FIXTURE SCHEDULE NOTES

1. PARKING LOT LUMINAIRES (TYPES 10A, 10B) INDICATED TO BE MOUNTED ON LOW CONCRETE BASE (DETAIL-G, E1.2) SHALL HAVE A 25'-0" HIGH, SQUARE STEEL POLE.
2. WALKWAY LUMINAIRES (TYPE 11) INDICATED TO BE MOUBTED ON LOW CONCRETE BASE (DETAIL H, E-1.2) SHALL HAVE 12'-0" HIGH, ROUND STEEL POLE.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ACTUAL CEILING CONSTRUCTION TYPE AS DEFINED ON THE ARCHITECTURAL DRAWINGS AND FURNISH ALL LIGHTING FIXTURES WITH THE CORRECT MOUNTING DEVICES AND PROPER OPERATING VOLTAGES WHETHER OR NOT SUCH VARIATIONS ARE INDICATED BY THE FIXTURE CATALOG NUMBER.
4. THE CONTRACTOR SHALL VERIFY DEPTH OF ALL RECESSED LIGHTING FIXTURES WITH ARCHITECTURAL DRAWINGS PRIOR TO ORDERING FIXTURES. ANY DISCREPANCIES THAT WOULD CAUSE RECESSED LIGHTING FIXTURES NOT TO FIT INTO CEILING SHALL BE REPORTED TO THE ARCHITECT PRIOR TO ORDERING OF THE FIXTURES.
5. ALL FLUORESCENT AND H.I.D. LIGHTING FIXTURES SHALL HAVE FUSED BALLAST.
6. ALL COMPACT FLUORESCENT DOWNLIGHT FIXTURES SHALL BE PROVIDED WITH ELECTRONIC BALLASTS.
7. OCCUPANCY MOTION SENSOR SYSTEM SHALL BE PROVIDED IN EVERY LOCATION THROUGHOUT THE FACILITY WHERE FLUORESCENT LIGHTING IS UTILIZED PER SPECIFICATION SECTION 16931, WHETHER OR NOT SYMBOLS ARE SHOWN ON PLANS.

SCHOOL ANCHORAGE NOTES

ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR SEISMIC ANCHORED TO RESIST HORIZONTAL FORCES ACTING IN DIRECTION USING THE CRITERIA LISTED TO CONFORM TO C.C.R. TITLE 24, 2001 CBC SECTION 1632A AND TABLE 16A-O.

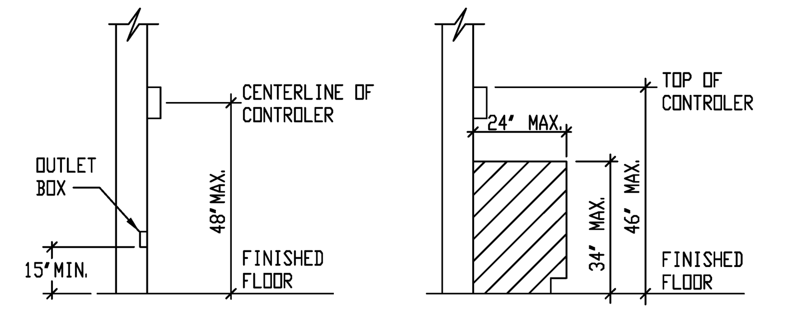
THE VALUES ARE FOR SEISMIC IMPORTANCE FACTOR, I=1.15, AND SEISMIC ZONE FACTOR, Z=0.4.

WHERE ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE ELECTRICAL ENGINEER AND ARCHITECT OF RECORD.

MECHANICAL EQUIPMENT NOTES

1. VERIFY EXACT LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION OF CONDUIT.
2. ALL EQUIPMENT, DEVICES, DISCONNECT SWITCHES, JUNCTION BOXES, CONNECTIONS, ETC. ON ROOF OR OUTSIDE SHALL BE WEATHERPROOF.
3. REFER TO MECHANICAL DRAWINGS CONTROLS DIAGRAMS FOR ALL SENSORS, TIME CLOCKS, RELAYS STARTERS, CONDUIT, LINE AND LOW VOLTAGE WIRING AS REQUIRED. ALL CONTROL WIRING (LOW VOLTAGE) SHALL BE INSTALLED BY THE CONTROLS CONTRACTOR. ALL CONDUITS SHALL BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO MECHANICAL DRAWING M-3 FOR ADDITIONAL REQUIREMENTS. INCLUDE ALL COSTS IN BID FOR A COMPLETE SYSTEM.
4. DISCONNECT SWITCHES SHALL BE HORSEPOWER RATED AND FUSED WITH CURRENT LIMITING/SHAWMUT, SIZED PER MANUFACTURER'S RECOMMENDATION. SWITCHES SHALL HAVE 'RK-1' FUSE REJECTION CLIPS.

MOUNTING HEIGHT OVER OBSTRUCTION



TITLE 24 MANDATORY MEASURES

1. **Building Lighting Shut-off**
The building lighting shut-off system consists of an automatic time switch, with a zone for each floor:
or
The building is separately metered and less than 5,000 square feet; exempt from the shut-off requirement.
2. **Override for Building Lighting Shut-off**
The automatic building shut-off system is provided with a manual accessible override switch in sight of the lights. The area of override is not to exceed 5,000 square feet.
3. **Automatic Control Devices Certified**
All automatic control devices specified are certified, all alternate equipment shall be certified and installed as directed by the manufacturer.
4. **Fluorescent Ballast and Luminaries Certified**
All fluorescent fixtures specified for the project are certified and listed in the Directory. All installed fixtures shall be certified.
5. **Tandem Wiring for Two-Lamp Ballast's**
All one and three lamp fluorescent fixtures are tandem wired with two (2) lamp ballast where required by Standards §132;
or
All three lamp fluorescent fixtures are specified with electronic high-frequency ballast's and are exempt from two-lamp tandem wiring requirements.
6. **Individual Room/Area Controls**
Each room and area in this building is equipped with a separate switch or occupancy sensor device for each area with floor-to-ceiling walls.
7. **Uniform Reduction for Individual Rooms**
All rooms and areas greater than 100 square feet and more than 1.2 watts per square foot of lighting load shall be controlled with Bi-level switching for uniform reduction of lighting within the room.
8. **Daylit Area Control**
All rooms with windows and skylights, that are greater than 250 square feet, and that allow for the effective use of daylight in the area shall have 50% of the lamps in each daylit area controlled by separate switch;
or
The effective use of daylight throughout cannot be accomplished because the window are continuously shaded by a building on the adjacent lot. Diagram of shading during different times of year is included on plans.
9. **Control of Exterior Lights**
Exterior mounted fixtures and served from the electrical panel inside the building are controlled with a directional photo cell control on the roof and a corresponding relay in the electrical panel.

