

MECHANICAL LEGEND AND SYMBOLS

PLUMBING & DRAINAGE	
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RECIRCULATION
	NON-POTABLE WATER
	TEMPERED HOT WATER
	IRRIGATION WATER
	BRINE WATER
	CHEMICAL WATER
	SOFT WATER
	SANITARY DRAIN - ABOVE GRADE
	SANITARY DRAIN - BELOW GRADE
	PUMPED SANITARY DRAIN
	STORM DRAIN - ABOVE GRADE
	STORM DRAIN - BELOW GRADE
	PUMPED STORM DRAIN
	PROCESS DRAIN - ABOVE GRADE
	PROCESS DRAIN - BELOW GRADE
	PUMPED PROCESS DRAIN
	WEEPER DRAIN (SUB-DRAIN)
	VENT
	CONDENSATE DRAIN
	OVERFLOW DRAIN
	FLOOR DRAIN (LETTER INDICATES TYPE SEE SPECIFICATION)
	FLOOR DRAIN (LETTER INDICATES TYPE SEE SPECIFICATION) ROOF DRAIN (CONVENTIONAL)
	FUNNEL DRAIN - ELEVATION
	HOSE BIBB
	HYDRANT - NON-FREEZE
	SHOWER HEAD
	PITCH-INDICATES DOWN SLOPE
	CLEANOUT - ABOVE GRADE
	CLEANOUT - BELOW GRADE
	CLEANOUT - BELOW GRADE
	RUNNING TRAP
	BACKFLOW PREVENTOR
	BACK WATER VALVE (FOR SEWAGE)
	BACKFLOW PREVENTER (ANTI-SIPHON DEVICE 25mm & LARGER)
	BACKFLOW PREVENTER (ANTI-SIPHON DEVICE UNDER 25mm)
	WATER CLOSET (WALL HUNG, FLUSH VALVE)
	WATER CLOSET (FLOOR MOUNTED, FLUSH TANK)
	URINAL (WALL HUNG, FLUSH VALVE)
	LAVATORY (WALL HUNG)
	LAVATORY (COUNTER TOP)
	SERVICE SINK
	GROUP WASHFOUNTAIN
	DRINKING FOUNTAIN COOLER (NUMBER INDICATES TYPE - SEE SPECS.)
	SAFETY SHOWER & EYE WASH STATION
	EYE WASH STATION
	VENDING MACHINE
	600 X 600 X 700 (H) CATCH BASIN
	IN LINE C.B.
	TRENCH DRAIN WITH CONTINUOUS SLOPE

FIRE PROTECTION	
	FIRE STANDPIPE
	SPRINKLER PIPE
	DRY FIRE STANDPIPE
	DRY SPRINKLER PIPE
	PRE-ACTION PIPE
	DELUGE PIPE
	DRY SPRINKLER PIPE
	PENDENT SPRINKLER HEAD
	UPRIGHT SPRINKLER HEAD
	CONCEALED SPRINKLER HEAD
	SIDEWALL SPRINKLER HEAD
	EXISTING SPRINKLER HEAD TO BE REMOVED
	EXPOSED FIRE EXTINGUISHER
	FIRE EXTINGUISHER WITH CABINET

FIRE PROTECTION	
	FIRE HOSE CABINET
	FIRE HOSE REEL
	FIRE HOSE HANGER
	FIRE HOSE CABINET (FHC)
	FIRE HOSE CABINET (FHC)
	FIRE HOSE CABINET (FHC)
	WALL HYDRANT
	ROOF HOSE HOUSE
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	SUPERVISED VALVE
	FLOW SWITCH
	SPRINKLER ALARM CHECK WET VALVE
	SPRINKLER ALARM CHECK DRY VALVE
	PREACTION SPRINKLER ALARM CHECK VALVE
	ALARM GONG
	HOSE HEADER 6 x 62Ø c/w HOSE CAP
	POST INDICATOR VALVE
	O.S. & Y. VALVE
	O.S. & Y. VALVE-IN RISER
	INSPECTORS TEST CONNECTION

