

GENERAL	
SYMBOL	DESCRIPTION
	SUPPLY AIR (DOWN)
	RETURN AIR (DOWN)
	EXHAUST AIR (DOWN)
	TRANSFER AIR (DOWN)
	OUTDOOR AIR (DOWN)
	SUPPLY AIR (UP)
	RETURN AIR (UP)
	EXHAUST AIR (UP)
	TRANSFER AIR (UP)
	OUTDOOR AIR (UP)
	FIRE DAMPER
	MOTORIZED DAMPER
	BACKDRAFT DAMPER
	BALANCING DAMPER
	DUCT FLEXIBLE CONNECTION
	FIN TUBE RADIATION
	RADIANT PANEL
	DUCT c/w ACOUSTIC INSULATION
	AIR FLOW DIRECTION
	PROPELLER FAN

MECHANICAL EQUIPMENT	
ABBREVIATIONS	DESCRIPTION
AC	AIR COMPRESSOR
ACC	AIR COOLED CHILLER
ACR	AIR COMPRESSOR - RECIPROCATING
ACS	AIR COMPRESSOR - SCREW
ACU	AIR CONDITIONING UNIT
AD	AIR DRYER
AF	AIR FILTER
AHU	AIR HANDLING UNIT
AR	AIR RECEIVER
AS	AIR SEPARATOR
BFP	BACK FLOW PREVENTOR
BF	BOILER - FLEXIBLE WATER TUBE
BG	BOILER-GLYCOL
BI	BOILER - INDUSTRIAL WATER TUBE
BS	BOILER-STEAM
CBB	COUNTER BALANCED BACKDRAFT DAMPER
CWP	CHILLED WATER PUMP
CC	COOLING COIL
CT	COOLING TOWER
CU	AIR COOLED CONDENSING UNIT
DEA	DEAERATOR
DG	DOOR GRILLE
DWH	DOMESTIC WATER HEATER
DX	DIRECT EXPANSION COIL
EC	ELECTRIC CONVECTOR
EF	EXHAUST FAN
ETNK	EXPANSION TANK
EHU	ELECTRIC UNIT HEATER
EA	EXHAUST AIR
ERH	ELECTRIC RADIANT HEATER
FC	FAN COIL UNIT
FOA	FOUL AIR
FF	FORCE FLOW UNIT HEATER
FE	FIRE EXTINGUISHER
FHC	FIRE HOSE CABINET
GMP	GLYCOL MAKE-UP PACKAGE
GRH	GRAVITY HOOD
HC	HEATING COIL
HP	HEAT PUMP
HEX	HEAT EXCHANGER
HPR	HIGH PRESSURE RECEIVER
HWP	HOT WATER PUMP
HRS	HOSE REEL STATION
HRU	HEAT RECOVERY UNIT
HT	HEAT TRACING
HWT	HOT WATER TANK
LP	LIQUID PUMP
LPR	LOW PRESSURE RECEIVER
LV	LOUVER
MAU	MAKE-UP AIR UNIT
MD	MOTORIZED DAMPER
MV	TEMPERING VALVE
OS	OIL SEPARATOR
OA	OUTSIDE AIR
P	PUMP
PP	FLUSHING WATER PUMP
SBFP	STEAM BOILER FEED PUMP
PTS	PIPING TRANSITION SUMP
PV	PRESSURE VESSEL
PVCD	POLYVINYL CHLORIDE DUCT
RA	RETURN AIR
RCC	REFRIGERATION COMPRESSOR CENTRIFUGAL

MECHANICAL EQUIPMENT (CONT...)	
ABBREVIATIONS	DESCRIPTION
RCR	REFRIGERATION COMPRESSOR RECIPROCATING
RCS	REFRIGERATION COMPRESSOR SCREW
RF	RETURN FAN
RHC	REHEAT COIL
SA	SUPPLY AIR
SF	SUPPLY FAN
SI	STEAM INJECTOR
SL	SILENCER
SMP	SUMP PUMP
TA	TRANSFER AIR
TB	TERMINAL BOX
BT	BRINE TANK
BDT	BLOWDOWN TANK
EP	EXPANSION TANK
HWT	HOT WATER TANK
GFT	GLYCOL FILL TANK
SBFT	STEAM BOILER FEED TANK
CFT	CHEMICAL FILL TANK
TH	TANK HEATER
UH	UNIT HEATER
VFD	VARIABLE FREQUENCY DRIVE
VAP	VACUUM PUMP
VT	VENTILATION AIR
WF	WALL FIN
WS	WATER SOFTENER

