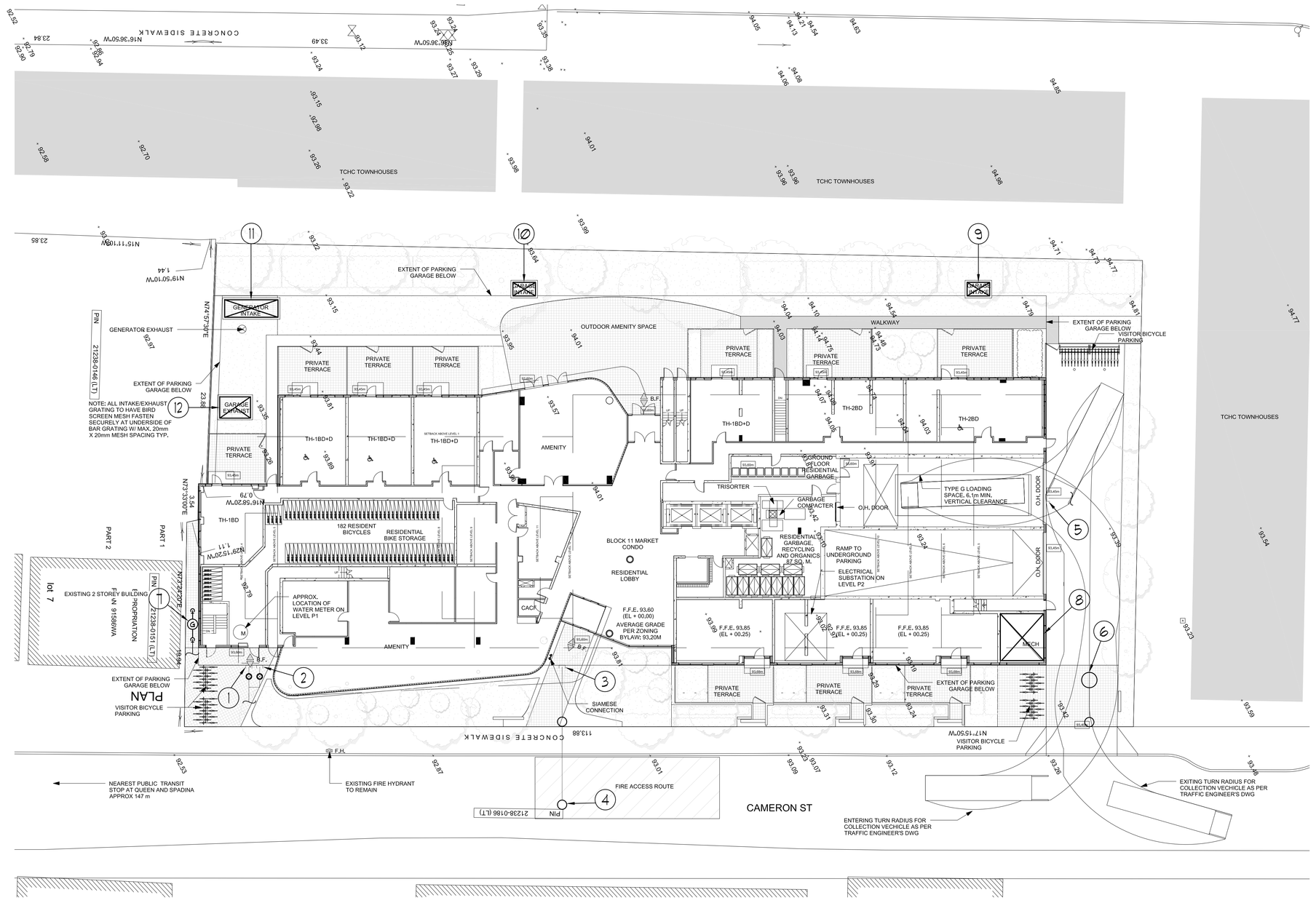

ALEXANDRA PARK (#1313)
MECHANICAL DRAWING LIST

		SCALE
M-1	SITE PLAN	1:200
M-2	P-2 FLOOR PLAN - SUB-SLAB DRAINAGE LAYOUT	1:100
M-3	P-2 FLOOR PLAN - MECHANICAL LAYOUT	1:100
M-4	P-1 FLOOR PLAN - HVAC LAYOUT	1:100
M-5	P-1 FLOOR PLAN - P&D LAYOUT	1:100
M-6	G/F - SOUTH HVAC DUCTWORK LAYOUT	1:50
M-7	G/F - NORTH HVAC DUCTWORK LAYOUT	1:50
M-8	G/F - SOUTH HVAC PIPING LAYOUT	1:50
M-9	G/F - NORTH HVAC PIPING LAYOUT	1:50
M-10	G/F - SOUTH P&D LAYOUT	1:50
M-11	G/F - NORTH P&D LAYOUT	1:50
M-12	2/F - SOUTH MECHANICAL LAYOUT	1:50
M-13	2/F - NORTH MECHANICAL LAYOUT	1:50
M-14	3/F - SOUTH MECHANICAL LAYOUT	1:50
M-15	3/F - NORTH MECHANICAL LAYOUT	1:50
M-16	4/F - SOUTH MECHANICAL LAYOUT	1:50
M-17	4/F - NORTH MECHANICAL LAYOUT	1:50
M-18	5/F - SOUTH MECHANICAL LAYOUT	1:50
M-19	5/F - NORTH MECHANICAL LAYOUT	1:50
M-20	6/F - SOUTH MECHANICAL LAYOUT	1:50
M-21	6/F - NORTH MECHANICAL LAYOUT	1:50
M-22	7/F - SOUTH MECHANICAL LAYOUT	1:50
M-23	7/F - NORTH MECHANICAL LAYOUT	1:50
M-24	8/F - SOUTH MECHANICAL LAYOUT	1:50
M-25	8/F - NORTH MECHANICAL LAYOUT	1:50
M-26	9/F - SOUTH MECHANICAL LAYOUT	1:50
M-27	9/F - NORTH MECHANICAL LAYOUT	1:50
M-28	10/F - MECHANICAL LAYOUT	1:50
M-29	11/F - MECHANICAL LAYOUT	1:50
M-30	12/F - MECHANICAL LAYOUT	1:50
M-31	13/F - MECHANICAL LAYOUT	1:50
M-32	14/F - MECHANICAL LAYOUT	1:50
M-33	ROOF - HVAC PIPING AND P&D LAYOUT	1:25
M-34	SYSTEM WATER RISER DIAGRAM	N.T.S.
M-35	DCW, DHW & DHWR RISER DIAGRAM	N.T.S.
M-36	PRESSURIZATION / VENTILATION RISER DIAGRAM	N.T.S.
M-37	SCHEMATICS	N.T.S.
M-38	DETAILS #1	N.T.S.
M-39	SCHEDULES	N.T.S.

NOTES:

1. INCOMING 150ø FIRE LINE. SEE SITE SERVICE ENGINEER'S DRAWINGS FOR DETAILS.
2. INCOMING 100ø DCW. SEE SITE SERVICE ENGINEER'S DRAWINGS FOR DETAILS.
3. 300ø SAN LEAVING PIPE @ 2% AT INV. 89.00. SEE SITE SERVICE ENGINEER'S DRAWINGS FOR DETAILS.
4. XXXø MANHOLE BY OTHERS.
5. 250ø STORM LEAVING PIPE @ 2% AT INV. 91.13. SEE SITE SERVICE ENGINEER'S DRAWINGS FOR DETAILS.
6. XXXø STORM MANHOLE BY OTHERS.
7. INCOMING GAS STATION C/W 5 LB. REGULATOR AND METERS BY ENBRIDGE.
   APPROX. BUILDING LOAD= XXX CFH
   APPROX. EMERGENCY GENERATOR = XXX CFH
   xxø (5 LB.) FOR BUILDING AND xxø (5 LB.) FOR GENERATOR DOWN TO P-1.
   PROVIDE LABEL ON EMERGENCY GENERATOR SHUT-OFF VALVE:
   "EMERGENCY GENERATOR SUPPLY - DO NOT CLOSE".
   SEE "ENBRIDGE GAS METER/REGULATING STATION DETAIL" ON THIS DRAWING FOR DETAIL.
8. 4,200x4,700 (19.7 M², 212.5 FT²) FRESH AIR INTAKE SHAFT FOR P-1 & P-2 LEVEL AND MAU-1.
9. 2,250x1,300 (2.93 M², 31.5 FT²) FRESH AIR INTAKE SHAFT FOR P-1 LEVEL C/W GRATE BY OTHERS.
10. 2,250x1,300 (2.93 M², 31.5 FT²) FRESH AIR INTAKE SHAFT FOR P-2 LEVEL C/W GRATE BY OTHERS.
11. 9,200x1,700 (8.84 M², 95 FT²) AIR SHAFT FOR GENERATOR INTAKE & EXHAUST C/W GRATE BY OTHERS.
12. 3,100x2,000 (6.2 M², 68 FT²) EXHAUST AIR SHAFT FOR P-1 & P-2 LEVEL C/W GRATE BY OTHERS.

LEGEND
SITE MECHANICAL

SYMBOL	DESCRIPTION
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
G	GAS LINE
F	FIRE LINE
	CATCH BASIN
	DOUBLE CATCH BASIN
	MAN HOLE
	CATCH BASIN MAN HOLE
	GAS METER
	WATER METER
RD	ROOF DRAIN
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
	SIAMESE CONNECTION
ENT. INV.	ENTERING INVERT
LVG. INV.	LEAVING INVERT

PRIORITY	NO	ISSUED FOR ---	BY
DATE	NO	DESCRIPTION	BY

PLANK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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DRAWINGS ARE NOT TO BE SCALED

NOVA TREND ENGINEERING GROUP, LTD.
178 West Beaver Creek Road, Unit 31
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Fax: 905 882-5447
Email: cad@novatrendeng.com

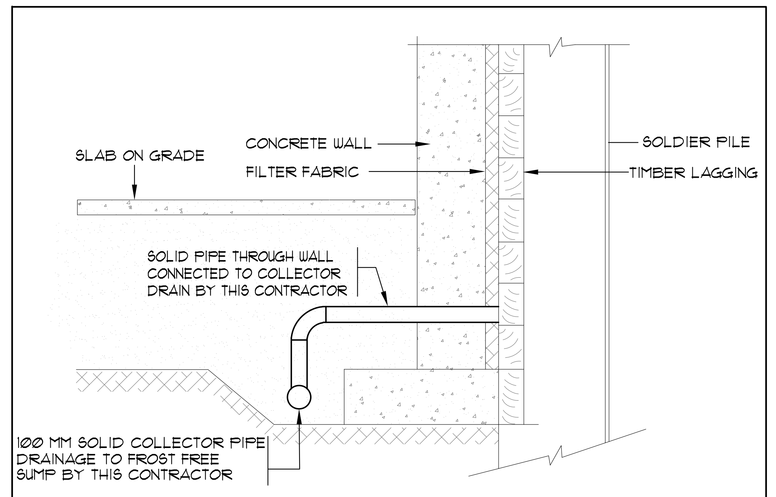
DRAWING TITLE:
SITE PLAN

PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

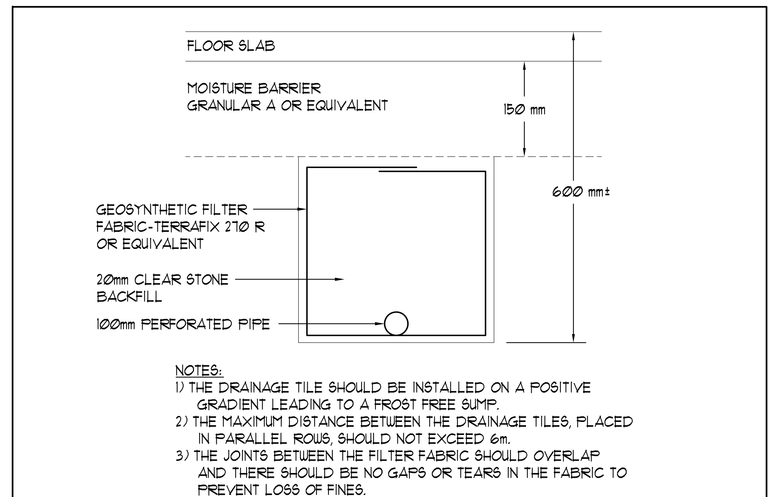
DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:200
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-1 OF 39

Drawing name: C:\Users\Gabriela\Upgabriel\Local\Temp\AcPublish_2924\1313dw - 1 (SITE PLAN).dwg Plotted: Apr 25, 2014 - 9:43am



WEEPING TILE INSTALLATION DETAILS

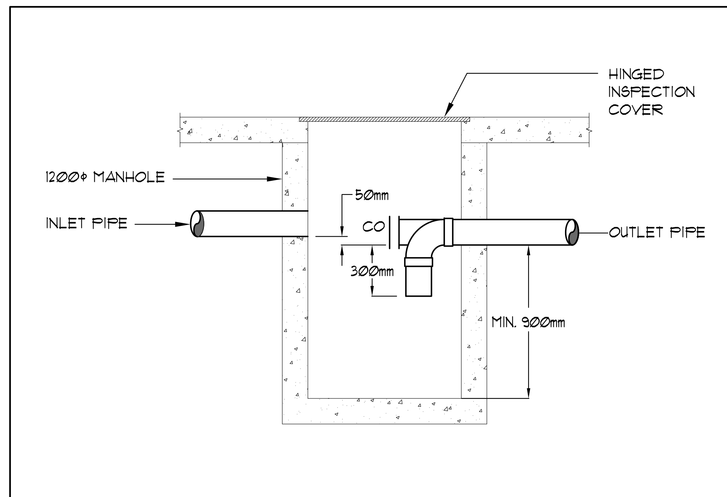
N.T.S.



NOTES:
1) THE DRAINAGE TILE SHOULD BE INSTALLED ON A POSITIVE GRADIENT LEADING TO A FROST FREE SUMP.
2) THE MAXIMUM DISTANCE BETWEEN THE DRAINAGE TILES, PLACED IN PARALLEL ROWS, SHOULD NOT EXCEED 6m.
3) THE JOINTS BETWEEN THE FILTER FABRIC SHOULD OVERLAP AND THERE SHOULD BE NO GAPS OR TEARS IN THE FABRIC TO PREVENT LOSS OF FINES.

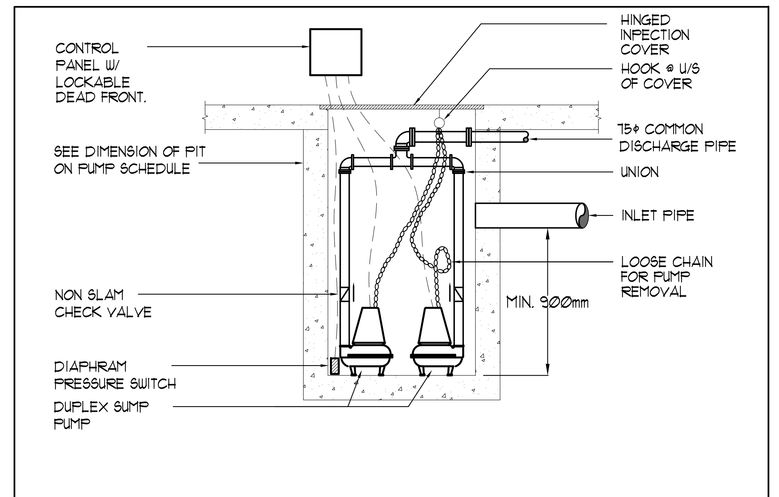
SUBFLOOR DRAINAGE DETAIL

N.T.S.



SAND TRAP DETAIL

N.T.S.



TYPICAL SUMP PIT DETAIL

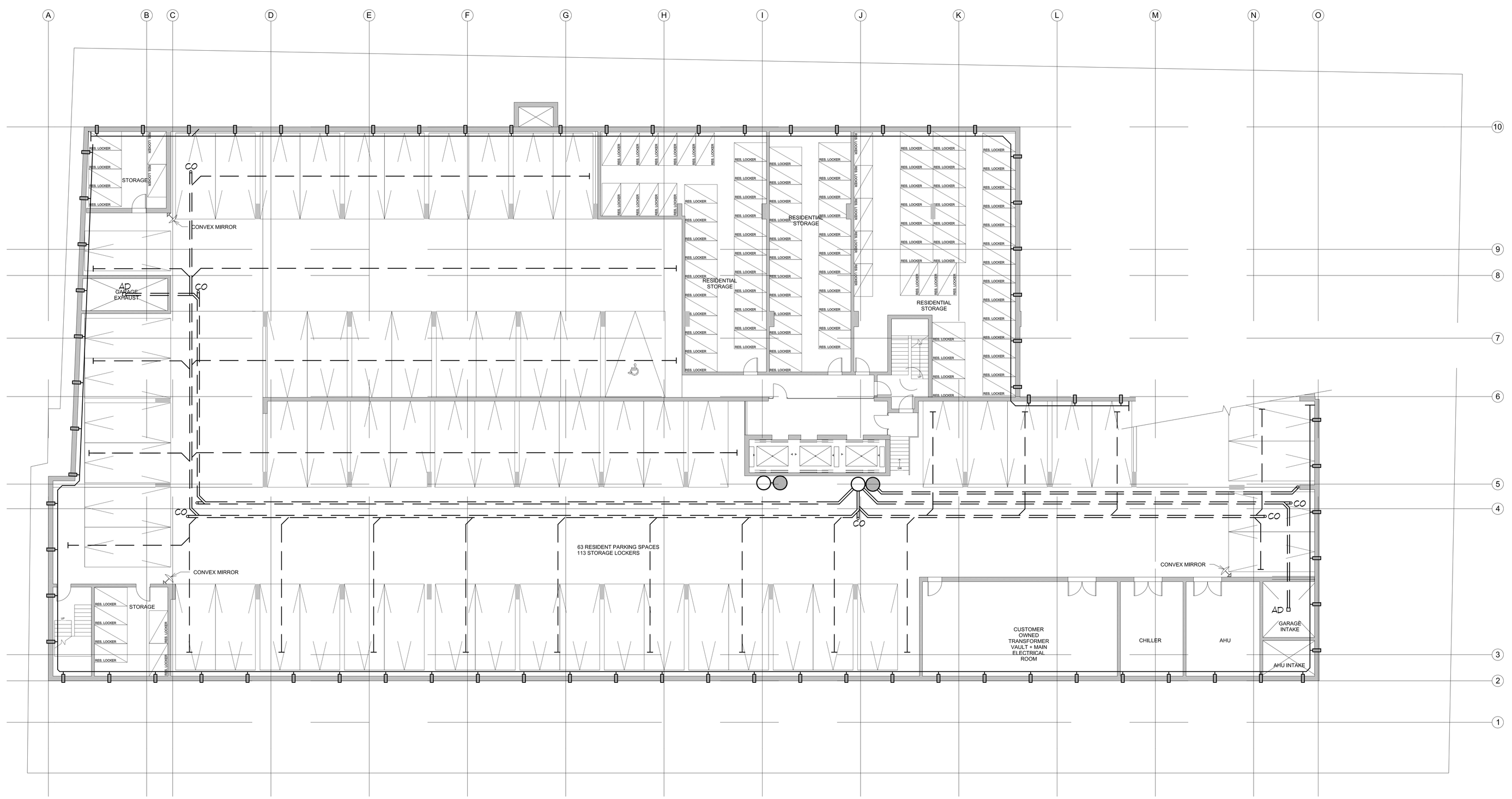
N.T.S.

REFER TO DWG. M-X FOR GENERAL AND ACOUSTIC NOTES

-/- -mm CLEAR
FLOOR TO UNDERSLAB

NOTES:

1
2
3
4



LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	-TYPE OF EQUIPMENT -EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
CO	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
T	1/2"x47'(1) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
XXX	FLOOR ELEVATION ABOVE LEVEL
XXX	FLOOR ELEVATION THIS LEVEL
XXX	HEADROOM (FLOOR TO U/S HEIGHT)

PRIORITY	1	ISSUED FOR: ---	EP.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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NOVA TREND DEVELOPMENT

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Email: cad@novatrendeng.com

DRAWING TITLE:
P-2 FLOOR PLAN
SUB -SLAB DRAINAGE LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:100
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-2 OF 39

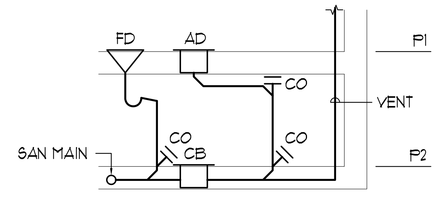
Drawing name: \\CADSERVER\Current Dwgs\1313 - Alexandra Park\Dwg\1313sb- (P-2 PLAN - SUB-SLAB DRAINAGE LAYOUT).dwg Plotted: Apr 25, 2014 - 9:43am

SANITARY PIT SP-1, SP-2

QTY.	DESCRIPTION
2	BARNES 28E-1054L SUBMERSIBLE PUMPS INSIDE A 1200MM SUMP PIT, EACH C/W 1 HP, 575 VOLT, 3 PHASE, 60 CYCLE MOTOR WITH 20 FT POWER CORD, 2" N.P.T. DISCHARGE, HANDLES 2" DIAMETER SOLIDS AND DELIVERS 50 U.S. G.P.M. AT 30 FT TOTAL HEAD.
1	LDP 575 DUPLEX ELECTRICAL ALTERNATOR STARTER AND CONTROL PANEL WITH LOCKABLE DEAD-FRONT, 575 VOLT, 3 PHASE, 60 CYCLE C/W H.O.A. SELECTOR SWITCHES, RUN LIGHTS, THERMAL OVERLOAD HEATERS TO SUIT PUMP MOTORS WITH RESET BUTTON, AND CIRCUIT BREAKERS IN EEMAC 3R ENCLOSURE.
4	LS 20 MECHANICAL LEVEL SENSORS, 1 FOR PUMP "ON", 1 FOR PUMP "OFF", 1 FOR BOTH PUMPS "ON", AND 1 FOR ALARM LEVEL.
1	LHU 115 HIGH WATER ALARM PANEL, 115 VOLT, 1 PHASE WITH PILOT LIGHT, ON-OFF-TEST SWITCH, BUZZER AND EXTRA RELAY FOR REMOTE SIGNALING, IN EEMAC 1 ENCLOSURE.
1	TRIM BAR CURB FRAME C/W CHECKERED COVER PLATE IN 2 SECTIONS, FOR INSPECTION AND ACCESS.

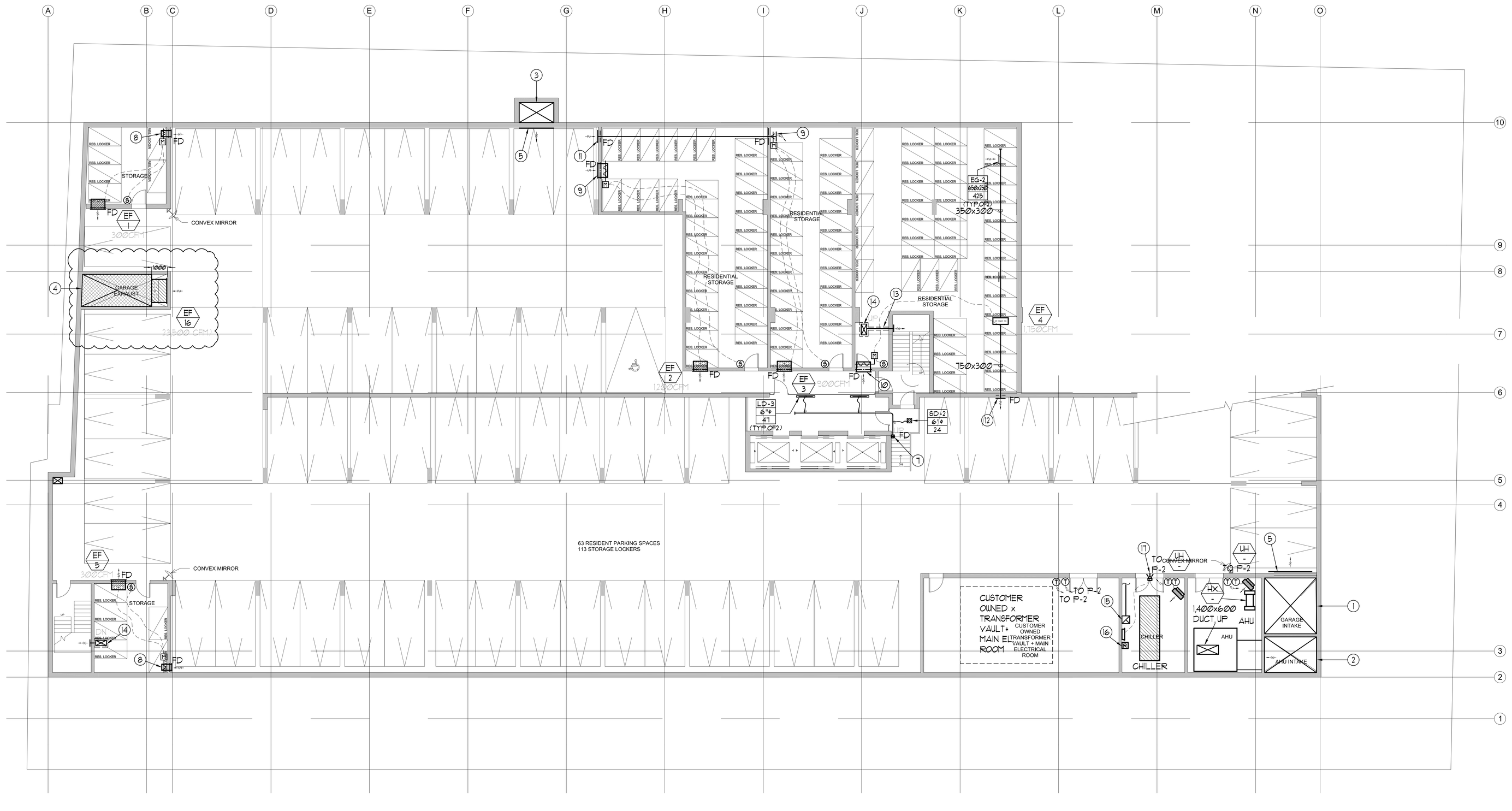
STORM PIT STP-1, STP-2

QTY.	DESCRIPTION
2	BARNES 28E-1054L SUBMERSIBLE PUMPS INSIDE A 1200MM SUMP PIT, EACH C/W 1 HP, 575 VOLT, 3 PHASE, 60 CYCLE MOTOR WITH 20 FT POWER CORD, 2" N.P.T. DISCHARGE, HANDLES 2" DIAMETER SOLIDS AND DELIVERS 50 U.S. G.P.M. AT 30 FT TOTAL HEAD.
1	LDP 575 DUPLEX ELECTRICAL ALTERNATOR STARTER AND CONTROL PANEL WITH LOCKABLE DEAD-FRONT, 575 VOLT, 3 PHASE, 60 CYCLE C/W H.O.A. SELECTOR SWITCHES, RUN LIGHTS, THERMAL OVERLOAD HEATERS TO SUIT PUMP MOTORS WITH RESET BUTTON, AND CIRCUIT BREAKERS IN EEMAC 3R ENCLOSURE.
4	LS 20 MECHANICAL LEVEL SENSORS, 1 FOR PUMP "ON", 1 FOR PUMP "OFF", 1 FOR BOTH PUMPS "ON", AND 1 FOR ALARM LEVEL.
1	LHU 115 HIGH WATER ALARM PANEL, 115 VOLT, 1 PHASE WITH PILOT LIGHT, ON-OFF-TEST SWITCH, BUZZER AND EXTRA RELAY FOR REMOTE SIGNALING, IN EEMAC 1 ENCLOSURE.
1	TRIM BAR CURB FRAME C/W CHECKERED COVER PLATE IN 2 SECTIONS, FOR INSPECTION AND ACCESS.



NOTE:
PRIME AND VENT TRAP OF FD/CB PER OBC PART 7 SECTION 7.5 (TYPICAL).

PARKING AREA DRAIN/CATCH BASIN SCHEMATIC



GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREAS OF CONFLICT TO THE ENGINEER PRIOR TO BEGINNING WORK.
3) MINIMUM HEAD ROOM IS 2100 mm ABOVE FINISH FLOOR LEVEL.
4) WHERE THERE IS A DROPPED CEILING, GAS PIPING SHALL BE HUNG BELOW AND TIGHT TO CEILING.
5) ALL EQUIPMENT TO BE INSTALLED PER SPECIFICATION AND MANUFACTURER'S INSTALLATION MANUAL. PROVIDE ACCESS PANEL FOR CONCEALED EQUIPMENT VALVES, ETC.
6) ALLOW 3M SEPARATION BETWEEN THE CONNECTION OF THE MAIN SANITARY RISER AND ITS AUXILIARY RISER.
7) ALL SANITARY PIPE OUTSIDE OF HEATED CEILING SPACE SHALL BE INSULATED, CANVASSED AND PAINTED.
8) ALL VENTS SHALL COMPLY WITH O.B.C. AND PLUMBING CODE.
9) FOR STORAGE ROOM VENTILATION SYSTEM, DIV.16 TO PROVIDE CONDUIT, WIRING AND SWITCH TO START / STOP FAN & DAMPER. FAN AND 110V ACTUATOR TO BE SUPPLIED AND INSTALLED BY DIV. 15.
10) FOR UTILITY ROOM VENTILATION SYSTEM, DIV.15 WILL PROVIDE LINE VOLTAGE THERMOSTAT TO DIV.16. DIV.16 TO PROVIDE CONDUIT & WIRING TO START/STOP FAN & DAMPER VIA THERMOSTAT. FAN AND 110V ACTUATOR TO BE SUPPLIED AND INSTALLED BY DIV. 15.
11) FOR UNIT HEATER, DIV. 15 TO PROVIDE LINE VOLTAGE THERMOSTAT TO DIV. 16. DIV. 16 TO PROVIDE CONDUIT & WIRING TO START/STOP UNIT HEATER.
12) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE-PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
13) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1.
14) DIV. 16 TO PROVIDE START/STOP FOR ALL THE MAIN GARAGE EXHAUST FANS INSIDE CACF ROOM.
15) ALL TRAPS & PRIMERS TO BE HEAT TRACED BY DIV.16, INSULATED & JACKETTED BY THIS CONTRACTOR.

⚠ 2550 mm CLEAR FLOOR TO UNDERSLAB

NOTES:

1. 3,300x3,600 (12.26 M², 132 FT²) FRESH AIR INTAKE SHAFT FOR P-1 & P-2 LEVEL.
2. 3,300x2,300 (7.8 M², 84 FT²) FRESH AIR INTAKE SHAFT FOR MAU.
3. 2,250x1,300 (2.93 M², 31.5 FT²) FRESH AIR SHAFT FOR P-2 LEVEL.
4. 5,300x2,000 (11.61 M², 125 FT²) EXHAUST AIR SHAFT FOR P-1 & P-2 LEVEL.
5. 3,100x2,000 WEATHERPROOF INTAKE LOUVRE C/W BIRDSCREEN. (16,500 CFM)
6. 2,000x1,300 WEATHERPROOF INTAKE LOUVRE C/W BIRDSCREEN. (7,000 CFM)
7. 200x200 FRESH AIR DUCT FROM ABOVE C/W FIRE DAMPER AT SLAB.
8. 400x200 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
9. 800x400 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
10. 800x800 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
11. 800x400 INTAKE LOUVRE C/W FIRE DAMPER& WIRE MESH.
12. 600x400 EXHAUST LOUVRE C/W FIRE DAMPER & WIRE MESH.
13. DUCT INSIDE 2Hr FIRE RATED ENCLOSURE. ENCLOSURE BY OTHERS.
14. 700x350 STAIR PRESSURIZATION DUCT FROM ABOVE C/W FIRE RATED ENCLOSURE. FIRE RATED ENCLOSURE BY OTHERS.
15. ---x--- DUCT DOWN TO 450 mm AFFL C/W OPEN END AND WIRE MESH.
16. REFRIGERANT MONITORING MASTER & SLAVE PANELS AND SENSOR. SLAVE PANEL SHOWING STATUS OF REFRIGERATION MONITORING SYSTEM TO BE MOUNTED OUTSIDE OF CHILLER ROOM. UPON SENSING OF REFRIGERANT LEAKAGE CHILLER WILL BE SHUT DOWN AND EF-10 TO BE ACTIVATED TO RUN IN HIGH SPEED.
17. ALARM STROBE LIGHT SUPPLIED AND WIRED TO THE REFRIGERANT MONITORING SYSTEM BY MECHANICAL CONTRACTOR.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
E	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	-TYPE OF EQUIPMENT / EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
S	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	PANEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
CA	COMPRESSED AIR OUTLET
BFV	BACKFLOW PREVENTER
BC	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
T	10"x4"DU THERMOWELL C/W 10" BUSHING X 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)

REVISION #	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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NOVA TREND DEVELOPMENT

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

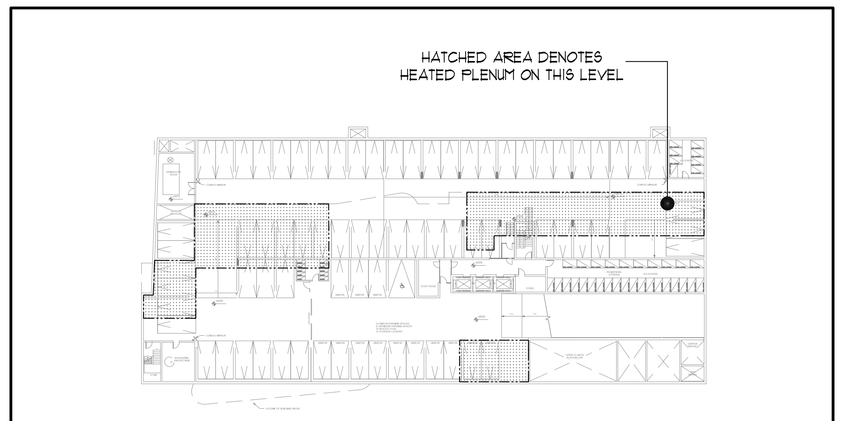
DRAWING TITLE:
P-2 FLOOR PLAN
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

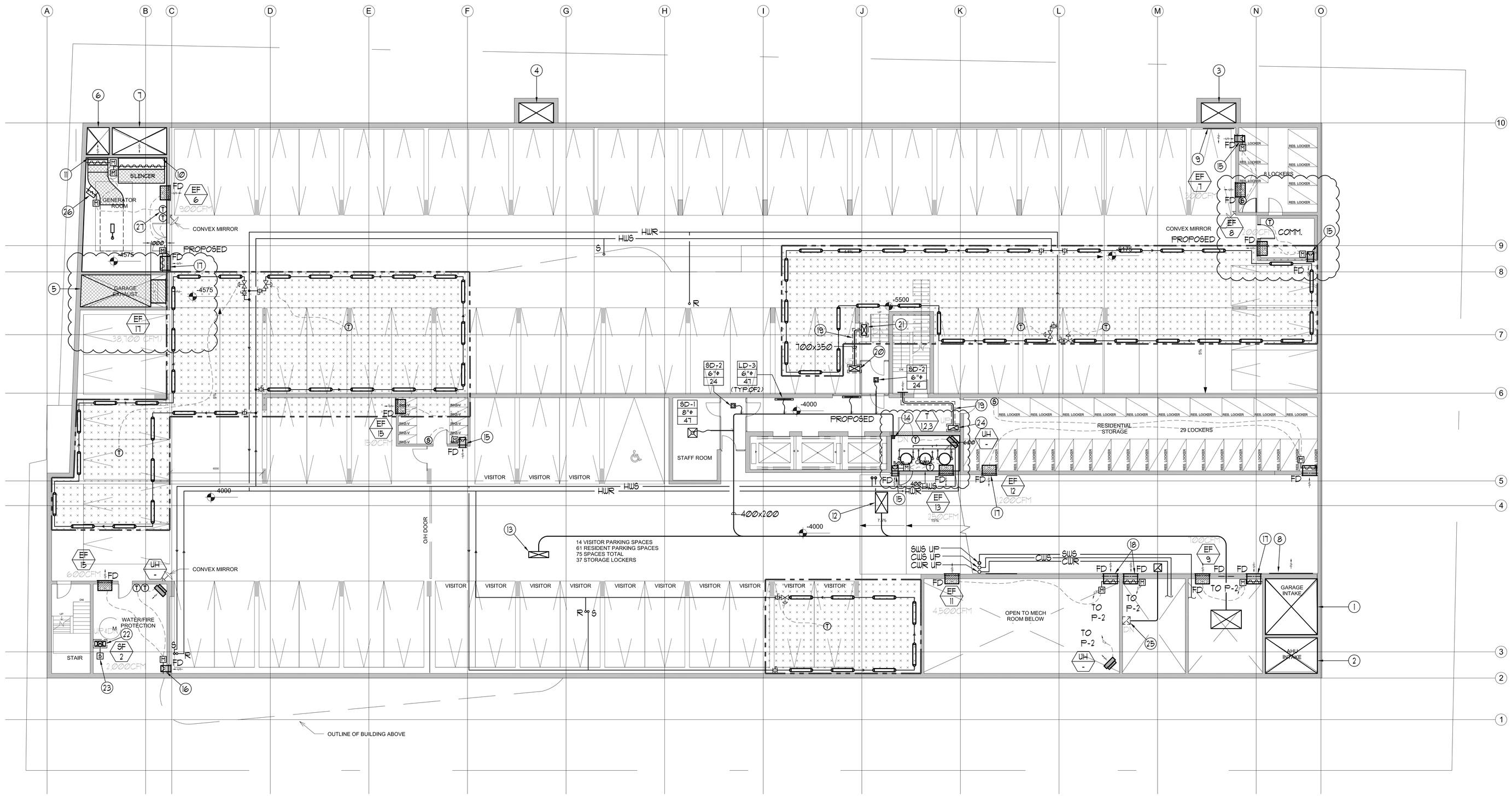
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:100
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-3 OF 39

Drawing name: \\CADSERVER\Current Dwg\13\1313 - Alexandra Park\2015\1313M- SP-2 PLAN - MECHANICAL LAYOUT.dwg Printed: Apr 25, 2014 - 9:43am



P-1 HEATED PLENUM | N.T.S.



REFER TO DWG. M-X FOR GENERAL AND ACOUSTIC NOTES

3800 mm CLEAR
FLOOR TO UNDERSLAB

NOTES:

1. 3,300x3,600 (12.26 M^2, 132 FT^2) FRESH AIR INTAKE SHAFT FOR P-1 & P-2 LEVEL.
2. 3,300x2,300 (7.8 M^2, 84 FT^2) FRESH AIR INTAKE SHAFT FOR MAU.
3. 2,250x1,300 (2.93 M^2, 315 FT^2) FRESH AIR INTAKE SHAFT FOR P-1 LEVEL.
4. 2,250x1,300 (2.93 M^2, 315 FT^2) FRESH AIR INTAKE SHAFT FOR P-2 LEVEL.
5. 5,500x2,000 (11.61 M^2, 125 FT^2) EXHAUST AIR SHAFT FOR P-1 & P-2 LEVEL.
6. 3,500x1,700 (6.2 M^2, 66.8 FT^2) INTAKE AIR SHAFT FOR GENERATOR.
7. 1,400x1,700 (2.5 M^2, 27.6 FT^2) EXHAUST AIR SHAFT FOR GENERATOR.
8. 3,100x2,900 WEATHERPROOF INTAKE LOUVRE C/W BIRDSCREEN. (25,000 CFM)
9. 2,000x2,500 WEATHERPROOF INTAKE LOUVRE C/W BIRDSCREEN. (13,700 CFM)
10. 3,400x2,500 WEATHERPROOF INTAKE LOUVRE C/W MOTORIZED DAMPER AND WIRE MESH. (24,000 CFM)
11. 1,300x3,200 WEATHERPROOF EXHAUST LOUVRE C/W MOTORIZED DAMPER AND WIRE MESH. (23,000 CFM)
12. 1,350x800 F/A DUCT UP C/W FIRE DAMPER AT SLAB.
13. 1,300x400 F/A DUCT UP C/W FIRE DAMPER AT SLAB.
14. 200x200 F/A DUCT DOWN C/W FIRE DAMPER AT SLAB.
15. 400x200 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
16. 400x400 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
17. 800x400 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
18. 1,200x800 400x400 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
19. DUCT INSIDE 2HF FIRE RATED ENCLOSURE. ENCLOSURE BY OTHERS.
20. 700x350 STAIR PRESSURIZATION DUCT FROM ABOVE C/W FIRE RATED ENCLOSURE. FIRE RATED ENCLOSURE BY OTHERS.
21. 700x350 STAIR PRESSURIZATION DUCT DOUN C/W FIRE RATED ENCLOSURE. RIRE RATED ENCLOSURE BY OTHERS.
22. 700x350 STAIR PRESSURIZATION DUCT FROM ABOVE & DOUN C/W FIRE RATED ENCLOSURE. FIRE RATED ENCLOSURE BY OTHERS, MOUNT SF-2 VERTICALLY.
23. SMOKE DETECTOR BY DIV.16 TO BE INSTALLED AT THE DISCHARGE SIDE OF THE FAN.
24. 700x350 STAIR RELIEF DUCT UP C/W FIRE RATED ENCLOSURE. FIRE RATED ENCLOSURE BY OTHERS.
25. ---x--- DUCT DOWN TO P-2 LEVEL.
26. ---x--- BY PASS MOTORIZED DAMPER CONNECTS TO THE TEMPERATURE CONTROLLER.
27. TEMPERATURE CONTROLLER TO BE INTERLOCKED TO GENERATOR INTAKE, RECIRCULATED AND EXHAUST MOTORIZED DAMPERS TO MAINTAIN ROOM TEMPERATURE @70 DEGREES F.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XXX	TYPE OF EQUIPMENT
X	EQUIPMENT IDENTIFICATION
XXX	TYPE OF DIFFUSER OR GRILLE
XXX	GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	AIRFLOW (CFM OR L/S)
SD	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES
	/ - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
XXXX	FLOOR ELEVATION ABOVE LEVEL
XXXX	FLOOR ELEVATION THIS LEVEL
XXXX	HEADROOM (FLOOR TO U/S HEIGHT)

PROJECT	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE.