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FIXTURE SCHEDULE

TYPE	DESCRIPTION	TOTAL WATTS	LAMP QUAN	LAMP WATTS	LAMP TYPE	MOUNTING
8	INCANDESCENT TRACK LIGHT WITH BARN DOORS, COLOR FILTERS AND WHITE FINISH; MOUNT ON FOUR CIRCUIT TRACK IN FINISH TO MATCH FIXTURE HEAD. HALO #L3750 (TRACK HEAD) #L1968 (BARN DOORS) #L200 SERIES (FILTERS) #L600 SERIES (TRACK)	150	1	150	PAR38 QUARTZ HAL	TRACK
9	LINEAR TRACK LIGHTING SYSTEM IN MODULES AS INDICATED ON DRAWINGS; COMPLETE WITH CHANNEL, JOINER BLOCKS, PENDANT KIT AND TRACK IN FINISH AS SELECTED BY ARCHITECT; DIRECT/ INDIRECT LIGHTING MODULES; INCANDESCENT TRACK LIGHTING. LIGHTOLIER MULTI-LYTE LIGHTING SYSTEM WITH 'MMC' SERIES MODULES (TWO LAMP) AND 8201 SERIES TRACK HEAD. NO KNOWN EQUAL.		VARIES INDIC. ON DWGS.	32 50 PAR20	SEE SPECS	CABLE
10	METAL HALIDE SHARP CUTOFF PARKING LOT LUMINAIRE WITH EXTRUDED ALUMINUM HOUSING; HORIZONTAL LAMP; ARM MOUNT; IMPACT RESISTANT SEALED AND GASKETED GLASS LENS; TYPE III DISTRIBUTION; SEGMENTED REFLECTOR ASSEMBLY; MOUNT ON 22'-6" HIGH 4" SQUARE STEEL POLE; FIXTURE HEAD, ARM AND POLE FINISH AS SELECTED BY ARCHITECT. GARDCO FORM 10 'EH' SERIES; LITHONIA 'KSF' SERIES; COOPER INVUE 'EXM' SERIES;				MH	22'-6" POLE SEE DETAIL 'G' ON SHEET E-0.2
	TYPE 10A: TWIN HEAD	620	2	250		
	TYPE 10B: SINGLE HEAD	310	1	250		
	TYPE 10C: SIMILAR TO TYPE 10A, EXCEPT WITH HOUSE SHIELD.	310	1	250		
11	METAL HALIDE WALKWAY LUMINAIRE WITH 30" NOMINAL DIAMETER CAST ALUMINUM TOP TEMPERED GLASS LENS; MOUNT ON 12'-0" HIGH ROUND STEEL POLE. FIXTURE HEAD AND POLE FINISH AS SELECTED BY ARCHITECT. LOUIS POULSEN 'KIPP' SERIES WITH POLE #DRA-5'-3"; ARCHITECTURAL AREA LIGHTING 'SLVT' SERIES; COOPER INVUE 'MSA' SERIES. 11B: SIMILAR TO TYPE 11, EXCEPT WITH INJECTION MOLDED WHITE OPAL ACRYLIC CONICAL DIFFUSER WITH 120 DEG. HOUSE SIDE SHIELD.	130	1	100	MH	12'-0" POLE SEE DETAIL 'H' ON SHEET E-1.2
12	COMPACT FLUORESCENT SHARP CUTOFF WALL SCONCE WITH DIECAST ALUMINUM HOUSING IN CUSTOM FINISH AS SELECTED BY ARCHITECT; IMPACT RESISTANT TEMPERED GLASS LENS; WET LOCATION LISTED. GARDCO 110 SERIES OR EQUAL BY LUMARK, LITHONIA	45	1	42	TT 2700K	WALL
13	COMPACT FLUORESCENT LENSED DOWNLIGHT WITH NOMINAL 7" APERTURE; CLEAR POLYCARBONATE LENS; WHITE REFLECTOR AND TRIM RING; METAL TRIM RING PAINTED TO MATCH SURROUNDINGS; ELECTRONIC BALLAST; WET LOCATION LISTED. PORTFOLIO C7142-E-7180W-3 OR APPROVED EQUAL BY LITHONIA, OMEGA	45	1	42	SEE SPECS	RECESSED
14	COMPACT FLUORESCENT LENSED DOWNLIGHT; NOMINAL 8" APERTURE; CLEAR ALZAK REFLECTOR; CLEAR ACRYLIC POLYCARBONATE LENS; TAMPERPROOF SCREWS; ELECTRONIC HIGH POWER FACTOR BALLAST; WET LOCATION LISTED. DESIGN PLAN 'RDL' SERIES	35	1	32	32W TTT 2700K	RECESSED

