

CONTROL PANEL DIGITAL INPUTS(TBDI)					
INTO CONTROL PANEL		OUT OF CONTROL PANEL		DESCRIPTION OF INPUTS	
DESTINATION	WIRE #	TERM #	WIRE #	ORIGINATION	
PUMP1 CALL RELAYS	1	1	CP-1	M1A-00-6	PUMP 1 STARTER CONTACT NC
PUMP1 CALL RELAYS	31	31	CP-31	M1A-00-6A	PUMP 1 STARTER CONTACT NC
PUMP2 CALL RELAYS	31	31	CP-31	M2A-00-6	PUMP 2 STARTER CONTACT NC
PUMP2 CALL RELAYS	31A	31A	CP-31A	M2A-00-6A	PUMP 2 STARTER CONTACT NC
PUMP3 CALL RELAYS	31A	31A	CP-31A	M3A-00-6	PUMP 3 STARTER CONTACT NC
PUMP3 CALL RELAYS	31B	31B	CP-31B	M3A-00-6A	PUMP 3 STARTER CONTACT NC
FLOAT 1 RELAY	72	72	CP-72	FLOAT 1	HIGH WATER ALARM
FLOAT 1 RELAY	72A	72A	CP-72A	FLOAT 1	HIGH WATER ALARM
FLOAT 2 RELAY	77	77	CP-77	FLOAT 2	START STANDBY PUMP
FLOAT 2 RELAY	77A	77A	CP-77A	FLOAT 2	START STANDBY PUMP
FLOAT 3 RELAY	82	82	CP-82	FLOAT 3	START LAG PUMP
FLOAT 3 RELAY	82A	82A	CP-82A	FLOAT 3	START LAG PUMP
FLOAT 4 RELAY	87	87	CP-87	FLOAT 4	START LEAD PUMP
FLOAT 4 RELAY	87A	87A	CP-87A	FLOAT 4	START LEAD PUMP
FLOAT 5 RELAY	92	92	CP-92	FLOAT 5	START LF PUMP
FLOAT 5 RELAY	92A	92A	CP-92A	FLOAT 5	START LF PUMP
FLOAT 6 RELAY	97	97	CP-97	FLOAT 6	STOP MAIN PUMPS, START LF PUMP
FLOAT 6 RELAY	97A	97A	CP-97A	FLOAT 6	STOP MAIN PUMPS, START LF PUMP
FLOAT 7 RELAY	102	102	CP-102	FLOAT 7	STOP LF PUMP
FLOAT 7 RELAY	102A	102A	CP-102A	FLOAT 7	STOP LF PUMP
FLOAT 8 RELAY	107	107	CP-107	FLOAT 8	LOW WATER ALARM
FLOAT 8 RELAY	107A	107A	CP-107A	FLOAT 8	LOW WATER ALARM
LEAD LIGHT	1	1	CP-1	SP-00-P14X	SCADA LEAD CALL
LEAD LIGHT	173	173	CP-173	SP-00-P14	SCADA LEAD CALL
LAG LIGHT	1	1	CP-1	SP-00-P15X	SCADA LAG CALL
LAG LIGHT	174	174	CP-174	SP-00-P15	SCADA LAG CALL
STAND-BY LIGHT	1	1	CP-1	SP-00-P18X	SCADA STBY CALL
STAND-BY LIGHT	175	175	CP-175	SP-00-P18	SCADA STBY CALL
LF LIGHT	1	1	CP-1	SP-00-P19X	SCADA LF LEAD CALL
LF LIGHT	176	176	CP-176	SP-00-P19	SCADA LF LEAD CALL
RELAY ROL1	1	1	CP-1	M1A-00-00	PUMP 1 OVERLOAD
RELAY ROL1	259A	259A	CP-259A	M1A-00-0E	PUMP 1 OVERLOAD
RELAY ROL2	1	1	CP-1	M2A-00-00	PUMP 2 OVERLOAD
RELAY ROL2	262A	262A	CP-262A	M2A-00-0E	PUMP 2 OVERLOAD
RELAY ROL3	1	1	CP-1	M3A-00-00	PUMP 3 OVERLOAD
