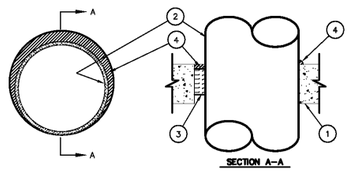
System No. C-AJ-1149
F Rating – 2 Hr
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/sq ft
L Rating At 400 F – 4 CFM/sq ft



SECTION A–A

2HR CONCRETE OR BLOCK FIREWALL DETAIL
N.T.S.

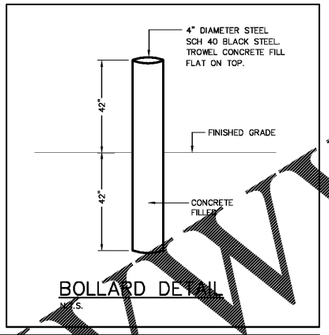
1. **FLOOR OR WALL ASSEMBLY** – MIN 4–1/2 IN. THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100–150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED **CONCRETE BLOCKS** *. MAX DIAM OF OPENING IS 12 IN.
   SEE **CONCRETE BLOCKS** (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
2. **THROUGH PENETRANTS** – ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED WITHIN THE FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE 0 IN. (POINT CONTACT) TO MAX 1–1/4 IN. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:
   A. CONDUIT – NOM 4 IN. DIAM (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.
3. **PACKING MATERIAL** – MIN 3 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FOR NOM 4 IN. DIAM (AND SMALLER) PIPES, CONDUITS OR TUBINGS AND A MIN 4 IN. THICKNESS OF MIN 4 PCF MINERAL WOOL BATT INSULATION FOR PIPE GREATER THAN NOM 4 IN. DIAM, FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.
4. **FILL, VOID OR CAVITY MATERIAL*** – **SEALANT** – MIN 1/2 IN. THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH THE TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL. AT THE POINT OF CONTACT LOCATION BETWEEN PIPE AND CONCRETE, A MIN 1/2 IN. DIAM BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/PIPE INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL.
   HILTI INC – CP601S, CP606 OR FS–ONE SEALANT
   (NOTE: L RATINGS APPLY ONLY WHEN FS–ONE SEALANT IS USED).
   *BEARING THE UL CLASSIFICATION MARKING
5. **INSTALLATION INSTRUCTIONS FOR UL NO. CAJ1149**
   A. **PREPARATION** – ALL SURFACES MUST BE CLEAN, SOUND, DRY AND FROST FREE PRIOR TO APPLICATION OF FIRESTOPPING MATERIALS.
   B. **BACKING MATERIAL** – PACK MINERAL WOOL TIGHTLY AROUND THE PENETRATING ITEM TO THE DEPTH SHOWN IN THE DRAWINGS, AND RECESS IT BELOW THE TOP SURFACE OF THE FLOOR (OR BOTH SURFACES OF A WALL) TO ALLOW PROPER SPACE FOR THE FIRESTOP MATERIAL.
   C. **FIRESTOP SEALANT** – APPLY THE FIRESTOP SEALANT OVER THE BACKING MATERIAL TO THE DEPTH SHOWN. WHEN USING FS 601/604 AND THE PIPE IS OFFSET TO ONE SIDE, APPLY A 1/2" BEAD OF FIRESTOP SEALANT AROUND ITS CIRCUMFERENCE WHERE IT CONTACTS THE WALL OR FLOOR. WALL PENETRATIONS REQUIRE FS 601 ON BOTH SIDES. LEAVE COMPLETED SEAL UNDISTURBED FOR 48 HOURS.

