

**DOCKETED**

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# RESPONSE TO CEC STAFF DATA REQUEST SET 2 (68-71)

Walsh Backup Generating Facility (19-SPPE-02)

SUBMITTED TO: CALIFORNIA ENERGY COMMISSION

SUBMITTED BY: **651 Walsh Partners, LLC**

October 2019



**WP, LLC'S RESPONSES TO CEC DATA REQUEST SET 2 (68-71)  
WALSH BACKUP GENERATING FACILITY (19-SPPE-02)**

**INTRODUCTION**

Attached are 651 Walsh Partner, LLC's (WP, LLC) responses to California Energy Commission (CEC) Staff Data Request Set No. 2 (68-71) for the Walsh Backup Generation Facility (MBGF) Application for Small Power Plant Exemption (SPPE) (19-SPPE-02). Staff issued Data Request Set No. 2 (68-71) on September 12, 2019.

The Data Responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as Staff presented them and are keyed to the Data Request numbers (68-71). Additional tables, figures, or documents submitted in response to a data request (e.g., supporting data, stand-alone documents such as plans, folding graphics, etc.) are found at the end each data response and are not sequentially page-numbered consistently with the remainder of this document, although they may have their own internal page numbering system.

For context the text of the Background and Data Request precede each Data Response.

**GENERAL OBJECTIONS**

WP, LLC objects to all data requests that require analysis beyond which is necessary to comply with the California Environmental Quality Act (CEQA) or which requires WP, LLC to provide data that is in the control of third parties and not reasonably available to WP, LLC. Notwithstanding this objection, WP, LLC has worked diligently to provide these responses swiftly to allow the CEC Staff to prepare the Initial Study/Mitigated Negative Declaration (IS/MND).

## AIR QUALITY AND PUBLIC HEALTH

### **BACKGROUND**

*The following data requests 68-70 seek additional clarification of issues raised in Set 1. Staff requested that the applicant conduct cumulative modeling analysis, including Walsh Data Center (WDC) and other new and planned sources within 6 miles of the WDC site (Data Request 8) and provide information dealing with the health risk assessment (Data Requests 56 and 58). More recently, the committee has asked that existing data centers located on the same 60 kV loop as WDC be "cumulatively modeled." The three data request below will assist staff in preparing a cumulative modeling analysis consistent with the expectations of the committee.*

### **BACKGROUND: PM EMISSIONS DURING OPERATION**

*The proposed standby engines would be certified to achieve Tier 2 emissions standards, with additional diesel particulate filters (DPF) to achieve a targeted emission factor of 0.01 grams per brake-horsepower-hour (g/hp-hr), shown in the application (p.57 and in Appendix AQ1, Table AQ1-1). This would represent a control effectiveness of over 93% from the Tier 2 standard of 0.15 g/hp-hr.*

### **DATA REQUESTS**

68. Please provide manufacturer or vendor information demonstrating DPF effectiveness that supports use of the proposed targeted PM10 and PM2.5 emission factor of 0.01 g/hp-hr (Table 4.3-7).

### **RESPONSE TO DATA REQUEST 68**

The background to this data request relates to Staff's assertion that the Committee requested a cumulative air quality impact analysis. We agree with Staff that the Committee express interest in finding out more information regarding other new data centers that would be interconnected to the same electricity distribution transmission loop by Silicon Valley Power (SVP). However, the Committee clearly stated that it was interested in understanding if the new projects connecting to the loop would have a "**cumulative impact on reliability**"<sup>1</sup>. The Committee identified that a cumulative impact on reliability of the loop would impact air quality but did not request a cumulative impact

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<sup>1</sup> 229861, Transcript of 08-29-2019 Committee Conference, Walsh Backup Generating Facility (09-SPPE-2), pages 30-31.

analysis include all data centers on the same SVP transmission loop. WP, LLC believes that the design of the separate loops within the larger SVP system was intended to increase reliability for the large users such as data centers. As part of the data center interconnection agreements with SVP, each data center is helping to fund these upgrades to provide this additional reliability. Therefore, there is no cumulative impact to reliability of the SVP system and no potential increase of an emergency outage because the Walsh Data Center is interconnecting to the Southern Loop. WP, LLC is requesting that SVP provide additional support for this conclusion.

