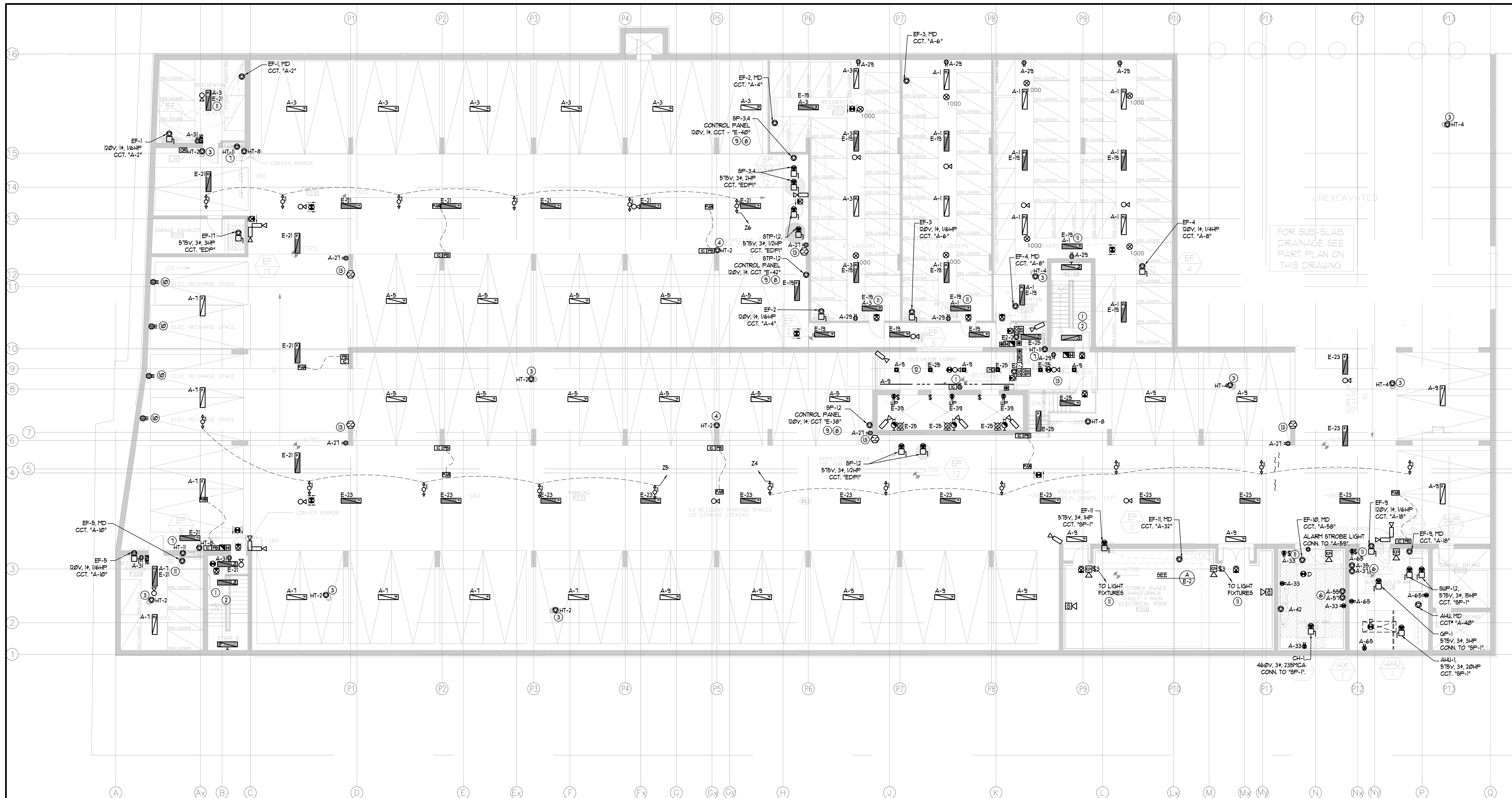


GENERAL AREA CIRCUITING - TABLE #1

LIGHTING FIXTURE LOCATION	CCT. #
P2 TO P1 - EXIT SIGNS	E-1
G/F TO MPH - EXIT SINGS	E-3
MPH - EXIT SIGNS	ER-1
STAIR "A" (P2 TO G/F)	E-5
STAIR "B" (P2 TO G/F)	E-7
STAIR "J" (G/F TO 4/F)	E-9
STAIR "J" (5/F TO 9/F)	E-11
STAIR "G" (G/F TO 14/F)	E-13
STAIR "F" (G/F TO 14/F)	E-15
STAIR "K" (14F TO MPH) & MPH	ER-3,ER-5,R-17,R-19
(G/F)	E-2,E-4,E-6,E-16,E-8,E-10,E-12,E-14,E-16
(G/F)	B1-2,B1-4,B1-6,B1-8,B1-10,B1-12,B1-14,B1-16, B1-18,B1-20,B1-22,B1-24,B1-26,B1-28,B1-30,
CORRIDOR (2/F & 3/F)	E-24
CORRIDOR (4/F & 5/F)	E-26
CORRIDOR (6/F & 7/F)	E-28
CORRIDOR (8/F TO 11/F)	E-30
CORRIDOR (12/F TO 14/F)	E-32
CORRIDOR & LOCKER (2/F)	B-46
CORRIDOR (3/F)	B-48
CORRIDOR (4/F)	B-50
CORRIDOR (5/F & 6/F)	B-52
CORRIDOR (7/F & 8/F)	B-54
CORRIDOR (9/F TO 11/F)	B-56
CORRIDOR (12/F TO 14/F)	B-58
ELEVATOR CAB	ER-6, ER-8,ER-10
EXTERIOR SITE	E1-1,E1-3,E1-5,E1-2,E1-4,E1-6
RECEPTACLE LOCATION	CCT. #
ELEC. S. CLOSET (G/F TO 9/F)	B-2
ELEC. N. CLOSET (2/F TO 9/F)	B-4
ELEC. N. CLOSET (10/F TO 14/F)	B-6
ELEC. N. CLOSET (22/F TO 32/F)	B-8
ELEV. LOBBY (P2 TO 8/F)	B-10
CORRIDOR (2/F TO 8/F)	B-12,B-14,B-16,B-18,B-20,B-22,B-24
CORRIDOR (2/F TO 5/F)	B-26,B-28
ELEV. LOBBY (9 TO 14/F)	B-30
CORRIDOR (9/F TO 14/F)	B-32,B-34,B-36,B-38
