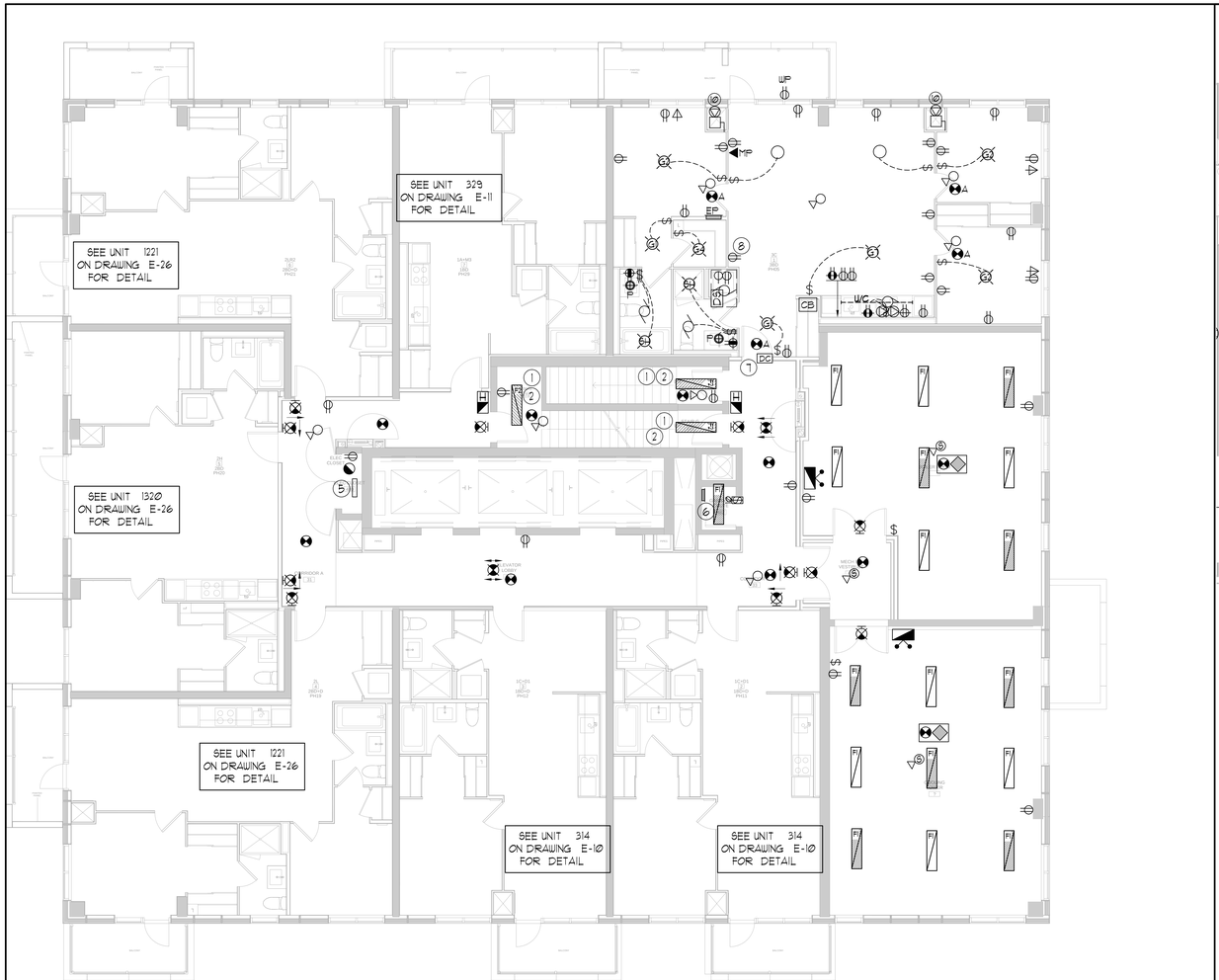
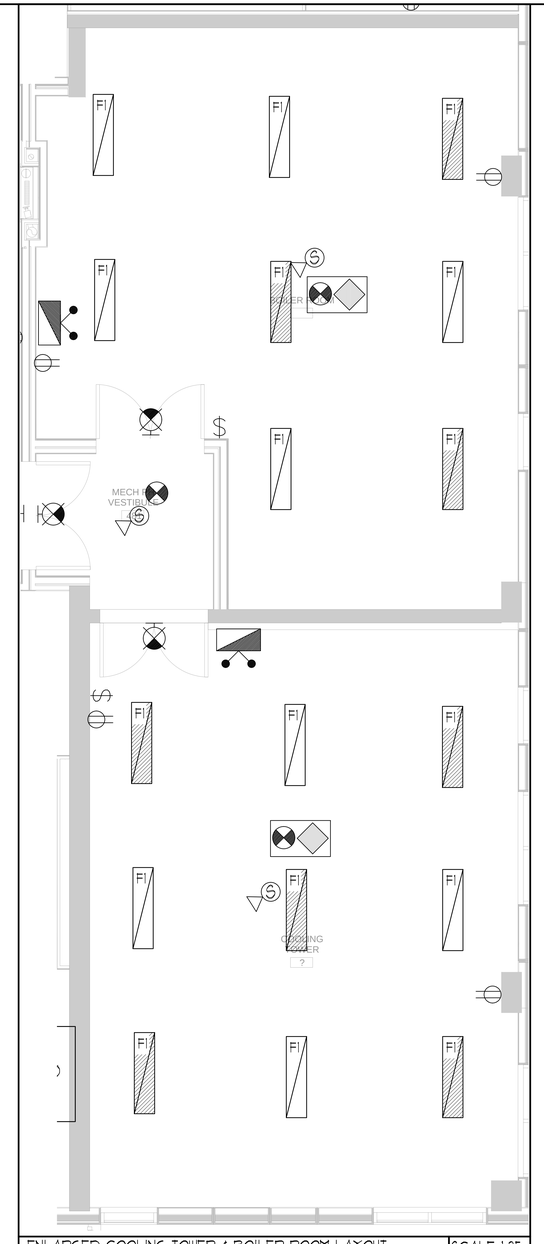




