

ABBREVIATIONS

SYMBOL	DESCRIPTION
AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE
A/C	AERIAL CABLE
AFG	ABOVE FINISHED GRADE
AF	ABOVE FINISHED FLOOR
ANN	ANNUNCIATOR
ATS	AUTOMATIC TRANSFER SWITCH
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CM	CENTIMETER
CT	CURRENT TRANSFORMER
CP	CONTROL PANEL
DC	DIRECT CURRENT
DIA	DIAMETER
DP	DISTRIBUTION PANEL
EF	EXHAUST FAN
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
FT	FEET OR FOOT
FND CON	FOUNDATION CONCRETE
FU	FUSE
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFR	GROUND FAULT RELAY
GND	GROUND
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
IG	ISOLATED GROUND
JB	JUNCTION BOX
KVA	KILOVOLT AMPERE
KW	KILOWATTS
LP	LIGHTING PANEL
M	METER
MCC	MOTOR CONTROL CENTER
MM	MILLIMETER
MTG HT	MOUNTING HEIGHT
MTS	MANUAL TRANSFER SWITCH
NL	NIGHT LIGHT
NO, #	NUMBER
PB	PUSH BUTTON
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PT	POTENTIAL TRANSFORMER
RECP	RECEPTACLE
RGC	RIGID GALVANIZED CONDUIT
RVS	REDUCED VOLTAGE STARTER
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SEL SW	SELECTOR SWITCH
SF	SUPPLY FAN
SPARE	SPARE
SPACE	SPACE
SS	STAINLESS STEEL
STA	STATION
SWGR	SWITCHGEAR
TMP	TEMPORARY
TEMP	TEMPERATURE
T-STAT	THERMOSTAT
TEFC	FULLY ENCLOSED FAN COOLED
UH	UNIT HEATER
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF
XFER	TRANSFER
XFMR	TRANSFORMER
XP	EXPLOSION-PROOF (CLASS I, DIV 1, GROUP C & D UNLESS NOTED OTHERWISE)

SCHEMATIC DIAGRAM DEVICE DESIGNATIONS

SYMBOL	DESCRIPTION
A	AUTOMATIC
ACK	ACKNOWLEDGE
CL	CLOSE
F	FAST
FWD	FORWARD
HI	HIGH
H	HAND
INST	INSTANTANEOUS
L	LOW
LOS	LOCKOUT-STOP
LOC	LOCAL
HR	HAND RESET
HS	HIGH SPEED
LSP	LOW SPEED
N	NORMAL
NC	NORMALLY CLOSED
NCTC	NORMALLY CLOSED TIMED CLOSED
NCTO	NORMALLY CLOSED TIMED OPEN
NO	NORMALLY OPEN
NOTC	NORMALLY OPEN TIMED CLOSED
NOTO	NORMALLY OPEN TIMED OPEN
O	OFF
OP	OPEN
REM	REMOTE
REV	REVERSE
S	SLOW
A	AMBER
BL	BLUE
C	CLEAR
G	GREEN
R	RED
W	WHITE
Y	YELLOW