REVISIONS

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DRAWINGS ARE NOT TO BE SCALED

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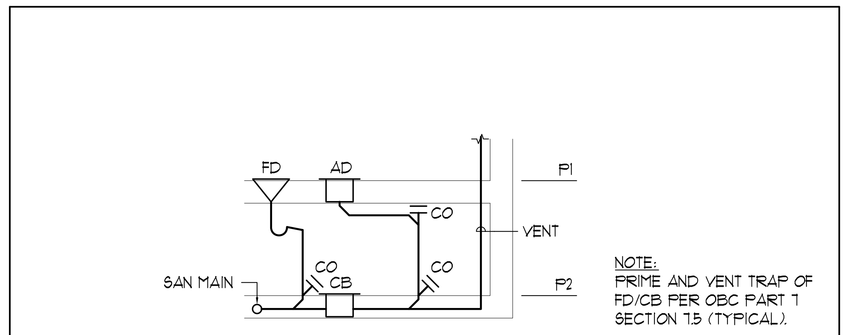
Tel: 905 882-5445
Fax: 905 882-5447
Email: cadnovatrendeng.com

DRAWING TITLE:
P-1 FLOOR PLAN
HVAC LAYOUT

PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

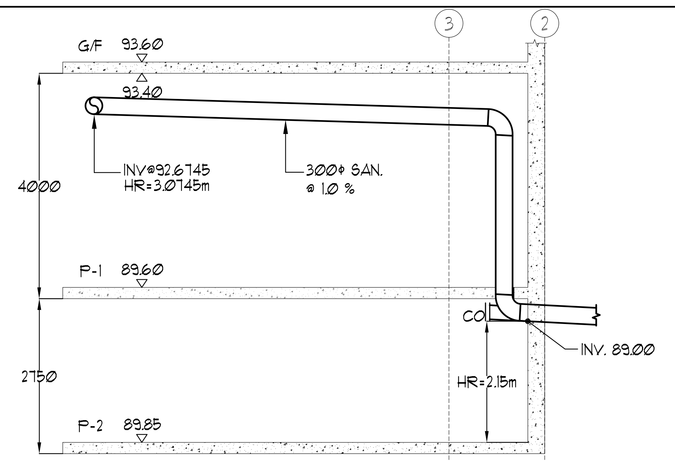
DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:100
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-4 OF 39

Drawing name: \\CADSERVER\Current Dwg\1313\1313-Alexandra Park\2015\1313-M- KP-1 PLAN - HVAC LAYOUT.dwg Printed: Apr 25, 2014 - 9:43am

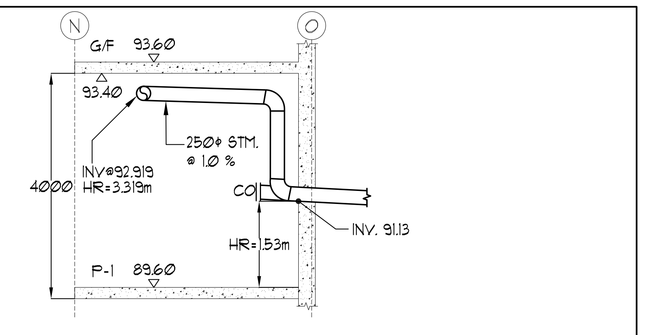


NOTE:
PRIME AND VENT TRAP OF FD/CB PER OBC PART 7 SECTION 7.5 (TYPICAL).

PARKING AREA DRAIN/CATCH BASIN SCHEMATIC



SANITARY PIPE DETAIL SECTION A-A | N.T.S.



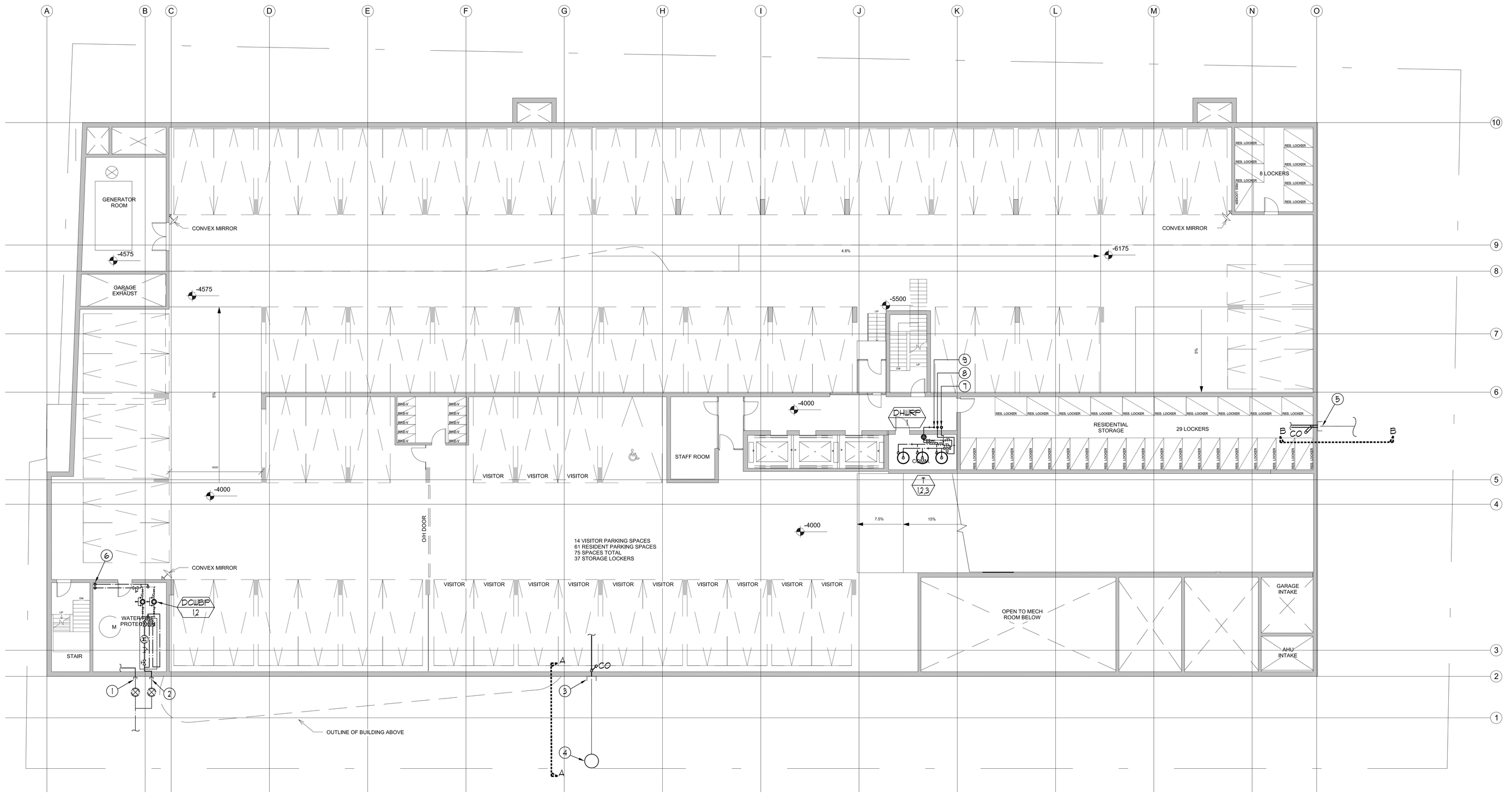
STORM PIPE DETAIL SECTION B-B | N.T.S.

REFER TO DWG. M-X FOR GENERAL AND ACOUSTIC NOTES

-mm CLEAR
FLOOR TO UNDERSLAB

KEYNOTES:

1. 150ø FIRE LINE CONNECTION FROM SITE SERVICE. SEE SPRINKLER DRAWING FOR CONTINUATION.
2. 100ø DCW MAIN CONNECTION FROM SITE SERVICE.
3. 300ø SAN LEAVING PIPE @ 2% AT INV. 89.00.
4. XXXø MANHOLE BY OTHERS.
5. 250ø STORM LEAVING PIPE @ 2% AT INV. 91.13
6. 100ø DCW (LZ) & 100ø DCW (HZ) UP TO G/F.
7. 100ø DCW (LZ) FROM ABOVE.
8. 63ø DHW (LZ) UP TO G/F.
9. 50ø DHWR (LZ) FROM ABOVE.



LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XX	-TYPE OF EQUIPMENT EQUIPMENT IDENTIFICATION
XXX	-TYPE OF DIFFUSER OR GRILLE
XXX	-GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	-AIRFLOW (CFM OR L/S)
SD	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
XXX	-FLOOR ELEVATION ABOVE LEVEL
XXX	-FLOOR ELEVATION THIS LEVEL
XXX	-HEADROOM (FLOOR TO U/S HEIGHT)

PROJECT#	1	ISSUED FOR: ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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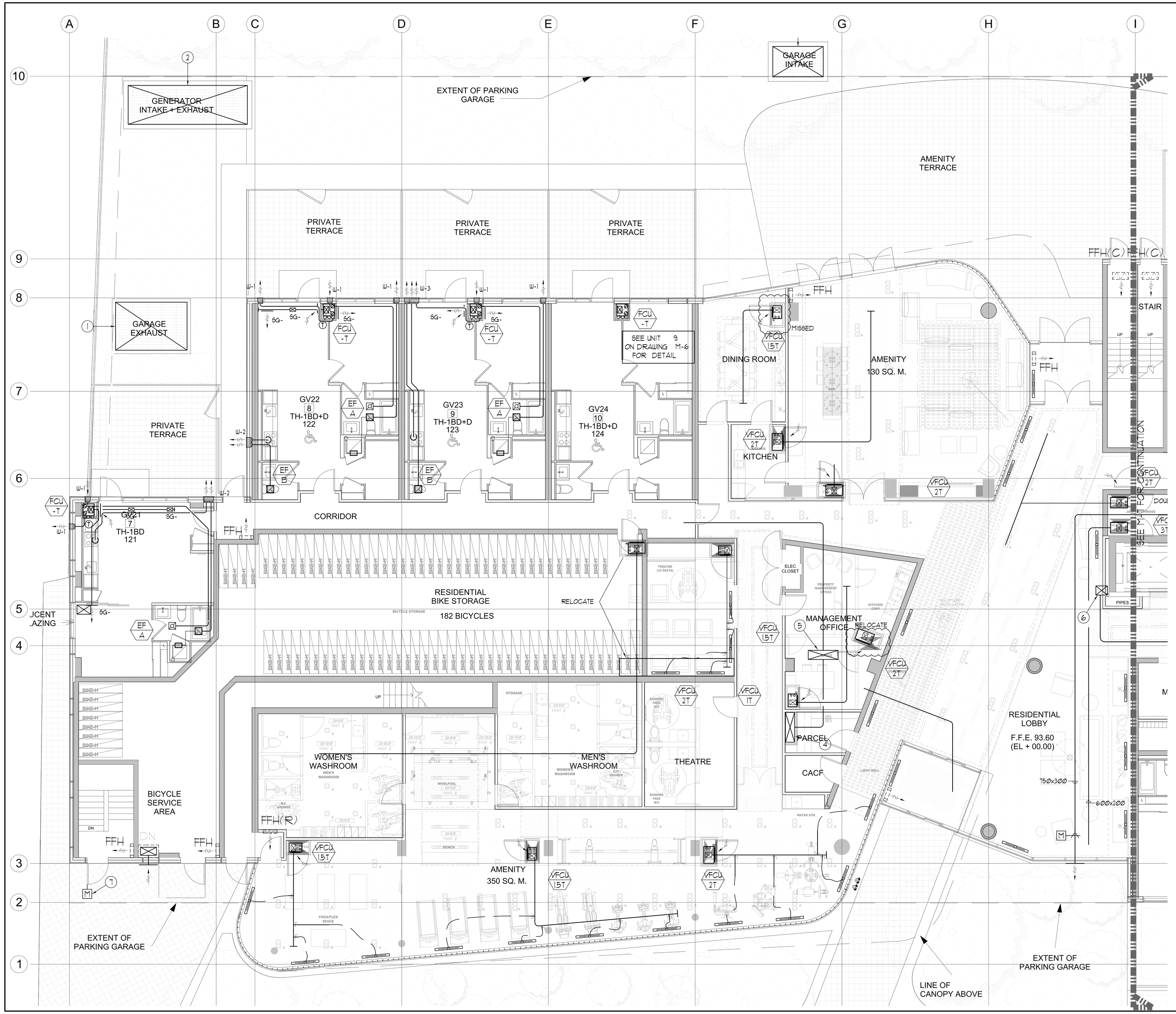
Tel: 905 882-5445
Fax: 905 882-5441
Email: cad@novatrendeng.com

DRAWING TITLE:
P-1 FLOOR PLAN
P4D LAYOUT

PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:100
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-5 OF 39

Drawing name: \\CADSERVER\Current Dwg\1313 - Alexandra Park\2013\1313M- SDP-1 PLAN - P4D LAYOUT.dwg Plotted: Apr 25, 2014 - 9:43am



GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.

2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.

3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.

4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H4C WATER, SANITARY CONNECTION DETAILS.

5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOUERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.

6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.

7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM

8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.

9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1

10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.

11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.

12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.

13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE).

REFER TO DWG. M-X FOR GENERAL AND ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 4050mm
CLEAR PRODUCT= 3000mm
COMPLETE DROP CEILING =1000mm FOR DUCT/PIPES
ROOF DRAINS & TERRACE DRAINS FROM 2/F

NOTES:

1. 3,100x2,000 (6.2 M², 68 FT²) EXHAUST AIR SHAFT FOR P-1 & P-2 LEVEL C/W GRATE BY OTHERS.
2. 5,200x1,700 (8.84 M², 95 FT²) AIR SHAFT FOR GENERATOR INTAKE & EXHAUST C/W GRATE BY OTHERS.
3. 2,250x1,300 (2.93 M², 31.5 FT²) FRESH AIR INTAKE SHAFT FOR P-2 LEVEL C/W GRATE BY OTHERS.
4. 1,300x400 F/A DUCT FROM BELOW C/W FIRE DAMPER AT SLAB.
5. 1,300x400 F/A DUCT UP TO SOUTH SHAFT A C/A FIRE DAMPER AT SLAB.
6. 500x400 F/A DUCT UP TO SOUTH SHAFT B C/W FIRE DAMPER AT SLAB.
7. MOTORIZED DOOR TO BE CONNECTED TO FIRE ALARM SYSTEM BY DIV.16.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	TYPE OF EQUIPMENT / EQUIPMENT IDENTIFICATION
	TYPE OF DIFFUSER OR GRILLE / GRILLE SIZE OR DIFFUSER NECK SIZE
	AIRFLOW (CFM OR L/S)
S	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
CA	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
2W	2-WAY MODULATING VALVE
3W	3-WAY MODULATING VALVE
	10"x4"(D) THERMOWELL C/W 10" BUSHING & 1/2" PLUG
XXXX	FLOOR ELEVATION ABOVE LEVEL
XXXX	FLOOR ELEVATION THIS LEVEL
XXXX	HEADROOM FLOOR TO U/S HEIGHT

PRIORITY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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Tel: 905 882-5445
Fax: 905 882-5447
Email: cad@novatrendeng.com

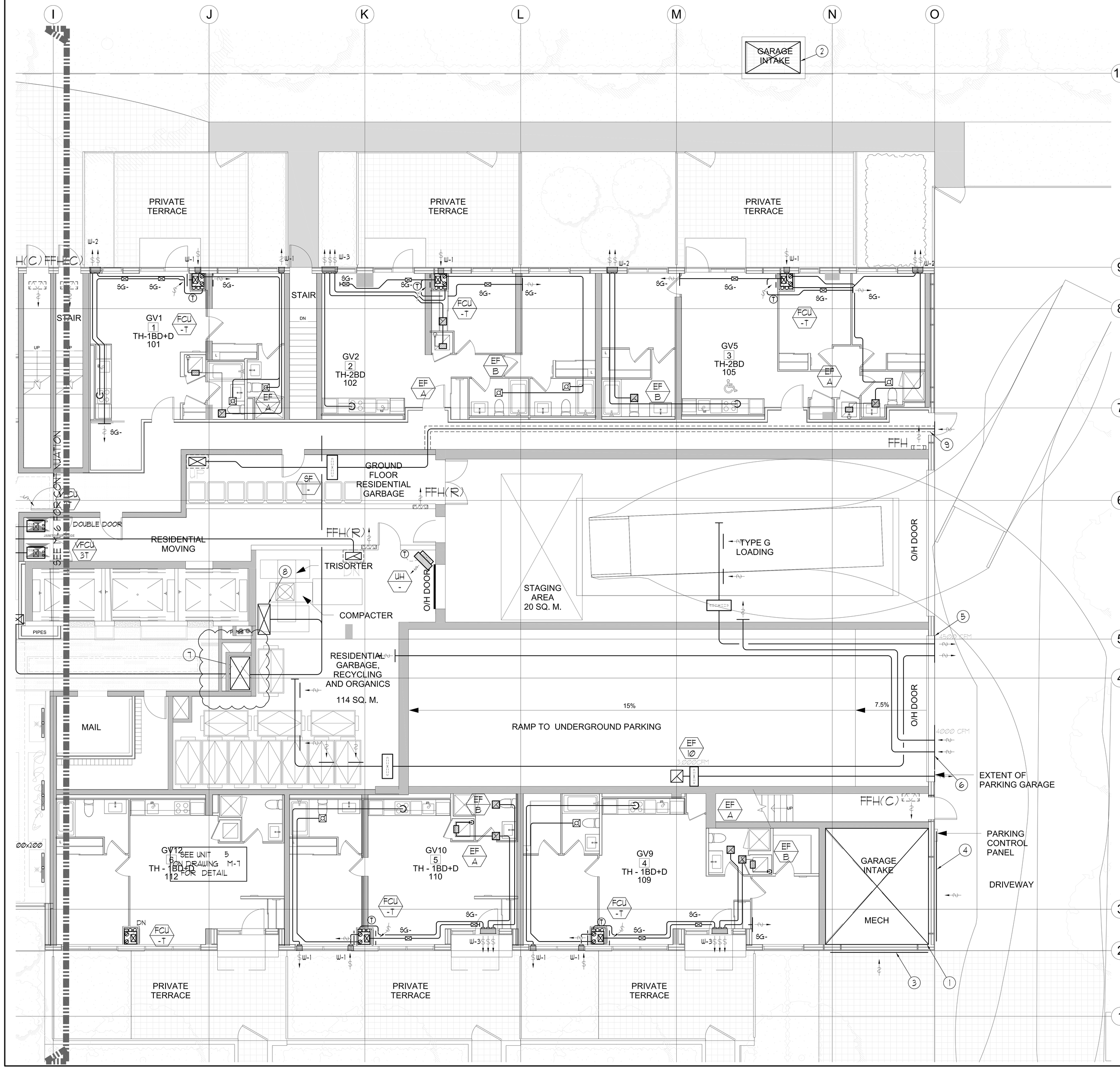
DRAWING TITLE:
G/F SOUTH
HVAC DUCTWORK LAYOUT

PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

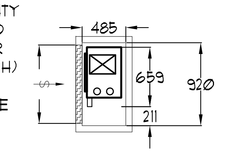
DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-6 OF 35

KEY PLAN N.T.S.

Drawing name: \\DOCS\DWGS\Current Dwgs\1313 - Alexandra Park\DWGS\1313M-6.DGF PLAN - SOUTH @ NORTH DUCTWORK LAYOUT.dwg Plotted: Apr 25, 2014 - 9:44am

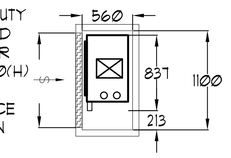


"VENTEX" HEAVY DUTY HINGED ANODIZED ALUMINUM LOUVER DOOR 870(W)x250(H) FOR RETURN AIR & MAINTENANCE •BY VENTILATION CONTRACTOR

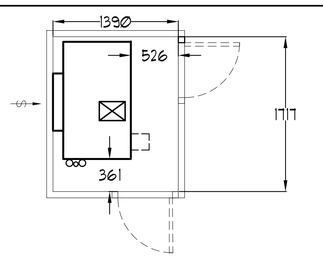


TYPICAL MECH. CLOSET FOR VERTICAL FCU (FCC-17 TO 157) AT COMMON AREA — N.T.S.

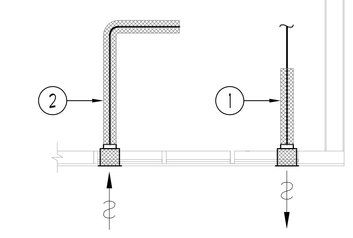
"VENTEX" HEAVY DUTY HINGED ANODIZED ALUMINUM LOUVER DOOR 1050(W)x1250(H) FOR RETURN AIR & MAINTENANCE •BY VENTILATION CONTRACTOR



TYPICAL MECH. CLOSET FOR VERTICAL FCU (FCC-2T TO 3T) AT COMMON AREA — N.T.S.



TYPICAL MECH. CLOSET FOR VERTICAL FCU (FCC-5T) AT COMMON AREA — N.T.S.



1. EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)
2. F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK — NTS

GENERAL NOTES:

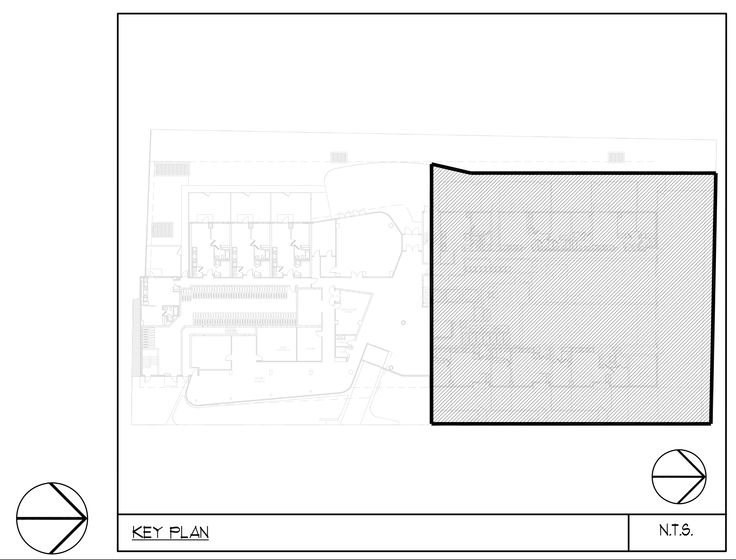
1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.
3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.
4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H&C WATER, SANITARY CONNECTION DETAILS.
5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.
6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM
8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1
10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.
11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.
12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.
13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

REFER TO DWG. M-X FOR GENERAL AND ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 4050mm
CLEAR PRODUCT= 3000mm
COMPLETE DROP CEILING =1000mm FOR DUCT/PIPES
ROOF DRAINS & TERRACE DRAINS FROM 2/F

NOTES:

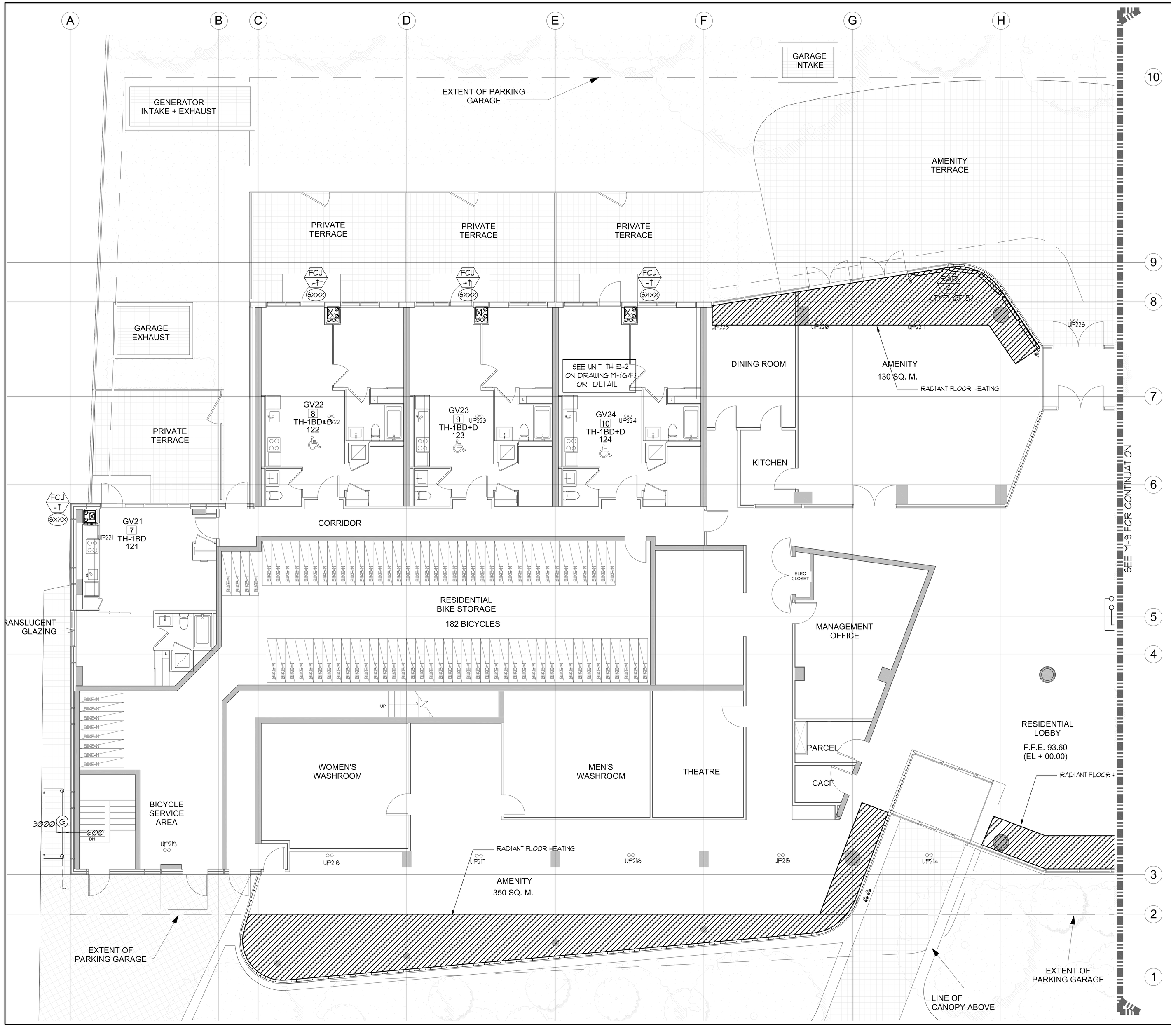
1. 4200x4,700 (19.7 M², 212.5 FT²) FRESH AIR INTAKE SHAFT FOR P-1 & P-2 LEVEL AND MAU-1.
2. 2,250x1,300 (2.93 M², 31.5 FT²) FRESH AIR INTAKE SHAFT FOR P-1 LEVEL C/W GRATE BY OTHERS.
3. 4,000x3,200 WEATHERPROOF INTAKE LOUVRE C/W BIRDSCREEN. (35,000 CFM)
4. 4,500x3,200 WEATHERPROOF INTAKE LOUVRE C/W BIRDSCREEN. (40,100 CFM)
5. 2,000x8,000 WEATHERPROOF INTAKE LOUVRE c/w BIRDSCREEN. (4,000 CFM)
6. 1,100x8,000 WEATHERPROOF EXHAUST LOUVRE c/w BIRDSCREEN. (4,500 CFM)
7. 650x1,300 F/A DUCT FROM BELOW C/W FIRE DAMPER AT SLAB.
8. 1,250x500 F/A DUCT UP TO NORTH SHAFT C/W FIRE DAMPER AT SLAB.
9. 2Hr FIRE RATED ENCLOSURE. FIRE RATED ENCLOSURE BY OTHERS.



KEY PLAN — N.T.S.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	-TYPE OF EQUIPMENT -EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
	STARTER (3 PHASE / 1PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
BLD	BLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
WCO	WALL CLEANOUT
FCO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
2W	2-WAY MODULATING VALVE
3W	3-WAY MODULATING VALVE
	10"x4"(X) THERMOWELL C/W 1/2" BUSHING & 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)

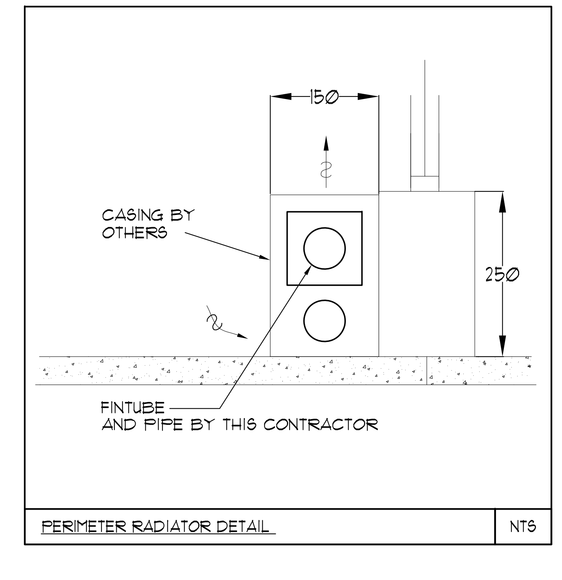


REFER TO DWG. M-X FOR GENERAL AND ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 4050mm
CLEAR PRODUCT= 3000mm
COMPLETE DROP CEILING =1000mm FOR DUCT/PIPES
ROOF DRAINS & TERRACE DRAINS FROM 2/F

NOTES:

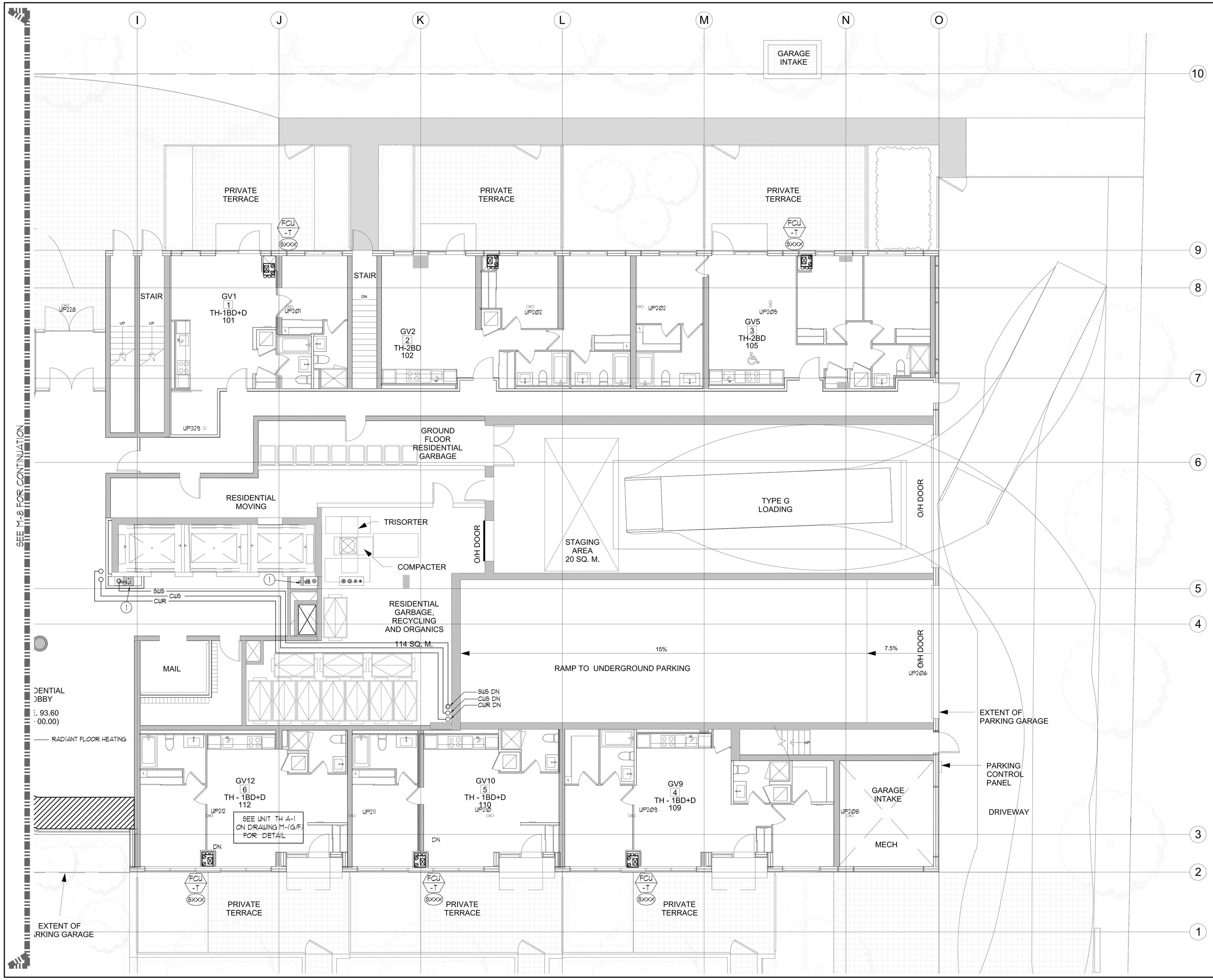
1. PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
2.
3.
4.



PERIMETER RADIATOR DETAIL | NTS

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	-TYPE OF EQUIPMENT -EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
CA	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
T	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING x 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION TWB LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)



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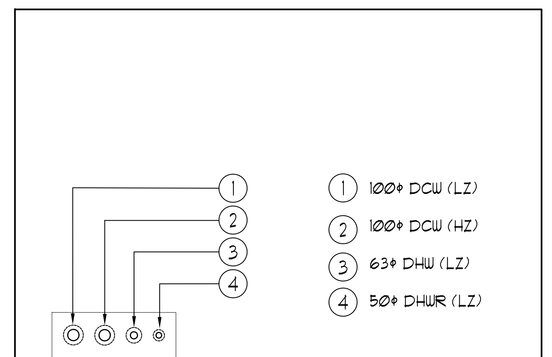
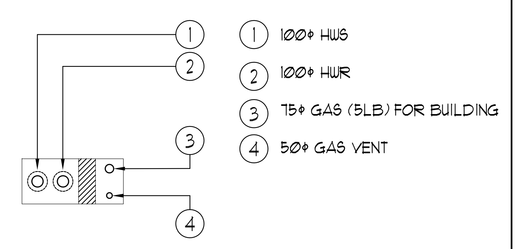
CLEAR PRODUCT= 3000mm
COMPLETE DROP CEILING =1000mm FOR DUCT/PIPES
ROOF DRAINS & TERRACE DRAINS FROM 2/F

NOTES:

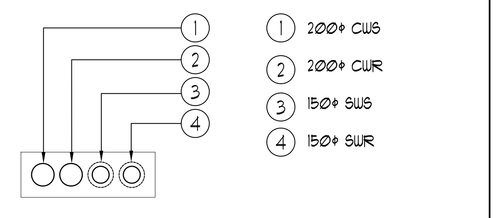
1. PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
2.
3.
4.