STAIR A (G/F) & J(9/F,6/F,3/F)	B-40
STAIR F (14/F,11/F,8/F,5/F,/2F)	B-42
STAIR H (14/F,11/F,8/F,5/F,2/F)	B-44
STAIR "K" & MPH	R-2

KEY NOTES (FOR CUSTOMER OWNED SUBSTAION):

(1) GROUND LOOP PER ONT. ELEC. SAFETY CODE SECTION 10.

(2) PROVIDE 3/4" X 10 FT STEEL GROUND RODS BURIED IN EARTH & CONNECT TO GROUND BUS BY 2-2/0 STRANDED COPPER WIRES. MIN. OF GROUND RODS SHALL BE SPACED AT LEAST 3 METERS APART.

(3) ALL DOOR FRAMES, SWITCHGEAR FRAMES & OTHER METAL OBJECTS SHALL BE BONDED TO THE GROUND BUS. METAL FRAME OF BUIDLING TO BE CONNECTED TO GROUND GRID BY MIN. OF 2-2/0 CU. CONDUCTORS.

(4) CONNECT STATION GROUND WITH IN-EARTH GROUND LOOP BY MIN. OF 2 LEADS SEPARATED BY A MINIMUM OF 2 METERS.

(5) WARNING SIGNS TO BE POSTED AS PER ONT. ELEC. SAFETY CODE RULES: 36-006, 36-100(4), 2-100, 14-506(D) BULLETIN 36-12-0, BULLETIN 36-6-17

(6) LOW VOLTAGE NEUTRAL 'XO' OF TRANSFORMER MUST BE GROUNDED TO THE SUBSTATION ELECTRODE WITH 3/0 AWG COPPER AND THE NEUTRAL INSTALLED TO THE SERVICE EQUIPMENT. THE 'XO' SHALL ALSO BE BONDED TO THE TRANSF. ENCLOSURE/GROUND BUS WITH A MIN. 500 MCM COPPER CONDUCTOR.

(7) ALL CONNECTIONS TO THE STATION GROUND ELECTRODE THAT ARE TO BE PERMANENTLY BURIED MUST BE MADE WITH AN APPROVED THERMIT WELD, COMPRESSION CONNECTORS OR AN APPROVED MECHANICAL CONNECTOR.