LIGHTING FIXTURE SCHEDULE

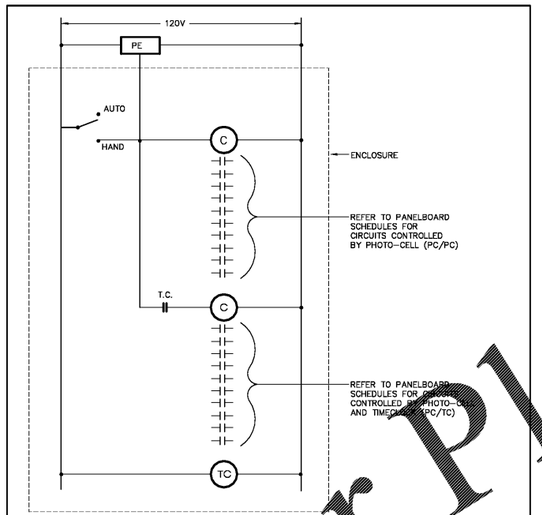
TYPE	LAMPS	MOUNTING	FIXTURE DESCRIPTION	MANUFACTURER'S NAME AND CATALOG NUMBER	INPUT WATTAGE	NOTES
A	FLUORESCENT (2) F32T8	SURFACE STRUCTURE	4–FOOT, 2–LAMP BARE LAMP STRIP. PROVIDE WITH WIREGUARD WHERE NOTED.	H.E. WILLIAMS 76–4–232–E92–UNV (WITH 2G–7611 WHERE SHOWN)	55W	ALL
B	LED INCLUDED	RECESSED CANOPY	6" RECESSED DOWNLIGHT, WET LOCATION UNDER CANOPY, REMOTE DRIVER MOUNTING, 2800 LUMENS, WIDE OPTICS. CLEAR SEMI–SPECULAR REFLECTOR.	JUNO LIGHTING L6–2840–1–G3–L600P–CQ–WET	30W	ALL
C	LED INCLUDED	WALL MTD 8'–6" AFF	QUARTER SPHERE WALL PACK, TYPE 3 OPTICS, 4400 LUMENS, REMOTE DRIVER MOUNTING.	McGRAW EDISON ESS–F02–LED–E1–BL3–BZ (WITH REMOTE BATTERY)	55W	ALL
D	METAL HALIDE (1) 400W PSMH	PENDANT AS DIRECTED	PENDANT MOUNTED METAL HALIDE FIXTURE.	LUMARK MP–DW–400–MT	426W	ALL
E	LED INCLUDED	WALL MTD 8'–0" AFF	DIE CAST ALUMINUM HOUSING, NORMALLY OFF EMERGENCY EGRESS LIGHT. SELF–TEST DIAGNOSTICS, COLD WEATHER HEATER.	CHLORIDE PLEM8Z–HTR	----	ALL
F	LED INCLUDED	WALL MTD 12'–0" AFF	ALUMINUM WALL PACK, TYPE 3 OPTICS, 18,000 LUMENS.	GARDCO LIGHTING 161–3–220LA–9670–NW–UNIV–BRP	210W	ALL
G	FLUORESCENT 8–F32 T8	CHAIN HUNG 12'AFF	EXISTING FLUORESCENT HIGH BAY LIGHTING FIXTURE RELOCATED TO NEW LOCATION SHOWN, CLEAN, RELAMP AND REPAIR AS REQUIRED		320W	
XW	LED INCLUDED	SURFACE WALL MOUNT	LED EXIT SIGN / EGRESS COMBINATION UNIT. THERMOPLASTIC WHITE HOUSING, SELF–TEST DIAGNOSTICS. VERIFY LETTERING COLOR WITH AHJ.	LSI LEPC–R–U–W–SD2	----	ALL

LIGHTING FIXTURE SCHEDULE NOTES:

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF LIGHTING FIXTURES. VERIFY FINISH OF ALL FIXTURES WITH ARCHITECT PRIOR TO ORDERING.
2. FLUORESCENT LIGHT FIXTURES EQUIPPED WITH EMERGENCY BATTERY PACK SHALL OPERATE TWO LAMPS IN FIXTURE UPON LOSS OF NORMAL BUILDING POWER. LIGHT FIXTURE SHALL BE WIRED SO THAT THE FAILURE OF ONE LAMP DURING EMERGENCY MODE OPERATION SHALL NOT CAUSE SECOND LAMP TO FAIL AND PUT FIXTURE IN TOTAL DARKNESS.
3. ALL LINEAR FLUORESCENT FIXTURES SHALL UTILIZE A HOUSING MADE FROM A MINIMUM 22 GAUGE STEEL AND BE PAINTED AFTER FABRICATION WITH NO SHARP EDGES WHETHER SPECIFIED IN THE FIXTURE SCHEDULE OR NOT. THESE FIXTURES UTILIZING A HINGED DOOR SHALL ALSO HAVE SPRING LOADED CAM LATCHES.
4. ALL FLUORESCENT BALLASTS AND EMERGENCY/EXIT FIXTURES SHALL BE "UNIVERSAL VOLTAGE" WITH TAPS FOR 120V AND 277V AND ALL HID BALLASTS SHALL BE "MULTI–TAP" WITH TAPS FOR 120V, 208V, 240V, AND 277V WHETHER SPECIFIED IN THE FIXTURE SCHEDULE OR NOT. WHERE SUCH BALLASTS OR FIXTURES ARE NOT AVAILABLE, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE BALLAST VOLTAGE WITH THE ELECTRICAL PLANS TO ENSURE COMPATABILITY WITH THE DESIGNED ELECTRICAL SYSTEM.
5. ALL LED LAMP TEMPERATURE SHALL BE VERIFIED WITH THE OWNER. LAMPS SHALL BE MANUFACTURED BY SYLVANNIA, PHILIPS, OR G.E. AND SHALL BE MANUFACTURED IN THE U.S.A.

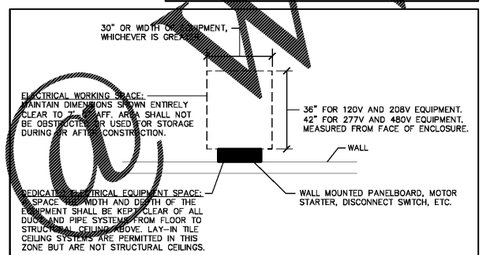


BOLLARD DETAIL
N.T.S.

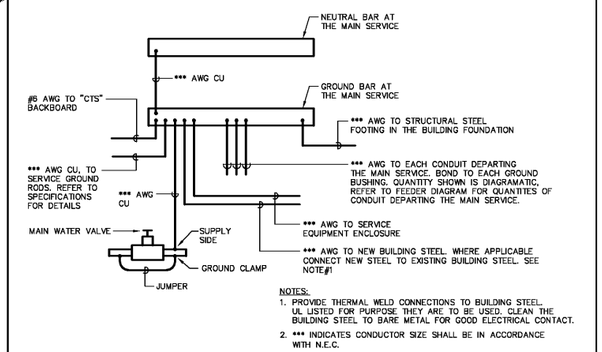


PHOTO–CELL & TIMECLOCK WIRING
N.T.S.

NOTES:
1. AUTO/TEST SWITCH MOUNTED IN FACE OF ENCLOSURE.
2. AUTO/TEST SWITCH SHALL BE CUTLER–HAMMER 10250T20KE WITH ENGRAVED FACEPLATE CUTLER–HAMMER 10250TS39.
3. CONTACTOR SHALL CONTAIN REQUIRED NUMBER OF POLES AS SHOWN ON THE DRAWINGS WITH A MINIMUM OF TWO SPARE CONTACTS. CUTLER–HAMMER CM35 SERIES, TWO POLE CIRCUITS REQUIRE TWO POLE CONTACTOR SPACE. SWITCHING OF ONE LEG ONLY IS NOT ALLOWED FOR TWO POLE CIRCUITS.
4. ENCLOSURE SHALL BE HOFFMAN CO. HINGED COVER, ENCLOSURE MOUNTING SHALL MATCH PANELBOARDS EITHER SURFACE OR RECESSED.
5. POWER FOR CONTACTOR COIL SHALL ORIGINATE FROM SAME PHASE AS THE CIRCUITS CONTROLLED BY THE CONTACTOR.
6. EACH ENCLOSURE SHALL CONTAIN ONLY THE CONTACTORS SERVING CIRCUITS FROM A PANELBOARD. NO ENCLOSURE SHALL CONTAIN CONTACTORS SERVING CIRCUITS FROM TWO DIFFERENT PANELBOARDS.