TYPE	DESCRIPTION	TOTAL WATTS	LAMP QUAN	LAMP WATTS	LAMP TYPE	MOUNTING
1	FLUORESCENT ENCLOSED METAL FIXTURE WITH DIE FORMED 5" DEEP STEEL HOUSING, PAINTED AFTER FABRICATION WITH PHOSPHATE RUST INHIBITOR PRIMER AND WHITE FINISH COAT. 1/4" DEEP REGRESSED WHITE DOOR FRAME, EXTRUDED ALUMINUM WITH MITERED CORNERS AND FULLY GASKETED TO PREVENT LIGHT LEAK. SECURED BY STEEL SAFETY T-HINGE AND SPRING LOADED LATCH FROM EITHER SIDE OF FIXTURE .156" CLEAR ACRYLIC PRISMATIC LENS. DAYBRITE 'DP' SERIES; LITHONIA 'SP' SERIES; METALUX 'GC' SERIES;			32	SEE SPECS	RECESSED
	TYPE 1A: 2'X 4' FIXTURE	64	3			
	TYPE 1B: 2'X 2' FIXTURE	41	2			
	TYPE 1C: 2'X 4' FIXTURE WITH INVERTED LENS	64	3			
	TYPE 1D: 2'X 4' FIXTURE WITH INVERTED LENS	41	2			
	TYPE 1E: SIMILAR TO TYPE '1C' EXCEPT WITH BATTERY BACK-UP	64	3			
2	FLUORESCENT FIXTURE WITH DIE-FORMED 20 GAUGE STEEL HOUSING. RUST INHIBITOR PRIMER AND WHITE FINISH PAINTED AFTER FABRICATION. PRISMATIC ACRYLIC WRAP AROUND DIFFUSER, LENS SECURED WITH TORSION SPRING, HINGED FROM EITHER SIDE OF FIXTURE. DAYBRITE 'DW' SERIES; LITHONIA 'AW' SERIES; METALUX 'SA' SERIES.	41	2	32	SEE SPECS	SURFACE
3	FLUORESCENT 4'-0" STRIP FIXTURE WITH DIE-FORMED 22 GAUGE STEEL HOUSING. PAINTED AFTER FABRICATION WITH PHOSPHATE RUST INHIBITOR PRIMER AND WHITE FINISH COAT. U.L. LISTED SUITABLE FOR DAMP LOCATIONS. 11 GAUGE WIRE GUARD SECURED WITH SIX HINGE CLIPS. DAYBRITE 'HDS' SERIES; LITHONIA 'UN' SERIES; METALUX 'STN' SERIES.	41	2	32	SEE SPECS	SURFACE OR CHAIN HUNG
4	COMPACT FLUORESCENT DOWNLIGHT WITH 8" APERTURE; CLEAR ALZAK SELF FLANGE REFLECTOR; ELECTRONIC BALLAST. PORTFOLIO C7142-E-7111-LI OR APPROVED EQUAL BY LITHONIA, OMEGA	45	1	42	SEE SPECS	RECESSED
5	EXIT SIGN, LED, DIE-CAST ALUMINUM HOUSING (NOMINAL 1 3/4" THICK) WITH BLACK FINISH, HINGED AND LATCHED BRUSHED ALUMINUM STENCIL FACE PLATES, 6" LETTERS WITH 3/4" STROKE, RED DIFFUSER LENS (NO LED IMAGE), SINGLE OR DOUBLE FACE PANEL AND DIRECTIONAL ARROWS) AS SHOWN ON THE DRAWINGS, VANDAL RESISTANT CLEAR POLYCARBONATE SHIELD. TWO CIRCUIT CAPACITY AND DUAL VOLTAGE 120/277 VOLTS. LITHONIA 'LE' SERIES; McPHILBEN '55 LINE' SERIES; SURELITES 'CX' SERIES.	14	N/A	N/A	LED	SURFACE WALL OR CEILING
6	FLUORESCENT 4'-0" VANDAL RESISTANT FIXTURE WITH ALUMINUM HOUSING IN FINISH AS SELECTED BY ARCHITECT; HIGH IMPACT ACRYLIC PEARLESCENT LENS; LENS SECURED WITH CAPTIVE STAINLESS STEEL TAMPER PROOF SCREWS; ELECTRONIC BALLASTS(S). COOPER 'HARMONY VR' SERIES; KENALL 'MILLENIUM STRETCH' SERIES. TYPE 6A: SURFACE MOUNT; SINGLE TYPE 6B: SURFACE MOUNT; CONTINUOUS	41	2	32	SEE SPECS	SURFACE
7	COMPACT FLUORESCENT WALL WASH DOWNLIGHT WITH NOMINAL 8" APERTURE; CLEAR SPECULAR LOW IRRIDESCENT ALZAK SELF FLANGED REFLECTOR; ELECTRONIC BALLAST. PORTFOLIO C7142-E-7111-LI OR APPROVED EQUAL BY LITHONIA, OMEGA	45	1	42	SEE SPECS	SURFACE

ELECTRICAL EQUIPMENT BRACING & ANCHORAGE

ALL ELECTRICAL EQUIPMENT AND CONDUITS SHALL BE INSTALLED WITH SEISMIC RESTRAINTS PER 'GUIDELINES FOR SEISMIC RESTRAINTS OF MECHANICAL SYSTEMS AND PLUMBING SYSTEMS' PUBLISHED BY SMACNA AND APPROVED DSA.

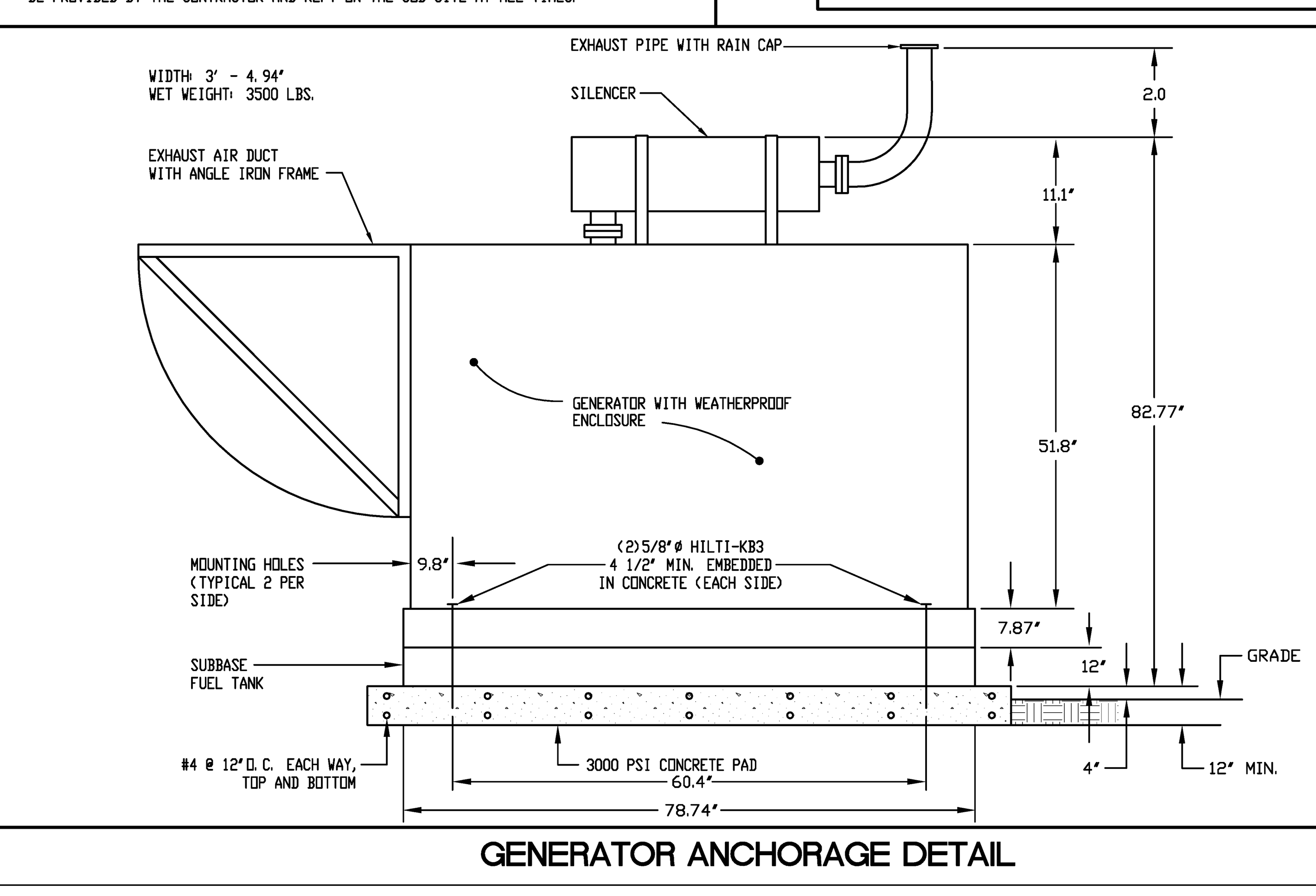
WHERE BRACING AND ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINES, THE FIELD INSTALLATION SHALL BE SUBJECT TO APPROVAL OF THE ARCHITECT, THE STRUCTURAL ENGINEER, AND THE DSA FIELD ENGINEER.

