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**SYMBOLS FOR PLANS**

**SYMBOLS FOR TELEPHONE AND DATA COMMUNICATIONS SYSTEM**

**SYMBOLS FOR PERSONNEL ACCESS AND SECURITY SYSTEM**

**SYMBOLS FOR ENERGY MANAGEMENT SYSTEM**

**SYMBOLS FOR GAS DETECTION/SAFETY SYSTEM**

**REFERENCES**

**SYMBOLS FOR SCHEMATIC DIAGRAMS**

SYMBOLS FOR PLANS

SURFACE, RECESSED OR PENDANT MOUNTED INCANDESCENT OR HIGH INTENSITY DISCHARGE LIGHTING FIXTURE

SURFACE, RECESSED OR PENDANT MOUNTED FLUORESCENT LIGHTING FIXTURE

SURFACE, RECESSED OR PENDANT MOUNTED FLUORESCENT LIGHTING FIXTURE WITH EMERGENCY BATTERY

FLUORESCENT FIXTURE. LETTERS DENOTE FIXTURE TYPE. SHADING INDICATES NIGHTLIGHT. NUMERAL INDICATES CIRCUIT NUMBER. SUBSCRIPT CORRESPONDS WITH SIMILARLY IDENTIFIED SWITCH OR MULTI-WAY SWITCH GROUP.

FLUORESCENT FIXTURE, FLUSH IN CEILING. WITH BATTERY/INVERTER BALLAST

FLUORESCENT STRIP FIXTURE

FLUORESCENT FIXTURE, SURFACE MOUNT

WALL MOUNTED HIGH INTENSITY DISCHARGE LIGHTING FIXTURE

STANCHION MOUNTED HIGH INTENSITY DISCHARGE LIGHT FIXTURE

POLE OR POST-TOP MOUNTED LIGHTING UNIT

ROADWAY LIGHTING UNIT

FLOODLIGHT

WALL MOUNTED EXIT LIGHT, EXIT LIGHT SURFACE MOUNTED ON WALL, ARROWS INDICATE DIRECTION

PENDANT MOUNTED EXIT LIGHT, EXIT LIGHT SURFACE MOUNTED ON CEILING, ARROWS INDICATE DIRECTION

WALL MOUNTED EXIT LIGHT WITH INTEGRAL BATTERY OPERATED LIGHTING UNITS, TWO (2) HEADS

BATTERY OPERATED AUXILIARY LIGHTING UNIT MOUNT 7'-8" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED

REMOTE MOUNTED AUXILIARY LIGHTING HEAD MOUNT 7'-8" ABOVE FLOOR

TRACK LIGHTING ASSEMBLY

CONTINUOUS RECEPTACLE PLUGMOLD, MOUNTING HEIGHT AND OUTLETS AS INDICATED

SINGLE POLE SWITCH CONTROLS FIXTURES MARKED "a"

DOUBLE POLE, SINGLE THROW SWITCH CONTROLS FIXTURES MARKED "b"

THREE-WAY SWITCH CONTROLS FIXTURES MARKED "c"

FOUR-WAY SWITCH CONTROLS FIXTURES MARKED "d"

RECEPTACLE - PEDESTAL MOUNTED

RECEPTACLE - PEDESTAL MOUNTED, 240 VOLT AMPERE RATING AS INDICATED ON PLAN

DUPLEX RECEPTACLE (XP = INDICATES EXPLOSION-PROOF)  
DUPLEX RECEPTACLE (WP = INDICATES WEATHER-PROOF)

QUADRUPLEX RECEPTACLE

DUPLEX RECEPTACLE (FLOOR MOUNTED)

QUADRUPLEX RECEPTACLE (FLOOR MOUNTED)

GROUND FAULT INTERRUPTER RECEPTACLE

SINGLE RECEPTACLE

POWER RECEPTACLE

FLOOR MOUNTED RECEPTACLE

LOCAL MOTOR STARTER

CONTROL POWER TRANSFORMER (CPT)

VALVE CONTROLLER

DISCONNECT SWITCH, 30A, UNLESS NOTED OTHERWISE (# = POLES)

FUSED DISCONNECT SWITCH, SIZE AS INDICATED (# = POLES)

AUTOMATIC TRANSFER SWITCH

WALL MOUNTED THERMOSTAT - MOUNTED 5'-0" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED

POWER DISTRIBUTION PANEL OR PANELBOARD, 240 VOLTS AND BELOW.

POWER DISTRIBUTION PANEL OR PANELBOARD, ABOVE 240 VOLTS.