In addition, the ability to conduct a cumulative impact analysis outlined by Staff in the background to this data request is impossible. All of the data necessary is within the exclusive control of third parties and WP, LLC is unable to obtain it. In addition, the vast amounts of assumptions necessary to complete such a modelling analysis are so great and varied that the outcome of any modelling is speculative and prohibited by CEQA.

With respect to the information requested in Data Request 68, Appendix AIR DR-68 contains data specification sheet for the active DPF that will be utilized for the WBGF. As listed on the data sheet, the emissions of diesel particulate matter will be limited to 0.01 g/bhp-hr.

69. Please explain the basis of the values in Table 4.3-14 (p.60) and Table 4.3-19 (p.71) that show 0.0533 lb per hour for diesel particulate matter (DPM) from a single engine, model QSK95, because this rate appears to be inconsistent with the proposed target emission rate of 0.095 lb PM10 and PM2.5 per hour per engine. Notes in the Response to Data Request 58 (TN# 229543) and in the application (pp.57 and 58) state that DPM rates are the surrogate compound for whole diesel exhaust and would be equal to PM10 and PM2.5 rates.

## **RESPONSE TO DATA REQUEST 69**

For the QSK95 engine the maximum emission rate of DPM (PM10/2.5) at 100% load is 0.095 lbs/hr and is based on 0.01 g/bhp-hr. This emission rate would be applicable to those periods when the engine is operating under emergency conditions, i.e., at or near full load. For purposes of evaluating emissions for readiness and maintenance testing, the applicant specified a set of composite operational scenarios (these are presented on the engine emissions calculation file as submitted with this response) between 25 and 100 percent loads. For purposes of the modeling assessment for criteria pollutants and the HRA, the composite readiness and maintenance testing composite run scenarios produced an annual DPM (PM10/2.5) emissions rate per engine of 2.66 lbs/yr, or 0.053 lbs/hr based on 50 hours per year.

However, the HRA was rerun with the DPM emissions based on 100 percent load at 0.095 lb/hr per engine (Table 4.3-10). The results are summarized in Table 69-1 and the HRA output files will be provided via the CEC FTP site.

**Table 69-1: WDC Revised Health Risk Assessment Summary**

WDC Health Risk Assessment Summary		
Operations – All Engines		
Risk Category	Facility Values	Applicable Significance Threshold
Cancer Risk Residential	<7.00 E-6	See Table 4.3-20
Cancer Risk Worker	1.12 E-6	
Cancer MIR location: Receptor #33, 593341.7E, 4136485N		

***BACKGROUND: AIR QUALITY AND PUBLIC HEALTH IMPACT ANALYSIS***

*The description of the generator yard (application p.13) indicates that the 32 (3-MW nameplate) standby engine-generator sets would be installed on two different levels. The drawings (north elevation in Figure 2-3) appear to show a horizontal point of release for the engines' emissions.*

***DATA REQUEST***

70. *Please confirm that all standby engine exhaust stacks would not have horizontal Releases or rain-caps. If these exhaust stacks could be horizontal or capped, please update the dispersion modeling to include the appropriate feature as a modeled stack parameter.*

**RESPONSE TO DATA REQUEST 70**

Confirmed. All of the engine exhaust stacks would not have horizontal releases or rain caps.

## **PROJECT DESCRIPTION**

### ***BACKGROUND***

***Applicant provided Appendix PDDR-27 in response to Data Request 39 (Please provide a map showing the proposed transmission line route). However, no legend is provided with the response. Staff needs more detailed information and clear indication on the proposed 60- kilovolt (kV) interconnection route, and transmission poles than was provided in the Appendix PDDR-27.***

### ***DATA REQUESTS***

71. Please provide a detailed description and drawing of the proposed 60-kV transmission line route, possible interconnection points to the existing Silicon Valley Power system, and possible pole locations. Please provide a legend and label the drawing to show the proposed line route, pole locations, and existing transmission facilities.