REVISIONS

NO.	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BOWMAN AVENUE PUMP STATION REHABILITATION ELECTRICAL

SYMBOL LIST

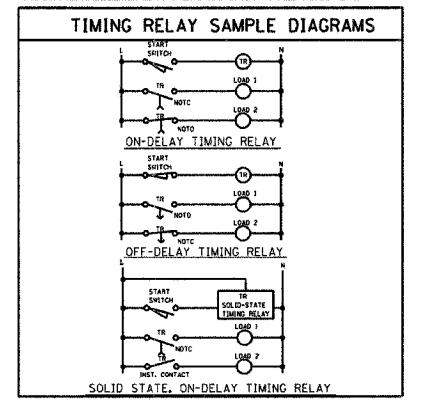
SCALE: AS SHOWN DRAWN BY: LMJ
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SYMBOL	DESCRIPTION
F1-20	FLUORESCENT FIXTURE (F1 INDICATES FIXTURE TYPE- REFER TO FIXTURE SCHEDULE - 20 INDICATES CIRCUIT No.2 ON SWITCH & N.T.Y.P.)
	FLUORESCENT FIXTURE, WALL MOUNTED
	INCANDESCENT, COMPACT FLUORESCENT OR HID FIXTURE
	WALL MOUNTED INCANDESCENT, COMPACT FLUORESCENT OR HID FIXTURE
	FLUORESCENT FIXTURE ON EMERGENCY CIRCUIT
	INCANDESCENT, COMPACT FLUORESCENT OR HID FIXTURE ON EMERGENCY CIRCUIT
	EXIT SIGN SINGLE SIDED (ABOVE DOOR)
	DIRECTIONAL EXIT SIGN - DOUBLE SIDED (DIRECTION AS INDICATED - TYP.)
	DIRECTIONAL EXIT SIGN - SINGLE SIDED
	BATTERY UNIT FOR EMERGENCY LIGHT
	BATTERY OPERATED EMERGENCY LIGHT
	EMERGENCY LIGHT, REMOTE HEAD
	ELECTRIC PULLBOX
	ELECTRIC JUNCTION BOX
	BARE GROUND CABLE
	EXPOSED CONDUIT
	CONCEALED CONDUIT IN FLOOR OR UNDERGROUND
	CONCEALED CONDUIT IN CEILING OR WALLS
LP-1-6	CONDUIT HOME-RUN TO PANEL AS INDICATED (LP-1-6 DENOTES PANEL DESIGNATION, SLASH LINES INDICATE QUANTITY OF WIRE, GROUND WIRE INDICATED AS LONG LINE WITH DOT, NEUTRAL WIRE INDICATED AS LONG LINE, PHASE WIRE AND SWITCH LEGS INDICATED AS SHORT LINES.)
	CABLE TRAY
	CONDUIT TURNED UP OR DOWN
	CONDUIT TERMINATED OR CAPPED
\$	SINGLE POLE TOGGLE SWITCH
\$2	DOUBLE POLE TOGGLE SWITCH
\$3	THREE-WAY TOGGLE SWITCH
\$4	FOUR-WAY TOGGLE SWITCH
\$K	KEY OPERATED SWITCH
\$T	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD PROTECTION
\$P	TOGGLE SWITCH WITH PILOT LIGHT
\$D	DIMMER SWITCH
	SINGLE RECEPTACLE
	DUPLEX RECEPTACLE
	QUADRUPLEX RECEPTACLE
GFCI	DUPLEX RECEPTACLE WITH GROUND FAULT CIRCUIT INTERRUPTER
IG	DUPLEX RECEPTACLE WITH ISOLATED GROUND

SYMBOL	DESCRIPTION
	SPECIAL PURPOSE RECEPTACLE
	TELEPHONE OUTLET
	DATA OUTLET
	FLUSH MOUNTED PANELBOARD (PANEL TYPE (LIGHTING PANEL) LP-1- UNIT NUMBER)
	SURFACE MOUNTED PANELBOARD
	MANUAL DISCONNECT SWITCH NONFUSED (RATING AS INDICATED)
	MANUAL DISCONNECT SWITCH FUSED (RATING AS INDICATED)
	MAGNETIC MOTOR STARTER (RATING AS INDICATED)
	COMBINATION MAGNETIC MOTOR & FUSED DISCONNECT SWITCH (RATING AS INDICATED)
	PUSHBUTTON STATION (1, 2 & 3 BUTTONS SHOWN)
	SINGLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
	DOUBLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
	ELECTRIC GENERATOR SET (KW RATING AS INDICATED)
	LIMIT SWITCH
FS	FLOAT SWITCH
P	PRESSURE SWITCH
FW	FLOW SWITCH
EP	ELECTRIC - PNEUMATIC SWITCH
PE	PNEUMATIC - ELECTRIC SWITCH
TO	TORQUE SWITCH
T	TRANSFORMER
F	FIRE ALARM PULL STATION
AV	AUDIO VISUAL ALARM
F	FIREALARM STROBE
S	SMOKE DETECTOR
H	HEAT DETECTOR
G	COMBUSTIBLE GAS DETECTOR
T	THERMOSTAT
UH	UNIT HEATER - HORIZONTAL TYPE
UH	UNIT HEATER - DOWNBLAST TYPE OR CENTRIFUGAL FAN TYPE
CUH	CABINET UNIT HEATER
	ALARM HORN