ELECTRICAL CLEAR SPACE DETAIL
N.T.S.



SERVICE GROUNDING DETAIL
N.T.S.

NOTES:
1. PROVIDE THERMAL WELD CONNECTIONS TO BUILDING STEEL. UL LISTED FOR PURPOSE THEY ARE TO BE USED. CLEAN THE BUILDING STEEL TO BARE METAL FOR GOOD ELECTRICAL CONTACT.
2. *** INDICATES CONDUCTOR SIZE SHALL BE IN ACCORDANCE WITH N.E.C.

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
3 b	**FLUORESCENT OR L.E.D. LIGHTING FIXTURE:** "A" REFERS TO DESIGNATION IN THE LIGHTING FIXTURE SCHEDULE "3" REFERS TO CIRCUIT NUMBER "b" REFERS TO SWITCH CONTROL
3 b NL	**FLUORESCENT OR L.E.D. EMERGENCY LIGHTING FIXTURE:** EQUIPPED WITH BUILT–IN EMERGENCY POWER BATTERY UNITS AND HOT MONITOR LINE TO ALLOW SWITCHING CONTROL. BATTERY SHALL PROVIDE 1400 LUMENS MINIMUM LIGHT OUTPUT IN EMERGENCY MODE. BATTERY UNIT SHALL OPERATE TWO LAMPS IN FIXTURE UPON LOSS OF NORMAL BUILDING POWER. LIGHT FIXTURE SHALL BE WIRED SO THAT THE FAILURE OF ONE LAMP DURING EMERGENCY MODE OPERATION SHALL NOT CAUSE SECOND LAMP TO FAIL AND PUT FIXTURE IN TOTAL DARKNESS.
EM	**EMERGENCY LIGHTING UNIT:** WALL MOUNTED, TWIN HEAD UNIT WITH SELF–CONTAINED BATTERY. PROVIDE UNSWITCHED POWER TO EACH UNIT. 9 WATT LAMPS MINIMUM. WHERE NORMAL LIGHTING IS H.I.D. FURNISH UNIT WITH 15 MINUTE DELAY.
3 ©	**INCANDESCENT, FLUORESCENT, L.E.D. OR H.I.D. LIGHTING FIXTURE:** "C" REFERS TO DESIGNATION IN THE LIGHTING FIXTURE SCHEDULE "b" REFERS TO SWITCH CONTROL "3" REFERS TO CIRCUIT NUMBER
b 3	**LIGHT SWITCH:** WALL MOUNTED 48" AFF, SINGLE POLE UNLESS NOTED. PROVIDE WHITE TAPE LABEL WITH 1/4" HIGH TYPED BLACK LETTERING ON COVERPLATE INDICATING PANELBOARD AND CIRCUIT NUMBER. PROVIDE A NEUTRAL CONDUCTOR TO ALL SWITCH BOXES FOR USE BY WALL OCCUPANCY SENSORS. WIRE–NUT CONDUCTOR IF NOT USED. "b" REFERS TO FIXTURES CONTROLLED BY SWITCH "M" WALL STATION OCCUPANCY SENSOR: SHALL USE BOTH ULTRASONIC AND PASSIVE INFRARED TO DETECT. PROVIDE NEUTRAL CONDUCTOR CONNECTION. SWITCH SHALL NOT GENERATE ANY CURRENT ON THE GROUND CONDUCTOR OR RACEWAY. WATTSTOPPER #DW–100 "3" 3–WAY "4" 4–WAY
X2	**EXIT LIGHT FIXTURE:** WITH BUILT–IN EMERGENCY BATTERY UNIT, ALUMINUM HOUSING, RED LETTERING, LED LAMP SOURCE, DIRECTIONAL ARROWS AS INDICATED. FURNISH WITH SELF–DIAGNOSTICS. "X" CEILING MOUNTED SINGLE FACE "X2" CEILING MOUNTED DOUBLE FACE "XW" WALL MOUNTED SINGLE FACE "W2" WALL MOUNTED DOUBLE FACE
	EXIT LIGHT FIXTURE WITH EMERGENCY LIGHT HEADS: EXIT SIGN WITH BUILT–IN TWIN–HEAD EMERGENCY LIGHT AND SELF–CONTAINED EMERGENCY BATTERY UNIT. THERMOPLASTIC HOUSING, RED LETTERING, LED LAMP SOURCE FOR LETTERING, DIRECTIONAL ARROWS AS INDICATED, SELF–DIAGNOSTICS. SINGLE FACE. TWIN–HEAD LAMPS SHALL BE 9 WATT LAMPS MINIMUM. WHERE NORMAL LIGHTING IS H.I.D. FURNISH UNIT WITH 15 MINUTE DELAY. WALL MOUNTED.
