DOCKETED	
Docket Number:	19-SPPE-02
Project Title:	Walsh Data Center
TN #:	229547-2
Document Title:	WP LLC's Initial Response to CEC Data Request Set 1 Appendix Part II of II
Description:	N/A
Filer:	Scott Galati
Organization:	DayZenLLC
Submitter Role:	Applicant Representative
Submission Date:	8/26/2019 3:43:41 PM
Docketed Date:	8/26/2019

APPENDIX CRDR-15

7 5-minute Series Topographic Maps (Rosso 2016 11-13)

601-711 Walsh Avenue

601-711 Walsh Avenue

Santa Clara, CA 95050

Inquiry Number: 4771017.4

November 03, 2016

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

11/03/16

Site Name:

601-711 Walsh Avenue
601-711 Walsh Avenue
Santa Clara, CA 95050
EDR Inquiry # 4771017.4

Client Name:

Rosso Environmental, Inc.
1400 Shattuck Ave, Suite 10
Berkeley, CA 94709
Contact: Philip Mclaughlin

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Rosso Environmental, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: 16-0062.00

Coordinates:

Latitude:	37.370924 37° 22' 15" North
Longitude:	-121.947011 -121° 56' 49" West
UTM Zone:	Zone 10 North
UTM X Meters:	593235.14
UTM Y Meters:	4136541.52
Elevation:	43.98' above sea level

Maps Provided:

2012
1980
1973
1968
1961
1953
1899
1897
1889

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

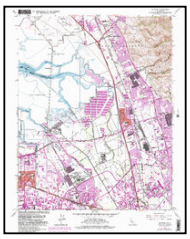
2012 Source Sheets

San Jose West
2012
7.5-minute, 24000

Milpitas
2012
7.5-minute, 24000

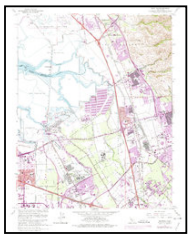
1980 Source Sheets

San Jose West
1980
7.5-minute, 24000
Photo Revised 1980
Aerial Photo Revised 1979



Milpitas
1980
7.5-minute, 24000
Photo Revised 1980
Aerial Photo Revised 1979

1973 Source Sheets



Milpitas
1973
7.5-minute, 24000
Photo Revised 1973
Aerial Photo Revised 1973

San Jose West
1973
7.5-minute, 24000
Photo Revised 1973
Aerial Photo Revised 1973

1968 Source Sheets

Milpitas
1968
7.5-minute, 24000
Photo Revised 1968
Aerial Photo Revised 1968

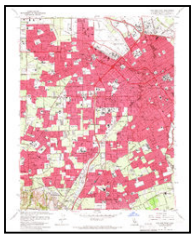
San Jose West
1968
7.5-minute, 24000
Photo Revised 1968
Aerial Photo Revised 1968

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1961 Source Sheets

Milpitas
1961
7.5-minute, 24000
Aerial Photo Revised 1960



San Jose West
1961
7.5-minute, 24000
Aerial Photo Revised 1960

1953 Source Sheets

Milpitas
1953
7.5-minute, 24000
Aerial Photo Revised 1948

San Jose West
1953
7.5-minute, 24000
Aerial Photo Revised 1948

1899 Source Sheets

San Jose
1899
15-minute, 62500

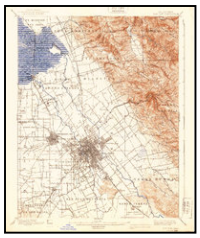
1897 Source Sheets

San Jose
1897
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

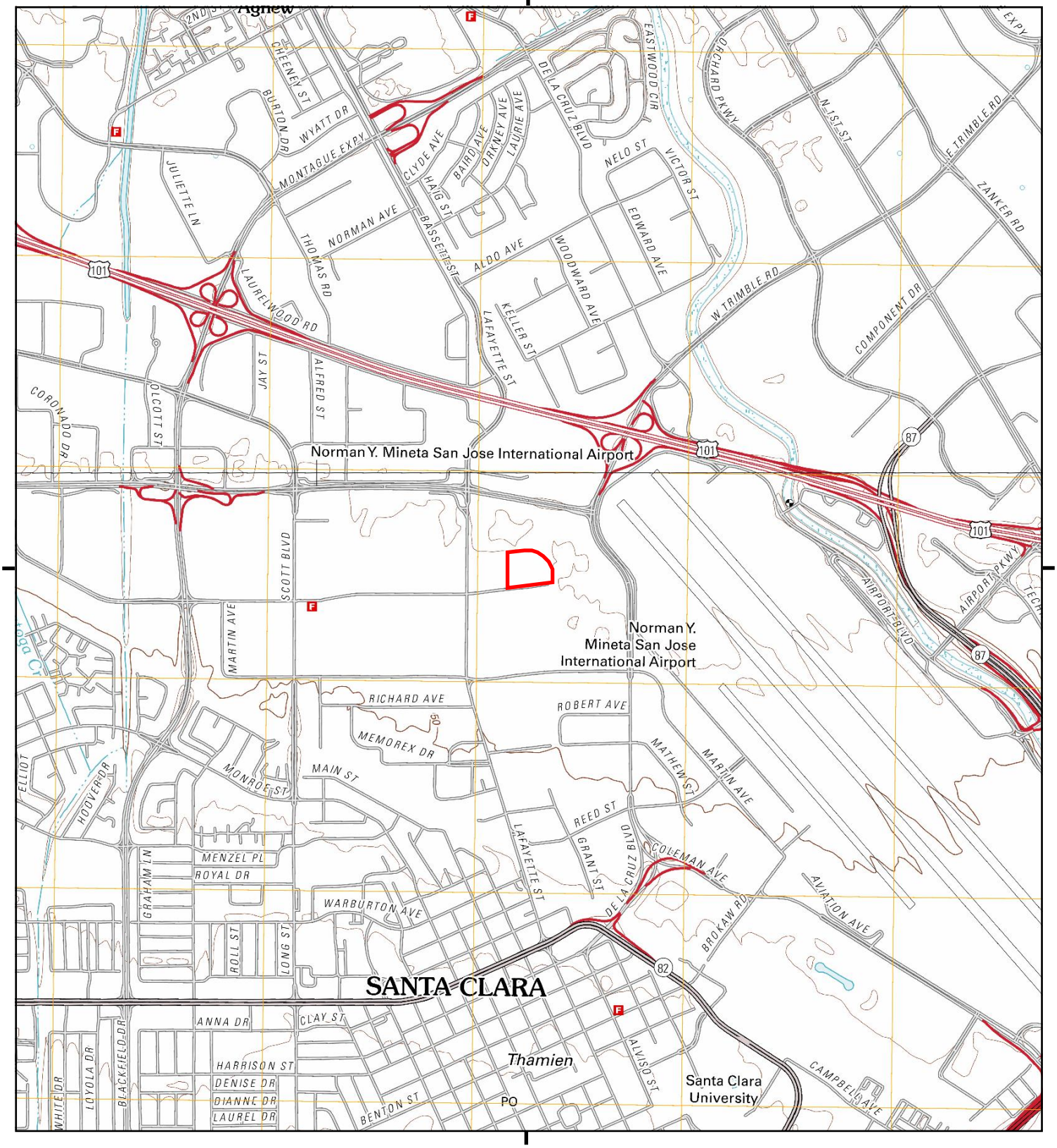
1889 Source Sheets



San Jose
1889
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

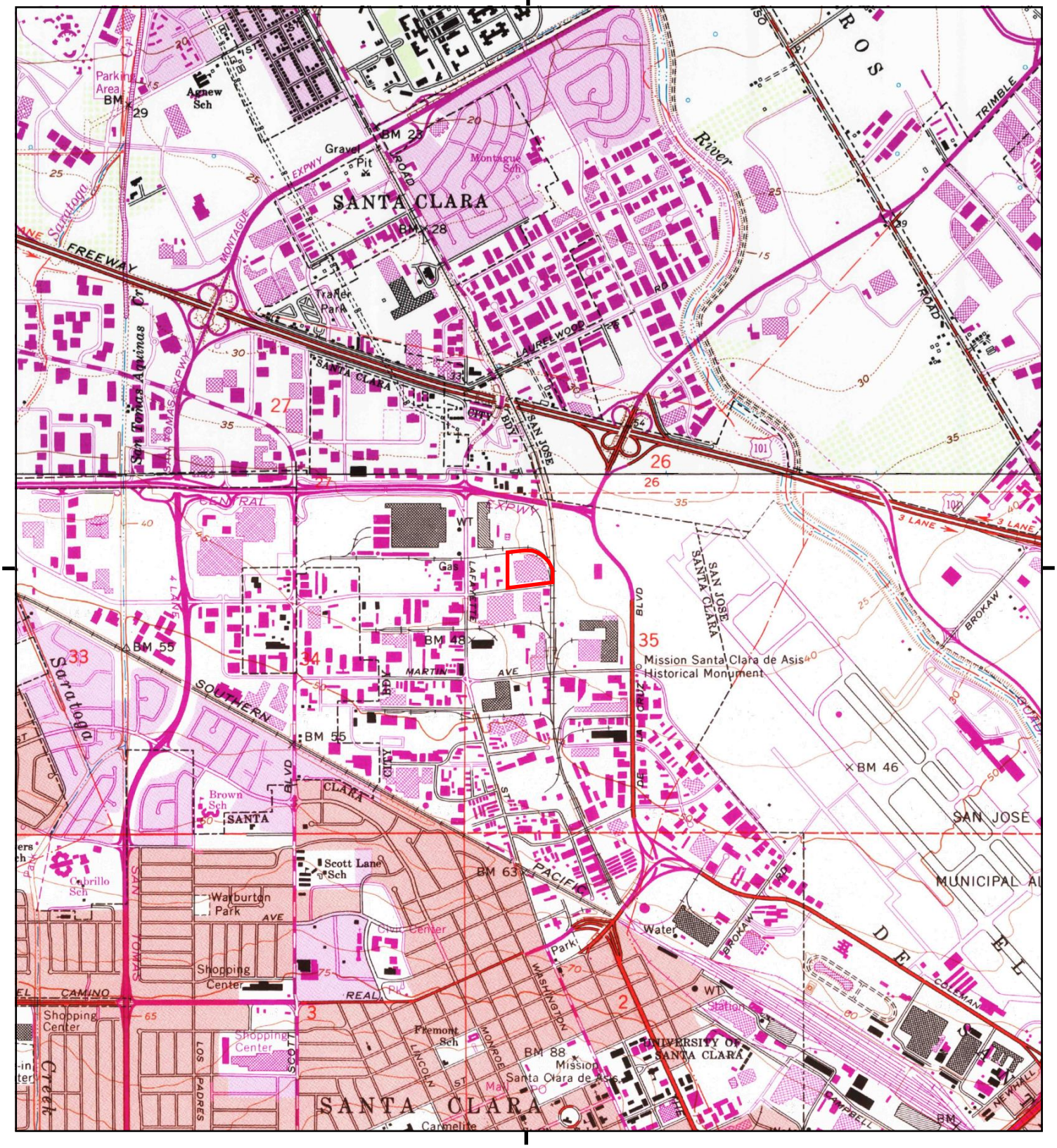
TP, San Jose West, 2012, 7.5-minute
N, Milpitas, 2012, 7.5-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N

Historical Topo Map

1980



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

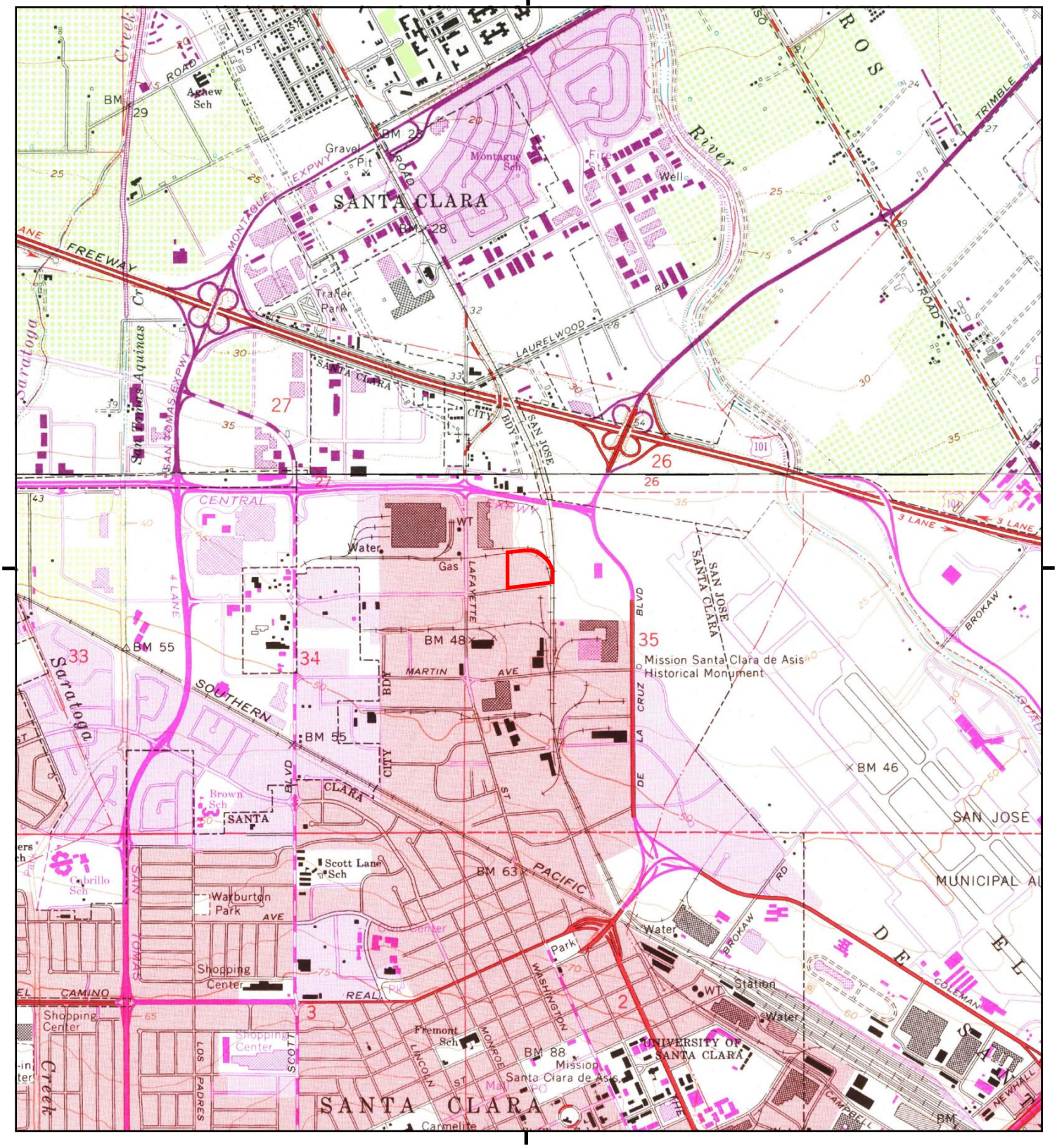
TP, San Jose West, 1980, 7.5-minute
N, Milpitas, 1980, 7.5-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N

Historical Topo Map

1973



This report includes information from the following map sheet(s).