### **RESPONSE TO DATA REQUEST 71**

As described in earlier responses to data requests, SVP will construct, own and operate the transmission lines that will bring electricity to the onsite substation. Attached is the best information we have been able to obtain as SVP has not yet designed the details that Staff requests in Data Request 71. WP, LLC believes that Staff does not need the detailed information to conduct a CEQA analysis. Unlike a traditional power plant, the CEC does not have jurisdiction over SVP's distribution lines as the first point of interconnection between the WBGF and the WDC, is the cabling between the WBGF and WDC building. For CEQA purposes a general description of the route is all that is necessary to determine, that with the mitigation incorporated into the project for potential impact associated with installation of transmission poles (cultural monitoring, etc.), potential impacts to the environment would be less than significant levels.

Appendix PD DR-71 includes a revised utility plan and other drawings responsive to this request.

# **APPENDIX AIR DR-68**

## **DPF Filter Specifications Sheet**





**Cummins Pacific – DLR Santa Clara**

**April 5, 2018**

**APPLICATION DESCRIPTION:**

**Engine Model:** Cummins C3000D6e, QSK95-G9  
**Quantity:**  
**RPM:** 1,800 RPM  
**Power Rating:** 3000 kW  
**Electrical:** 480v 3 Phase  
**Design Exhaust Flow Rate:** 22630 CFM  
**Max Temperature:** 825F  
**Engine Duty:** Standby  
**Lube Oil Specification:** .5% wt% sulfated ash or less  
**Lube Oil Consumption:** Per Cummins specifications  
**Engine Family #:** HCEXL95.0AAA

**RYPOS PRODUCT SPECIFICATION:**

**MODEL #:** ADPF-9

**System Data:** Active filter with Diesel Oxidation Catalyst

**Housing Construction:** Carbon Steel with High Temp Zinc/Silicon Finish

**Filter Connections:** Standard ANSI Flanges to suit Installation

**Acoustical Spec:** Critical Grade attenuation (25 to 35 dba)

**System Power Requirements:** 480v 3-Phase; 38KW max load, 20KW average

**Verification:** CARB Level 3+

**Emissions Summary for a Degreened Rypos Filter and Rated Engine Load**

<b>Exhaust Gases</b>	<b>Engine Output</b>	<b>Reduction</b>	<b>System Output</b>	<b>Area Limits</b>
CO	0.52gm/bhp-hr	85%+	0.078 gm/bhp-hr	TBD
NOx + HC	4.62 gm/bhp-hr	85%+	4.62 gm/bhp-hr	N/A
PM10	0.11 gm/bhp-hr	85%+	meets 0.01 gm/bhp-hr PM emission standard*	CARB Level 3 +

