILT" DRAWINGS. THE EC SHALL KEEP THE EXISTING EQUIPMENT AND SYSTEMS "ON LINE" AS REQUIRED IN THE CONSTRUCTION PHASING CONTRACT REQUIREMENTS. ANY SHUTDOWNS SHALL BE SCHEDULED AND APPROVED BY THE ENGINEER AND TOWN MANAGERS.
- 5) ALL POWER SOURCES FEEDING CIRCUITS OR EQUIPMENT THAT ARE TO BE MODIFIED SHALL BE DISCONNECTED AND "TAGGED OFF" AT THE SOURCE PRIOR TO ANY WORK. ALL EQUIPMENT LOCKOUTS SHALL BE PROVIDED IN STRICT ACCORDANCE WITH ALL APPLICABLE OSHA AND ELECTRICAL LIFE SAFETY CODES REQUIREMENTS.
- 6) ALL DEMOLITION WORK MUST BE COORDINATED WITH THE PROPOSED NEW CONSTRUCTION PER THE ENGINEER'S CONSTRUCTION PHASING PLAN. ALL EXISTING ELECTRICAL SYSTEMS SHALL BE KEPT ON-LINE UNTIL THE NEW ELECTRICAL SYSTEMS ARE COMPLETED AND PUT ON-LINE. ANY AND ALL TEMPORARY EQUIPMENT AND WIRING WHICH IS NECESSARY TO ACCOMPLISH THIS CONTRACT REQUIREMENT SHALL BE FURNISHED AND INSTALLED BY THE EC. ALL TEMPORARY EQUIPMENT AND WIRING SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ITS CONSTRUCTION.
- 7) ALL DEMOLITION WORK MUST BE PROVIDED IN STRICT ACCORDANCE WITH THE MASSACHUSETTS ELECTRICAL CODE, NATIONAL CODES AND ALL LOCAL CODES, AND TO THE APPROVAL OF THE ENGINEER AND OWNER.
- 8) ALL CONFLICTS BETWEEN EXISTING CONCEALED ELECTRICAL WORK AND THE INSTALLATION OF NEW WORK OF ANY TRADE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO PROCEEDING WITH THE NEW WORK. IT SHOULD BE NOTED THAT (PRIOR TO ANY FLOOR OR WALL CORING) THERE ARE EXISTING CONCEALED ELECTRICAL RACEWAYS WHICH MUST BE FIELD TRACED PRIOR AND DE-ENERGIZED PRIOR TO ANY CORING.
- 9) THE LOCATIONS OF EXISTING EQUIPMENT IN THE EXISTING BUILDINGS AND SITE ARE APPROXIMATE ONLY DUE TO LIMITED EXISTING "AS-BUILT" DRAWINGS AND WALK THROUGH INSPECTIONS BY THE ENGINEER. THE EC'S WORK INCLUDES MAKING ANY MINOR ADJUSTMENTS AS REQUIRED DUE TO THE EXISTING FIELD CONDITIONS. THE EC SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING EQUIPMENT AND WIRING BEFORE COMMENCING WORK. THE EC AGREES TO BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THEIR FAILURE TO EXACTLY LOCATE AND PROTECT ANY AND ALL EQUIPMENT INCLUDING ANY CONCEALED SITE UNDERGROUND WIRING.
- 10) ALL POWER OUTAGES CAUSED BY DEMOLITION SHALL BE SCHEDULED WITH THE GENERAL CONTRACTOR AND TOWN MANAGERS. ALL SHUTDOWNS SHALL ALSO BE COORDINATED WITH THE OTHER TRADES. ANY PREMIUM OVERTIME LABOR WHICH IS REQUIRED TO PERFORM ELECTRICAL DEMOLITION WORK OR NEW ELECTRICAL WORK TO MAINTAIN THE EXISTING SYSTEMS SHALL BE CARRIED AS PART OF THE CONTRACT COST. NOTE, THE EXISTING ENGINE/GENERATOR SHALL BE OPERATED TO MAINTAIN THE BUILDING'S LIFE SAFETY DURING THE TAPPING OF THE EXISTING BUILDING SWITCHBOARD.
- 11) THE EC'S WORK ALSO INCLUDES ALL NECESSARY COORDINATION WITH THE AFFECTED UTILITY (I.E. - POWER) DUE TO THE SITE'S INCREASED ELECTRICAL SERVICE LOADS.

