

ABBREVIATIONS AND ACRONYMS

A/C HAIR CONDITIONER.
 A HANFORD.
 AC ALTERNATING CURRENT, OR ACCESS CHAMBER.
 AEC ASSOCIATION OF ESDM ILLUMINATING COMPANIES.
 AFD ADJUSTABLE FREQUENCY DRIVE.
 AFG ABOVE FINISHED FLOOR.
 AFS ABOVE FINISHED GRADE.
 A.L.C. AIR HANDLING UNIT.
 A.M. AMPS INTERRUPTING CAPACITY.
 AL ALUMINUM.
 ANI AMERICAN NATIONAL STANDARDS INSTITUTE.
 ANT ANTENNA.
 APPROX APPROXIMATE.
 ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
 AS REQUIRED.
 ARC ARC WELD.
 ARCH ARCHITECTURE.
 ASD ADJUSTABLE SPEED DRIVE.
 ASYM ASYMMETRICAL.
 ATM ATMOSPHERE.
 ATS AUTOMATIC TRANSFER SWITCH.
 AUTO AUTOMATIC.
 AWG AMERICAN WIRE GAGE.
 AX AXILIARY RELAY.
 B BARE.
 BAG BARE ARMORED GROUND, US LABELED.
 BAT BATTERY.
 BC BATTERY CHARGER.
 BDP BIAS DUCT.
 BHP HORSEPOWER.
 BLOC BLOCKING.
 BOB BOTTOM OF CONDUIT.
 BOOP BUSHING.
 BTE BEAM TUBE ENCLOSURE.
 BTU BRITISH THERMAL UNIT.
 C CONDUIT, PER SPECIFICATION, US LABELED.
 C CENTER LINE.
 CAR CARBON FIBER.
 CAD COMPUTER AIDED DESIGN.
 CADW COMPASS AIDED DESIGN AND DRAFTING.
 CAP CAPACITOR.
 CB CIRCUIT BREAKER.
 CC CLOSED CIRCUIT TELEVISION.
 CCTV CONTRACTOR FURNISHED EQUIPMENT.
 CFI CONTRACTOR.
 CNTRL CONTROLLER.
 CONDUIT CONDUIT.
 COAX COAXIAL CABLE.
 COIL COIL.
 CONC CONCRETE.
 CONF CONFIRMED.
 COM COMMUNICATIONS PULL BOX.
 CPU CENTRAL PROCESSING UNIT.
 CR CONTROL RELAY.
 CT CURRENT TRANSFORMER.
 CU COPPER.
 DB DIRECT BURIED.
 DC DIRECT CURRENT.
 DET DETAIL.
 DIA DIAMETER.
 DISM DISARM.
 DISC DISCONNECT.
 DN DOWN.
 DNA DOES NOT APPLY.
 DPO DOUBLE POLE DOUBLE THROW.
 DSD DOUBLE POLE SINGLE THROW.
 DT DUSTTIGHT, US LABELED.
 DWG DRAWING.
 EGRESS EGRESS (CENTRIGRADE).
 EGRESS EGRESS/FIREARREST.
 E EMBROIDERED.
 EA LEACH.
 EL ELEVATION.
 ELEC ELECTRIC.
 ELEC ELECTRIC LIGHTING UNIT.
 EMF ELECTROMAGNETIC TUBING, US LABELED.
 ENG ENGINE.
 EP EPOXY PROOF, US LABELED.
 EPR ELECTRICAL PULL BOX.
 EPDM ETHYLENE PROPYLENE RUBBER (SYNTHETIC POLYMER).
 INSULATED, US LABELED TO 35 KV, CERTIFIED TO AEC SPECIFICATION, ABOVE 35 KV DO NOT IDENTIFY AS EP.
 EQUIPMENT.
 EPT ET CETRA.
 EWC ELECTRIC WATER COOLER.
 EXIST EXISTING.
 FA FIRE ALARM.
 FACP FIRE ALARM CONTROL PANEL.
 FC FOOT CANDLE.
 FEED FEEDER.
 FIC FIGURE.
 FIBER FIBER.
 FIA FIBER LOAD AMPERES.
 FLEX FLEXIBLE CONDUIT, US LABELED.
 FLUOR FLUORESCENT.
 FM FACTORY MUTUAL RESEARCH CORPORATION APPROVED AND LABELED.
 FACTORY MUTUAL SYSTEM APPROVED, FM APPROVED, OR FM.
 FREQ FREQUENCY.
 FUSE FUSE.
 FUT FUTURE.
 FVR FULL VOLTAGE NON-REVERSING.
 FVR FULL VOLTAGE REVERSING.
 GA GAGE (NOT GAUGE).
 GALV GALVANIZED.
 GEN GENERATOR.
 GOVERNMENT GOVERNMENT FURNISHED EQUIPMENT.
 GTE

