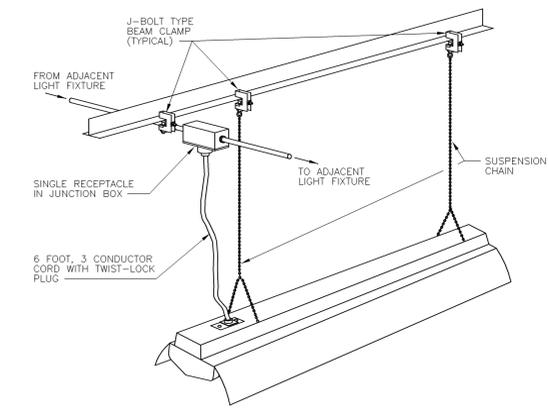


Date (mm dd yyyy)	Issued For	Rev.
12-07-2007	TITLE II DESIGN 30% REVIEW SUBMITAL	C
03-28-2008	TITLE II DESIGN 60% REVIEW SUBMITAL	D
07-31-2008	TITLE II DESIGN 90% REVIEW SUBMITAL	E
08-25-2008	TITLE II DESIGN 100% OWNER REVIEW	F
10-17-2008	TITLE II CONSTRUCTION BID ISSUE	G

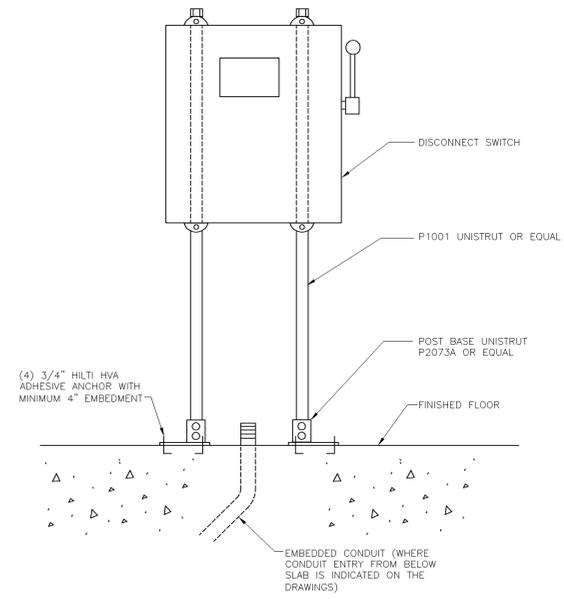
FIXTURE SCHEDULE				
FIXTURE TYPE	DESCRIPTION	VOLTAGE	VA	REMARKS
FAA	4 FOOT INDUSTRIAL FLUORESCENT WITH THREE F48T8L84/HO/ALTO LAMPS, SPRING LOADED LAMP SOCKETS, WHITE PORCELAIN REFLECTOR, 10% UPLIGHT, WIRE GUARD, CHANNEL COUPLINGS AND END CAPS, CORD AND PLUG, FAST BLOW FUSE AND RAPID START ELECTRONIC BALLAST (ONE TWO LAMP BALLAST & ONE ONE LAMP BALLAST).  LITHONIA "AF10" SERIES HUBBELL "CROWN" SERIES COLUMBIA "DYNAMO" SERIES COOPER METALUX "DIM" SERIES	120	98VA 59VA	REFER TO MOUNTING DETAIL "501A" THIS SHEET
FBB	SAME AS "FAA" EXCEPT TWO LAMP BALLAST FOR TWO OUTER LAMPS AND ONE LAMP BALLAST FOR NIGHT LIGHT INNER LAMP. ALSO, PROVIDE 1100 LUMEN EMERGENCY BATTERY PACK FOR INNER LAMP.	120	98VA 59VA	
FCC	4' INDUSTRIAL VAPOR TIGHT FLUORESCENT FIXTURE WITH TWO F28T8/SP41/UMX/ECO LAMPS, FIBERGLASS HOUSING, DR ACRYLIC DIFFUSER, WHITE FINISH, FAST BLOW FUSE, ELECTRONIC BALLAST AND UL APPROVED FOR DAMP LOCATIONS.  LITHONIA DM SERIES COOPER METALUX V12 SERIES COLUMBIA LUN SERIES DAY-BRITE	120	65VA	MOUNT SIMILAR TO DETAIL "501A" THIS SHEET
FDD	SAME AS "FCC" EXCEPT FOR 277 VOLTS.			
FEE	SAME AS "FCC" EXCEPT FOR 277 VOLTS AND WITH EMERGENCY BATTERY PACK AND REMOTE TEST SWITCH.			
FFF	6 INCH APERTURE RECESSED FLUORESCENT DOWNLIGHT WITH ONE F26DBX4/SPX41 LAMP (260T 41K), CLEAR ALZAK REFLECTOR, PRISMATIC LENS, WHITE TRIM PLATE, FOR MOUNTING IN GYPSUM BOARD CEILING, FUSED ELECTRONIC BALLAST AND UL APPROVED FOR WET LOCATIONS.  LITHONIA "LGFV" SERIES COLUMBIA PRESOLITE "CF06" SERIES COOPER HALOX SERIES	120	25VA	
FGG	8 INCH APERTURE RECESSED FLUORESCENT DOWNLIGHT WITH TWO F26DBX4/SPX41 LAMPS (2-260T 41K), CLEAR ALZAK REFLECTOR, WHITE BAFFLE, WHITE TRIM RING, FOR MOUNTING IN GYPSUM BOARD CEILING AND FUSED ELECTRONIC BALLAST.  LITHONIA "AF" SERIES COLUMBIA PRESOLITE "CFR8" SERIES COOPER HALOX "803" SERIES	277	44VA	
FHH	SAME AS TYPE "FGG" EXCEPT WITH EMERGENCY BATTERY PACK AND REMOTE TEST SWITCH.			