UNIT HEATER

MOTOR OR DEVICE - FOR HORSEPOWER RATING, SEE PANELBOARD SCHEDULE OR MCC SINGLE LINE DIAGRAM

D = DAMPER MOTOR

F = FRACTIONAL HORSEPOWER MOTOR

EES = EYEWASH/ EMERGENCY SHOWER

WELDING RECEPTACLE WITH DISCONNECT

JUNCTION BOX OR PULL BOX. SIZE PER NEC. PJ = POWER JUNCTION BOX. LI = INSTRUMENTATION JUNCTION BOX. LETTERS/NUMERALS INDICATE NEMA TYPE OTHER THAN NEMA 1.

LOCAL CONTROL STATION/LOCAL CONTROL PANEL

EQUIPMENT, ENCLOSURE OR DEVICE

EQUIPMENT, ENCLOSURE OR DEVICE (FUTURE)

EQUIPMENT TO BE DEMOLISHED

GROUND ROD

TEST WELL GROUND ROD

CONNECTION TO GROUNDING ELECTRODE SYSTEM

CONNECTION TO EQUIPMENT GROUND BUS OR FRAME

GROUNDING ELECTRODE CONDUCTOR AND/OR EQUIPMENT GROUNDING CONDUCTOR (UNDERGROUND OR EXPOSED)

**SYMBOLS FOR CONDUIT AND WIRING**

CONDUIT RUNS CONCEALED IN FLOOR, WALL AND UNDERGROUND

CONDUIT RUNS EXPOSED

CONDUIT TURNING UP OR TOWARD OBSERVER

CONDUIT TURNING DOWN OR AWAY FROM OBSERVER

CONDUIT CAPPED

FLEXIBLE CONDUIT

DIRECT BURIAL CABLE

HOMERUN, WIRE AND LOCATION CALLOUT, EXPOSED OR EMBEDDED IN CONCRETE

E - CONDUIT AND CONDUCTORS FOR LV-600V POWER (RUNS CONCEALED IN FLOOR, WALL AND UNDERGROUND)

5KV - CONDUIT AND CONDUCTORS FOR 5KV POWER (RUNS CONCEALED IN FLOOR, WALL AND UNDERGROUND)

HV - CONDUIT AND CONDUCTORS FOR HV-15KV POWER (RUNS CONCEALED IN FLOOR WALL AND UNDERGROUND)

CONDUIT AND CONDUCTORS FOR TELEPHONE COMPANY'S WIRING

ICM - CONDUIT AND CONDUCTORS FOR NETWORK / COMMUNICATION SYSTEM

C - CONDUIT AND CONDUCTORS FOR PROCESS CONTROL SYSTEM

FAS - CONDUIT AND CONDUCTORS FOR FIRE ALARM SYSTEM

CONDUIT AND CONDUCTORS FOR PERSONAL ACCESS AND SECURITY SYSTEMS

MH ELECTRICAL MANHOLE

HH ELECTRICAL HANDHOLE

HH ELECTRICAL/COMMUNICATIONS HANDHOLE

**SYMBOLS FOR TELEPHONE AND DATA COMMUNICATIONS SYSTEM**

TELEPHONE TERMINAL CABINET

TELEPHONE OUTLET, WALL MOUNTED, WIRING AS REQUIRED

DUPLEX (VOICE/DATA) OUTLET

DUPLEX (VOICE/DATA) FLOOR MOUNTED OUTLET

COMPUTER OR DATA OUTLET

TELEVISION SYSTEM OUTLET

**SYMBOLS FOR PERSONNEL ACCESS AND SECURITY SYSTEM**

DPS DOOR POSITION SWITCH

CR CARD READER

TV CLOSED CIRCUIT TELEVISION CAMERA (CCTV)

TELEVISION OUTLET IN WALL. BUSHED HOLE IN PLATE WITH EMPTY 3/4" CONDUIT HOME- RUN TO TELEVISION CABINET, 18" AFF UNLESS OTHERWISE INDICATED

SPEAKER, FLUSH IN CEILING

SPEAKER, WALL MOUNTED 7'-6" AFF

3/4" PLYWOOD BACKBOARD FOR COMPUTER (HEIGHT AND WIDTH AS INDICATED)

3/4" PLYWOOD BACKBOARD FOR TELEPHONE (HEIGHT AND WIDTH AS INDICATED)

**SYMBOLS FOR ENERGY MANAGEMENT SYSTEM**

EMS ENERGY MANAGEMENT SYSTEM PANEL (INCLUDES FACILITIES AND BUILDINGS)

OCCUPANCY CONTROL STATION (INTERFACES WITH LIGHTING AND/OR ENERGY MANAGEMENT CONTROL SYSTEM)