A COPY OF THE GUIDELINES PUBLISHED BY SMACNA AND APPROVED BY DSA SHALL BE PROVIDED BY THE CONTRACTOR AND KEPT ON THE JOB SITE AT ALL TIMES.

FIRE ALARM NOTE:

FIRE ALARM SUBMITTAL SHALL BE A COMPLETE PLAN SUBMITTAL IN ACCORDANCE WITH DSA POLICY 95-03 (FLS) FEBRUARY 1, 1995

THE SEISMIC ANCHORAGE OF MECHANICAL AND ELECTRICAL EQUIPMENT SHALL CONFORM TO C.C.R. TITLE 24. 2001 CBC SECTION 1632A AND TABLE 16A-O. ANCHORAGE DETAILS FOR ROOF/FLOOR MOUNTED EQUIPMENT SHALL BE SHOWN ON PLANS.



GENERATOR ANCHORAGE DETAIL — SCALE: NTS — A

SYMBOL LIST

(ALL SYMBOLS NOT NECESSARILY USED ON THESE PLANS)
ALL SYMBOL DESCRIPTIONS ARE SUBJECT TO MODIFICATION AS NOTED ON THE DRAWINGS

A.F.F.	ABOVE FINISH FLOOR
A.F.G.	ABOVE FINISH GRADE
AWG	AMERICAN WIRE GAUGE
AMP, A	AMPERE
A.I.C.	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)
AF/AT	AMP FRAME, AMP TRIP
AS/AF	AMP SWITCH, AMP FUSE
CATV	CABLE TELEVISION
CIRC.	CIRCUIT
CB	CIRCUIT BREAKER
C	CONDUIT
C.O.	CONDUIT ONLY.
CONN	CONNECTED
ELC	EXTERIOR LIGHTING CONTROLLER
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM (SEE DIVISION 15)
LTG, LTS	LIGHTING
MCM	THOUSAND CIRCULAR MILS
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NC	NORMALLY CLOSED
NO	NORMALLY OPENED
NF	NON-FUSED
NIC	NOT IN CONTRACT
NO. or #	NUMBER
PRIMARY	OVER 600 VOLTS
PH. or Φ	PHASE
PROVIDE	FURNISH, INSTALL AND CONNECT.
REC, RECEPT	RECEPTACLE
EF	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
E-O-L	END-OF-LINE CIRCUIT TERMINATOR.
EP	EXPLOSION PROOF
FT or '	FEET
FA	FIRE ALARM
FLA	FULL LOAD AMPS
GFI	GROUND FAULT INTERRUPTER.
GRD	GROUND
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
H.,W.,D.,L.	HEIGHT, WIDTH, DEPTH, LENGTH
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
IN. or "	INCHES
IG	ISOLATED GROUND
J-BOX	JUNCTION BOX
KVA	KILOVOLT AMPERES
KW	KILOWATT
LCL	LONG CONTINUOUS LOAD
(R)	REMOVE EXISTING EQUIPMENT, CONDUIT AND CONDUCTORS
(A)	REMOVE EXISTING WIRING OR DEVICE AND ABANDON RACEWAY OR OUTLET IN PLACE
RGS	RIGID GALVANIZED STEEL
SECONDARY	600 VOLTS AND LESS
TV	TELEVISION
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLT AMPERES
WP	WEATHERPROOF
W	WIRE
Y	WYE CONFIGURATION
	CONNECTED TO SOLID GROUND REFERENCE POINT
C / E-2	DETAIL CALLOUT, 'C' INDICATES DETAIL, 'E-2' INDICATES DRAWING WHERE DETAIL OCCURS. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND REQUIREMENTS OF MECHANICAL EQUIPMENT.
EF / 1	MECHANICAL EQUIPMENT CALLOUT.
+45"	MOUNTING HEIGHT TO CENTER LINE OF DEVICE FROM FINISH FLOOR OR EXTERIOR GRADE
(1)	PLAN NOTE CALLOUT. REFER TO CORRESPONDING NOTE ON DRAWING WHERE CALLOUT OCCURS.