(8) GROUND LOOP SIZE SHALL BE EQUIVALENT TO THE FOOT PRINT OF THE SUBSTATION.

(9) THE ELECTRICAL COONTRACTOR SHALL SUBMIT SHOP DRAWING & ROUTING DETAILS OF HV CABLES INSIDE THE SUBSTATION PRIOR TO INSTALLATION.

(10) THE GROUND GRID CONDUCTORS SHALL BE BARE COPPER BURIED TO A MAXIMUM DEPTH OF 600MM BELOW ROUGH STATION GRADE AND A MINIMUM DEPTH OF 150 MM BELOW THE FINISHED STATION GRADE.

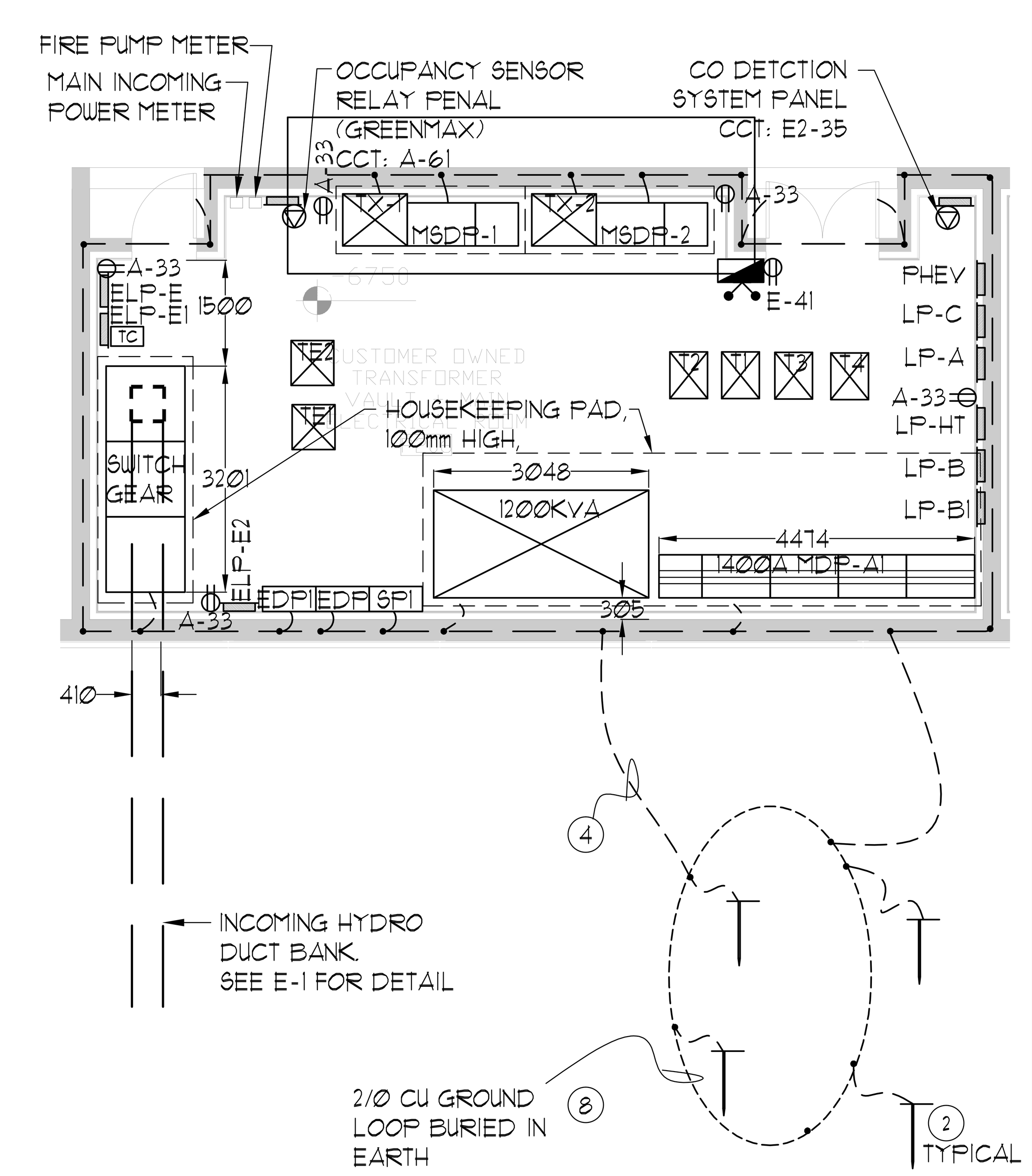
(11) PROVIDE HYDRO METER BASE CUTLAR HAMMER (EATON) TSU-13 IN 12"x12" ELEC. BOX± C/W 1/2" EMT. PROVIDE 1-1/2" EMT TO UTILITY COMPARTMENT OF MAIN SWITCHBOARD.