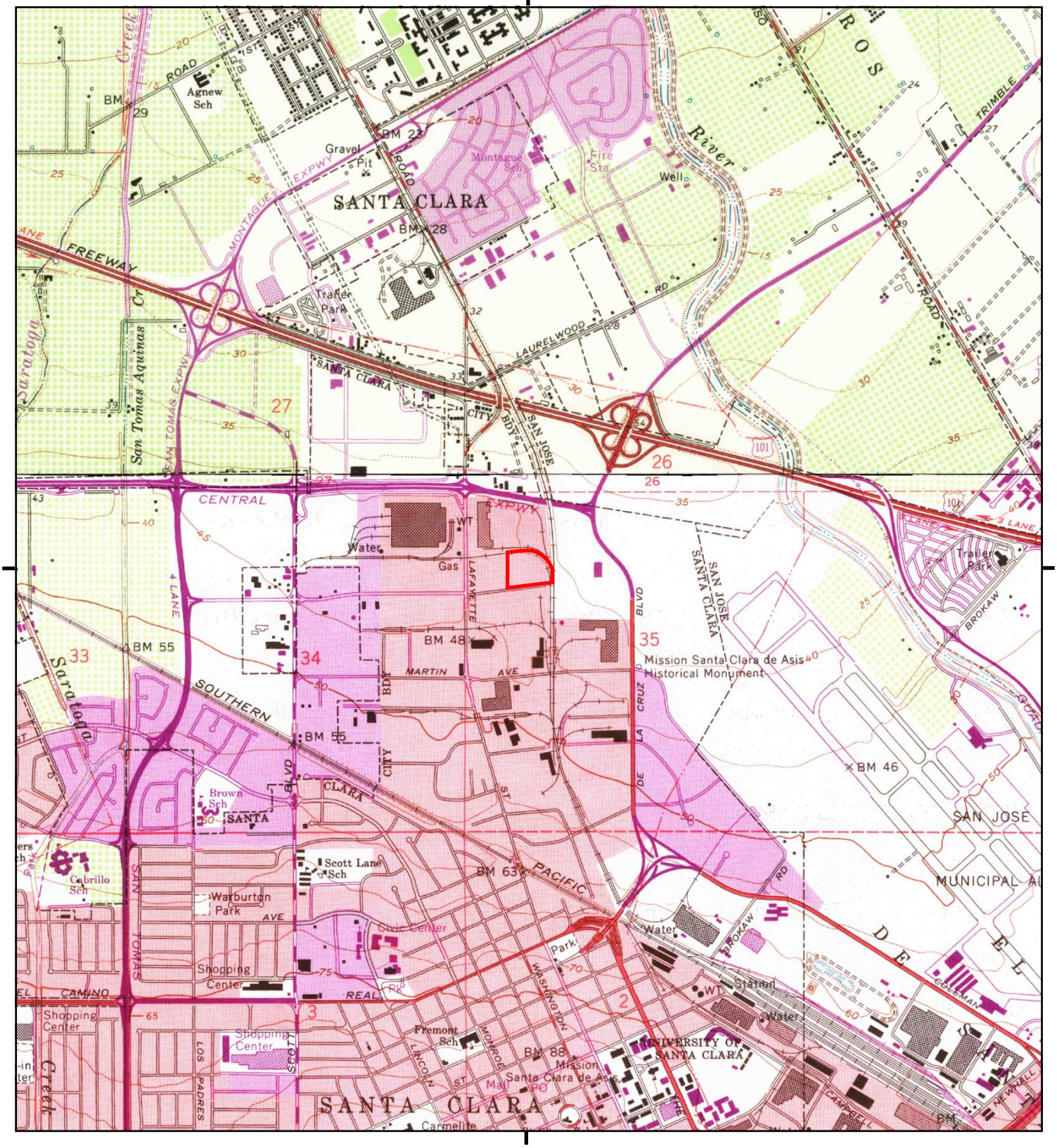
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, San Jose West, 1973, 7.5-minute
N, Milpitas, 1973, 7.5-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

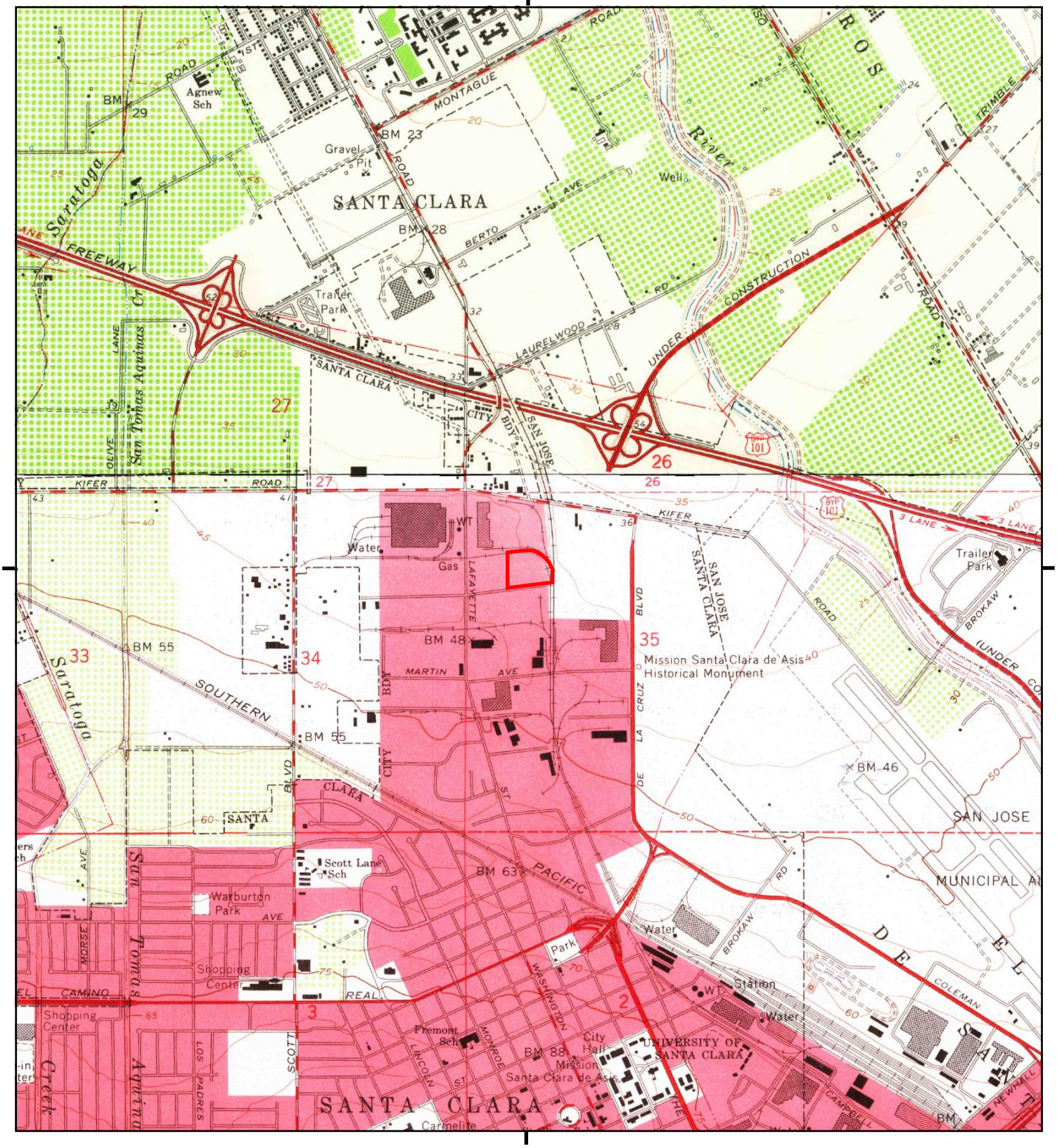
TP, San Jose West, 1968, 7.5-minute
N, Milpitas, 1968, 7.5-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N

Historical Topo Map

1961



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

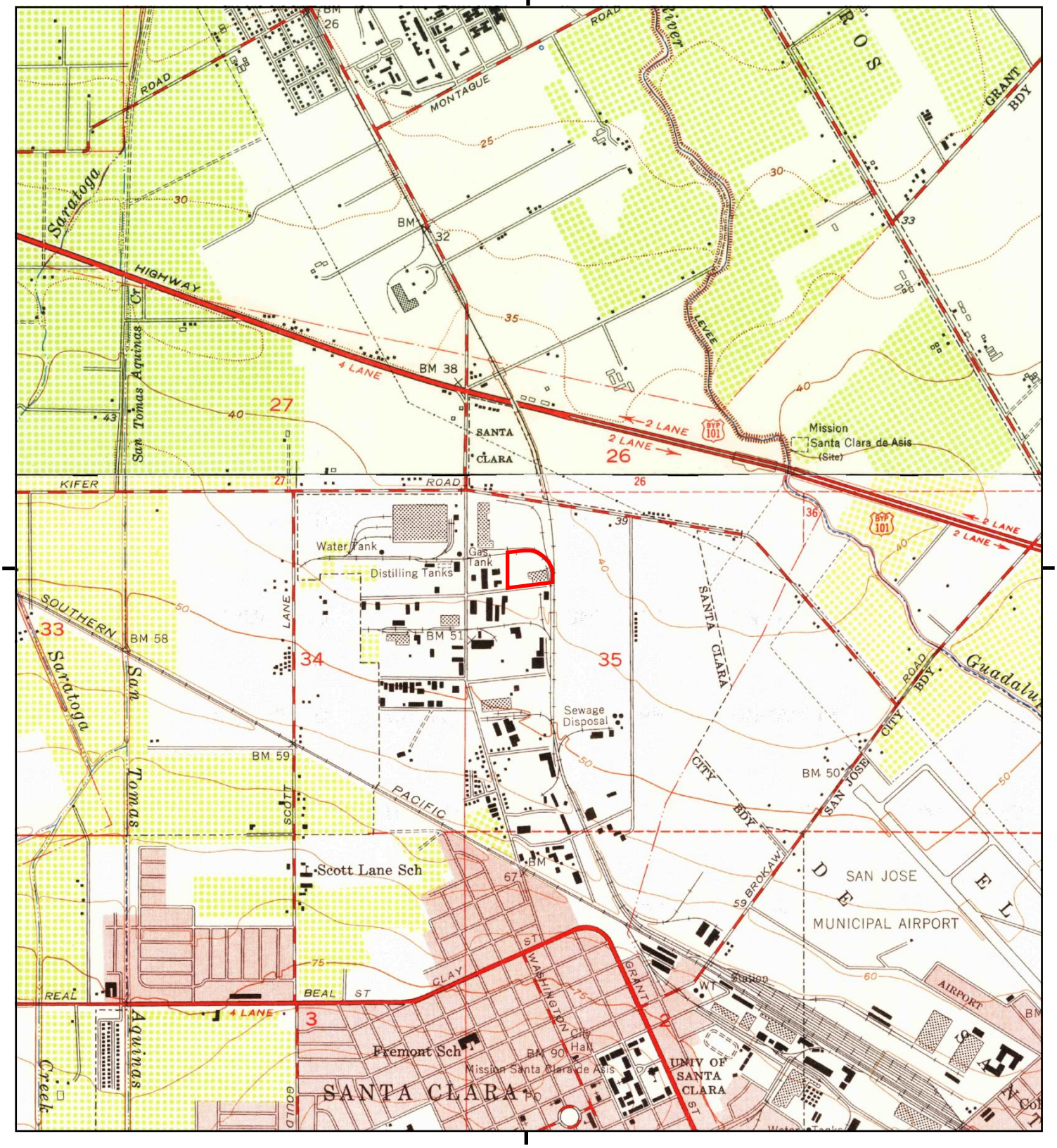
TP, San Jose West, 1961, 7.5-minute
N, Milpitas, 1961, 7.5-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N

Historical Topo Map

1953



This report includes information from the following map sheet(s).

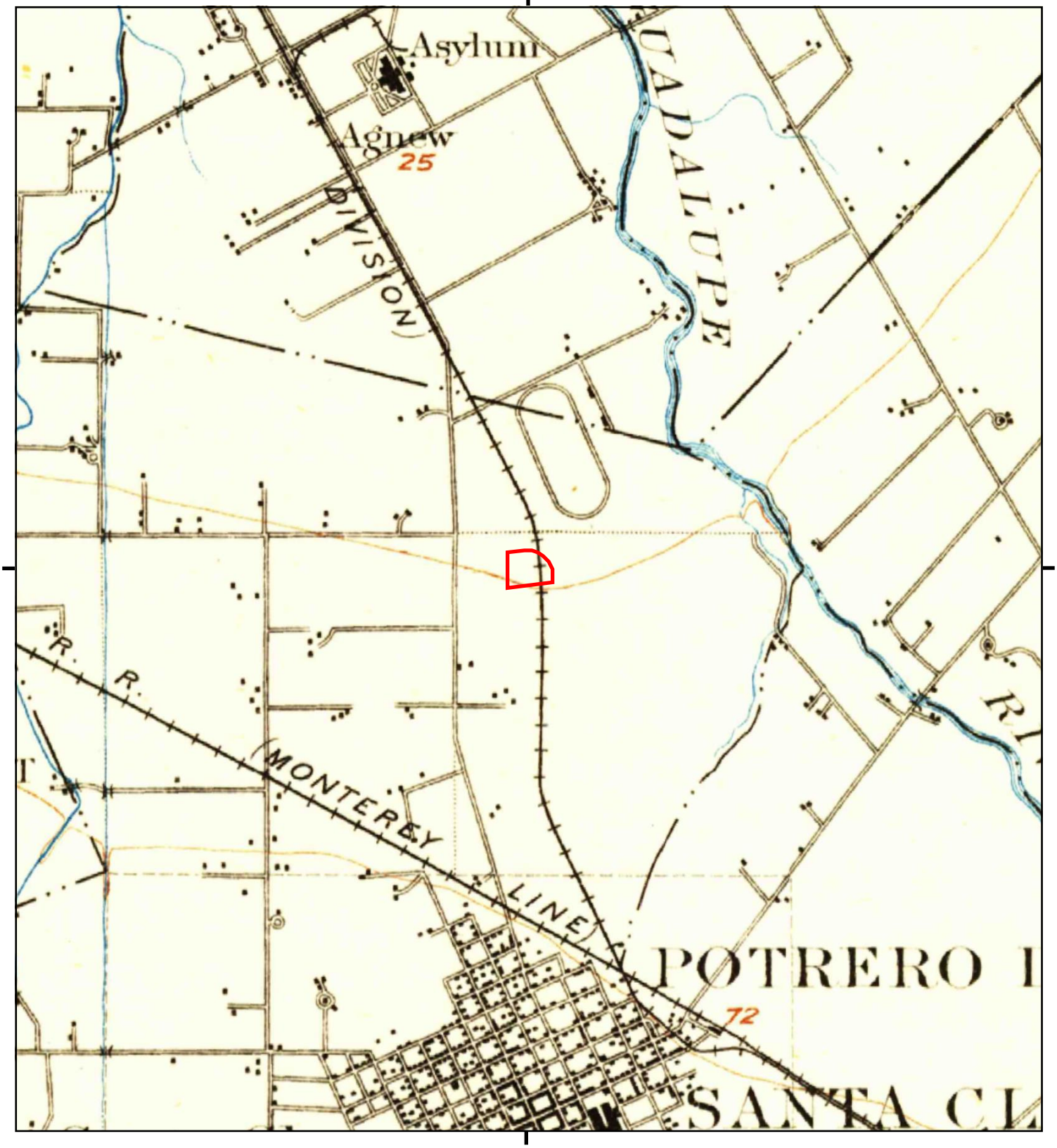
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, San Jose West, 1953, 7.5-minute
N, Milpitas, 1953, 7.5-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N



This report includes information from the following map sheet(s).