NORTH PIPE SHAFT 2: G/F. NTS



NORTH PIPE SHAFT 1: G/F. NTS



SOUTH PIPE SHAFT: G/F. NTS

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XX YY	-TYPE OF EQUIPMENT -EQUIPMENT IDENTIFICATION
XX-X XXX XXX	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
XX XX	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
GM	GAS METER
	GAS COCK
PR	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
WM	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
PR	PRESSURE REDUCING VALVE
	CHECK VALVE
C	CAP
CA	COMPRESSED AIR OUTLET
BFP	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
2W	2-WAY MODULATING VALVE
3W	3-WAY MODULATING VALVE
	10"(+4"OD) THERMOWELL C/W 10" BUSHING X 1/2" PLUG
XXXX	-FLOOR ELEVATION ABOVE LEVEL
XXXX	-FLOOR ELEVATION THIS LEVEL
XXXX	-HEADROOM (FLOOR TO U/S HEIGHT)

PRIORITY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO ISSUE 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 ENGINEERING & MANAGEMENT INC.
175 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5447
Email: cad@novatrendeng.com

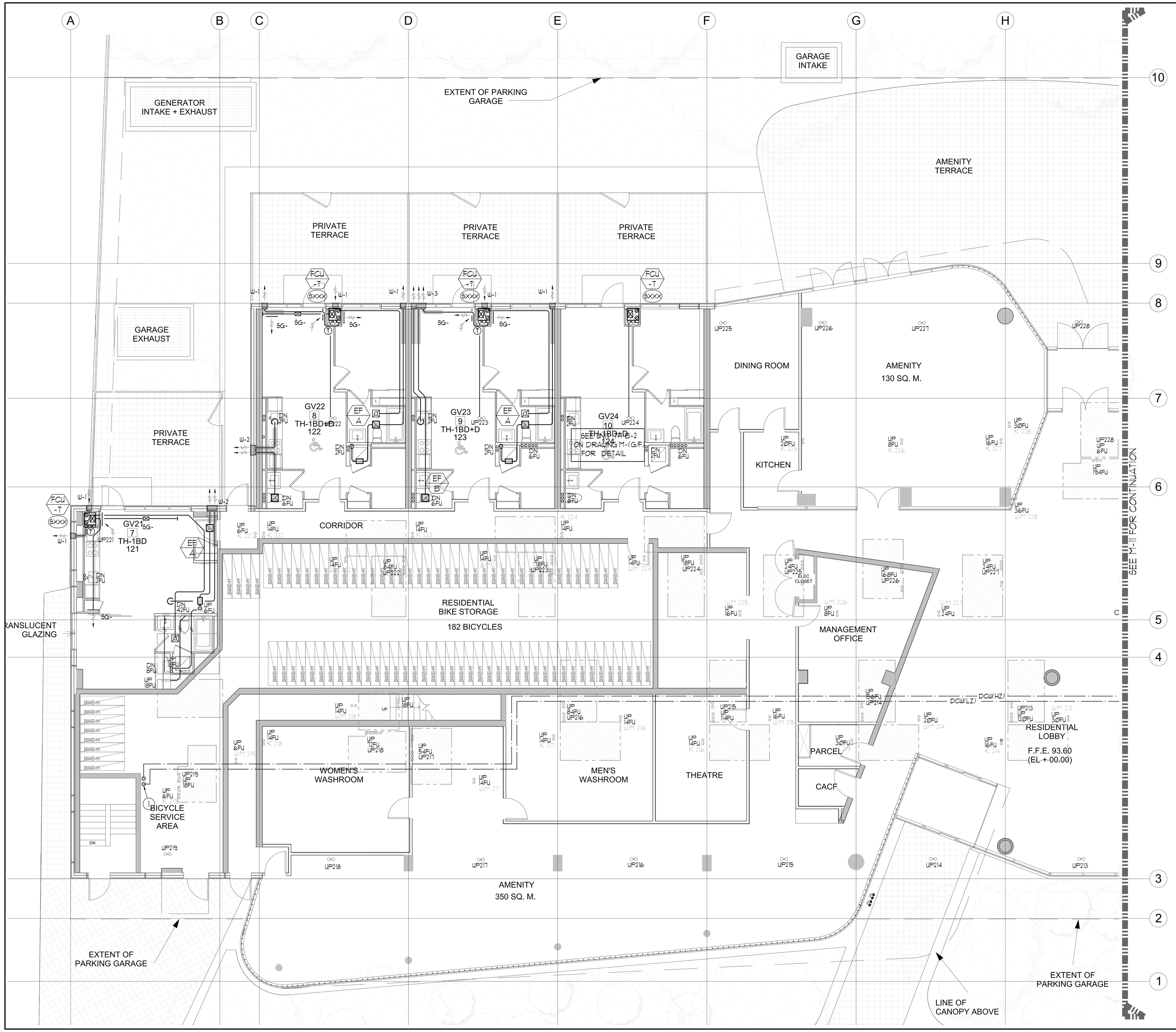
DRAWING TITLE:
G/F NORTH
HVAC PIPING LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-3 OF 35

Drawing name: \\QADSRVR01\Current Dwgs\1313 - Alexandra Park\DWGS\1313M-3 ARCP PLAN -050CM & NORTH HVAC PIPING LAYOUT.dwg Plotted: Apr 25, 2014 - 9:44am



REFER TO DWG. M-X FOR GENERAL AND ACOUSTIC NOTES

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CLEAR PRODUCT= 3000mm
COMPLETE DROP CEILING =1000mm FOR DUCT/PIPES
ROOF DRAINS & TERRACE DRAINS FROM 2/F

NOTES:

1. ---Ø DCW (LZ) & ---Ø DCW (HZ) FROM BELOW.
2.
3.
4.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	-TYPE OF EQUIPMENT -EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
	-STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
CO	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
2W	2-WAY MODULATING VALVE
3W	3-WAY MODULATING VALVE
4W	3-WAY MODULATING VALVE C/W 10"x4"OD THERMOWELL C/W 10" BUSHING x 1/2" PLUG
XXXX	-FLOOR ELEVATION ABOVE LEVEL -FLOOR ELEVATION THIS LEVEL -HEADROOM (FLOOR TO U/S HEIGHT)

PROJECT #	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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DRAWINGS ARE NOT TO BE SCALED

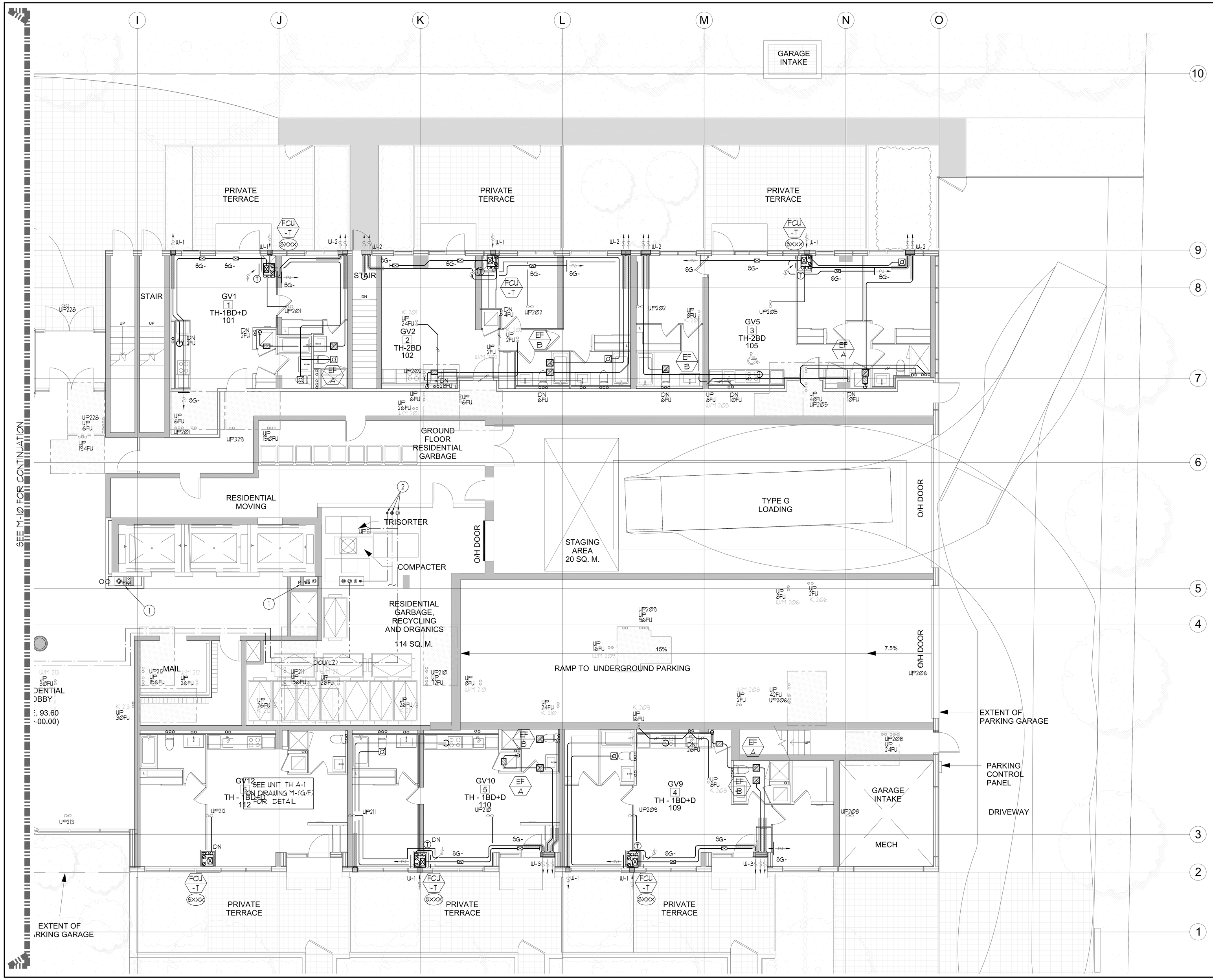
NOVA TREND ENGINEERING GROUP LTD.
115 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5447
Email: cad@novatrendeng.com

DRAWING TITLE:
G/F SOUTH
P4D LAYOUT

PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-10 OF 35

Drawing name: \\2K8SRV04\Current Dwgs\1313 - Alexandra Park\Drw\1313-Dw - 10 (1)GF PLAN - SOUTH & NORTH HVAC P&D LAYOUT.dwg Plotted: Apr 25, 2014 - 9:44am



LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
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	GAS LINE
	GAS METER
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RD	ROOF DRAIN
SLD	SLAB DRAIN
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BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
CA	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
2WV	2-WAY MODULATING VALVE
3WV	3-WAY MODULATING VALVE
T	10"(+470) THERMOWELL C/W 10" BUSHING + 1/2" PLUG
XXXX	-FLOOR ELEVATION ABOVE LEVEL
XXXX	-FLOOR ELEVATION THIS LEVEL
XXXX	-HEADROOM (FLOOR TO U/S HEIGHT)

PRIORITY	NO.	ISSUED FOR ---	BY
DATE		DESCRIPTION	

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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Tel: 905 882-5445
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DRAWING TITLE:
G/F NORTH
P4D LAYOUT

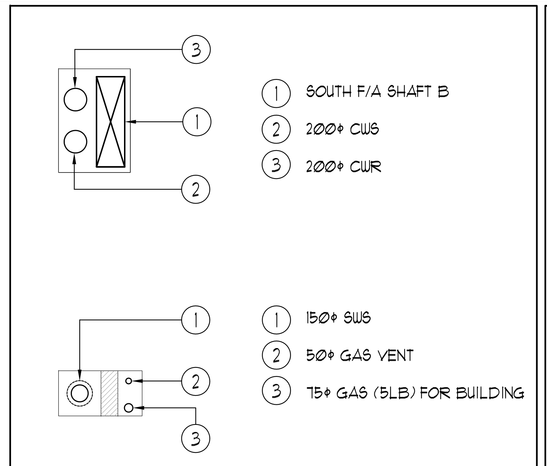
PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

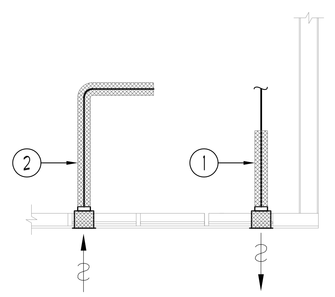
DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-11

OF 35

Drawing name: \\2008DWG\Current Dwg\1313 - Alexandra Park\DWG\1313M-10 (1)GF PLAN - 500cm & NORTH HVAC P&D LAYOUT.dwg Plotted: Apr 25, 2014 - 9:45am

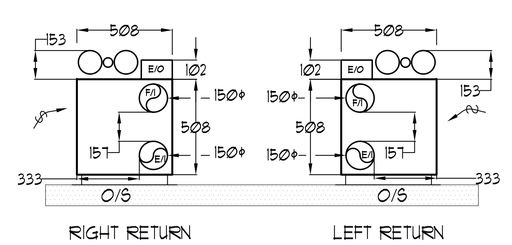


SOUTH PIPE SHAFT: 2/F -T/F | NTS



1. EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)
2. F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,013.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/S (UNLESS SPECIFIED OTHERWISE)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm(L)
W-2	425x200	INSULATED
W-3	625x200	WALL BOX

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	508x660
FCU-1.5T	600	508x660
FCU-2T	800	508x660
FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x200
F	165	300x150			

GENERAL NOTES:

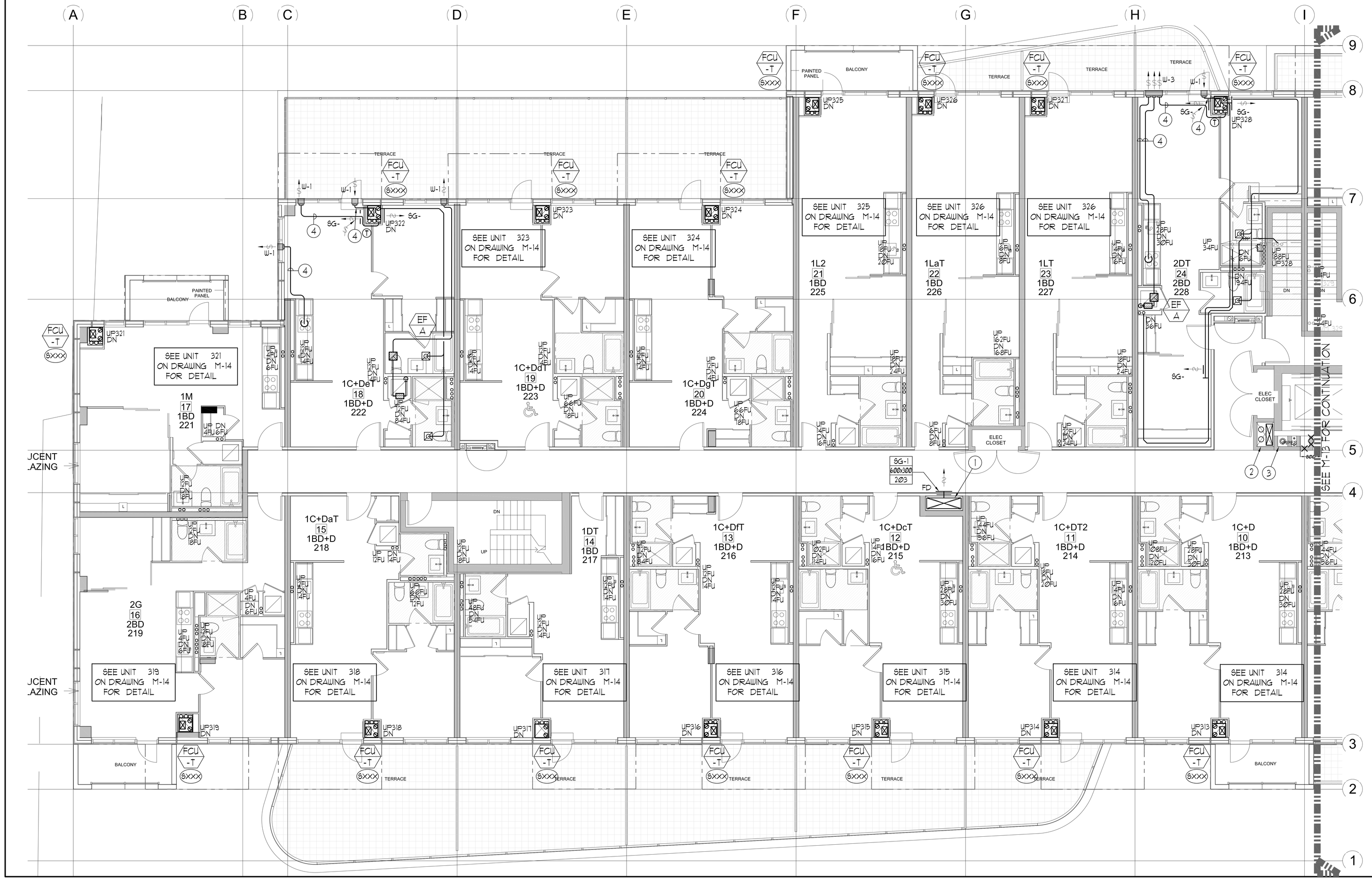
1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.
3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.
4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.
5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.
6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM
8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1
10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.
11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.
12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.
13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

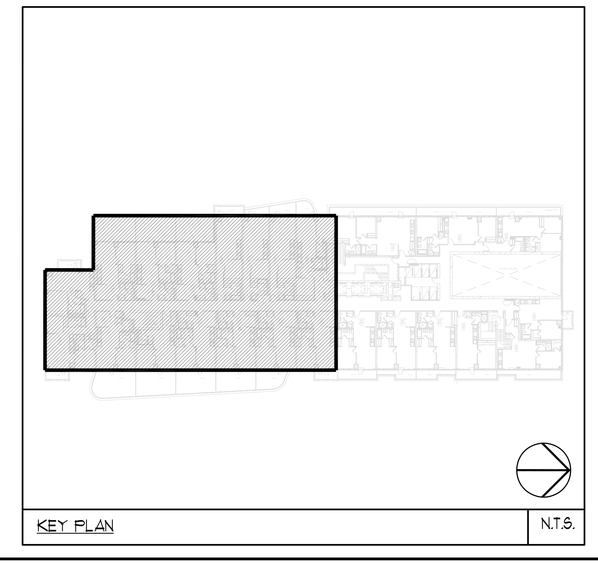
REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2750mm
CLEAR PRODUCT = 2700mm

NOTES:

1. SOUTH F/A SHAFT A FROM G/F TO 8/F DUCT SERVING CORRIDOR FROM G/F TO 8/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2. SOUTH F/A SHAFT B FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM 9/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
3. PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
4. 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)





KEY PLAN | N.T.S.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XX	-TYPE OF EQUIPMENT
XX	-EQUIPMENT IDENTIFICATION
XXX	-TYPE OF DIFFUSER OR GRILLE
XXX	-GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	-AIRFLOW (CFM OR L/S)
3Ø A	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
G	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES
	/ - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING x 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)

PROJECT #	1	ISSUED FOR ---	EP.
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. VERIFICATION OF DIMENSIONS BY THE ENGINEERS AND THEY SHALL BE INFORMED UPON COMPLETION OF THE WORK.

DRAWINGS ARE NOT TO BE SCALED

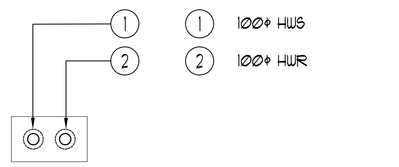
NOVA TREND ENGINEERING GROUP INC.
115 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5447
Email: ca@novatrendeng.com

DRAWING TITLE:
2/F SOUTH
MECHANICAL LAYOUT

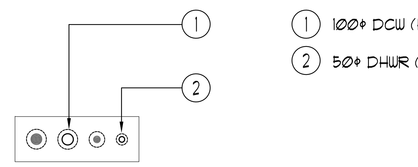
PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-12 OF 35

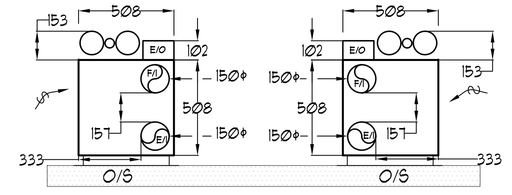
Drawing name: \\ADOBE\RVT\Current Dwg\1313 - Alexandra Park\2015\1313m - 12.3 (2F PLAN - SOUTH & NORTH MECHANICAL LAYOUT).dwg Printed: Apr 20, 2014 - 9:45am



NORTH PIPE SHAFT A: 2/F -T/F | NTS



NORTH PIPE SHAFT B: 2/F -T/F | NTS



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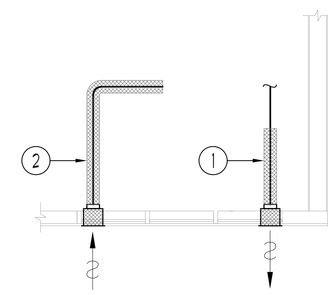

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TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS

NOTES:

1 NORTH F/A SHAFT SERVING FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM G/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.

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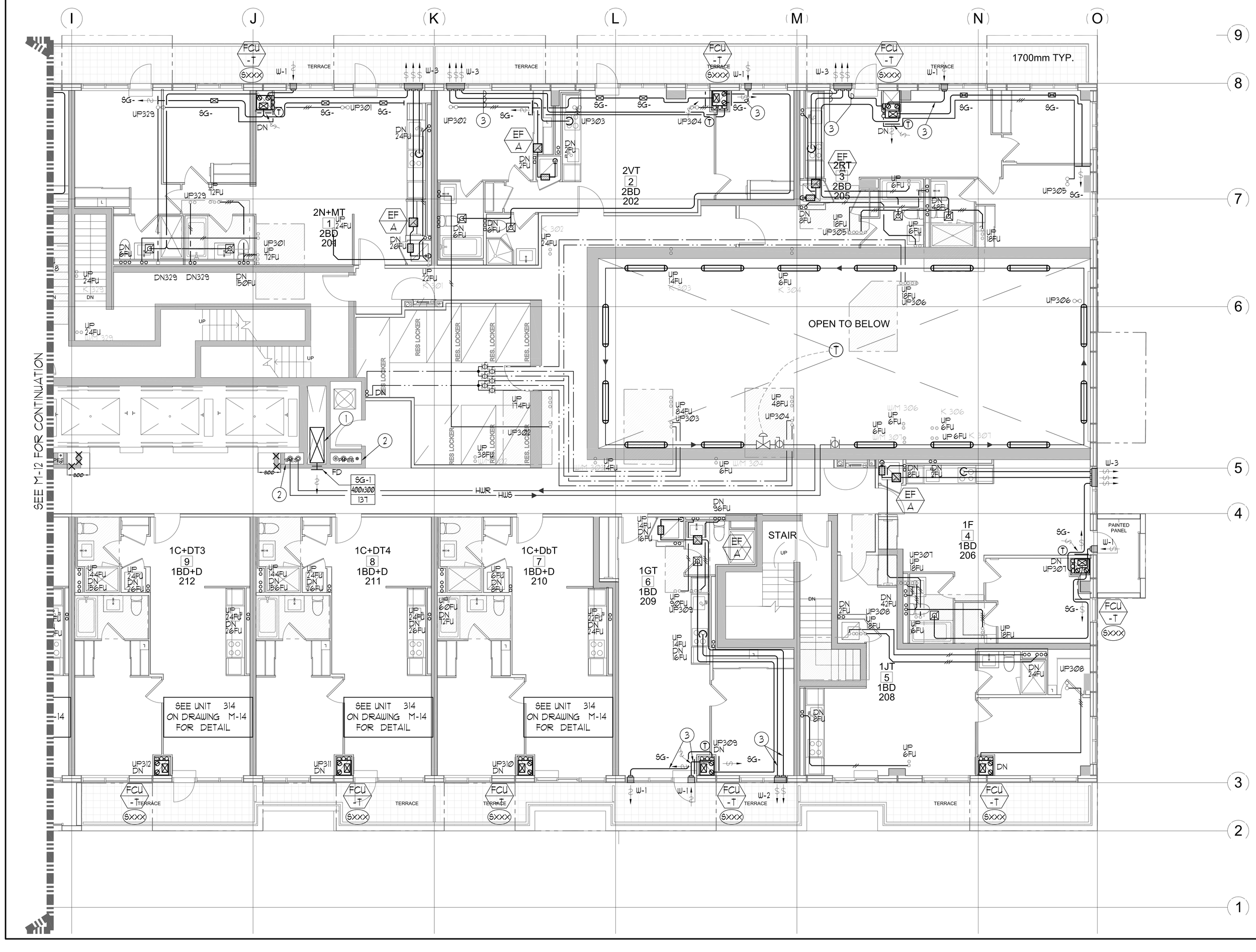

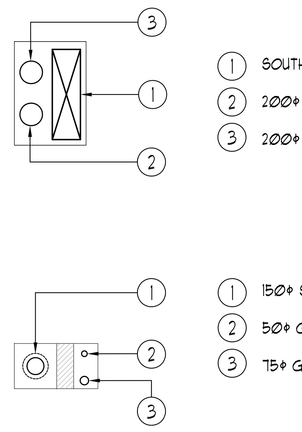

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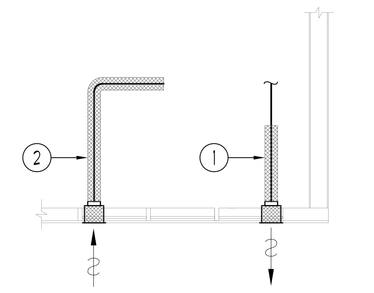

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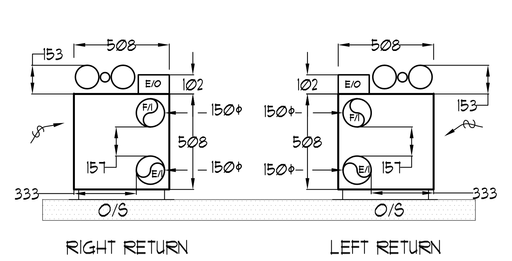

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T	TEMPERATURE SENSOR
T	THERMOMETER
2W	2-WAY MODULATING VALVE
3W	3-WAY MODULATING VALVE
	10"x4"(D) THERMOWELL C/W 10" BUSHING x 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)

PROJECT #	1	ISSUED FOR:		E.P.
DATE	NO.	DESCRIPTION		BY

MARK VOID ALL PRINTS DATED PREVIOUS TO THIS 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

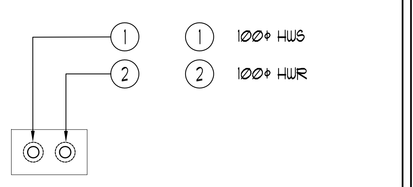
NOVA TREND ENGINEERING G.P. INC.
175 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5447
Email: cad@novatrendeng.com

DRAWING TITLE:
3/F SOUTH
MECHANICAL LAYOUT

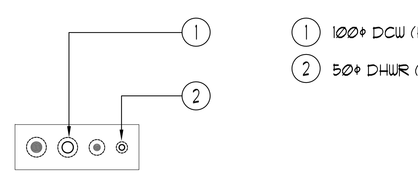
PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-14 OF 39

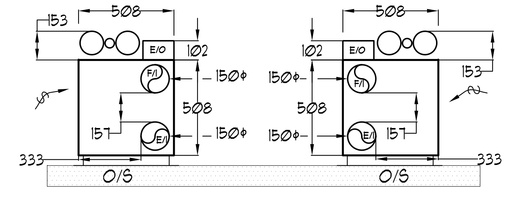
Drawing name: \\DATA\DRAWS\Current Dwgs\1313 - Alexandra Park\DWTS\1313M - 14/15/P PLAN - 3D/M & NORTH MECHANICAL LAYOUT.dwg Plotted: Apr 25, 2014 - 9:45am



NORTH PIPE SHAFT A: 2/F -T/F | NTS



NORTH PIPE SHAFT B: 2/F -T/F | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,013.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/s (UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm(L)
W-2	425x200	INSULATED
W-3	625x200	WALL BOX

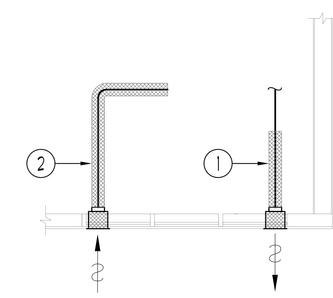
VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	500x660
FCU-1.5T	600	500x660
FCU-2T	800	500x660
FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x200
F	165	300x150			



1. EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)
2. F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL:INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS

GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.
3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.
4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H4C WATER, SANITARY CONNECTION DETAILS.
5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.
6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
7) FOR D.H.4C. W. RISER SIZES, REFER TO RISER DIAGRAM
8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1
10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.
11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.
12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.
13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

REFER TO DWG. M-X FOR ACOUSTIC NOTES

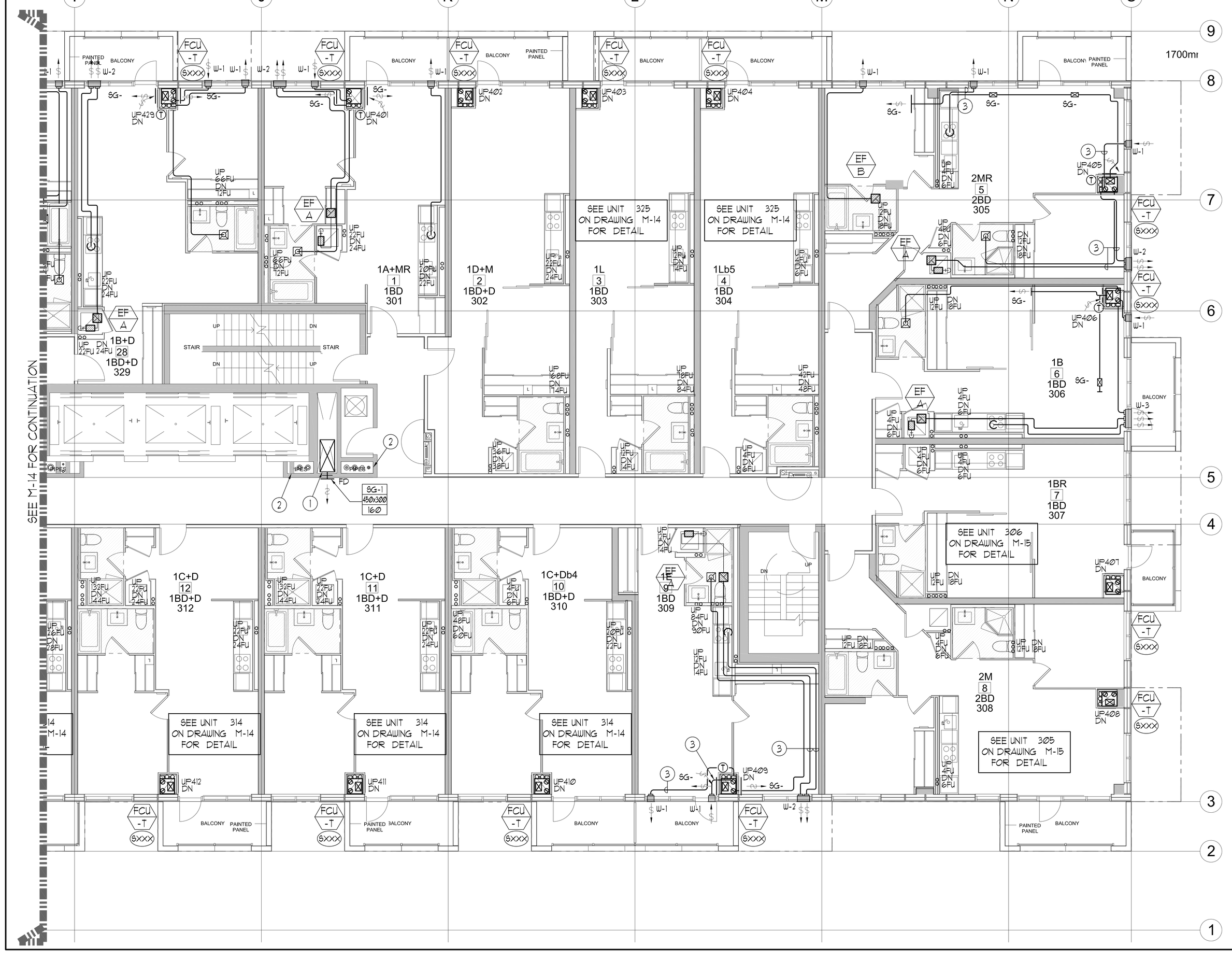
CLEAR FLOOR TO UNDERSLAB = 2590mm
CLEAR PRODUCT= 2550mm

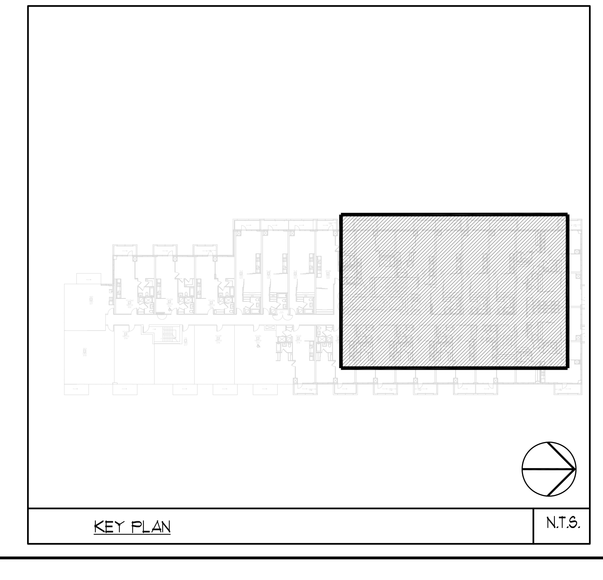
NOTES:

1. NORTH F/A SHAFT SERVING FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM G/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2. PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
3. 150ø KITCHEN / DRYER / W.R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	-TYPE OF EQUIPMENT EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
S	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
GC	GAS COCK
PR	PRESSURE REDUCING VALVE
SAG	SANITARY ABOVE GRADE
SBG	SANITARY BELOW GRADE
STA	STORM ABOVE GRADE
STB	STORM BELOW GRADE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
SAV	SANITARY VENT
WM	WATER METER
FD	FLOOR DRAIN
FFD	PANEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
ST	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING x 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION TAG LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)





PRIORITY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

PLANK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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

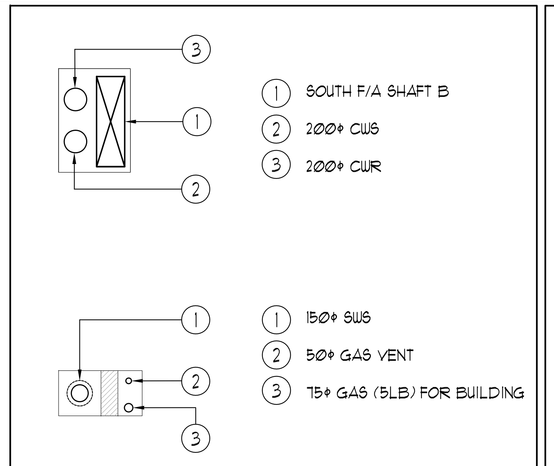
DRAWING TITLE:
3/F NORTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

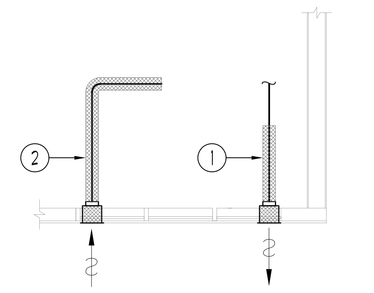
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-15 OF 39

Drawing name: \\CADDRIVE\Current Dwg\1313 - Alexandra Park\Drwfs\1313M - 14.DGN PLAN - 300M & NORTH MECHANICAL LAYOUT.dwg Plotted: Apr 25, 2014 - 9:45am

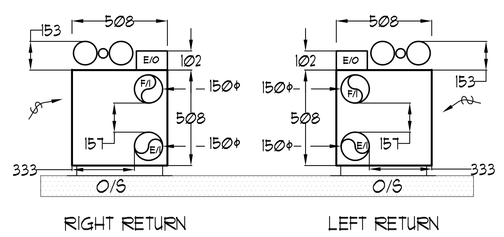


SOUTH PIPE SHAFT: 2/F - T/F | NTS



1. EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)
2. F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,013.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF FOLDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/S (UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm(L)
W-2	425x200	INSULATED
W-3	625x200	WALL BOX

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	508x660
FCU-1.5T	600	508x660
FCU-2T	800	508x660
FCU-2.5T	1000	553x660
FCU-3T	1200	553x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x200
F	165	300x150			

GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.

2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.

3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.

4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.

5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.

6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.

7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM

8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.

9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1

10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.

11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.

12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.

13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2598mm
CLEAR PRODUCT= 2550mm
UNITS 419/421: DRAINS FROM TERRACE ON 5/F

NOTES:

1. SOUTH F/A SHAFT A FROM G/F TO 8/F DUCT SERVING CORRIDOR FROM G/F TO 8/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2. SOUTH F/A SHAFT B FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM 9/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
3. PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
4. 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	-TYPE OF EQUIPMENT -EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	PANNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)

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

MARK VOID ALL PRINTS DATED PREVIOUS TO DATE ABOVE

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Tel: 905 882-5445
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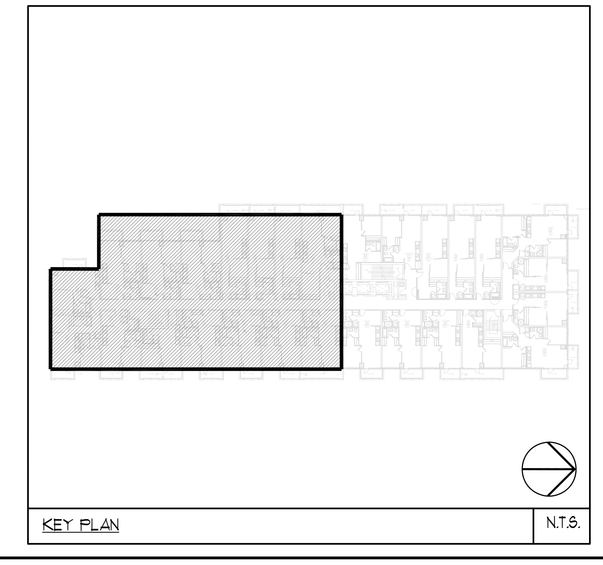
Email: cad@novatrendeng.com

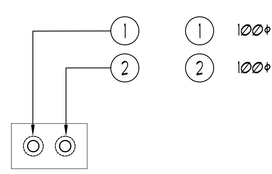
DRAWING TITLE:
4/F SOUTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

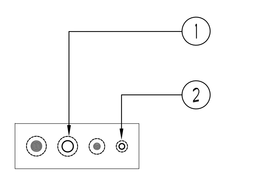
DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-16 OF 35



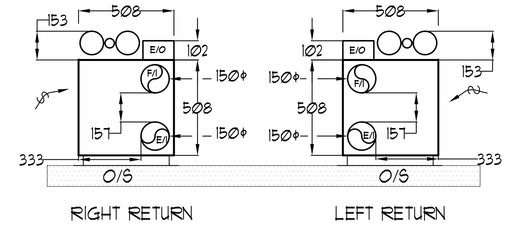
Drawing name: \\GROSERVER\Current Dwgs\1313 - Alexandra Park\DWGS\1313M-16.VT (4F PLAN - SOUTH) NORTH MECHANICAL LAYOUT.dwg Printed: Apr 25, 2014 - 9:45am



NORTH PIPE SHAFT A: 2/F - T/F | NTS



NORTH PIPE SHAFT B: 2/F - T/F | NTS



NOTE:
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- HEIGHT OF FCU IS 2,023.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/s (UNLESS SPECIFIED ELSEWHERE)
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SG-C	400x150	94-140
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W-1	225x200	210m³/L)
W-2	425x200	INSULATED
W-3	675x200	WALL BOX

VERTICAL FAN COIL SIZE

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FCU-1T	450	508x660
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(4.06 m/s, 800 FPM)

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D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x200
F	165	300x150			

GENERAL NOTES:

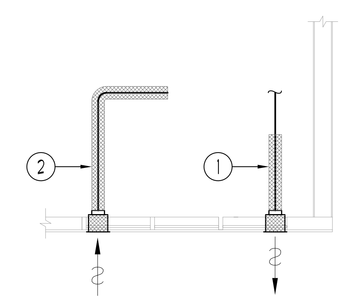
1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.
3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.
4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.
5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.
6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM
8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1
10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.
11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.
12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.
13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2590mm
CLEAR PRODUCT= 2550mm
UNITS 419/421: DRAINS FROM TERRACE ON 5/F

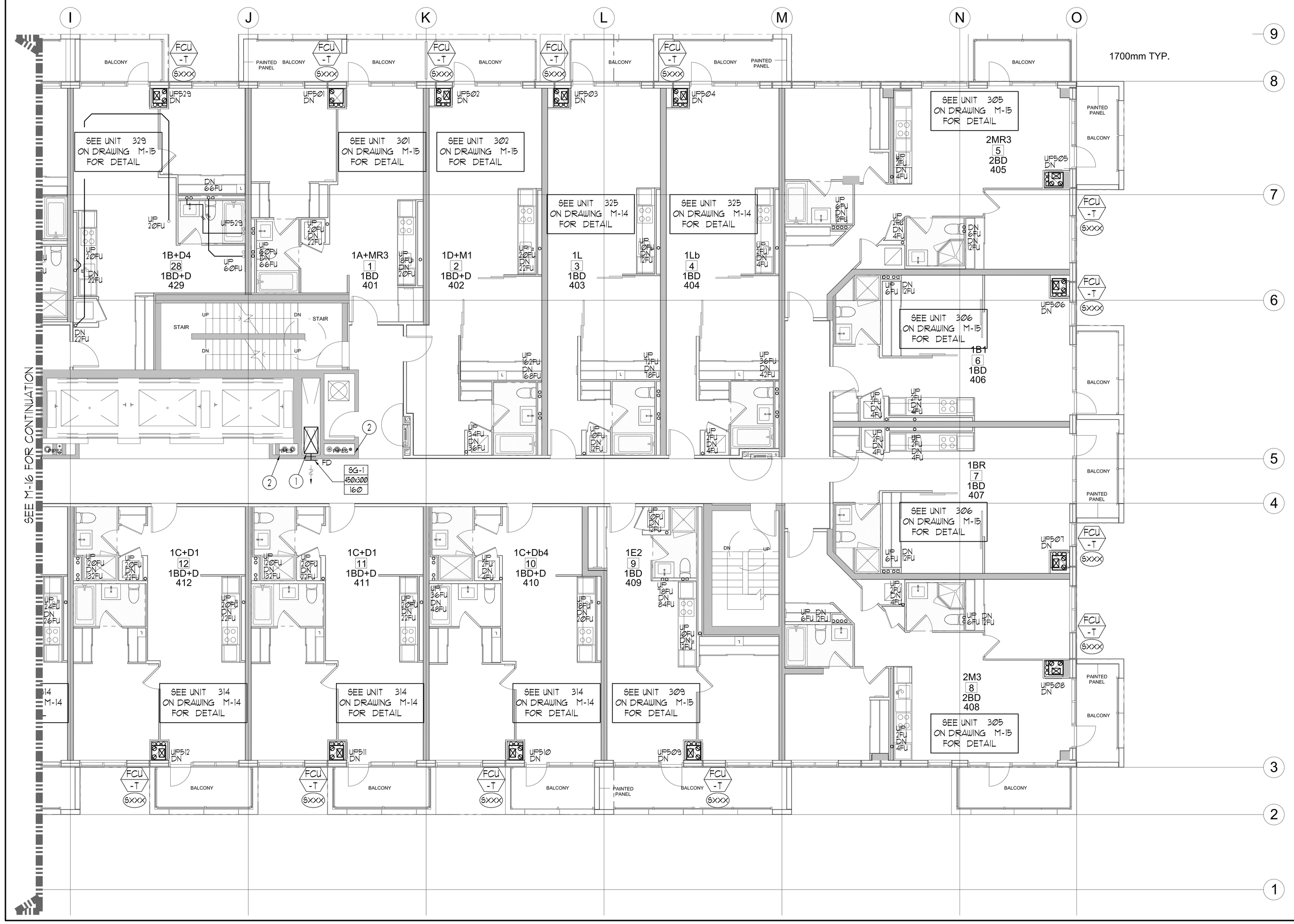
NOTES:

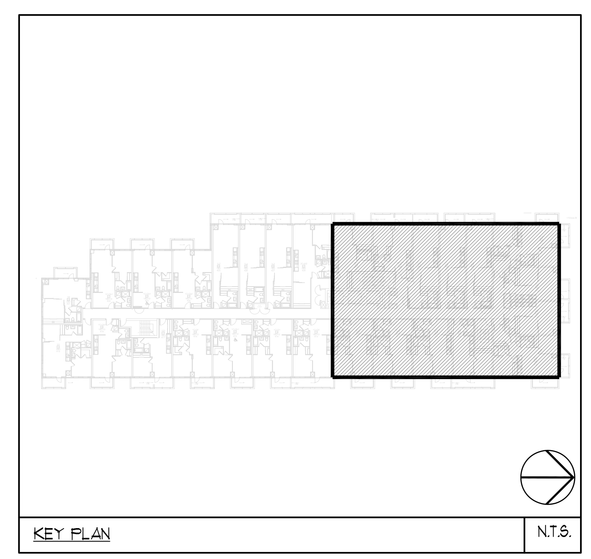
1) NORTH F/A SHAFT SERVING FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM G/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2) PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
3) 150ø KITCHEN / DRYER / WR / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)



1 EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)
2 F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS





KEY PLAN | N.T.S.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	TYPE OF EQUIPMENT
	EQUIPMENT IDENTIFICATION
	TYPE OF DIFFUSER OR GRILLE
	GRILLE SIZE OR DIFFUSER NECK SIZE
	AIRFLOW (CFM OR L/S)
S	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
GC	GAS COCK
PR	PRESSURE REDUCING VALVE
SAG	SANITARY ABOVE GRADE
SBG	SANITARY BELOW GRADE
SVAG	STORM ABOVE GRADE
SVBG	STORM BELOW GRADE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
V	SANITARY VENT
WM	WATER METER
FD	FLOOR DRAIN
FFD	PANEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
ST	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
GV	GLOBE VALVE
GV	GATE VALVE
BV	BALL VALVE
BV	BUTTERFLY VALVE
PR	PRESSURE REDUCING VALVE
CV	CHECK VALVE
C	CAP
CA	COMPRESSED AIR OUTLET
BFP	BACKFLOW PREVENTER
BV	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES
	/ - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
2V	2-WAY MODULATING VALVE
3V	3-WAY MODULATING VALVE
TV	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING + 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)

PRIORITY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

PLANK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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DRAWINGS ARE NOT TO BE SCALED

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

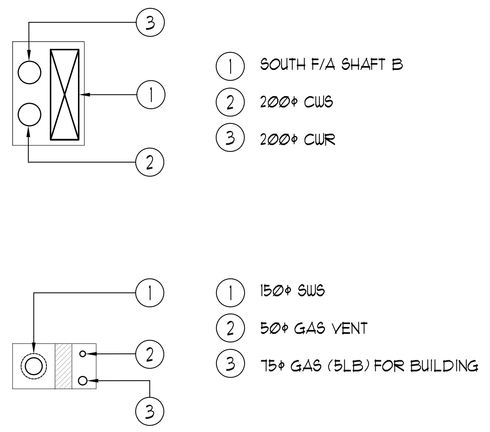
DRAWING TITLE:
4/F NORTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

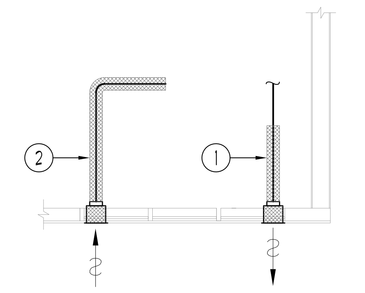
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-17 OF 39

Drawing name: \\CADDRIVE\Current Dwg\1313 - Alexandra Park\Dwf\1313m - 16.1" GF Plan - SOUTH& NORTH MECHANICAL LAYOUT.dwg Plotted: Apr 25, 2014 - 9:45am



SOUTH PIPE SHAFT: 2/F - 7/F | NTS



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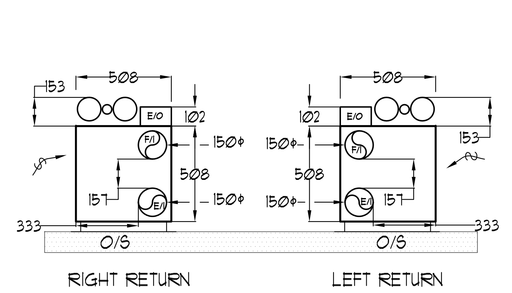
TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,013.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/S	(UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70	
SG-B	300x150	71-93	
SG-C	400x150	94-140	
SG-D	450x150	141-188	
EG-A	150x150	35	
W-1	225x200	210mm(L)	
W-2	425x200	INSULATED	
W-3	625x200	WALL BOX	

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	508x660
FCU-1.5T	600	508x660
FCU-2T	800	508x660
FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x100
F	165	300x150			

GENERAL NOTES:

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3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.