(12) PROVIDE CABLE PULLING EYE OPPOSITE TO THE INCOMING HV FEEDER. COORDINATE W/HYDRO ON SITE.

(13) T1,T2,T3,T4,TE1,TE2 SHALL BE FLOOR MOUNTED.

(14) PROVIDE LAMINATED SINGLE LINE DIAGRAM AND MOUNT ON SUBSTATION WALL AS PER LATEST ADDITION OF TORONTO HYDRO CONDITIONS OF SERVICE.

(15) DIV. 16 TO SUBMIT ALL SHOP DRAWINGS AND ELECTRICAL DRAWINGS AS PER TORONTO HYDRO'S REQUIREMENT, PRIOR TO AUTHORIZE THE MANUFACTURER FOR FABRICATION OF SWITCHGEAR AND SWITCHBOARD.



A / E-2 ELECTRICAL & SWITCH GEAR ROOM PLAN VIEW & GROUNDING DETAILS

SCALE 1:50

(10) ELECTRICAL CONTRACTOR SHALL PROVIDE A RECEPTACLE WITH CONFIGURATION (NEMA 6-50R) C/W 1-½" CONDUIT TO 120/208V PANEL 'PHEV' WITH METER FOR PHEV (PLUG-IN HYBRID ELECTRIC VEHICLES). 5 DEDICATED 1Φ, 208V, 40A CIRCUITS.

(11) EMERGENCY LIGHT FIXTURES IN LOCKERS, STORAGE, UTILITY AND SERVICE ROOMS SHALL BE CONNECTED TO BOTH NORMAL AND EMERGENCY POWER AS PER DETAIL #28 OF DWG. E-35.

(12) REFER TO ID DRAWINGS FOR ELEVATOR LOBBY LIGHTING FIXTURES MOUNTING DIMENSIONS.

(13) PROVIDE ONE ZONE FOR CO MONITORING AT EACH PARKING LEVEL, I.E. ACTIVATION OF ANY CO SENSOR IN PARKING LEVEL SHALL TRIGGER ALL EXHAUST FANS TO START IN THE PARKING LEVEL.

(18) DIV. 16 TO SUPPLY, DIV. 15 TO INSTALL HOSPITAL PLUS GRADE MUFFLER ON THE GENERATOR EXHAUST. MUFFLER AND EXHAUST PIPE SHOULD BE ISOLATED FROM THE BUILDING STRUCTURE USING SPRINGS OR HIGH TEMPERATURE FELT PADS.

GENERAL NOTES - PARKING:

1. ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH MECHANICAL, STRUCTURAL, ARCHITECTURAL AND LANDSCAPE DRAWINGS. AND COMPLY WITH ALL APPLICABLE NOTES.
2. CONTRACTOR SHALL RUN CABLES WITHIN CEILING SLAB OR ENCLOSURES TO RETAIN 2 HOUR FIRE PROTECTION RATING FOR ALL LOADS THAT CONNECT TO EMERGENCY POWER.
3. STAIRWAY WALL MOUNTED EMERGENCY LIGHT FIXTURES SHALL BE MOUNTED @ 7' A.F.F.
4. FOR STORAGE ROOM VENTILATION SYSTEM, DIV. 16 TO PROVIDE CONDUIT, WIRING AND SWITCH (S) TO START/STOP FAN AND DAMPER. FAN AND 110V ACTUATOR TO BE SUPPLIED AND INSTALLED BY DIV. 15.
5. FOR UTILITY ROOM VENTILATION SYSTEM, DIV. 15 WILL PROVIDE LINE VOLTAGE THERMOSTAT (T) TO DIV. 16. DIV. 16 TO PROVIDE CONDUIT AND WIRING TO START/STOP FAN AND DAMPER VIA THERMOSTAT. FAN AND 110V ACTUATOR TO BE SUPPLIED AND INSTALLED BY DIV. 15.
6. FOR UNIT HEATER, DIV. 15 TO PROVIDE LINE VOLTAGE THERMOSTAT (T), DIV. 16 TO PROVIDE CONDUIT AND WIRING TO START/STOP UNIT HEATER.
7. SANITARY PIPE AS NOTED, ALL STANDPIPE, ALL WET SPRINKLER AND DOMESTIC WATER PIPE RUN IN UNHEATED AREA SHALL BE HEAT TRACED BY DIV. 16.
8. ULTRASONIC OCCUPANCY CEILING MOUNTED SENSORS SHOULD BE LOCATED AT A MINIMUM OF 6 FEET FROM HVAC SUPPLY/RETURN VENTS.
9. REFER TO DETAIL #6 ON DWG. E-35 FOR OCCUPANCY SENSORS (LIGHTING CONTROL BLOCK).
10. CONTRACTOR IS RESPONSIBLE FOR PROPER SENSITIVITY AND TIME DELAY SETTINGS FOR NON-ADAPTIVE PRODUCTS, FOLLOWING THE MANUFACTURER'S RECOMMENDED PLACEMENT, AND FIELD VERIFICATION OF CIRCUITS WITH RESPECT TO POWER PACK FOR OCCUPANCY SENSORS REPLACEMENT. (IF USED)
11. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF REQUIRED NUMBER OF POWER PACKS FOR OCCUPANCY SENSORS. (IF USED).
12. CARBON MONOXIDE CONDUIT SYSTEM TO BE PROVIDED AND INSTALLED BY DIV. 16 THROUGHOUT PARKING LOT, AND SHALL BE MOUNTED ON COLUMNS AT 1200mm A.F.F. REFER TO DETAIL #22 ON DWG. E-35.
13. GARAGE EXHAUST FANS SHALL BE CONTROLLED BY CO SENSOR SYSTEM C/W OVERRIDE ON/OFF SWITCH LOCATED AT THE CACF.
14. REFER TO SPRINKLER DRAWINGS FOR FIRE PROTECTION DEVICE TO BE CONNECTED TO THE FIRE ALARM SYSTEM. THE DEVICE AND EQUIPMENT SHALL FORM AN INTEGRAL PART OF THE ELECTRICAL CONTRACT.
15. PROVIDE CHAIN FOR CEILING MOUNTED LIGHT FIXTURES IN P-1 LEVEL. LIGHTS TO BE INSTALLED AT 3m A.F.F. MAX., 2.1m A.F.F. MIN., OR INSTALL LIGHTS BELOW MECHANICAL PIPE. WHICHEVER HAS LOWER A.F.F.
16. OCCUPANCY SENSORS SHALL COMMUNICATE TO RELAY PANEL THROUGH LVT WIRING CIRCUIT # Z1, Z2, ETC. REFER TO DETAIL 23 ON DWG. E-35.
17. CONTRACTOR SHALL PROVIDE ALLOWANCE FOR HEAT TRACING TO DRUM DRIPS (6 PER PARKING LEVEL). REFER TO DWG. E-34 FOR CIRCUITING.
18. THE INDOOR, METAL ENCLOSED HIGH VOLTAGE SWITCHGEAR MUST BE CERTIFIED TO STANDARD CSA C22.2 No 3. RULE 2-024, BULLETIN 36-6-19.
19. THE LOCATION OF THE HIGH VOLTAGE CONDUCTORS ENCASED OR EMBEDDED IN CONCRETE OR MASONRY SHALL BE INDICATED BY PERMANENT MARKERS SET IN THE WALLS, FLOORS OR CEILINGS AT INTERVALS OF NOT MORE THAN 3M. RULE 36-100 (4).
20. CONDUCTORS USED FOR THE CONNECTION TO DRY TYPE TRANSFORMERS SHALL BE PERMITTED TO ENTER A TRANSFORMER THROUGH THE TOP, ONLY WHERE THE TRANSFORMER IS MARKED TO PERMIT SUCH ENTRY. RULE 26-240 (3).
21. THE PRIMARY "HO" CONNECTION OF THE HIGH VOLTAGE TRANSFORMER SHALL BE CONNECTED TO THE UTILITY COMPANY'S SYSTEM NEUTRAL, WHEN REQUIRED BY THE UTILITY COMPANY. RULE 2-034.
22. ALL OUTDOOR RECEPTACLES SHALL BE WEATHERPROOF (LEGRADE CAT# 3232TRWR-GRY FOR NON-GFCI AND CAT# 1595TRWR-GRY FOR GFCI) AND SHALL BE EQUIPPED WITH A WHILE IN USE CAST ALUMINUM COVERPLATE (LEGRANDE CAT# WIUCAST1) COVERFPLATE.
23. ELECTRICAL FEEDS TO THE CHILLER SHOULD BE ROUTED ACROSS THE CEILING AND DOWN TO THE CHILLER PANEL, NOT UP THROUGH THE FLOATING FLOOR.
24. DIV. 16 TO PROVIDE 1" CONDUIT TO AUTOMATIC TRANSFER SWITCH AND GENERATOR CONTROLLER. REFER TO SINGLE LINE DIAGRAM DWG. E-30 FOR CONDUIT RISER DETAILS.