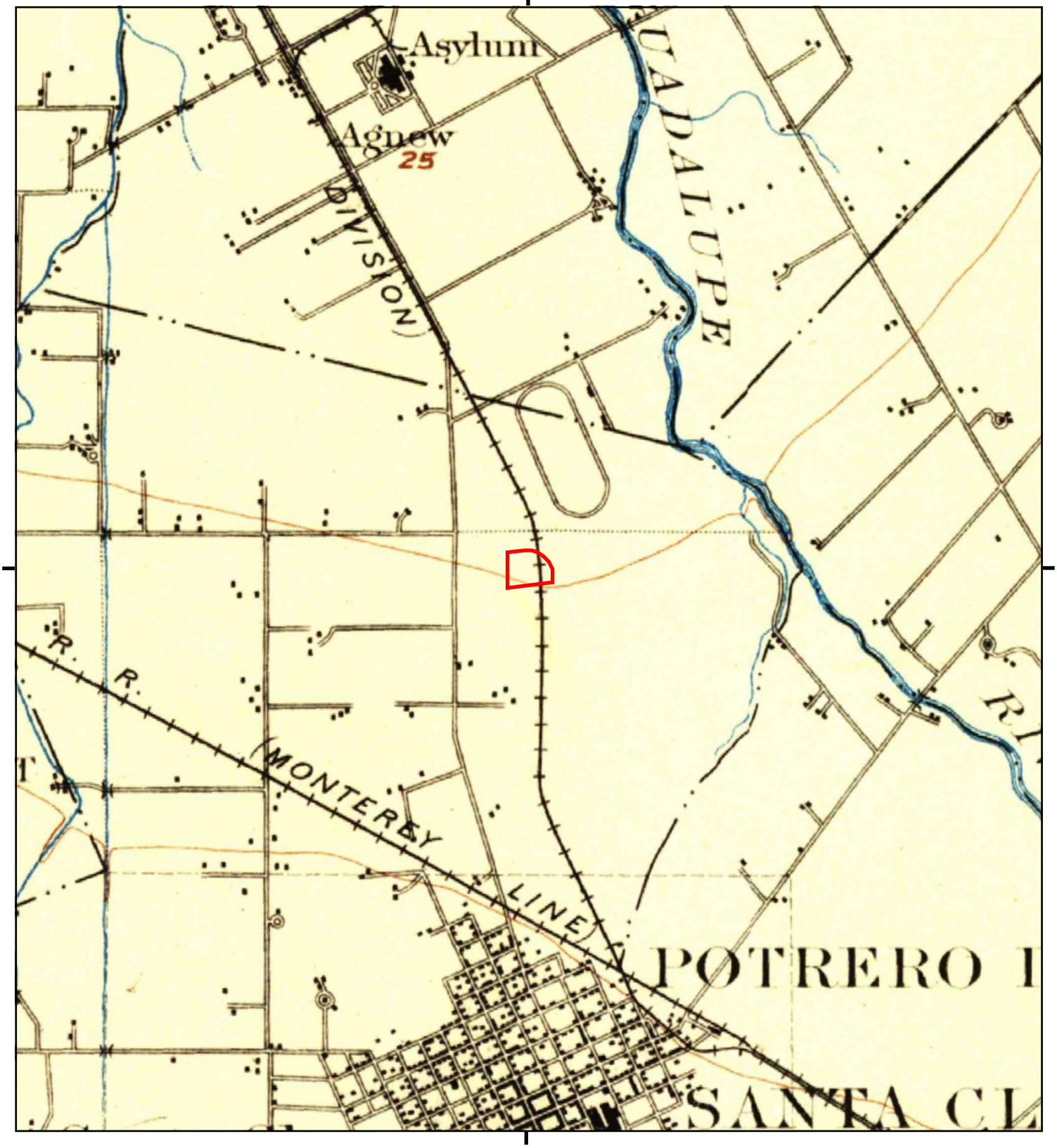
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, San Jose, 1899, 15-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N



This report includes information from the following map sheet(s).

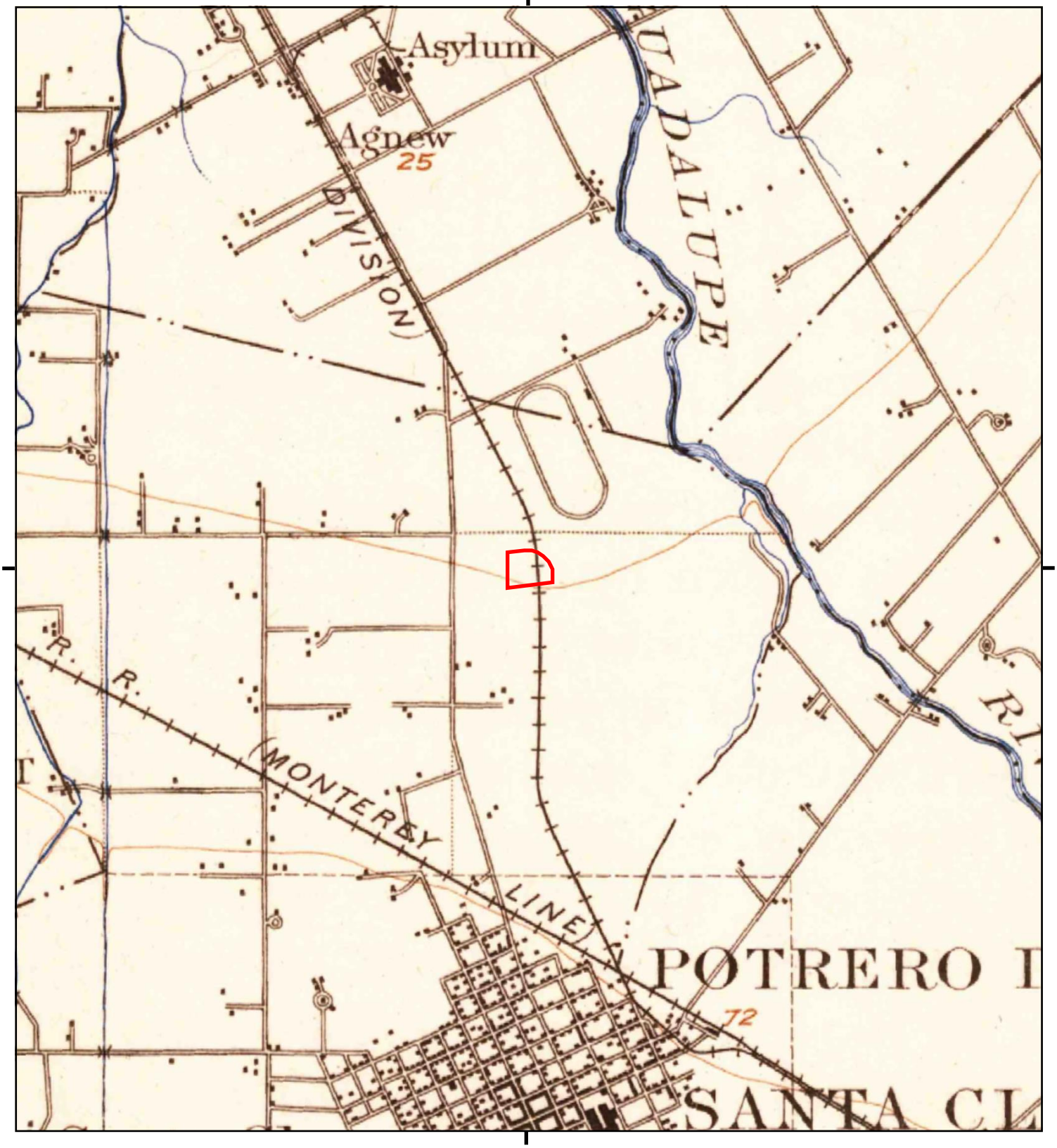
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, San Jose, 1897, 15-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, San Jose, 1889, 15-minute

SITE NAME: 601-711 Walsh Avenue
ADDRESS: 601-711 Walsh Avenue
Santa Clara, CA 95050
CLIENT: Rosso Environmental, Inc.