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REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2850mm
CLEAR PRODUCT = 2600mm
EXCEPT UNIT: 503 CLEAR PRODUCT = 2550mm
EXCEPT UNITS: 526/527 CLEAR PRODUCT = 2600mm
UNITS 513/521: DRAINS FROM TERRACE ON 6/F

NOTES:

1) SOUTH F/A SHAFT A FROM G/F TO 8/F DUCT SERVING CORRIDOR FROM G/F TO 8/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.

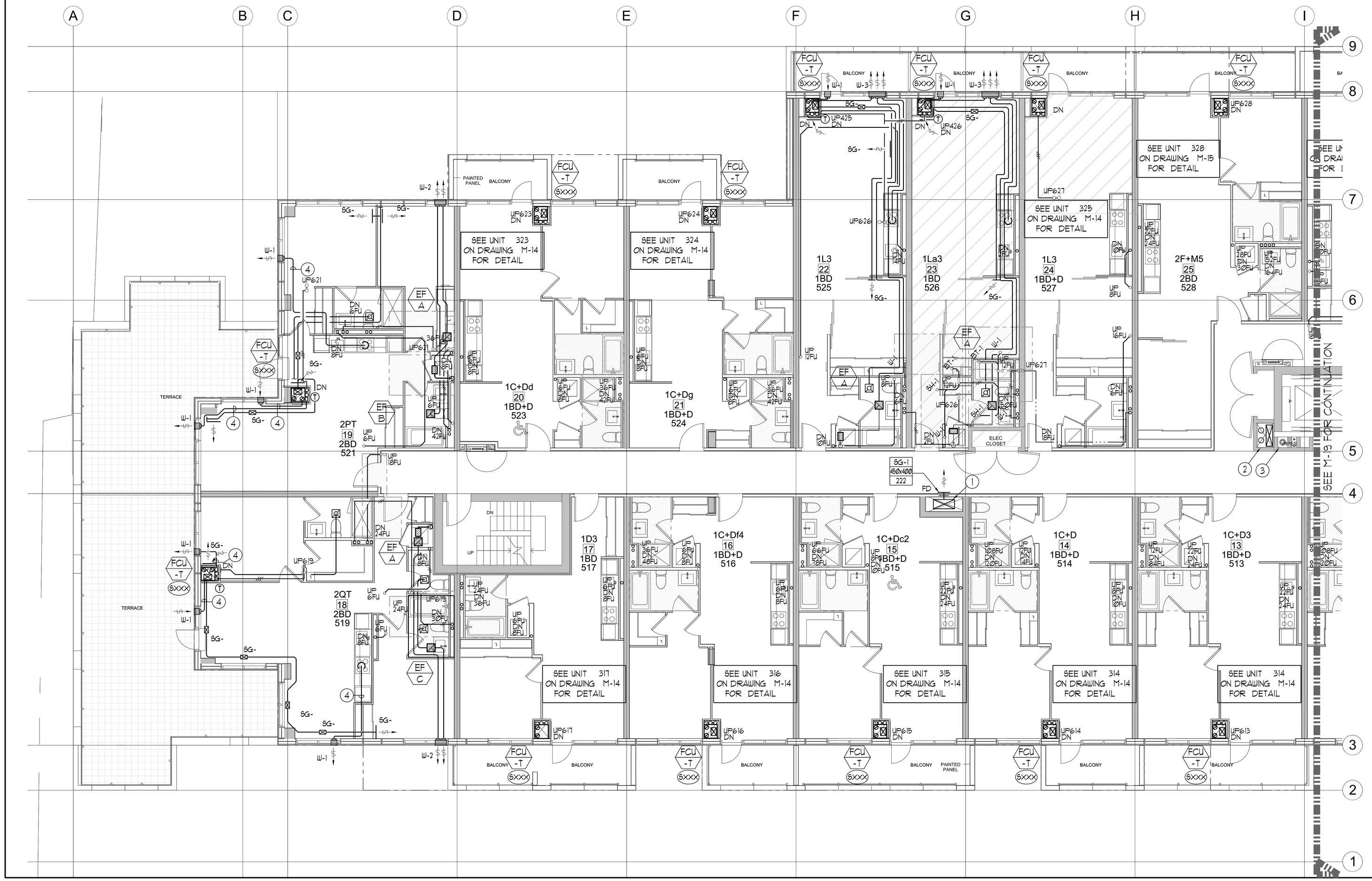
2) SOUTH F/A SHAFT B FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM 9/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.

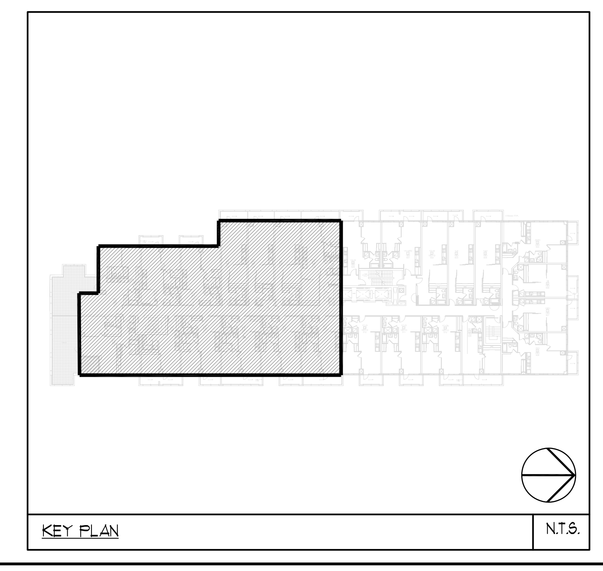
3) PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.

4) 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MFD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	-TYPE OF EQUIPMENT -EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
S	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
GM	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
WM	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
BLD	BLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
PR	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
BF	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	3-WAY MODULATING VALVE C/W 1/2" BUSHING 4 1/2" PLUG
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING 4 1/2" PLUG
	-FLOOR ELEVATION ABOVE LEVEL -FLOOR ELEVATION THIS LEVEL -HEADROOM (FLOOR TO U/S HEIGHT)





KEY PLAN | N.T.S.

PRIORITY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

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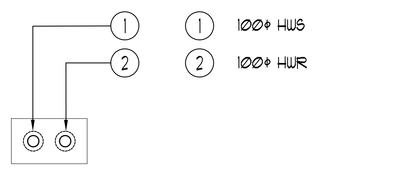
NOVA TREND ENGINEERING GROUP LTD.
119 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5447
Email: cad@novatrendeng.com

DRAWING TITLE:
B/F SOUTH
MECHANICAL LAYOUT

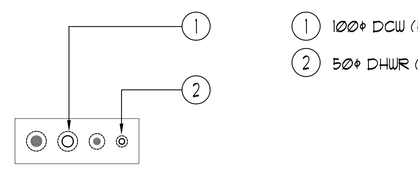
PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-18 OF 35

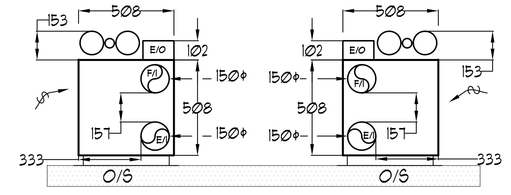
Drawing name: \\DRDRIVE\Current Projects\1313 - Alexandra Park\DWGS\1313M-18.DP (SF PLAN - SOUTH & NORTH MECHANICAL LAYOUT).dwg Plotted: Apr 25, 2014 - 9:46am



NORTH PIPE SHAFT A: 2/F - T/F | NTS



NORTH PIPE SHAFT B: 2/F - T/F | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,013.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/s (UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm/L)
W-2	425x200	INSULATED
W-3	675x200	WALL BOX

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	500x660
FCU-1.5T	600	500x660
FCU-2T	800	500x660
FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
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E	141	250x150	L	377	500x200
F	165	300x150			

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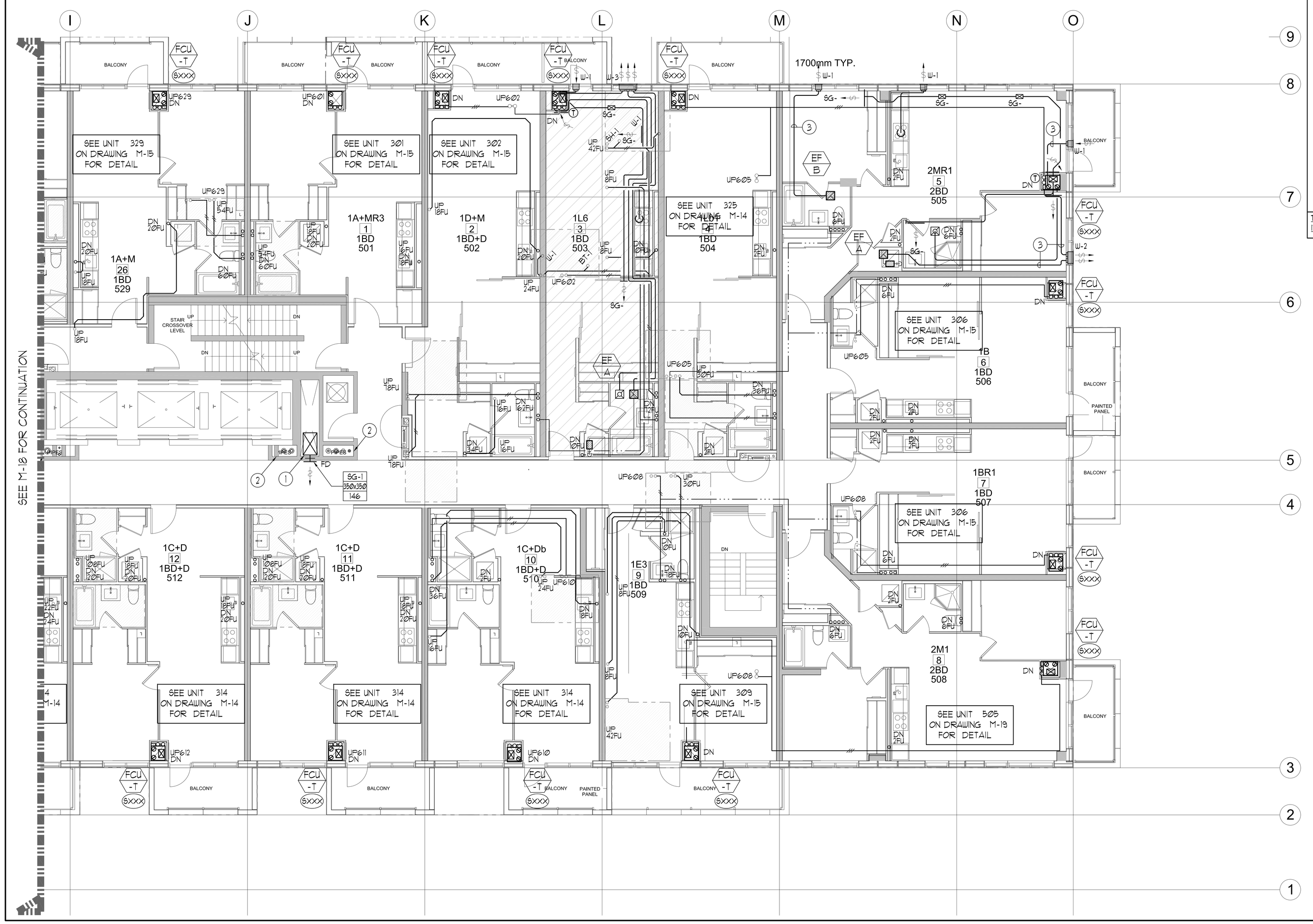
CLEAR PRODUCT = 2800mm
EXCEPT UNIT: 503 CLEAR PRODUCT = 2550mm
EXCEPT UNITS: 526/527 CLEAR PRODUCT = 2600mm
UNITS 518/521: DRAINS FROM TERRACE ON 6/F

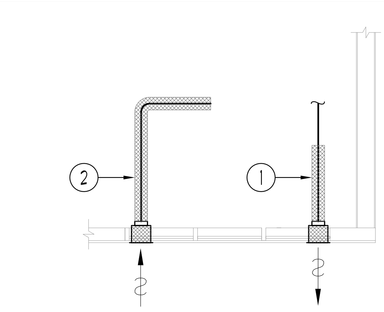
NOTES:

(1) NORTH F/A SHAFT SERVING FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM G/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.

(2) PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.

(3) 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

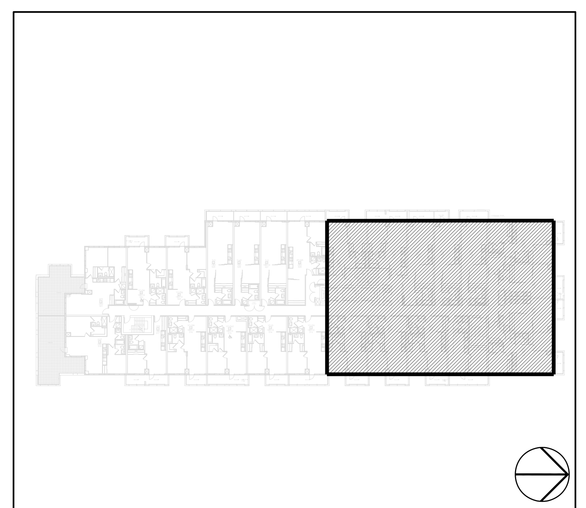




(1) EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)

(2) F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



KEY PLAN | N.T.S.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XX	-TYPE OF EQUIPMENT
XX	-EQUIPMENT IDENTIFICATION
XXX	-TYPE OF DIFFUSER OR GRILLE
XXX	-GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	-AIRFLOW (CFM OR L/S)
S	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
G	GAS COCK
PR	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
PFD	PANNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
BLD	BLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES
	-/- DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING + 1/2" PLUG
XXX	-FLOOR ELEVATION ABOVE LEVEL
XXX	-FLOOR ELEVATION TWB LEVEL
XXX	-HEADROOM (FLOOR TO U/S HEIGHT)

PRIORITY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

PLANK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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DRAWINGS ARE NOT TO BE SCALED

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

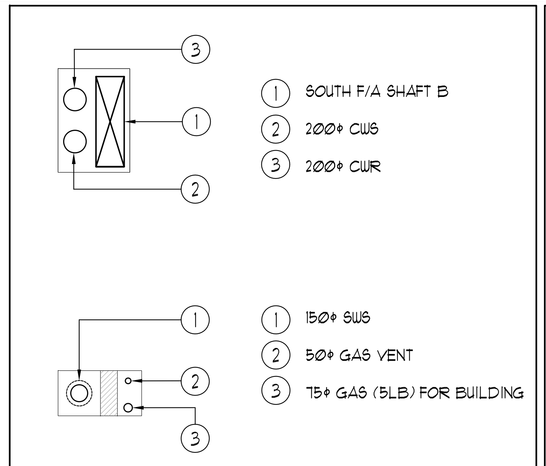
DRAWING TITLE:
5/F NORTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

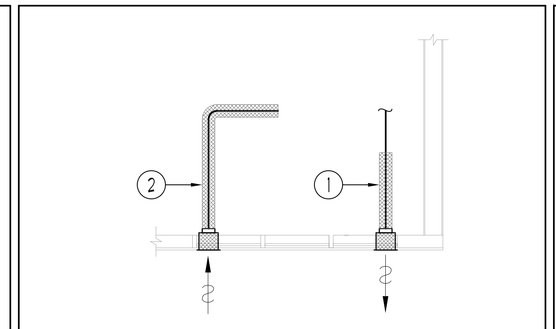
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-19 OF 39

Drawing name: \\CADDRIVE\Current Dwg\1313 - Alexandra Park\Dwf\1313M - 18.19 5F Plan - SOUTH & NORTH MECHANICAL LAYOUT.dwg Plotted: Apr 25, 2014 - 8:46am

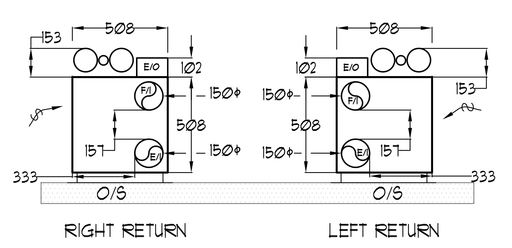


SOUTH PIPE SHAFT: 2/F - T/F | NTS



1. EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)
2. F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,013.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF FOLDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/S (UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm(L)
W-2	425x200	INSULATED
W-3	625x200	WALL BOX

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	508x660
FCU-1.5T	600	508x660
FCU-2T	800	508x660
FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x200
F	165	300x150			

GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.
3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.
4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.
5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.
6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM
8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1
10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.
11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.
12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.
13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2750mm
CLEAR PRODUCT= 2700mm
UNITS 605/608: DRAINS FROM TERRACE ON T/F

NOTES:

1. SOUTH F/A SHAFT A FROM G/F TO 8/F DUCT SERVING CORRIDOR FROM G/F TO 8/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2. SOUTH F/A SHAFT B FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM 9/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
3. PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
4. 150Ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
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	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
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	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
(XX)	-TYPE OF EQUIPMENT
XXX	-EQUIPMENT IDENTIFICATION
XXX	-TYPE OF DIFFUSER OR GRILLE
XXX	-GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	-AIRFLOW (CFM OR L/S)
3Ø, 4W	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
G	GAS METER
G	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
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	GLOBE VALVE
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	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES
	/ - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
XXX	-FLOOR ELEVATION ABOVE LEVEL
XXX	-FLOOR ELEVATION THIS LEVEL
XXX	-HEADROOM (FLOOR TO U/S HEIGHT)

PROJECT #	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

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135 West Beaver Creek Road, Unit 31
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Tel: 905 882-9449
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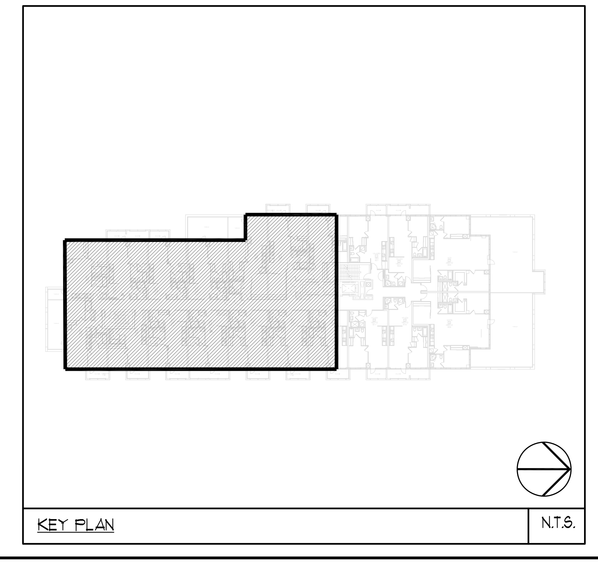
Email: cad@novatrendeng.com

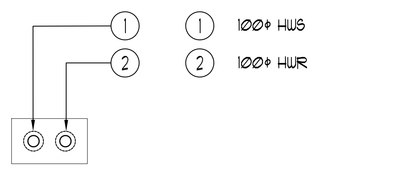
DRAWING TITLE:
6/F SOUTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

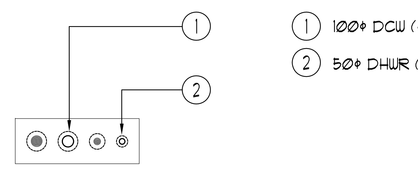
DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-20 OF 39



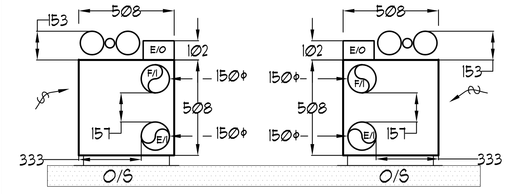
Drawing name: \\CADSERVER\Current Dwg's\1313 - Alexandra Park\DWG'S\1313M - 2ND FLR - SOUTH & NORTH MECHANICAL LAYOUT.dwg Plotted: Apr 25, 2014 - 9:48am



NORTH PIPE SHAFT A: 2/F - T/F | NTS



NORTH PIPE SHAFT B: 2/F - T/F | NTS



NOTE:
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INSUITE FCU DIMENSIONS | NTS

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NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
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CLEAR PRODUCT= 2700mm
UNITS 605/608: DRAINS FROM TERRACE ON 7/F

NOTES:

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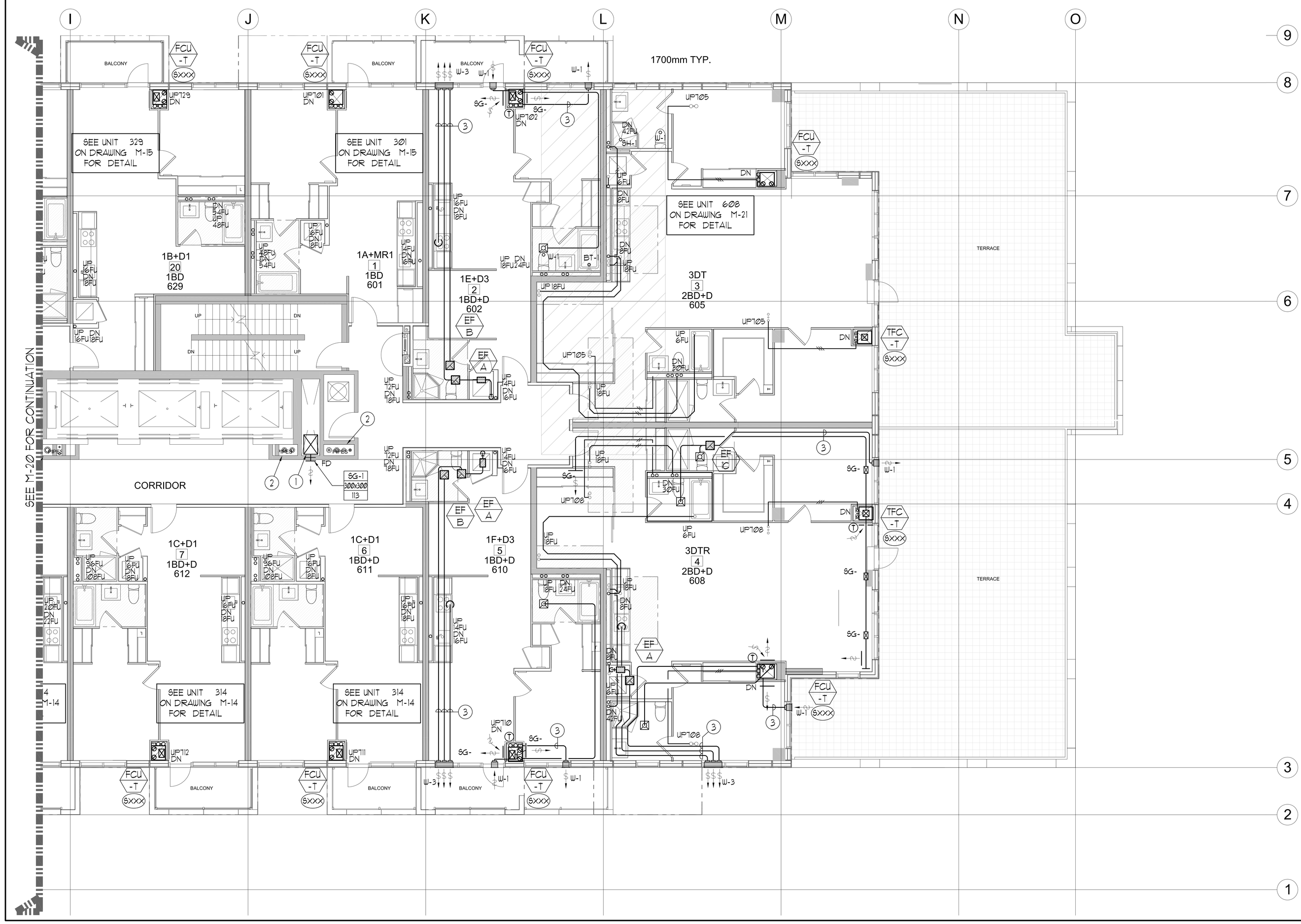

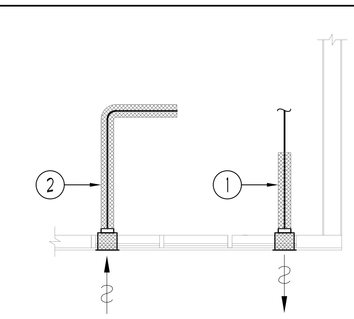

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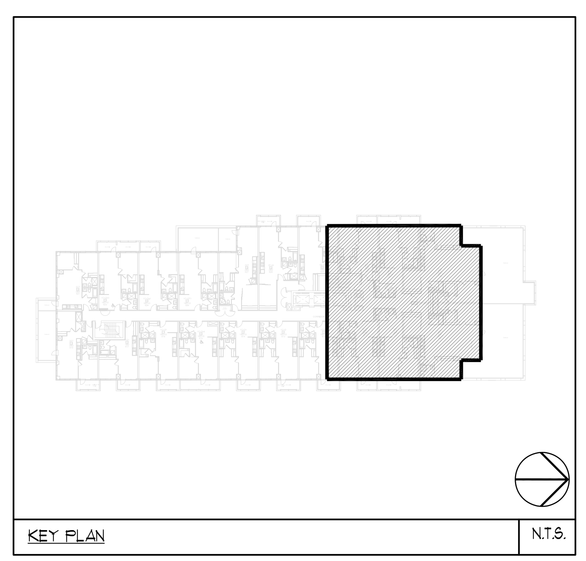
TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



KEY PLAN | N.T.S.

LEGEND MECHANICAL

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	SUPPLY AIR TROFFER
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	-TYPE OF EQUIPMENT -EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE -AIRFLOW (CFM OR L/S)
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	CAP
CA	COMPRESSED AIR OUTLET
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	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - - DENOTES NO. OF PIPES
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T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
	-FLOOR ELEVATION ABOVE LEVEL -FLOOR ELEVATION THIS LEVEL -HEADROOM (FLOOR TO U/S HEIGHT)

PRIORITY	1	ISSUED FOR ---	EP
DATE	NO.	DESCRIPTION	BY

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DRAWINGS ARE NOT TO BE SCALED

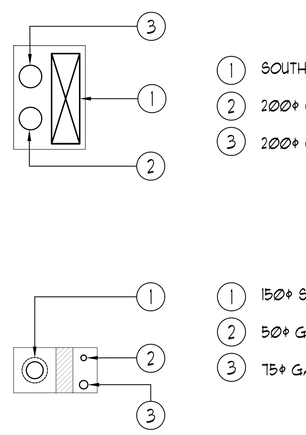
NOVA TREND ENGINEERING CONSULTANTS
175 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-9445
Fax: 905 882-9447
Email: cad@novatrendeng.com

DRAWING TITLE:
G/F NORTH
MECHANICAL LAYOUT

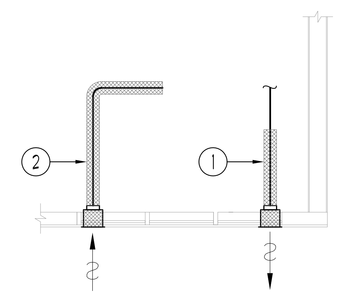
PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.G.	E.P.	1:50
DATE: FEB. 13	PROJECT NUMBER: 1313	DRAWING NUMBER: M-21 of 39

Drawing name: \\CADSERVER\Current Dwgs\1313 - Alexandra Park\DWGS\1313m - 2ND FLOOR PLAN - SOUTH& NORTH MECHANICAL LAYOUT.dwg Plotted: Apr 25, 2014 - 9:48am

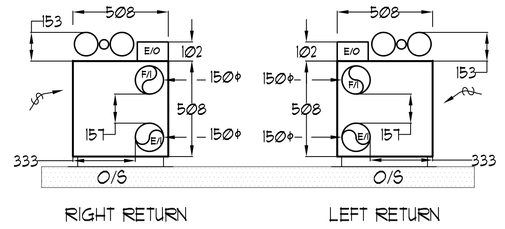


SOUTH PIPE SHAFT: 2/F - T/F | NTS



1. EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION &FT. FROM EXTERNAL WALL. (TYPICAL)
2. F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,Ø13.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/S (UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm(L)
W-2	425x200	INSULATED
W-3	625x200	WALL BOX

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	508x660
FCU-1.5T	600	508x660
FCU-2T	800	508x660
FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x200
F	165	300x150			

GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.
2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.
3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.
4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.
5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.
6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM
8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.
9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1
10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.
11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.
12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.
13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2750mm
CLEAR PRODUCT= 2700mm

NOTES:

1. SOUTH F/A SHAFT A FROM G/F TO 8/F DUCT SERVING CORRIDOR FROM G/F TO 8/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2. SOUTH F/A SHAFT B FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM 9/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
3. PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
4. 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
F	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	TYPE OF EQUIPMENT / EQUIPMENT IDENTIFICATION
	TYPE OF DIFFUSER OR GRILLE / GRILLE SIZE OR DIFFUSER NECK SIZE
	AIRFLOW (CFM OR L/S)
S	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
GC	GAS COCK
PR	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	PANNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
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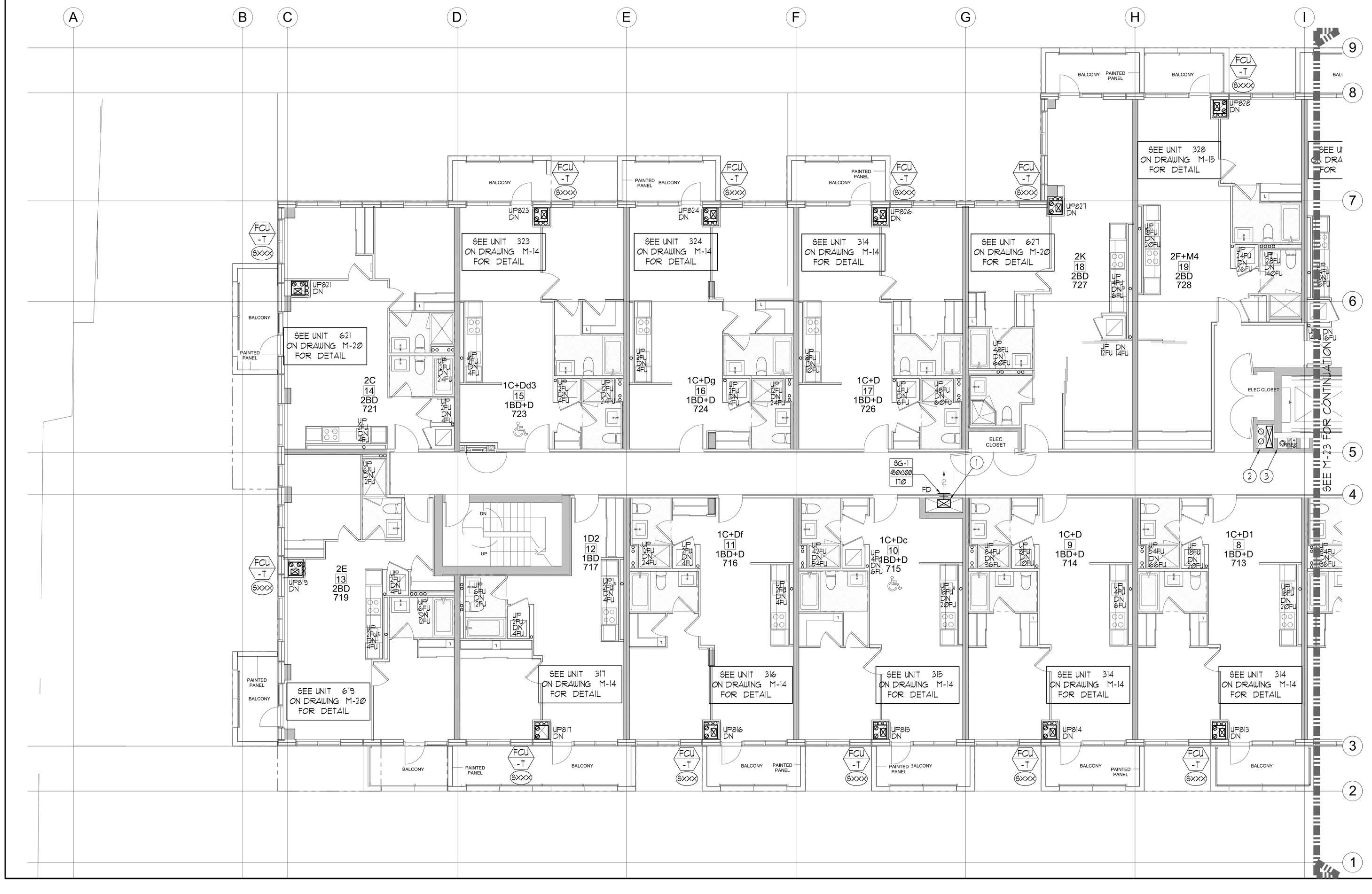
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)



KEY PLAN | N.T.S.

PROJECT NO.	DATE	DESCRIPTION	BY
1		ISSUED FOR ---	E.P.