RELAY ROL3	265A	265A	CP-265A	M3A-00-0E	PUMP 3 OVERLOAD
RELAY ROL4	1	1	CP-1	M4A-00-00	LF PUMP 4 OVERLOAD
RELAY ROL4	268A	268A	CP-268A	M4A-00-0E	LF PUMP 4 OVERLOAD
ALARM AN11 IN	274	274	CP-274	M1A-00-30A	PUMP 1 MOIST/HIGH TEMP
ALARM AN11 IN	275	275	CP-275	M1A-00-30B	PUMP 1 MOIST/HIGH TEMP
ALARM AN12 IN	277	277	CP-277	M2A-00-30A	PUMP 2 MOIST/HIGH TEMP
ALARM AN12 IN	278	278	CP-278	M2A-00-30B	PUMP 2 MOIST/HIGH TEMP
ALARM AN13 IN	280	280	CP-280	M3A-00-30A	PUMP 3 MOIST/HIGH TEMP
ALARM AN13 IN	281	281	CP-281	M3A-00-30B	PUMP 3 MOIST/HIGH TEMP
ALARM AN14 IN	283	283	CP-283	M4A-00-30A	LF PUMP 4 MOIST/HIGH TEMP
ALARM AN14 IN	284	284	CP-284	M4A-00-30B	LF PUMP 4 MOIST/HIGH TEMP
ALARM AN18 IN	307	307	CP-307	SP-00-32	DISCHARGE CHAMBER BUBBLER FAILURE
ALARM AN18 IN	309	309	CP-309	SP-00-32X	DISCHARGE CHAMBER BUBBLER FAILURE
ALARM AN19 IN	310	310	CP-310	SP-00-29	DISCHARGE CHAMBER FLOODED
ALARM AN19 IN	312	312	CP-312	SP-00-29X	DISCHARGE CHAMBER FLOODED
ALARM AN20 IN	301	301	CP-301	SP-00-21	PRIMARY BUBBLER FAILURE
ALARM AN20 IN	303	303	CP-303	SP-00-21X	PRIMARY BUBBLER FAILURE
ALARM AN15 IN	286	286	CP-286	SP-00-22	SECONDARY BUBBLER FAILURE
ALARM AN15 IN	288	288	CP-288	SP-00-22X	SECONDARY BUBBLER FAILURE
ALARM AN21 IN	331	331	CP-331	SP-00-P26	TRANSFER SWITCH FAILURE
ALARM AN21 IN	333	333	CP-333	SP-00-P26X	TRANSFER SWITCH FAILURE
ALARM AN22 IN	334	334	CP-334	TRANSFER SWITCH	UTILITY POWER FAILURE
ALARM AN22 IN	336	336	CP-336	TRANSFER SWITCH	UTILITY POWER FAILURE
ALARM AN23 IN					ALARM BUZZER
ALARM AN23 IN					ALARM BUZZER
ALARM AN24 IN	340	340	CP-340	SP-00-P23	SCADA PANEL AC POWER FAILURE RELAY
ALARM AN24 IN	342	342	CP-342	SP-00-P23X	SCADA PANEL AC POWER FAILURE RELAY
ALARM AN25 IN	343	343	CP-343	SP-00-P25	SCADA PANEL ALARM
ALARM AN25 IN	345	345	CP-345	SP-00-P25X	SCADA PANEL ALARM
ALARM AN26 IN	346	346	CP-346	FIRE ALARM PANEL	FIRE ALARM
ALARM AN26 IN	348	348	CP-348	FIRE ALARM PANEL	FIRE ALARM
ALARM AN27 IN	349	349	CP-349	AEGIS PANEL	INTRUSION ALARM
ALARM AN27 IN	351	351	CP-351	AEGIS PANEL	INTRUSION ALARM
ALARM AN28 IN	352	352	CP-352	SP-00-P27	FLOAT FAILURE
