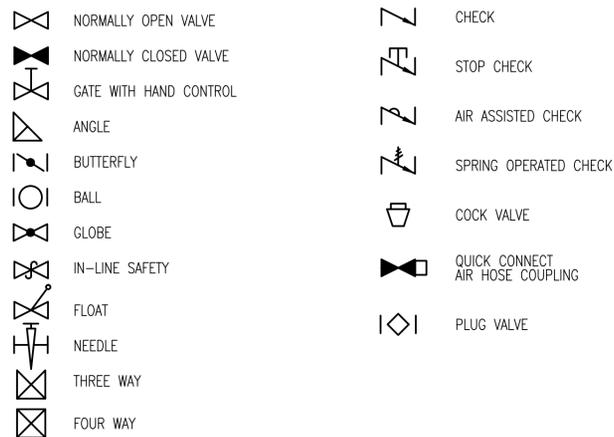
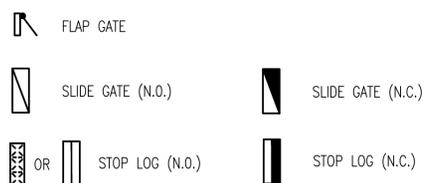


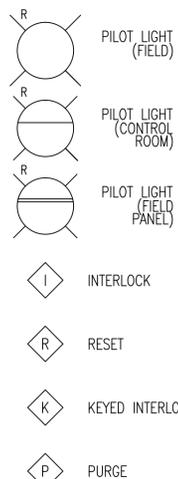
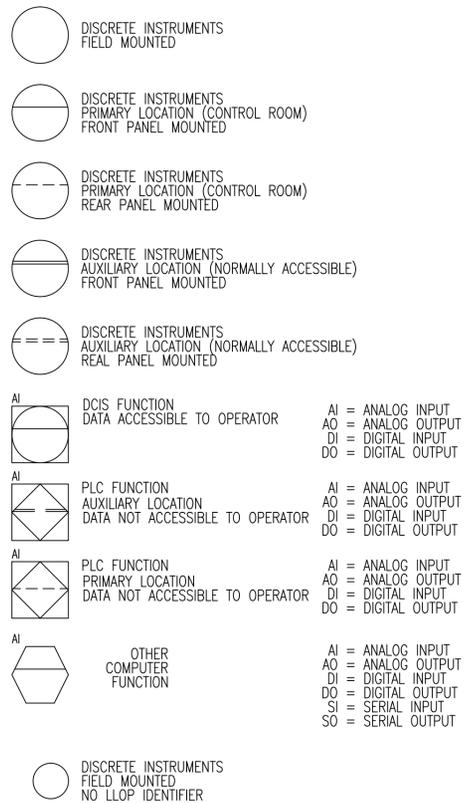
VALVE SYMBOLS