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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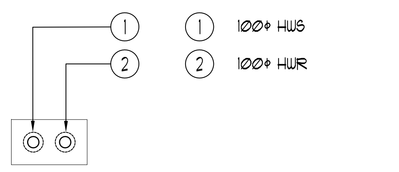
DRAWING TITLE:
T/F SOUTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

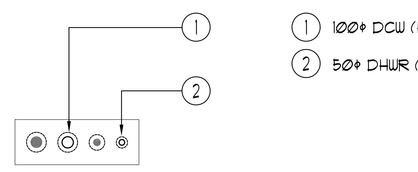
DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50

DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-22 OF 35

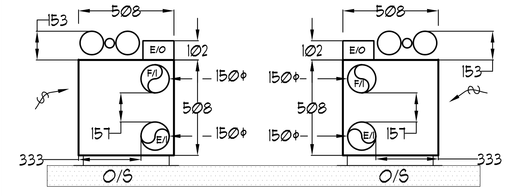
Drawing name: \\DOCS\DWGS\Current Dwgs\1313 - Alexandra Park\DWGS\1313M-22.DWF PLAN - SOUTH & NORTH MECHANICAL LAYOUT.dwg Printed: Apr 25, 2014 - 9:48am



NORTH PIPE SHAFT A: 2/F -T/F | NTS



NORTH PIPE SHAFT B: 2/F -T/F | NTS



NOTE:
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INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

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DESIGNATION	SIZE	L/S (UNLESS SPECIFIED ELSEWHERE)
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SG-D	450x150	141-188
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W-1	225x200	210mm/L)
W-2	425x200	INSULATED
W-3	625x200	WALL BOX

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
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FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
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B	71	150x150	H	236	450x150
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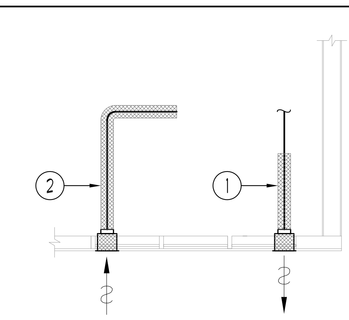
REFER TO D.W.G. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2750mm
CLEAR PRODUCT= 2700mm

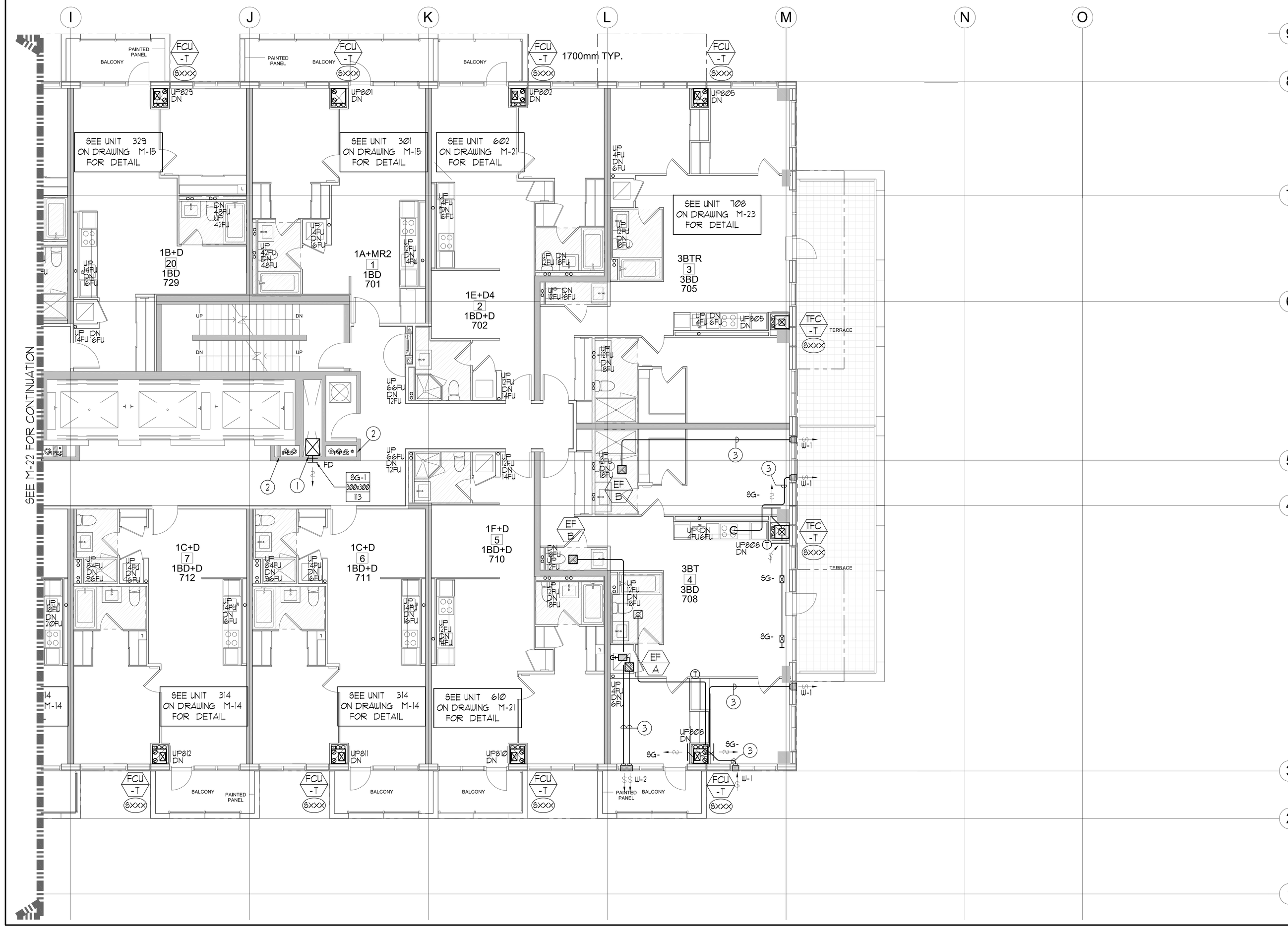
NOTES:

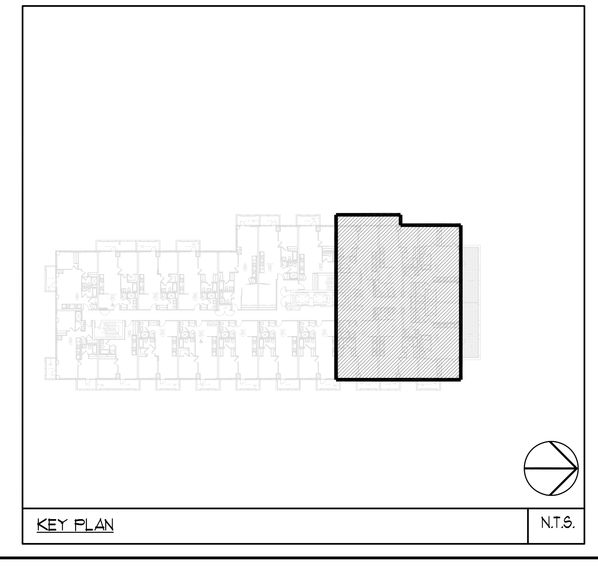
1) NORTH F/A SHAFT SERVING FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM G/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2) PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.
3) 150ø KITCHEN / DRYER / WR / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)



1. EXHAUST DUCTWORK TO BE C/U 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)
2. F/A INTAKE DUCTWORK TO BE C/U 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL:INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS





KEY PLAN | N.T.S.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
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BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
FC	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
(V)	TYPE OF EQUIPMENT
V	EQUIPMENT IDENTIFICATION
XXX	TYPE OF DIFFUSER OR GRILLE
XXX	GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	AIRFLOW (CFM OR L/S)
S M	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
GC	GAS COCK
PR	PRESSURE REDUCING VALVE
SAD	SANITARY ABOVE GRADE
SBD	SANITARY BELOW GRADE
STA	STORM ABOVE GRADE
STB	STORM BELOW GRADE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
V	SANITARY VENT
WM	WATER METER
FD	FLOOR DRAIN
FPD	PANNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
ST	SANITARY TRAP
	ELBOW UP
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CO	WALL CLEANOUT
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	CAP
CA	COMPRESSED AIR OUTLET
PV	BACKFLOW PREVENTER
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	MULTIPLE PIPES
	/ - DENOTES NO. OF PIPES
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	2-WAY MODULATING VALVE
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	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING x 1/2" PLUG
XXX	FLOOR ELEVATION ABOVE LEVEL
XXX	FLOOR ELEVATION TWB LEVEL
XXX	HEADROOM (FLOOR TO U/S HEIGHT)

PROJECT #		ISSUED FOR —	E.P.
DATE	NO.	DESCRIPTION	BY

YORK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

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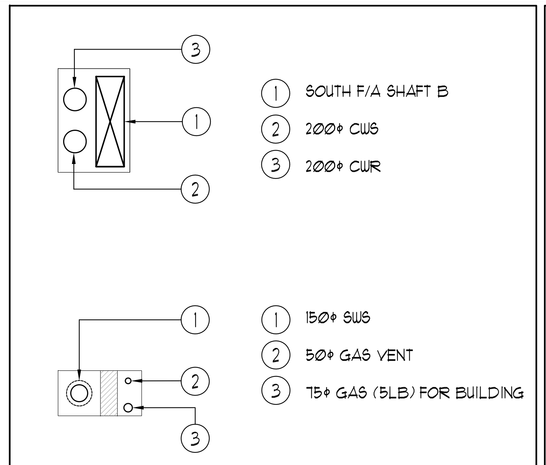
DRAWING TITLE:
T/F NORTH
MECHANICAL LAYOUT

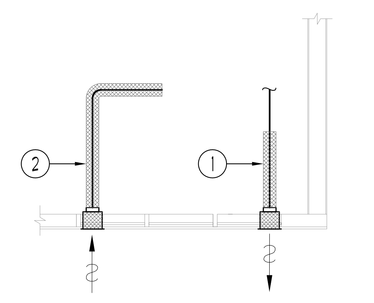
PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO, ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-23 OF 39

Drawing name: \\CADSERVER\Current Dwg's\1313 - Alexandra Park\DWG\1313M- 23.DWG Plan - South & North MECHANICAL LAYOUT.dwg Plotted: Apr 25, 2014 - 9:46am



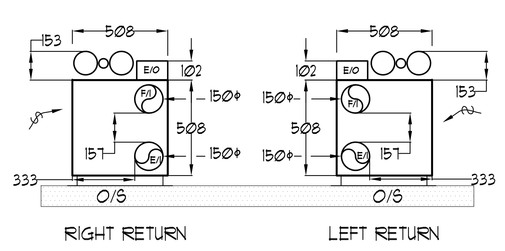
SOUTH PIPE SHAFT: B/F | NTS



1 EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)

2 F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



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NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(1400 m/s, 8000 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
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ACOUSTIC NOTES:

FOR FLOORS WITH ERV'S:

XX) ERV'S SHALL BE ISOLATED USING ISOLATORS INCORPORATING BOTH A SPRING ELEMENT AND A SECONDARY NEOPRENE-IN-SHEAR ELEMENT IN SERIES. DUCTWORK SHALL BE DE-COUPLED FROM FAN BY FLEXIBLE CONNECTORS. ASSOCIATED DUCTWORK SHALL BE SUSPENDED ON HANGERS WITH NEOPRENE PADS.

FOR TRANSITION FLOORS:

XX) ALL HORIZONTAL SUPPLY AIR DUCTWORK SHALL BE C/W 25MM INTERNAL ACOUSTIC LINING AND SHALL BE SUSPENDED ON RUBBER PADS IN THE HANGERS. ELBOWS SHALL BE COMPLETE WITH TURNING VANES.

XX) ALL SYSTEM/DOMESTIC PIPE LOOPS OR OFFSETS WHICH ARE LARGER THAN 75 MM SHALL BE ISOLATED USING NEOPRENE-IN-SHEAR HANGERS, AND ADDITIONAL 25 MM THICK RIBBED OR WAFFLED NEOPRENE PADS IN THE SADDLES OF CLEVIS HANGERS.

12) ALL PIPES 50MM DIA. AND SMALLER SHALL BE ISOLATED WITH NEOPRENE PADS.

GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.

2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.

3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.

4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.

5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.

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8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.

9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1

10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.

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13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

CLEAR FLOOR TO UNDERSLAB = 3050mm
CLEAR PRODUCT = 2100mm
COMPLETE DROP CEILING = 350mm
UNITS 816/817/818/821/823/824: DRAINS FROM AMENITY TERRACE ON 9/F

NOTES:

1) SOUTH F/A SHAFT A FROM G/F TO 8/F DUCT SERVING CORRIDOR FROM G/F TO 8/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.

2) SOUTH F/A SHAFT B FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM 9/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.

3) PIPE SHAFT - REFER TO PIPE RISER DETAIL ON THIS DRAWING FOR DETAILS.

4) 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XX	TYPE OF EQUIPMENT
XX	EQUIPMENT IDENTIFICATION
XXX	TYPE OF DIFFUSER OR GRILLE
XXX	GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	AIRFLOW (CFM OR L/S)
3Ø	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
GC	GAS COCK
PR	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
WM	WATER METER
FD	FLOOR DRAIN
FPD	PANEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
BLD	BLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
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NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
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T	TEMPERATURE SENSOR
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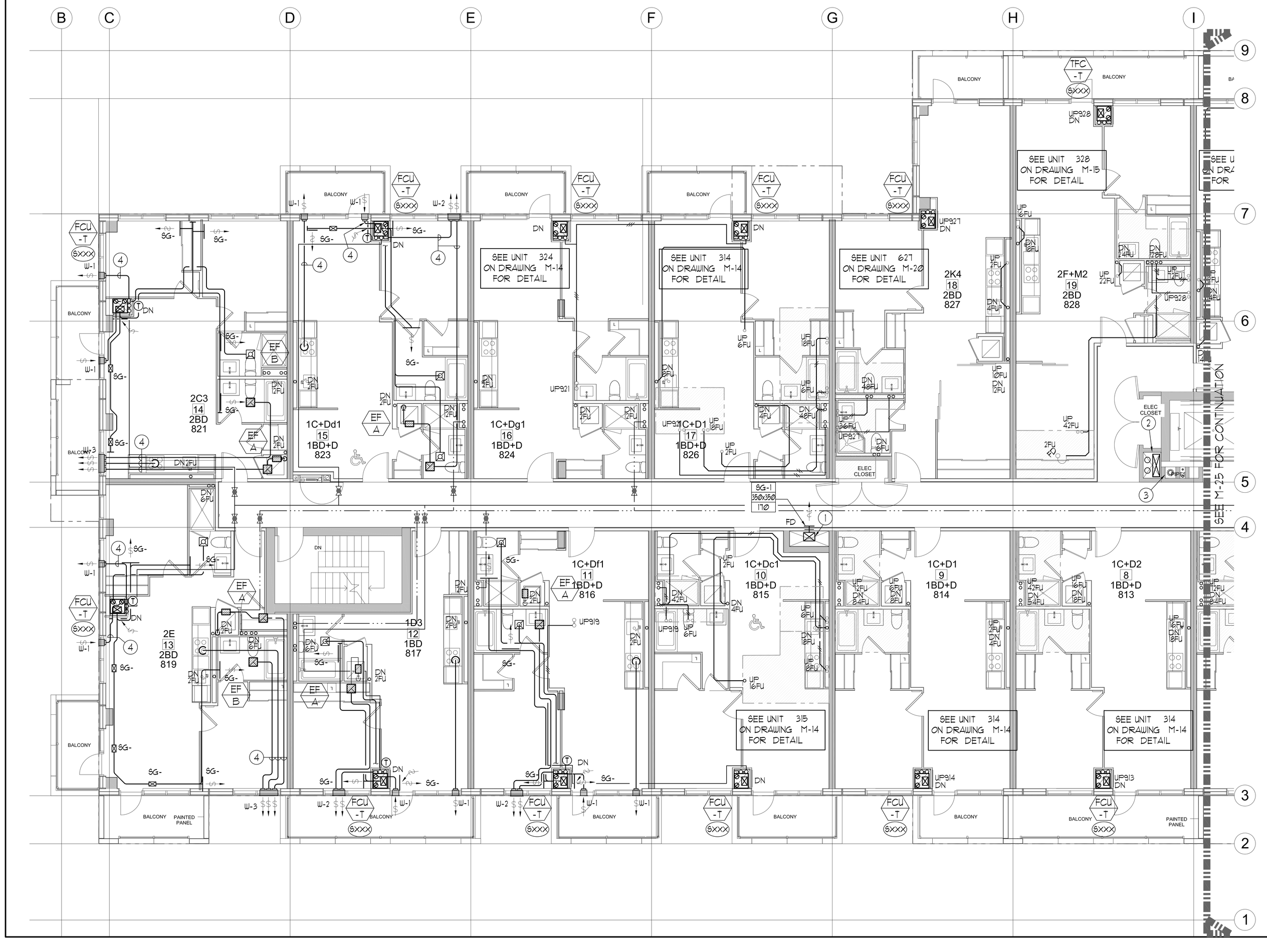
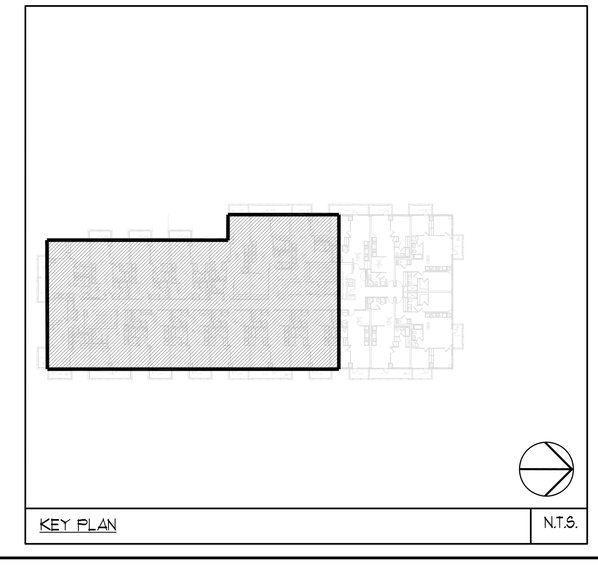
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING + 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION TWB LEVEL
	HEADROOM (FLOOR TO 1/2S HEIGHT)





KEY PLAN | N.T.S.

PROJECT #	1	ISSUED FOR ---	EP
DATE	NO.	DESCRIPTION	BY

PLANS VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

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DRAWINGS ARE NOT TO BE SCALED

NOVA TREND DEVELOPMENTS
715 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-9445
Fax: 905 882-9447
Email: cad@novatrendeng.com

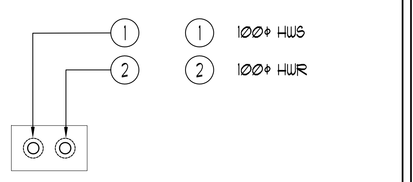
DRAWING TITLE:
B/F SOUTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

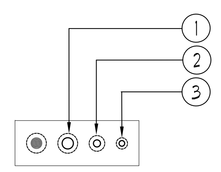
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.G.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-24 OF 39

Drawing name: \\CADSERVER\Current Dwg's\1313 - Alexandra Park\DWG\1313-M-24.DGN PLAN - SOUTH & NORTH MECHANICAL LAYOUT.dwg Plotted: Apr 25, 2014 - 9:47am



NORTH PIPE SHAFT A: B/F | NTS



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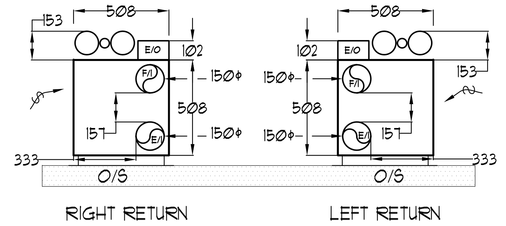

NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,013.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/S (UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70
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NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

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(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
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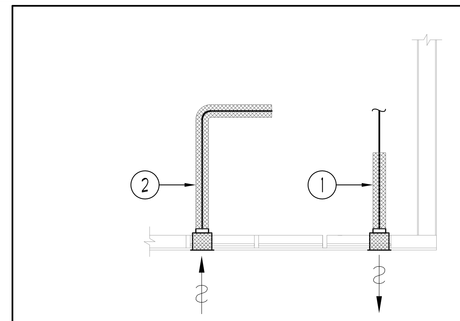

1 EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)

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TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS

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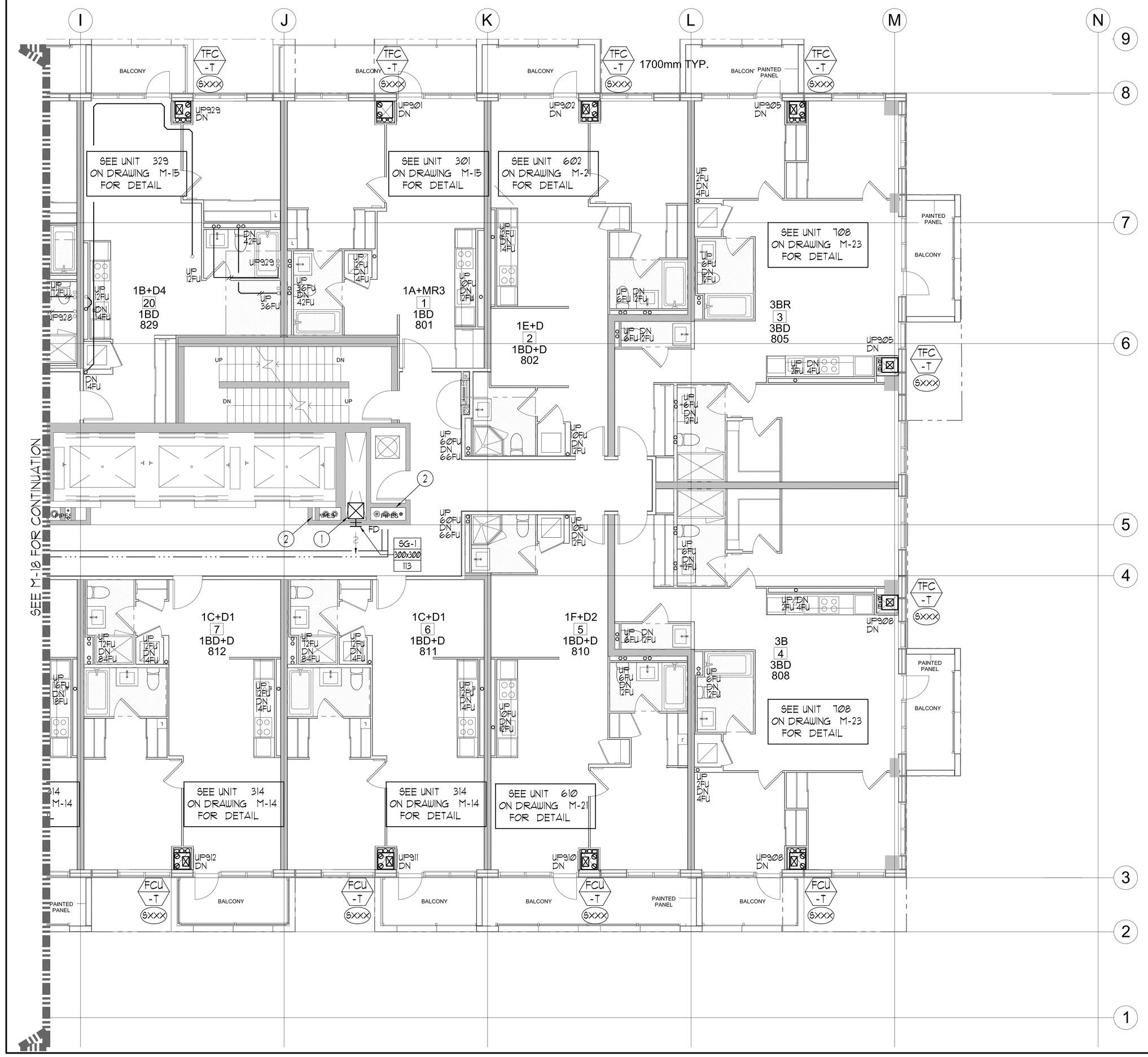

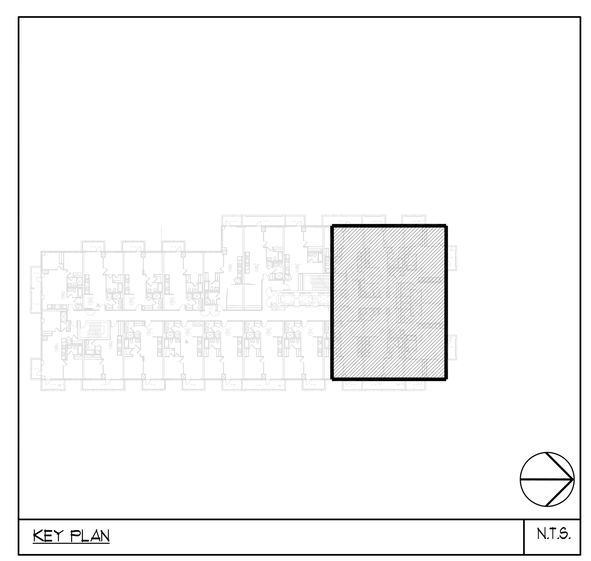

KEY PLAN | N.T.S.

NOTES:

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UNITS 816/817/818/819/821/823/824: DRAINS FROM AMENITY TERRACE ON 9/F

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
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	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
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S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
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	SUPPLY DUCT DOWN
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	RETURN DUCT DOWN
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MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XX	-TYPE OF EQUIPMENT
XX	-EQUIPMENT IDENTIFICATION
XXX	-TYPE OF DIFFUSER OR GRILLE
XXX	-GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	-AIRFLOW (CFM OR L/S)
3Ø, 4W	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	PANEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
BLD	BLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
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CO	WALL CLEANOUT
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	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
PV	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES
	/ - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
XXX	FLOOR ELEVATION ABOVE LEVEL
XXX	FLOOR ELEVATION THIS LEVEL
XXX	HEADROOM (FLOOR TO U/S HEIGHT)

PRIORITY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

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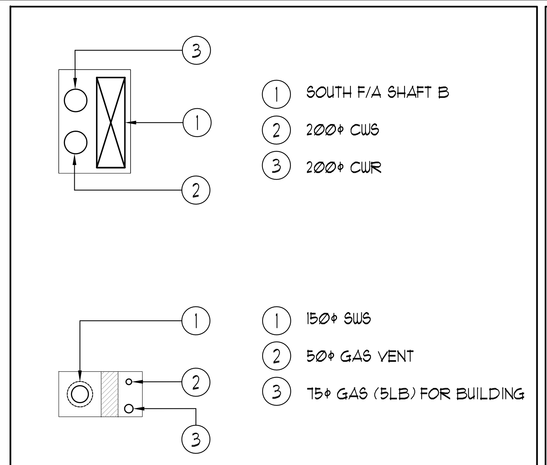
115 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5447
Email: cad@novatrendeng.com

DRAWING TITLE:
B/F NORTH
MECHANICAL LAYOUT

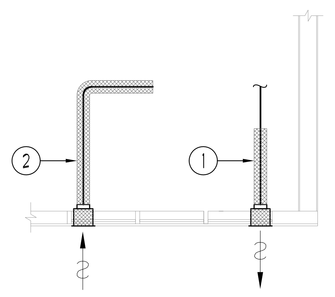
PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-25 OF 35

Drawing name: \\DATA\PROJECTS\Current Projects\1313 - Alexandra Park\DWGS\1313M-24.DGN PLAN - SOUTH & NORTH MECHANICAL LAYOUT.dwg Printed: Apr 25, 2014 - 9:47am



SOUTH PIPE SHAFT: 9/F -13/F | NTS



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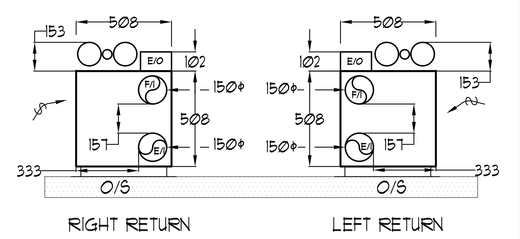
TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



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INSUITE FCU DIMENSIONS | NTS

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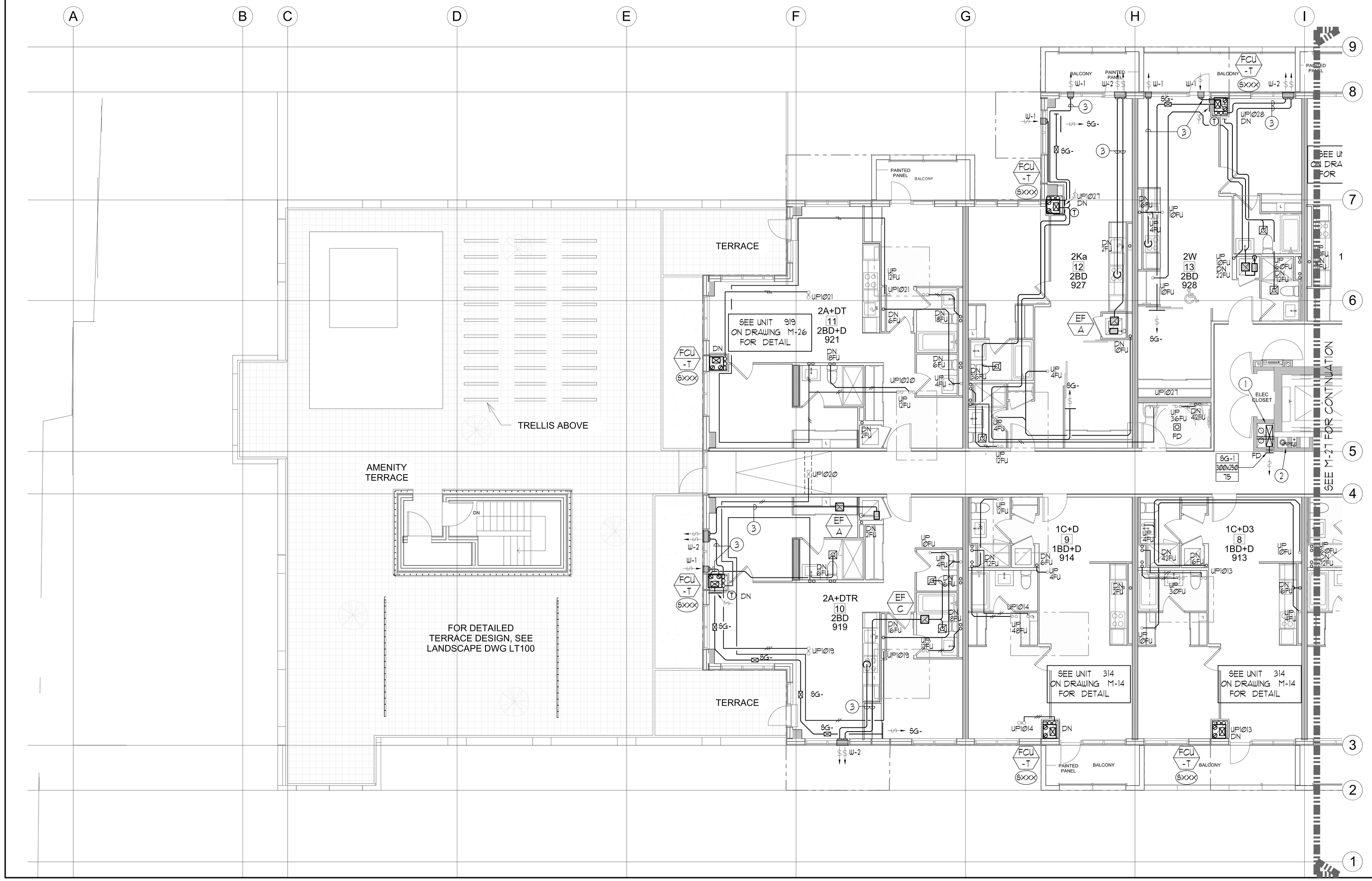
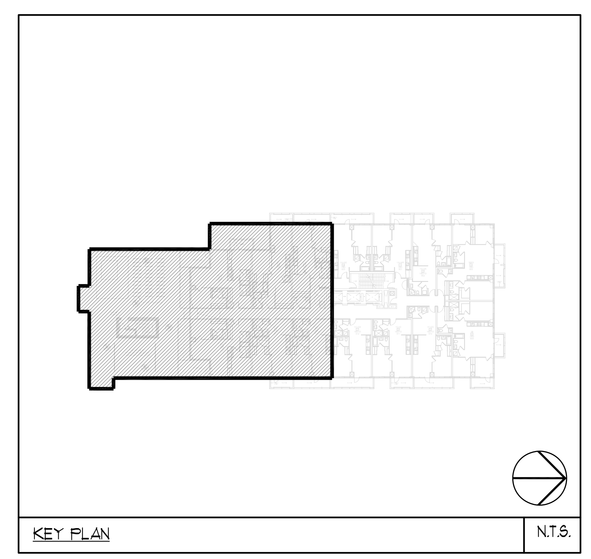
REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2850mm
ALL UNITS CLEAR PRODUCT= 2800mm
EXCEPT UNITS: 905/908 CLEAR PRODUCT= 2700m
UNITS 905/908/919/921: DRAINS FROM TERRACE ON 10/F

NOTES:

1. SOUTH F/A SHAFT B FROM G/F TO 14/F DUCT SERVING CORRIDOR FROM 9/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2. PIPE SHAFT - REFER TO PIPE DIAGRAM FOR DETAILS.
3. 150ø KITCHEN / DRYER / WR / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)





KEY PLAN | N.T.S.

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MBD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XX	TYPE OF EQUIPMENT
X	EQUIPMENT IDENTIFICATION
XXX	TYPE OF DIFFUSER OR GRILLE
XXX	GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	AIRFLOW (CFM OR L/S)
3Ø, 4W	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
G	GAS COCK
PR	PRESSURE REDUCING VALVE
SA	SANITARY ABOVE GRADE
SB	SANITARY BELOW GRADE
SAD	STORM ABOVE GRADE
SBD	STORM BELOW GRADE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
V	SANITARY VENT
WM	WATER METER
FD	FLOOR DRAIN
FFD	PANNEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
BLD	BLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
ST	SANITARY TRAP
EU	ELBOW UP
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XXX	FLOOR ELEVATION ABOVE LEVEL
XXX	FLOOR ELEVATION THIS LEVEL
XXX	HEADROOM (FLOOR TO U/S HEIGHT)

19/03/27	1		ISSUED FOR ---	E.P.
DATE	NO.		DESCRIPTION	BY

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

REVISIONS

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NOVA TREND ENGINEERING GROUP LTD.
115 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5441
Email: cad@novatrendeng.com

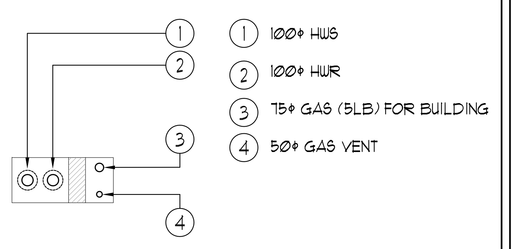
DRAWING TITLE:
9/F SOUTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

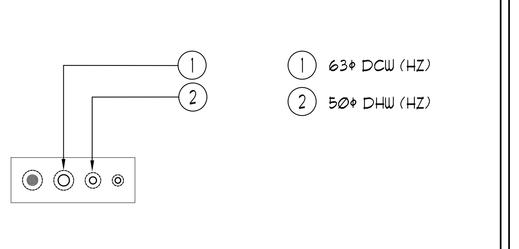
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-26 OF 39

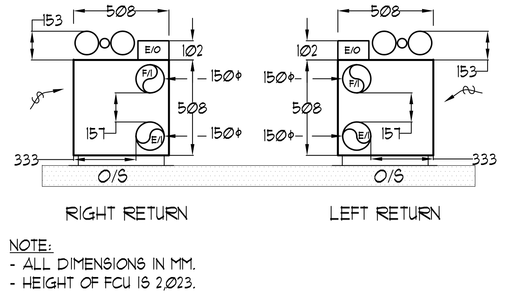
Drawing name: \\SAGE8\PROJECTS\Current Dwg's\1313 - Alexandra Park\2013\1313M- 26.2T (9F PLAN -SOUTH & NORTH MECHANICAL LAYOUT).dwg Plotted: Apr 25, 2014 - 9:47am



NORTH PIPE SHAFT A: 9/F -13/F | NTS



NORTH PIPE SHAFT B: 9/F -13/F | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,013.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/s (UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm(L)
W-2	425x200	INSULATED
W-3	675x200	WALL BOX

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	508x660
FCU-1.5T	600	508x660
FCU-2T	800	508x660
FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x200
F	165	300x150			

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4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.
5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.
6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM
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9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1
10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.
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NOTES:

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3) 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

LEGEND MECHANICAL

SYMBOL	DESCRIPTION
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	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
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	SUPPLY DUCT UP
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	TURNING VANES
FC	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	TYPE OF EQUIPMENT
	EQUIPMENT IDENTIFICATION
	TYPE OF DIFFUSER OR GRILLE
	GRILLE SIZE OR DIFFUSER NECK SIZE
	AIRFLOW (CFM OR L/S)
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G	GAS COCK
PR	PRESSURE REDUCING VALVE
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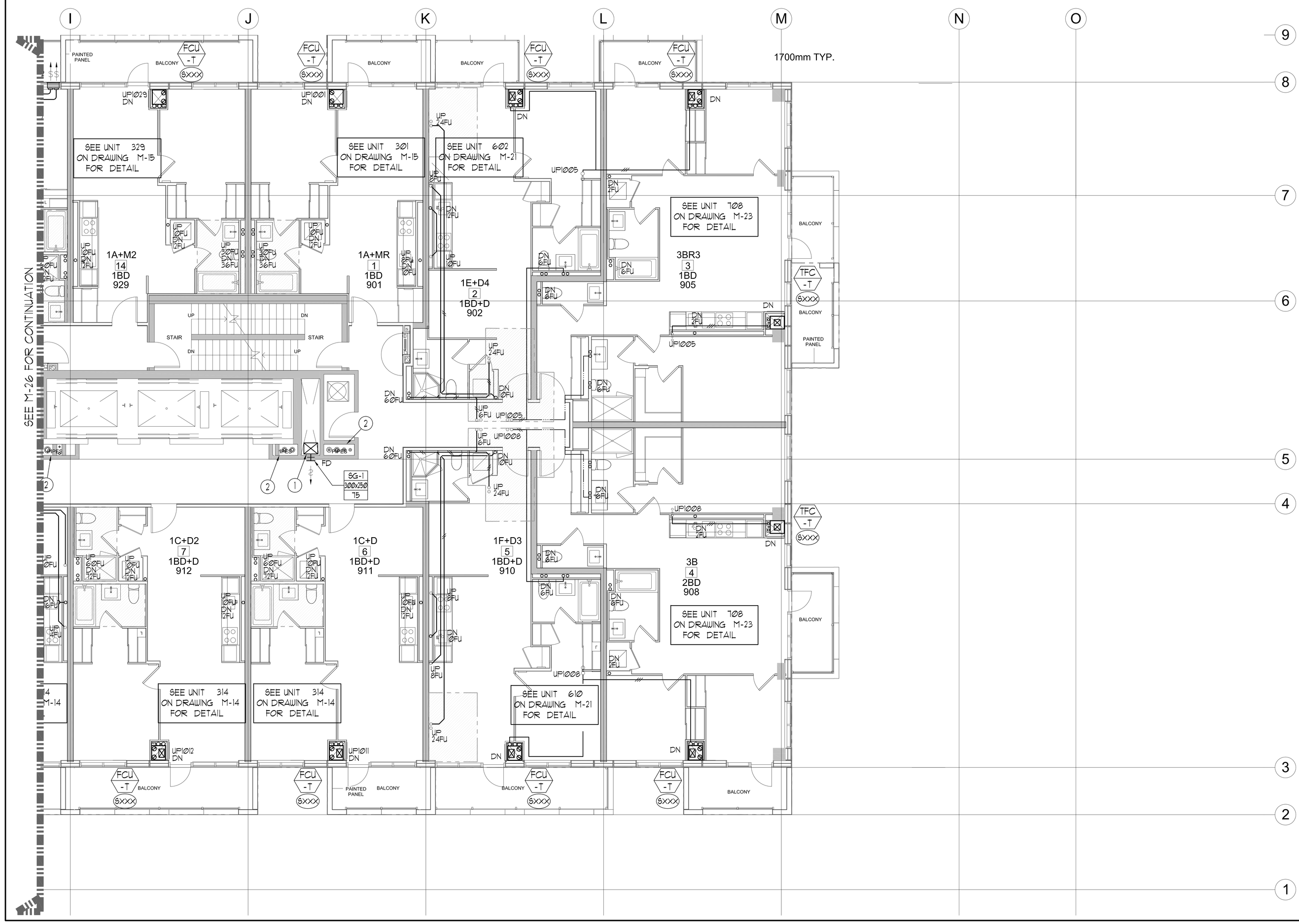
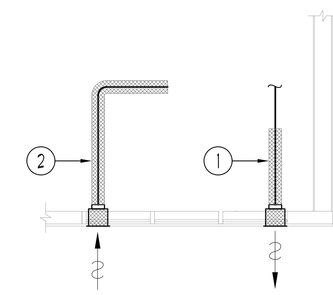
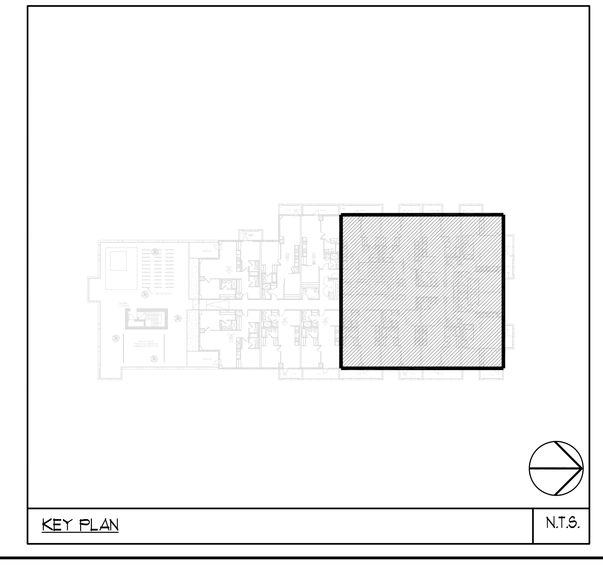




1 EXHAUST DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION 6FT. FROM EXTERNAL WALL. (TYPICAL)

2 F/A INTAKE DUCTWORK TO BE C/W 25mm THICK THERMAL INSULATION FOR ENTIRE LENGTH FROM EXTERIOR WALL TO ERV FCU. (TYPICAL)

TYPICAL DETAIL: INSULATION FOR INTAKE/EXHAUST DUCTWORK | NTS



KEY PLAN | N.T.S.