ENLARGED COOLING TOWER & BOILER ROOM LAYOUT | SCALE 1:25

GENERAL NOTES - ROOF:

1. ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH MECHANICAL, STRUCTURAL, ARCHITECTURAL AND LANDSCAPE DRAWINGS.
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. FIRE ALARM RISERS SHALL BE RUN IN 2 HOUR FIRE RATED ELECTRICAL CLOSET. REFER TO DWG. E-32 FOR RISER DIAGRAM AND DETAILS.
4. PROVIDE ALARM SPEAKER, SMOKE DETECTOR AND RECEPTACLE AT EVERY THIRD FLOOR STAIR WELL.
5. STAIRWAY WALL MOUNTED EMERGENCY LIGHT FIXTURES SHALL BE MOUNTED @ 7' AFF.
6. 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.
7. 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.
8. FOR UNIT HEATER, DIV. 15 TO PROVIDE LINE VOLTAGE THERMOSTAT (T), DIV. 16. TO PROVIDE CONDUIT AND WIRING TO START/STOP UNIT HEATER.
9. CONDUITS TO MEDIUM SIZED TRANSFORMERS (300KVA-450KVA) ARE NOT TO BE BURIED IN THE ROOF SLAB RIGHT UP TO THE UNIT. INSTEAD, THEY ARE TO BE ROUTED ACROSS THE CEILING OF THE MECHANICAL PENTHOUSE AND BACK DOWN TO CONNECT TO THE TRANSFORMER.
10. ELECTRICAL FEEDS TO THE CHILLER SHOULD BE ROUTED ACROSS THE CEILING AND DOWN TO THE CHILLER PANEL, NOT UP THROUGH THE FLOATING FLOOR.
11. ELEVATOR CONTROLLER SUPPLIED AND INSTALLED BY OTHERS. THIS CONTRACTOR SHALL PROVIDE INTERCONNECTION BETWEEN FIRE ALARM CONTROL PANEL AND ELEVATOR CONTROLLER.
12. DIV. 16 TO PROVIDE 1" CONDUIT TO AUTOMATIC (TC) TRANSFER SWITCH AND GENERATOR CONTROLLER. REFER TO SINGLE LINE DIAGRAM DWG. E-30 FOR CONDUIT RISER DETAILS.
13. ALLOCATE 2, 120V, 15A, CIRCUITS FROM PANEL 'LP-R1' FOR MECHANICAL CONTROL, CONTRACTOR COORDINATE WITH DIV. 15 FOR EXACT LOCATION. REFER TO PANEL SCHEDULE FOR CCT#(R1- , R1-).
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.