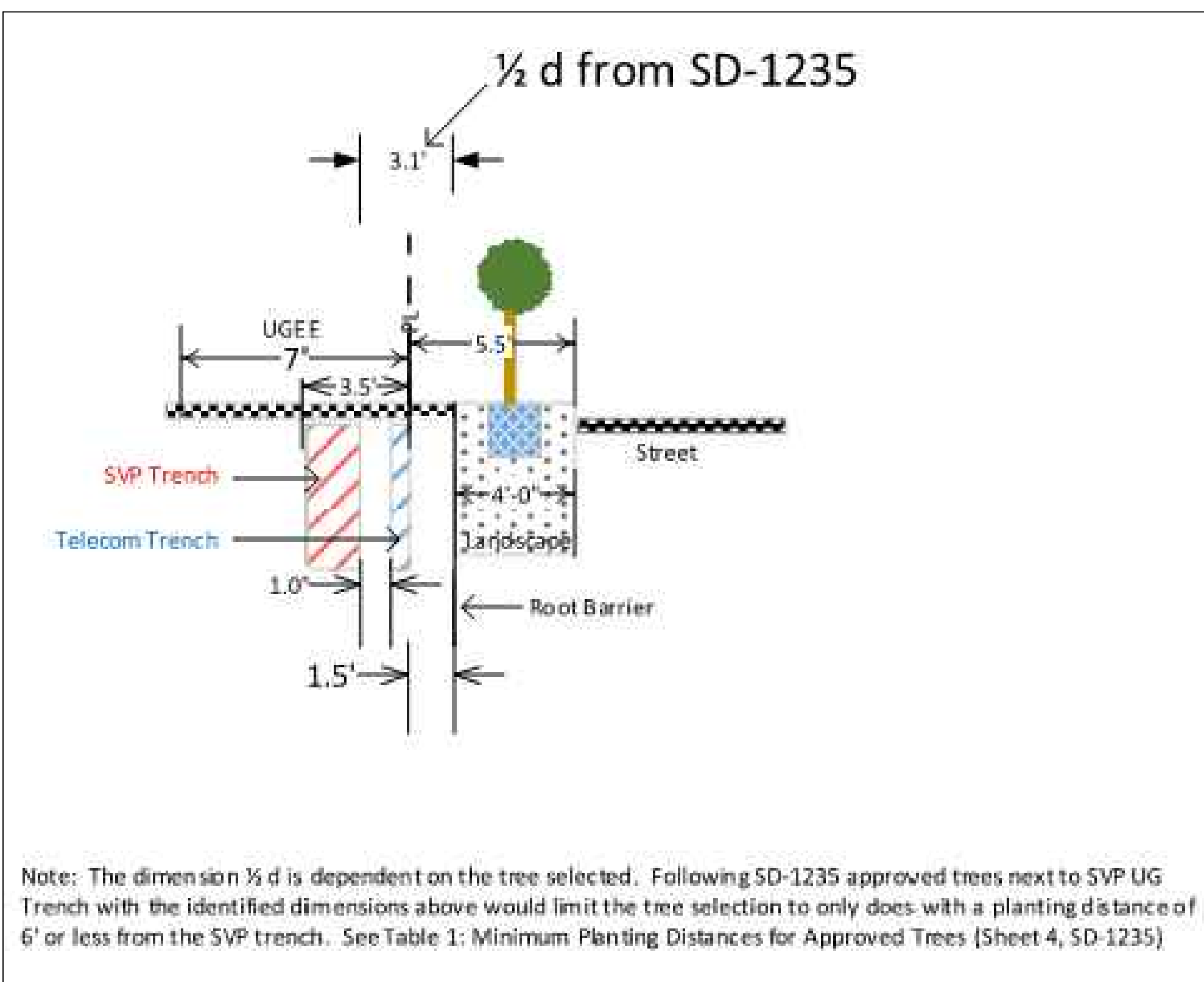
\*complies with the 0.01 g/bhp-hr PM emission standard of 17 CCR §§ 93115.6 – .9 and SCAQMD Rules 1470(c)(2) – (c)(8)