FJJ	1' X 4' WALL MOUNTED FLUORESCENT FIXTURE WITH UP AND DOWN LIGHT WITH TWO F28T8/SP41/UMX/ECO LAMPS, STEEL CONSTRUCTION WITH WHITE PAINTED FINISH, #12 PATTERN ACRYLIC LENS, FAST BLOW FUSE AND PROGRAMMED RAPID START ELECTRONIC BALLAST.  LITHONIA "VP" SERIES COLUMBIA "WAL" SERIES COOPER METALUX "BIU" SERIES DAY-BRITE "AZTEC" SERIES	277	65VA	IN TOILETS, MOUNT BOTTOM OF FIXTURE 6 INCHES ABOVE MIRROR
FKK	1' X 4' SURFACE MOUNTED WRAPAROUND FLUORESCENT FIXTURE WITH TWO F28T8/SP41/UMX/ECO LAMPS, ACRYLIC PRISMATIC DIFFUSER, STEEL CONSTRUCTION WITH WHITE PAINTED FINISH, FAST BLOW FUSE AND PROGRAMMED RAPID START ELECTRONIC BALLAST.  LITHONIA "LB" SERIES COLUMBIA "WC" SERIES COOPER METALUX "WS" SERIES DAY-BRITE "CAN" SERIES	277	65VA	
FLL	SAME AS TYPE "FKK" EXCEPT WITH EMERGENCY BATTERY PACK AND REMOTE TEST SWITCH.			
FMM	2' X 4' HIGH BAY SUSPENDED FLUORESCENT FIXTURE WITH SIX F28T8/SP41/UMX/ECO LAMPS, LOW PROFILE, SUITABLE FOR SINGLE OR DUAL POINT MOUNTING, MEDIUM DISTRIBUTION, STEEL CONSTRUCTION WITH UPLIGHT, WIRE GUARD, HIGH GLOSS WHITE BAKED ENAMEL, 93% OR GREATER REFLECTANCE, HIGH LUMEN FUSED ELECTRONIC BALLAST (GE ULTRAMAX OR APPROVED EQUAL W/1.15 TO 1.2 BALLAST FACTOR).  GE "ES" SERIES LITHONIA "FSB" SERIES HOLOPHANE "HB" SERIES	277	196VA 131VA	MOUNT SIMILAR TO DETAIL 501A ON DRAWING E-501
FNN	SAME AS TYPE "FMM" EXCEPT ONE BALLAST FOR TWO INNER LAMPS (NIGHT LIGHT CIRCUIT) AND ONE BALLAST FOR FOUR OUTER LAMPS AND WITH EMERGENCY BATTERY PACK AND REMOTE TEST SWITCH.	277	68VA 131VA	
FOO	4 FOOT INDUSTRIAL FLUORESCENT FIXTURE WITH TWO F28T8/SP41/UMX/ECO LAMPS, SPRING LOADED LAMP SOCKETS WITH PORCELAIN REFLECTOR, 10% UPLIGHT, WIRE GUARD, CHANNEL COUPLINGS AND END CAPS, CORD AND PLUG, FAST BLOW FUSE AND RAPID START ELECTRONIC BALLAST.  LITHONIA "AF10" SERIES HUBBELL "CROWN" SERIES COLUMBIA "DYNAMO" SERIES COOPER METALUX "DIM" SERIES	277	65VA	REFER TO MOUNTING DETAIL "501A" THIS SHEET
FPP	SAME AS TYPE "FOO" EXCEPT WITH EMERGENCY BATTERY PACK AND REMOTE TEST SWITCH.			
HA	FIXTURE FOR BLDG 600C (SHED) DOOR.	120	XXVA	MATCH EXISTING AT EXISTING SHED
HB	STANCHION MOUNTED FIXTURE WITH 1.50" NPT STANCHION MOUNT BRACKET, 150W HIGH PRESSURE SODIUM LAMP, LONG/NARROW REFRACTOR W/WIRE GUARD, GRAY CAST ALUMINUM HOUSING AND FUSED BALLAST.  HOLOPHANE CAT No. PETL 15AMP 12 541 SA F1 PETLWGA	120	190VA	MATCH EXISTING AT EXISTING COOLING TOWER EXCEPT DIFFERENT VOLTAGE

