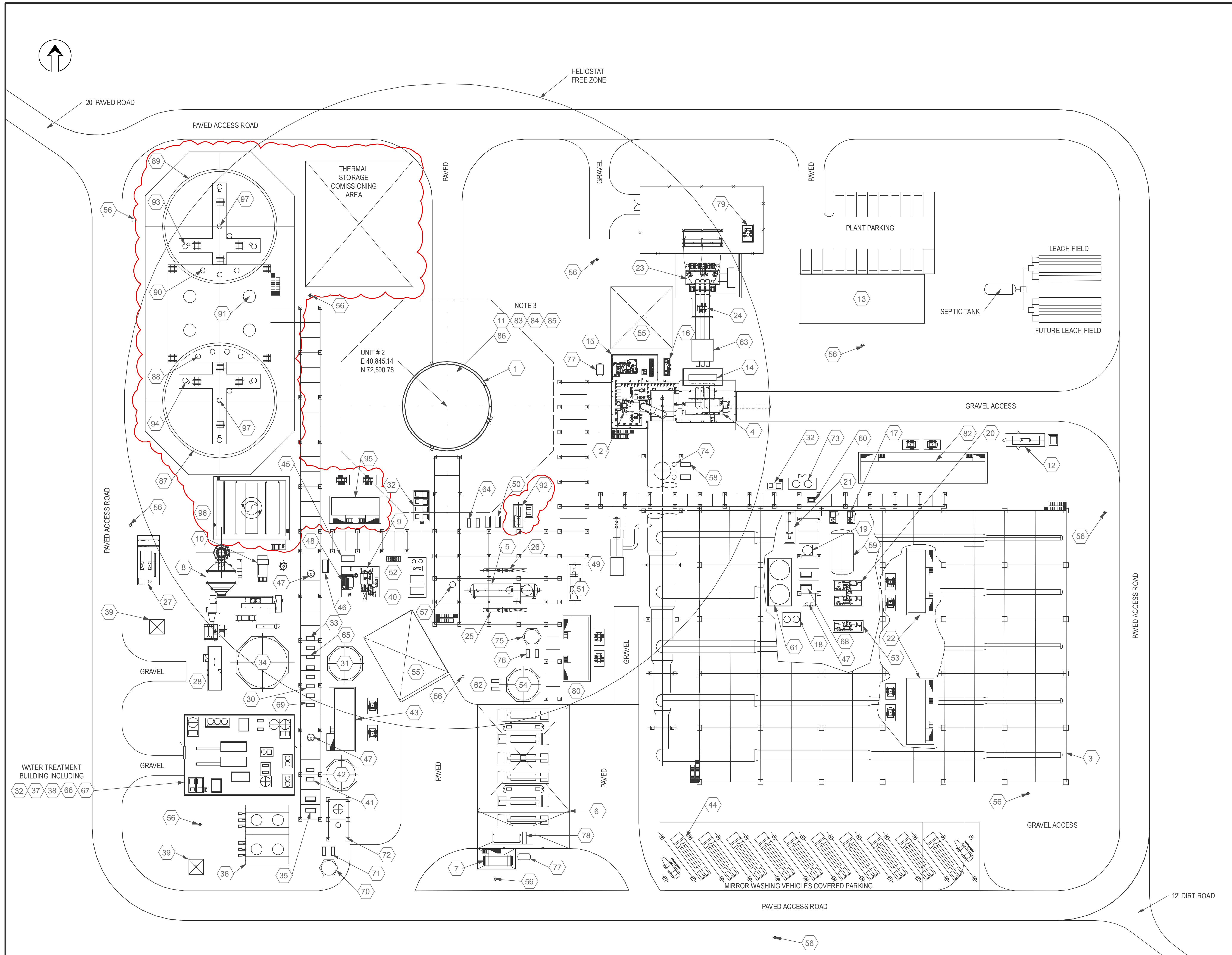


DOCKETED

Docket Number:	09-AFC-07C
Project Title:	Palen Solar Power Project - Compliance
TN #:	201817
Document Title:	Palen Solar Holdings, LLC's Drawing Showing Potential Future Thermal Storage Equipment
Description:	N/A
Filer:	Marie Fleming
Organization:	Galati Blek LLP
Submitter Role:	Applicant Representative
Submission Date:	3/3/2014 8:47:29 AM
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EQUIPMENT LEGEND