- COMPUTER/DATA OUTLET, WITH A DUPLEX UNIVERSAL OUTLET CONNECTOR, ON FLUSH WALL MOUNTED OUTLET BOX +18". PROVIDE 1" CONDUIT TO ACCESSIBLE CEILING SPACE AND TWO LEVEL (6) COMPUTER/DATA CABLES AS SPECIFIED TO THE RESPECTIVE COMPUTER/DATA RACK, UNLESS NOTED OTHERWISE.
- COMPUTER/DATA OUTLET, WITH TWO DUPLEX UNIVERSAL OUTLET CONNECTORS, ON FLUSH WALL MOUNTED OUTLET BOX +18". PROVIDE 1" CONDUIT TO ACCESSIBLE CEILING SPACE AND FOUR LEVEL (6) COMPUTER/DATA CABLES AS SPECIFIED TO THE RESPECTIVE COMPUTER/DATA RACK, UNLESS NOTED OTHERWISE.
- DATA OUTLET, WITH A DOUBLE UNIVERSAL OUTLET CONNECTOR, ON FLUSH FLOOR OUTLET BOX. PROVIDE 1" CONDUIT TO ACCESSIBLE CEILING SPACE AND TWO LEVEL (6) COMPUTER/DATA CABLES AS SPECIFIED TO THE RESPECTIVE DATA RACK.
- SPEAKER, HOUSING AND GRILLE, SURFACE MOUNTED ON FLUSH CEILING MOUNTED OUTLET BOX.
- SPEAKER, HOUSING & GRILLE, FLUSH CEILING MOUNTED.
- SPEAKER, HOUSING & GRILLE, SURFACE MOUNTED ON FLUSH WALL MOUNTED OUTLET BOX, +90".
- SPEAKER, HOUSING & GRILLE, FLUSH WALL MOUNTED, +90". PROVIDE 3/4"C. TO ABOVE ACCESSIBLE CEILING WITH SPEAKER CABLING AS REQUIRED.
- SPEAKER OUTLET ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- WP: WEATHERPROOF SPEAKER HOUSING AND VANDAL-RESISTANT GRILLE, FLUSH WALL MOUNTED, +90". PROVIDE 3/4"C. STUBBED INTO ACCESSIBLE CEILING SPACE WITH CLASS PASSING CABLING AS REQUIRED.
- VOLUME CONTROL ON FLUSH WALL MOUNTED OUTLET BOX, +45".
- CLOCK OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX, +90", WITH CLOCK.
- COMBINATION CLOCK/SPEAKER ON FLUSH WALL MOUNTED BACKBOX, +90".
- TELEVISION OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX, +18", WITH 1" CONDUIT TO ACCESSIBLE CEILING SPACE. PROVIDE TELEVISION CABLING AS REQUIRED.
- TELEVISION OUTLET, ON FLUSH FLOOR MOUNTED OUTLET BOX. 'P' INDICATES PEDESTAL TYPE, ON FLUSH FLOOR MOUNTED OUTLET BOX.
- TELEVISION OUTLET, ON FLUSH CEILING MOUNTED OUTLET BOX.
- COMPUTER/DATA PROCESSING OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX +18", WITH 1" CONDUIT TO ACCESSIBLE CEILING SPACE. 'C' INDICATES HORIZONTAL IN FLUSH WALL MOUNTED OUTLET BOX, 6" ABOVE COUNTER SPLASH.
- COMPUTER/DATA PROCESSING OUTLET, ON FLUSH FLOOR MOUNTED BOX 'P' INDICATES PEDESTAL TYPE, ON FLUSH FLOOR MOUNTED OUTLET BOX.
- INTRUSION DETECTION SYSTEM KEY PAD, ON FLUSH WALL MOUNTED OUTLET BOX, +45".
- INTRUSION DETECTION SYSTEM MOTION SENSOR SURFACE CEILING MOUNTED.
- —F— FIRE ALARM SYSTEM - 3/4"C. WITH FIRE ALARM SYSTEM CONDUCTORS AS SPECIFIED.
- —T— TELEPHONE SYSTEM 3/4"C.O.
  T2 - 1"C.O.
  T3 - 1 1/4"C.O.
  T4 - 1 1/2"C.O.
- —P— PUBLIC ADDRESS SYSTEM - 3/4"C., WITH CONDUCTORS AS SPECIFIED.
  P2 - 3/4"C WITH CONDUCTORS AS SPECIFIED.
  P3 - 1"C WITH CONDUCTORS AS SPECIFIED.
  P4 - 1"C WITH CONDUCTORS AS SPECIFIED.
  P5 - 1 1/4"C WITH CONDUCTORS AS SPECIFIED.
- —C— CLOCK SYSTEM - 3/4"C., WITH CONDUCTORS AS SPECIFIED.
- —TV— TELEVISION SYSTEM - 1"C. WITH CONDUCTORS AS SPECIFIED.
- —ID— INTRUSION DETECTION SYSTEM - 3/4"C. WITH CONDUCTORS AS SPECIFIED.
- —D1— COMPUTER/DATA PROCESSING SYSTEM - 3/4"C.
  D2 - 1 "C. WITH CONDUCTORS AS SPECIFIED.
  D3 - 1 1/4"C. WITH CONDUCTORS AS SPECIFIED.
- —TC1— TELECOMMUNICATION SYSTEM - 3/4"C., WITH ONE (1) SET OF CONDUCTORS AS SPECIFIED.
  TC2 - 1"C. WITH TWO (2) SETS OF CONDUCTORS.
  TC3 - 1"C. WITH THREE (3) SETS OF CONDUCTORS.
  TC4 - 1 1/4"C. WITH FOUR (4) SETS OF CONDUCTORS.
- PUSH-BUTTON STATION, RED, MUSHROOM TYPE, ON FLUSH WALL MOUNTED OUTLET BOX, +45".
- 'R' INDICATES RECESSED FLOOR BOX WITH MULTISERVICE FITTINGS, DOUBLE DUPLEX, TELEPHONE AND DATA OUTLETS.
- MICROPHONE OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- MICROPHONE OUTLET, ON FLUSH FLOOR MOUNTED OUTLET BOX. 'P' INDICATES PEDESTAL TYPE, ON FLUSH FLOOR MOUNTED OUTLET BOX.
- PROJECTOR OUTLET ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- PROJECTOR OUTLET, ON FLUSH FLOOR MOUNTED OUTLET BOX.
- TECHNICAL SYSTEM OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- TECHNICAL SYSTEM OUTLET, ON FLUSH FLOOR MOUNTED OUTLET BOX.
- ASSISTIVE LISTENING SYSTEM EMITTER, SURFACE MOUNTED ON FLUSH MOUNTED OUTLET BOX. MOUNTING HEIGHT AS INDICATED ON THE ELECTRICAL DRAWINGS.
- —M— MICROPHONE SYSTEM - 3/4"C. WITH CONDUCTORS AS SPECIFIED.
  M2 - 1"C. WITH CONDUCTORS AS SPECIFIED.
  M3 - 1 1/4"C. WITH CONDUCTORS AS SPECIFIED.
- TELEPHONE OUTLET, ON FLUSH FLOOR MOUNTED OUTLET BOX. 'P' INDICATES PEDESTAL TYPE, ON FLUSH FLOOR MOUNTED OUTLET BOX.
- TELEPHONE OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX +18", WITH DESK MOUNTED TELEPHONE. PROVIDE 1"C. TO ABOVE ACCESSIBLE CEILING AND TELEPHONE SYSTEM CABLING AS SPECIFIED FROM OUTLET TO RESPECTIVE TELEPHONE BACKBOARD.
- TELEPHONE OUTLET, ON FLUSH WALL MOUNTED OULET BOX +45", WITH WALL MOUNTED TELEPHONE. PROVIDE 1"C. TO ABOVE ACCESSIBLE CEILING AND TELEPHONE SYSTEM CABLING AS SPECIFIED FROM OUTLET TO RESPECTIVE TELEPHONE BACKBOARD.
- TELEPHONE OUTLET, ON FLUSH FLOOR MOUNTED OUTLET BOX, 'P' INDICATES PEDESTAL TYPE ON FLUSH FLOOR MOUNTED OUTLET BOX WITH DESK MOUNTED TELEPHONE.
- SPEAKER JACK OUTLET MOUNTED IN WEATHERPROOF LOCKABLE ENCLOSURE AT +18"
- COMPUTER/DATA OUTLET, WITH A SINGLE UNIVERSAL OUTLET CONNECTOR, ON FLUSH WALL MOUNTED OUTLET BOX +18". PROVIDE 1" CONDUIT TO ACCESSIBLE CEILING SPACE AND ONE LEVEL (6) COMPUTER/DATA CABLE AS SPECIFIED TO THE RESPECTIVE COMPUTER/DATA RACK, UNLESS NOTED OTHERWISE.
- R: RELAY
- 1P SINGLE POLE; 2P DOUBLE POLE; 3P TRIPLE POLE
- EMERGENCY LIGHTING BATTERY UNIT, WALL MOUNT +96".
- FS: COMBINATION FIRE/SMOKE DAMPER ON DUCT IN CEILING SPACE; OPERATED BY DUCT TYPE OR AREA TYPE SMOKE DETECTOR WITH RELAY BASE. PROVIDE 120V. CONNECTION AND DUCT OR AREA TYPE SMOKE DETECTOR. INSTALL IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS.
- C: INTRUSION DETECTION SYSTEM DOOR CONTACT