NOTE 2 (TYP)

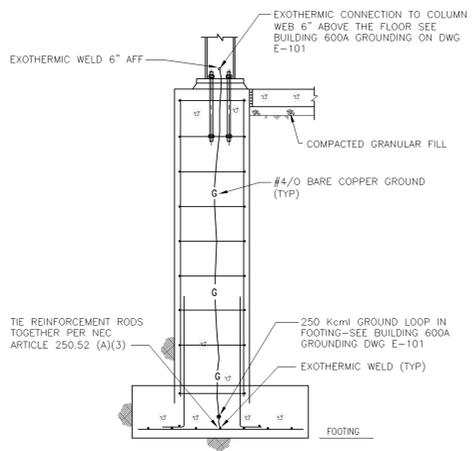
FIXTURE SCHEDULE (CONTINUED)				
FIXTURE TYPE	DESCRIPTION	VOLTAGE	VA	REMARKS
HC	SAME AS TYPE "HB" EXCEPT FOR 277 VOLTS	277	190VA	
HD	WALL MOUNTED WALLPACK, 70 WATT HIGH PRESSURE SODIUM LAMP WITH MOGAL BASE, STANDARD OPTICS, DIE CAST ALUMINUM HOUSING BRONZE IN COLOR, BOROSILICATE GLASS REFRACTOR, HID FUSED BALLAST FOR STARTING DOWN TO -30 DEGREE C, PHOTOCONTROL KIT AND UL APPROVED FOR WET LOCATIONS.  HOLOPHANE CAT No. W4 070HP 27 S Z F1 B	277	95VA	TO MATCH EXISTING BUILDING EXTERIOR FIXTURES
HE	250 WATT HIGH PRESSURE SODIUM POLE MOUNTED FIXTURE, ALUMINUM CANOPY, PRISMATIC GLASS REFLECTOR, GRAY IN COLOR, FUSED BALLAST, WITH 90 DEGREE SHIELD, UL APPROVED FOR WET LOCATIONS AND MOUNTED ON 25 FOOT ROUND TAPERED POLE.  FIXTURE: HOLOPHANE CRESTWOOD SERIES CAT No. CW3A 250HP 27 GR CA CW3A90 POLE: HOLOPHANE CAT No. RTA2570E P4 ND SB	277	300VA	TO MATCH EXISTING ROADWAY LIGHTING FIXTURE AND POLE
XAA	EXIT SIGN WITH BATTERY BACK UP, LIGHT EMITTING DIODES, SINGLE FACE WALL MOUNTED WITH 6" HIGH RED LETTERING, DIRECTIONAL ARROWS AS INDICATED ON THE DRAWINGS, WHITE POLYCARBONATE HOUSING WITH ROUND CORNER STYLING, MAINTENANCE FREE NICKEL CADMIUM BATTERY WITH SELF DIAGNOSTICS.  COOPER SURE-LITES "LPX" SERIES LITHONIA "QUANTUM" SERIES APPROVED EQUAL	277	10VA	MATCH EXISTING IN BUILDING EXCEPT 277 VOLTS
XBB	SAME AS TYPE "XAA" EXCEPT PENDENT MOUNTED.			
XCC	SAME AS TYPE "XAA" EXCEPT PENDENT MOUNTED AND TWO FACES.			