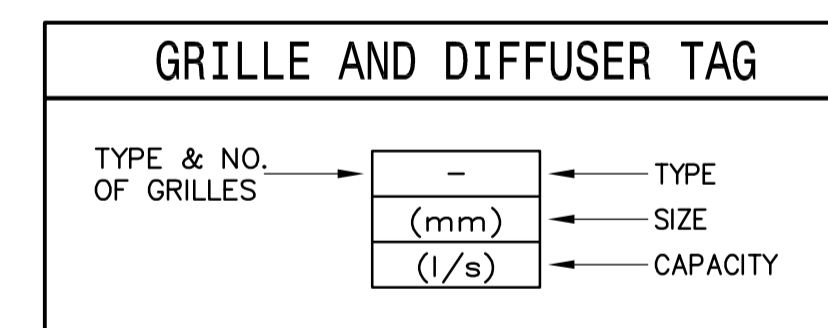
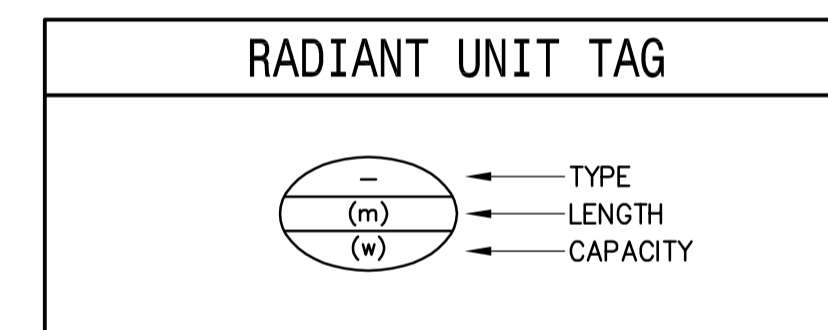
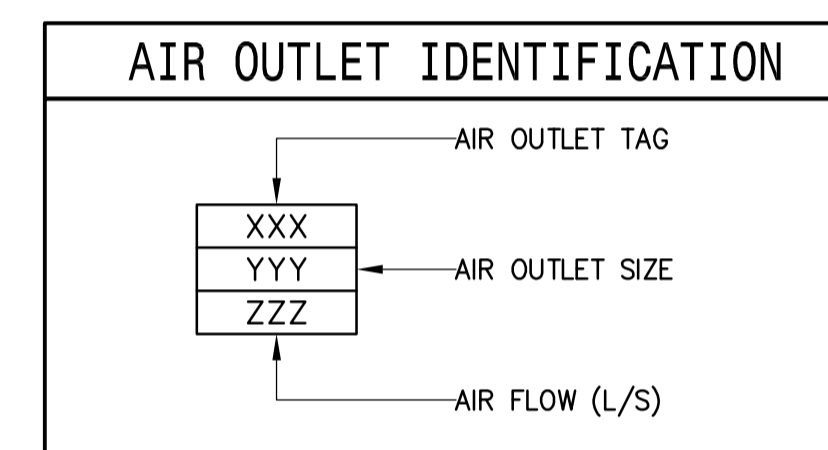
PLUMBING FIXTURES	
ABBREVIATIONS	DESCRIPTION
AN	ACID NEUTRALIZATION SYSTEM
DC	DRINKING COOLER
DF	DRINKING FOUNTAIN
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
ES	EMERGENCY SHOWER
EES	EMERGENCY EYE WASH / SHOWER
EEW	EMERGENCY EYE WASH
FD	FLOOR DRAIN
FFD	FUNNEL FLOOR DRAIN
GI	GREASE INTERCEPTOR
GS	GANG SINK
HB	HOSE BIBB
HD	HUB DRAIN
HR	HOSE REEL
L	LAVATORY
MS	MOP SINK
OI	OIL INTERCEPTOR
PH	POST HYDRANT
RD	ROOF DRAIN
SH	SHOWER
SK	SINK
SS	SERVICE SINK
TPD	TRAP PRIMER DEVICE
UR	URINAL
WC	WATER CLOSET
WH	WALL HYDRANT

CONTROL SYMBOLS	
SYMBOL	DESCRIPTION
	THERMOSTAT
	HUMIDISTAT
	SWITCH
	TEMPERATURE SENSOR
	TEMPERATURE TRANSMITTER
	FREEZE STAT
	DISCONNECT SWITCH
	MOTOR
	ACTUATOR
	CURRENT SENSING RELAY
	PRESSURE SENSOR
	FLOW SWITCH
	LIMIT SWITCH
	SMOKE DETECTOR
	CARBON MONOXIDE SENSOR
	DIRECT INTERLOCK TO STARTER
	STARTER
	HUMIDITY SENSOR
	HUMIDITY HIGH LIMIT
	PRESSURE SWITCH
	FLOW SWITCH
	CURRENT SENSING RELAY
	BACK DRAFT DAMPER
	CARBON DIOXIDE SENSOR
	SCR ELECTRIC HEATING COIL
	INTERLOCK
	THREE PHASE WIRING
	SINGLE PHASE WIRING BY DIVISION 16
	CONTROL WIRING BY DIVISION 15
	CONTROL WIRING (LOW VOLTAGE)
	CONTROL WIRING (LINE VOLTAGE)
	LOW WATER CUT OFF DEVICE