ELECTRICAL SYMBOLS

- ⊖ DUPLEX WALL MTD RECEPTACLE
- ☎ TELEPHONE WALL MTD OUTLET
- S TOGGLE SWITCH WALL MTD
- S₂ TWO POLE TOGGLE SWITCH
- ⊕ THERMOSTAT
- ⊖ JUNCTION BOX
- CONDUIT INSTALLED EXPOSED
- CONDUIT INSTALLED CONCEALED
- ~ CONDUIT - FLEXIBLE METAL
- ↻ CONDUIT - TURNING UP
- C-x BRANCH CIRCUIT HOMERUN TO PANELBOARD WITH NO. OF CONDUCTORS AND PNLBD CKT NO. NOTED
- A1 CONDUIT AND WIRE HOMERUN TO EQUIPMENT NOTED WITH CONDUIT NUMBER (REFER TO C&W SCHEDULE)
- A SURFACE MOUNTED LIGHTING FIXTURE WITH TYPE, CKT NO. AND LTG. CONTROL SWITCH NOTED
- ⊙ MOTOR WITH HORSEPOWER RATING NOTED
- ⊖ FUSED DISCONNECT SAFETY SWITCH WITH RATINGS NOTED
- ⊖ UN-FUSED DISCONNECT SAFETY SWITCH WITH RATINGS NOTED
- ⊗ DRIVEN GROUND ROD
CONTROL STATION : FOR TYPES SEE LIST BELOW
"FSOR" = FAST/SLOW/OFF/REMOTE SEL SWITCH
"HOA" = HAND/OFF/AUTO SEL SWITCH
"LOR" = LOCAL/OFF/REMOTE SEL SWITCH
"OCA" = OPEN/CLOSE/AUTO SEL SWITCH
- ⊖ DENOTES DEVICE OR EQUIPMENT WHICH IS RECESSED MOUNTED
- ⊖ DENOTES DEVICE AND EQUIPMENT WHICH IS SURFACE MOUNTED
- FVNR 2g2b 3 COMBINATION MOTOR STARTER WITH CUT BKR AND NEMA STARTER SIZES NOTED TYPES NOTED:
C = CONTACTOR
FVNR = FULL VOLTAGE NON-REVERSING
RVNR = REDUCED VOLTAGE NON-REVERSING
FVTS = FULL VOLTAGE TWO SPEED
3 = NEMA STARTER SIZE
o = NORMALLY OPEN CONTACTS
b = NORMALLY CLOSED CONTACTS
- INDICATING LIGHT - PUSH-TO-TEST TYPE
R = RED
G = GREEN
A = AMBER
- 100/20 THERMAL/MAGNETIC CIRCUIT BREAKER WITH FRAME AND TRIP SIZES NOTED
- 3 MCP MOTOR CIRCUIT PROTECTOR CIRCUIT BREAKER WITH TYPE AND CONTINUOUS RATING NOTED
- LP PANELBOARD - SURFACE MTD WITH TAG NO. NOTED
- ⊖ CURRENT TRANSFORMERS
- ⊖ POTENTIAL TRANSFORMERS
- ⊖ PERSONNEL - EMERGENCY STATION
- ⊖ FIRE DETECTION - SMOKE DETECTOR (120VAC PHOTO-ELECTRIC)
- ⊖ FIRE DETECTION - HEAT DETECTOR
"R" = RATE OF RISE TEMP
"F" = FIXED TEMP
- ⊖ INTRUSION - DOOR SWITCH CONTACT
- ⊖ PRESSURE SWITCH