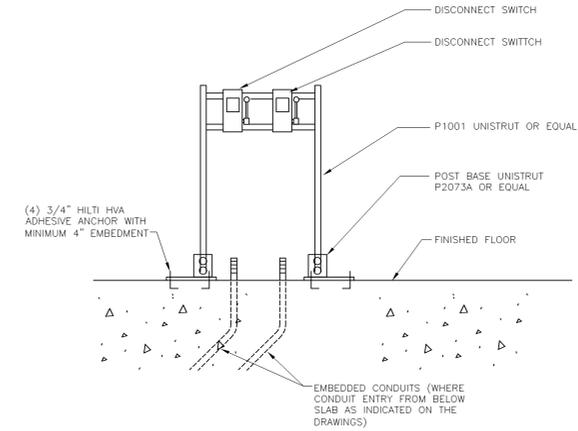
501A TYPICAL INDUSTRIAL FLUORESCENT LUMINAIRE SUSPENSION DETAIL  
E-501 NOT TO SCALE



501B TYPICAL MOUNTING DETAIL FREE STANDING DISCONNECT SWITCH  
EP-400 NTS  
EP-401



501D BUILDING 600A COLUMN GROUNDING DETAIL  
E-101 NTS



501C TYPICAL MOUNTING DETAIL FREE STANDING DISCONNECT SWITCHES  
EP-401 NTS

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This drawing shall not be used for construction purposes until the seal and signature of the responsible registrant appears on the drawing, and proper permit forms and related fees are transmitted by the Owner, Owner's Agent or Contractor to the Authority Having Jurisdiction.

- NOTES:
- REFER TO DRAWING E-001 FOR ELECTRICAL ABBREVIATIONS, GENERAL NOTES AND DRAWING LIST AND DRAWING E-002 FOR ELECTRICAL SYMBOLS.
  - ALL FIXTURES SHALL BE U. L. LISTED.

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Project No.: SF070003

**BROOKHAVEN NATIONAL LABORATORY**

UNDER CONTRACT WITH  
**UNITED STATES DEPARTMENT OF ENERGY**  
PLANT ENGINEERING DIVISION  
UPTON, NEW YORK 11973

JOB TITLE: CENTRAL CHILLED WATER FACILITY PHASE II  
DWG. TITLE: FIXTURE SCHEDULE AND DETAILS

JOB NO.	SHEET NO.	REVISION	DATE	ENL.	APPD.	DLA
SCALE	AS NOTED	DATE	BY	REV'D BY	JOB NO.	11705
ES&H RISK LEVEL	APP'D. BY	R. BARTOY	BLDG. NO.	600		
PATH:						E-501