# **APPENDIX PD DR-71**

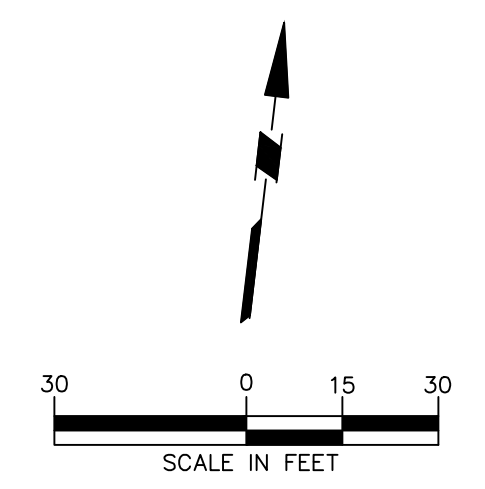
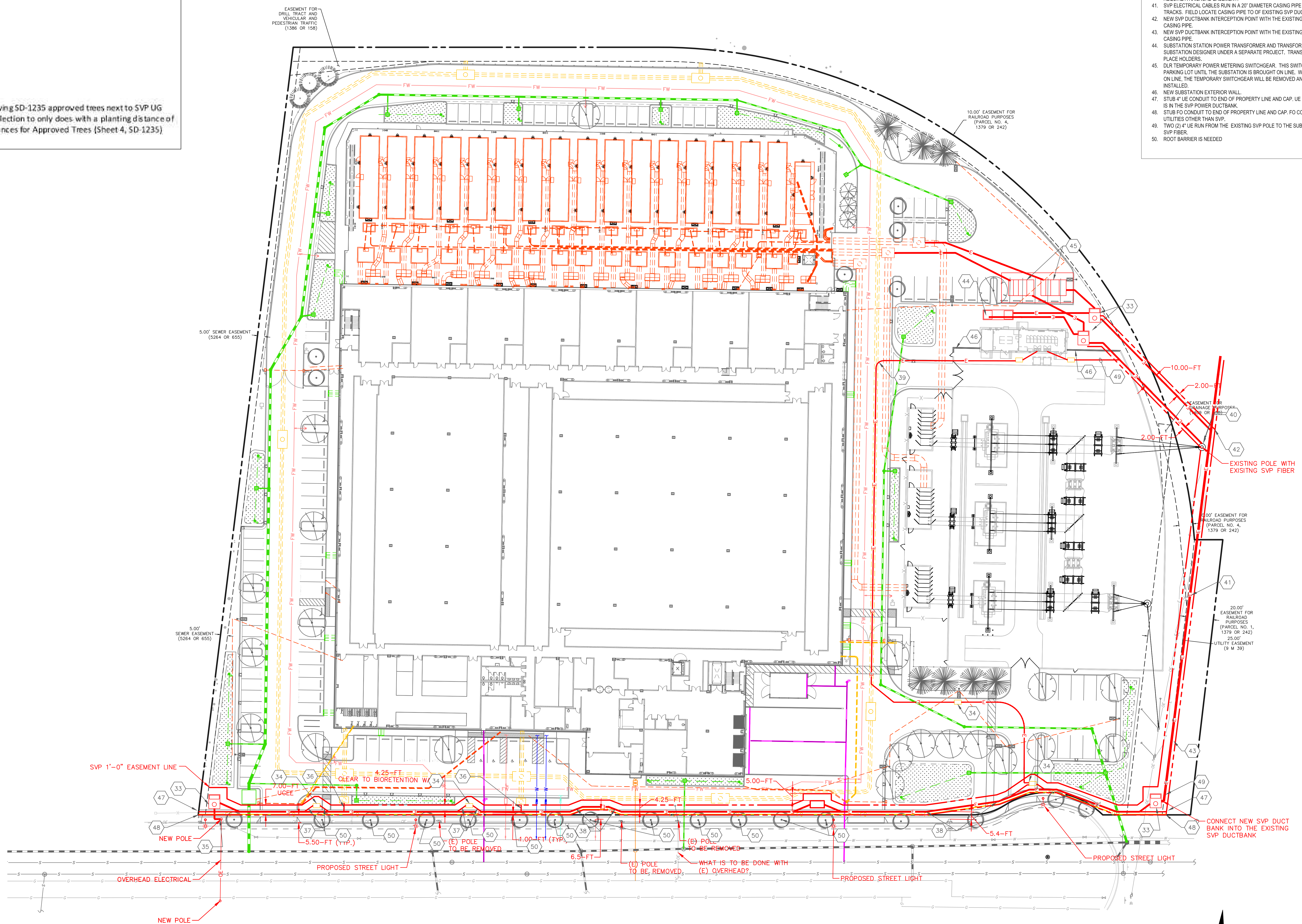
## **Onsite Utility Plans**