SYMBOL	DESCRIPTION
+	CONDUCTOR CONNECTION
+	NO CONNECTION
o	TERMINAL ON A DEVICE
+	NORMALLY OPEN CONTACT
#	NORMALLY CLOSED CONTACT
	SINGLE POLE, SINGLE THROW SWITCH
	SINGLE POLE, DOUBLE THROW SWITCH
	DOUBLE POLE, SINGLE THROW SWITCH
	DOUBLE POLE, DOUBLE THROW SWITCH
	THREE WAY ROTARY SWITCH
	NORMALLY CLOSED MOMENTARY PUSH BUTTON SWITCH
	NORMALLY OPEN MOMENTARY PUSH BUTTON SWITCH
	2 POSITION PUSH BUTTON (EXTRA CONTACT BLOCK)
	NORMALLY OPEN DOUBLE BREAK SINGLE THROW CONTACT BLOCK
	NORMALLY CLOSE DOUBLE BREAK SINGLE THROW CONTACT BLOCK
	DOUBLE BREAK DOUBLE THROW CONTACT BLOCK
	MUSHROOM HEAD PUSH BUTTON
	MAINTAINED CONTACT PUSHBUTTON
	2 OR 3 POSITIONS SELECTOR SWITCH (CLOSED CONTACTS INDICATED BY "X")
	MULTI-POSITION, MULTI-CONTACT SELECTOR SWITCH (CLOSED CONTACTS INDICATED BY "X")
	TEMPERATURE SWITCH - CLOSSES ON RISING TEMPERATURE
	TEMPERATURE SWITCH - OPENS ON RISING TEMPERATURE
	PRESSURE SWITCH - CLOSSES ON RISING PRESSURE
	PRESSURE SWITCH - OPENS ON RISING PRESSURE
	DIFFERENTIAL PRESSURE SWITCH - CLOSSES WHEN THE DIFFERENTIAL IN PRESSURE BETWEEN TWO DIAPHRAGMS EXCEEDS A SET POINT
	DIFFERENTIAL PRESSURE SWITCH - OPENS WHEN THE DIFFERENTIAL IN PRESSURE BETWEEN TWO DIAPHRAGMS EXCEEDS A SET POINT
	TIME DELAY RELAY SWITCH - CLOSSES ON TIME DELAY AFTER ENERGIZATION OF RELAY COIL
	TIME DELAY RELAY SWITCH - OPENS ON TIME DELAY AFTER ENERGIZATION OF RELAY COIL
	TIME DELAY RELAY SWITCH - CLOSSES ON TIME DELAY AFTER DE-ENERGIZATION OF RELAY COIL
	TIME DELAY RELAY SWITCH - OPENS ON TIME DELAY AFTER DE-ENERGIZATION OF RELAY COIL
	LIMIT SWITCH - NORMALLY OPEN
	LIMIT SWITCH - NORMALLY CLOSED
	LIMIT SWITCH - NORMALLY OPEN HELD CLOSED