ALARM AN28 IN	354	354	CP-354	SP-00-P27X	FLOAT FAILURE
ALARM AN29 IN	355	355	CP-355	M8C(M8D)-00-12A	VALVE/GATE IN NON-DISCHARGE MODE
ALARM AN29 IN	355A	355A	CP-355A	M8C(M8D)-00-12B	VALVE/GATE IN NON-DISCHARGE MODE
ALARM AN30 IN	358	358	CP-358	SP-00-P24	CENTRAL PUMP TEST
ALARM AN30 IN	360	360	CP-360	SP-00-P24X	CENTRAL PUMP TEST
PUMP 1 FAILURE RELAY	418	418	CP-418	M1A-00-5B	PUMP 1 STARTER CONTACT NC
PUMP 1 FAILURE RELAY	418A	418A	CP-418A	M1A-00-5C	PUMP 1 STARTER CONTACT NC
PUMP 2 FAILURE RELAY	419	419	CP-419	M2A-00-5B	PUMP 2 STARTER CONTACT NC
PUMP 2 FAILURE RELAY	419A	419A	CP-419A	M2A-00-5C	PUMP 2 STARTER CONTACT NC
PUMP 3 FAILURE RELAY	420	420	CP-420	M3A-00-5B	PUMP 3 STARTER CONTACT NC
PUMP 3 FAILURE RELAY	420A	420A	CP-420A	M3A-00-5C	PUMP 3 STARTER CONTACT NC
LF PUMP 4 FAILURE RELAY	421	421	CP-421	M4A-00-6	LF PUMP 4 STARTER CONTACT NC
LF PUMP 4 FAILURE RELAY	421A	421A	CP-421A	M4A-00-6A	LF PUMP 4 STARTER CONTACT NC
PUMP 1 FAIL TO STOP	162	162	CP-162	M1A-00-5A	PUMP 1 STARTER CONTACT NO
PUMP 1 FAIL TO STOP	162A	162A	CP-162A	M1A-00-5B	PUMP 1 STARTER CONTACT NO
PUMP 2 FAIL TO STOP	162	162	CP-162	M2A-00-5A	PUMP 2 STARTER CONTACT NO
PUMP 2 FAIL TO STOP	162A	162A	CP-162A	M2A-00-5B	PUMP 2 STARTER CONTACT NO
PUMP 3 FAIL TO STOP	162	162	CP-162	M3A-00-5A	PUMP 3 STARTER CONTACT NO
PUMP 3 FAIL TO STOP	162A	162A	CP-162A	M3A-00-5B	PUMP 3 STARTER CONTACT NO
LF PUMP 4 FAIL TO STOP	162	162	CP-162	M4A-00-7B	LF PUMP 4 STARTER CONTACT NO
LF PUMP 4 FAIL TO STOP	162A	162A	CP-162A	M4A-00-7C	LF PUMP 4 STARTER CONTACT NO

CONTROL PANEL DIGITAL INPUTS(TBDI)					
INTO CONTROL PANEL		OUT OF CONTROL PANEL		DESCRIPTION OF INPUTS	
DESTINATION	WIRE #	TERM #	WIRE #	ORIGINATION	
ALARM AN31 IN	337	337	CP-337		EMERGENCY GENERATOR FAILURE
ALARM AN31 IN	339	339	CP-339		EMERGENCY GENERATOR FAILURE
ALARM AN32 IN	298	298	CP-298		COMBUSTIBLE GAS PRESENT
ALARM AN32 IN	300	300	CP-300		COMBUSTIBLE GAS PRESENT
ALARM AN33 IN	295	295	CP-295		HIGH DRY PIT SUMP LEVEL
ALARM AN33 IN	297	297	CP-297		HIGH DRY PIT SUMP LEVEL
ALARM AN34 IN	292	292	CP-292		LOW WATER LEVEL