- | | |
|---|--|
| 1 SOLAR POWER TOWER | 50 START-UP AUXILIARY BOILER FEED PUMPS (2 REQ'D) |
| 2 STEAM TURBINE | 51 ELECTRIC BOILER FEED WATER PUMP |
| 3 AIR COOLED CONDENSER (ACC) | 52 BULK STORAGE NITROGEN BOTTLES |
| 4 STEAM TURBINE GENERATOR | 53 ACC VACUUM SKID (NIGHT OPERATION) |
| 5 FEED WATER DEAERATOR | 54 WASH WATER STORAGE TANK |
| 6 WASH VEHICLE FILLING / FUELING STATION & PARKING | 55 CONSTRUCTION AND MAINTENANCE CRANE PAD |
| 7 8000 GAL. DIESEL FUEL STORAGE TANK | 56 FIRE HYDRANT W/ HOSE (10) |
| 8 START-UP AUXILIARY BOILER | 57 CCW EXPANSION TANK |
| 9 NIGHT PRESERVATION AUXILIARY BOILER (NPAB) | 58 ACC DRAIN PUMPS (2 REQ'D) |
| 10 START-UP DEAERATOR & PUMP SKID | 59 CONDENSATE TANK |
| 11 SOLAR RECEIVER STEAM GENERATOR (SRSG) | 60 ACC WASHING SKID |
| 12 EMERGENCY DIESEL GENERATOR | 61 POLISHING SKID |
| 13 PLANT SERVICES BUILDING | 62 WASH WATER PUMPS (2 REQ'D) |
| 14 STEAM TURBINE EXCITATION CONTAINER | 63 GENERATOR CIRCUIT BREAKER |
| 15 STEAM TURBINE OIL SYSTEMS | 64 CLOSED COOLING WATER BOOSTER PUMPS (2 REQ'D) |
| 16 STEAM TURBINE GLAND STEAM CONDENSER | 65 RAW WATER FORWARDING PUMPS (2 REQ'D) |
| 17 CONDENSATE PUMPS (2 REQ'D) | 66 SERVICE WATER BAG FILTERS |
| 18 CONDENSATE POLISHER PREFILTER SKID | 67 DEMINERALIZED WATER CARTRIDGE FILTERS |
| 19 CONDENSATE FILTER AIR RECEIVER | 68 POLISHER SLUICE PUMPS (2 REQ'D) |
| 20 ACC VACUUM SKID (NORMAL OPERATION) | 69 WSAC MAKE-UP WATER PUMPS (2 REQ'D) |
| 21 ACC AIR EJECTOR SKID | 70 RESIDUE TANK |
| 22 ACC POWER DISTRIBUTION CENTER TRANSFORMERS | 71 RESIDUE TANK PUMPS (2 REQ'D) |
| 23 GSU STEP-UP TRANSFORMER | 72 THERMAL EVAPORATION UNIT |
| 24 UNIT AUXILIARY TRANSFORMER | 73 SPENT AND CLEAN RESIN STORAGE TANKS |
| 25 LP FEED WATER HEATERS (4 REQ'D) | 74 CONDENSATE FILTERS (2 REQ'D) |
| 26 HP FEED WATER HEATERS (3 REQ'D) | 75 DRAINS TANK |
| 27 FUEL GAS FILTER/METERING STATION | 76 DRAINS TANK PUMPS (2 REQ'D) |
| 28 FIRE WATER PUMP HOUSE W/ 1 DIESEL, 1 ELEC, & 1 JOCKEY PUMP | 77 OIL WATER SEPARATOR |
| 29 NOT USED | 78 DIESEL FUEL TRUCK REFUELING |
| 30 DEMIN. WATER TRANSFER PUMPS (2 REQ'D) | 79 STATION SERVICE TRANSFORMER |
| 31 DEMIN. WATER STORAGE TANK | 80 BOILER PUMP POWER DISTRIBUTION CENTER AND TRANSFORMER |
| 32 CHEMICAL FEED STATION | 81 FIN FAN COOLER |
| 33 SERVICE WATER DISTRIBUTION PUMPS (2 REQ'D) | 82 MAIN PLANT POWER DISTRIBUTION CENTER |
| 34 SERVICE / FIRE WATER STORAGE TANK | 83 SRSG CIRCULATING PUMPS (4 REQ'D) |
| 35 CLOSED COOLING WATER (CCW) PUMPS (2 REQ'D) | 84 SRSG CIRCULATING PUMPS COOLING EXPANSION TANK |
| 36 CCW WET SURFACE AIR COOLER (WSAC) | 85 SRSG FLASH TANK |
| 37 POTABLE WATER PUMPS (2 REQ'D) | 86 SRSG BLOWDOWN TANK |
| 38 POTABLE WATER GENERATION SKID | 87 HOT THERMAL STORAGE TANK |
| 39 GROUND WATER WELLS W/PUMPS (2 REQ'D) | 88 HOT THERMAL STORAGE PUMPS (4 REQ'D) |
| 40 DUEL AIR COMPRESSOR SKID | 89 COLD THERMAL STORAGE TANK |
| 41 WASTE WATER PUMPS (2 REQ'D) | 90 COLD THERMAL STORAGE PUMPS (4 REQ'D) |
| 42 WASTE WATER STORAGE TANK | 91 THERMAL STORAGE HEAT EXCHANGERS (4 REQ'D) |
| 43 WATER SYSTEMS POWER DISTRIBUTION CENTER AND TRANSFORMERS | 92 TES SUB-COOLING CIRCULATING PUMP |
| 44 MIRROR WASH TRUCKS | 93 COLD THERMAL STORAGE TANK MIXER |
| 45 SAMPLE PANEL | 94 HOT THERMAL STORAGE TANK MIXER |
| 46 CONTINUOUS EMISSION MONITORING SYSTEM | 95 TES POWER DISTRIBUTION CENTER AND TRANSFORMERS |
| 47 WASTE WATER SUMP W/ 2 PUMPS (3 REQ'D) | 96 ISH AUXILIARY BOILER |
| 48 NP AUXILIARY BOILER DEAERATOR / PUMP SKID | 97 THERMAL STORAGE TANK VENT |
| 49 TURBINE DRIVE BOILER FEED WATER PUMP | |

SOLAR TOWER #2 GRADE ELEV. 538'-0"

- NOTES:
- SOLAR POWER TOWER WILL INCLUDE STAIRS, ELEVATOR WITH THE SRSG ON THE TOP.
 - FEED WATER DEAERATOR WILL BE INSTALLED ON THE TOP PLATFORM OF 5 TOTAL. EACH PLATFORM WILL BE AT +/- 20 FEET BETWEEN LEVELS.
 - ITEMS 11 & 83-86 TO BE PLACED ON ELEVATED PLATFORMS IN THE (SRSG) TOWER.

PALEN SOLAR

POTENTIAL FUTURE PHASE
 DWG. NO. P-1000A REV. 3
 ISSUED: 11/20/2012

**EQUIPMENT ARRANGEMENT PLAN
 250MW POWER BLOCK #2
 WITH THERMAL STORAGE**