- FLUORESCENT LIGHTING FIXTURE, RECESS MOUNTED, WITH OUTLET BOX.
- FLUORESCENT LIGHTING FIXTURE, SURFACE OR PENDANT MOUNTED ON FLUSH MOUNTED OUTLET BOX.
- FLUORESCENT STRIP OR INDUSTRIAL LIGHTING FIXTURE, SURFACE, CHAIN OR PENDANT MOUNTED ON FLUSH MOUNTED OUTLET BOX.
- LIGHTING FIXTURE, SURFACE MOUNTED, ON FLUSH CEILING MOUNTED OUTLET BOX..
- LIGHTING FIXTURE, RECESS MOUNTED, WITH OUTLET BOX.
- LIGHTING FIXTURE, SURFACE OR FLUSH MOUNTED AS INDICATED ON FIXTURE SCHEDULE, ON WALL MOUNTED OUTLET BOX, +90". STEM INDICATES WALL MOUNTED OUTLET BOX, TYPICAL.
- OUTLET ON EMERGENCY LIGHTING CIRCUIT.
- LIGHTING FIXTURE WITH LAMPS ON NORMAL AND EMERGENCY LIGHTING CIRCUITS, PROVIDE SEPARATE LAMP BALLASTS AS REQUIRED.
- LIGHTING FIXTURE RECESSED MOUNTED WITH OUTLET BOX AND REMOTE MOUNTED JUNCTION BOX CONCEALED ABOVE ACCESSIBLE CEILING. PROVIDE FLEXIBLE CONDUIT CONNECTION 6 FT. MAXIMUM LENGTH, 1/2" DIAMETER MINIMUM, FROM JUNCTION BOX TO FIXTURE OUTLET. PROVIDE CONDUCTORS IN CONDUIT, QUANTITY AS REQUIRED FOR INDICATED CIRCUITS AND SWITCHING CONTROLS, #12 (AWG) MINIMUM.
- WALL WASH LIGHTING FIXTURE, RECESS MOUNTED, WITH OUTLET BOX.
- LIGHTING BOLLARD AND SUPPORT BASE.
- POST TOP LIGHTING STANDARD, POLE MOUNTED LUMINAIRE AND POLE SUPPORT BASE.
- LIGHTING STANDARD WITH SINGLE ARM MOUNTED LUMINAIRE AND POLE SUPPORT BASE.
- LIGHTING STANDARD WITH TWIN ARM MOUNTED LUMINAIRES AND POLE SUPPORT BASE.
- UPLIGHT, MOUNTED FLUSH WITH FINISH GRADE.
- FLOODLIGHTING FIXTURE WITH WEATHERPROOF OUTLET BOX.
- TRACK LIGHTING WITH FIXTURE(S), CEILING, PENDANT, OR WALL MOUNTED, WITH FLUSH OUTLET BOX.
- EXIT SIGN SINGLE FACE, ON FLUSH CEILING MOUNTED OUTLET BOX. ARROW INDICATES DIRECTIONAL ARROW ON EXIT SIGN FACE. REFER TO ARCHITECTURAL DRAWINGS FOR PHOTOLUMINESCENT, LOW LEVEL EXIT AND PATHWAY MARKINGS.
- EXIT SIGN DOUBLE FACE, ON FLUSH CEILING MOUNTED OUTLET BOX. REFER TO ARCHITECTURAL DRAWINGS FOR PHOTOLUMINESCENT, LOW LEVEL EXIT AND PATHWAY MARKINGS.
- EXIT SIGN, ON FLUSH WALL MOUNTED OUTLET BOX, +90". REFER TO ARCHITECTURAL DRAWINGS FOR PHOTOLUMINESCENT, LOW LEVEL EXIT AND PATHWAY MARKINGS.
- 2/100: FIXTURE SCHEDULE DESIGNATION: '2' INDICATES FIXTURE TYPE, '100' INDICATES FIXTURE TOTAL WATTAGE.
- S 2,P a,b: SINGLE POLE TOGGLE SWITCH, ON FLUSH WALL MOUNTED OUTLET BOX, +45". INSTALL MULTIPLE SWITCHES UNDER COMMON COVER PLATE. SUBSCRIPT OR SUPERSCRIPT AT SWITCH SYMBOL INDICATES THE FOLLOWING:
  2 - DOUBLE POLE; 4 - FOUR WAY; M - MANUAL MOTOR STARTERS
  3 - THREE WAY; P - PILOT LIGHT; K - KEY OPERATED
  R - SPDT MOMENTARY CONTACT RELAY SWITCH; V - VAPOR PROOF
  a, b, c, d, ETC. - MULTIPLE SWITCHES WITH IDENTIFICATION OF OUTLET CONTROLLED.
- INCANDESCENT LIGHTING DIMMER, ON FLUSH WALL MOUNTED OUTLET BOX +45". DIMMERS SHALL BE 2000 WATT, UNLESS NOTED OTHERWISE.
- OCCUPANCY MOTION SENSOR ON FLUSH CEILING MOUNTED OUTLET BOX.
- OCCUPANCY MOTION SENSOR SWITCH, ON FLUSH WALL MOUNTED OUTLET BOX, +45".
- OCCUPANCY MOTION SENSOR ON FLUSH WALL MOUNTED OUTLET BOX, +90".
- DUPLEX CONVENIENCE RECEPTACLE VERTICAL ON FLUSH WALL MOUNTED OUTLET BOX, +18". STEM INDICATES WALL MOUNTED OUTLET BOX, TYPICAL.
- DUPLEX CONVENIENCE RECEPTACLE HORIZONTAL ON FLUSH WALL MOUNTED OUTLET BOX, +6" ABOVE COUNTER SPLASH.
- DUPLEX CONVENIENCE RECEPTACLE SPLIT WIRED, ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- DOUBLE DUPLEX (FOUR-PLEX) CONVENIENCE RECEPTACLE ON ONE FLUSH WALL MOUNTED OUTLET BOX +18".
- SINGLE RECEPTACLE, NEMA CONFIGURATION PER EQUIPMENT MANUFACTURER REQUIREMENTS, ON FLUSH WALL MOUNTED OUTLET BOX, +18".
- DUPLEX CONVENIENCE RECEPTACLE WITH INTERNAL GROUND FAULT INTERRUPTER, VERTICAL ON FLUSH WALL MOUNTED OUTLET BOX +18".