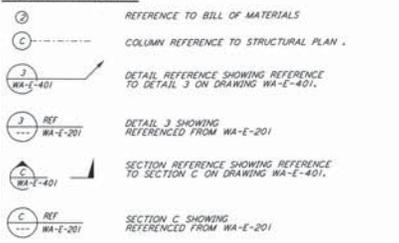
ABBREVIATIONS AND ACRONYMS

GFI GROUND FAULT INTERRUPTER.
 GFI GROUND FAULT SENSOR.
 GND GROUND.
 GROUND GROUND RELAY.
 GSI GREEN ISOLATED, US LABELED TYPE TW CONDUCTOR WHEN WITH GND.
 GRS GALVANIZED STEEL CONDUIT, US LABELED.
 HANDHELD.
 HSD HIGH SENSITIVITY DISCHARGE.
 HP HORSEPOWER.
 HPS HIGH PRESSURE SODIUM.
 HSIGHT HEAT.
 HTR HEATER.
 HV HIGH VOLTAGE.
 HVAC HEATING, VENTILATION, AND AIR CONDITIONING.
 HZ HERTZ.
 ICEA INSULATED CABLE ENGINEERS ASSOCIATION.
 IE INERT ELEVATION.
 IEEE INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS.
 IG INERT GAS.
 IOP INERT GAS WELD.
 IMC INTERMEDIATE GRADE CONDUIT, US LABELED.
 IN INCH.
 INC INCORPORATED.
 INST INSTRUMENTATION.
 INSTR INSTRUMENT.
 INTERCOM INTERCOMMUNICATION.
 INVT INVERT ELEVATION.
 IR IRON.
 J JUNCTION BOX.
 KA HOLDAMPERE.
 KCMIL THOUSAND CIRCULAR MILS.
 KID KIDNEY.
 KV KILOVOLT.
 KVA KILOVOLT AMPERES.
 KVAR KILOVOLT AMPERES REACTIVE.
 KWH KILOWATT HOURS.
 LB POUND.
 LPS LOW PRESSURE SODIUM.
 LFD LIGHT DUTY FLEXIBLE CONDUIT, US LABELED.
 LFT LIGHTING.
 LVA LOW VOLTAGE.
 LVE LASER VACUUM EQUIPMENT AREA.
 MAR MARINER.
 MANT METAL CLAD CABLE, US LABELED.
 MNC MOTOR CONTROL CENTER, US LABELED.
 MCP MOTOR CIRCUIT PROTECTOR, US LABELED.
 MCS MOUNTED CABLE SWITCH, US LABELED.
 MDP MAIN DISTRIBUTION FRAME.
 MECH MECHANICAL.
 MECA #1, 000, 000.
 MFR MANUFACTURER.
 MICRO #0, 000,000.
 MILL #0, 000.
 MIN MINORAL INSULATED COPPER SHEATHED CABLE, US LABELED.
 MIS MISCELLANEOUS.
 MTD MOUNTING HEIGHT.
 MW MOUNTING HEIGHT.
 MTH MACHINE TOOL WIRE, US LABELED.
 MSHA MINE SAFETY AND HEALTH ADMINISTRATION.
 MUR MURDER.
 MV MEDIUM VOLTAGE (EQUIPMENT), OR MEDIUM VOLTAGE CABLE, US LABELED, TAUX INSULATED TYPE WP-90 PER NEC.
 N NONE.
 NA NON-AUTOMATIC.
 N.C. NORMALLY CLOSED.
 NEC NATIONAL ELECTRICAL CODE.
 NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION.
 NATIONAL NATIONAL ELECTRICAL SAFETY CODE.
 NEUT NEUTRAL.
 NF NON-FUSED.
 NFPA NATIONAL FIRE PROTECTION ASSOCIATION.
 NIC NOT IN CONTACT.
 NSC NON-SIGHT LIGHT.
 N.S. NORMALLY OPEN.
 NPT NATIONAL PIPE THREAD.
 NOT TO SCALE.
 NTS NUMBER.
 OAS OVERALL SHIELD.
 OC ON CENTER.
 OCB VOL. CIRCUIT BREAKER.
 OD OUTSIDE DIAMETER.
 OPE OWNER FURNISHED EQUIPMENT.
 OPE OVERHEAD.
 OLS OVERHEAD RELAY CONTACTS.
 OPS OPERATIONS SUPPORT BUILDING.
 OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
 P PULSE.
 PA PUBLIC ADDRESS.
 PABX PRIVATE AUTOMATIC BRANCH EXCHANGE.
 PB PUSH BUTTON.
 PF POWER FACTOR.
 PIC POWER INSULATED LEAD COVERED CABLE.
 PNE PNEUMATIC.
 PNE PNEUMATIC AND INSTRUMENTATION DIAGRAM.
 PLTC POWER LIMITED TRAY CABLE, US LABELED.
 PLR PLASTER.
 PVC POLYVINYL CHLORIDE CONDUIT.
 RAC RIGID ALUMINUM CONDUIT, US LABELED.
 RCPT RECEPTACLE.
 RECD RECESSED.
 RHW RUBBER INSULATED HEAT AND MOISTURE RESISTANT WIRE, US LABELED.
 RM ROOM.
 RMC ROOT MEAN SQUARE.
 RPVC RIGID POLYVINYL CHLORIDE CONDUIT SCHEDULE 40, US LABELED.
 RPVC-80 RIGID POLYVINYL CHLORIDE CONDUIT SCHEDULE 80, US LABELED.
 RSP RIGID SILICON-BRONZE CONDUIT, US LABELED.
 RT RAIN TIGHT, US LABELED.
 RVNR REDUCED VOLTAGE NON-REVERSING.

