

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
	<div> <div>INSTRUMENT IDENTIFICATION SYMBOLS</div> <div>(SEE NOTE 1)</div> <div> CIRCLE SIZES FOR INSTRUMENT SYMBOLS: 1/2" DIA. FOR MAIN INSTR. IDENTIFICATION 1/4" DIA. FOR SMALL TANGENT CIRCLES </div> <div> FIELD MOUNTED CONVENTIONAL INSTRUMENT (WE) = SPECIAL NOTE (WE) = FURNISHED WITH EQUIPMENT (V) = FURNISHED BY VENDOR (R) = RELOCATED (E) = EXISTING </div> <div> LOCATION PANEL INSTRUMENT CONVENTIONAL TYPE FIELD PANEL NUMBER (IF SHOWN) </div> <div> REAR MOUNTED LOCAL PANEL INSTRUMENT </div> <div> CONTROL ROOM MOUNTED CONVENTIONAL INSTRUMENT </div> <div> BEHIDE-THE-PANEL DEVICE IN THE CONTROL ROOM </div> <div> DCS </div> <div> DCS DEVICE / CONTROLLER (NORMALLY ACCESSIBLE TO OPERATOR) </div> <div> DCS DEVICE / CONTROLLER SECONDARY LOCATION (NORMALLY ACCESSIBLE TO OPERATOR) </div> <div> DCS DEVICE / FUNCTION (NORMALLY ACCESSIBLE TO OPERATOR) </div> <div> LAH LAL SOFTWARE CONSOLE FUNCTION: LAHH = HIGH-HIGH ALARM LAH = HIGH ALARM LAL = LOW-LOW ALARM LAL = LOW ALARM DV = DEVIATION ALARM (DVH, etc.) RSP = REMOTE SET POINT SEL = SIGNAL SELECT A/M = AUTO/MANUAL CAS = CASCADE M = MEDIAN SELECT </div> <div> MASS = MASS FLOW CALCULATION </div> <div> PLC/SIS </div> <div> PLC DEVICE / CONTROLLER (NORMALLY ACCESSIBLE TO OPERATOR) </div> <div> PLC DEVICE / CONTROLLER SECONDARY LOCATION (NORMALLY ACCESSIBLE TO OPERATOR) </div> <div> PLC DEVICE / FUNCTION (NORMALLY ACCESSIBLE TO OPERATOR) </div> </div> <div> <div>INSTRUMENT SYMBOLS</div> <div> FAILURE POSITION (TYPICAL) FO = FAIL OPEN FC = FAIL CLOSED FL = FAIL LAST POSITION </div> <div> CONTROL VALVE </div> <div> SELF-CONTAINED REGULATOR VALVE (BACK PRESSURE TYPE SHOWN) (UPSTREAM TYPE OPPOSITE HAND) </div> <div> EXTERNALLY SENSED REGULATING VALVE (BACK PRESSURE TYPE SHOWN) (UPSTREAM TYPE OPPOSITE HAND) </div> <div> TEMPERATURE REGULATOR FILLED SYSTEM TYPE </div> <div> PISTON OPERATED VALVE </div> <div> ELECTRIC MOTOR OPERATED VALVE </div> <div> ELECTRIC SOLENOID VALVE (ARROW INDICATES FLOW IN DE-ENERGIZED STATE) </div> <div> ELECTRIC SOLENOID VALVE WITH MANUAL RESET </div> <div> PISTON OPERATE VALVE WITH SOL. VA. AND POSITION SWITCHES </div> <div> PISTON OPERATE VALVE WITH INTERNAL LOCK, SOL. VA. AND POSITION SWITCHES </div> <div> CONTROL DAMPER, BUTTERFLY VALVE OR LOUVER </div> <div> FUNCTION INLINE INSTRUMENT TYPE OF ELEMENT </div> <div> ROTAMETER WITH NEEDLE VALVE & DIFF. REGULATOR </div> <div> ROTAMETER WITHOUT NEEDLE VALVE & DIFF. REGULATOR </div> <div> INDICATES THERMOWELL WITH THERMOCOUPLE OR RTD ASSEMBLY (TYPICAL WHERE SHOWN) </div> <div> LOCAL TEMPERATURE GAUGE </div> <div> DCS TEMPERATURE INDICATION </div> <div> LOCAL PRESSURE GAUGE (NOTE 3) </div> <div> LOCAL PRESSURE GAUGE WITH CHEMICAL SEAL (NOTE 3) </div> <div> LOCAL PRESSURE GAUGE WITH STEAM SIPHON (NOTE 3) </div> <div> LOCAL PRESSURE GAUGE WITH CHEMICAL SEAL AND SEAL FLUSH RING (NOTE 3) </div> </div> <div> <div>NOTES:</div> <div> 1. THIS DRAWING APPLIES TO SCOPE OF WORK FOR THE "CYANCO PROJECT HERSEY". HOWEVER THIS DRAWING DOES NOT SUPERCEDE ANY UNIT SPECIFIC STANDARD SYMBOLOLOGY DRAWINGS. </div> <div> 2. ISA (INSTRUMENT SOCIETY OF AMERICA) STANDARD "ISA-55.1" SHALL BE USED FOR INSTRUMENT SYMBOLS AND DESCRIPTIONS NOT SHOWN. </div> <div> 3. ALL PRESSURE GAUGES WILL HAVE STANDARD BLOCK AND BLEED VALVE (SOMETIMES NOT SHOWN PER APPLICABLE PIPING SPECIFICATION, UNLESS NOTED OTHERWISE). </div> <div> 4. ON LINES CONNECTING AN INSTRUMENT TO A PROCESS PIPELINE OR EQUIPMENT ITEM, ONLY THE FIRST BLOCK VALVE AWAY FROM THE POINT OF CONNECTION IS USUALLY SHOWN ON THE P&ID. HOWEVER, ALL OTHER VALVES OR INSTRUMENT PIPING DETAILS SHOULD BE SHOWN ON THE DETAILED INSTRUMENT DRAWINGS. </div> <div> 5. REQUIRED SOLENOID VALVES AND AIR SUPPLIES ARE NOT SHOWN FOR PISTON OPERATED VALVES. AIR SUPPLIES ARE NOT SHOWN FOR CONTROL VALVES. </div> <div> 6. 1/2" CONVERTERS ARE NOT SHOWN BECAUSE INTEGRAL DIGITAL ELECTRO PNEUMATIC POSITIONS WILL BE UTILIZED FOR ALL THROTTLING CONTROL VALVES. </div> <div> 7. ALL INSTRUMENTATION TAG NUMBERS ARE PREFIXED BY DEPT NUMBER UNLESS OTHERWISE NOTED. EXAMPLE: TAG NUMBER FOR AN INSTRUMENT IN DEPT 36 SHOWN AS PG2059 IS ACTUALLY 36PG2059. </div> <div> TYPICAL FOR: LT-1303A LT-1303B LT-1307 LT-112 LT-2304A LT-2304B LT-3106 LT-3305 LT-5210A LT-5210B LT-5211A LT-5211B LT-5212A LT-5212B LT-7205A LT-7205B LT-7114A LT-7114B LT-7300-1A LT-7300-1B LT-7300-2A LT-7300-2B LT-7614A LT-7614B </div> <div> TYPICAL FOR: LT-5104A LT-5104B LT-5105A LT-5105B LT-2105-1 LT-2105-2 LT-2201-1 LT-2201-2 LT-3211 LT-3211A LT-7401A LT-7401B LT-7406A LT-7406B LT-7411 </div> </div>																			

NOTE:

REFERENCE DRAWINGS		REVISIONS				ENGINEERING RECORD		
NO.	TITLE	NO.	FIRM	DATE	DESCRIPTION	BY	CHK.	APP.
-	-	A	MSC	04/15/21	ISSUED FOR REVIEW	GJR	-	-
		B						
		C						
		D						
		E						
		F						

CLIENT LOGO	
MARS BASE PROCESS SERVICES UTILITY SERVICES	
P&ID LEGEND MONTGOMERY COUNTY, TEXAS	

PLT SCALE	N/A	DWG. NO.	D-XXXX-PO5-104
CAD. NO.	PID-104	REV	A