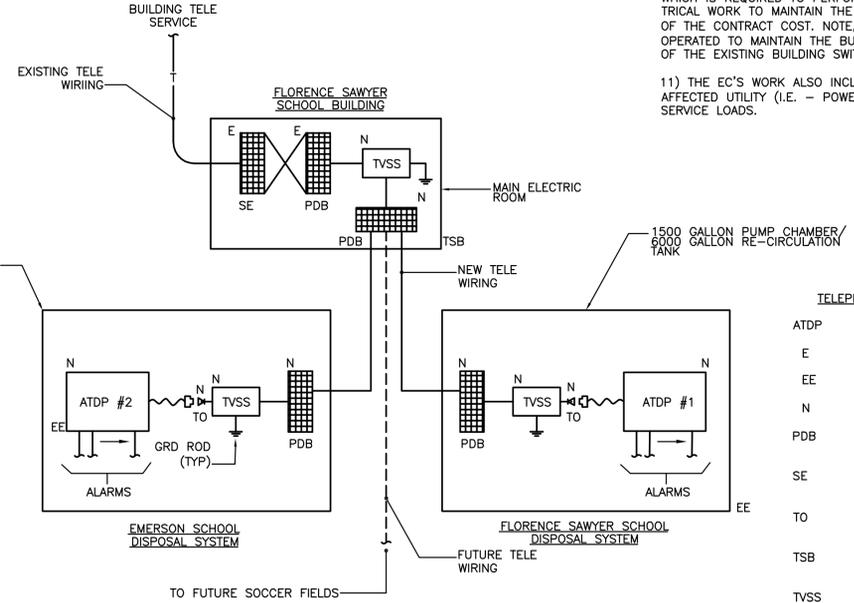
ELECTRICAL ABBREVIATIONS LIST

A	AMPERES	LOR	LOCAL-OFF-REMOTE CTL SWITCH
ACP	ALARMS CONTROL PANEL	LTG	LIGHTING
AF	AMP FRAME	M	MOTOR STARTER CONTACTOR
AFF	ABOVE FINISHED FLOOR	MS	MOTOR STARTER UNIT SEPARATELY MOUNTED
AIC	AMPERES INTERRUPTING CAPACITY	MBS	MANUAL BYPASS SWITCH
AL	ALUMINUM	MCC	MAIN CIRCUIT BREAKER
AMP TRIP		MCC	MOTOR CONTROL CENTER
ATS	AUTOMATIC TRANSFER SWITCH	MCP	MOTOR CIRCUIT PROTECTOR
AUX	AUXILIARY	MTD	MOUNTED
AWG	AMERICAN WIRE GAUGE	NC	NORMALLY CLOSED
C	COUNTER HEIGHT MOUNTED	NEC	NATIONAL ELECTRICAL CODE
CLF	CURRENT LIMITING FUSE	NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
CB	CIRCUIT BREAKER	NIC	NOT IN CONTRACT
CKT	CIRCUIT	NO	NUMBER OR NORMALLY OPEN
CPT	CONTROL POWER TRANSFORMER	NTS	NOT TO SCALE
CR	CONTROL RELAY	OCA	OPEN-CLOSE-AUTO CTL SW
CT	CURRENT TRANSFORMER	OL	OVERLOAD
CTL	CONDUIT WALL SLEEVE	OHE	OVERHEAD ELECTRIC
CWS	DC VOLTAGE POWER SUPPLY	P	POLES
DCPS	EXISTING	PDB	TELEPHONE PUNCHDOWN BLOCK
E	ELECTRICAL CONTRACTOR	PF	POWER FACTOR CORRECTION CAPACITOR
EF	EXHAUST FAN	PH	PHASE
E/G	ENGINE GENERATOR	PLC	PROGRAMMABLE LOGIC CONTROLLER
EM	EXISTING WITH MODIFICATIONS	PNLBD	PANELBOARD
EPB	ELECTRICAL PANELBOARD	PPS	PUMPS
ESP	EMERGENCY STOP PUSHBUTTON	PRR	TELE. PHASE REVERSAL RELAY
EUH	ELECTRIC UNIT HEATER	PS	PRESSURE SWITCH
EST	ELECTRIC SERVICE TRANSFORMER	PSO	PUMP STATION OPERATORS
ETM	ELAPSED TIME METER	PT	POTENTIAL TRANSFORMER
F	FIXED TEMPERATURE	PV	POLYVINYL CHLORIDE CONDUIT
FA	FIRE ALARM	PWR	POWER
FLEX	FLEXIBLE	R	RATE OF RISE TEMPERATURE
FLUOR	FLUORESCENT	RACP	RADIO ALARMS CTL PANEL
FS	FLOAT SWITCH	RF	RADIO FREQUENCY
FSOR	FAST-SLOW-OFF-REMOTE CTL SWITCH	RGS	RIGID GALVANIZED STEEL
G	GROUNDED CABLE	RT	RUNNING TIME METER
GCB	GENERATOR CIRCUIT BREAKER	SP	SPACE SWITCH
GF	GROUND FAULT INTERRUPTER	SW	SWITCH
GRD	GROUND	T	TRANSFORMER
HOA	HAND-OFF-AUTO CTL SWITCH	TAD	TELEPHONE ALARMS DIALER
HP	HORSEPOWER	TD	TIME DELAY RELAY
HVAC	HEATING, VENTILATING AND AIR CONDITIONING	TELE	TELEPHONE
HV	HEATING/VENTILATION	TO	TELEPHONE OUTLET
I&C	INSTRUMENTATION & CONTROL	TRANSF	TRANSFORMER
IMC	INTERMEDIATE METAL CONDUIT	TVSS	TRANSIENT VOLTAGES SURGE SUPPRESSOR
JB	JUNCTION BOX	UL	UNDERWRITERS LABORATORY
KVA	KILO-VOLT AMPERES	UNON	UNLESS OTHERWISE NOTED
KW	KILO-WATTS	V	VOLTS
L	LEVEL	W	WIRE OR WATERTIGHT
LOL	PUMP LOW OIL LEVEL	WP	WEATHERPROOF
		XP	EXPLOSION-PROOF