OCS	**CEILING MOUNTED OCCUPANCY SENSOR:** FURNISH AND INSTALL LOW–VOLTAGE OCCUPANCY SENSOR. PROVIDE ALL REQUIRED LOW VOLTAGE WIRING BETWEEN SENSORS AND POWER PACKS. SENSOR SHALL USE DUAL–TECHNOLOGY (INFRARED AND ULTRASONIC) TO DETECT ON A 2000 SQUARE FOOT 360 DEGREE PATTERN. SENSORS SHALL BE WATTSTOPPER #DT–300
OPP	**OCCUPANCY SENSOR POWER PACK:** FURNISH AND INSTALL LOW–VOLTAGE CONTROLLED POWER PACK. UNIT SHALL BE FULLY RATED TO SWITCH 20 AMP BALLAST LOAD. SHALL PROVIDE POWER FOR LOW–VOLTAGE OCCUPANCY SENSORS. UNIT SHALL BE MOUNTED IN AN ACCESSIBLE LOCATION. POWER PACK SHALL BE WATTSTOPPER #BZ–50.
	DUPLEX PLUG RECEPTACLE: 18" AFF, 20A, 120V. PROVIDE WHITE TAPE LABEL WITH 1/4" HIGH TYPED BLACK LETTERING ON COVERPLATE OF RECEPTACLE INDICATING PANELBOARD AND CIRCUIT NUMBER. "T" LOCATE ALONGSIDE TELEVISION OUTLET "CS" INDICATES CHILD SAFETY OUTLET
	COLORED SIDES, SPECIAL MOUNTING HEIGHT IN OR AROUND CASEWORK, SEE ARCHITECTURAL DRAWINGS AND CASEWORK ELEVATIONS
	COLORED CENTER WITH BUILT–IN GROUND FAULT PROTECTION, 44" AFF AT CASEWORK, 18" WEATHER–RESISTANT OUT OF DOORS "WP" WEATHERPROOF IN–USE "EXTRA–DUTY" (UL 5140–2000) COVER AND WEATHER–RESISTANT (UL 498SE) TYPE GFCI DEVICE. "R" INDICATES MOUNTED ON THE ROOF. PROVIDE DEDICATED NEUTRAL FOR EACH CIRCUIT SERVING AN OUTLET.
	QUADPLEX PLUG RECEPTACLE: PROVIDE TWO DUPLEX RECEPTACLES IN A DOUBLE GANG BOX WITH A DOUBLE GANG COVERPLATE. REFER TO RECEPTACLE DESCRIPTIONS ABOVE FOR RECEPTACLE TYPE REQUIRED.
J	**JUNCTION BOX:** FUNCTION, SIZE AND USE AS REQUIRED
	BRANCH CIRCUIT HOMERUN: CONDUIT WITH CONDUCTORS EXTENDED AND CONNECTED TO OVERCURRENT DEVICE(S) NOTED. CROSSLINES INDICATE QUANTITY OF #12 AWG CONDUCTORS WHEN MORE THAN TWO. PROVIDE A DEDICATED NEUTRAL FOR EACH LINE–TO–NEUTRAL CIRCUIT IN A HOMERUN. WHERE ONE NEUTRAL IS PROVIDED FOR A MULTI–CIRCUIT HOMERUN THE CONTRACTOR SHALL PROVIDE DISCONNECTING MEANS FOR EACH CONDUCTOR AS REQUIRED BY THE 2008 NEC. GROUNDING CONDUCTOR IS NOT ILLUSTRATED.
	CONDUIT: SOLID LINE AND CLOSED DOT INDICATE INSTALLED IN WALL OR CEILING SHOWN TURNING DOWN. ALL CONDUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR WHICH IS NOT ILLUSTRATED. BROKEN LINE AND OPEN DOT INDICATE INSTALLED IN FLOOR CONSTRUCTION OR UNDERGROUND SHOWN TURNING UP. ALL CONDUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR WHICH IS NOT ILLUSTRATED.
	POWER PANELBOARD: FLUSH OR SURFACE MOUNTED, TOP 6'–0" AFF. SEE PANELBOARD SCHEDULE FOR SUPPORT INFORMATION.
	DISCONNECT SWITCH: HORSEPOWER RATED, FUSED, HEAVY DUTY "WP" WEATHERPROOF, NEMA 3R OUT OF DOORS
	CONTROLLERS: LOCKABLE MANUAL MOTOR STARTER FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
	ELECTRIC MOTOR CONNECTION: USE FLEXIBLE CONDUIT WITH–IN 18" OF CONNECTION