VALVES, FITTINGS AND SPECIALTIES	
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	PLUG VALVE
	BUTTERFLY VALVE
	BALL VALVE
	DIAPHRAM VALVE
	HOSE END VALVE
	BOILER BLOWDOWN VALVE
	FIRE STOP VALVE
	RUPTURE DISC
	VALVE IN RISER
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE - ELEVATION
	PRESSURE RELIEF VALVE
	PRESSURE RELIEF VALVE - PLAN
	FLOAT ACTIVATED SIGNAL TRANSMITTER
	FLOAT OPERATED VALVE
	BACK PRESSURE VALVE
	DIFFERENTIAL BACK PRESSURE VALVE
	NEEDLE VALVE
	BALANCING VALVE
	FLOW METERING FITTING (UNDER 75mm)
	FLOW METERING FITTING (75mm AND LARGER)
	CONTROL VALVE - ELECTRIC
	CONTROL VALVE - PNEUMATIC
	THREE-WAY CONTROL VALVE - ELECTRIC
	THREE-WAY CONTROL VALVE - PNEUMATIC
	MOTORIZED VALVE
	PUMP CONTROL VALVE
	GLOBE CONTROL VALVE - PNEUMATIC
	BUTTERFLY CONTROL VALVE - PNEUMATIC
	PNEUMATIC ACTUATOR
	ELECTRIC ACTUATOR
	ELECTRIC MOTOR
	ELECTRIC SOLENOID
	ROOM THERMOSTAT
	FLOW SWITCH (HARD WIRED)
	HIGH LIMIT HUMIDITY SENSOR
	DIFFERENTIAL PRESSURE SENSOR
	MEDIA RUN-OUT SWITCH
	ELBOW TURNED TOWARD
	ELBOW TURNED AWAY

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ISSUES		
No.	DESCRIPTION	DATE
00	ISSUED FOR CONSTRUCTION	2023-03-13

[illegible][illegible]

SEAL

LICENSED PROFESSIONAL ENGINEER

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PROJECT TITLE	CITY OF TORONTO ACCESSIBILITY UPGRADES
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PROJECT ADDRESS

PROJECT NO: 9119- 19- 0162 / IBI 122260	
DRAWN BY: K.DURUKAN	CHECKED BY: B.LIAO
PROJECT MGR: F.BOLOURIAN	APPROVED BY: S. LIU

SHEET TITLE MECHANICAL LEGEND SHEET 1 OF 2	
SHEET NUMBER G28-GAL-G3001	ISSUE 00

CONTROLS POINT FUNCTION ABBREVIATION

FIRST LETTER		SECOND LETTER		THIRD LETTER		FOURTH LETTER	
A	AIR	A	H-O-A STATUS	H	HIGH	H	HIGH
C	COMPRESSED GAD	C	CLOSE	L	LOW	L	LOW
D	DAMPER	E	VOLTAGE	X	TRASMITTER		
E	EQUIPMENT	F	FIRE (ALARM) SMOKE	Z	INDICATING TRANSMITTER		
G	NATURAL GAS	FL	FLOW	D	DIFFERENTIAL		
L	LIQUID	H	HUMIDITY				
S	STEAM	I	CURRENT				
V	VALVE	L	LEVEL				
M	MISCELLANEOUS	O	OPEN				
		OL	OVERLOAD				
		OR	OVERRIDE				
		P	PRESSURE				
		SS	START / STOP				
		ST	STATUS				
		T	TEMPERATURE				
		V	VELOCITY / SPEED				
		WT	WINDING TEMPERATURE				
		X	POSITION				
		Y	SERIAL COMM'S				

BMS POINT

NOTE: IF AN INSTRUMENT IS NOT DESIGNATED AS A TRANSMITTER "X" OR AN INDICATING TRANSMITTER "Z", IT IS A SENSOR OR SWITCH, DEPENDING ON POINT TYPE.

XX - YYYY

POINT FUNCTION ABBREVIATION

POINT TYPE

AI: ANALOG INPUT

AO: ANALOG OUTPUT

DI: DIGITAL INPUT

DO: DIGITAL OUTPUT

HW: HARDWIRED

SC: SERIAL COMMUNICATION

e.g. DO - ESS

START / STOP

EQUIPMENT

DIGITAL OUTPUT

GENERAL NOTES

1.

FOR ROOF OPENING AND ROOF CURB DETAILS SEE ARCHITECTURAL DRAWINGS.

