

**TRAVERSE CITY LIGHT & POWER DEPARTMENT
GRAND TRAVERSE SUBSTATION SWITCHYARD**

CONTROL PANEL NO.1 (EXTERIOR)

NO.	QTY.	SIZE		COLOR		CHAR	LINES	* INDICATES NEW LINE OF ENGRAVING TAG TO BE ENGRAVED WITH
		L	W	CHAR	PLATE			
P1	2	4"	2"	W	B	1/4"	3	CONTROL PANEL NO.1 * 69KV BUS NO.2 & BREAKER FAILURE * RELAYING & COMM
2	1	3"	1"	W	B	5/32"	3	69KV BUS * DIFF. & BKR. SPARING RELAY * SEL311C
3	1	3"	1"	W	B	5/32"	3	SEL3530 * REAL-TIME AUTOMATION * CONTROLLER (RTAC)
4	1	3"	1"	W	B	5/32"	3	69KV BUS * SYNC SCOPE
5	1	3"	1"	W	B	5/32"	3	LIGHTS ON INDICATES * 69KV BUS NO.2 * 3Ø POTENTIAL HEALTHY
6	1	3"	1"	W	B	5/32"	3	69KV BUS NO.2 * METERING POTENTIAL * VOLTMETER
7	1	3"	1"	W	B	5/32"	3	SEL2523 * SUBSTATION * ANNUNCIATOR
8	1	3"	1"	W	B	5/32"	3	69KV BUS * DIFF & SPARING TRIP * (86B)
9	1	3"	1"	W	B	5/32"	3	69KV BUS * BREAKER FAILURE TRIP * (86BF)
10	1	3"	1"	W	B	5/32"	3	69KV BUS * DIFF CURR & POT * 1TS1
11	1	3"	1"	W	B	5/32"	3	69KV BUS * RELAY DC CONTROL * 1TS2
12	1	3"	1"	W	B	5/32"	3	69KV BUS * METERING CURR & POT * 1TS3
13	1	3"	1"	W	B	5/32"	3	86BF LOR * TRIPS & BLOCKS * 1TS4
14	1	3"	1"	W	B	5/32"	3	86B LOR * TRIPS & BLOCKS * 1TS5
15	1	3"	1"	W	B	5/32"	3	GV722 * DC CONTROL * 1TS6

NOTE: SECOND P1 TAG TO BE PLACE ON BACK OF PANEL

**TRAVERSE CITY LIGHT & POWER DEPARTMENT
GRAND TRAVERSE SUBSTATION SWITCHYARD
CONTROL PANEL NO.2 (EXTERIOR)**

NO.	QTY.	SIZE		COLOR		CHAR	LINES	* INDICATES NEW LINE OF ENGRAVING TAG TO BE ENGRAVED WITH
		L	W	CHAR	PLATE			
P2	2	4"	2"	W	B	1/4"	3	CONTROL PANEL NO.2 * TRANSFORMER NO.2 * RELAYING & CONTROL
2	1	3"	1"	W	B	5/32"	3	ITC KEYSTONE LINE * 138KV RELAYING * SEL-311L-A
3	1	3"	1"	W	B	5/32"	3	ITC KEYSTONE LINE * 138KV RELAYING * SEL-311L-B
4	1	3"	1"	W	B	5/32"	3	TRANSFORMER RELAYING * RELAY SEL587/501 * 87T2
5	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * 138KV C.S. GV329 * REMOTE/LOCAL
6	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * LTC TAP * POSITION INDICATOR
7	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * 138KV C.S. GV329 * CONTROL SWITCH
8	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * LTC CONTROL * REMOTE/LOCAL
9	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * LTC CONTROL SWITCH * RAISE/LOWER
10	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * LTC SELECTOR SWITCH * AUTO/MANUAL
11	1	3"	1"	W	B	5/32"	3	LIGHTS ON INDICATES * T2 LTC POTENTIAL * SENSING HEALTHY
12	1	3"	1"	W	B	5/32"	3	LIGHTS ON INDICATES * T2 SYNC POTENTIAL * SENSING HEALTHY
13	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * BREAKER GV222 * RELAY SEL351S
14	1	3"	1"	W	B	5/32"	3	BREAKER GV222 * TRIP/CLOSE * PUSH BUTTONS
15	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * 138KV MOAB GV321 * CONTROL SWITCH
16	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * MULTI FUNCTION * METER (SECONDARY)
17	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * PROTECTIVE TRIP * (86T2)
18	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * PRI DIFF CURR * 2TS1
19	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * SEC DIFF CURR * 2TS2
20	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * DC CONTROL * 2TS3
21	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * PRI OC CURR * 2TS4
22	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * PRI OC CONTROL * 2TS5
23	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * SEC DC CONTROL * 2TS6
24	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * SEC CURR & POT * 2TS7
25	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * SEC DC CONTROL * 2TS8
26	1	3"	1"	W	B	5/32"	3	TRANSFORMER NO.2 * METERING CURR & POT * 2TS9
27	1	3"	1"	W	B	5/32"	3	ITC LINE RELAY B * RELAYING CURR & POT * 2TS10
28	1	3"	1"	W	B	5/32"	3	ITC LINE RELAYING * DC CONTROL * 2TS11
29	1	3"	1"	W	B	5/32"	3	ITC LINE RELAY A * RELAYING CURR & POT * 2TS12