KEY NOTES - PARKING:

(1) FOR CIRCUITING, REFER TO TABLE #1.

(2) PROVIDE ALARM SPEAKER, SMOKE DETECTOR AND RECEPTACLE AT EVERY THIRD FLOOR STAIR WELL,STARTING FROM TOP FLOOR, AS PER TO DWG. E-32 FOR FIRE ALARM RISER DIAGRAM.

(3) SANITARY TRAPS ARE TO BE HEAT TRACED BY DIV. 16. CONNECT TO GFI CIRCUIT AS SHOWN.

(4) SANITARY AND STORM LINE IN PARKING FLOORS ARE TO BE HEAT TRACED WITH SELF REGULATING CABLE BY DIV. 16. CONNECT TO GFI CIRCUIT AS SHOWN.

(5) ACTIVATION OF FIRE ALARM SYSTEM SHALL ACTIVATE THE SUPPLY FANS. WHEN THE DUCT TYPE SMOKE DETECTOR IS ACTIVATED, THE ASSOCIATED SUPPLY FAN SHALL BE TURNED OFF. WHEN THE MOTORIZED DAMPER IS ACTIVATED, THE DOOR SHALL BE RELEASED AND OPENED.

(6) ALLOCATE 2, 120V, 15A, CCTS FOR MECHANICAL CONTROL, CONTRACTOR SHALL COORDINATE WITH DIV. 15 FOR EXACT LOCATION.

(7) F.H.C. IN UNHEATED AREAS ARE TO BE HEAT TRACED BY DIV. 16. CONNECT TO GFI CIRCUIT AS SHOWN.

(8) CONTROL PANEL FOR SANITARY PUMP AND STORM PUMP BY DIV. 15, POWER CONNECTION UP TO CONTROL PANELS SHALL BE INSTALLED BY DIV. 16 CONTRACTOR. THIS CONTRACTOR SHALL SUPPLY UNDER SLAB CONDUITS FOR POWER AND CONTROL WIRING FROM CONTROL PANELS TO SANITARY/SUMP PIT.

(9) INSTALL 3/4"C CONDUIT C/W WIRING AND PULL STRING FROM SANITARY AND STORM PUMP CONTROL PANEL TO CONCIERGE DESK AND CACF FOR HIGH WATER ALARM SYSTEM.

ELECTRICAL LEGEND

LIGHTING

- FLUORESCENT LIGHT FIXTURE, TYPE AS INDICATED
- NIGHT LIGHT OR LIGHT CONNECTED TO EMERGENCY POWER
- CEILING MOUNTED/WALL MOUNTED LIGHT FIXTURE, INSCRIBED LETTER DENOTES TYPE
- POLE MOUNTED LIGHT FIXTURE, INSCRIBED LETTER DENOTES TYPE
- CAPPED CEILING LIGHT OUTLET
- TRACK LIGHT
- STRIP LIGHT
- UNDER CABINET FLUORESCENT LIGHT FIXTURE
- CEILING MOUNTED/WALL MOUNTED EXIT SIGN
- SINGLE/DUAL EMERGENCY LAMP REMOTE HEAD
- EMERGENCY BATTERY PACK
- PP — OCCUPANCY SENSOR POWER PACKS
- \$/\$/\$ \$3, \$4, \$P, \$D — SINGLE/TWO/THREE POLE, SINGLE/TWO/THREE THROW TOGGLE SWITCH RESPECTIVELY, ('3','4','P','D' DENOTES 3-WAY,4-WAY,PILOT LIGHT, DIMMER SWITCHED LIGHT RESPECTIVELY)
- MASTER LIGHTING SHUT-OFF SWITCH
- SENSOR WALL SWITCH PIR, SELF POWERED
- OCCUPANCY SENSOR, CEILING MOUNTED