2.

ALL FRESH AIR OR EXHAUST AIR LOUVRES IN BUILDING WALLS BY GENERAL TRADES UNLESS OTHERWISE NOTED. FOR DETAILS SEE ARCHITECTURAL DRAWINGS.

3.

ALL STORM COLLAR FLASHINGS BY MECHANICAL FOR DETAILS OF FLASHINGS SEE ARCHITECTURAL DRAWINGS.

4.

THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND MEASUREMENTS AT THE SITE AND REPORT TO THE OWNER'S REPRESENTATIVE ANY DISCREPANCIES OR UNSATISFACTORY CONDITIONS WHICH MAY ADVERSELY AFFECT THE PROPER COMPLETION OF THE WORK.

5.

DIMENSIONS SHOWN ARE FOR PREFERRED LOCATION AND GENERAL ARRANGEMENT OF MECHANICAL SYSTEMS. IT SHALL REMAIN THE CONTRACTORS RESPONSIBILITY TO ENSURE OVERALL COORDINATION OF HIS WORK WITH OTHER TRADES. SHOULD DEVIATION FROM LOCATIONS SHOWN ON DRAWINGS BECOME NECESSARY DUE TO CONFLICTS WITH OTHER TRADES OR LOCAL PROBLEMS THEY MUST BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO PROCEEDING WITH WORK.

6.

THIS IS THE STANDARD SHEET FORM NOT ALL ITEMS ARE ASSOCIATED WITH THIS PROJECT.

7.

ALL EXISTING SERVICES TO REMAIN UNLESS NOTED OTHERWISE.

8.

ALL SYSTEMS TO REMAIN FUNCTIONAL UNLESS PERMISSION FOR SHUTDOWN IS GRANTED BY THE OWNER.

GENERAL NOTES: PLUMBING & DRAINAGE

1.

ALL SANITARY DRAINS NPS 4 SIZE & LARGER SHALL SLOPE AT 1.0%. ALL SANITARY DRAINS NPS 3 & SMALLER SHALL SLOPE AT 2%.

2.

ALL PLUMBING, DRAINAGE & VENTING SHALL BE IN CONFORMANCE WITH PART 7 OF THE O.B.C. AND IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR.

3.

ALL VENTING AND TRAP SEAL PRIMER NOT SHOWN BUT REQUIRED, SHALL BE BY PLUMBING CONTRACTOR.

4.

ALL DOMESTIC COLD AND HOT WATER PIPING SHALL BE THERMALLY INSULATED.

5.

ALL ABOVE GROUND HORIZONTAL RAIN WATER LEADER AND STORM DRAIN SHALL BE THERMALLY INSULATED.

GENERAL NOTES: FIRE PROTECTION

1.

ALL MATERIAL SHALL BE UNDERWRITER'S LABORATORIES OF CANADA (ULC) LISTED AND SHALL COMPLY WITH THE OWNER'S INSURER'S STANDARDS AND REQUIREMENTS AND LOCAL AUTHORITIES HAVING JURISDICTION.

2.

FIRE PROTECTION CONTRACTOR TO COORDINATE ON SITE WITH OTHER TRADES BEFORE ANY WORK IS DONE. ANY SERVICE RELOCATION DUE TO INSUFFICIENT COORDINATION TO BE DONE AT NO EXTRA COST TO THE OWNER. BEFORE PROCEEDING WITH WORK, DUCTWORK, PIPING AND ELECTRICAL DRAWINGS TO BE STUDIED BY FIRE PROTECTION CONTRACTOR. SHOP DRAWINGS TO REFLECT COORDINATED ELEVATIONS.

3.

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF DUCTWORK, PIPING, AND LIGHTING FIXTURES, ETC.

4.

DETAILED FIRE PROTECTION DESIGN SHOP DRAWINGS TO BE STAMPED BY PROFESSIONAL ENGINEER LICENSED IN ONTARIO AND TO BE SUBMITTED TO CONSULTANT AND AUTHORITY HAVING JURISDICTION FOR REVIEW.

5.

PROVIDE TYPE ABC FIRE EXTINGUISHERS AS PER ONTARIO FIRE CODE. FINAL LOCATION TO BE COORDINATED ON FIELD.