N

APPENDIX PDDR-25

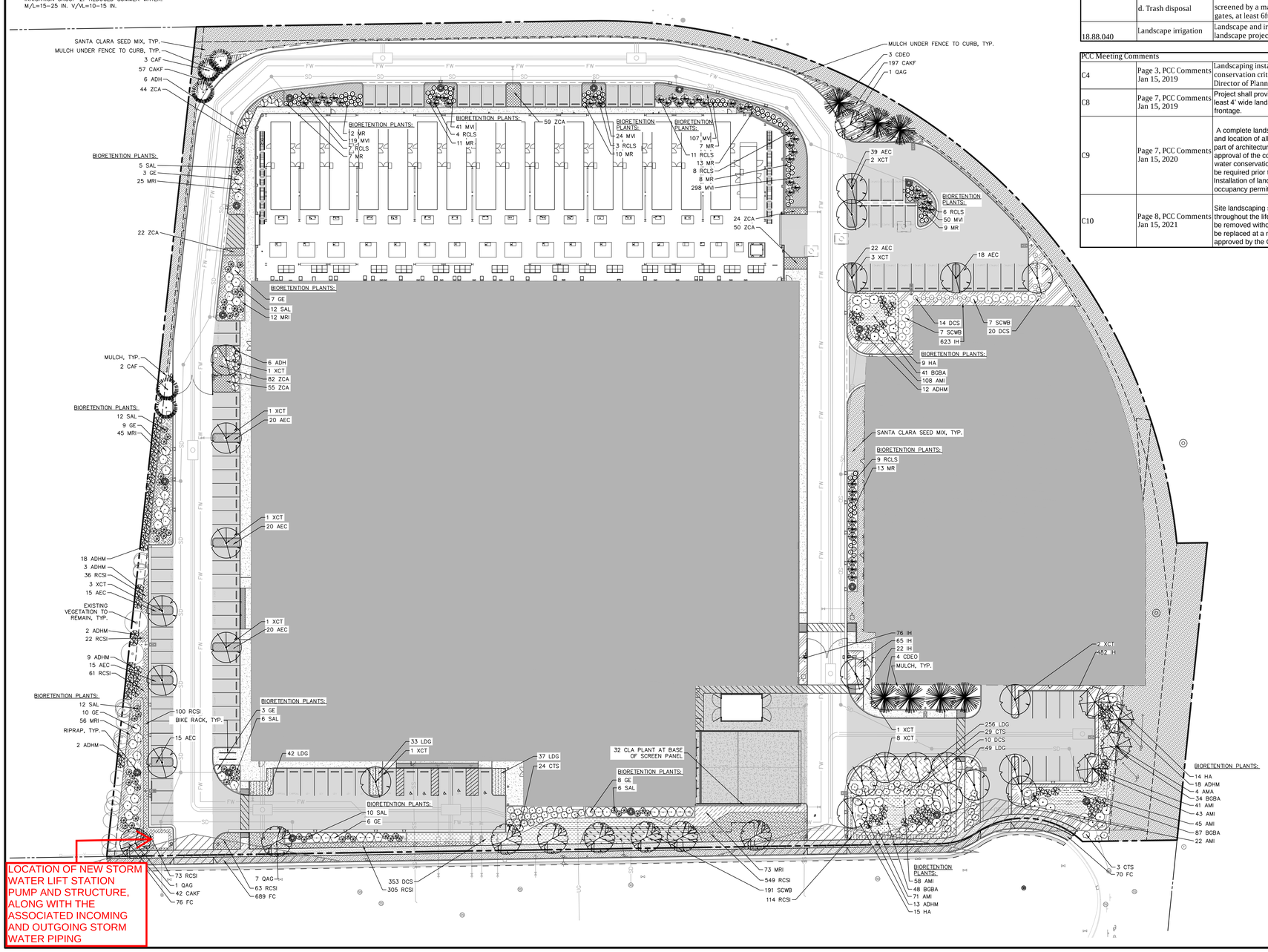
Drawing L-201, Landscape Plan

PLANT SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS	PLANT FACTORS	IRRIGATION
TREE(S)								
QAG	9	QUERCUS AGRIFOLIA	COAST LIVE OAK	2 1/2–3" CAL. 24"BOX	B+B	–	M/L	2
XCT	24	XCHITALPA TASHKENTENSIS	CHITALPA	2 1/2–3" CAL. 24"BOX	B+B	–	M/L	2
AMA	4	ARBUTUS 'MARINA'	MARINA STRAWBERRY TREE	2 1/2–3" CAL. 24"BOX	B+B	SINGLE STEM	L	2
EVERGREEN TREE(S)								
CAF	5	CEDRUS ATLANTICA FASTIGIATA	COLUMNAR BLUE ATLAS CEDAR	10' H MIN. 24"BOX	B+B	–	M/L	2
CDEO	7	CEDRUS DEODARA	DEODAR CEDAR	2 1/2" CAL. 24"BOX	B+B	–	M/L	2
EVERGREEN SHRUB(S)								
ADHM	76	ARCTOSTAPHYLOS DENSIFLORA 'HOWARD MCMINN'	MAZANITA 'MCMINN'	48" H	CONTAINER #5	–	M/L	2
ADH	12	ARCTOSTAPHYLOS 'DR HURD'	DR HURD MANZANITA	36" H	CONTAINER #3	–	M/L	2
CTS	56	CEANOTHUS THYRSIFLORUS 'SKYLARK'	SKYLARK CEANOTHUS	36" H	CONTAINER #5	–	M/L	2
GE	46	CARRYA ELLIPTICA	SILK TASSEL	48" H	CONTAINER #5	–	M/L	2
HA	38	HETEROMELES ARBUTIFOLIA	TOYON	48" H	CONTAINER #5	–	M/L	2
RCLS	48	RHAMNUS CALIFORNICA 'LITTLE SUR'	LITTLE SUR COFFEEBERRY	30" H	CONTAINER #5	–	M/L	2
DECIDUOUS SHRUB(S)								
MR	90	MAHONIA REPENS	CREEPING OREGON GRAPE	30" H	CONTAINER #3	–	M/L	
SAL	63	SYMPHORICARPOS ALBUS	SNOWBERRY	30" H	CONTAINER #3	–	M/L	
GROUND COVER								
AEC	184	ARCTOSTAPHYLOS 'EMERALD CARPET'	EMERALD CARPET MANZANITA	2 GAL.	CONTAINER	spaced @ 24" o.c.	M/L	2
FC	992	FESTUCA CALIFORNIA	CALIFORNIA FESCUE	1 GAL.	CONTAINER	spaced @ 18" o.c.	M/L	2
RCSI	1225	RHAMNUS CALIFORNICA 'SEAVIEW IMPROVED'	CALIFORNIA COFFEE BERRY	1 GAL.	CONTAINER	spaced @ 18" o.c.	M/L	2
PERENNIAL(S)								
AMI	388	ACHILLEA MILLEFOLIUM	COMMON YARROW	1 GAL.	CONTAINER	spaced @ 18" o.c.	M/L	2
LDG	417	LAVANDULA DENTATA 'GOODWIN CREEK GRAY'	GOODWIN CREEK GRAY LAVENDER	1 GAL.	CONTAINER	spaced @ 24" o.c.	M/L	2
MVI	532	MONARDELLA VILLOSA	COYOTE MINT	1 GAL.	CONTAINER	spaced @ 18" o.c.	VL	
SCWB	207	SALVIA CLEVELANDII 'WHIRLY BLUE'	CLEVELAND SAGE	2 GAL.	CONTAINER	spaced @ 24" o.c.	L/VL	2
ZCA	336	ZAUSCHNERIA CALIFORNICA	CALIFORNIA FUCHSIA	1 GAL.	CONTAINER	spaced @ 18" o.c.		
ORNAMENTAL GRASS(ES)								
BGBA	210	BOUTELOUA GRACILIS 'BLONDE AMBITION'	BLONDE AMBITION BLUE GRAMA GRASS	1 GAL	CONTAINER	spaced @ 24" o.c.	L/VL	2
CAKF	296	CALAMAGROSTIS ARUNDINACEA 'KARL FOERSTER'	FEATHER REED GRASS	1 GAL.	CONTAINER	spaced @ 24" o.c.	M/L	2
DCS	390	DESCHAMPSIA CESPITOSA	TUFTED HAIR GRASS	2 GAL.	CONTAINER	spaced @ 24" o.c.	L	
IH	1268	IVA HAYESIANA	SAN DIEGO MARSH ELDER	1 GAL.	CONTAINER	spaced @ 18" o.c.	M	2
MRI	190	MUHLENBERGIA RIGENS	DEER GRASS	2 GAL	CONTAINER	spaced @ 36" o.c.	M/L	2
VINE(S)								
CLA	32	CLEMATIS LASIANTHA	CHAPARRAL CLEMATIS	2 GAL.	CONTAINER	spaced @ 18" o.c.	M/L	2

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

IRRIGATION GROUP 2: REDUCED SUMMER WATER.
M/L=15–25 IN. V/VL=10–15 IN.



Ordinance Chart

Code section		Requirement	Calculation	Proposed	Compliance
Chapter 18.74 Parking	e. Screening and Landscaping	Parking areas which abut upon a public street right-of-way shall provide landscaping to a depth of at least 10 ft of said street right-of-way and of any plan line, with openinings for walkway or drive purposes			Complies
		Additional 5% of gross lot area shall be devoted to landscaping. Major canopy trees shall be provided throughout the parking area and adjacent to buildings. Trees shall be spaced at either a min. distance of 36' o.c. or in an alternative design to accomplish an equivalent density of screening and degree of shading	76,447 sqft of parking x 5% =3,822 sqft of landsdcaped area	45,235 sqft of landscaped area proposed	Complies
12.35 Trees and Shrubs	Street Tree requirement	No tree or shrub shall be planted in the streets of the city. No tree, plant or shrub planted or growing in the streets of the City shall be altered or removed without obtaining a written permit from the superintendent of streets.			Permit required
18.50 MH-Heavy Industrial Zoning Districts	120. Open landscaped area	A minimum of 10ft of the required front and street side yards, exclusive of City-permitted driveway cuts, shall be developed into and permanently maintained as open landscaped areas			Complies
		A minimum landscaped area equal to at least 10% of the required parking area to be evenly distributed thoughout the parking area and adjacent to buildings.	76,447 sqft of parking x 10% =7,645 sqft of landsdcaped area	45,235 sqft of landscaped area proposed	Complies
	140.a.Fencing	Fencing shall not exceed 3ft in height in required frontage landscaping			Complies
		outdoor storage areas shall be screened from the street by a minimum 6ft high solid fence located behind required frontage landscaping		12 ft green fence provided	Complies
	c. Lighting	Lighting shall reflect away from residential areas and public streets			Complies
	d. Trash disposal	screened by a masonry enclosure, with solid wood gates, at least 6ft in height.			N.A.
18.88.040	Landscape irrigation	Landscape and irrigation design plans are required of landscape projects larger than 2,500 sqft		Irrigation provided	Complies

PCC Meeting Comments			Calculation	Proposed	Compliance
C4	Page 3, PCC Comments Jan 15, 2019	Landscaping installation shall meet City water conservation criteria in a manner acceptable to the Director of Planning and Inspection			Complies
C8	Page 7, PCC Comments Jan 15, 2019	Project shall provide a 5' wide sidewalk and at least 4' wide landscaping strip along the project frontage.		5' wide sidewalk and 4' wide landscaping strip provided	Complies
C9	Page 7, PCC Comments Jan 15, 2020	A complete landscape plan that includes, type, size and location of all plant species shall be required as part of architectural review of the project. Review and approval of the complete landscape plan, including water conservation calculations and irrigation plan shall be required prior to issuance of building permits. Installation of landscaping is required prior to occupancy permits.			Complies
C10	Page 8, PCC Comments Jan 15, 2021	Site landscaping shall be maintained in good condition throughout the life of the Development. No trees shall be removed without City review and approval and shall be replaced at a minimum of 2:1 with 24" box species approved by the City.	24 existing trees to be demolished x2 =48 proposed trees	48 proposed trees with 24" box	Complies

exp U.S. Services Inc.
t: +1.312.616.0000 f: +1.312.616.6069
205 North Michigan Avenue
Chicago, IL 60601
USA
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY

Project No.:770656701

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
1 Almaden Boulevard, Suite 590
San Jose, CA 95113
T: 408.283.3600 F: 408.283.3601 www.langan.com

No.	Revision	Date
	ISSUE FOR 95% CD REVIEW	05/28/2019
	ISSUED FOR DESIGN DEVELOPMENT	03/11/2019
	ISSUED FOR SCHEMATIC DESIGN	01/18/2019

CONSTRUCTION DOCUMENTS

Professional Seal(s)

NOT FOR CONSTRUCTION

Drawn By:	LANGAN
Checked By:	LANGAN
Approved By:	LANGAN
Date Printed:	
File Name:	L-201 - LANDSCAPE PLAN

Project Title

DLR 651 WALSH SANTA CLARA PHASE 2A - CORE & SHELL BUILDING
651 Walsh Ave,
Santa Clara, CA 95050
DLR Building Number: SJC-37

Dwg. Title

LANDSCAPE PLAN

Project No.
770656701

Dwg. No.
L-201

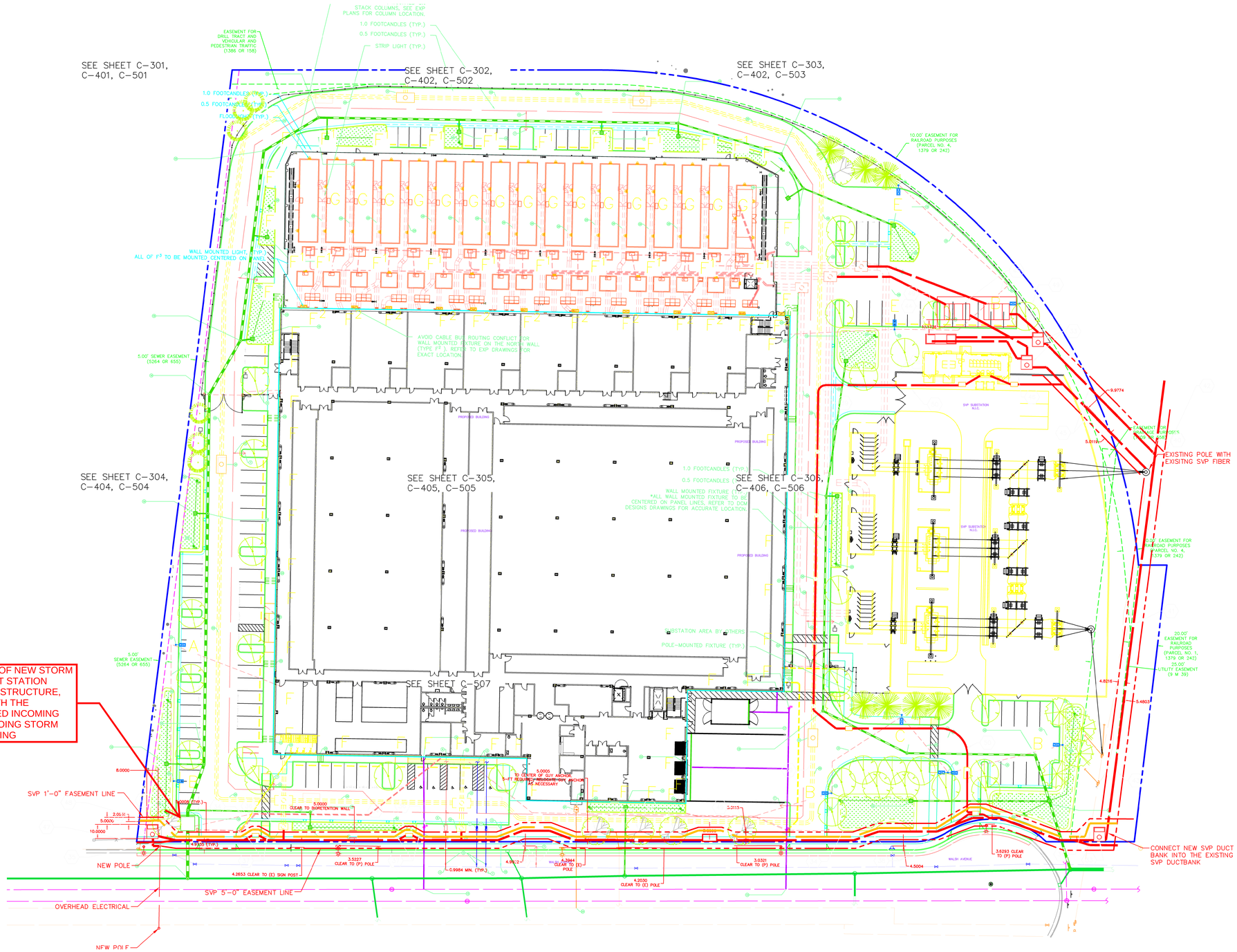
Rev. No.