REVISIONS			
PROJECT #	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

THANK YOU! ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

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Email: cad@novatrendeng.com

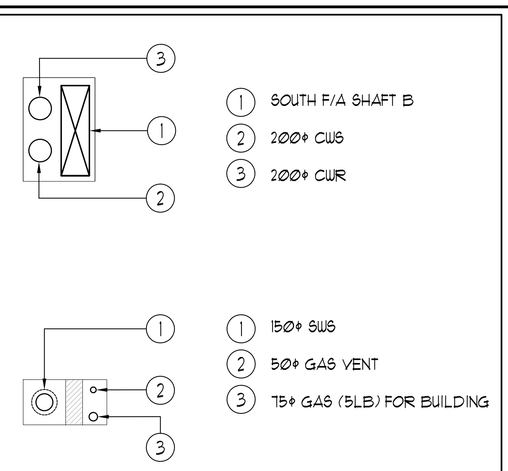
DRAWING TITLE:
9/F NORTH
MECHANICAL LAYOUT

PROJECT TITLE:
ALEXANDRA PARK

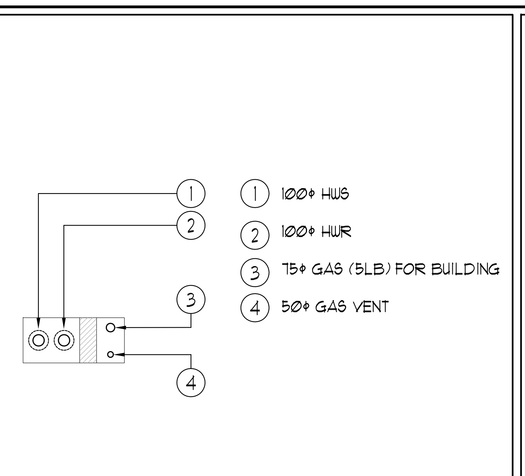
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-27 OF 39

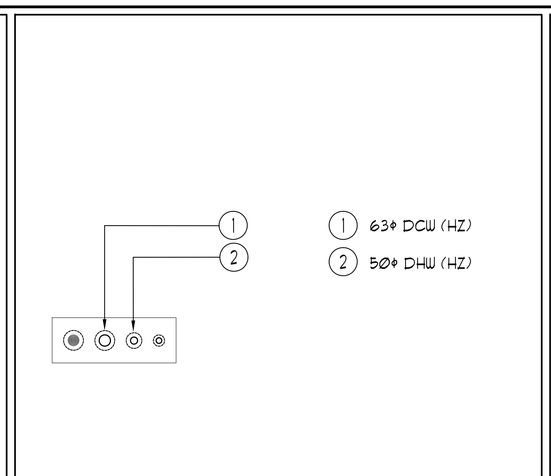
Drawing name: \\CADSERVER\Current Dwg's\13\1313 - Alexandra Park\DWG\13130m - 26,27 (9F PLAN -950th & NORTH MECHANICAL LAYOUT).dwg Printed: Apr 25, 2014 - 9:47am



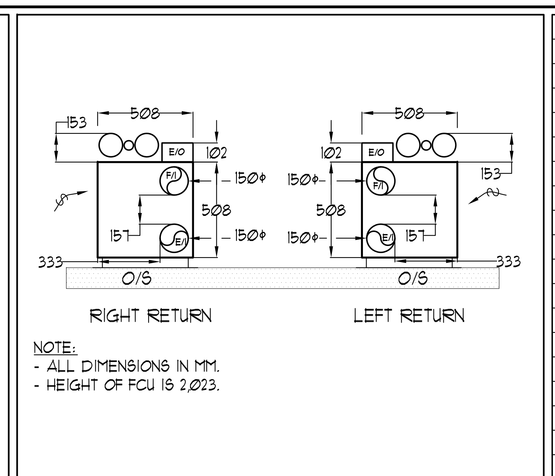
SOUTH PIPE SHAFT: 9/F -13/F | NTS



NORTH PIPE SHAFT A: 9/F -13/F | NTS



NORTH PIPE SHAFT B: 9/F -13/F | NTS



NOTE:
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- HEIGHT OF FCU IS 2,023.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

ACOUSTIC NOTES:

FOR FLOORS WITH ERV'S:

XX) ERV'S SHALL BE ISOLATED USING ISOLATORS INCORPORATING BOTH A SPRING ELEMENT AND A SECONDARY NEOPRENE-IN-SHEAR ELEMENT IN SERIES. DUCTWORK SHALL BE DE-COUPLED FROM FAN BY FLEXIBLE CONNECTORS. ASSOCIATED DUCTWORK SHALL BE SUSPENDED ON HANGERS WITH NEOPRENE PADS.

FOR TRANSITION FLOORS:

XX) ALL HORIZONTAL SUPPLY AIR DUCTWORK SHALL BE C/W 25MM INTERNAL ACOUSTIC LINING AND SHALL BE SUSPENDED ON RUBBER PADS IN THE HANGERS. ELBOWS SHALL BE COMPLETE WITH TURNING VANES..

XX) ALL SYSTEM/DOMESTIC PIPE LOOPS OR OFFSETS WHICH ARE LARGER THAN 75 MM SHALL BE ISOLATED USING NEOPRENE-IN-SHEAR HANGERS, AND ADDITIONAL 25 MM THICK RIBBED OR WAFFLED NEOPRENE PADS IN THE SADDLES OF CLEVIS HANGERS.

12) ALL PIPES 80MM DIA. AND SMALLER SHALL BE ISOLATED WITH NEOPRENE PADS.

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	-TYPE OF EQUIPMENT EQUIPMENT IDENTIFICATION
	-TYPE OF DIFFUSER OR GRILLE -GRILLE SIZE OR DIFFUSER NECK SIZE
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	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)

PRIORITY	1	ISSUED FOR ---	EP
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. DRAWINGS TO BE CONSIDERED IN THE PROPERTY OF THE ENGINEERS AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

DRAWINGS ARE NOT TO BE SCALED

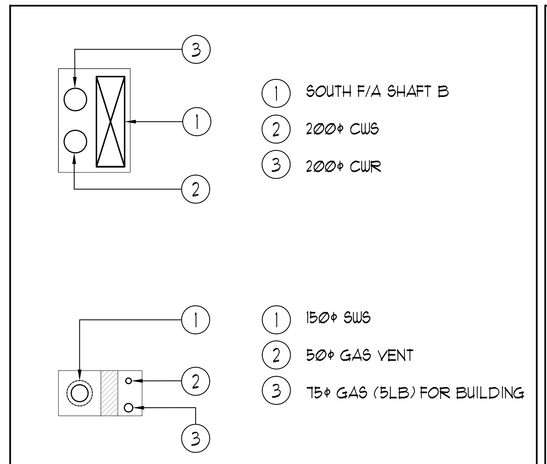
NOVA TREND ENGINEERING ASSOCIATES
139 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-9445
Fax: 905 882-9447
Email: cad@novatrendeng.com

DRAWING TITLE:
10/F
MECHANICAL LAYOUT

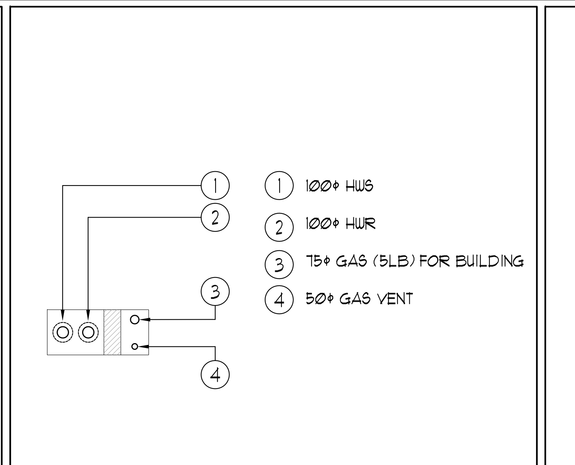
PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.G.	E.P.	1:50
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-28 OF 39

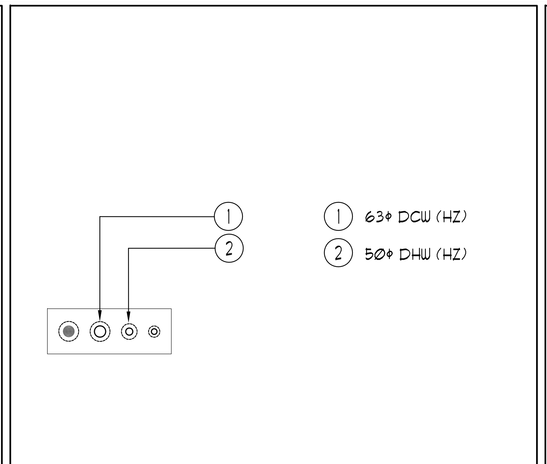
Drawing name: \\CADSERVER\Current Dwg's\1313 - Alexandra Park\DWGS\1313M- 28(10F PLAN - MECHANICAL LAYOUT).dwg Printed: Apr 25, 2014 - 9:47am



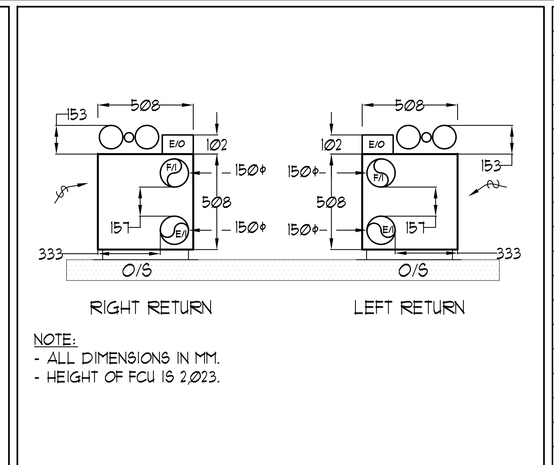
SOUTH PIPE SHAFT: 9/F -13/F | NTS



NORTH PIPE SHAFT A: 9/F -13/F | NTS



NORTH PIPE SHAFT B: 9/F -13/F | NTS



NOTE:
- ALL DIMENSIONS IN MM.
- HEIGHT OF FCU IS 2,023.

INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T

GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.

2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.

3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.

4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.

5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.

6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.

7) FOR D.H.W.C. W. RISER SIZES, REFER TO RISER DIAGRAM

8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.

9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1

10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.

11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.

12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.

13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE.)

REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 2850mm
ALL UNITS CLEAR PRODUCT= 2800mm
EXCEPT UNITS: 1113/1114/1121/1121/1128 CLEAR PRODUCT= 2700mm
UNITS 1119/1120/1121/1121: DRAINS FROM TERRACE ON 12/F

NOTES:

1. SOUTH F/A SHAFT B FROM G/F TO 14/F DUCT SERVING CORRIDOR FROM 9/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2. NORTH F/A SERVING FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM G/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
3. PIPE SHAFT - REFER TO PIPE DIAGRAM FOR DETAILS.
4. 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)

GRILLE SIZING TABLE

DESIGNATION	SIZE	L/S (UNLESS SPECIFIED ELSEWHERE)
SG-A	300x100	47-70
SG-B	300x150	71-93
SG-C	400x150	94-140
SG-D	450x150	141-188
EG-A	150x150	35
W-1	225x200	210mm(L)
W-2	425x200	INSULATED
W-3	625x200	WALL BOX

VERTICAL FAN COIL SIZE

DESIGNATION	MODEL	W x D
FCU-1T	450	508x660
FCU-1ST	600	508x660
FCU-2T	800	508x660
FCU-2ST	1000	559x660
FCU-3T	1200	559x660

NOTE:
A MIN. OF 125mm IS REQUIRED ON THE SIDE OF PIPE RISER.

DUCT SIZING TABLE
(4.06 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
A	47	100x150	G	189	350x150
B	71	150x150	H	236	450x150
C	94	200x150	J	283	500x150
D	118	200x150	K	330	600x150
E	141	250x150	L	377	500x200
F	165	300x150			

KEY PLAN | N.T.S.

LEGEND
MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
	TYPE OF EQUIPMENT EQUIPMENT IDENTIFICATION
	TYPE OF DIFFUSER OR GRILLE GRILLE SIZE OR DIFFUSER NECK SIZE AIRFLOW (CFM OR L/S)
	STARTER (3 PHASE / PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
	GAS LINE
	GAS METER
	GAS COCK
	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
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	CAP
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	BACKFLOW PREVENTER
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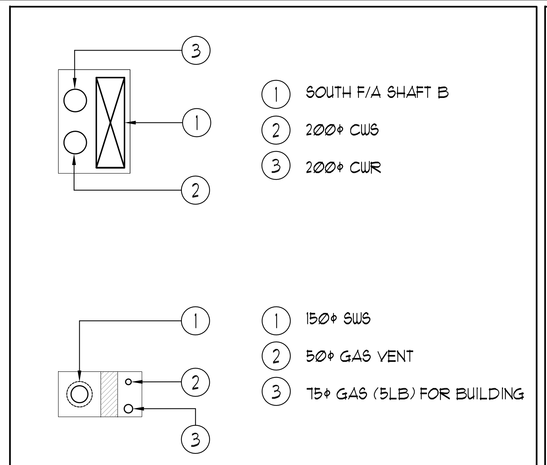
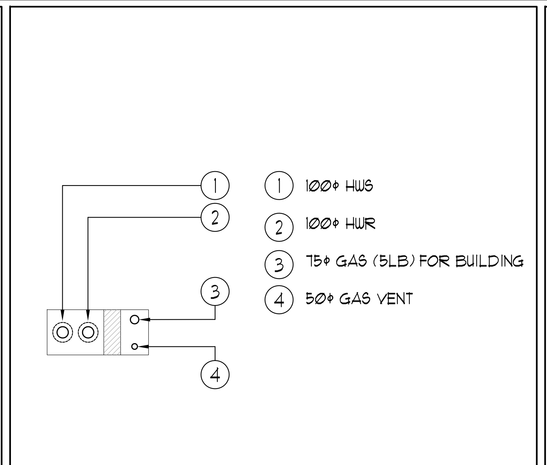
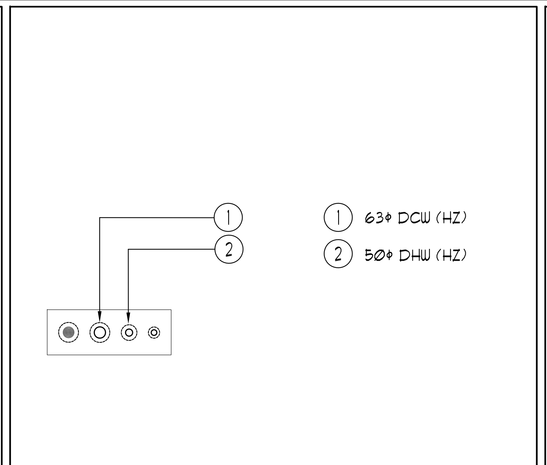
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING + 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION TUB LEVEL
	HEADROOM (FLOOR TO 1ST HEIGHT)



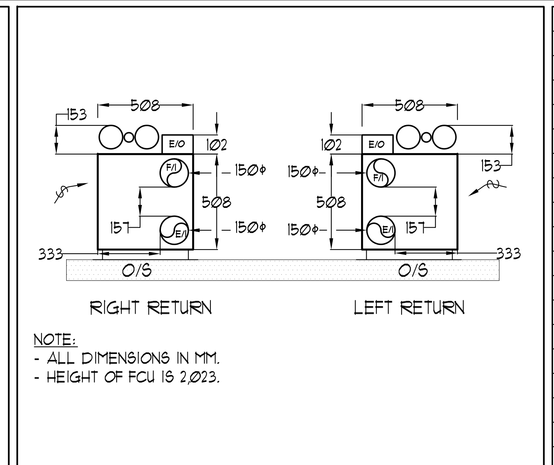
SOUTH PIPE SHAFT: 9/F -13/F | NTS



NORTH PIPE SHAFT A: 9/F -13/F | NTS



NORTH PIPE SHAFT B: 9/F -13/F | NTS



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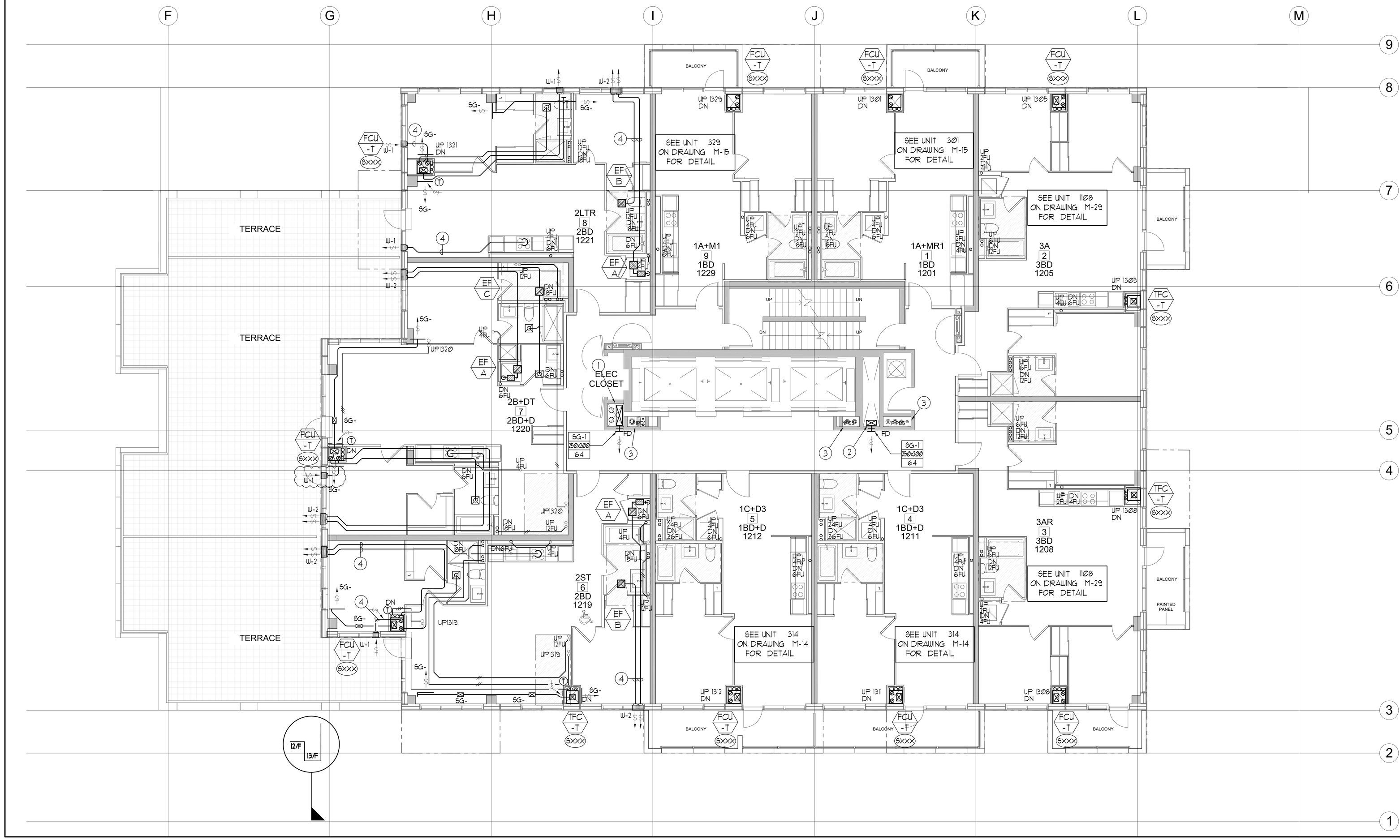
INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T



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DESIGNATION	MODEL	W x D
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FCU-1.5T	600	508x660
FCU-2T	800	508x660
FCU-2.5T	1000	559x660
FCU-3T	1200	559x660

NOTE:
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DUCT SIZING TABLE
(406 m/s, 800 FPM)

DESIGNATION	L/s	DUCT SIZE	DESIGNATION	L/s	DUCT SIZE
(A)	47	100x150	(G)	189	350x150
(B)	71	150x150	(H)	236	450x150
(C)	94	200x150	(J)	283	500x150
(D)	118	200x150	(K)	330	600x150
(E)	141	250x150	(L)	377	500x200
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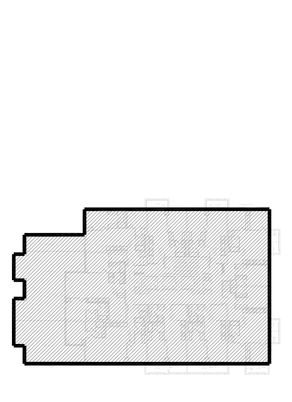

KEY PLAN | N.T.S.

LEGEND
MECHANICAL

SYMBOL	DESCRIPTION
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	SUPPLY AIR TROFFER
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	FLEXIBLE CONNECTION
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	TYPE OF EQUIPMENT / EQUIPMENT IDENTIFICATION
	TYPE OF DIFFUSER OR GRILLE / GRILLE SIZE OR DIFFUSER NECK SIZE
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S	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
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	GAS LINE
	GAS METER
	GAS COCK
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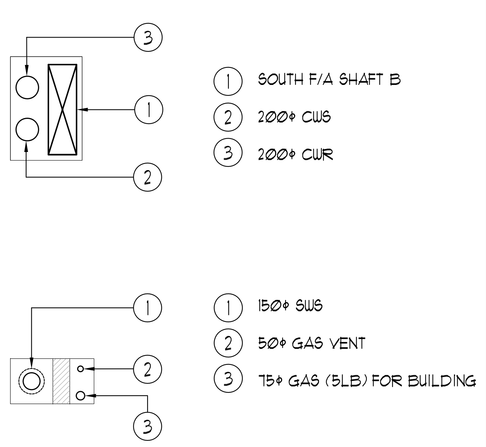
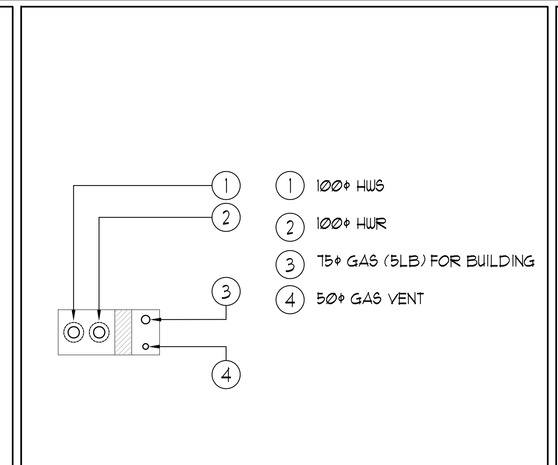


SOUTH PIPE SHAFT: 9/F -13/F | NTS



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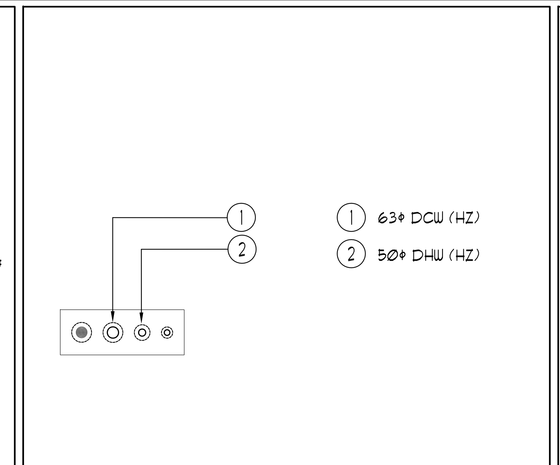
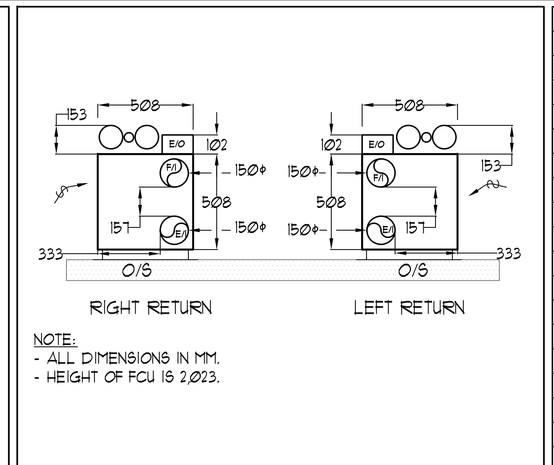


NORTH PIPE SHAFT B: 9/F -13/F | NTS



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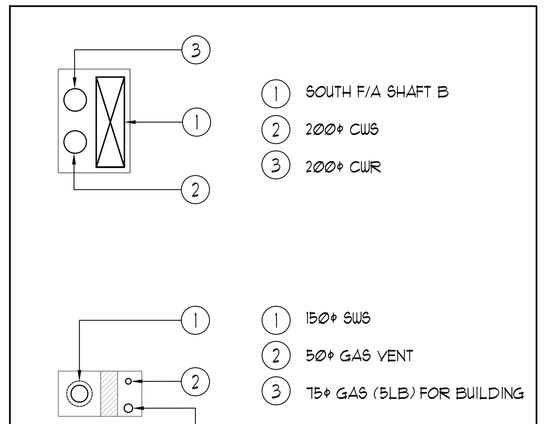
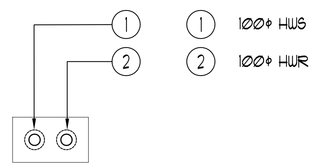
INSUITE FCU DIMENSIONS | NTS

UNIT	NAME	AREA (SQ. FT.)	# OF WR	# OF POWDER	SIZE (T)	FIXTURE UNITS	BR	SQ. FT/T



SOUTH PIPE SHAFT, 14/F | NTS



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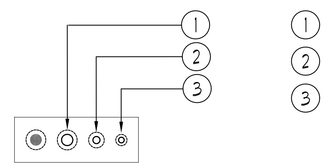

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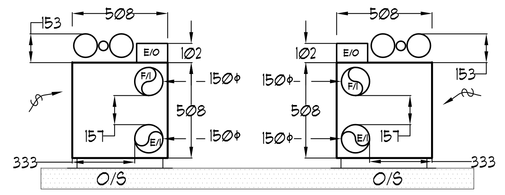

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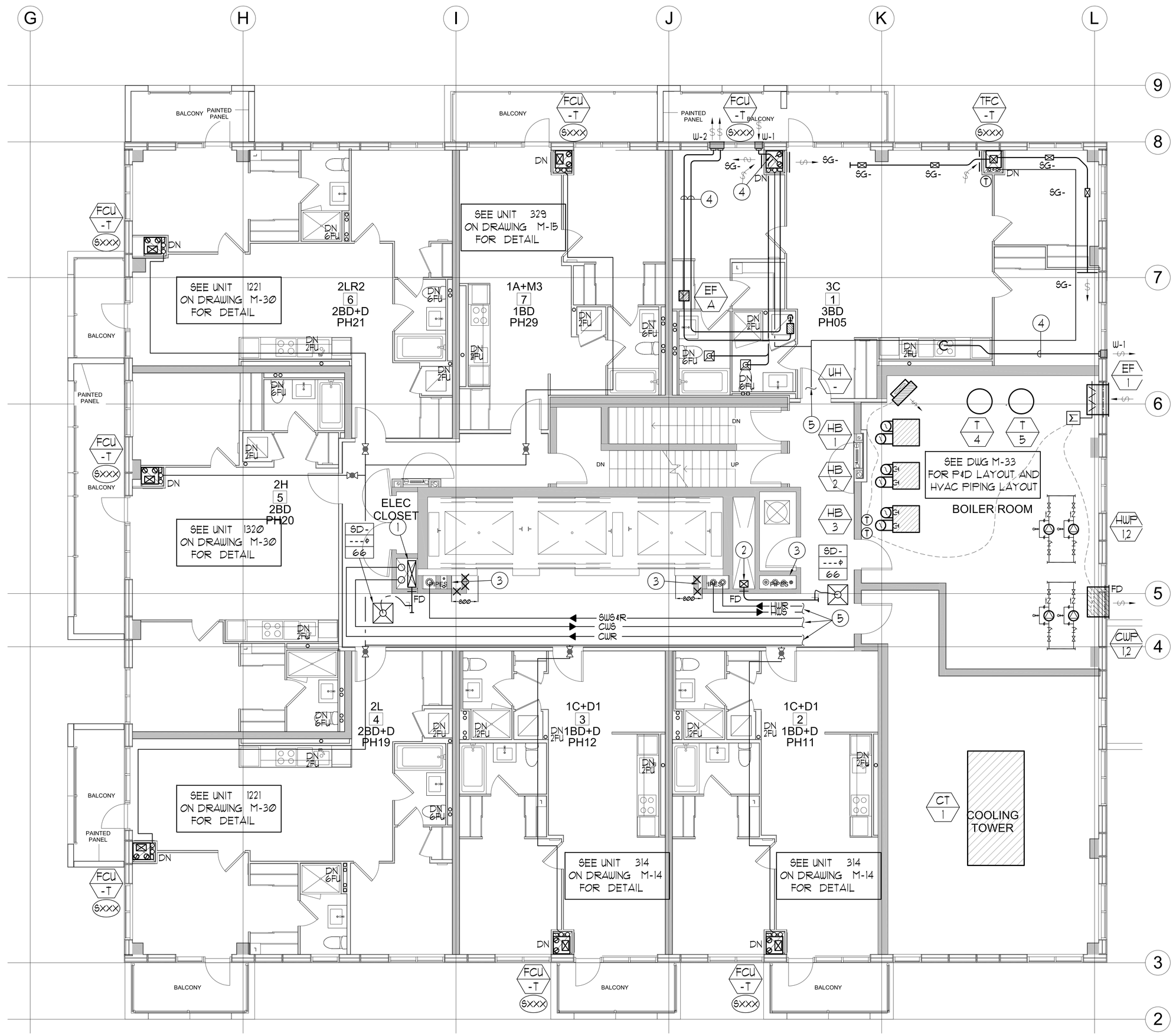
3) PROVIDE EXPANSION CHAMBERS FOR ALL KITCHEN SINKS.
4) SEE INSTALLATION DETAILS DRAWING FOR WASHER DOM. H+C WATER, SANITARY CONNECTION DETAILS.
5) SUPPLY AND INSTALL COMPLETE DOMESTIC HOT AND COLD WATER LINES, SANITARY AND VENT LINES TO EACH FIXTURE /EQUIPMENT INCLUDING WATER CLOSETS, LAVATORIES, BATHS, SHOWERS, KITCHEN SINK, WASHING MACHINES, DISHWASHERS, AND FLOOR DRAINS. KITCHEN SINK, LAVATORIES, WATER CLOSETS AND WASHING MACHINE TO BE C/W LOCALIZED SHUT-OFF VALVES.
6) ALL VENT PIPE INSTALLATION TO COMPLY WITH PLUMBING CODES.
7) FOR D.H.W. W. RISER SIZES, REFER TO RISER DIAGRAM
8) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE PROTECTION RATING OF THE FENETRATED FIRE SEPARATION.
9) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1
10) THE FIRE HOSE CABINET THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.
11) NO FLEXIBLE DUCT SHALL BE USED FOR ANY IN-SUITE DUCTWORK.
12) PROVIDE 25MM EXTERNAL INSULATION TO ENTIRE FRESH AIR DUCT FROM EXTERIOR WALL TO ERV FAN COIL UNIT.
13) DRYER EXHAUST DUCT SHALL BE SMOOTH AND CORROSION-RESISTANT MATERIAL (FLEXIBLE CONNECTION IS NOT ACCEPTABLE).

REFER TO DWG. M-X FOR ACOUSTIC NOTES

CLEAR FLOOR TO UNDERSLAB = 3270mm
CLEAR PRODUCT= 2700mm
COMPLETE DROP CEILING = 570mm

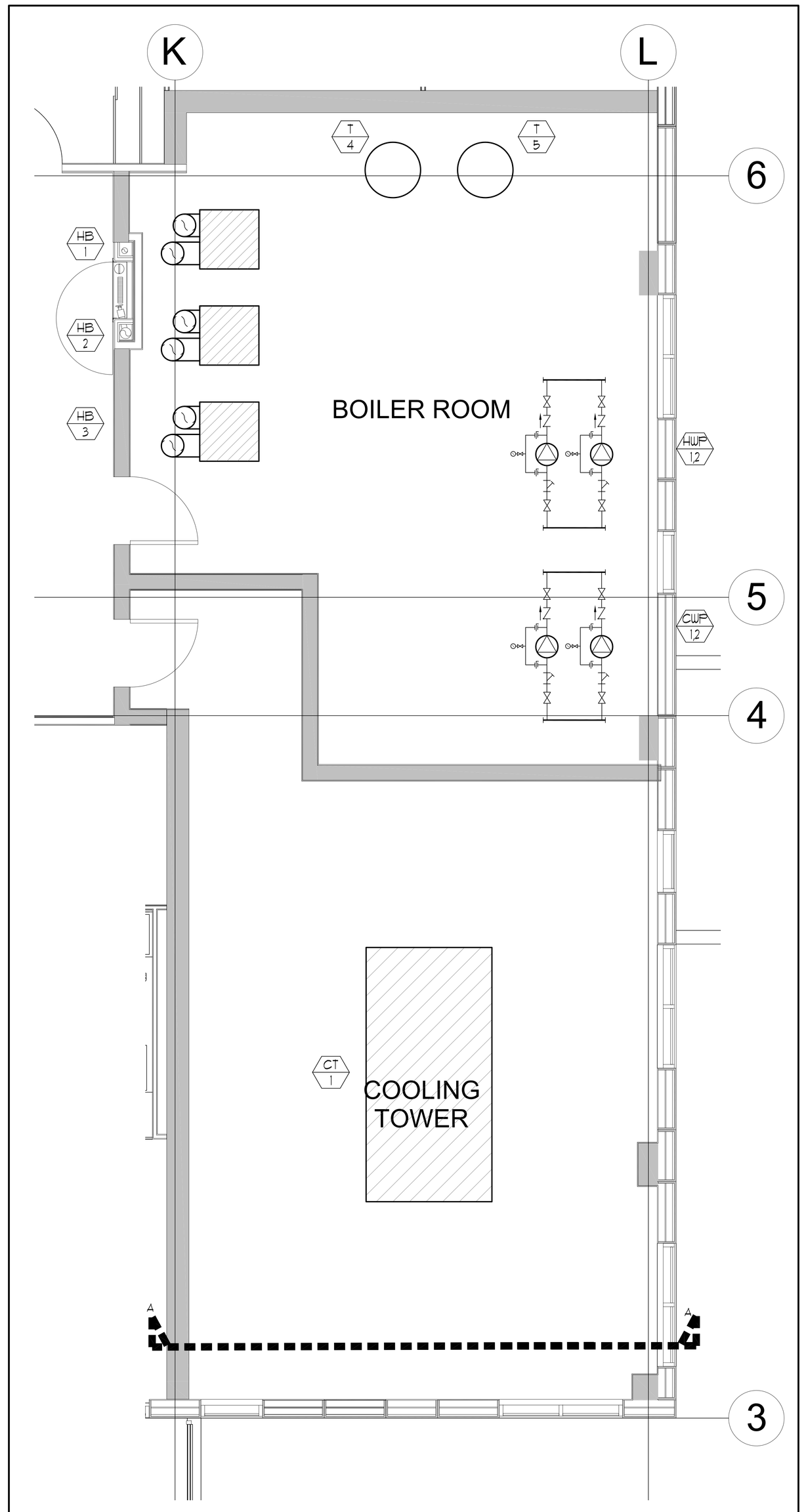
NOTES:

1. SOUTH F/A SHAFT B FROM G/F TO 14/F DUCT SERVING CORRIDOR FROM G/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
2. NORTH F/A SERVING FROM G/F TO 14/F. F/A DUCT SERVING CORRIDOR FROM G/F TO 14/F. SEE VENTILATION RISER DIAGRAM FOR DETAILS.
3. PIPE SHAFT - REFER TO PIPE DIAGRAM FOR DETAILS.
4. 150ø KITCHEN / DRYER / W/R / FCU INTAKE / FCU EXHAUST DUCT. (TYPICAL UNLESS OTHERWISE NOTED)
5. SEE DWG. M-33 FOR PIPING CONNECTION DETAIL.

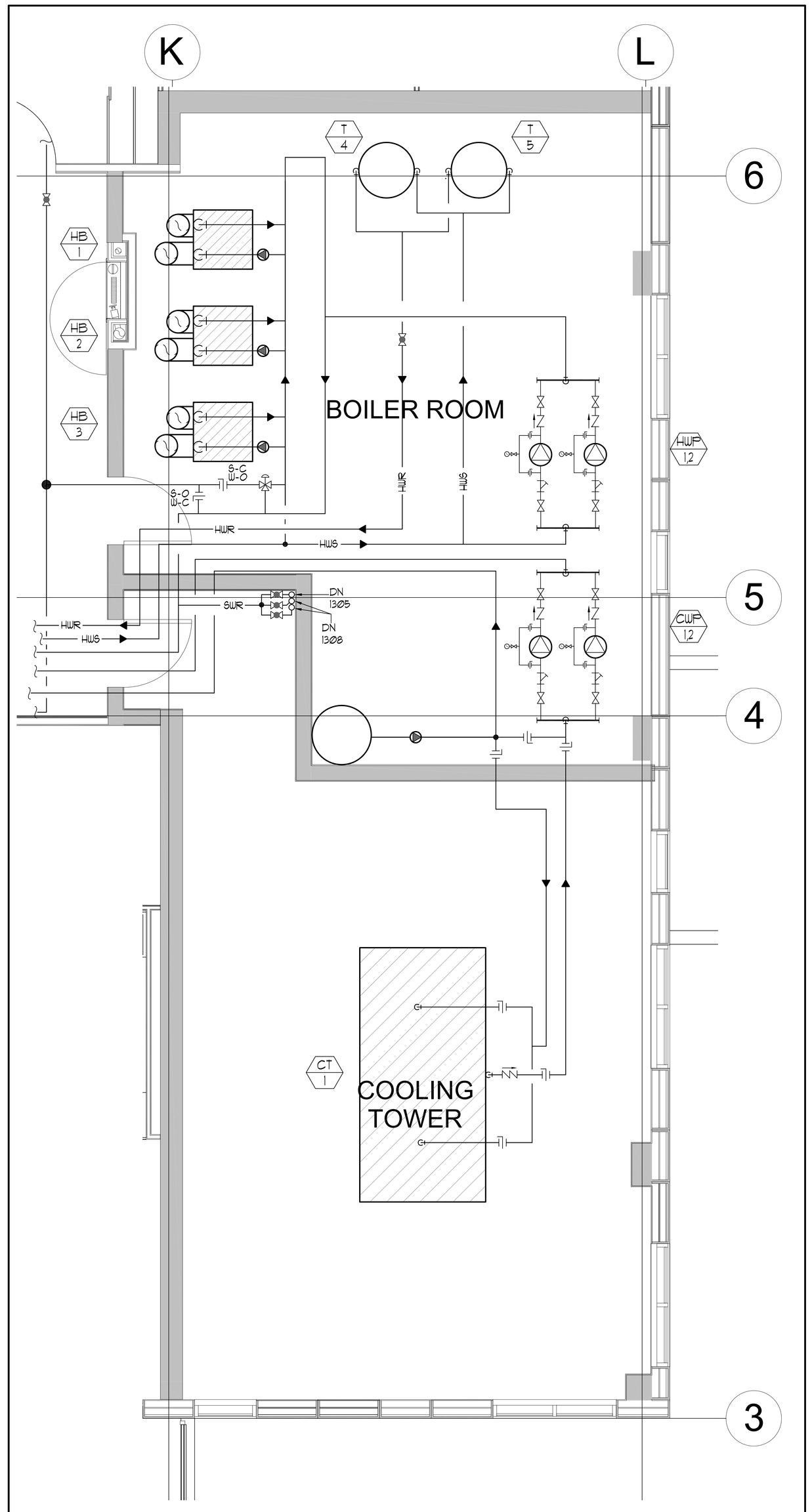


LEGEND
MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
EG	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
XX	-TYPE OF EQUIPMENT
V	EQUIPMENT IDENTIFICATION
XXX	-TYPE OF DIFFUSER OR GRILLE
XXX	GRILLE SIZE OR DIFFUSER NECK SIZE
XXX	AIRFLOW (CFM OR L/S)
SS	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
G	GAS METER
G	GAS COCK
PR	PRESSURE REDUCING VALVE
SAG	SANITARY ABOVE GRADE
SBG	SANITARY BELOW GRADE
STAG	STORM ABOVE GRADE
STBG	STORM BELOW GRADE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
V	SANITARY VENT
WM	WATER METER
FD	FLOOR DRAIN
PFD	PANEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
BLD	BLAB DRAIN
AD	AREA DRAIN
BL-AD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
ST	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
PR	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
CO	COMPRESSED AIR OUTLET
PV	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES
	/ - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
2W	2-WAY MODULATING VALVE
3W	3-WAY MODULATING VALVE
	10"x4"DU THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
XXXX	-FLOOR ELEVATION ABOVE LEVEL
XXXX	-FLOOR ELEVATION THIS LEVEL
XXXX	-HEADROOM (FLOOR TO U/S HEIGHT)



ENLARGED COOLING TOWER & BOILER ROOM P&ID LAYOUT — SCALE 1:25



ENLARGED COOLING TOWER & BOILER ROOM HVAC PIPING LAYOUT — SCALE 1:25

GENERAL AND ACOUSTIC NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC AND SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.

2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREA OF CONFLICTS TO THE ENGINEER PRIOR TO WORK BEGINS.

3) REFER TO ACOUSTIC ENGINEER'S REPORT FOR ACOUSTIC TREATMENT REQUIRED.

4) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE-PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.

5) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3-1.9-1.

