

## HVAC

	SA	UPWARD AND DOWNWARD SUPPLY DUCT
	RA	UPWARD AND DOWNWARD RETURN OR EXHAUST DUST
	SA	SUPPLY DUCT UPWARD
	SA	SUPPLY DUCT DOWNWARD
	RA	RETURN OR EXHAUST DUCT UPWARD
	RA	RETURN OR EXHAUST DUCT DOWNWARD
		MANUAL DAMPER (WITH ACCESS DOOR)
		MOTORIZED DAMPER (WITH ACCESS DOOR)
		SUPPLY AIR DIFFUSER
		RETURN AIR GRILLE
		EXHAUST AIR GRILLE
	OA	OUTSIDE AIR
	FD	FIRE DAMPER
	BD	BALANCING DAMPER
	BDD	BACKDRAFT DAMPER
		MOTORIZED DAMPER
	#1	VAV BOX #1
	109 230 L/S CFM	AIRFLOW
	L/s	LITRES PER SECOND
	CU-1	CONDENSING UNIT #1
	EF-1	EXHAUST FAN #1
	HRV-1	HEAT RECOVERY VENTILATOR #1
	AHU-1	AIR HANDLING UNIT #1
	HC-1	HEATING COIL #1
	SF-1	SUPPLY FAN TYPE 1
	S1 292 L/S	SUPPLY GRILLE TYPE 1 CAPACITY IN L/S
	R1 292 L/S	RETURN GRILLE TYPE 1 CAPACITY IN L/S

## GENERAL

	PIPE RISE	FD-1	FLOOR DRAIN TYPE 1
	PIPE DROP	FD-2	FLOOR DRAIN TYPE 2
	PIPE TOP TAKE-OFF	FD-3	FLOOR DRAIN TYPE 3
	PIPE BOTTOM TAKE-OFF	CO	FLOOR CLEANOUT
	SIMPLE CONNECTION	CO	HORIZONTAL PIPE CLEANOUT
	PIPE CAP	HR-1	HOSE REEL TYPE 1
	PIPE CONTINUATION	HS	HOSE STATION
	DOMESTIC COLD WATER	WC-1	WATER CLOSET TYPE 1
	DOMESTIC HOT WATER	CS-1	COUNTER SINK TYPE 1
	SANITARY SEWER	L-1	LAVATORY TYPE 1
	DOMESTIC HOT WATER RETURN	MS-1	MOP SINK TYPE 1
	VENT	SH-1	SHOWER TYPE 1
	HOT WATER, SUPPLY	SS-1	SERVICE SINK TYPE 1
	HOT WATER, RETURN	EW-1	EYE WASH TYPE 1
	TREATED COLD WATER	ES-1	EYE WASH SHOWER TYPE 1
	TREATED HOT WATER	B-1	BOILER TYPE 1
	GLYCOL, SUPPLY	UH-1	UNIT HEATER TYPE 1
	GLYCOL, RETURN	NPW	NON POTABLE WATER
	FUEL OIL, SUPPLY	DTWS	DOMESTIC TEMPERED WATER SUPPLY
	FUEL OIL, RETURN	ETK-2	EXPANSION TANK #2
	FUEL OIL, VENT		
	OVERFLOW, VENT		
	NOMINAL PIPE SIZE (38mm)		

## PLUMBING AND HEATING

## EQUIPMENT &amp; PIPING ACCESSORIES

	AIR FILTER		CLEANOUT
	PIPE CAP OR PLUG		PURGE POINT
	BLIND FLANGE (IN-LINE)		DECANTER
	BLIND FLANGE		BASKET SCREEN
	COMPENSATOR		LIQUID SEAL
	DRAIN		HEAT EXCHANGER
	SPRAY NOZZLE		GAUGE GUARD
	VENT		SEDIMENT MOISTURE TRAP
	PULSE ABSORBER		AIR RELIEF VALVE AND VACUUM BREAKER
	VENTURI INJECTOR		HOSE CONNECTION
	UNION		PUMP
	SIPHON		IMPELLER TYPE MIXER
	SIGHT-GLASS WITH FLOW READING		COMPRESSOR
	SIGHT-GLASS		FLOOR DRAIN
	FLEXIBLE CONNECTOR		HEAT EXCHANGER PLATE TYPE
	FLEXIBLE CONNECTING REDUCER		OIL FILTER
	CONCENTRIC REDUCER		WATER METER
	ECCENTRIC REDUCER		BACK FLOW PREVENTER
	TRUCK CONNECTION		THERMOMETER
	GRAVITY FLOW		PRESSURE GAUGE
	JET MIX / JET AERATION		BRAIDED HOSE
	SILENCER		THERMOSTATIC MIXING VALVE
	SPRAY NOZZLE		AUTOMATIC AIR VENT (AAV)
	HEADER		ANTISIPHON VALVE
	CONDENSATE OR DRIP TRAP		
	STRAINER		
	STATIC MIXER		
	TO BE REMOVED		