GATE SYMBOLS

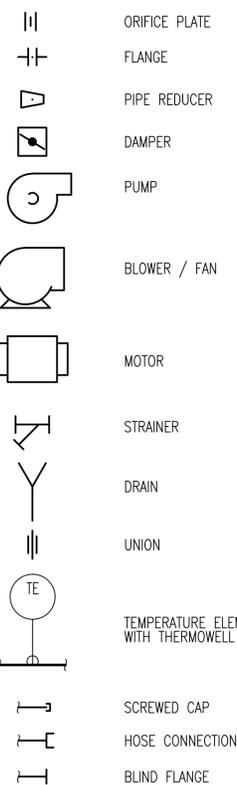


INSTRUMENT SYMBOLS

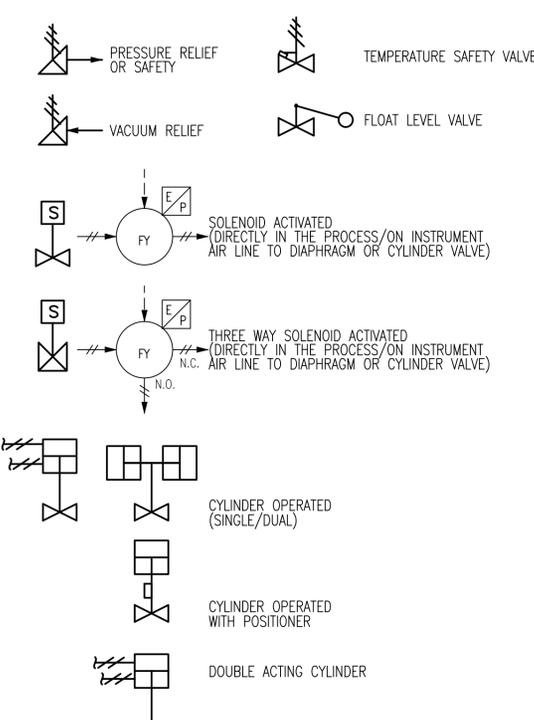
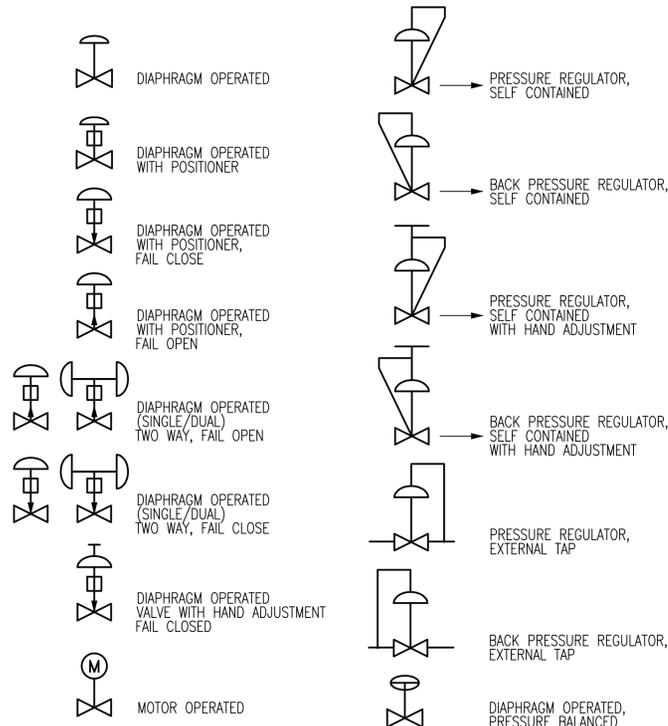


W = WHITE
R = RED
G = GREEN
A = AMBER
B = BLUE

ACCESSORY DEVICE SYMBOLS



ACTUATOR SYMBOLS



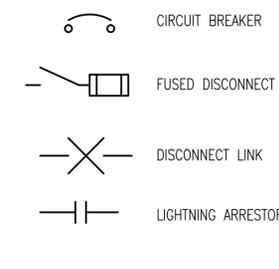
PID STANDARDS

- DRAWINGS UTILIZE CITY OF WINNIPEG STANDARDS FOR BORDER AND TITLE BLOCK. ALL DRAWINGS ARE PRODUCED ON AUTOCAD (LATEST REV., R2000 OR LATER).
- ALL UNITS ARE IN METRIC, EXCEPT AS NOTED OTHERWISE. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS (mm).
- DRAWING CONTENT GENERALLY CONFORMS WITH TO ISA-5.1 STANDARD. AN EXCEPTION REGARDING EQUIPMENT TAGGING HAS BEEN MADE TO ALLOW BETTER CONFORMITY IN NAMING.
- PID'S INDICATE MAJOR PROCESS PIPING AND EQUIPMENT AND ASSOCIATED LOCAL INSTRUMENTATION, DCS AND OTHER PROCESS I/O.
- EQUIPMENT INCLUDING VESSELS, DRUMS, EXCHANGERS, HEATERS, PUMPS, COMPRESSORS, ETC. ARE ARRANGED IN SEQUENCE WITH PRINCIPLE FUNCTIONS AND FLOWS.
- ALL MAJOR EQUIPMENT INCLUDING PUMPS, COMPRESSORS, TANKS, ETC. ARE LABELED AS TO FUNCTION WITH DESIGN SIZES AND RATINGS.
- ALL PROCESS LINES ARE LABELED ACCORDING TO FUNCTION AND SIZE UTILIZING SYSTEM CODES DEFINED HEREIN.
- 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.