ALARM AN34 IN	294	294	CP-294		LOW WATER LEVEL
ALARM AN35 IN	289	289	CP-289		HIGH WATER LEVEL
ALARM AN35 IN	291	291	CP-291		HIGH WATER LEVEL
ALARM AN16 IN					SPARE
ALARM AN16 IN					SPARE
ALARM AN17 IN	289	289	CP-289		GAS MONITOR FAILURE
ALARM AN17 IN	291	291	CP-291		GAS MONITOR FAILURE

CONTROL PANEL DIGITAL OUTPUTS - TBD0					
INTO CONTROL PANEL		OUT OF CONTROL PANEL		DESCRIPTION OF INPUTS	
ORIGINATION	WIRE #	TERM #	WIRE #	DESTINATION	
RELAY MP1	4	4	M1A-9	M1A-DI-9	PUMP 1 FLOAT CALL
RELAY MP1	4A	4A	M1A-2	M1A-DI-2	PUMP 1 FLOAT CALL
RELAY MP2	10	10	M2A-9	M2A-DI-9	PUMP 2 FLOAT CALL
RELAY MP2	10A	10A	M2A-2	M2A-DI-2	PUMP 2 FLOAT CALL
RELAY MP3	16	16	M3A-9	M3A-DI-9	PUMP 3 FLOAT CALL
RELAY MP3	16A	16A	M3A-2	M3A-DI-2	PUMP 3 FLOAT CALL
RELAY PLF4	32	32	M4A-9	M4A-DI-9	LF PUMP 4 FLOAT CALL
RELAY PLF4	32A	32A	M4A-2	M4A-DI-2	LF PUMP 4 FLOAT CALL
MP SEQ. SEL. SWITCH	17	17	SP-S40	SP-DI-S40	MP MANUAL SEQ. SW. 1-2-3
MP SEQ. SEL. SWITCH	17A	17A	SP-S40C	SP-DI-S40C	MP MANUAL SEQ. SW. 1-2-3
MP SEQ. SEL. SWITCH	19	19	SP-S41	SP-DI-S41	MP MANUAL SEQ. SW. 1-3-2
MP SEQ. SEL. SWITCH	19A	19A	SP-S41C	SP-DI-S41C	MP MANUAL SEQ. SW. 1-3-2
MP SEQ. SEL. SWITCH	21	21	SP-S42	SP-DI-S42	MP MANUAL SEQ. SW. 2-3-1
MP SEQ. SEL. SWITCH	21A	21A	SP-S42C	SP-DI-S42C	MP MANUAL SEQ. SW. 2-3-1
MP SEQ. SEL. SWITCH	23	23	SP-S43	SP-DI-S43	MP MANUAL SEQ. SW. 2-1-3
MP SEQ. SEL. SWITCH	23A	23A	SP-S43C	SP-DI-S43C	MP MANUAL SEQ. SW. 2-1-3
MP SEQ. SEL. SWITCH	25	25	SP-S44	SP-DI-S44	MP MANUAL SEQ. SW. 3-1-2
MP SEQ. SEL. SWITCH	25A	25A	SP-S44C	SP-DI-S44C	MP MANUAL SEQ. SW. 3-1-2
MP SEQ. SEL. SWITCH	27	27	SP-S45	SP-DI-S45	MP MANUAL SEQ. SW. 3-2-1
MP SEQ. SEL. SWITCH	27A	27A	SP-S45C	SP-DI-S45C	MP MANUAL SEQ. SW. 3-2-1
RELAY MPFS	165	165	SP-S53	SP-DI-S53	MAIN PUMP FAIL TO STOP
RELAY MPFS	165A	165A	SP-S53C	SP-DI-S53C	MAIN PUMP FAIL TO STOP
SPARE	166	166			
SPARE	166A	166A			
RELAY FR1	217	217	SP-S54	SP-DI-S54	HIGH WATER ALARM-FLOAT
RELAY FR1	217A	217A	SP-S54C	SP-DI-S54C	HIGH WATER ALARM-FLOAT
RELAY FR1	217	217	SP-S54	SP-DI-S54	HIGH WATER ALARM-FLOAT
RELAY FR1	217A	217A	SP-S54C	SP-DI-S54C	HIGH WATER ALARM-FLOAT