6.

FIRE PROTECTION CONTRACTOR TO PROVIDE PIPE HANGERS AS PER NFPA 13.

7.

FIRE PROTECTION SYSTEM SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF NFPA 13.

8.

CONTRACTOR TO CONDUCT FLOW TEST AND USE THE RESULTS FOR HYDRAULIC CALCULATIONS.

9.

HYDRAULIC CALCULATION SHALL START AT FIRE MAIN BUILDING CONNECTION. MAXIMUM SYSTEM PRESSURE TO BE 35KPA (5 PSI) LESS THAN THE PRESSURE TEST RESULT AT REQUIRED FLOW RATE, TO ACCOUNT FOR FUTURE FLUCTUATION IN WATER SUPPLY PRESSURE.

10.

PIPE DIMENSIONS TO BE DETERMINED BY THE RESULTS OF HYDRAULIC CALCULATION.

11.

SPRINKLER SYSTEMS TO BE HYDRAULICALLY DESIGNED TO DELIVER THE DENSITIES OVER THE MOST REMOTE AREA AS LISTED IN THE SCHEDULE

12.

SPRINKLER COVERAGES INDICATED ARE TO BE CONFIRMED BY FIRE PROTECTION CONTRACTOR.

13.

PROVIDE SPRINKLER PROTECTION UNDER ALL PLATFORMS INCLUDING BUT NOT LIMITED TO CONVEYORS, STAIRS, CATWALKS, SHELVING PLATFORMS, OVERHEAD DOORS, MEZZANINES, DUCTS OR ANY OBSTRUCTIONS WIDER THAN 1200MM.

14.

SPRINKLER SHOWN ARE FOR COORDINATION PURPOSE ONLY. FINAL LOCATION OF THE SPRINKLERS TO BE DETERMINED BY FIRE PROTECTION CONTRACTOR BASED ON HYDRAULIC CALCULATIONS.

15.

USE UPRIGHT SPRINKLER IN SPACE WITHOUT CEILING.

16.

LOCATE SPRINKLER HEADS IN THE CENTRE OF CEILING TILES.

17.

SPRINKLER HEAD LOCATION TO BE COORDINATED WITH ARCHITECT PRIOR TO SHOP DRAWING PRODUCTION.

18.

PIPING AND SPRINKLER HEADS MARKED FOR DEMOLITION TO BE REMOVED AND DISPOSED OF FROM SITE UNLESS OTHERWISE NOTED.

19.

REFER TO EXISTING SHOP DRAWINGS.

20.

ALL EXISTING SPRINKLERS TO BE ADJUSTED TO SUIT NEW BUILDING LAYOUT IN ACCORDANCE WITH NFPA 13.

21.

PROVIDE FIRE WATCH DURING SHUT DOWN.

GENERAL NOTES: HVAC

1.

ALL DUCTWORK TO BE INSTALLED TO LOW-PRESSURE DUCTWORK TO S.M.A.C.N.A. STANDARDS.

2.

DUCTWORK: FABRICATED OF PRIME QUALITY GALVANIZED STEEL SHEETS WITH Z275 (G90) DESIGNATION ZINC COATING TO ASTM A653/A653M

3.

ALL DUCTWORK C/W SEAL CLASS 'A' AS PER S.M.A.C.N.A. STANDARDS.

4.

ALL EXHAUST DUCTWORK SHALL BE THERMALLY INSULATED FOR 1500mm BEFORE EXITING THE BUILDING ENVELOPE.

5.

ALL FLEXIBLE DUCT TO BE MAXIMUM 3000MM LONG AND INSULATED.

6.

ALL SUPPLY AIR DUCTWORK INSIDE CEILING SPACE SHALL BE THERMALLY INSULATED.

7.

ALL REFRIGERANT LINES SHALL BE THERMALLY INSULATED.

8.

ALL CONDENSATE DRAIN SHALL BE THERMALLY INSULATED.

9.

ALL CONTROL WIRING SHALL BE FT-6 RATED.

CLIENT

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Toronto

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SHEET TITLE

MECHANICAL LEGEND
SHEET 2 OF 2

SHEET NUMBER

G28-GAL-G3002

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00

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