SYMBOL	DESCRIPTION
"FACP"	**FIRE ALARM CONTROL PANEL:** MOUNT WITH TOP 5'–0" AFF. FURNISH WITH BATTERY BACK–UP AND DIGITAL COMMUNICATOR. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. PROVIDE DEDICATED 20A 120V CIRCUIT. ASSOCIATED CIRCUIT BREAKER DEVICE SHALL BE RED, EQUIPPED WITH A LOCK–ON DEVICE TO PREVENT SHUT–OFF, AND LABELED "FIRE ALARM CIRCUIT."
"FAA"	**FIRE ALARM REMOTE ANNUNCIATOR:** MOUNT WITH TOP 6'–0" AFF. ROUTE 1" CONDUIT TO THE FIRE ALARM PANEL.
F	**MANUAL PULL STATION:** FIRE ALARM SYSTEM MANUAL ACTIVATION DEVICE, MOUNT 48" AFF
FL	**VISUAL SIGNAL:** FIRE ALARM ACTIVATION SIGNAL DEVICE, ADA COMPLIANCE LISTED, MOUNT 80" AFF, MEASURED TO THE BOTTOM OF THE APPLIANCE. ANY DEVIATION FROM 80" MOUNTING HEIGHT SHALL BE COORDINATED WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO ROUGH–IN. ALL DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT UNLESS DIRECTED OTHERWISE. COORDINATE BOX HEIGHT WITH THE FIRE ALARM SUPPLIER PRIOR TO ROUGHING–IN. REFER TO FIRE ALARM SPECIFICATIONS FOR ALL OTHER INFORMATION IN REGARDS TO FIRE ALARM SYSTEM REQUIREMENTS. "cd" INDICATES THE CANDELA RATING. "WP" INDICATES WEATHERPROOF SUITABLE FOR OUTDOOR MOUNTING
FLH	**AUDIBLE/VISUAL SIGNAL: HORN LIGHT** FIRE ALARM SIGNAL ACTIVATION DEVICE, ADA COMPLIANCE LISTED, MOUNT 80" AFF, MEASURED TO THE BOTTOM OF THE APPLIANCE. ANY DEVIATION FROM 80" MOUNTING HEIGHT SHALL BE COORDINATED WITH THE AUTHORITY HAVING JURISDICTION PRIOR TO ROUGH–IN. ALL DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT UNLESS DIRECTED OTHERWISE. COORDINATE BOX HEIGHT WITH THE FIRE ALARM SUPPLIER PRIOR TO ROUGHING–IN. REFER TO FIRE ALARM SPECIFICATIONS FOR ALL OTHER INFORMATION IN REGARDS TO FIRE ALARM SYSTEM REQUIREMENTS. "cd" INDICATES THE CANDELA RATING. "db" INDICATES THE DECIBEL RATING. "WP" INDICATES WEATHERPROOF SUITABLE FOR OUTDOOR MOUNTING