**SYMBOLS FOR GAS DETECTION/SAFETY SYSTEM**

GD GAS DETECTION HORN

LH LOSS OF VENTILATION HORN

BEACON FOR GAS DETECT./LOSS OF VENTILATION

GD GAS DETECTOR

**REFERENCES**

○ DENOTES SECTION NO. OR DETAIL LETTER

○ DENOTES SHEET NO. ON WHICH SECTIONS OR DETAIL IS EITHER SHOWN AND/OR TAKEN

AB 1234 FIELD MOUNTED INSTRUMENT

NO KEYNOTE NUMBER (NO.), (APPLIES ONLY TO SHEET ON WHICH IT APPEARS)

TAG DUCT/BANK OR EQUIPMENT ELEVATION DETAIL OR SECTION (LOOKING IN DIRECTION OF ARROW OR POINTER AS NOTED ON PLAN DRAWING)

**SYMBOLS FOR ONELINE DIAGRAMS**

100AF 15AT

MCP 15

100

100 70

3

2-PTs

3-PTs

CT = CURRENT TRANSFORMER, NUMERAL DENOTES QUANTITY.

CPT = CONTROL POWER TRANSFORMER, DRAWOUT TYPE WITH FUSE. PT = POTENTIAL TRANSFORMER-DRAWOUT TYPE, NUMERAL DENOTES QUANTITY.

CPT = CONTROL POWER TRANSFORMER WITH FUSE. PT = POTENTIAL TRANSFORMER, NUMERAL DENOTES QUANTITY.

MEDIUM VOLTAGE FUSED SWITCH WITH VACUUM CONTACTOR

FUSED DISCONNECT SWITCH DRAWOUT TYPE

CIRCUIT BREAKER DRAWOUT TYPE

TRANSFORMER, KVA SIZE AS NOTED

MEDIUM VOLTAGE VACUUM CIRCUIT BREAKER, DRAWOUT TYPE, ELECTRICALLY OPERATED, STORED-ENERGY TYPE, D.C. CLOSE AND TRIP.

GENERATOR

AM = AMMETER

VM = VOLTMETER

W = WATTMETER

WH = WATT HOUR METER

D = DEMAND METER

EX = EXCITER

FM = FREQUENCY METER

WM = WATT METER

RT = RUNNING TIME METER

TA = TACHOMETER

TG = TACHOMETER GENERATOR

PF = POWER FACTOR METER

VAR = VAR METER

VR = VOLTAGE REGULATOR

KWH = KILOWATT HOUR METER

CLF FUSE-CLF DENOTES CURRENT LIMITING TYPE

R INDICATING LIGHTS: R=RED, B=BLUE, G=GREEN, A=AMBER

E - - - ELECTRICALLY INTERLOCKED

K - - - MECHANICALLY INTERLOCKED

K KEY INTERLOCK

E ELECTRICAL OPERATION

LA CLOSE TRIP FEEDER

LA NORMALLY OPEN CONTACT (DEENERGIZED POSITION)

LA NORMALLY CLOSED CONTACT (DEENERGIZED POSITION)

LA LIGHTNING ARRESTER

SC SURGE CAPACITOR

HP HIK "HIK" DESIGNATION NEXT TO MOTOR INDICATES LOCAL CONTROL STATION FOR HAND SWITCH OPERATION WITH RUNNING AND TROUBLE INDICATORS TO BE PROVIDED. ROUTE 1" TO NEAREST REMOTE INPUT/OUTPUT PANEL FOR DATA AND POWER INTERFACE.

HP HIK SYMBOL INDICATES LOCAL OPERATOR CONTROL STATION REQUIRING 120V POWER AND DATA CONNECTION. ROUTE 1" TO NEAREST REMOTE INPUT/OUTPUT PANEL FOR POWER.

MCP MCP TRIP

FVR FVNR FULL VOLTAGE REVERSING MOTOR STARTER AND CONTROLS

FVR FULL VOLTAGE NON-REVERSING MOTOR STARTER AND CONTROLS

SPACE HEATER

CONTROL TRANSFORMER CONTROLLER

VFD VARIABLE FREQUENCY DRIVE

RVSS SOLID STATE REDUCED VOLTAGE STARTER

\*\*\*\*\* AVAILABLE SHORT CIRCUIT CURRENT, RMS SYMMETRICAL MOMENTARY VALUE

UPS UNINTERRUPTIBLE POWER SYSTEM, KVA RATING/ INPUT VOLTAGE - OUTPUT VOLTAGE, PHASE

D OVERHEAD DOOR OPERATOR COMPLETE WITH WIRING TO PUSHBUTTONS, LIMIT SWITCHES AND OTHER ACCESSORIES

M MOTORIZED ACTUATOR

T TRANSFORMER, KVA RATING AS INDICATED ON ONE LINE DIAGRAM

**SYMBOLS FOR SCHEMATIC DIAGRAMS (CONTINUED)**

HEATER OR HEATING ELEMENT

FUSE

CURRENT TRANSFORMER, RATIO AS INDICATED

**SYMBOLS FOR ONELINE DIAGRAMS (CONTINUED)**

SPD SURGE PROTECTIVE DEVICE

VSI VOLTMETER SELECTOR SWITCH

ASI AMMETER SELECTOR SWITCH

CSI CIRCUIT BREAKER CONTROL SWITCH

CTB CURRENT TEST BLOCK

PTB POTENTIAL TEST BLOCK

PQM MICROPROCESSOR-BASED POWER QUALITY MONITORING SYSTEM, INCLUDES DISPLAY, KEYBOARD AND PC.