- DUPLEX CONVENIENCE RECEPTACLE WITH INTERNAL GROUND FAULT INTERRUPTER, HORIZONTAL ON FLUSH WALL MOUNTED OUTLET BOX, +6" ABOVE COUNTER SPLASH.
- WP: DUPLEX CONVENIENCE RECEPTACLE, WITH INTERNAL GROUND FAULT INTERRUPTER, IN FLUSH WALL MOUNTED ENCLOSURE WITH HINGED DOOR, LOCK AND KEY, +18".
- WP: DUPLEX CONVENIENCE RECEPTACLE, WITH INTERNAL GROUND FAULT INTERRUPTER, ON FLUSH WALL MOUNTED OUTLET BOX WITH SPRING DOOR COVER, +18".
- DUPLEX CONVENIENCE RECEPTACLE ON FLUSH, FLOOR MOUNTED OUTLET BOX. 'P' INDICATES PEDESTAL TYPE ON FLUSH FLOOR MOUNTED OUTLET BOX.
- DUPLEX CONVENIENCE RECEPTACLES, BACK TO BACK, PEDESTAL TYPE ON FLUSH FLOOR MOUNTED OUTLET BOX.
- DUPLEX CONVENIENCE RECEPTACLE, ON FLUSH CEILING MOUNTED OUTLET BOX.
- SURFACE MULTI-OUTLET RACEWAY WITH PRE-WIRED RECEPTACLES IN RACEWAY 24" ON CENTER, ON FLUSH WALL MOUNTED OUTLET BOX, +6" ABOVE COUNTER SPLASH.
- SURFACE MULTI-OUTLET RACEWAY, WITH RECEPTACLES IN RACEWAY AS INDICATED, ON FLUSH WALL MOUNTED OUTLET BOX, +6" ABOVE COUNTER SPLASH.
- JUNCTION BOX, FLUSH WALL MOUNTED, +18".
- JUNCTION BOX CONCEALED ABOVE ACCESSIBLE CEILING.
- INDICATES CONNECTION TO EQUIPMENT AS REQUIRED, TYPICAL.
- JUNCTION BOX, FLUSH IN FLOOR.
- THERMOSTAT ON FLUSH WALL MOUNTED OUTLET BOX, REFER TO MECHANICAL DRAWINGS FOR HEIGHT AND LOCATION.
- A / E-1: PANELBOARD, ADJACENT LINE INDICATES PANEL FRONT. ADJACENT BALLOON INDICATES PANEL DESIGNATION 'A', SEE DRAWING E-1 FOR PANEL SCHEDULE.
- TERMINAL CABINET OR EQUIPMENT CABINET. ADJACENT LINE INDICATES CABINET FRONT.
- A / E-1: FLOOR STANDING SWITCHGEAR ADJACENT BALLOON INDICATES EQUIPMENT DESIGNATION 'DBA', SEE DRAWING E-1 FOR SINGLE LINE DIAGRAM AND/OR SCHEDULE.
- CIRCUIT BREAKER STATIONARY (NON-DRAWOUT), SECONDARY VOLTAGE.
- FUSIBLE SWITCH AND FUSE DEVICE. STATIONARY SWITCH (NON- DRAWOUT) REMOVABLE FUSES, SECONDARY VOLTAGE.
- FUSED SAFETY SWITCH (DISCONNECT), HORSE POWER RATED. MOUNT ON WALL +45", OR ON EQUIPMENT +36". PROVIDE SWITCH AND FUSES SIZED PER EQUIPMENT MANUFACTURER REQUIREMENTS.
- MOTOR CONNECTION. PROVIDE FUSED SAFETY SWITCH (DISCONNECT), HORSE POWER RATED, WALL MOUNTED, +45" OR EQUIPMENT MOUNTED, +36". PROVIDE SWITCH AND FUSES SIZED PER EQUIPMENT MANUFACTURER REQUIREMENTS.
- MCA-11: HOME RUN TO MCA-11, INDICATES MOTOR CONTROL CENTER 'MCA' CIRCUIT NO. 11. SEE RESPECTIVE SCHEDULE FOR WIRE AND CONDUIT.
- (3): MAGNETIC MOTOR STARTER: NUMBER INDICATES 'NEMA' SIZE '3'.
- (3): COMBINATION MAGNETIC MOTOR STARTER: NUMBER INDICATES 'NEMA' SIZE '3'.
- PUSH BUTTON STATION WITH 'STOP-START' PUSH BUTTONS AND RED INDICATING PILOT LIGHT ON FLUSH WALL MOUNTED OUTLET BOX, +45".
- CONDUIT, INSTALLED CONCEALED IN WALL OR IN CEILING SPACE.
  1/2" C - 2 #12; 3/4" - 6 #12
  1/2" C - 3 #12; 1" C - 7 #12
  3/4" C - 4 #12; 1" C - 8 #12
  3/4" C - 5 #12; 1 1/4" C - 9 #12
- CONDUIT, INSTALLED CONCEALED IN OR UNDER FLOOR OR BELOW GRADE, 3/4" CONDUIT MINIMUM.
- CONDUIT, INSTALLED EXPOSED.
- B-5,7,9: HOMERUN TO PANEL 'B' FOR CIRCUITS 5, 7, 9 WITH COMMON NEUTRAL
- UNDERGROUND CONDUIT STUBOUT, STUB 5'-0" FROM BUILDING OR WALKWAY, CAP, MARK AND RECORD.
- FIRE ALARM BELL.
- FIRE SPRINKLER WATER FLOW SWITCH WITH WEATHERPROOF OUTLET BOX.
- FIRE SPRINKLER WATER TAMPER SWITCH WITH WEATHERPROOF OUTLET BOX.
- TELEPHONE OUTLET, ON FLUSH WALL MOUNTED OUTLET BOX, +18". SUBSCRIPT OR SUPERSCRIPT AT SIGNAL SYMBOLS INDICATES THE FOLLOWING:
  C - OUTLET HORIZONTAL IN FLUSH WALL MOUNTED OUTLET BOX, +6" ABOVE COUNTER SPLASH.
  W - OUTLET ON FLUSH WALL MOUNTED OUTLET BOX, +45".
- LS: LIGHT SENSOR FOR DAYLIGHT CONTROLS ON RECESSED CEILING MOUNTED OUTLET BOX.