SYMBOL	DESCRIPTION
	LIMIT SWITCH - NORMALLY CLOSED HELD OPEN
	LEVEL SWITCH - CLOSSES ON RISING LEVEL
	LEVEL SWITCH - OPENS ON RISING LEVEL
	FLOW SWITCH - CLOSSES ON FLOW
	FLOW SWITCH - OPENS ON FLOW
	TRANSFORMER - (TYPE AND RATING AS INDICATED)
	CONNECTION TO GROUND
	LIGHTNING OR SURGE ARRESTER
	THERMAL OVERLOAD ELEMENT
	FUSE
	CIRCUIT BREAKER
	HEATING ELEMENT
	SOLENOID VALVE
COIL	C - CLOSE CR - CONTROL RELAY F - FAST OR FORWARD M - MOTOR STARTER MX - MOTOR STARTER AUXILIARY RELAY N - NORMAL O - OPEN OL - OVERLOAD RELAY R - REVERSE S - SLOW TD - TIME DELAY RELAY TDAE - TIME DELAY AFTER ENERGIZATION TDAO - TIME DELAY AFTER DE-ENERGIZATION
	INDICATOR LIGHT (PUSH TO TEST TYPE)
	DEVICE ENCLOSURE
ANN	ANNUNCIATOR
COUNT	COUNTER
ETM	ELAPSED TIME METER
TMR	ELECTRONIC TIMER
TOT	TOTALIZER



SYMBOL	DESCRIPTION
	POWER CIRCUIT
	EQUIPMENT ENCLOSURE
	CONTROL OR INTERLOCK CIRCUIT
	BUS (RATING AS INDICATED)
	CONDUCTOR CONNECTION
	DRAWOUT DEVICE
	DRAWOUT MOLDED CASE CIRCUIT BREAKER (600V, THERMAL-MAGNETIC TYPE, UNLESS NOTED OTHERWISE) TRIP SETTING (TYP.) FRAME SIZE (TYP.)
	MOLDED CASE CIRCUIT BREAKER (600V, THERMAL-MAGNETIC TYPE, UNLESS NOTED OTHERWISE)
	AIR CIRCUIT BREAKER
	INSULATED CASE CIRCUIT BREAKER
	FUSE (RATING AS INDICATED)
	DRAWOUT FUSE (RATING AS INDICATED)
	FUSE - SWITCH (RATING AS INDICATED)
	NON-FUSIBLE DISCONNECT SWITCH
	THERMAL OVERLOAD ELEMENT
	INSTANTANEOUS CONTACT
	CONNECTION TO GROUND
	LIGHTNING OR SURGE ARRESTER
	CURRENT TRANSFORMER-DOUGHNUT TYPE (QUANTITY, RATIO AND RATING AS INDICATED)
	CURRENT TRANSFORMER-WINDOW TYPE (RATIO AND RATING AS INDICATED)
	POTENTIAL TRANSFORMER (QUANTITY, RATIO AND RATING AS INDICATED)
	CAPACITOR
	BATTERY
AS	AMMETER SWITCH
VS	VOLTMETER SWITCH
SS	SELECTOR SWITCH
A	AMMETER (RANGE AS INDICATED)
V	VOLTMETER (RANGE AS INDICATED)
KWH	KILOWATT-HOUR METER
K-K	KIRK-KEY INTERLOCK
GFR	GROUND FAULT RELAY

SYMBOL	DESCRIPTION
	SINGLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
	DOUBLE SPEED ELECTRIC MOTOR (KW OR HP RATING AS INDICATED)
	ELECTRIC GENERATOR SET (TYPE & KW RATING AS INDICATED)
	TRANSFER SWITCH (TYPE AND RATING AS INDICATED)
	SINGLE SPEED NON-REVERSING MANUAL STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	SINGLE SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	COMBINATION CIRCUIT BREAKER & SINGLE SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	COMBINATION CIRCUIT BREAKER & SINGLE SPEED REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	COMBINATION CIRCUIT BREAKER & TWO SPEED NON-REVERSING MAGNETIC STARTER (NEMA OR IEC DESIGNATION AS SPECIFIED OR SHOWN)
	REDUCED VOLTAGE STARTER, AUTO TRANSFORMER TYPE (NEMA OR IEC DESIGNATIONS AS SPECIFIED OR SHOWN)
	REDUCED VOLTAGE STARTER, WYE-DELTA TYPE (NEMA OR IEC DESIGNATIONS AS SPECIFIED OR SHOWN)
	REDUCED VOLTAGE STARTER, PRIMARY-RESISTOR TYPE (NEMA OR IEC DESIGNATIONS AS SPECIFIED OR SHOWN)
	SOLID STATE REDUCED VOLTAGE STARTER

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