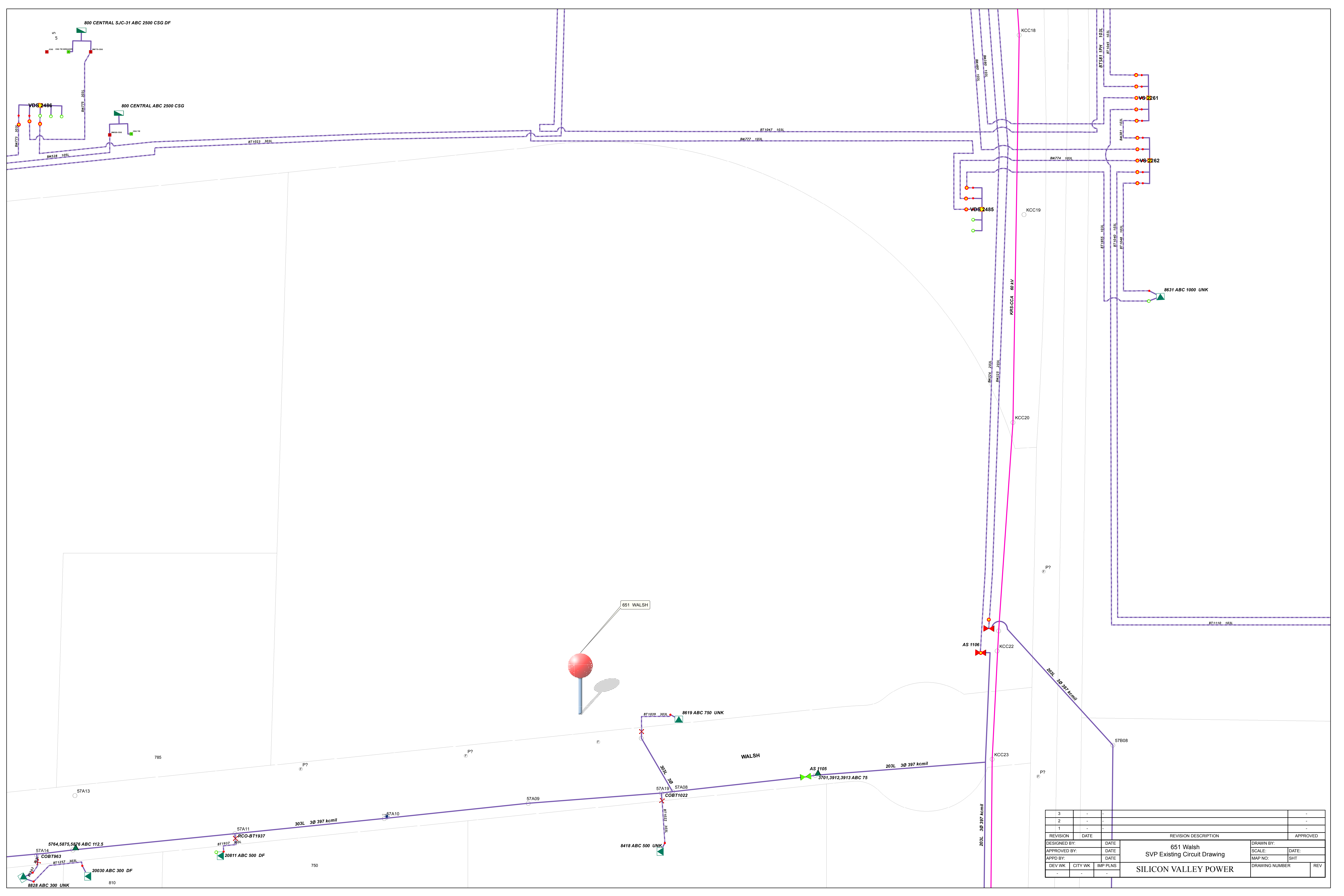
# OVERALL UTILITY PLAN



- ### SHEET KEYNOTES
33. NEW 8' X 10' SVP PRIMARY SWITCH VAULT.
  34. NEW SVP NS2 UTILITY ELECTRIC VAULT. LOCATE VAULT 2'-0" AWAY FROM THE SVP POWER DUCTBANK.
  35. NEW UTILITY RISER CONDUIT AT NEW UTILITY POLE.
  36. NEW 4" CONNECTION TO CUSTOMER MEET ME BOX.
  37. 45 DEGREE BEND TO NS2 UTILITY ELECTRIC VAULT.
  38. 45 DEGREE BEND TO CLEAR 6' X 10' SVP PRIMARY SWITCH VAULT OR FIRE HYDRANT THRUST BLOCK.
  39. TWO (2) 4" UE RUN BELOW THE DLR FIBER DUCT BANK TO THE SUBSTATION CONTROL HOUSE. UE IS SVP FIBER.
  40. NEW POWER AND FIBER OPTIC RISER CONDUIT TO THE EXISTING POLE. THESE RISERS WILL REQUIRE A RAILROAD EASEMENT.
  41. SVP ELECTRICAL CABLES RUN IN A 20" DIAMETER CASING PIPE UNDER THE RAILROAD TRACKS. FIELD LOCATE CASING PIPE TO OF EXISTING SVP DUCTBANK INTERCEPTION LOCATIONS.
  42. NEW SVP DUCTBANK INTERCEPTION POINT WITH THE EXISTING SVP DUCTBANK NORTH OF THE CASING PIPE.
  43. NEW SVP DUCTBANK INTERCEPTION POINT WITH THE EXISTING SVP DUCTBANK SOUTH OF THE CASING PIPE.
  44. SUBSTATION STATION POWER TRANSFORMER AND TRANSFORMER PAD DESIGNED BY SVP'S SUBSTATION DESIGNER UNDER A SEPARATE PROJECT. TRANSFORMERS SHOWN ARE LOCATION PLACE HOLDERS.