TS TEST SWITCH

VFD VARIABLE FREQUENCY DRIVE

RVSS REDUCED VOLTAGE SOFT STARTER

MPA MICROPROCESSOR-BASED POWER MONITOR & ANALYZER (GE MULTILIN PQM OR EQUAL)

MPC MICROPROCESSOR-BASED POWER MONITOR & CONTROL

MPD MICROPROCESSOR-BASED POWER MONITOR, DISPLAY, PROTECTION RELAY AND CONTROL

MPR MICROPROCESSOR-BASED PROTECTION RELAY

MPM MICROPROCESSOR-BASED POWER MONITOR & DISPLAY

MPU MOTOR PROTECTION UNIT

MSR MICROPROCESSOR-BASED STATUS RELAY

MTU MICROPROCESSOR-BASED TRIP UNIT (PROTECTION, MONITORING AND COMMUNICATION)

UCP UNIT CONTROL PANEL

**SYMBOLS FOR SCHEMATIC DIAGRAMS**

STATUS INDICATION

FIELD MOUNTED

FRONT PANEL MOUNTED

COMPUTER CONTROL SYSTEM CONFIGURABLE FUNCTION (DISPLAYED ON CRT)

REAR PANEL MOUNTED

COMPUTER CONTROL SYSTEM CONFIGURABLE FUNCTION (NOT DISPLAYED ON CRT)

3 OVERLOADS

ETM ELAPSED TIME METER

PUSHBUTTON

MAINTAINED LOCK-OUT SWITCH

SELECTOR SWITCH, SPST

SWITCH

TIME DELAY PICK-UP

TIME DELAY DROPOUT

LIMIT SWITCH

PRESSURE SWITCH

LEVEL SWITCH

TEMPERATURE SWITCH

FLOW SWITCH

CONTACT

SELECTOR SWITCH, DPST

CAPACITOR

VARIABLE CAPACITOR

RELAY COIL

INDICATING LIGHT, LETTER DENOTES COLOR

ANNUNCIATOR LIGHT

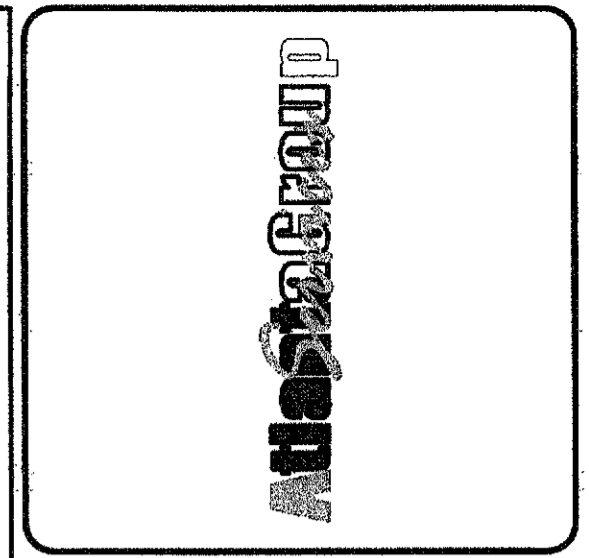
WIRING NOT CONNECTED

WIRING CONNECTED

GROUND CONNECTION

TERMINAL

REMOTE LOCATION



PEACHTREE CREEK SOUTH FORK RELIEF STORAGE AND PUMPING STATION

CITY OF ATLANTA

DEPARTMENT OF WATERSHED MANAGEMENT

REV	DATE	REVISION DESCRIPTION
0	10/28/12	100 PERCENT BID PACKAGE

THIS LINE IS ONE INCH LONG WHEN PLOTTED FULL SCALE

THIS DRAWING MUST BE USED IN CONJUNCTION WITH THE APPLICABLE OR GOVERNING TECHNICAL SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS.

PROJECT NO: FC-6260

DATE: OCTOBER 2012

RESP PROJ: KCV DESIGNER: AWP CHECKER: WFR

SHEET TITLE: ELECTRICAL 00 - GENERAL

LEGEND

SHEET NO. E0-001 REV. 0