LAMPS AND BALLASTS SPECIFICATIONS

1. FLUORESCENT BALLASTS SHALL BE ELECTRONIC TYPE PARALLEL LAMP OPERATION AND SHALL OPERATE LAMPS AT A FREQUENCY ABOVE 40 kVz. BALLAST MANUFACTURER MUST HAVE A MINIMUM OF 10 YEARS EXPERIENCE MANUFACTURING ELECTRONIC BALLASTS. MINIMUM STARTING TEMPERATURE SHALL BE -18 DEGREES C.

   BALLASTS SHALL BE GUARANTEED AGAINST SERVICE FAILURE FOR 5 YEARS AND SHALL BE UL LISTED.

   BALLASTS SHALL BE SYLVANIA QUICKTRONIC PROSTART PSX PROGRAMMED RAPID START ELECTRONIC BALLASTS, UNIVERSAL VOLTAGE AND SHALL BE USED WITH OCTRON XP 4100K LAMPS. BALLASTS SHALL BE AS FOLLOWS:

   A. OSRAM SYLVANIA NO. 51420, QTP 1XFO28/SS (28W), 120-277V., 1 LAMP, 22 INPUT WATTS, 0.71 BALLASTS FACTOR, LESS THAN 10 PERCENT THD.
   B. OSRAM SYLVANIA NO. 51425, QTP 2XFO28/SS (28W), 120-277V., 2 LAMP, 41/40 INPUT WATTS, 0.71 BALLASTS FACTOR, LESS THAN 10 PERCENT THD.
   C. OSRAM SYLVANIA NO. 51430, QTP 3XFO28/SS (28W), 120-277V., 3 LAMP, 64/62 INPUT WATTS, 0.71 BALLASTS FACTOR, LESS THAN 10 PERCENT THD.

2. FLUORESCENT LAMPS SHALL BE OCTRON XP SUPERSAVER ECOLOGIC3 LAMPS (FO32) HAVING MEDIUM BI-PIN BASES. LAMPS SHALL BE DESIGNED TO PASS THE FEDERAL TCLP TEST IN FORCE AT THE TIME OF MANUFACTURER. LAMP(S) SHALL HAVE A CORRELATED COLOR TEMPERATURE OF (4100K) AND CRI OF 85. LAMP(S) SHALL HAVE A 95% LUMEN MAINTENANCE AT 8,000 HOURS AND AN AVERAGE RATED LIFE OF 30,000 HOURS ON DEDICATED OSRAM SYLVANIA QUICKTRONIC PSX BALLASTS. PSX SYSTEM SHALL BE PROVIDED WITH A COMPLETE WARRANTY FROM ONE MANUFACTURER COVERING BOTH LAMP(S) AND BALLAST(S).

GENERAL

1. LAMP AND BALLAST COMBINATIONS SHALL BE SUITABLE FOR USE WITH THE SPECIFIED LIGHTING CONTROLS.

LICENSED ARCHITECT JAMES M. STINSON C19098 RENEWAL 02/28/ STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER STEPHEN R. ZAJICEK No. E 10372 Exp. 09-30-12 ELECTRICAL STATE OF CALIFORNIA

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FBA # 270.032

REVISIONS	DATE
ADDENDUM #1	

P S W C GROUP — ARCHITECTS / PLANNERS — 1887 BUSINESS CENTER DR., SUITE 3, SAN BERNARDINO, CA. 92408 — 909/890-2233 FAX. 909/890-2644

ROOSEVELT II ELEMENTARY SCHOOL
SAN BERNARDINO CITY UNIFIED SCHOOL DISTRICT
1261 W. 16TH STREET, SAN BEERNARDINO, CA.

SYMBOL LIST, FIXTURE SCHEDULE AND GENERAL NOTES

JOB NO. P520 — DRAWN BY FBA — DATE 12/8/2011

E-1.0

RE-BID #F09-02 ROOSEVELT II (HENRY) E.S. NEW CONSTRUCTION BID ISSUANCE SET 12/09/11