KEY NOTES - ROOF:

1. FOR CIRCUITING, REFER TO TABLE #1.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE THE FOLLOWINGS FOR BOILER:

   1.) 575V, 3ø, 15A FEEDER FOR BOILER CIRCULATING PUMP.
   2.) 115V, 1ø, 15A DEDICATED CIRCUIT FOR BOILER IGNITER.
   3.) BOILER SHUTDOWN PUSHBUTTON AT EXIT OF MECHANICAL ROOM.
3. 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.
4. PROVIDE CONDUIT AS PER SECURITY CONDUIT CONNECTION DIAGRAM ON DWG. E-31.
5. PROVIDE CONDUIT AS PER TELECOM RISER ON DWG. E-31.
6. ALL EXTERIOR LIGHTS SHALL BE CONTROLLED BY A TIMER/CONTACTOR LOCATED NEAR 'LP-R1', CONNECT LIGHTS TO CIRCUIT AS SHOWN.

GENERAL AREA CIRCUITING - TABLE #1

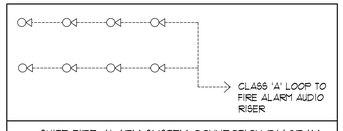
LIGHTING FIXTURE LOCATION	CCT. #	RECEPTACLE LOCATION	CCT. #
P4 TO P1 - EXIT SIGNS	EX-XX	LOBBY (P4 TO P1)	EX-XX
G/F TO 10/F - EXIT SINGS	EX-XX	STAIR "A" (5/F,3/F,2/F)	EX-XX
11/F TO ROOF - EXIT SIGNS	EX-XX	STAIR "B" (MPH,30,27,24,21,18,15) FLOORS	EX-XX
LOBBY (P4 TO P1)	EX-XX	STAIR "B" (12,9,6,3,P1,P4) FLOORS	EX-XX
STAIR "A" (P4 TO G/F)	EX-XX	STAIR "C" (MPH,30,27,24,21) FLOORS	EX-XX
CORRIDOR	EX-XX	STAIR "C" (18,15,12,9,6,3) FLOORS	EX-XX
-	EX-XX	STAIR "D" (P1,P4) FLOORS	EX-XX
-	EX-XX	STAIR "E" (P1) FLOOR	EX-XX
-	EX-XX	CORRIDOR	EX-XX

GENERAL NOTES - RESIDENTIAL:

1. ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH MECHANICAL, STRUCTURAL, ARCHITECTURAL AND LANDSCAPE DRAWINGS.
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. FIRE ALARM RISERS SHALL BE RUN IN 2 HOUR FIRE RATED ELECTRICAL CLOSET. REFER TO DWG. E-32 FOR RISER DIAGRAM AND DETAILS.
4. STAIRWAY WALL MOUNTED EMERGENCY LIGHT FIXTURES SHALL BE MOUNTED @ 7' AFF.
5. EMERGENCY LIGHT FIXTURES IN LOCKERS, STORAGE, GARBAGE, UTILITY AND SERVICE ROOMS SHALL BE CONNECTED TO BOTH NORMAL AND EMERGENCY POWER AS PER DETAIL #7.1 OF DWG. E-35.
6. 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.
7. 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.
8. 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.
9. REFER TO SUITE PANEL SCHEDULES FOR INSUITE CIRCUIT ARRANGEMENT.
10. ALL DWELLING UNIT RECEPTACLES EXCEPT IN KITCHEN SHALL BE TAMPER PROOF.
11. PROVIDE GROUND FAULT PROTECTION FOR SUITE KITCHEN AND WASHROOM RECEPTACLES WITHIN 1500mm OF SINK.
12. (CB) PROVIDE TELECOMMUNICATION BOX C/W BUILT-IN RECEPTACLE FOR TELECOMMUNICATION. TELECOMMUNICATION BOX SHALL BE COMPLIANT WITH THE TELECOM SERVICE PROVIDER SPECIFICATION. REFER TO DETAIL #3 ON DWG. E-35 FOR TELECOM JUNCTION BOX INSTALLATION.
13. (DS) DRYER SENSOR TO START DRYER VENTILATION FAN AUTOMATICALLY WHEN DRYER IS RUNNING.
14. ALL SMOKE ALARMS WITHIN THE SUITE SHALL BE HARDWIRED TOGETHER AND TO A 15A, 1P CIRCUIT BREAKER AHEAD OF OTHER LOADS.