30 0 15 30
SCALE IN FEET

APPENDIX PDDR-27

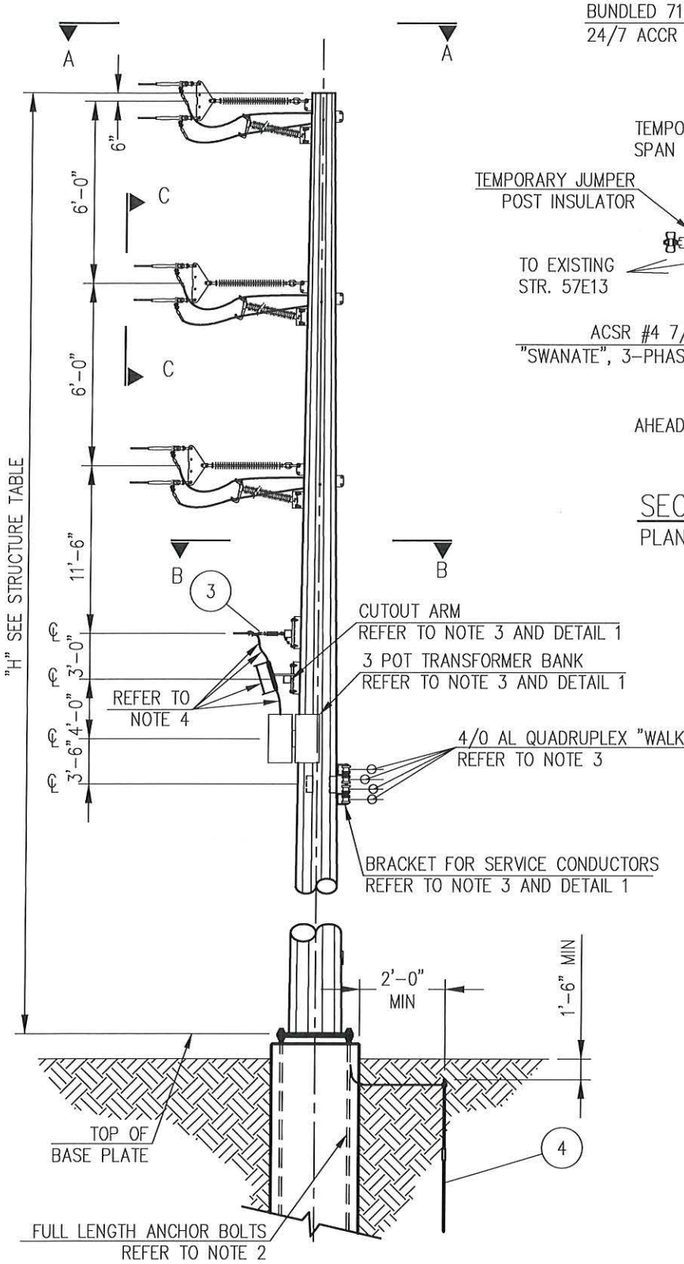
Overall Utility Plan

OVERALL UTILITY PLAN

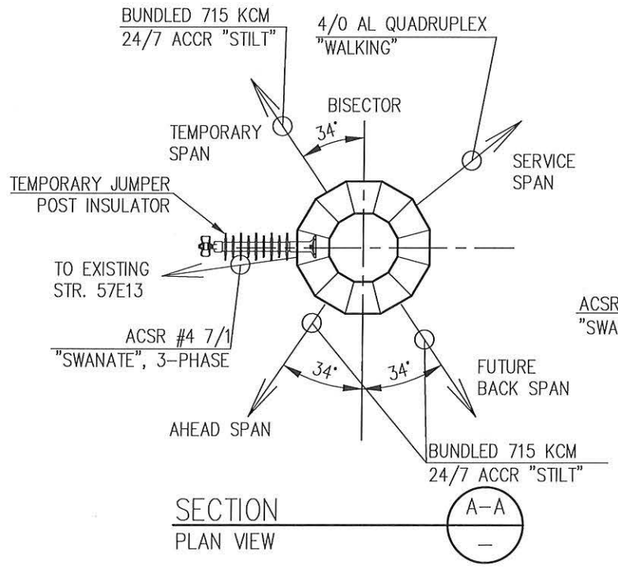


APPENDIX PDDR-31

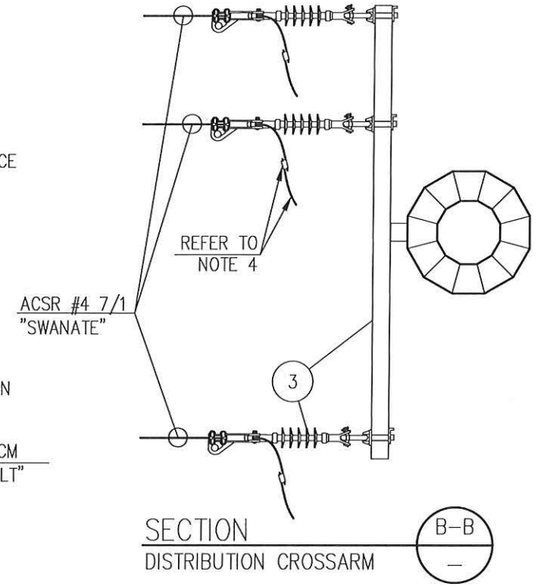
SVP Typical Transmission Pole Configurations



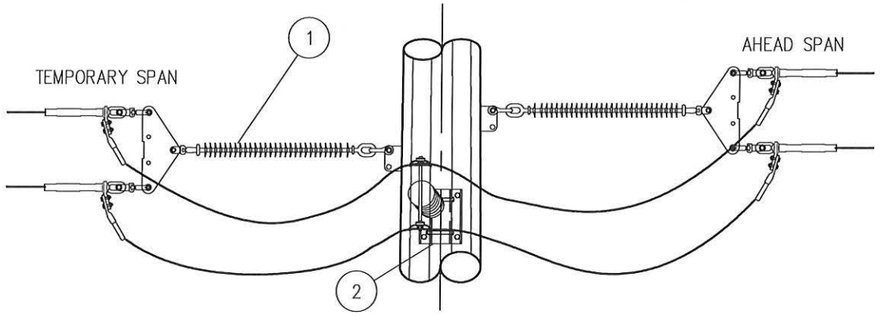
ELEVATION
(LOOKING TOWARD INTERIOR BISECTOR)



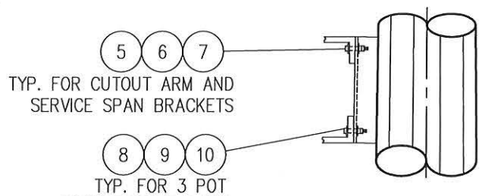
SECTION
PLAN VIEW
A-A



SECTION
DISTRIBUTION CROSSARM
B-B



SECTION
CONDUCTOR ATTACHMENT
POST INSULATOR
C-C



DETAIL
BOLT ATTACHMENT FOR
DISTRIBUTION EQUIPMENT
1

REGISTERED PROFESSIONAL ENGINEER
BRADLEY M STRINGHAM
C 83641
EXP. 3/31/19
CIVIL
STATE OF CALIFORNIA

MATERIAL ASSEMBLIES

ITEM NO.	ASSEMBLY DESCRIPTION	ASSEMBLY DRAWING	QTY
1	60 kV DE INSULATOR, 715 KCM, ACCR, BUNDLED	PSI-A-T006-2	6
2	60 kV JUMPER POST, FLAT BASE, DBL. TRUNNION	PSI-A-T006-3	3
3	DE FIBERGLASS ARM, 10 FT. W/ INSULATOR ASSEMBLIES	PSI-A-T006-5	1
4	GROUND ROD ASSEMBLY	PER SVP STANDARDS	1

UNIQUE MATERIALS FOR PSI-B-T005-SH1

ITEM	STOCK NO.	MATERIAL DESCRIPTION	VENDOR OR SVP BIN NO.	PART NO.	QTY
5	67	BOLT, SQUARE HEAD, 5/8IN DIA. X 5IN LONG, 3IN THREAD, WITH NUT	BIN NO. 70009	-	6
6	32	WASHER, ROUND, FLAT, GALV. STEEL, 5/8IN, 2IN O.D.	HUGHES BROTHERS	RW2-60	12
7	38	NUT, LOCK, 5/8IN, SQUARE	HUGHES BROTHERS	MF60	6
8	69	BOLT, SQUARE HEAD, 3/4IN DIA. X 6IN LONG, 4IN THREAD, WITH NUT	BIN NO. 70082	-	2
9	35	WASHER, ROUND, FLAT, GALV. STEEL, 3/4IN, 2IN O.D.	BIN NO. 70044	JOSLYN #J1089	4
10	36	NUT, LOCK, 3/4IN, SQUARE	HUGHES BROTHERS	MF70	2

STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE RAKE MEASURED AT TOP OF POLE (IN)	DIRECTION OF RAKE	POLE HEIGHT "H"	STRUCTURE QUANTITY
PAR-KEN 2	NOT REQUIRED	NOT REQUIRED	62'-0"	1

NOTES:

1. DISTANCE AND DIRECTION OF RAKE SHALL BE AS SHOWN IN THE STRUCTURE TABLE.
2. REFER TO DRAWING PSI-B-T003-1 FOR FOUNDATION DETAILS.
3. TRANSFER EXISTING CUT-OUT ARM, 3 POT TRANSFORMER BANK, CONDUCTORS, AND BOTH BRACKETS USED TO SUPPORT THE SERVICE SPAN FROM EXISTING STRUCTURE 57E14 TO STRUCTURE PAR-KEN 2 AT THE LOCATIONS SHOWN ON THE NEW STEEL POLE.
4. TRANSFER WIRE AND CLAMPS FROM EXISTING STRUCTURE 57E14 TO STRUCTURE PAR-KEN 2. THE FUSE CUTOUTS SHALL BE MOUNTED ON THE SIDE OF THE CROSSARM THAT IS FURTHEST FROM THE STEEL POLE.

ISSUED FOR CONSTRUCTION

"Engineering with Distinction"
ELECTRICAL CONSULTANTS, INC.
490 W. MAGEE ROAD
TUCSON, ARIZONA 85704
(520)219-9933 FAX: (520)219-9949

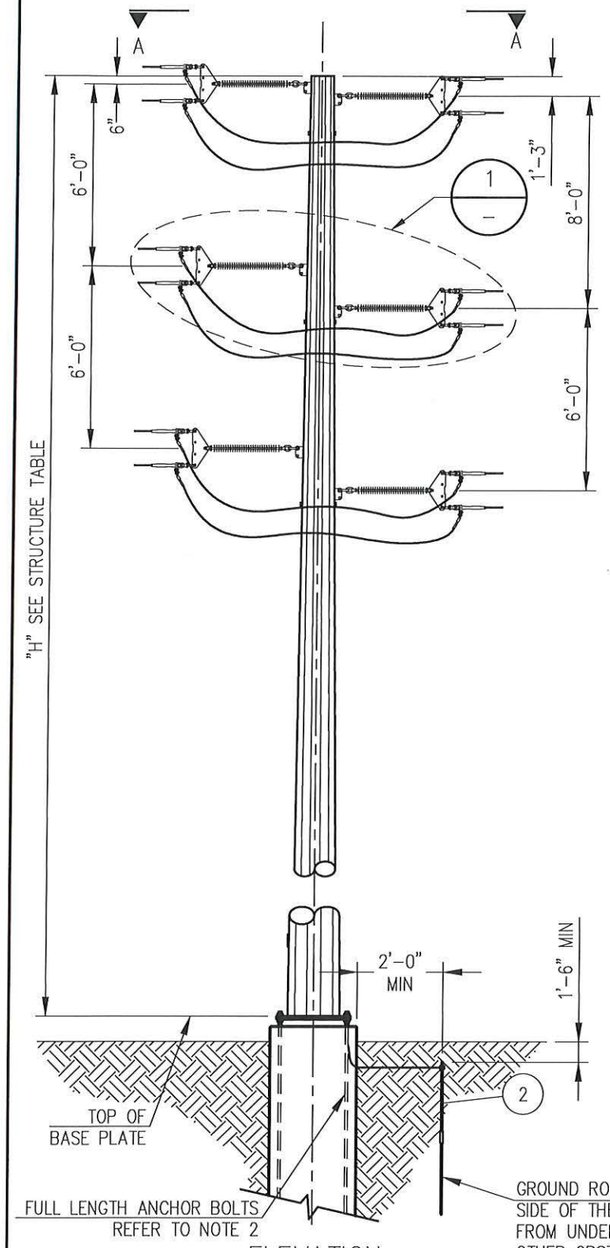
NO	REVISION	DATE	BY	APR
0	ISSUED FOR CONSTRUCTION	31Jan2019	ALP/DJW	BMS

Silicon Valley Power
CITY OF SANTA CLARA

ENGINEERING RECORD		DATE
DRAWN	DJW	25Oct2018
DESIGNED	AJM	25Oct2018
CHECKED	ALP	25Oct2018
APPROVED	BMS	25Oct2018
DWG SCALE: NONE	PLT SCALE: 1=1	

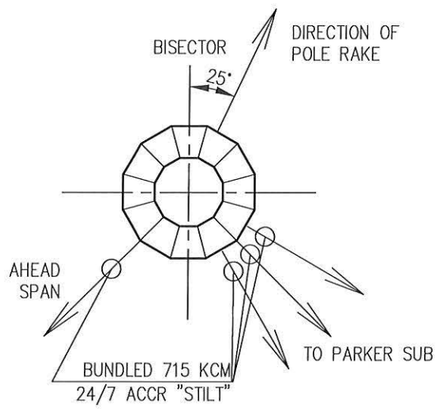
PARKER SUB INTERCONNECT
60 kV TRANSMISSION LINE
STR. PAR-KEN 2, STEEL DEADEND

FILE NO : PSI-B-T005-SH1 REVISION NO : 0

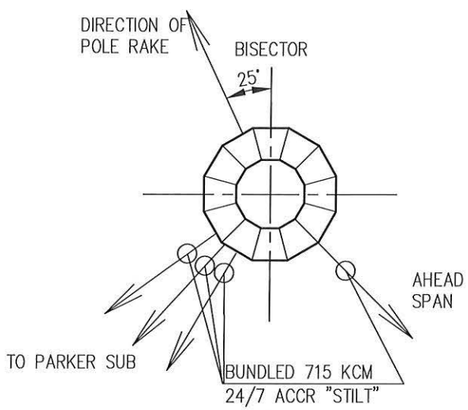


ELEVATION

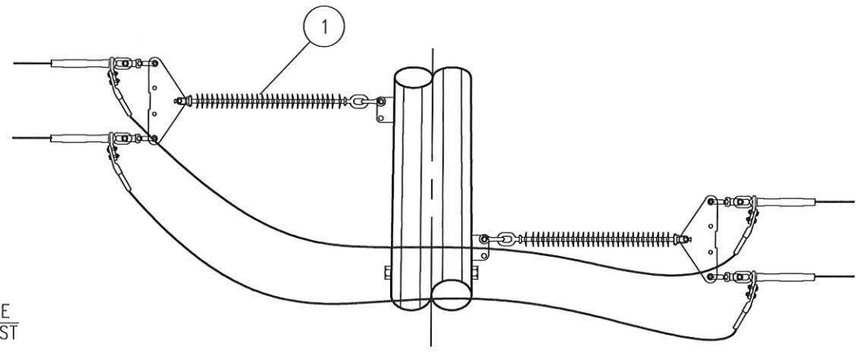
(LOOKING TOWARD INTERIOR BISECTOR)
STR. PAR–KEN 1 SHOWN, STR. MAT–PAR 4 SIMILAR
REFER TO NOTE 3



SECTION A–A
PLAN VIEW, STR. PAR–KEN 1



SECTION A–A
PLAN VIEW, STR. MAT–PAR 4



DETAIL 1
CONDUCTOR ATTACHMENT

MATERIAL ASSEMBLIES

ITEM NO.	ASSEMBLY DESCRIPTION	ASSEMBLY DRAWING	QTY
1	60 kV DE INSULATOR, 715 KCM, ACCR, BUNDLED	PSI–A–T006–2	6
2	GROUND ROD ASSEMBLY	PER SVP STANDARDS	1

STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE RAKE MEASURED AT TOP OF POLE (IN)	DIRECTION OF RAKE	POLE HEIGHT "H"	STRUCTURE QUANTITY
PAR–KEN 1	6"	REFER TO SECTION A–A	61'–0"	1
MAT–PAR 4	6"	REFER TO SECTION A–A	66'–0"	1

NOTES:

1. DISTANCE AND DIRECTION OF RAKE SHALL BE AS SHOWN IN THE STRUCTURE TABLE.
2. REFER TO DRAWING PSI–B–T003–1 FOR FOUNDATION DETAILS.
3. FOR BOTH STR. PAR–KEN 1 AND MAT–PAR 4, THE LOWER CONDUCTOR AT EACH PHASE LEVEL IS ORIENTED TOWARD PARKER SUB.

