D SIZE 22" x 34" (559mm x 864mm)

EQUIPMENT SYMBOLS

- PUMP
- RECIPROCATING COMPRESSOR
- ELECTRIC MOTOR
- HEAT EXCHANGER
- INJECTOR

ELECTRICAL SYMBOLS

- FUSED DISCONNECT
- PULL OUT STABS
- SURGE ARRESTOR
- CAPACITOR
- TRANSFORMER
- CIRCUIT BREAKER

VALVE SYMBOLS

- VALVE - GENERAL SYMBOL OR GATE VALVE
- NORMALLY CLOSED VALVE
- ANGLE VALVE
- THREE WAY VALVE
- FOUR WAY VALVE
- BUTTERFLY VALVE
- BALL VALVE
- PLUG VALVE
- CONE VALVE
- GLOBE VALVE
- NEEDLE VALVE
- CHECK VALVE
- DIAPHRAGM VALVE
- PINCH VALVE

- PRESSURE REGULATOR, SELF CONTAINED
- BACK PRESSURE REGULATOR, SELF CONTAINED
- FCV — FLOW CONTROL VALVE RESTRICTED FLOW LEFT FREE FLOW RIGHT

ACTUATOR SYMBOLS

- DIAPHRAGM ACTUATOR
- CYLINDER ACTUATOR
- M — MOTOR ACTUATOR
- S — SOLENOID ACTUATOR
- FLOAT ACTUATOR
- HAND ACTUATOR
- PRESSURE RELIEF

ACTUATOR DETAIL SYMBOLS

- POSITIONER
- FAIL CLOSED
- FAIL OPEN

PIPING DETAIL SYMBOLS

- REDUCER
- DRAIN
- STRAINER
- SCREWED CAP
- HOSE CONNECTION
- BLIND FLANGE

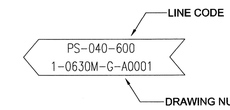
ACCESSORY DEVICE SYMBOLS

- ORIFICE PLATE
- VENTURI TUBE
- M — MAGNETIC FLOW METER
- FLEX PIPE
- FILTER / STRAINER
- F — FLOW METER

PID STANDARDS

1. DRAWINGS UTILIZE CITY OF WINNIPEG STANDARDS FOR BORDER AND TITLE BLOCK. ALL DRAWINGS ARE PRODUCED ON AUTOCAD (LATEST REV., R2000 OR LATER).
2. ALL UNITS ARE IN METRIC, EXCEPT AS NOTED OTHERWISE. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS (mm).
3. DRAWING CONTENT GENERALLY CONFORMS WITH ISA-5.1 STANDARD. AN EXCEPTION REGARDING EQUIPMENT TAGGING HAS BEEN MADE TO ALLOW CONFORMITY WITH EXISTING NAMING CONVENTIONS.
4. PID'S INDICATE MAJOR PROCESS PIPING AND EQUIPMENT AND ASSOCIATED LOCAL INSTRUMENTATION, SCADA PLC AND OTHER PROCESS I/O.
5. EQUIPMENT INCLUDING VESSELS, DRUMS, EXCHANGERS, HEATERS, PUMPS, COMPRESSORS, ETC. ARE ARRANGED IN SEQUENCE WITH PRINCIPLE FUNCTIONS AND FLOWS.
6. ALL MAJOR EQUIPMENT INCLUDING PUMPS, COMPRESSORS, TANKS, ETC. ARE LABELED AS TO FUNCTION WITH DESIGN SIZES AND RATINGS.
7. ALL PROCESS LINES ARE LABELED ACCORDING TO FUNCTION AND SIZE UTILIZING SYSTEM CODES DEFINED HEREIN.
8. EACH SYSTEM INTERCONNECTION POINT BETWEEN DRAWINGS IS LABELED WITH A SOURCE DRAWING NUMBER OR DESTINATION DRAWING NUMBER. ARROWS ON PROCESS PIPING INDICATE DIRECTION OF FLOW BETWEEN DRAWINGS.

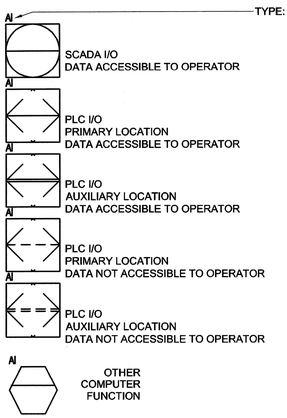
CONNECTING ARROWS



PROCESS / SIGNAL CONTINUATION ON INDICATED DRAWING

SIGNAL CONTINUATION ON SAME DRAWING

I/O TAGS



INSTRUMENT SYMBOLS

- DISCRETE INSTRUMENT FIELD MOUNTED
- DISCRETE INSTRUMENT PRIMARY LOCATION (CONTROL ROOM) FRONT PANEL MOUNTED
- DISCRETE INSTRUMENT PRIMARY LOCATION (CONTROL ROOM) REAR PANEL MOUNTED
- DISCRETE INSTRUMENT AUXILIARY LOCATION (NORMALLY ACCESSIBLE) FRONT PANEL MOUNTED
- DISCRETE INSTRUMENT AUXILIARY LOCATION (NORMALLY ACCESSIBLE) REAR PANEL MOUNTED
- P — PURGE

W = WHITE
R = RED
G = GREEN
A = AMBER
B = BLUE

- PILOT LIGHT FIELD MOUNTED
- PILOT LIGHT PRIMARY LOCATION (CONTROL ROOM)
- PILOT LIGHT AUXILIARY LOCATION (NORMALLY ACCESSIBLE)
- I — INTERLOCK
- R — RESET
- K — KEYED INTERLOCK

- I/I — CURRENT / CURRENT RELAY
- E/P — VOLTAGE / PNEUMATIC RELAY
- Σ — SUMMATION

DRN	CHK	DES	ENG	IDR

UMA REVIEW

NO.	REVISIONS	YY/MM/DD	BY
B	ISSUED FOR BID	08/11/21	QL
A	ISSUED FOR REVIEW	08/10/28	QL

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UMA | AECOM

DESIGNED BY	KM	CHECKED BY	
DRAWN BY	QL	APPROVED BY	
HOR. SCALE	NTS	RELEASED FOR CONSTRUCTION	
VERT. SCALE	NTS		
DATE		DATE	

PROFESSIONAL'S SEAL
PROVINCE OF MANITOBA
Nov 24/08
B. L. MOORE
REGISTERED PROFESSIONAL ENGINEER

CONSULTANT DRAWING NO.
D265-199-00_02-IL0001_RX.dwg

APEGM
Certificate of Authorization
UMA Engineering Ltd. (MB)
No. 256 Date: Nov. 24/08

Winnipeg

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

G. C. MACLEAN PUMPING STATION
P-26 ENGINE REPLACEMENT
PROCESS AND INSTRUMENTATION DIAGRAMS
SYMBOLS LEGEND

SHEET 1 OF 3

CITY DRAWING NUMBER
1-0630M-A0028-001 REV B

PLOT: 08/11/24 4:28:39 PM
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UMA REVIEW | DRFT CHK