KEY NOTES - RESIDENTIAL:

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. REFER TO SUPERVISED VALVE AND FLOW SWITCH SCHEDULE ON DWG. E-XX FOR DETAILS ON TYPICAL FLOORS.
4. PROVIDE TELECOMMUNICATION BACKBOARD C/W 115V, 1ø, 15A RECEPTACLE AS PER COMMUNICATION RISER DIAGRAM ON DWG. E-31.
5. CONTRACTOR SHALL REFER TO ELECTRICAL SINGLE LINE DIAGRAM ON DWG. E-30 AND SDP RISER ON DWG. E-31 FOR SDP LOCATIONS AND DISTRIBUTION.
6. PROVIDE CONDUIT AS PER RISER DETAIL #13 ON DWG. E-35 FOR BISORTER/TRISORTER CONTROL SYSTEM.
7. ALL SUITE DOOR CONTACTS WILL COMPLETE WITH INTRUSION ALARM SYSTEM THAT CONTACT TO THE CONCIERGE STATION.
8. DESIGNATED "LAUNDRY RECEPTACLE" AS DEFINED BY ESA CODE 26-710(a)(ii), 26-720(b) AND ESA BULLETIN 26-26-0 (WITHIN 3m RADIUS OF LAUNDRY CLOSET). RECEPTACLE SHALL BE CONNECTED TO A DEDICATED CIRCUIT. SEE DETAIL #4 ON DWG. E-35.
9. SWITCHES, RECEPTACLES, ETC., TO BE INSTALLED AS TO NOT INTERFERE WITH THE OPENING AND OPERATION OF SLIDING DOOR.



SUITE FIRE ALARM SYSTEM CONNECTION DIAGRAM

MOUNTING HEIGHT SCHEDULE
(DIMENSIONS ARE FROM FINISH FLOOR TO TOP OF WALL BOX)

OUTLET	SUITES	PUBLIC AREA
RECEPTACLE	18" FFF	18" FFF
KITCHEN COUNTER SPLIT RECEPTACLE	46" FFF	46" FFF
TV/TELEPHONE (MULTI-PORT) OUTLET	18" FFF	18" FFF
LIGHT SWITCH	38" FFF	38" FFF
SECURITY PANEL	62" F.F.F	62" F.F.F
WALL THERMOSTAT	62" F.F.F	62" F.F.F
FRIDGE RECEPTACLE	TO SUIT EQUIPMENT	
MICROWAVE/FAN UNIT RECEPTACLE	LOCATE IN UPPER CABINET ABOVE	
UNDER CABINET LIGHTING RECEPTACLE	LOCATE IN UPPER CABINET ABOVE MICROWAVE / FAN UNIT	
INTERCOM		47" FFF
FIREFIGHTER'S HANDSET		47" FFF
PULL STATION		47" FFF

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
- OCCUPANCY SENSOR POWER PACKS
- S/S/S, S3, S4, S4, S5 — SINGLE/TWO/THREE POLE, SINGLE/TWO/THREE THROW TOGGLE SWITCH RESPECTIVELY, ("3","4","5" 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
- CH1000 — ELECTRICAL HEATER
- ELECTRICAL PANEL / SECURITY PANEL

TELECOMMUNICATION

- TV/CABLE OUTLET
- TELEPHONE OUTLET
- TELEPHONE/TV CABLE (MULTI-PORT OUTLET)
- DATA OUTLET
- DATA/TELEPHONE OUTLET
- CB — IN SUITE TELECOM'S BOX C/W RECEPTACLE
- SPT — WIFI LOCATION
- PM / VC — MUSIC SPEAKER / VOLUME CONTROL
- RR — RADIO RECEIVER

SECURITY

- C / INT — INTERCOM / ENTERPHONE
- CC — INTERCOM WITH CAMERA
- PB / PAIR — PANIC BUTTON / PANIC INTERCOM STATION
- CR — CARD READER
- ARDS / RR — AUTOMATIC RELEASE CARD ACCESS/RADIO RECEIVER
- ES — ELECTRIC STRIKE
- ML — MAGLOCK
- DC / WC — DOOR CONTACT / WINDOW CONTACT
- DO — AUTOMATIC DOOR OPERATOR
- MD — MOTION DETECTOR
- PB — 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 STROBE/HORN, WALL MTD.
- FIRE ALARM MINI-HORN, WALL MTD.
- FIRE ALARM SPEAKER/STROBE CEILING MTD.
- FIRE ALARM SPEAKER, CEILING MTD.
- FAAP — FIRE ALARM ANNUCIATOR PANEL
- FACP — FIRE ALARM CONTROL PANEL

PROJECT#		ISSUED FOR ---	S.T.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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

NOVA TREND DEVELOPMENT CORPORATION
179 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5447
Email: cad@novatrendeng.com

DRAWING TITLE:
14/F FLOOR PLAN
ELECTRICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
S.O.	S.T.	1:50
DATE: FEB. 13	PROJECT NUMBER: 1313	DRAWING NUMBER: E-28 OF

Drawing name: \\CADSERVER\Current Dwg\1313 - Alexandra Park\DWG\1313C - 28 (14F ELEC).dwg Plotted: May 20, 2014 - 3:59pm