NOTE, NOT ALL SYMBOLS & ABBREVIATIONS USED FOR PROJECT. PROVIDED FOR GENERAL REFERENCE ONLY.

ANY REFERENCE TO AN ELECTRICAL CONTRACTOR REFERS TO ALL ELECTRICAL MATERIAL AND INSTALLATION AS INDICATED ON THE ELECTRICAL DRAWINGS AND SPECIFICATIONS.

- * 12000 GALLON PUMP CHAMBER, 3000 GALLON PUMP CHAMBER, 6000 GALLON RE-CIRCULATION TANK, 2000 GALLON PUMP CHAMBER (REFER TO SITE PLAN)



TELEPHONE DIAGRAM ABBREVIATIONS

ATDP	ALARMS TELEPHONE DIALER PANEL
E	DENTOES "EXISTING" EQUIPMENT
EE	ELECTRICAL EQUIPMENT ENCLOSURE
N	DENTOES "NEW" EQUIPMENT
PDB	TELEPHONE "DC-110" TYPE PUNCH-DOWN WIRING BLOCKS
SE	TELEPHONE SERVICE ENTRANCE EQUIPMENT FROM UTILITY COMPANY
TO	TELEPHONE MODULAR CAT "3" PLUG-IN OUTLET
TSB	TELEPHONE SERVICE ENTRANCE BOARD WITH EQUIPMENT AND WIRING
TVSS	TELEPHONE ELECTRONIC TYPE TRANSIENT VOLTAGES SURGE SUPPRESSOR

SEWAGE DISPOSAL SYSTEMS ELECTRICAL TELEPHONE BLOCK DIAGRAM NOT TO SCALE

ELECTRICAL DRAWINGS REFERENCE NOTES

- 1) FOR SYMBOLS, ABBREVIATIONS & GENERAL NOTES, REFER TO DWG # E-1.
- 2) FOR ELECTRICAL SITE PLAN & DETAILS, REFER TO DWGS # E-2 & E-3.
- 3) FOR TANKS POWER PLANS AND DETAILS, REFER TO DWG # E-4.
- 4) FOR ELECTRICAL ENCLOSURES PLANS AND DETAILS, REFER TO DWG # E-5.
- 5) FOR PWR AND TELE SYSTEMS RISER DIAGRAMS, REFER TO DWG # E-6.
- 6) FOR ELECTRICAL DETAILS, REFER TO DWG # E-7.
- 7) FOR ELECTRICAL SCHEDULES REFER TO DWG # E-8.
- 8) FOR ELECTRICAL SPECIFICATIONS, REFER TO DWG # E-9.

ELECTRICAL SYMBOLS, ABBREV'S & NOTES		DWG. NO
EMERSON & SAWYER SCHOOLS SEWAGE DISPOSAL SYSTEM 50 MECHANIC ST. BOLTON, MASS		E-1
PREPARED FOR:	TOWN OF BOLTON P.O. 278 BOLTON, MA 01740	TEL: (978) 779-2297 DATE: JANUARY 13, 2005
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