

CITY OF MASSILLON, OHIO
REGIONAL WASTEWATER TREATMENT PLANT
UPGRADE 2000
PROJECT NO. E9031

JUN 9 2003

DATE	SYM	REVISION RECORD	AUTH	DR	CK
3/29/02	A	FOR APPROVAL	CUST	RN	BS

INSTRUMENT IDENTIFICATION SYMBOLS

FIRST LETTER		SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYSIS		ALARM		
B BURNER FLAME		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C CONDUCTIVITY (ELECTRICAL)			CONTROL	
D DENSITY (MASS) OR SPECIFIC GRAVITY	DIFFERENTIAL			
E VOLTAGE (EMF)		PRIMARY ELEMENT		
F FLOW RATE	RATIO (FRACTION)			FAILURE
G GAGING (DIMENSIONAL)		GLASS	GATE	
H HAND (MANUALLY INITIATED)				HIGH OR OPENED
I CURRENT (ELECTRICAL)		INDICATE		
J POWER	SCAN			
K TIME OR TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L LEVEL		PILOT (LIGHT)		LOW OR CLOSED
M MOTOR OR MOTION				MIDDLE OR INTERMEDIATE
N USER'S CHOICE OR STATUS		USER'S CHOICE	USER'S CHOICE	ON, OPERATE OR RUNNING
O USER'S CHOICE OR TORQUE	OVERLOAD	ORIFICE (RESTRICTION)		
P PRESSURE OR VACUUM		POINT (TEST CONNECTION)		
Q QUANTITY OR EVENT	INTEGRATE OR TOTALIZE			
R RADIOACTIVITY		RECORD OR PRINT		
S SPEED OR FREQUENCY	SAFETY		SWITCH	OFF OR STOPPED
T TEMPERATURE			TRANSMIT	
U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V VIBRATION, MECH. MONITORING			VALVE, DAMPER OR LOUVER	
W WEIGHT OR FORCE		WELL		
X UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y EVENT STATE OR PRESSURE			RELAY OR COMPUTE DRIVE, ACTUATE, OR UNCLASSIFIED FINAL CONTROL ELEMENT	
Z POSITION				

LEGEND

	FUSE (X = AMPERE MELT RATING) (Y = FUSE REFERENCE NUMBER)
	FUSE WITH BLOWN FUSE INDICATOR (X = AMPERE MELT RATING) (Y = FUSE REFERENCE NUMBER)
	FUSE (X = AMPERE MELT RATING) (Y = FUSE REFERENCE NUMBER)
	RELAY CONTACT, NO
	RELAY CONTACT, NC
	CONTROL RELAY W/ DESIGNATION NUMBER (X)
	DISCONNECT SWITCH
	PUSHBUTTON, SINGLE CIRCUIT, NO
	PUSHBUTTON, SINGLE CIRCUIT, NC
	LIMIT SWITCH, NC
	LIMIT SWITCH, NO
	ELECTRICAL SIGNAL (PANEL)
	ELECTRICAL SIGNAL (FIELD)
	CONTROLNET NETWORK
	TERMINAL
	TERMINAL
	TERMINAL

	PUSH-TO-TEST INDICATOR LIGHT X = LENS COLOR R: RED G: GREEN A: AMBER B: BLUE W: WHITE YYY = PUSH TO TEST WIRE.
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INSTRUMENTATION TAG NUMBERING SYSTEM

	LLL = FUNCTIONAL INSTRUMENT FIELD MOUNTED DEVICE NNN = LOOP NUMBER
	LLL = FUNCTIONAL INSTRUMENT FILTER CONSOLE / PANEL MOUNTED INSTRUMENT OR DEVICE NNN = LOOP NUMBER
	LLL = FUNCTIONAL INSTRUMENT INTERIOR PANEL MOUNTED INSTRUMENT OR DEVICE NNN = LOOP NUMBER

	SWITCH - 2 POSITION SELECTOR
	SWITCH - 3 POSITION SELECTOR
	SWITCH - 4 POSITION SELECTOR
	SUBPANEL GROUND

ABBREVIATIONS

AC	= ALTERNATING CURRENT
AWG	= AMERICAN WIRE GAUGE
CKT	= CIRCUIT
DC	= DIRECT CURRENT
DWG	= DRAWING
XXX	= FUNCTION SUBSCRIPT FOR PUSHBUTTONS AND HAND SWITCHES
ACK	= ACKNOWLEDGE
EN	= EMERGENCY - NORMAL
HOA	= HAND-OFF-AUTO
HOR	= HAND-OFF-REMOTE
LR	= LOCAL-REMOTE
MOA	= MANUAL-OFF-AUTO
OA	= OPEN-AUTO
OC	= OPEN-CLOSE
OCA	= OPEN-CLOSE-AUTO
OO	= ON-OFF
OOC	= OPEN-OFF-CLOSE
OOCA	= OPEN-OFF-CLOSE-AUTO
T	= TEST
SG	= SHIELD GROUND
ECB	= ELECTRICAL CIRCUIT BREAKER

NOTE:
1. FINAL CORRECTIONS WILL BE MADE TO REFLECT
AS-BUILT/INSTALLED STATUS UPON COMPLETION
OF COMMISSIONING.

03/18/02 14:41

WIRE LUGS - NO ☒ YES ☐		RING ☐ LOCKING SPADE ☐	
INSULATION: NYLON ☐ PVC ☒			
WIRE SPECIFICATIONS:			
USAGE	SIZE	COLOR	INSUL
AC PANEL POWER	AWG #12	BLK.	THW/THHN
AC PANEL NEUTRAL	AWG #12	WHT.	THW/THHN
AC PANEL GROUND	AWG #12	GRN.	THW/THHN
AC CONTROL POWER	AWG #14	RED	THW/THHN
AC CONTROL NEUTRAL	AWG #14	WHT.	THW/THHN
AC FOREIGN	AWG #14	YELLOW	THW/THHN
DC POWER	AWG #16	BLUE	THW/THHN
DC CONTROL	AWG #16	BLUE	THW/THHN
SIGNAL/INSTRUMENTS	AWG #16	2 CONDUCTOR SHLD	THW/THHN



KOKOSING
CONSTRUCTION CO.
P.O. #
DUBLIN TECHNICAL
SYSTEMS INC.
PROJECT # 02040

TOLERANCES	DUBLIN TECHNICAL SYSTEMS, INC.	
±	CITY OF MASSILLON, OHIO REGIONAL WASTEWATER TREATMENT PLANT - UPGRADE 2000 PROJECT NO. E9031	SCALE NONE
DECIMAL ± .03	DRAWN BY RN	APPROVED BY BS
FRACTIONAL ± 1/32"	TITLE ELECTRICAL LEGENDS AND SYMBOLS	
ANGULAR ± 1°	DATE 3/18/02	DRAWING NUMBER DTSI - 02040 - 001