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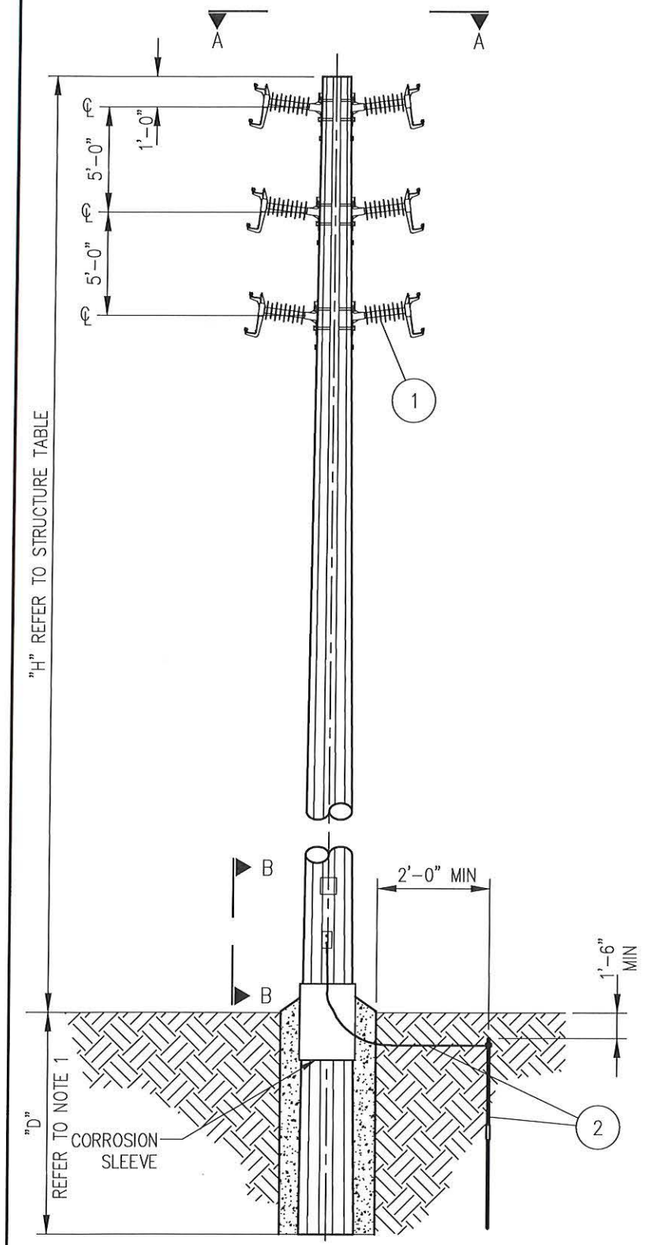
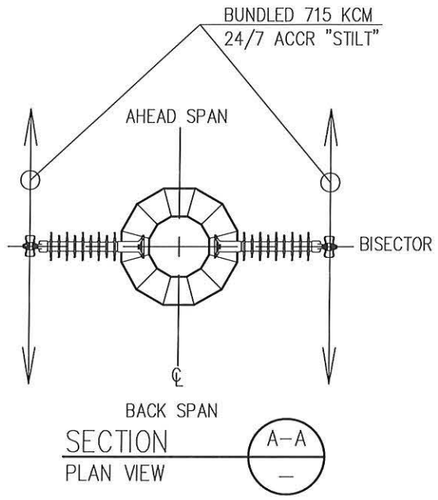
DWG SCALE: NONE	PLT SCALE: 1=1	

PARKER SUB INTERCONNECT
60 kV TRANSMISSION LINE
STR. PAR–KEN 1 & MAT–PAR 4, STEEL DEADEND

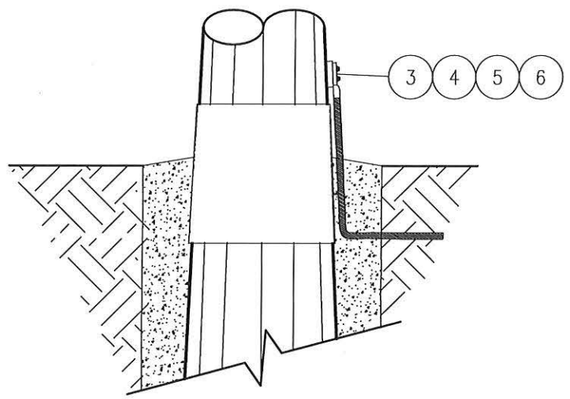
FILE NO :	PSI–B–T005–SH2	REVISION NO : 0



ELEVATION
(LOOKING AHEAD ON LINE)



SECTION A–A
PLAN VIEW



SECTION B–B
GROUNDING CONNECTION AT POLE

MATERIAL ASSEMBLIES

ITEM NO.	ASSEMBLY DESCRIPTION	ASSEMBLY DRAWING	QTY
1	60 KV DBL. POST INSULATOR, DBL. TRUNNION	PSI–A–T006–4	3
2	GROUND ROD ASSEMBLY	PER SVP STANDARDS	1

UNIQUE MATERIALS FOR PSI–B–T005–SH4

ITEM	STOCK NO.	MATERIAL DESCRIPTION	VENDOR OR SVP BIN NO.	PART NO.	QTY
3	95	BOLT, MACHINE, 1/2 IN DIA, 1–1/2 IN LG, SILICON BRONZE	HUBBELL	HBB150	2
4	96	WASHER, ROUND, 1/2 IN DIA., SILICON BRONZE	HUBBELL	HFB500	2
5	97	WASHER, BELLEVILLE, 1/2 IN DIA. STAINLESS STEEL	HUBBELL	BW500	2
6	94	CONNECTOR, COMPRESSION, TERMINAL, 2–HOLE, FOR #2, 7–STRAND COPPER	BURNDY	YGA2C2N	1

STRUCTURE TABLE

STRUCTURE NUMBER	POLE CLASS & LENGTH	POLE HEIGHT "H"	EMBEDMENT DEPTH "D"	STRUCTURE QUANTITY
MAT–PAR 2	H6–80'	65'–0"	15'–0"	1

REGISTERED PROFESSIONAL ENGINEER
BRADLEY M STRINGHAM
C 83641
EXP. 3/31/19
CIVIL
STATE OF CALIFORNIA

NOTES:
1. REFER TO DRAWING PSI–B–T003–2 FOR EMBEDMENT DETAILS.

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ENGINEERING RECORD		DATE
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DESIGNED	AJM	25Oct2018
CHECKED	ALP	25Oct2018
APPROVED	BMS	25Oct2018
DWG SCALE: NONE	PLT SCALE: 1=1	

PARKER SUB INTERCONNECT
60 kV TRANSMISSION LINE
STR. MAT–PAR 2, LIGHT DUTY STEEL, TANGENT

FILE NO : PSI–B–T005–SH4 REVISION NO : 0

APPENDIX PDDR-34

One-Line Diagram of Laurelwood Substation

Which Will Serve The WDC

O/H 60KV LINE TO _____SUBSTATION BREAKER____

(Q.B.) 72.5KV 3000A — 41

72.5KV 3000A, 63KA — 42

72.5KV 3000A — 43

3000A

72.5KV 3000A, 63KA — 32

72.5KV 3000A — 33-2

72.5KV 3000A, 63KA — 22

72.5KV 3000A — 23-1

72.5KV 3000A — 13

72.5KV 3000A, 63KA — 12

(Q.B.) 72.5KV 3000A — 11

O/H 60KV LINE TO _____SUBSTATION BREAKER ____

C B A X2

1:300 1:500

60KV VT 2

60KV VT 1

(Q.B.) 72.5KV 2000A — 36

(Q.B.) 72.5KV 2000A — 26

(Q.B.) 72.5KV 2000A — 16

LA 70 KV

T3 / T2 / T1

30/40/50 MVA, 55°C
33.6/44.8/56 MVA, 65°C
ONAN/ONAF1/ONAF2 60-12KV
WITH LTC ±10%

X0 300A 0.35Ω

1:100

12KV VT3 / 12KV VT2 / 12KV VT1

LA 12.7 KV

15.5KV 3000A — 30 / 20 / 10

3000A, 25KV ROOF BUSHINGS (TYP.)

SVP REVENUE METER

VT3-1 / VT2-1 / VT1-1 0.5E 100:1

VT3-2 / VT2-2 / VT1-2 0.5E 100:1

3000A — 300 / 200 / 100

MAIN BUS 3, 3000A, 3Ø, 3W, 25KAIC

MAIN BUS 2, 3000A, 3Ø, 3W, 25KAIC

MAIN BUS 3, 3000A, 3Ø, 3W, 25KAIC

1200A — 306 305 304 303 302 301

1200A — 206 205 204 203 202 201

1200A — 106 105 104 103 102 101

CPT-3 / CPT-2 / CPT-1

FEEDER FEEDER FEEDER FEEDER FEEDER FEEDER

TO DRT DISTRIBUTION SYSTEM

PHASE SEQUENCE
C-B-A

**PRELIMINARY
05-07-2018**

REV	DATE	DECRIPTION	APPR'D

DESIGNED BY:
APPROVED BY:

MH engineers, inc.
3350 scott blvd., bldg. 11
santa clara, ca 95054
(408) 986-8558
FAX (408) 986-9627
PROJECT NO. 18818-01

LAURELWOOD SUBSTATION

SINGLE-LINE DIAGRAM

DRAWN BY: RMC
SCALE: NTS — DATE: 03/19/18
MAP #: NONE — SH 1 OF 1

SILICON VALLEY POWER
CITY OF SANTA CLARA

DRAWING NUMBER: XXX-E-0-X-1 — REV: A

APPENDIX PDDR-43

SVP Responses Filed in Laurelwood SPPE

have two 115/60kV transformers for redundancy and reliability. This arrangement allows for a high reliability electrical system.

The 60kV loop is designed to maintain power to all customers when any line on the loop is out of service due to either maintenance or an unplanned outage. Each Receiving Station on the loop ends, SRS and KRS, is capable of delivering power to the entire loop. The full redundancy design of the system allows any line segment on the loop to be taken out of service for regular maintenance activities without causing a service interruption to any customers. Additionally, the protection systems on the loop are designed to detect fault conditions and isolate the fault to a single line segment. The isolation of the fault allows for continuous service for all customers during fault conditions.

As discussed above, the Laurelwood substation will have three 30/40/50 MVA transformers. The maximum load being requested by the customer is 100 MVA. With 150MVA of transformers, one transformer can be removed from service for maintenance and the load can be provided by the remaining two transformers.

See attached SVP Network Diagram 8-2-19.

2. Please provide a description of the SVP system in general and the other 60 kV loops that would serve data centers.
   a. Could you provide a one-line diagram and a "*.shp" file of the 60 kV and above lines serving the Silicon Valley Power System? Would you have any concerns with us using either of these in a public document?

      See Attached Diagram SVP CA Energy Map 8-2-19 and the SVP Network Diagram

   b. Are each of the 60 kV loops designed similarly or do some of them have features that make them more or less reliable than the others?

      They are all designed similarly with the same redundancy/reliability philosophy.

3. Please describe any outages or service interruptions on the 60 kV systems that will serve the proposed data centers:
   a. How many 60 kV double looped lines serve data centers in SVP, and how many data centers are on each?

      The City currently has five 60kV Loops. They are as follows:
      - East Loop
      - Northeast Loop
      - Northwest Loop
      - Center Loop
      - South Loop

Customer location per loop is provided in Question 1 d. above.

The City is currently in design phase of expanding the East Loop to shift load from the South Loop to East Loop and expand system capacity. The East Loop and South Loop will continue to maintain double looped lines serving each substation both before and after completion of this project. This project is expected to be completed by January of 2021.

b. What is the frequency of 60 kV double-looped lines having a "double outage" that would require use of backup generators?

Extremely Rare. There was only one outage between years 2009 current 2019 where SVP lost both 60kV feeds into a substation. The total duration of the outage was 7 hours and 23 min for the outage that occurred on May 28th, 2016 at 9:28 PM.

A balloon released by an individual made contact with the 60kV line between the Northwestern Substation (NWN) and the Zeno Substation (ZEN) at pole NWZ4. The balloon contact caused a pole fire and the bottom phase, bottom insulator and guy wire burned. The circuit breaker at ZEN substation tripped properly, isolating the fault from the ZEN substation and keeping the line from the ZEN substation to the Kiefer Receiving Station energized.

However, on the NWN Substation side, the circuit breaker failed to trip due to a faulty direct current (DC) voltage source which is required for the breaker tripping coil.

Once this breaker failed to open, due to the directional nature of the fault, the fault was picked up at the Scott Receiving Station (SRS) which caused the section of the loop from the ZEN to SRS to be without power. This included the NWN Substation and the Fairview (FVR) substation. Since this was an unusual event, SVP spent the required time determining the root cause and inspecting the system prior to re-energization.

c. How long were any outages and what were their causes?

60kV outage data since 2009 is in the below chart (10 years of data). The items highlighted in yellow indicate that there was some kind of fault associated with the outage. The items highlighted in blue is when we had customers out of power as a result. The non-highlighted items are where an outage was taken to correct an observed situation.

From 2009 through current 2019 there have been:

1. 15-60kV impacted outages due to faults.
2. 4- 60 kV impacted outages that caused customers to be out of power. Only the 12/2/16 outage and 5/28/16 involved data centers.
3. 31- 60kV total outages
4. The average 60kv outage lasts for 2.75 hours

Date	Line(s)	Cause	Duration	Customers out of power
3/30/19	URA-WAL	Bird @ UW43	1 Hour 46 Min	0
11/22/18	HOM-SER	Pole Fire HS9 (force out)	1 Hour 27 Min	0
7/5/18	SER-HOM	Force out to remove balloons	9 Min	0
5/5/18	SER-HOM	Force out to remove balloons	11 Min	0
9/1/17	AGN-NAJ	Force out to cut trees	1 hour 5 min	0
8/8/17	URA-ZEN	Force out to remove balloons	20 Min	0
5/25/17	SRS-FRV	Tripped during SCADA commissioning	1 Min	0
5/8/17	NWN-ZEN	Force out to remove bird	50 Min	0
4/29/17	SRS-HOM	Force out to remove balloons	2 hours 22 min	0
03/20/17	JUL-CEN	Third Party got into 60kV	9 hours 55 min	0
01/22/17	SER-BRO	Tree in wires	3 hours 31 min	0
01/22/17	NAJ-PLM	A phase contact guy wire when winds pick up	1 hour 47 min	0
01/19/17	KRS-PLM	Palm frond between phases	41 min	0
01/18/17	NAJ-PLM	A phase contact guy wire when winds pick up	1 Hour 44 min	0
12/02/16	RAY T1 & T2	Dropped both transformers during restoration switching due to relay not reset	12 minutes	257
09/06/16	SRS-CEN	Bird Contact	40 Min	0
06/30/16	WAL-FIB	Bird nest contact	12 hours and 4 min	0
5/28/16	SRS-FRV-NWN-	Balloons in line and	7 hours 23 min	28

	ZEN	breaker fail		
02/17/16	SRS-FRV	Palm tree with fire	7 hours	0
11/18/15	SER-BRO	Arcing wires forced	2 hours 59 min	0
11/16/15	SER-BRO	Rotten Pole- forced	22 hours 32 min	0
11/09/15	JUL CB32	Possible lightning	53 min	0
10/29/15	SER-BRO	Roller arcing-forced	3 hours 33 min	0
08/12/15	BRO-DCJ, BRO T1	Squirrel on CB100	3 hours 55 min	2155
06/24/15	CCA CB22	Bad JMUX card	3 hours 23 min	0
05/30/15	SER-BRO	No cause found	3 hours 12 min	0
03/31/15	BRO-DCJ 12KV BUS 1 & 2	Squirrel across 12kv bus tie	3 hours 26 min	2927
01/28/15	Mission CB12	Shorted control cable	6 hours 29 min	0
04/24/14	DCJ CB42	Tripped during relay work. BF wired as TT	1 Hour 30 Min	0
10/14/13	URA_WAL	Sheared Hydrant hit 60kV above	2 hours 26 min	0
12/06/12	Jul CB 32	Tripped due to cabinet vibration	2 min	0

d. Have there been any changes to the SVP system that would prevent these types of outages from occurring in the future?