DH	**DUCT MOUNTED SMOKE DETECTOR:** LOCATION AND MOUNTING BY MECHANICAL CONTRACTOR, FIRE ALARM CONNECTION BY ELECTRIC CONTRACTOR. ELECTRICAL CONTRACTORS TO VERIFY EXACT NUMBER OF DETECTORS REQUIRED WITH MECHANICAL AND ELECTRICAL DRAWINGS. PROVIDE ALL FIRE ALARM CONTROL MODULES AS REQUIRED FOR HVAC UNIT SHUT–DOWN UPON ACTIVATION OF THE DUCT SMOKE DETECTOR. PROVIDE FOR EACH DUCT DETECTOR A REMOTE TEST STATION WITH LED INDICATOR. TEST SWITCH SHALL BE LOCATED ON THE WALL 6" BELOW FINISHED CEILING OR 9'–0"AFF WHICHEVER IS LOWER. EACH TEST STATION SHALL BE LABELED SUCH AS "DUCT DETECTOR, SUPPLY, RTU–1". WHERE HVAC UNITS ARE LOCATED IN MECHANICAL ROOMS LOCATE TEST SWITCH IN THAT ROOM, WHERE UNITS ARE LOCATED ABOVE THE CEILING, ROOF MOUNTED, ETC. LOCATE TEST SWITCH AS CLOSE AS POSSIBLE AT THE NEAREST WALL.
SH	**SMOKE DETECTOR:** CEILING MOUNTED ON 4" SQUARE BOX. DETECTORS SHALL NOT BE LOCATED IN THE DIRECT AIRFLOW OR CLOSER THAN 3'–0" TO ANY AIR SUPPLY DIFFUSER OR RETURN AIR OPENING.
HD	**HEAT DETECTOR:** CEILING MOUNTED ON 4" SQUARE BOX. HEAT DETECTOR SHALL BE RATE OF RISE TYPE DETECTOR.
FS	**FLOW SWITCH:** FURNISHED AND INSTALLED BY SPRINKLER CONTRACTOR, CONNECTION TO FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR. VERIFY EXACT NUMBER OF DEVICES WITH THE SPRINKLER CONTRACTOR.
TS	**TAMPER SWITCH:** FURNISHED AND INSTALLED BY SPRINKLER CONTRACTOR, CONNECTION TO FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR. VERIFY EXACT NUMBER OF DEVICES WITH THE SPRINKLER CONTRACTOR.
PIV	**POST INDICATOR VALVE:** FURNISHED AND INSTALLED BY SPRINKLER CONTRACTOR, CONNECTION TO FIRE ALARM SYSTEM BY ELECTRICAL CONTRACTOR
XX 01	**EQUIPMENT NUMBER:** REFER TO SCHEDULES AND EQUIPMENT SUPPLIERS DRAWINGS FOR SUPPORTING INFORMATION
SPD	**SURGE PROTECTIVE DEVICE:** REFER TO SPECIFICATIONS FOR REQUIREMENTS FOR THIS DEVICE. DEVICE MAY BE INTEGRAL OR SURFACE MOUNTED WITH THE ASSOCIATED PANEL IS SURFACE MOUNTED. DEVICE SHALL BE INTEGRAL TO THE PANEL FOR FLUSH MOUNTED PANELS.