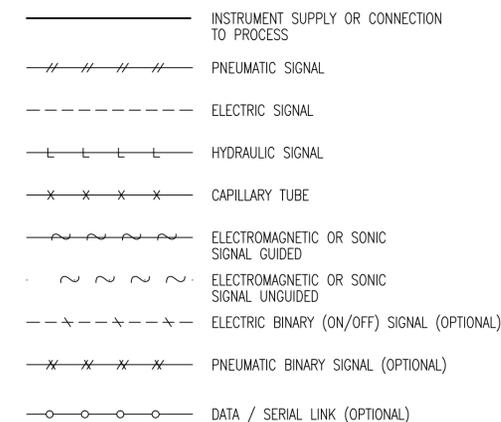
CONNECTING ARROWS



ELECTRICAL SYMBOLS



INSTRUMENT LINE SYMBOLS



THIS DRAWING IS BASED ON CITY OF WINNIPEG DRAWING NUMBER 1-0101A-D-A0001-001-06D

NOTICE:
AS-CONSTRUCTED DIMENSIONS, MEASUREMENTS AND OTHER DETAILS CONTAINED IN THIS RECORD DRAWING HAVE BEEN OBTAINED BY AECOM CANADA LTD. ("AECOM") FROM VARIOUS SOURCES. SUCH INFORMATION REPRESENTS THE BEST INFORMATION AVAILABLE TO AECOM AT THE TIME OF PREPARATION OF THIS RECORD DRAWING. AECOM DOES NOT IN ANY WAY REPRESENT OR WARRANT THAT SUCH INFORMATION IS ACCURATE AND ASSUMES NO RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS CONTAINED THEREIN.

REVISION 03 CHANGES			
THE ENGINEER'S DESIGN RESPONSIBILITIES ARE LIMITED TO THE CHANGES INDICATED IN THE CLOUDED WORK			
DESIGNED BY: NK	CHECKED BY: KJS	DATE: 16/06/23	RELEASED FOR CONSTR. DATE: -
DRAWN BY: SRG	APPROVED BY: KJS		

APEGM Certificate of Authorization			
AECOM Canada Ltd.			
No. 4671 Date: June 23/16			
DESIGNED BY:	LAE	CHECKED BY:	SB
DRAWN BY:	LAE	APPROVED BY:	
SCALE:	NONE	RELEASED FOR CONSTRUCTION BY:	
DATE:	2006/01/16	DATE:	

EarthTech A Tyco International Ltd. Company			
DESIGNED BY:	LAE	CHECKED BY:	SB
DRAWN BY:	LAE	APPROVED BY:	
SCALE:	NONE	RELEASED FOR CONSTRUCTION BY:	
DATE:	2006/01/16	DATE:	

PROVINCE OF MANITOBA
K.J. SEARS
REGISTERED PROFESSIONAL ENGINEER
CONSULTANT DRAWING NO. P4.01

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION
NEWPCC CENTRATE NUTRIENT TREATMENT NITROGEN REMOVAL FACILITY
PROCESS AND INSTRUMENTATION DIAGRAMS LEGEND AND DETAILS
CITY FILE NUMBER: 1-0101C-P0016-001-03
SHEET 1 OF 3
CITY DRAWING NUMBER: 1-0101C-P0016-001-03