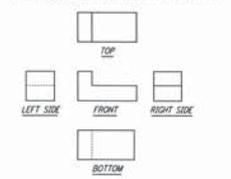
ABBREVIATIONS AND ACRONYMS

IP SINGLE POLE.
 IS SHORT CIRCUIT.
 ISCH SCHEDULE.
 ISCT SECTION.
 ISIS SYMMETRIC INSULATED HEAT RESISTANT SWITCHBOARD WIRE, US LABELED.
 ISV ISOLATED.
 ISWT SWIFT.
 ISWTP SHIELDED TWISTED PAIR.
 ISWTP SHIELDED TWISTED TRIAD.
 ISWTP SHIELDED TWISTED QUAD.
 ISWTP SOLIDCORE OPERATED VALVE.
 ISWTP SINGLE POLE DOUBLE THROW.
 ISWTP SPECIFICATION.
 ISWTP SQUARE.
 ISWTP STAINLESS STEEL, TYPE 316.
 STD STANDARD.
 STR STRUCTURAL.
 SUBST SUBSTATION.
 SW SWITCH.
 SWBD SWITCHBOARD.
 SWBP SWITCHBOARD.
 SWBK SWITCHBOARD.
 SWM SWITCHMETAL.
 SWM STRAMETAL.
 2P #2 POLE.
 3P #3 POLE.
 3W THREE WIRE.
 TC TRAY CABLE.
 TEL TELEPHONE.
 TERM TERMINAL.
 TRNW THERMOPLASTIC INSULATED HEAT RESISTANT NYLON JACKET WIRE, US LABELED.
 TRNW THERMOPLASTIC INSULATED HEAT AND MOISTURE RESISTANT NYLON JACKET WIRE, US LABELED.
 TRNW THERMOPLASTIC INSULATED HEAT AND MOISTURE RESISTANT NYLON JACKET WIRE, US LABELED.
 TDC TOP OF DUCT.
 TOS TOP OF STEEL.
 TP TWISTED PAIR.
 TW TW.
 TWP THERMOPLASTIC INSULATED MOISTURE RESISTANT WIRE, US LABELED.
 TYP TYPICAL.
 UBC UNIFORM BUILDING CODE.
 UL UNDERWRITERS LABORATORIES INC.
 UNF UNIFIED NATIONAL COARSE SCREW THREAD (SEE NOTE 101).
 UNF UNIFIED NATIONAL FINE SCREW THREAD.
 UN-8 UNIFIED NATIONAL 8 THREAD SERIES.
 UN-12 UNIFIED NATIONAL 12 THREAD SERIES.
 UN-16 UNIFIED NATIONAL 16 THREAD SERIES.
 UNLESS OTHERWISE NOTED.
 UPS UNINTERRUPTIBLE POWER SUPPLY.
 V VOLT.
 VAR VARIABLE OR VOLT AMPERES REACTIVE.
 VEA VACUUM EQUIPMENT AREA.
 VD VOLTAGE DROP.
 VT VAPORTIGHT, US LABELED.
 W WATT OR WIRE.
 WFR WEATHERPROOF.
 WT WEIGHT.
 XFORM TRANSFORMER.
 XSWX SYNTHETIC INSULATED HEAT AND MOISTURE RESISTANT WIRE, US LABELED.
 XSWX CROSS LINKED POLYETHYLENE INSULATED, US LABELED TO 35 KV, CERTIFIED TO AEC SPECIFICATION ABOVE 35 KV, DO NOT IDENTIFY AS XLP, DO NOT USE ICEA.
 Z IMPEDANCE.

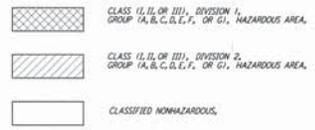
TYPICAL SYMBOLS



TYPICAL DRAWING LAYOUT



AREA CLASSIFICATION SYMBOLS



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REVISION	DATE	BY	CHKD	ENGR	PROJL	DESCRIPTION
1	6-15-98	J. G.	TL	W	PL	ISSUED FOR AS-BUILT DRAWINGS

ISSUED FOR CONSTRUCTION			
DRAWN	M. M.	6-25-98	
CHECKED	J. R.	7-3-98	
ENGINEER	M. R.	7-3-98	
PROJL	M. G. W.	7-8-98	

AS-BUILT DRAWINGS	
NO.	DESCRIPTION

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 PASADENA, CALIFORNIA

LIGO
 CALIFORNIA INSTITUTE OF TECHNOLOGY
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LIGO-D960388-01-O
 LASER INTERFEROMETER
 GRAVITATIONAL-WAVE OBSERVATORY
 SITE NO. 1 - HANFORD, WASHINGTON

TITLE: ELECTRICAL STANDARD SYMBOLS, ABBREVIATIONS & ACRONYMS

NONE PP150969 8094

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