NOTES:
1. DEVICES LOCATED ON OPPOSITE SIDES OF FIRE RATED PARTITIONS MUST BE SEPARATED BY A MINIMUM OF 24" HORIZONTAL DISTANCE. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE RATED PARTITIONS. WHERE CONDITIONS PROHIBIT A 24" MINIMUM SEPARATION OF DEVICES, USE FIRESTOP PUTTY PADS, HILTI CP617 SERIES, ON DEVICE BOXES TO MAINTAIN FIRE RATING OF PARTITION. INSTALL PADS PER MANUFACTURER'S SPECIFICATIONS. DEVICE BOXES SHALL NOT BE MOUNTED BACK TO BACK. PRIOR TO INSTALLATION OF PADS, VERIFY METHOD WITH ARCHITECT AND FIRE INSPECTOR.
2. WHERE MORE THAN ONE VISUAL DEVICE (STROBE) IS LOCATED WITHIN AN AREA, ALL VISUAL DEVICES (STROBES) WITHIN THAT AREA SHALL BE SYNCHRONIZED. THIS APPLIES TO ALL AND ANY LOCATIONS WHERE AN INDIVIDUAL CAN SEE MORE THAN ONE DEVICE FROM THE SAME LOCATION FROM WHERE THEY ARE STANDING, SITTING, ETC. PROVIDE ALL REQUIRED SYNCHRONIZED DEVICES, SYNCHRONIZING MODULES ETC. IN ORDER TO ACCOMPLISH THIS FUNCTION. REFER TO FIRE ALARM SPECIFICATIONS FOR ALL OTHER INFORMATION IN REGARD TO FIRE ALARM SYSTEM REQUIREMENTS.
3. ALL CONDUITS SHALL CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR WHICH IS NOT ILLUSTRATED.
4. PRIOR TO LOCATING ANY AND ALL DEVICES AT CASEWORK, COUNTERTOPS ETC., THE CONTRACTOR SHALL REFER TO FINAL ARCHITECTURAL CASEWORK ELEVATIONS AND SHOP DRAWINGS TO VERIFY MOUNTING HEIGHTS AND LOCATIONS. ALL DEVICE LOCATIONS SHALL BE COORDINATED WITH THESE DRAWINGS AND/OR THE ARCHITECT PRIOR TO ROUGH–IN.
5. ALL 120V, 20 AMP CIRCUITS WITH HOMERUNS GREATER THAN 70 FEET SHALL HAVE CIRCUIT CONDUCTORS OF #10AWG AS MINIMUM. ANY 120V, 20 AMP CIRCUIT WITH OUTLETS GREATER THAN 100 FEET OF BRANCH CIRCUIT LENGTH SHALL HAVE MINIMUM CIRCUIT CONDUCTOR OF #10AWG TO ALL OUTLETS AND HOMERUN. ANY 120V, 20 AMP CIRCUIT WITH HOMERUN GREATER THAN 140 FEET SHALL HAVE BRANCH CIRCUIT CONDUCTOR OF #8AWG MINIMUM. PROVIDE ADEQUATE BOX TO SPLICE #12AWG FOR TERMINATION TO DEVICE. LARGER CONDUCTORS MAY REQUIRE THE UTILIZATION OF LARGER CONDUIT SIZES – REFER TO NEC TABLES.
6. PROVIDE A DEDICATED NEUTRAL FOR EACH LINE–TO–NEUTRAL CIRCUIT IN A MULTI–CIRCUIT HOMERUN AS REQUIRED BY THE 2008 NEC.

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Project Name:
GERMANTOWN2

Drawn By:
MWE

Revisions:

No.	DATE	DESCRIPTION

Project Title:

RETAIL SPACE

Poplar Avenue &
Exeter Road

Location:
Germantown, TN

Sheet Contents:
Legend, Schedules & Details

Date:
November 11, 2016

Sheet Number:
E–211