NOTE: SECOND P2 TAG TO BE PLACE ON BACK OF PANEL

**TRAVERSE CITY LIGHT & POWER DEPARTMENT
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CONTROL PANEL NO.3 (EXTERIOR)**

NO.	QTY.	SIZE		COLOR		CHAR	LINES	* INDICATES NEW LINE OF ENGRAVING TAG TO BE ENGRAVED WITH
		L	W	CHAR	PLATE			
P3	2	4"	2"	W	B	1/4"	3	CONTROL PANEL NO.3 * 69KV LINE GV422 * RELAYING & CONTROL
2	1	3"	1"	W	B	5/32"	3	SEL2407 * SUBSTATION * SATELLITE CLOCK
3	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * MULTI FUNCTION * METER
4	1	3"	1"	W	B	5/32"	3	LIGHT ON INDICATES * 69KV LINE GV422 * AØ POTENTIAL HEALTHY
5	1	3"	1"	W	B	5/32"	3	LIGHTS ON INDICATES * PRIMARY RELAYING * 3Ø POTENTIAL HEALTHY
6	1	3"	1"	W	B	5/32"	3	LIGHTS ON INDICATES * BACKUP RELAYING * 3Ø POTENTIAL HEALTHY
7	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * PRIMARY RELAY * SEL311C
8	1	3"	1"	W	B	5/32"	3	BREAKER GV422 * TRIP/CLOSE * PUSH BUTTONS
9	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * BACK UP RELAY * SEL311C
10	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * SEL311C (PRI.) CURR & POT * 3TS1
11	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * SEL311C (PRI.) DC CONTROL * 3TS2
12	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * METERING CURR & POT * 3TS3
13	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * SEL311C (B.U.) CURR & POT * 3TS4
14	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * SEL311C (B.U.) DC CONTROL * 3TS5
15	1	3"	1"	W	B	5/32"	3	69KV LINE GV422 * DC CONTROL * 3TS6

NOTE: SECOND P3 TAG TO BE PLACE ON BACK OF PANEL

**TRAVERSE CITY LIGHT & POWER DEPARTMENT
GRAND TRAVERSE SUBSTATION SWITCHYARD**

CONTROL PANEL NO.4 (EXTERIOR)

NO.	QTY.	SIZE		COLOR		CHAR	LINES	* INDICATES NEW LINE OF ENGRAVING TAG TO BE ENGRAVED WITH
		L	W	CHAR	PLATE			
P4	2	4"	2"	W	B	1/4"	3	CONTROL PANEL NO.4 * 69KV LINE GV522 * RELAYING & CONTROL
2	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * MULTI FUNCTION * METER
3	1	3"	1"	W	B	5/32"	3	LIGHT ON INDICATES * 69KV LINE GV522 * AØ POTENTIAL HEALTHY
4	1	3"	1"	W	B	5/32"	3	LIGHTS ON INDICATES * PRIMARY RELAYING * 3Ø POTENTIAL HEALTHY
5	1	3"	1"	W	B	5/32"	3	LIGHTS ON INDICATES * BACKUP RELAYING * 3Ø POTENTIAL HEALTHY
6	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * PRIMARY RELAY * SEL311C
7	1	3"	1"	W	B	5/32"	3	BREAKER GV522 * TRIP/CLOSE * PUSH BUTTONS
8	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * BACK UP RELAY * SEL311C
9	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * SEL311C (PRI.) CURR & POT * 4TS1
10	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * SEL311C (PRI.) DC CONTROL * 4TS2
11	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * METERING CURR & POT * 4TS3
12	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * SEL311C (B.U.) CURR & POT * 4TS4
13	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * SEL311C (B.U.) DC CONTROL * 4TS5
14	1	3"	1"	W	B	5/32"	3	69KV LINE GV522 * DC CONTROL * 4TS6

NOTE: SECOND P4 TAG TO BE PLACE ON BACK OF PANEL