POWER

- REGULAR DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE, GROUND FAULT INTERRUPT
- 5-20R T-SLOT DUPLEX RECEPTACLE
- SINGLE RECEPTACLE, TYPE AND CONFIGURATION AS SPECIFIED FOR DRYER
- CONNECTION FOR OVEN/COOKTOP
- ABOVE COUNTER DEVICE
- CEILING MOUNTED DEVICES
- FLOOR MOUNTED DEVICES
- DISCONNECT SWITCH, NON-FUSED
- DISCONNECT SWITCH, FUSED
- COMBINATION STARTER
- FRACTIONAL MOTOR/FAN DIRECT CONNECTION
- DIRECT CONNECTION, SINGLE PHASE
- DIRECT CONNECTION, THREE PHASE
- THERMOSTAT
- DS — DRYER SENSOR
- HEAT TRACE
- ELECTRICAL HEATER
- EP / SP — ELECTRICAL PANEL / SECURITY PANEL

TELECOMMUNICATION

- TV/CABLE OUTLET
- TELEPHONE OUTLET
- MP — TELEPHONE/TV CABLE (MULTI-PORT OUTLET)
- DATA OUTLET
- DATA/TELEPHONE OUTLET
- CB — IN SUITE TELECOMM. BOX C/W RECEPTACLE
- WFI — WIFI LOCATION
- VIC — VIDEO INTERCOM
- RR — RADIO RECEIVER

SECURITY

- IC / ENT — INTERCOM / ENTERPHONE
- ICV — INTERCOM WITH CAMERA
- PB / PAR — PANIC BUTTON / PANIC INTERCOM STATION
- CR — CARD READER
- ARCA / RR — AUTOMATIC RELEASE CARD ACCESS/RADIO RECEIVER
- ES — ELECTRIC STRIKE
- ML — MAGLOCK
- DC / WC — DOOR CONTACT / WINDOW CONTACT
- GB — GLASS BREAK DETECTOR
- DO — AUTOMATIC DOOR OPERATOR
- MD — MOTION DETECTOR
- PUSH BUTTON
- SECURITY CAMERA

LIFE SAFETY

- FIRE ALARM SMOKE DETECTOR
- SMOKE ALARM
- FIRE ALARM DUCT TYPE SMOKE DETECTOR
- FIRE ALARM HEAT DETECTOR
- FIXED TEMP. 88 °C DEGREE HEAT DETECTOR
- MOISTURE PROOF HEAT DETECTOR
- CO ALARM
- COMBINATION SMOKE & CO ALARM
- CO / NO — CO SENSOR / NO SENSOR
- FIRE ALARM MANUAL PULL STATION
- FIREFIGHTER'S HANDSET
- FIRE ALARM SPEAKER/STROBE, WALL MTD.
- FIRE ALARM SPEAKER, WALL MTD.
- FIRE ALARM SPEAKER/STROBE CEILING MTD.
- FIRE ALARM SPEAKER, CEILING MTD.
- FAAP — FIRE ALARM ANNUNCIATOR PANEL
- FACP — FIRE ALARM CONTROL PANEL

REVISIONS

DATE	NO.	DESCRIPTION	BY
01/08/15	5	ISSUED FOR PTA #E-1	S.T.
10/31/14	4	RE-ISSUED FOR TENDER	S.T.
09/23/14	3	ISSUED FOR TENDER	S.T.
07/10/14	2	RE-ISSUED FOR PERMIT	S.T.
05/30/14	1	ISSUED FOR PERMIT	S.T.

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT DISCREPANCIES TO THE ENGINEERS BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS THE PROPERTY OF THE ENGINEERS AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

DRAWINGS ARE NOT TO BE SCALED

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DRAWING TITLE: P-2 FLOOR PLAN ELECTRICAL LAYOUT

PROJECT TITLE: ALEXANDRA PARK

38 CAMERON STREET, BLOCK 11
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
S.O.	S.T.	1:100
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB, 13	1313	E-2 OF

Drawing name: \\cadserver\Current Dwg\13\1313 - Alexandra Park\DIV16\1313E- 2 (P-2 ELEC).dwg Plotted: Jan 13, 2015 - 4:53pm