



LINE LEGEND

---	CONTROL/SWGR CUBICLES
---	NEUTRAL/LINE CUBICLE
---	HIGH VOLTAGE
---	CONTROL WIRING
---	TRIP LINE

NOTES

SWITCHGEAR CONTROLS & VOLTAGE REGULATOR WIRED FOR A-B-C PHASE ROTATION.

IF REDUNDANCY FOR SITG FUNCTION IS REQUIRED, SEA BASLER BEI-50/SIM-204 RELAYS WILL BE UTILIZED.

ALL RELAY FUNCTIONS MARKED WITH (1), (2) OR (1/2) ARE PART OF (1) SR489 OR (2) M3410A MULTIFUNCTION RELAYS.

DEVICE LEGEND

12	- OVERSPEED RELAY
13	- SYNC SPEED RELAY
14	- UNDERPEED RELAY
14B	- SECONDARY UNDERPEED RELAY
25	- SYNC CHECK RELAY
25A	- AUTO SYNCHRONIZER
27DC	- DC UNDER VOLTAGE
32	- REVERSE POWER RELAY
38	- BEARING OVER TEMPERATURE
39	- OVER VIBRATION
40	- LOSS OF EXCITATION
46	- PHASE BALANCE RELAY
47-27/59	- PHASE SEQ.-UNDER/OVER VOLTAGE RELAY
49	- OVER TEMPERATURE RELAY
51V	- VOLT RESTRAINED OVERCURRENT RELAY
51TG	- TRANSFORMER GROUND OVERCURRENT RELAY
52M	- TRANSFORMER GROUND OVERCURRENT RELAY
52N	- MAIN CIRCUIT BREAKER
59N	- NEUTRAL OVERVOLTAGE RELAY
63	- COOLING WATER PRESSURE RELAY
71	- BEARING OIL LEVEL RELAY
80	- COOLING WATER FLOW RELAY
81	- DIVER/UNDER FREQUENCY RELAY
86E	- ELECTRICAL LOCKOUT RELAY
86M	- MECHANICAL LOCKOUT RELAY
86V/F	- VOLT/FREQ LOCKOUT RELAY
87G	- GENERATOR DIFFERENTIAL RELAY
AM	- AMMETER
AS	- AMMETER SWITCH
BPT	- BUS POTENTIAL TRANSFORMER
BVM	- BUS VOLT METER
BVS	- BUS VOLT METER SWITCH
CCT	- CROSS CURRENT TRANSFORMER
DM	- DIGITAL MULTI METER
ET	- EXCITATION TRANSFORMER
GFM	- GENERATOR FREQUENCY METER
GPT	- GENERATOR POTENTIAL TRANSFORMER
GVM	- GENERATOR VOLT METER
GVS	- GENERATOR VOLT METER SWITCH
LA	- LIGHTNING ARRESTOR
M	- METERING
NCT	- NEUTRAL CURRENT TRANSFORMER
NGR	- NEUTRAL GROUNDING RESISTOR
NPT	- NEUTRAL POTENTIAL TRANSFORMER
RCT	- RELAYING CURRENT TRANSFORMER
SC	- SURGE CAPACITOR
SL	- SYNC LIGHT
SSC	- SYNCHROSCOPE
SSV	- SYNC SWITCH
TGCT	- TRANSFORMER GROUND CURRENT TRANSFORMER

BAT ELECTRIC, INC.
 20410 MARTINEZ LANE
 REDDING, CA 96002
 TEL: (530) 221-1336
 FAX: (530) 221-5486

RUGRAW, LLC
 LASSEN LODGE 5.0MW
 HYDRO ELECTRIC PROJECT
 ONE LINE DIAGRAM

DWG No.: 11P0525-01
 ENGR: DJB/ADDFR
 DATE: 4-20-11

REV	BY	DATE
A	PT	1-21-14