RELAY FR2	218	218	SP-S55	SP-DI-S55	START STANDBY LEVEL-FLOAT
RELAY FR2	218A	218A	SP-S55C	SP-DI-S55C	START STANDBY LEVEL-FLOAT
RELAY FR3	219	219	SP-S56	SP-DI-S56	START LAG LEVEL-FLOAT
RELAY FR3	219A	219A	SP-S56C	SP-DI-S56C	START LAG LEVEL-FLOAT
RELAY FR4	220	220	SP-S57	SP-DI-S57	START LEAD LEVEL-FLOAT
RELAY FR4	220A	220A	SP-S57C	SP-DI-S57C	START LEAD LEVEL-FLOAT
RELAY FR5	221	221	SP-S58	SP-DI-S58	STOP MAIN PUMP, START LF LEVEL-FLOAT
RELAY FR5	221A	221A	SP-S58C	SP-DI-S58C	STOP MAIN PUMP, START LF LEVEL-FLOAT
RELAY FR6	222	222	SP-S59	SP-DI-S59	MAIN PUMP FAIL TO STOP LEVEL
RELAY FR6	222A	222A	SP-S59C	SP-DI-S59C	MAIN PUMP FAIL TO STOP LEVEL
RELAY FR7	223	223	SP-S60	SP-DI-S60	STOP LF PUMP LEVEL-FLOAT
RELAY FR7	223A	223A	SP-S60C	SP-DI-S60C	STOP LF PUMP LEVEL-FLOAT
RELAY FR8	224	224	SP-S61	SP-DI-S61	LOW WATER LEVEL ALARM
RELAY FR8	224A	224A	SP-S61C	SP-DI-S61C	LOW WATER LEVEL ALARM
SPARE	229	229	SP-S64	SP-DI-S64	SPARE
SPARE	229A	229A	SP-S64C	SP-DI-S64C	SPARE
SPARE	229B	229B	SP-S65	SP-DI-S65	SPARE
SPARE	229C	229C	SP-S65C	SP-DI-S65C	SPARE
RELAY ROL1	399	399	SP-S27	SP-DI-S27	PUMP 1 OVERLOAD TRIP
RELAY ROL1	399A	399A	SP-S27C	SP-DI-S27C	PUMP 1 OVERLOAD TRIP
RELAY ROL2	400	400	SP-S28	SP-DI-S28	PUMP 2 OVERLOAD TRIP
RELAY ROL2	400A	400A	SP-S28C	SP-DI-S28C	PUMP 2 OVERLOAD TRIP
RELAY ROL3	401	401	SP-S29	SP-DI-S29	PUMP 3 OVERLOAD TRIP
RELAY ROL3	401A	401A	SP-S29C	SP-DI-S29C	PUMP 3 OVERLOAD TRIP
ALARM ROL4	402	402	SP-S32	SP-DI-S32	LF PUMP 4 OVERLOAD TRIP
ALARM ROL4	402A	402A	SP-S32C	SP-DI-S32C	LF PUMP 4 OVERLOAD TRIP
RELAY RAA	398	398	SP-S0	SP-DI-S0	ALARM ACKNOWLEDGE
RELAY RAA	398A	398A	SP-S0C	SP-DI-S0C	ALARM ACKNOWLEDGE
RELAY FHL	462C	462C	AIAP-5	AEGIS-DI-5	HIGH WATER ALARM-FLOAT
RELAY FHL	462	462	AIAP-C	AEGIS-DI-C	HIGH WATER ALARM-FLOAT
RELAY FLWL	462E	462E	AIAP-7	AEGIS-DI-7	LOW WATER ALARM-FLOAT
RELAY FLWL	462	462	AIAP-C	AEGIS-DI-C	LOW WATER ALARM-FLOAT

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PUMP STATION NO. 48  
REHABILITATION  
CONTROL PANEL  
TERMINAL SCHEDULE

SCALE: N/A  
DATE: 03-10-11

DRAWN BY: KCC/HFF  
CHECKED BY: KCC/MS