VALVES SYMBOLS	
SYMBOL	DESCRIPTION
	SOLENOID VALVE
	THREE WAY CONTROL VALVE
	BALL VALVE (NORMALLY OPEN)
	BALL VALVE (NORMALLY CLOSED)
	BALANCING VALVE
	GLOBE VALVE
	BUTTERFLY VALVE
	GATE VALVE (NORMALLY OPEN)
	GATE VALVE (NORMALLY CLOSED)
	DOUBLE LEAF CHECK VALVE
	CHECK VALVE
	COUNTER BALANCED BACKDRAFT DAMPER

PLUMBING & DRAINAGE	
SYMBOL	DESCRIPTION
	FLOOR DRAIN (TYPE, TRAP, PRIMED)
	TRENCH DRAIN
	ROOF DRAIN
	HOSE BIBB
	NON - FREEZE HOSE BIBB
	CLEANOUT ABOVE GRADE
	CLEANOUT BELOW GRADE
	P-TRAP
	RUNNING TRAP WITH CLEANOUT
	"T" CONNECTION
	TRAP PRIMING DEVICE

FIRE PROTECTION EQUIPMENT	
SYMBOL	DESCRIPTION
	UPRIGHT SPRINKLER HEAD
	PENDANT SPRINKLER HEAD
	SIDE WALL SPRINKLER HEAD
	DRY SPRINKLER HEAD
	FIRE HOSE CABINET
	FIRE DEPARTMENT CONNECTION
	FIRE EXTINGUISHER (10 kg)



PIPING IDENTIFICATION	
SYMBOL	DESCRIPTION
	ACID WASTE
	ACID WASTE (BURIED)
	ACID WASTE VENT
	BOILER BLOWDOWN
	BOILER FEED WATER
	COMPRESSED AIR
	COMPRESSED AIR (BURIED)
	CIRCULATION COOLING WATER
	CONDENSER GLYCOL SUPPLY
	CONDENSER GLYCOL RETURN
	CHILLED WATER SUPPLY
	CHILLED WATER RETURN
	CONDENSER WATER SUPPLY
	CONDENSER WATER RETURN
	COOLING WATER SUPPLY
	COOLING WATER RETURN
	DIESEL FUEL SUPPLY
	DIESEL FUEL RETURN
	DOMESTIC COLD WATER SUPPLY
	DOMESTIC HOT WATER SUPPLY
	DOMESTIC HOT WATER RECIRC.
	DRAINAGE FLOORS
	DRAINS CLEAN
	EFFLUENT SUPPLY
	EFFLUENT RETURN
	EXPANSION TANK EQUALIZER LINE
	FIRE PROTECTION WATER
	FIRE WATER
	FUEL OIL SUPPLY
	FUEL OIL RETURN
	FUEL OIL VENT
	GLYCOL HEATING SUPPLY
	GLYCOL HEATING RETURN
	HIGH PRESSURE CONDENSATE
	HIGH PRESSURE STEAM
	INSTRUMENT AIR
	LOW PRESSURE CONDENSATE
	LOW PRESSURE STEAM
	MAKE-UP WATER
	MEDIUM PRESSURE CONDENSATE
	MEDIUM PRESSURE STEAM
	NATURAL GAS
	PLANT SERVICE WATER
	PROPANE
	PUMPED CONDENSATE
	SANITARY LINE
	SANITARY LINE (BURIED)
	SANITARY VENT
	STORM
	STORM (BURIED)
	SPRINKLER PIPE
	TEMPERED DOMESTIC WATER
	VACUUM
	RAIN WATER LEADER
	PIPE DROP
	PIPE RISE
	PIPE TEE DOWN

 Certificate of Authorization Earth Tech Canada Inc. No. 730 Expiry: April 30, 2007	B.M. ELEV.	 Frederickson Cooper ARCHITECTS DESIGNED BY PT CHECKED BY AMA DRAWN BY LAE APPROVED BY AHL SCALE: NONE RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI DATE 2005/07/27 DATE 2006/03/29	ENGINEER'S SEAL ORIGINAL SIGNED BY A.M. AFTANAS 2006/03/29 CONSULTANT DRAWING NO. WM-H0001	 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION WATER TREATMENT PLANT GENERAL PLANT SERVICES MECHANICAL AND ELECTRICAL MECHANICAL LEGEND AND SYMBOLS	CITY FILE NUMBER
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