6) THE FIRE HOSE CABINETS THAT ARE RECESSED INTO THE EXIT STAIR SHAFTS ARE REQUIRED TO BE SEPARATED FROM THE EXIT STAIR BY A 2 HR. FIRE SEPARATION.

7) ALL AHU/FAU/MAU SHALL BE MOUNTED ON DOUBLE LAYER (50N) PADS BETWEEN UNIT CASING AND HOUSEKEEPING PAD. EXTERNAL HEAT RECOVERY FAN SHALL BE ISOLATED USING SPRING ISOLATORS WITH MINIMUM 38MM STATIC DEFLECTION, PLUS A NEOPRENE-IN-SHEAR ELEMENT IN SERIES. ALL UNIT DUCTWORK WITHIN THE MECHANICAL ROOM SHALL BE C/W 25MM INTERNAL ACOUSTIC LINING, 25MM INSULATION AND JACKETTING. ALL ASSOCIATED DUCTWORK SHALL BE HUNG BY HANGERS WITH NEOPRENE PADS.

8) MAIN FRESH AIR SHAFT TO BE C/W 25MM THICK ACOUSTIC DUCT LINER STARTING FROM THE MECHANICAL PENTHOUSE AND DOWN THREE FLOORS.

9) CHILLER ROOM IS TO BE CONSTRUCTED WITH A MINIMUM 100MM FLOATING CONCRETE FLOOR ON 50 MM THICK ISOLATORS, DESIGNED FOR A FUNDAMENTAL FREQUENCY OF 10 HZ OR LESS, WITH BATT INSULATION IN THE CAVITY.

THE FLOATING FLOOR DESIGN SHALL INCLUDE SEPARATE CONCRETE PIERS WHICH PENETRATE THE FLOATING FLOOR TO SUPPORT THE CHILLER. THE PAD MATERIAL UNDER THE PIER SHALL BE CDM-42 OR EQUIVALENT.

THE CHILLER BODY SHALL BE ISOLATED FROM THE PIERS USING MULTIPLE-COIL SPRING ISOLATORS HAVING A STATIC DEFLECTION OF APPROXIMATELY 2", PLUS A THICK NOISE PAD UNDER THE SPRING BASE. THE NOISE PAD SHALL CONSIST OF MULTIPLE LAYERS OF RUBBER, MAXIMUM 45 DUROMETER, SEPARATED BY STEEL SHIMS AND TOPPED BY A STEEL LOAD PLATE. THE NOISE PAD SHALL BE SIZED TO ACHIEVE A STATIC DEFLECTION OF APPROXIMATELY Ø3" AT A LOAD EQUAL TO 2/3 OF THE MAXIMUM EXPECTED POINT LOAD OF THE CHILLER.

CHILLER SHALL BE COMPLETE WITH ACOUSTIC BLANKET.

10) ALL CONNECTIONS BETWEEN THE CHILLER AND THE ATTACHED PIPING SHALL INCLUDE TWIN-SPHERE RUBBER EXPANSION JOINTS.

11) COOLING TOWER SHALL BE ISOLATED USING DISCRETE SPRING ISOLATORS, WITH MINIMUM 75MM STATIC DEFLECTION AND DOUBLE-LAYER PADS UNDER THE SPRING BASE. TWIN-SPHERE RUBBER EXPANSION JOINTS THAT ARE RATED FOR OUTDOOR USE, SHALL BE PROVIDED BETWEEN THE COOLING TOWER AND ATTACHED PIPING.

12) BOILERS AND HEAT EXCHANGERS SHALL BE SUPPORTED ON DOUBLE-LAYER NEOPRENE-STEEL-NEOPRENE RUBBER PADS BETWEEN THE SUPPORT CHANNELS AND THE HOUSEKEEPING PADS BELOW.

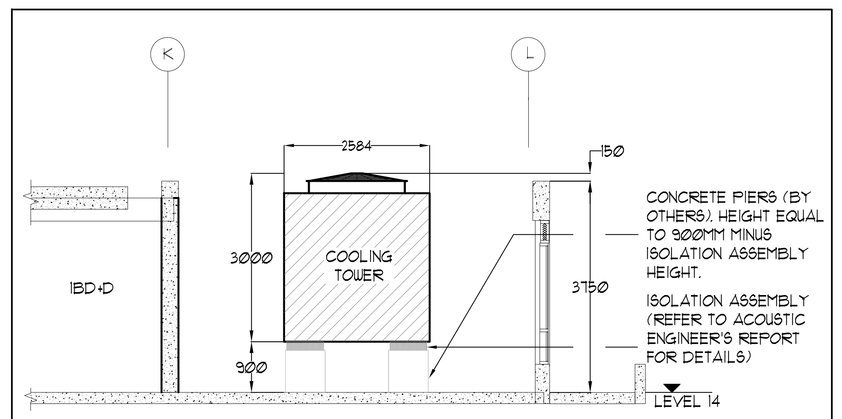
13) CWP, SWP, CHWP AND HWP SHALL BE DECOUPLED FROM THE ATTACHED PIPING USING TWIN-SPHERE RUBBER EXPANSION JOINTS ON BOTH THE SUCTION AND DISCHARGE SIDES. FOR VIL PUMPS, THESE EXPANSION JOINTS ARE TYPICALLY LOCATED IN THE VERTICAL SECTION ABOVE THE SUCTION STRAINER AND SHUT-OFF VALVE. THE PUMPS AND DIRECTLY ATTACHED PIPING (UP TO THE TWIN-SPHERE JOINT) SHALL BE MOUNTED ON CONCRETE INERTIA BASES, AND ISOLATED FROM THE FLOATING FLOOR BELOW USING SPRING ISOLATORS WITH MINIMUM 38 MM STATIC DEFLECTION AND 25 MM THICK N30 PADS UNDER THE SPRING BASE, PROPERLY LOADED.

14) ALL BASE MOUNTED PUMPS SHALL BE MOUNTED C/W CONCRETE INERTIA BASES SUPPORTED ON STEEL SPRINGS WITH A STATIC DEFLECTION OF AT LEAST 15" AND INCLUDING AT LEAST TWO LAYERS OF WAFFLED NEOPRENE PADS BELOW.

15) SMALLER PUMPS MAY BE SUPPORTED USING PIPE STANDS UNDER THE ELBOWS (NOT DIRECTLY FROM THE CASING ITSELF) WITH 38MM DEFLECTION SPRING ISOLATORS PLUS NEOPRENE. SMALL PUMPS SHALL BE ISOLATED USING NEOPRENE-IN-SHEAR ISOLATORS FOR THE FIRST 3 POINTS OF SUPPORT ON EITHER SIDE OF THE PUMP.

16) ALL VFD'S TO BE MOUNTED ON RUBBER PADS.

17) IN-LINE AND CABINET FANS SHALL BE ISOLATED WITH SPRINGS OR NEOPRENE-IN-SHEAR MOUNTS. SIDEWALL FANS SHALL BE ISOLATED USING NEOPRENE MOUNTS, PADS OR GROMMETS.



SECTION A-A — N.T.S.

NOTES:

1
2
3
4

LEGEND
MECHANICAL

SYMBOL	DESCRIPTION
	SUPPLY AIR DIFFUSER
	SUPPLY AIR TROFFER
	LINEAR SUPPLY DIFFUSER
T	THERMOSTAT
S	FAN SWITCH
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
	SUPPLY DUCT UP
	SUPPLY DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
FD	FIRE DAMPER
BD	BALANCING DAMPER
MD	MOTORIZED DAMPER
MFD	MOTORIZED FIRE DAMPER
BDD	BACKDRAFT DAMPER
OBD	OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT
	TURNING VANES
	FLEXIBLE CONNECTION
	ACOUSTIC INSULATION
AV	TYPE OF EQUIPMENT / EQUIPMENT IDENTIFICATION
	TYPE OF DIFFUSER OR GRILLE / GRILLE SIZE OR DIFFUSER NECK SIZE
	AIRFLOW (CFM OR L/S)
3Ø	STARTER (3 PHASE / 1 PHASE)
S	IN-SUITE ERV MASTER SWITCH
S	FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON
CO	CO SENSOR
G	GAS LINE
GM	GAS METER
G	GAS COCK
P	PRESSURE REDUCING VALVE
	SANITARY ABOVE GRADE
	SANITARY BELOW GRADE
	STORM ABOVE GRADE
	STORM BELOW GRADE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	SANITARY VENT
	WATER METER
FD	FLOOR DRAIN
FFD	PANEL FLOOR DRAIN
HD	HUB DRAIN
RD	ROOF DRAIN
SLD	SLAB DRAIN
AD	AREA DRAIN
BLAD	BI-LEVEL AREA DRAIN
CB	CATCH BASIN
	SANITARY TRAP
	ELBOW UP
	ELBOW DOWN
CO	WALL CLEANOUT
CO	FLOOR CLEANOUT
HB	HOSE BIBB
NFHB	NON-FREEZE HOSE BIBB
	GLOBE VALVE
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	PRESSURE REDUCING VALVE
	CHECK VALVE
	CAP
	COMPRESSED AIR OUTLET
	BACKFLOW PREVENTER
	CIRCUIT BALANCING VALVE
	MULTIPLE PIPES / - DENOTES NO. OF PIPES
T	TEMPERATURE SENSOR
T	THERMOMETER
	2-WAY MODULATING VALVE
	3-WAY MODULATING VALVE
	1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING X 1/2" PLUG
	FLOOR ELEVATION ABOVE LEVEL
	FLOOR ELEVATION THIS LEVEL
	HEADROOM (FLOOR TO U/S HEIGHT)

ISSUED/QTY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

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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

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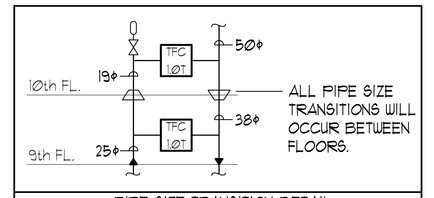
DRAWING TITLE
ROOF
MECHANICAL LAYOUT

PROJECT TITLE
ALEXANDRA PARK

XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	1:25
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-33 OF 39

Drawing name: \\CADSERVER\Current Dwg's\1313 - Alexandra Park\2013\1313M- 330000 PLAN - MECHANICAL LAYOUT(1).dwg Plotted: Apr 25, 2014 - 9:49am



PIPE SIZE TRANSITION DETAIL
N.T.S.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SCHEMATICS DRAWINGS.

ACOUSTIC NOTES:

1) ALL RISER ANCHORS MUST INCLUDE 25MM THICK NSN ISOLATION PADS. THE PADS ARE TO BE HELD IN PLACE WITH HORIZONTAL STEEL PLATES WELDED TO BRACKETS THAT ARE IN TURN WELDED TO THE RISER.

2) WHERE RISERS ARE SUPPORTED BY T-CLAMPS RATHER THAN ANCHORS, NSN PADS ARE TO BE INCLUDED BELOW THE T-CLAMP.

3) ANY PIPE GUIDES USED IN CONNECTION WITH EXPANSION JOINTS OR LOOPS ARE TO BE THE PRE-FABRICATED TYPE WITH INTEGRAL RUBBER ISOLATION.

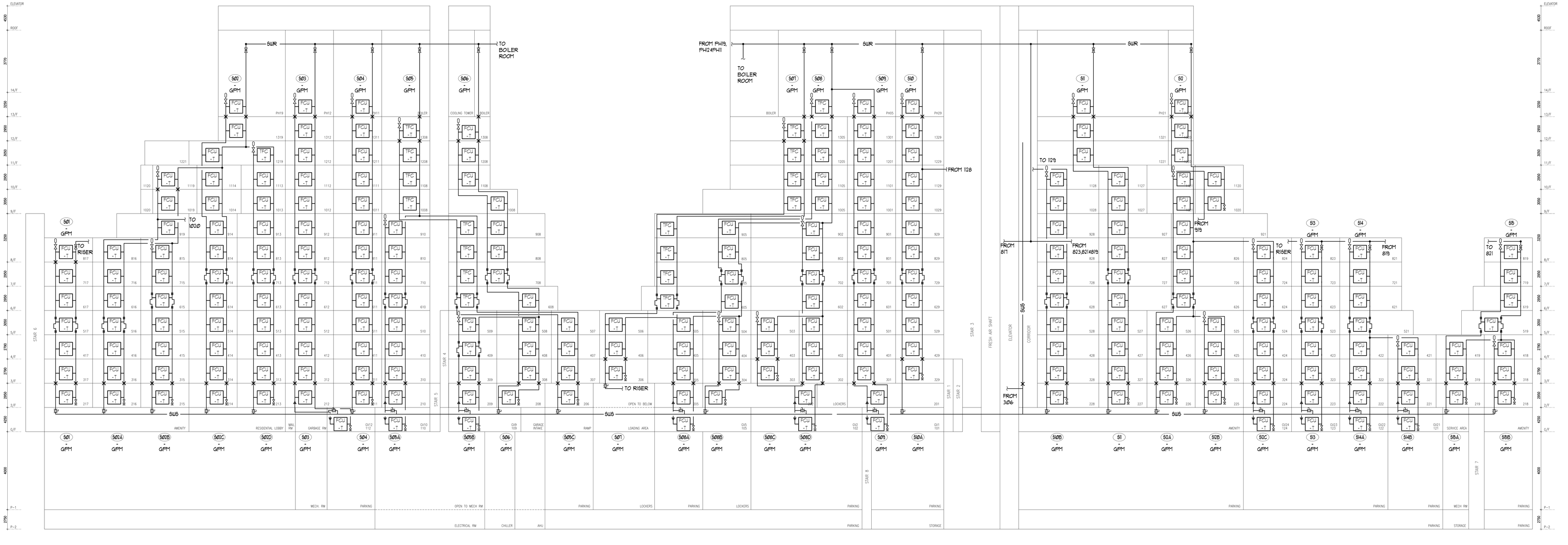
NOTES:

(1) 19ø CHWS & 19ø HWS

(2) 25ø CHWS & 19ø HWS

(3) 25ø CHWS & 25ø HWS

(4) 19ø CHWR & 19ø HWR



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DRAWING TITLE:
SYSTEM WATER
RISER DIAGRAM

PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

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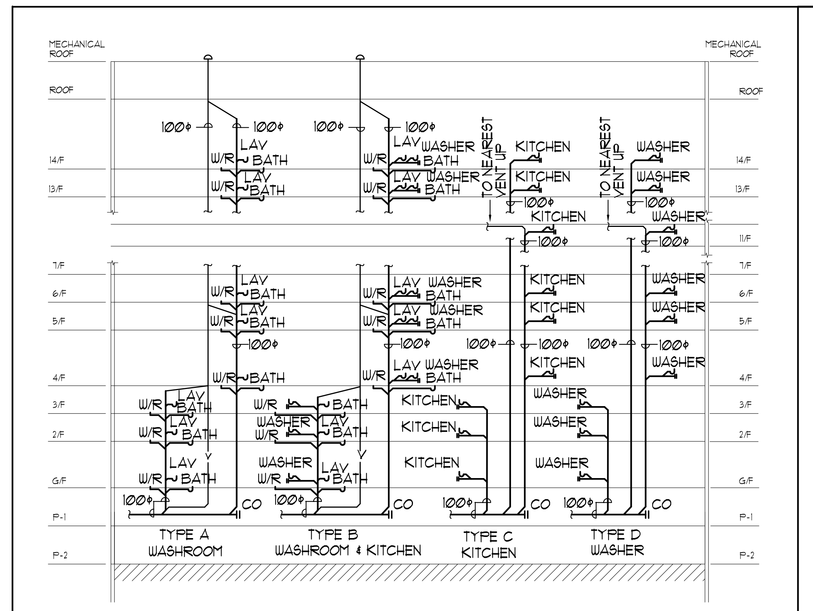
G.S.	E.P.	N.T.S.
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-34 OF 39

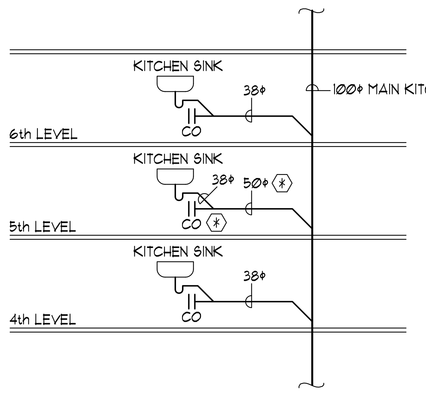
Drawing name: \\CADSERVER\Current Dwg's\13's\1313 - Alexandra Park\DWG's\1313M - SYSTEM WATER RISER DIAGRAM.dwg Printed: Apr 25, 2014 - 9:48am



GENERAL SANITARY RISER NOTES:

1. ALL INSTALLATION SHALL BE ACCORDING TO LATEST EDITION OF THE PLUMBING CODE.
2. PROVIDE YOKE VENT AT EVERY FIVE STOREYS OR AS REQUIRED BY CODE.
3. PROVIDE MINIMUM 3000mm SEPARATION BETWEEN CONNECTION OF MAIN SANITARY AND AUXILIARY SANITARY RISERS TO THE SANITARY BRANCH AT THE BASE OR THE RISERS.

TYPICAL SANITARY RISER DIAGRAM — N.T.S.



NOTES:

F INSTALL 50ø CLEANOUT FOR KITCHEN RISER EVERY 5 FLOORS.

KITCHEN RISER CLEANOUT DETAIL — N.T.S.

PRV SCHEDULE

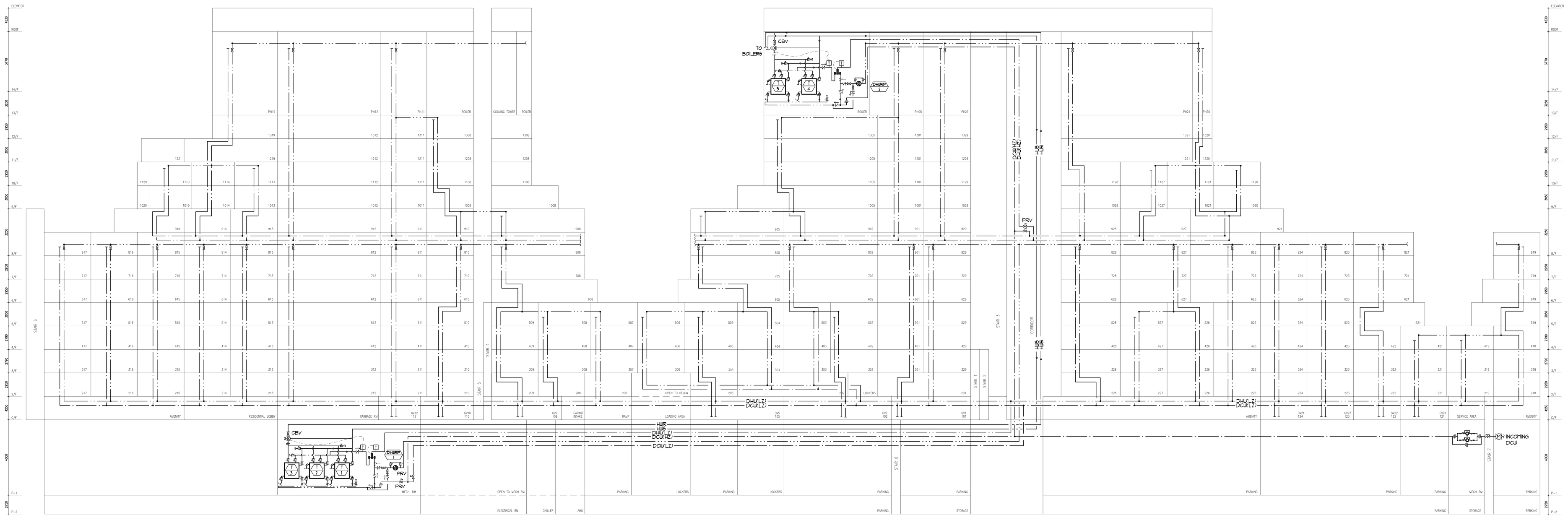
PRV #	DUTY	FLOW RATE (GPM)	INLET PRESSURE (PSI)	OUTLET PRESSURE (PSI)	REMARKS
1	LOW ZONE DHW	-	-	-	CLA-VAL MODEL 90G-Ø1A5KC -mm ø OR EQUAL.
2	LOW ZONE DCW	-	-	-	CLA-VAL MODEL 90G-Ø1A5KC -mm ø OR EQUAL.
3	HIGH ZONE DHW	-	-	-	CLA-VAL MODEL 90G-Ø1A5KC -mm ø OR EQUAL.
4	HIGH ZONE DCW	-	-	-	CLA-VAL MODEL 90G-Ø1A5KC -mm ø OR EQUAL.

GENERAL NOTES:

1) SIZES SHOWN INDICATE REDUCTIONS AFTER DHW&CW HEADERS ON STOREY INDICATED.
2) REFER TO FLOOR PLANS FOR SIZING OF HORIZONTAL PIPE.
3) PROVIDE 19ø SHUT OFF VALVES FOR EACH SUITE.
4) PROVIDE DRAIN VALVE AT BOTTOM OF EACH RISER.
5) PROVIDE AIR VENT AT TOP OF EACH RISER.
6) PROVIDE 19ø CIRCUIT BALANCING VALVE ON TOP OF EACH DOMESTIC HOT WATER RISER EACH CIRCUIT VALVE TO BE BALANCED TO EQUAL FLOW.
7) ALL RISER ANCHORS MUST INCLUDE 25MM THICK NSN ISOLATION PADS. THE PADS ARE TO BE HELD IN PLACE WITH HORIZONTAL STEEL PLATES WELDED TO BRACKETS THAT ARE IN TURN WELDED TO THE RISER.
8) WHERE RISERS ARE SUPPORTED BY T-CLAMPS RATHER THAN ANCHORS, NSN PADS ARE TO BE INCLUDED BELOW THE T-CLAMP.
9) ANY PIPE GUIDES USED IN CONNECTION WITH EXPANSION JOINTS OR LOOPS ARE TO BE THE PRE-FABRICATED TYPE WITH INTEGRAL RUBBER ISOLATION.

NOTES:

1. WATER METER ASSEMBLY c/w BACK WATER VALVE AND EXPANSION TANK PER CITY'S STANDARDS. SEE DETAILS ON DWG M-27.
2. 19ø CIRCUIT BALANCING VALVE AT TOP OF EACH DHW RISER UNLESS OTHERWISE SPECIFIED (TYPICAL)
3. --
4. 19ø SHUT-OFF VALVE FOR EACH SUITE. (TYPICAL)
5. SET AT 120°F DHW & COMBINED DCW & DHWR TO MAINTAIN MAXIMUM SUPPLY TEMPERATURE AT 120°F.
6. BYPASS HWS ONCE DHW SUPPLY TEMPERATURE REACHES 140°F.
7. 19ø DCW & 19ø DHW.
8. 25ø DCW & 19ø DHW.
9. 32ø DCW & 25ø DHW.
10. 38ø DCW & 32ø DHW.
11. 50ø DCW & 38ø DHW.
12. THERMOMETER AND PRESSURE GAUGE.



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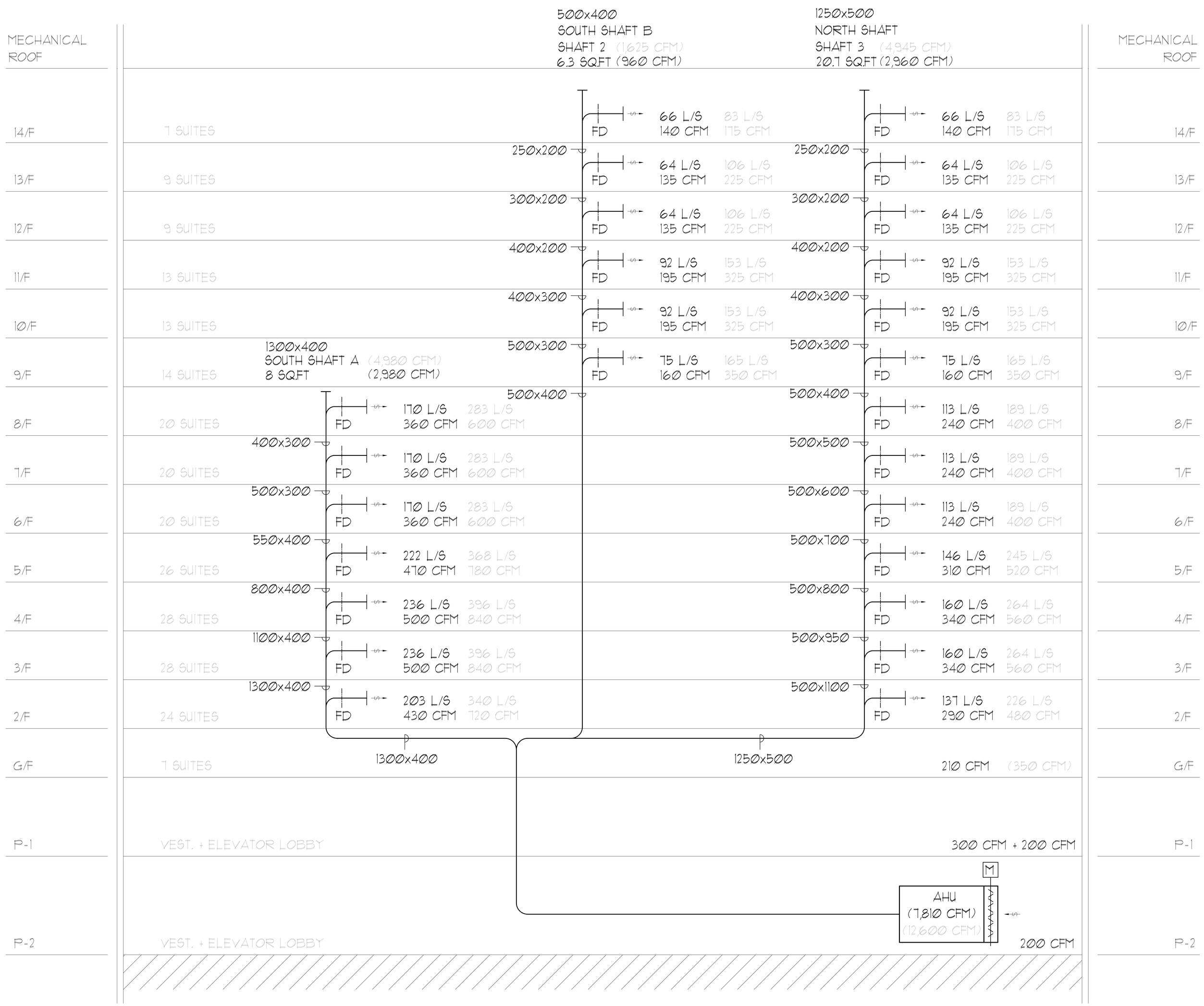
DRAWING TITLE:
DCW, DHW & DHWR
RISER DIAGRAM

PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	N.T.S.
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-35 OF 39

Drawing name: \\CADSERVER\Current Dwg's\13\1313 - Alexandra Park\DWG\1313-2SDCM_DHW_DHWR RISER DIAGRAM.dwg Printed: Apr 25, 2014 - 9:49am



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DATE	NO.	DESCRIPTION	BY

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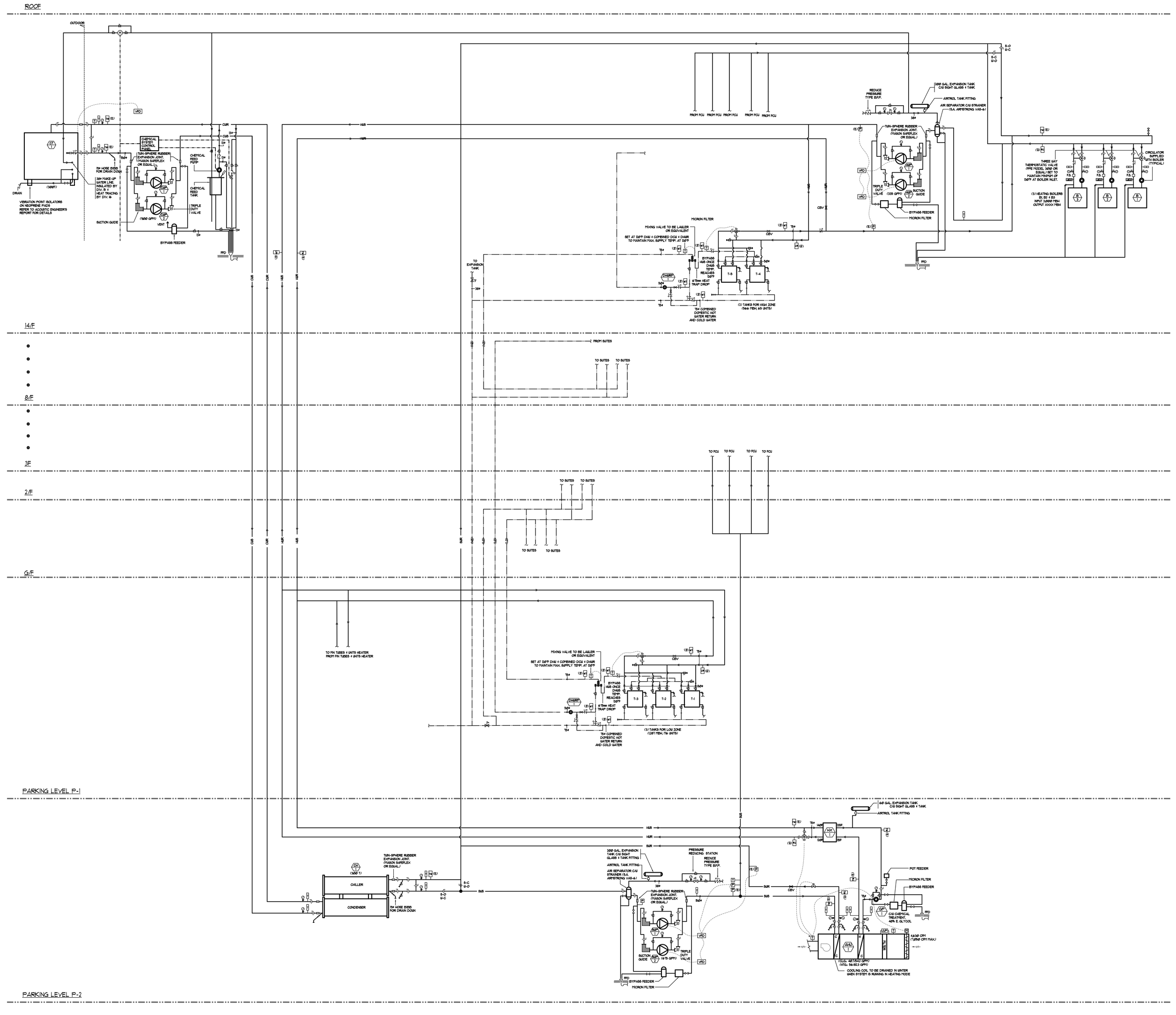
DRAWING TITLE:
PRESSURIZATION/VENTILATION RISER DIAGRAM

PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	N.T.S.
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-36 OF 39

Drawing name: \\CADDRIVE\Current Dwg\1313 - Alexandra Park\Dwf\1313e- 3DPRESSURIZATION &VENTILATION RISER DIAGRAM.dwg Plotted: Apr 25, 2014 - 9:48am



PRIORITY	1	ISSUED FOR ---	E.P.
DATE	NO.	DESCRIPTION	BY

PLANK 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.

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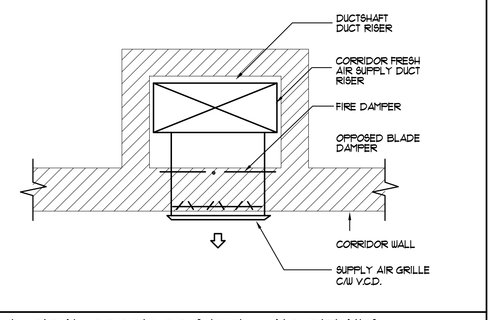
DRAWING TITLE:
SCHEMATICS

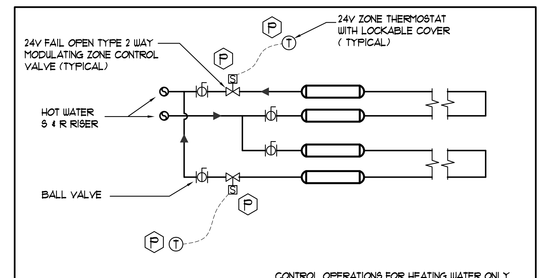
PROJECT TITLE:
ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	N.T.S.
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-37 OF 39

Drawing name: \\CAD\SPARK\Current Dwg\1313 - Alexandra Park\Dwf\1313-M-37.dwf Plotted: Apr 25, 2014 - 9:49am



TYPICAL CORRIDOR SUPPLY AIR DETAILS
N.T.S.



FIN TUBE HEATING CONTROL DETAIL (HTG. WATER ONLY)
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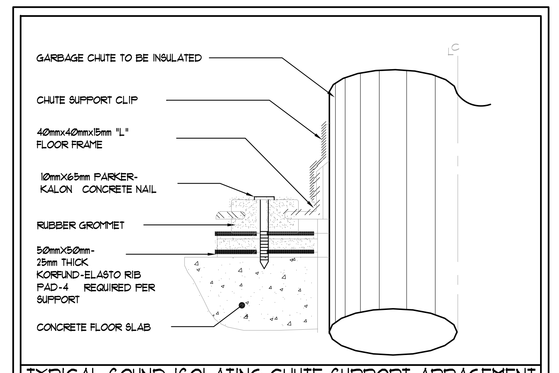
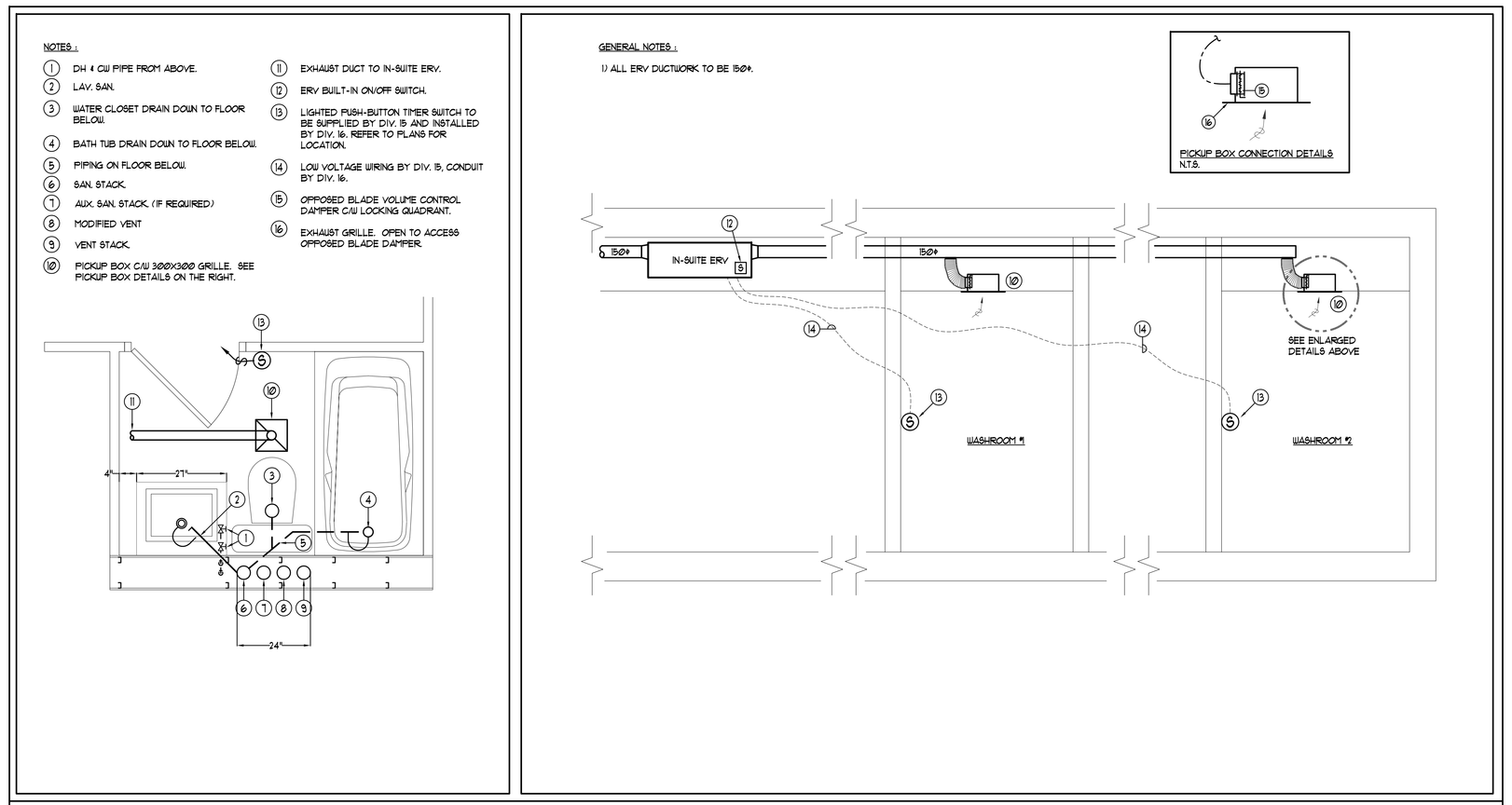
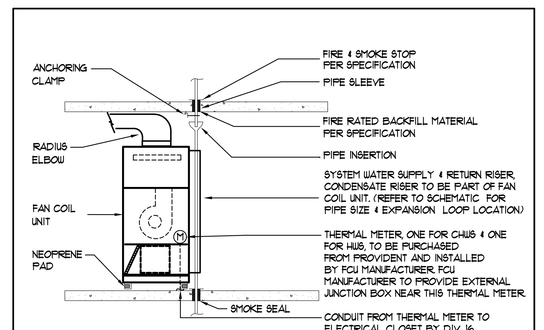


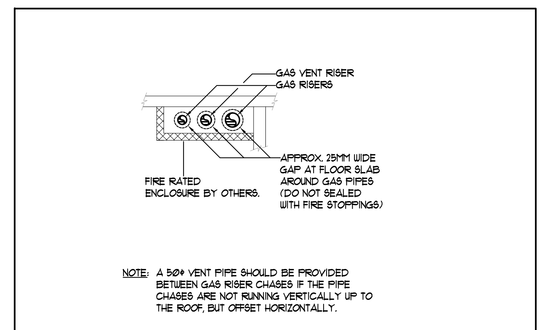
TYPICAL SOUND ISOLATING CHUTE SUPPORT ARRAGEMENT
N.T.S.



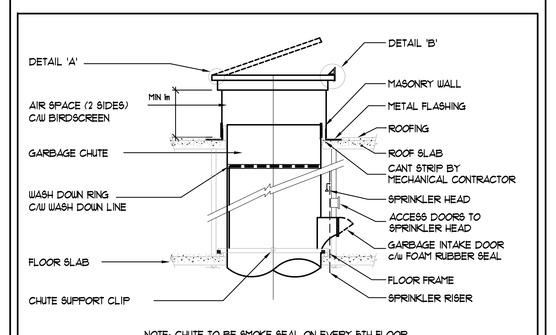
WASHROOM EXHAUST DETAIL
N.T.S.



FAN COIL UNIT INSTALLATION DETAIL
N.T.S.

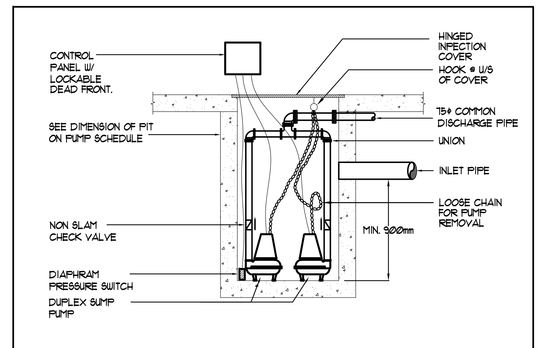


TYPICAL GAS PIPE RISERS DETAIL IF ENCLOSED BY FIRE RATED ENCLOSURE
NTS

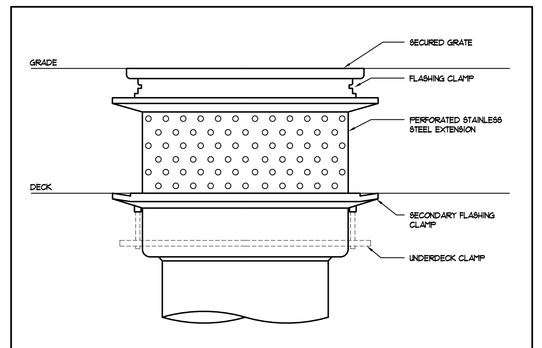


NOTE: CHUTE TO BE SMOKE SEAL ON EVERY 5TH FLOOR.