Every outage is analyzed for root cause. Most of the outages that occur on the 60kV system are outside SVP's control, e.g. Mylar balloon, squirrels or animals, car accidents, and similar events. If the outage is suspected to be caused by a failure of the intended protection scheme or equipment, then further analysis is performed and appropriate changes are implemented to minimize impact of future outages. After the outage in May, 2016, SVP performed additional circuit breaker testing and DC wire checks to maintain the reliability of its system.

e. Given the large number of data centers with backup generators being developed in the SVP service area, would future outages likely affect more than one data center or are there elements of the SVP system design that might limit the impact of transmission outages?

Adding more data centers on the 60kV looped system would not make it more or less likely that an outage will occur. A "double outage," which has occurred only once in the last ten years, has the potential to cause multiple data centers to go to back up generators depending on the locations of both line segments that are out of service.

f. Are there data center customers served by SVP (ie, legacy data centers) that are not on the 60kV loops? How are they served and what are the expected service outage types and rates?

No, ALL data center customers are inherently part of our 60kV loop. The voltage level these data center customers are on our 12kV distribution system, which power is provided from our 60kV substations.

4. During the proceeding for the McClaren Backup Generating Facility, the project owner described a 5/29/2016 outage at their Vantage Santa Clara Campus. The project owner provided information that six backup generators operated during that outage; of those, two operated for 7 hours while four others operated approximately 19 hours.
   a. What was the reason for the outage?

   Balloons made contact with the NWN-ZEN 60kV Line at Pole NWZ4. Original fault was A Phase and GRD due to contact with the Guy wire. NWN CB 32 failed to trip due to a bad DC power source to the breaker trip coil. FRV CB12 tripped as a result of NWN CB32 not tripping. FRV CB42 and SRS CB572 also tripped due to 3 phase differential fault that occurred which is believed to have been caused by the amount of time the A phase and ground fault lasted.

   b. How long did it last for the Vantage customer? For other customers on that loop?

   The outage occurred on 5/28/2019 at 2128. On 5/29/19 @ 0429- Fairview was restored, @ 0434 NWN 60kV bus restored. The system outage was 7 hours and 23 minutes. We are not privileged to the information as to why the data center may have chosen to continue to operate on their back-up generators.

   c. Is the anything about the location or interconnection of the proposed data centers that protect against a similar outage?

   No difference with this location.

   d. Does this description of one recent outage at the MECP1 Santa Clara 1, LLC seem to be a reasonable description of the event and applicable for the Laurelwood Data Center?

   The description of the Vantage event is reasonable, however cannot be directly applied to the Laurelwood Data Center. The Vantage event had a unique combination of contributing factors for which the resulting outcome cannot be reasonably assumed to be the expected outcome for line faults on the SVP 60kV network.

5. Pacific Gas and Electric Company and other utilities have developed Public Safety Power Shutoff protocols that could disconnect electrical services during periods of concern in order to prevent their equipment from starting wildfires. These potential shutoffs could last hours or even days. How would these new protocols potentially affect SVP's service territory or access to bulk transmission assets?

   The City of Santa Clara's SVP is not located in a California Public Utilities Commission/Cal Fire Tier 2 or Tier 3 high fire risk zone. Therefore, SVP does not have a Public Safety Power Shutoff as part of their Wildfire Mitigation Plan. However, we do receive power from PG&E through six interconnection points. Based on our discussion with PG&E, Santa Clara may be requested by PG&E or the California Independent System Operator (CAISO) to curtail load. This request may be because of the reduced capacity somewhere within the system which will require overall system load reduction. This experience may be similar to the energy crisis of the early 2000's when rolling black-outs were require to maintain electric grid reliability. SVP has the capability to provide 200 MW of generation in the City with its Donald Von Raesfeld Combined Cycle Power Plant (147 MW) and the Gianera Peaker Plant (49 MW) and Cogen Facility (6 MW), we may be requested to curtail load.

   SVP is working with PG&E and the CAISO as to how this situation may occur.

Substation	Loop	Customer/Industry
Fairview	Center	Mfg1
Fairview	Center	Datacenter1
Fairview	Center	Datacenter2
Fairview	Center	Datacenter3
Fairview	Center	Datacenter4
FIB	Center	Mfg2
Lafayette	Center	Mfg3
Lafayette	Center	Datacenter5
Lafayette	Center	Mfg4
Lafayette	Center	Mfg5
Lafayette	Center	Datacenter6
Lafayette	Center	Mfg6
NWN	Center	Datacenter7
Uranium	Center	Datacenter8
Uranium	Center	R&D1
Uranium	Center	Property Management1
Uranium	Center	Datacenter9
Uranium	Center	Datacenter10
Uranium	Center	Datacenter11
Uranium	Center	Property Management2
Uranium	Center	Education1
Uranium	Center	Education2
Uranium	Center	Education3
Uranium	Center	Education4
Uranium	Center	Semiconductor/Telecommunications
Uranium	Center	Gaming/AI/Semiconductors1
Uranium	Center	R&D/Mfg
Uranium	Center	Mfg7
Walsh	Center	Semiconductor1
Walsh	Center	Gaming/AI/Semiconductors2
Walsh	Center	Mfg8
Walsh	Center	Gaming/AI/Semiconductors3
Walsh	Center	Datacenter12
Walsh	Center	Education5
Walsh	Center	Government1
Walsh	Center	Government2

Walsh	Center	Semiconductor2
Walsh	Center	Semiconductor/R&D/Mfg
Walsh	Center	Mfg9
Walsh	Center	Telecommunications1
Walsh	Center	Datacenter13
Walsh	Center	Education6
Walsh	Center	Datacenter14
Zeno	Center	Education7
Zeno	Center	Education8
Zeno	Center	Semiconductor3
Zeno	Center	Datacenter15
Zeno	Center	Bio Tech 1
Zeno	Center	Semiconductor/Telecommunications
Zeno	Center	Semiconductor/R&D/Mfg

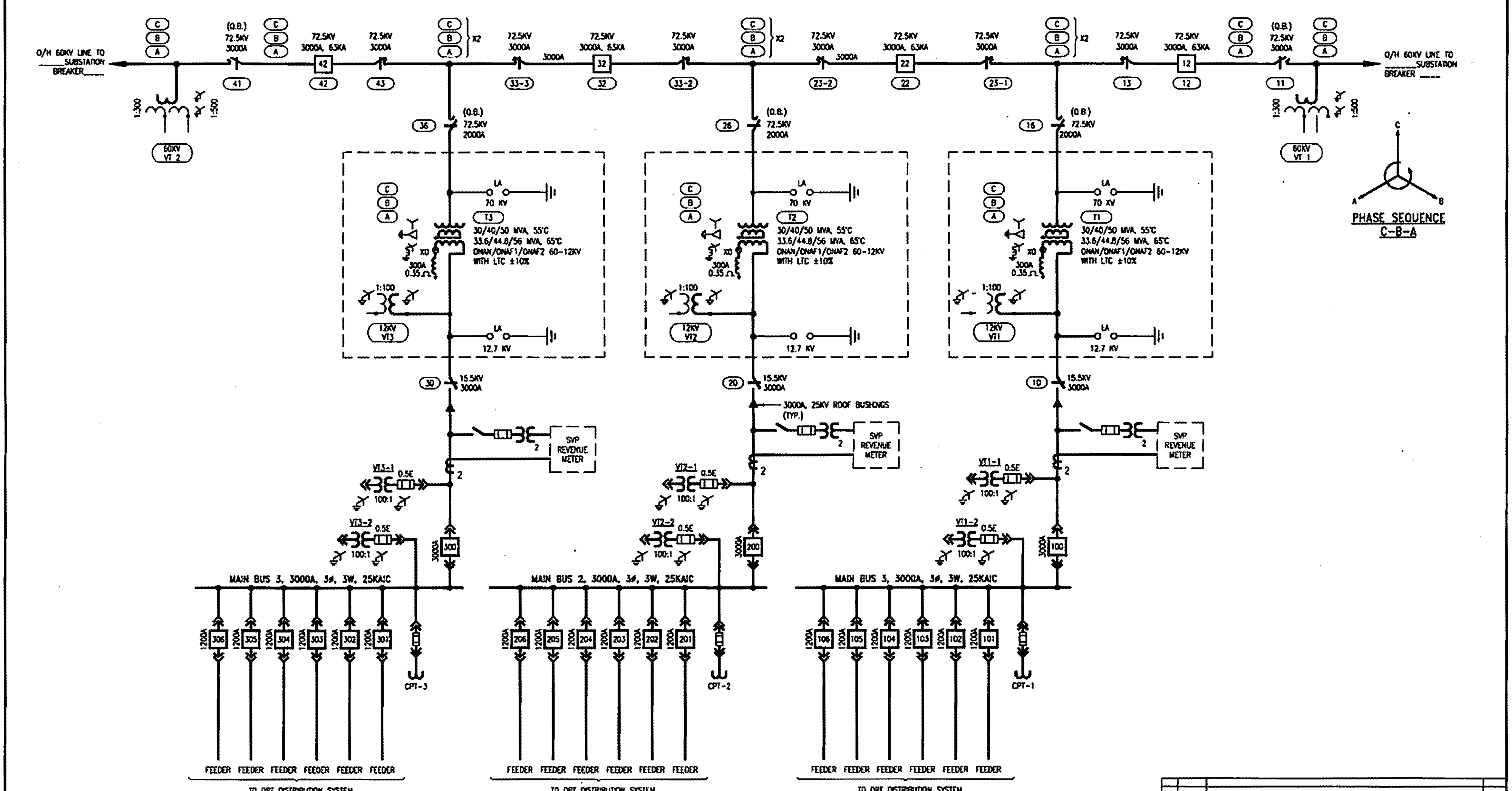
Center 141MW
Mfg1
Datacenter1
Datacenter2
Datacenter3
Datacenter4
Mfg2
Mfg3
Datacenter5
Mfg4
Mfg5
Datacenter6
Mfg6
Datacenter7
Datacenter8
R&D1
Property Management1
Datacenter9
Datacenter10
Datacenter11
Property Management2
Education1
Education2
Education3
Education4
Semiconductor/Telecommunications
Gaming/AI/Semiconductors1
R&D/Mfg
Mfg7
Semiconductor1
Gaming/AI/Semiconductors2
Mfg8
Gaming/AI/Semiconductors3
Datacenter12
Education5
Government1
Government2
Semiconductor2
Semiconductor/R&D/Mfg
Mfg9
Telecommunications1
Datacenter13
Education6
Datacenter14
Education7
Education8
Semiconductor3
Datacenter15
Bio Tech 1
Semiconductor/Telecommunications
Semiconductor/R&D/Mfg

East Loop 15MW
Datacenter16
Datacenter17
Gaming/AI/Semiconductors4

Northeast Loop 28MW
Security1
Property Management3
Property Management4
Entertainment1
NFL1
Property Management5
Entertainment2
Hotel1
Datacenter18
Medical1
Mfg10
Datacenter19
Datacenter20
Datacenter21
Datacenter22
Cyber Security 1
Hotel2
Property Management6
Mfg11
Datacenter/software/cloud computing
NFL2
NFL3
NFL4
Education9
Education10
Conventions 1
Education11
Semiconductor4
Datacenter23
Education12
Real Estate1
Network hardware1
Semiconductor5
Computer hardware/software 1

Northwest Loop 112MW
Medical2
Real Estate2
Real Estate3
Real Estate4
Datacenter24
Datacenter25
R&D2
Real Estate5
Real Estate6
Healthcare equipment
Education13
Semiconductor/R&D
Datacenter26
Property Management7
Computer hardware/software 2
Real Estate7
Datacenter27
Software1
Computer hardware/software 3
Cyber Security 2
Conventions 2
Hotel3
Medical3
Cyber Security 3
Education14
Datacenter28
R&D3
Semiconductor6
Storage1
Entertainment3
Property Management8
Medical4
Telecommunications2
NFL5
Datacenter29
Datacenter30
Datacenter31
Datacenter32
Telecommunications3
Datacenter33
Gaming/AI/Semiconductors5
Datacenter34

South Loop 65MW
Government3
Education15
Education16
Education17
Real Estate8
Design1
Security 2
Education18
Education19
Mfg12
Datacenter35
Education20
Education21
Education22
Education23
Education24
Education25
Education26
Healthcare1
Telecommunications4
Education27
Education28
Datacenter36
Datacenter37
Medical device
Education29
Education30
Healthcare2
Healthcare3
Healthcare4
Healthcare5



PRELIMINARY
05-07-2018

engineers, inc.