## VALVES

	GLOBE VALVE		MOTOR ACTUATED
	VALVE (BASIC SYMBOL)		3-WAY MOTOR ACTUATED
	BALANCING VALVE		DIAPHRAGM ACTUATED
	PLUG VALVE		FLOAT CONTROLLED
	THREE WAY PLUG VALVE		SPRING ACTUATED
	DIAPHRAGM VALVE		WEIGHT CONTROLLED
	NEEDLE VALVE		SOLENOID VALVE
	KNIFE GATE VALVE		PNEUMATIC CONTROL VALVE
	BUTTERFLY VALVE		LOCKABLE ACTUATOR ON VALVE
	CHECK VALVE		VENT VALVE
	FOOT VALVE		PRESSURE REGULATOR
	THREE WAY COCK		MOTORIZED SAFETY SHUT-OFF VALVE
	PRESSURE REDUCING VALVE		SHUT-OFF COCK
	PRESSURE RELIEF VALVE		TWIN FLAPPER CHECK VALVE
	OVER PRESSURE RELIEF VALVE		MULTI-FUNCTION VALVE
	UNDER PRESSURE RELIEF VALVE		GATE VALVE AND BOX
	ADJUSTABLE OVER PRESSURE RELIEF VALVE		BUTTERFLY VALVE AND BOX
	BACK PRESSURE VALVE		VACUUM RELIEF VALVE
	PINCH VALVE		FIRE VALVE
	LUBRICATED PLUG VALVE		BALL VALVE

## DRIVER TYPE

M	ELECTRIC
H	HYDRAULIC
P	PNEUMATIC

## CONTROLS

	N.C.	NORMALLY CLOSED		GREEN PILOT LIGHT
	N.O.	NORMALLY OPEN		RED PILOT LIGHT
	TR	TRANSFORMER		STROBE LIGHT
	FAD	FRESH AIR DAMPERS		LEVEL SWITCH
	EAD	EXHAUST AIR DAMPERS		PRESSURE SWITCH
	RAD	RETURN AIR DAMPERS		PRESSURE INDICATING TRANSMITTER
	CAD	COMBUSTION AIR DAMPERS		FLOW SWITCH - X
		NORMALLY OPEN CONTACT		TEMPERATURE SENSOR
		NORMALLY CLOSED CONTACT		SOLENOID VALVE
		MANUAL SWITCH		TEMPERATURE SENSOR (C/W PROBE WELL)
		ELECTRICITY BY CONTROLS DIVISION		H2S GAS SENSOR
		ELECTRICITY BY ELECTRICAL DIVISION		METHANE GAS SENSOR
		FAN		END SWITCH
		TRANSFORMER WITH FUSE AND GROUND ON SECONDARY		SWITCH
		THERMOSTAT		FREEZESTAT
		RELAY		OUTDOOR TEMPERATURE SENSOR
		REVERSE ACTING THERMOSTAT		CONTROL VALVE TYPE 1
		CLASS 1, DIV.2 THERMOSTAT		THREE WAY TEMPERATURE CONTROL VALVE AHU-3.1
		MODULATING THERMOSTAT		TEMPERATURE CONTROLLER TYPE 1
		CURRENT SENSOR		

## DRAWING LIST

M1501-1	MECHANICAL LEGEND AND DRAWING LIST
M1502-1	DEMOLITION
M1503-1	PLUMBING LAYOUT AND SCHEMATIC
M1504-1	HEATING LAYOUT
M1505-1	HEATING DETAILS AND SCHEMATIC
M1506-1	LOWER LEVEL VENTILATION LAYOUT
M1507-1	UPPER LEVEL VENTILATION LAYOUT
M1508-1	VENTILATION DETAILS
M1509-1	FUEL SYSTEMS PLAN
M1510-1	FUEL SYSTEMS SCHEMATIC
M1511-1	CONTROLS

No.	Issue	Date
1	ISSUED FOR TENDER	2013-APR-10
2	RELEASED FOR CONSTRUCTION	2013-JUN-27

No.	Revision	Ckd. By	Date

PERMIT OF PRACTICE  
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Signature   
Date 2013/JUN/27  
PERMIT NUMBER: P483  
NT/NU Association of Professional Engineers and Geoscientists

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WASTE WATER TREATMENT PLANT UPGRADE PANGNIRTUNG, NU		
Dwg. Title		
MECHANICAL LEGEND AND DRAWING LIST		
Project No. OTT-00204430-A0		
Dwg. No. M1501 - 1	Rev. No. 0	
Scale		
NOT TO SCALE This drawing is not to be scaled		