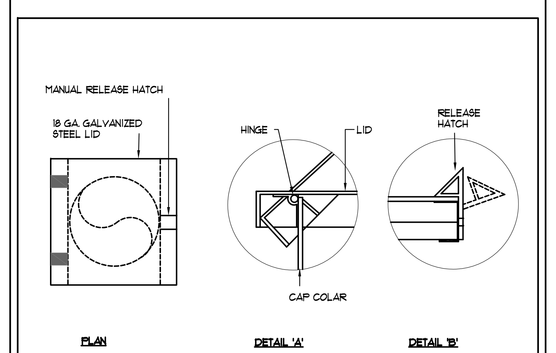
GARBAGE CHUTE DETAIL
N.T.S.



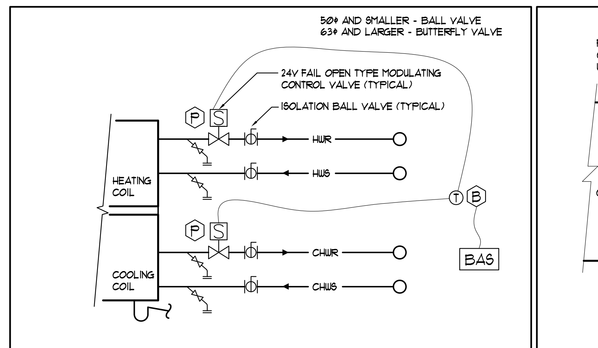
ELEVATOR SUMP PIT DETAIL
N.T.S.



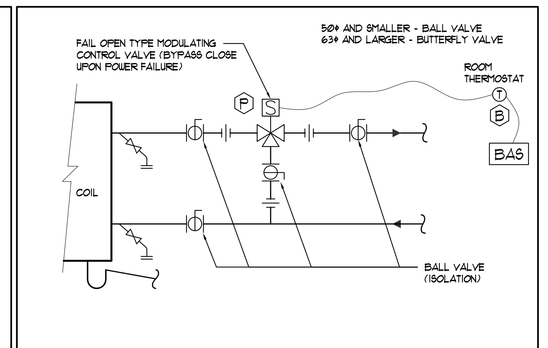
BI-LEVEL AREA DRAIN DETAIL
N.T.S.



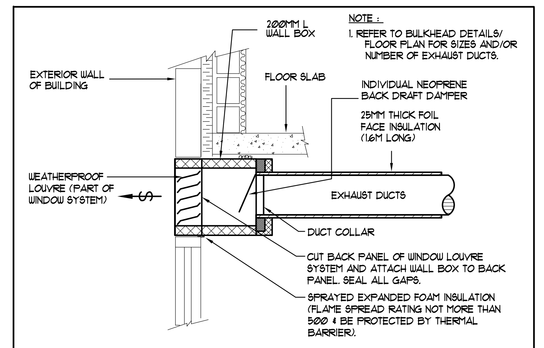
GARBAGE CHUTE OPENING DETAIL
N.T.S.



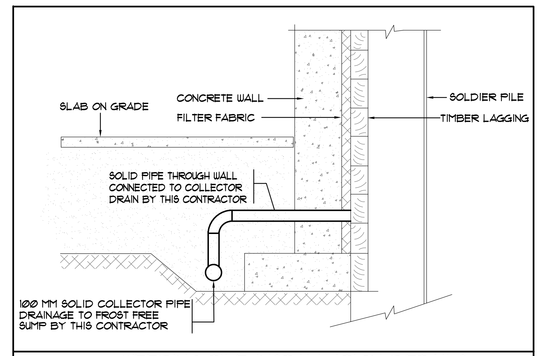
2-WAY VALVE PIPING ARRANGEMENT FOR 4-PIPE SYSTEM (SEPARATE COOLING/HEATING COILS)
N.T.S.



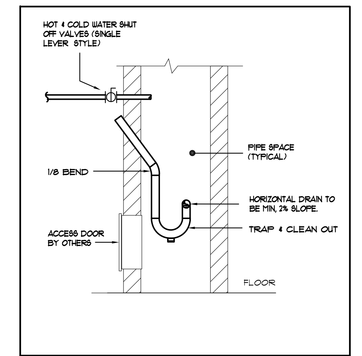
3-WAY VALVE PIPING ARRANGEMENT
N.T.S.



WALL BOX DETAIL
N.T.S.



WEEPING TILE INSTALLATION DETAILS
N.T.S.



WASHER CONNECTION DETAIL
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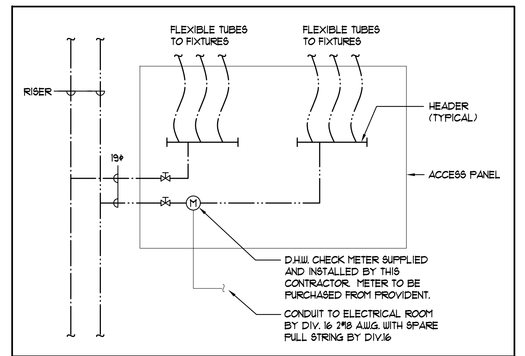
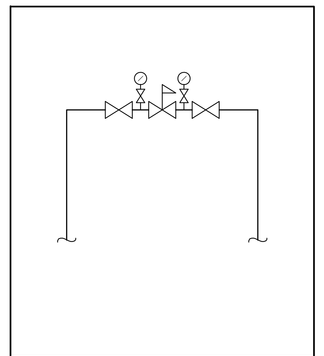
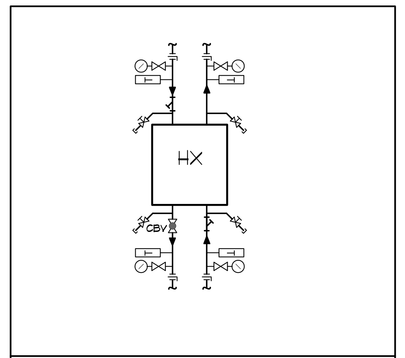


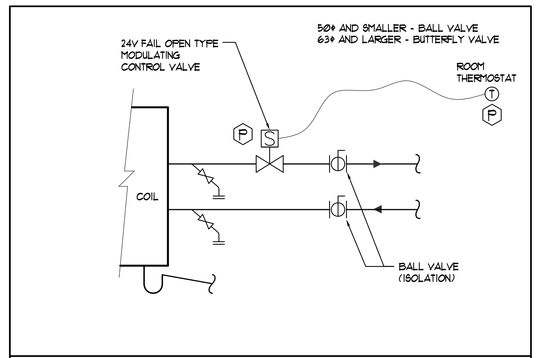
IN-SUITE D.H. & C.W. ARRANGEMENT BEHIND KITCHEN CABINET
N.T.S.



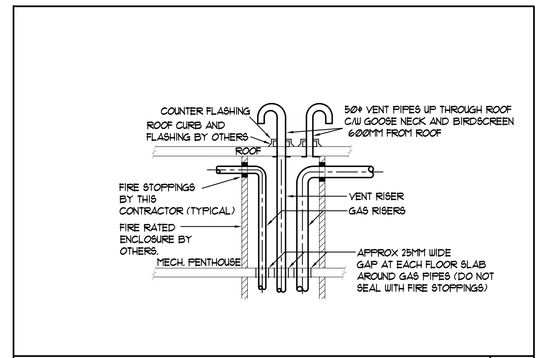
DOMESTIC PRV CONNECTION DETAILS
N.T.S.



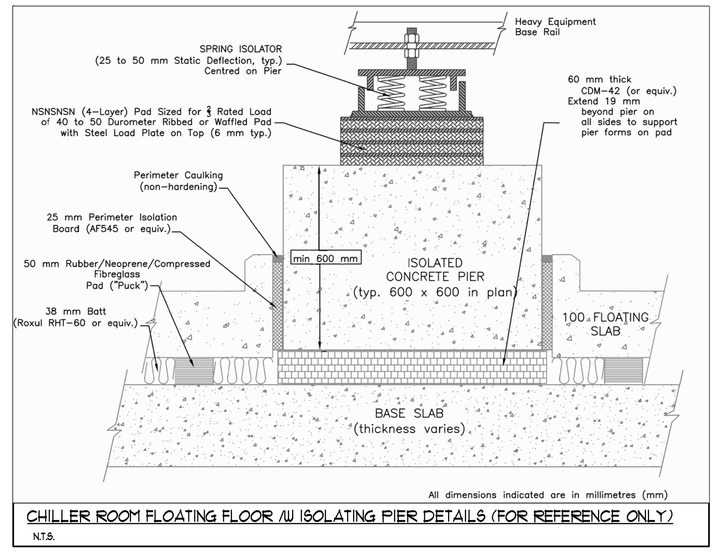
HEAT EXCHANGER
N.T.S.



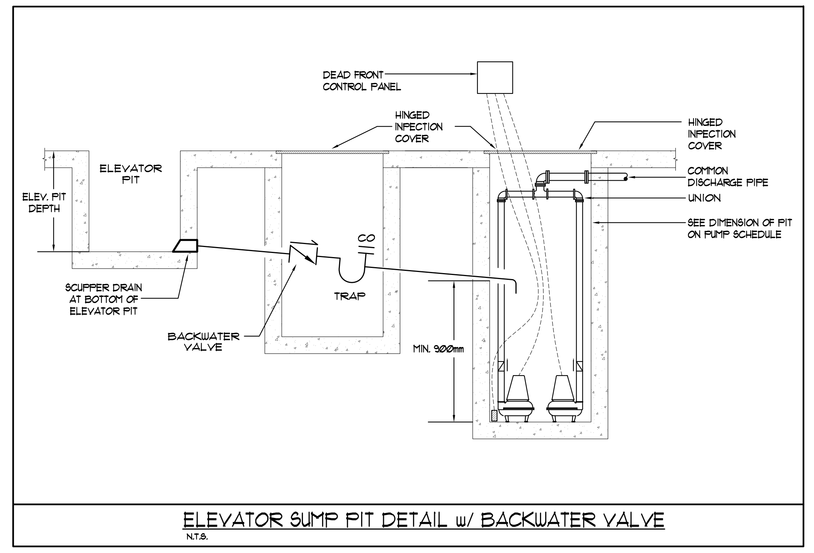
2-WAY VALVE PIPING ARRANGEMENTFOR 2-PIPE SYSTEM
N.T.S.



TYPICAL SECTION VIEW OF GAS PIPE RISERS IF ENCLOSED BY FIRE RATED ENCLOSURE
NTS



CHILLER ROOM FLOATING FLOOR /W ISOLATING PIER DETAILS (FOR REFERENCE ONLY)
N.T.S.



ELEVATOR SUMP PIT DETAIL w/ BACKWATER VALVE
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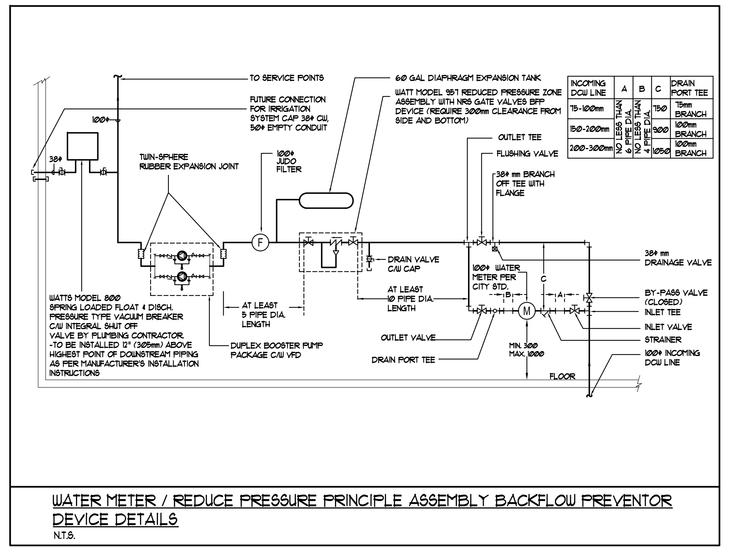
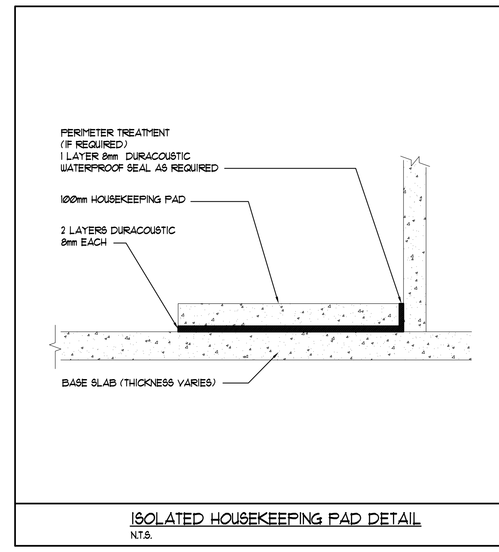
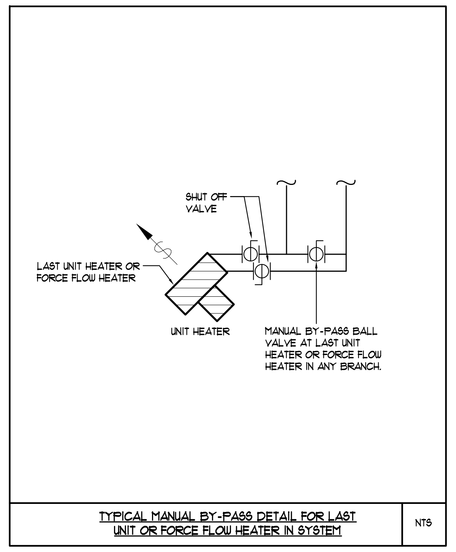


WATER METER / REDUCE PRESSURE PRINCIPLE ASSEMBLY BACKFLOW PREVENTOR DEVICE DETAILS
N.T.S.



ISOLATED HOUSEKEEPING PAD DETAIL
N.T.S.



TYPICAL MANUAL BY-PASS DETAIL FOR LAST UNIT OR FORCE FLOW HEATER IN SYSTEM
NTS

PROJECT	1	ISSUED FOR ---	E.P.
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 MAY BE RETAINED UPON COMPLETION OF THE WORK.

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DRAWING TITLE: DETAILS #1

PROJECT TITLE: ALEXANDRA PARK
XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.S.	E.P.	N.T.S.
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-38 OF 39

Drawing name: \\CAD2\DWGS\Current Dwgs\1313 - Alexandra Park\Dwfs\1313m1-38DETAILS#1.dwg Plotted: Apr 02, 2014 - 9:48am

AIR HANDLING UNIT

SYMBOL	MANUFACTURER	MODEL	DUTY	CHILLED WATER COIL SECTION													HEATING COIL SECTION												SUPPLY FAN SECTION ESP/HP	REMARKS
				AIR FLOW (CFM)	EAT (DB/WB) (°F)	LAT (DB/WB) (°F)	TOTAL CAP. (MBH)	SEN. CAP. (MBH)	EST (°F)	LST (°F)	FLOW (USGPM)	FLUID	%PD (FT.)	APD (IN.)	FACE AREA (SQFT)	FARE VEL. (FPM)	SIZE	ROWS	FPI	AIR FLOW (CFM)	EAT (DB/WB) (°F)	LAT (DB/WB) (°F)	TOTAL CAP. (MBH)	EST (°F)	LST (°F)	FLOW (USGPM)	FLUID	%PD (FT.)	APD (IN.)	FACE AREA (SQFT)	FARE VEL. (FPM)	SIZE	ROWS	FPI		
AHU-1	YORK	SOLUTION 16SW20	FRESH AIR	16,000 (13,000 TOA)	1 | 1	51.2 | 56.8	1,270,000 @	693,300 @	45	55	304,200 @	WATER	8.8	Ø	35.5000 @	496	513x85	4	9	16,000 (13,000 TOA)	-12.0	16.3	2,309.1	105	115	718,7,000	40% E GLYCOL	8.8	Ø.06	5.0	418	60x50	3	11	2.5"	2.5	FAN TO CAV ABB VFD W/ BYPASS. CLG. COIL TO HAVE FACE AND 25% BYPASS DAMPER, INLET MOTORIZED DAMPER, PREHEAT AT 5.4AT DOWN FAN AND INLET MOTORIZED DAMPER. PERV 9 FILTERS AND PERV 8 PREFILTERS. WITH MAGNAHELIC GAUGES TO MONITOR DIFFERENTIAL PRESSURE OF AIR FILTERS. UNIT SHALL HAVE SPARE CAPACITY TO SUPPLY 15000CFM AIRFLOW.

FAN COIL UNIT (IN SUITE WITH INTEGRATE ERV)

FAN SECTION								CHILLED WATER COIL PERFORMANCE											HEATING WATER COIL PERFORMANCE										REMARKS
SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	AIR FLOW	ESP (IN)	HP	V/HZ/Ø	SUPPLY AIR (ERV) (CFM)	SUPPLY AIR (COIL) (CFM)	ERV INLET AIR TEMP (°F)	ERV SUPPLY AIR TEMP (°F)	LAT (°F)	TOTAL CAP. (MBH)	SEN. CAP (MBH)	EST (°F)	LST (°F)	FLOW (USGPM)	%PD (FT.)	SUPPLY AIR (ERV) (CFM)	SUPPLY AIR (COIL) (CFM)	ERV INLET AIR TEMP (°F)	ERV SUPPLY AIR TEMP (°F)	LAT (°F)	TOTAL CAP. (MBH)	SEN. CAP (MBH)	EST (°F)	LST (°F)	FLOW (USGPM)	

FAN COIL UNIT (IN-SUITE WITH INTEGRATED ERV)

FAN SECTION								CHILLED WATER COIL PERFORMANCE											HEATING WATER COIL PERFORMANCE										REMARKS
SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	AIR FLOW	ESP (IN)	HP	V/HZ/Ø	SUPPLY AIR (ERV) (CFM)	SUPPLY AIR (COIL) (CFM)	ERV INLET AIR TEMP (°F)	ERV SUPPLY AIR TEMP (°F)	LAT (°F)	TOTAL CAP. (MBH)	SEN. CAP (MBH)	EST (°F)	LST (°F)	FLOW (USGPM)	%PD (FT.)	SUPPLY AIR (ERV) (CFM)	SUPPLY AIR (COIL) (CFM)	ERV INLET AIR TEMP (°F)	ERV SUPPLY AIR TEMP (°F)	LAT (°F)	TOTAL CAP. (MBH)	SEN. CAP (MBH)	EST (°F)	LST (°F)	FLOW (USGPM)	%PD (FT.)	
FCU-17	UNILUX	DLE4WD-ERV*B	STACKED VERTICAL 2 PIPE	IN-SUITE	450	.02	1/3	115-1/60	75	379	85.6	71.1	54.2	9.5	8.1	45	54	2	1.2	75	378	-13	46.3	51.8	2.1	1.4	140	117.5	2	1.2	
FCU-137	UNILUX	DLE6WD-ERV*B	STACKED VERTICAL 2 PIPE	IN-SUITE	600	.02	1/3	115-1/60	75	525	85.6	71.1	54	14.4	12.1	45	55	2.8	2.6	75	525	-13	46.3	52.4	2.8.2	1.40	117.2	2.8	2.6	
FCU-27	UNILUX	DLE8WD-ERV*B	STACKED VERTICAL 2 PIPE	IN-SUITE	800	.02	1/3	115-1/60	75	725	85.6	71.1	54.3	19.5	16.6	45	56	3.9	5.2	75	725	-13	46.3	53.1	42.6	1.40	119.2	3.9	5.2	
FCU-237	UNILUX	DLE10WD-ERV*B	STACKED VERTICAL 2 PIPE	IN-SUITE						925	85.6	71.1	53.5	24	21.8	45	57	4	8.3	75	925	-13	46.3	53.8	53.7	1.40	12.6	4	8.3	

- CAU ECM MOTOR (3A) W/ HEATER AND RISERS. RISER SIZE SHALL MATCH RISER DIAGRAM. 3 WAY CONTROL VALVE FOR TOP 4 BOTTOM OF STACK. 2 WAY CONTROL VALVE FOR REMAINING UNITS.
- THERMOSTAT: PROGRAMMABLE HEATING/COOLING THERMOSTAT HONEYWELL T8750A2000 OR EQUAL. RETURN AIR LOUVRE: PERV 8 FILTER TO BE PLACED ON RAISED LEGS SUCH THAT THE TOP OF THE BOXSHALL SUPPLY AIR GRILLE ARE TO BE 300mm BELOW CEILING.
- FCU - 17 TO BE c/w PERV 8 FILTER.
- FCU - 137, 27 TO BE c/w PERV 9 FILTER.

FAN COIL UNIT (IN SUITE WITHOUT ERV)

FAN SECTION								CHILLED WATER COIL PERFORMANCE							HEATING WATER COIL PERFORMANCE								REMARKS
SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	AIR FLOW	ESP (IN)	HP	V/HZ/Ø	EAT (DB/WB) (°F)	LAT (DB/WB) (°F)	TOTAL CAP. (MBH)	SEN. CAP (MBH)	EST (°F)	LST (°F)	FLOW (USGPM)	%PD (FT.)	EAT (DB) (°F)	LAT (DB) (°F)	TOTAL CAP. (MBH)	GLYCOL	EST (°F)	LST (°F)	FLOW (USGPM)	%PD (FT.)	WEIGHT (LBS)	
TFC-17	INVLUX	DLE4WD	2-PIPE VERTICAL FAN COIL	IN-SUITE	450	.02	1/6	120-1/60	78.6/67	59.3/54.3	14.3	10	55	55	2.5	1.5	70	100	34.8	0%	140	105	2.5	1.5	6.3	
TFC-137	INVLUX	DLE6WD	2-PIPE VERTICAL FAN COIL	IN-SUITE	550	.02	1/6	120-1/60	78.6/67	59.3/53.8	19.2	13.6	55	55	3.8	2.3	70	100	32.4	0%	140	105	3.8	2.3	6.3	
TFC-27	INVLUX	DLE8WD	2-PIPE VERTICAL FAN COIL	IN-SUITE	650	.02	1/3	120-1/60	78.6/67	59.3/53.7	24.1	16.8	55	55	5.5	3	70	100	42.9	0%	140	105	5.5	3	6.3	

- CAU ECM MOTOR, 5KW HEATER AND RISERS. RISER SIZE SHALL MATCH RISER DIAGRAM. 3 WAY CONTROL VALVE. THERMAL METERS. PROGRAMMABLE HEATING/COOLING THERMOSTAT HONEYWELL T8750A2000 OR EQUAL. RETURN AIR LOUVRE: PERV 8 FILTER TO BE PLACED ON RAISED LEGS SUCH THAT THE TOP OF THE BOXSHALL SUPPLY AIR GRILLE ARE TO BE 300mm BELOW CEILING.

FAN COIL UNIT (AMENITY AND COMMON AREAS)

FAN SECTION								CHILLED WATER COIL PERFORMANCE							HEATING WATER COIL PERFORMANCE								HORIZONTAL DISCHARGE CONDENSER										
SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	AIR FLOW	ESP (IN)	HP	V/HZ/Ø	EAT (DB/WB) (°F)	LAT (DB/WB) (°F)	TOTAL CAP. (MBH)	SEN. CAP (MBH)	EST (°F)	LST (°F)	FLOW (USGPM)	%PD (FT.)	EAT (DB) (°F)	LAT (DB) (°F)	TOTAL CAP. (MBH)	GLYCOL	EST (°F)	LST (°F)	FLOW (USGPM)	%PD (FT.)	EAT (DB/WB) (°F)	LAT (DB/WB) (°F)	TOTAL CAP. (MBH)	SEN. CAP (MBH)	REFRIG. TYPE	COIL FV (FPM)	SUCTION CONN. (IN)	LIQUID CONN. (IN)	SYMBOL	MODEL	V/HZ/Ø	MCA	MAX. FUSE SIZE	WEIGHT (LBS)	REMARKS

- CAU ECM MOTOR, 5KW HEATER AND RISERS. RISER SIZE SHALL MATCH RISER DIAGRAM. 3 WAY CONTROL VALVE. THERMAL METERS. PROGRAMMABLE HEATING/COOLING THERMOSTAT HONEYWELL T8750A2000 OR EQUAL. RETURN AIR LOUVRE: PERV 8 FILTER TO BE PLACED ON RAISED LEGS SUCH THAT THE TOP OF THE BOXSHALL SUPPLY AIR GRILLE ARE TO BE 300mm BELOW CEILING.

SPLIT HEAT PUMP SYSTEM

SYMBOL	MAKE	MODEL	DESCRIPTION	AIR FLOW (CFM)	ESP (IN)	TOT. HTG. CAP. (MBH)	TOT. CLG. CAP. (MBH)	SEN. CLG. CAP. (MBH)	MCA	MOCP	V/HZ/Ø	WT. (LBS)	REMARKS

SELF-CONTAINED COOLING UNIT (FOR RETAIL)

SYMBOL	MAKE	MODEL	DESCRIPTION	AIR FLOW (CFM)	ESP (IN)	TOT. HTG. CAP. (MBH)	TOT. CLG. CAP. (MBH)	SEN. CLG. CAP. (MBH)	MCA	MOCP	V/HZ/Ø	WT. (LBS)	REMARKS

INSTANTANEOUS INDIRECT WATER HEATER

SYMBOL	MAKE	MODEL	DESCRIPTION	TANK VOLUME (US GAL)	HEAT TRANSFER AREA (SQ FT)	UTILITY CONNECTION	BOILER CONNECTION	DIMENSIONS	REMARKS

COOLING TOWER SCHEDULE

SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	NOM. TONS	GPM	P.D. FT.	ENTER. WTR °F	LVG. WTR °F	GPM	FAN HP	FAN KW	WEIGHT (LBS)	SIZE	REMARKS
CT-1	BALTIMORE AIRCOIL	XSE-122-079	OPEN COOLING TOWER SINGLE CELL	CONDENSER WATER	600	1,200	-	95	85	1,452@0	40	N/L	36,000	21'Ø27'L10'H	C/W ABB VFD WITH BACNET COMPATIBLE WITH SIEMENS CONTROLS. ACCESS LADDER 4 HANDRAILS CONTROL POWER PANEL. 13 INCHES DEFLECTION ISOLATORS 2 LAYERS OF BAFFLED NEOPRENE PADS.

BOILER SCHEDULE

SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	INPUT (MBH)	OUTPUT (MBH)	GPM	↓ T	P.D. FT.	ENTER WTR °F	LVG WTR °F	WGHT (LBS)	VENT SIZE	INTAKE SIZE	SIZE	GAS	WATER CONNECTION	ELECTRICAL VOLTAGE	ELECTRICAL AMPERE	MOCP	CIR. HP	CIR. VOLTAGE	REMARKS

PUMP SCHEDULE (ALL MOTORS SHALL BE HI-EFF. TYPE, ABB VFD WITH BACNET COMPATIBLE WITH SIEMENS CONTROLS)

SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	GPM	FT HEAD	RPM	HP	V/HZ	WEIGHT	REMARKS
DOMSP-1	ARMSTRONG	4300 IVS-DE-36/4-4	DOMESTIC BOOSTER DUPLEX PACKAGE SYSTEM	DOMESTIC COLD WATER BOOSTER	210	387	3,600	30	575/3/60	2284	C/W VFD, CONTROL PANEL
DOMSP-2											

PLATE HEAT EXCHANGERS

SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	HEAT TRANSFER (MBH)	SIDE 1					SIDE 2						SIGHT GLASS	REMARKS
						ENTER	LIST	FLOW (GPM)	P.D. (psi)	FLUID	ENTER	LIST	FLOW (GPM)	P.D. (psi)	FLUID			

HOT WATER EQUIPMENT SCHEDULE

SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	HEAT TRANSFER (MBH)	HOT WATER COIL			GPM	S.P.	H.P.	V/HZ/Ø	WEIGHT (LBS)	REMARKS
						ENTER	LIST	FLOW (GPM)						

FAN SCHEDULE

NOTE:
- ALL MOTOR 1 HP AND ABOVE SHALL BE HIGH-EFFICIENCY TYPE
- VFD TO BE ABB C&U BACNET COMPATIBLE WITH SIEMENS CONTROLS

* ALL FANS 10 HP AND LARGER TO BE C&U NOVA STARTER

SYMBOL	MAKE	MODEL	DESCRIPTION	DUTY	CFM	ESP (")	RPM	HP	V/HZ/Ø	FAN DIMENSIONS	WALL OPENING	WEIGHT	REMARKS
EF-A	ZONEX	DSP1SP	IN-LINE	DRYER EXHAUST	140	Ø.4	1750	1/2 W	120/1/60			11	C/W LINT TRAP, RELAY TO INTERLOCK W/ DRYER.
EF-B	ZONEX	GP1SP	IN-LINE	WASHROOM EXHAUST	100	Ø.25	1,200	6.3W	120/1/60			14	C/W B.D.D., EXTRA LARGE HOUSING + SLIDING DAMPER, SOUND DATA NOT MORE THAN 1 SONE + ENERGY STAR COMPLIANT.
EF-1	CARNES	LYDK36K	WALL PROPELLER	P-2 STORAGE ROOM EXHAUST	300	Ø.25	1113	1/6	120/1/60			40	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, SWITCH, DAMPER GUARD 4 SPEED CONTROLLER.
EF-2	CARNES	LYDK28K	WALL PROPELLER	P-2 RESI. STORAGE ROOM 1 EXHAUST	1,200	Ø.25	867	1/6	120/1/60			30	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, SWITCH, DAMPER GUARD 4 SPEED CONTROLLER.
EF-3	CARNES	LYDK22K	WALL PROPELLER	P-2 RESI. STORAGE ROOM 2 EXHAUST	1,200	Ø.25	1,240	1/6	120/1/60			42	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, SWITCH, DAMPER GUARD 4 SPEED CONTROLLER.
EF-4	CARNES	VBK10L	IN-LINE	P-2 RESI. STORAGE ROOM 3 EXHAUST	1,750	Ø.25	881	1/4	120/1/60				C/W B.D.D., ISOLATION KIT, AND SWITCH.
EF-5	CARNES	LYDK36K	WALL PROPELLER	P-2 STORAGE ROOM	300	Ø.25	1113	1/6	120/1/60			40	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, SWITCH, DAMPER GUARD 4 SPEED CONTROLLER.
EF-6	CARNES	LYDK42K	WALL PROPELLER	P-1 GENERATOR ROOM EXHAUST	1,500	Ø.25	1,240	1/6	120/1/60			42	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, THERMOSTAT, DAMPER GUARD 4 SPEED CONTROLLER.
EF-7	CARNES	LYDK36K	WALL PROPELLER	P-1 LOCKER ROOM	300	Ø.25	1113	1/6	120/1/60			40	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, SWITCH, DAMPER GUARD 4 SPEED CONTROLLER.
EF-8	CARNES	LYDK25H	WALL PROPELLER	P-1 COMMUNICATION ROOM	300	Ø.25	1031	1/2	120/1/60			39	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, THERMOSTAT, DAMPER GUARD 4 SPEED CONTROLLER.
EF-9	CARNES	LYDK31K	WALL PROPELLER	P-1 A&I ROOM EXHAUST	700	Ø.375	1478	1/6	120/1/60			42	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, THERMOSTAT, DAMPER GUARD 4 SPEED CONTROLLER.
EF-10	CARNES	VBK12K	IN-LINE	P-1 CHILLER ROOM EXHAUST	3,000	Ø.375	1155	3/4	575/3/60			162	C/W B.D.D., ISOLATION KIT, SWITCH + H.O.A. STARTER(S)- SPEED MOTOR (1 ST SPEED TO T-STAT, FULL SPEED TO REFRIGE SENSOR)
EF-11	CARNES	LXBK34	WALL PROPELLER	P-1 TRANSFORMER ROOM EXHAUST	4,000	Ø.375	1164	1	575/3/60			81	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, THERMOSTAT, DAMPER GUARD 4 SPEED CONTROLLER.
EF-12	CARNES	LYDK31K	WALL PROPELLER	P-1 RESI. STORAGE ROOM EXHAUST	1,200	Ø.25	867	1/6	120/1/60			30	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, THERMOSTAT, DAMPER GUARD 4 SPEED CONTROLLER.
EF-13	CARNES	LYDK31K	WALL PROPELLER	P-1 MECH. ROOM (TURBOMAX) EXHAUST	750	Ø.25	1118	1/6	120/1/60			40	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, THERMOSTAT, DAMPER GUARD 4 SPEED CONTROLLER.
EF-14	CARNES	LYDK25H	WALL PROPELLER	P-1 LOCKER ROOM EXHAUST	150	Ø.25	1,731	1/2	120/1/60			39	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, SWITCH, DAMPER GUARD 4 SPEED CONTROLLER.
EF-15	CARNES	LYDK31K	WALL PROPELLER	P-1 MECH/ELEVATOR ROOM	1,400	Ø.25	1,386	1/6	120/1/60			42	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, THERMOSTAT, DAMPER GUARD 4 SPEED CONTROLLER.
EF-16	CARNES	LYDK42K	WALL PROPELLER	P-1 COMMUNICATION ROOM 2 EXHAUST	3,100	Ø.25	1,753	1/6	120/1/60			40	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, THERMOSTAT, DAMPER GUARD 4 SPEED CONTROLLER.
EF-17	CARNES	LRBK34	WALL PROPELLER	P-3 PARKING EXHAUST	23,500	Ø.25	1,115	3	575/3/60			350	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, DAMPER GUARD, VFD STEP CONTROL TYPE (E BY-PASS) AND WEATHERPROOF MOTOR, 460V/3PH STEP DOWN TRANSFORMER FOR MOTORIZED DAMPER. THE FAN SHALL BE ACTIVATED AND RUN AT 50% SPEED UPON RECEIPT OF CO SIGNAL FROM CO SENSOR / SYSTEM. IF THE CO SIGNAL STILL PRESENCE AFTER CONTINUOUS RUNNING FOR 10 MINUTES, THE FAN SHALL BE SWITCHED TO FULL SPEED AND RUN UNTIL THE CO SIGNAL IS OUT.
EF-18	CARNES	LRBK40	WALL PROPELLER	P-1 PARKING EXHAUST	36,500	Ø.25	992	5	575/3/60			480	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, DAMPER GUARD, VFD STEP CONTROL TYPE (E BY-PASS) AND WEATHERPROOF MOTOR, 460V/3PH STEP DOWN TRANSFORMER FOR MOTORIZED DAMPER. THE FAN SHALL BE ACTIVATED AND RUN AT 50% SPEED UPON RECEIPT OF CO SIGNAL FROM CO SENSOR / SYSTEM. IF THE CO SIGNAL STILL PRESENCE AFTER CONTINUOUS RUNNING FOR 10 MINUTES, THE FAN SHALL BE SWITCHED TO FULL SPEED AND RUN UNTIL THE CO SIGNAL IS OUT.
EF-19	CARNES	VBK12M	IN-LINE	G/F BIKE STORAGE ROOM EXHAUST	1,400	Ø.375	1163	1/3	120/1/60			101	C/W B.D.D., ISOLATION KIT, AND SWITCH.
EF-20	CARNES	VBK12M	IN-LINE	G/F GARBAGE ROOM EXHAUST	3,000	Ø.375	1159	3/4	575/3/60			116	C/W MOTORIZED DAMPER, WALL HOUSING WITH GUARD, DAMPER GUARD, THERMOSTAT, H.O.A. STARTER AND SPEED CONTROLLER
EF-21	CARNES	VBK12M	IN-LINE	G/F MOVING ROOM EXHAUST	1,500	Ø.375	1,161	3/4	575/3/60			101	C/W B.D.D., ISOLATION KIT, SWITCH + H.O.A. STARTER.
EF-22	CARNES	LYDK7L	WALL PROPELLER	M/F BOILER ROOM EXHAUST	1,200	Ø.375	1,044	1/4	120/1/60			60	C/W B.D.D., ISOLATION KIT, SWITCH + H.O.A. STARTER.
SF-12	WOODS		IN-LINE	STAIR PRESSURIZATION	3,000	1	1,500	1	575/3/60			161	C/W B.D.D., ISOLATION KIT + H.O.A. STARTER w VOLTAGE SENSING TIME DELAY RELAY SETTING (Ø-5s)

GRILLE AND DIFFUSER SCHEDULE

(ALL GRILLES AND DIFFUSERS HAVE STANDARD WHITE FINISH UNLESS SPECIFIED ELSEWHERE)

SYMBOL	MAKE	MODEL	DESCRIPTION	SIZE	REMARKS
SG-A	EH PRICE	540	SINGLE DEFLECTION SUPPLY AIR GRILLE	300x300	C/W MULTI-DAMPER, COLOUR TO BE COORDINATED WITH ARCHITECT.
SG-B	EH PRICE	540	SINGLE DEFLECTION SUPPLY AIR GRILLE	300x750	C/W MULTI-DAMPER, COLOUR TO BE COORDINATED WITH ARCHITECT.
SG-C	EH PRICE	540	SINGLE DEFLECTION SUPPLY AIR GRILLE	450x750	C/W MULTI-DAMPER, COLOUR TO BE COORDINATED WITH ARCHITECT.
SG-D	EH PRICE	540	SINGLE DEFLECTION SUPPLY AIR GRILLE	450x750	C/W MULTI-DAMPER, COLOUR TO BE COORDINATED WITH ARCHITECT.
SG-1	EH PRICE	CVD	TWO WAY CURVED VANE DIFFUSER	SEE DWG.	C/W O.B.D. COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
SG-2	EH PRICE	940D	SINGLE DEFLECTION SUPPLY AIR GRILLE	SEE DWG.	C/W O.B.D. COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
SG-3	EH PRICE	640DAL	SINGLE DEFLECTION ALUMINUM SUPPLY AIR GRILLE	SEE DWG.	C/W ALUMINUM O.B.D. COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
SD-1	EH PRICE	5CD	4 WAY SUPPLY AIR DIFFUSER	600x600	C/W O.B.D. COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
SD-2	EH PRICE	5CD	4 WAY SUPPLY AIR DIFFUSER	300x300	C/W O.B.D. COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
LD-1	EH PRICE	5CD1200	4 SLOT LINEAR DIFFUSER	1200 LENGTH	C/W O.B.D. + PLENUM, COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
LD-2	EH PRICE	5CD1200	3 SLOT LINEAR DIFFUSER	1200 LENGTH	C/W O.B.D. + PLENUM, COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
LD-3	EH PRICE	5CD1200	2 SLOT LINEAR DIFFUSER	1200 LENGTH	C/W O.B.D. + PLENUM, COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
EG-1	EH PRICE	630DAL	SINGLE DEFLECTION ALUMINUM EXHAUST AIR GRILLE	SEE DWG.	C/W ALUMINUM O.B.D. COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
EG-2	EH PRICE	940D	SINGLE DEFLECTION EXHAUST AIR GRILLE	SEE DWG.	C/W O.B.D. COLOUR TO BE COORDINATED WITH ARCHITECT
EG-3	EH PRICE	600AL	EGG CRATE EXHAUST AIR GRILLE	SEE DWG.	C/W ALUMINUM O.B.D. COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
RG-1	EH PRICE	80	EGG CRATE RETURN AIR GRILLE	600x600	COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
RG-2	EH PRICE	80	EGG CRATE RETURN AIR GRILLE	300x300	COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
RG-3	EH PRICE	80	EGG CRATE RETURN AIR GRILLE	600x300	COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
LRD-1	EH PRICE	5CR1200	2 SLOT LINEAR RETURN AIR DIFFUSER	1200 LENGTH	C/W RETURN AIR PLENUM AND PAINTED BLACK INSIDE, COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.
LRD-2	EH PRICE	5CR1200	3 SLOT LINEAR RETURN AIR DIFFUSER	1200 LENGTH	C/W RETURN AIR PLENUM AND PAINTED BLACK INSIDE, COLOUR TO BE COORDINATED WITH INTERIOR DESIGNER.

PRIORITY	1	ISSUED FOR ---	E.P.
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 ENGINEER BEFORE PROCEEDING WITH THE WORK. DRAWING IS THE PROPERTY OF THE ENGINEER AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

DRAWINGS ARE NOT TO BE SCALED

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DRAWING TITLE:
SCHEDULES

PROJECT TITLE:
ALEXANDRA PARK

XXX
TORONTO ONTARIO

DRAWN BY:	CHECKED BY:	SCALE:
G.G.	E.P.	N.T.S.
DATE:	PROJECT NUMBER:	DRAWING NUMBER:
FEB. 13	1313	M-39 of 39

Drawing name: \\CADSERVER\Current Dwg's\1313 - Alexandra Park\DWGS\1313M- 3RDSHEDULES.dwg Plotted: Apr 25, 2014 - 9:49am