PROJECT NO. 18818-01

REV	DATE	DESCRIPTION	APPR'D
DESIGNED BY:			
APPROVED BY:			

LAURELWOOD SUBSTATION

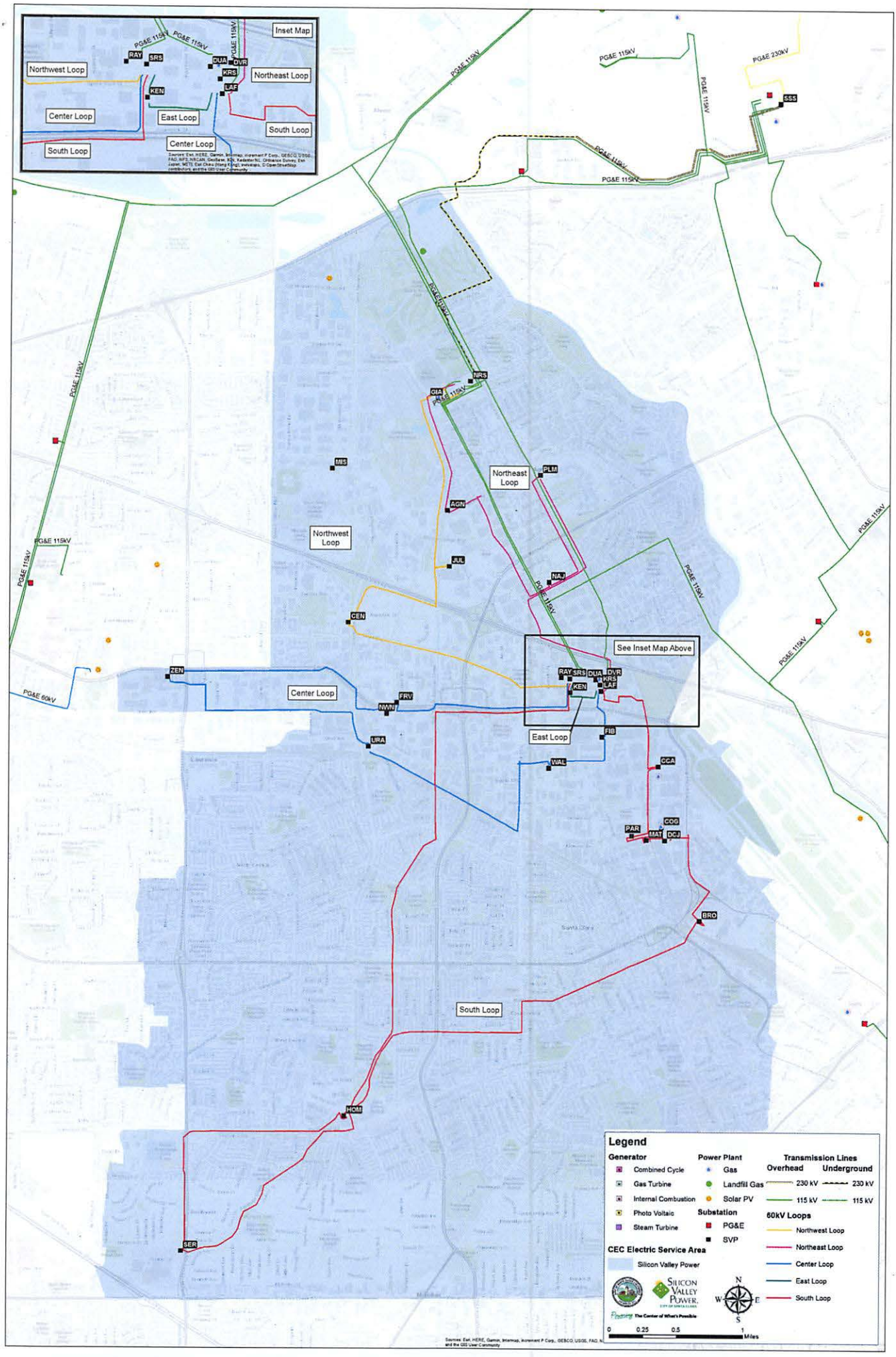
SINGLE-LINE DIAGRAM

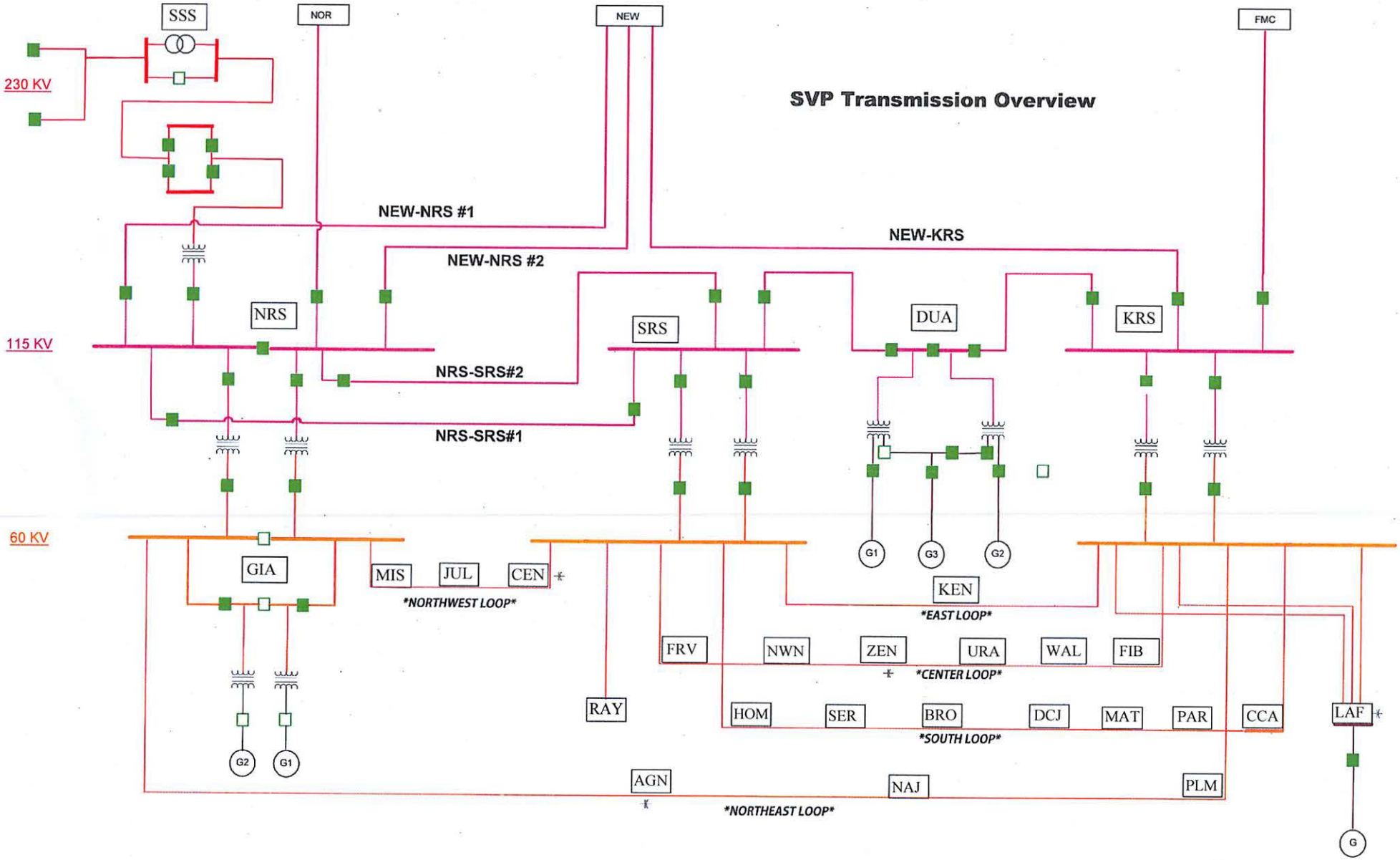
SILICON VALLEY POWER

CITY OF SANTA CLARA

DRAWING NUMBER XXX-E-0-X-1 | REV A

SCALE: NTS | MAP #: NONE | SH 1 OF 1


Inset Map
Northwest Loop
Northeast Loop
Center Loop
East Loop
South Loop
Center Loop
South Loop
RAY
SRS
DUA
DVR
KRS
LAF
KEN
PG&E 115kV
PG&E 230kV
SSS
MRS
GIA
MIS
PLM
AGN
JUL
NAJ
CEN
ZEN
FRY
NWN
URA
WAL
FIB
CGA
PAR
MAT
DCJ
COG
BRO
HOM
SER
See Inset Map Above
PG&E 60kV
Legend
Generator
Combined Cycle
Gas Turbine
Internal Combustion
Photo Voltaic
Steam Turbine
Power Plant
Gas
Landfill Gas
Solar PV
Substation
PG&E
SVP
CEC Electric Service Area
Silicon Valley Power
Transmission Lines
Overhead
Underground
230 kV
115 kV
60kV Loops
Northwest Loop
Northeast Loop
Center Loop
East Loop
South Loop
Silicon Valley Power
Powering The Center of What's Possible
N
W
E
S
0
0.25
0.5
1
Miles


SVP Transmission Overview
230 KV
115 KV
60 KV
SSS
NOR
NEW
FMC
NEW-NRS #1
NEW-NRS #2
NEW-KRS
NRS
SRS
DUA
KRS
NRS-SRS#2
NRS-SRS#1
GIA
MIS
JUL
CEN
NORTHWEST LOOP
KEN
EAST LOOP
FRV
NWN
ZEN
URA
WAL
FIB
CENTER LOOP
RAY
HOM
SER
BRO
DCJ
MAT
PAR
CCA
LAF
SOUTH LOOP
AGN
NAJ
PLM
NORTHEAST LOOP
G1
G2
G3
G

From: Kevin Kolnowski <KKolnowski@SantaClaraCA.gov>
Sent: Thursday, August 08, 2019 2:23 PM
To: Hesters, Mark@Energy <Mark.Hesters@energy.ca.gov>
Subject: FW: Follow up CEC questions

Mark, outlined below are the responses to your Monday, August 5th questions.

Please let us know if you have additional questions.
Thank you,
Kevin Kolnowski
Electric Utility Chief Operating Officer

From: Hesters, Mark@Energy [mailto:Mark.Hesters@energy.ca.gov]
Sent: Monday, August 05, 2019 1:09 PM
To: Kevin Kolnowski <KKolnowski@SantaClaraCA.gov>
Subject: Follow up CEC questions
Yes, we can talk to SVP before we file this or something else that SVP and their legal counsel approves of to the docket. I also have some questions that we can pose to them or send the questions to them before hand. Also, we should see if anyone else some follow up questions.

1. The Aug 2 response talks about the May 28/29, 2016 outage and the 28 customers that lost power. The table of outages in their response seems to list outages that affected 60kV customers, and these customers appear to be data centers customers and other, non-data center customers. Does SVP know how many of the 28 customers referred to on the May 28, 2016 entry were data centers? Two Data Centers were affected.

2. The Aug 2 response talks about a Dec 2, 2016 outage and the 257 customers that lost power. The table of outages in their response seems to list outage that affected 60kV customers, and these customers appear to be data centers customers and other, non-data center customers. Does SVP know how many of the 257 referred to on the Dec 2, 2016 entry were data centers? Four Data Centers were affected.

3. The Aug 2 response talks about a Dec 2, 2016 outage and the 257 customers that lost power. Can we get more information about this outage? Was it also an N-1-1 cascade like the series of faults that caused the May 28/29, 2016 outage? Why did we not hear about this outage earlier - was it different that the May 2016 outage (eg, internal faults versus an external fault like a balloon or squirrel)? This outage was caused during maintenance work with the Relay Technician. During the testing, the relay was required to be reset prior to returning to service. Since the relay was not reset, when put back into service the device tripped. The Standard Operating Procedure was revised to include the step of resetting the relay prior to placing back into service. This was not a N-1-1 cascading type outage. The outage lasted 12 minutes.

4. The Aug 2 response has a table of 60kV outages. Just to confirm, only the Dec 2 and May 28, 2016 outages affected data centers. So, for example, none of the 2927 customers affected by Mar 31, 2015 outage were data centers - is that correct? Correct, no data centers were effected during March 31, 2015 outage.

5. Also, it sounds like some data center customers are connected to 12kV feeds, but these feed are connected to the dual feed 60kV loops that are highly reliable. Is this correct, and how many customers might be on a 12kV line that comes off a 60kV loop? And how is reliability maintained on the 12kV line - looping, breakers and redundant equipment - like the 60kV loops?
   Yes, this is correct. The electric services that supply power to our 12kV data center customers are from our general 60kV distribution substations, which is inherently connected to our 60kV looped system. The number of customers that are off a 12kV feeder (line) is limited to SVP's operational loading philosophy, which is 4.5MVA or 50% of the maximum 9MVA. Said in another way, we can have as few as one customer or as many as one-hundred on a feeder, as long as the entire load is less than 4.5MVA. To address reliability, by operating our 12kV feeders at half-loaded, SVP has operational flexibility to completely transfer loads to other 12kV feeders in the event of an outage. SVP may make an operational determination to limit a feeder to one data center customer, but at this time is not contractually obligated to provide as such.

6. The Aug 2 response has a 4.d. response regarding how the Vantage MECP1 data center responded to the the May 28/29, 2016 SVP outage that said "[t]he description of the Vantage event is reasonable, however cannot be directly applied to the Laurelwood Data Center. The Vantage event had a unique combination of contributing factors for which the resulting outcome cannot be reasonably assumed to be the expected outcome for line faults on the SVP 60kV network." Do you have more information on what were the "contributing factors", and why should we not assume that other data centers would have similar "expected outcomes"? As discussed in the 8/2/19 document, had the DC voltage supply cable not had an issue, a similar event would have been contained. Our anticipation, an outage in the future the protection system would operate as expected.

7. Regarding the Aug 2 response to PG&E's PSPS plans, could SVP curtailments ever allow a data center to operate under emergency conditions? To date this has not happened, the decision to operate during this situation would be by the data center. Our understanding is during emergency situation, individuals can operate their emergency generators.

   Are SVP curtailments to PSPS conditions voluntary or emergency conditions? We understand that diesel emergency gensets cannot operate for economic reasons, only in response to an unplanned emergency or upset on their supply grid. We will be instructed to reduce load to respond to emergency conditions somewhere within the CAISO controlled grid, we have to follow what the CAISO directs us to do. The CAISO instructions are not voluntary. We would request customers to reduce load to satisfy the emergency condition and if that is not sufficient we will begin shutdown of our customers to meet the emergency situation. We would be operating at the direction of the CAISO.

8. Are there any plans that part of the PSPS program might include payments to some loads to curtail or shed? SVP does not have a plan to pay a data center to shed or curtail load.

9. Would the 6 interconnection points with the PG&E system allow SVP/PG&E to wheel bulk deliveries around potential shutdowns on the PG&E system? In other words, is the current understanding of the PSPS program that most shutdown will be in specific areas and not across the greater PG&E system, and that would allow PG&E to work around an area that would be fully shutdown? The understanding is if the conditions are such where transmission has to be curtailed, the CAISO will require load reductions of the CAISO controlled grid, similar to the energy crisis from the early 2000's. SVP will request voluntary reductions to meet the CAISO demand or will make switching changes which to remove blocks of customers load. It will depend how much reductions the CAISO will be instructing us to reduce, voluntary load shedding and customer shutoff.

Matt

Mark Hesters
California Energy Commission
(916)654-5049