  45. DLR TEMPORARY POWER METERING SWITCHGEAR. THIS SWITCH GEAR IS LOCATED IN THE PARKING LOT UNTIL THE SUBSTATION IS BROUGHT ON LINE. WHEN THE SUBSTATION IS BROUGHT ON LINE, THE TEMPORARY SWITCHGEAR WILL BE REMOVED AND THE PARKING SPOT WILL BE INSTALLED.
  46. NEW SUBSTATION EXTERIOR WALL.
  47. STUB 4" UE CONDUIT TO END OF PROPERTY LINE AND CAP. UE CONDUITS FOR THE SVP FIBER AND IS IN THE SVP POWER DUCTBANK.
  48. STUB FO CONDUIT TO END OF PROPERTY LINE AND CAP. FO CONDUIT IS FOR COMMUNICATIONS UTILITIES OTHER THAN SVP.
  49. TWO (2) 4" UE RUN FROM THE EXISTING SVP POLE TO THE SUBSTATION CONTROL HOUSE. UE IS SVP FIBER.
  50. ROOT BARRIER IS NEEDED.







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2	-	-	-	-
1	-	-	-	-
REVISION	DATE	REVISION DESCRIPTION		APPROVED
DESIGNED BY:	DATE	651 Walsh		DRAWN BY:
APPROVED BY:	DATE	SVP Existing Circuit Drawing		SCALE:
APPD BY:	DATE	SILICON VALLEY POWER		MAP NO.:
DEV WK	CITY WK	IMP PLNS	DRAWING NUMBER	REV





3				
2				
1				
REVISION	DATE	REVISION DESCRIPTION	APPROVED	
DESIGNED BY:	DATE	<b>651 Walsh</b> <b>SVP Existing Structure Drawing</b>	DRAWN BY:	
APPROVED BY:	DATE		SCALE:	DATE:
APPD BY:	DATE		MAP NO.:	SHT
DEV WK	CITY WK	IMP PLNS	DRAWING NUMBER	REV
SILICON VALLEY POWER				