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Agenda Date: 11/19/2020
Council Meeting

2020 NOV 17 A 11:27

CITY OF FRESNO
CITY CLERK'S OFFICE

FRESNO CITY COUNCIL



Information Packet

ITEM(S)

File ID 20-001446 (1-G)

Actions pertaining to solar projects proposed at three new City of Fresno facilities: 1) Fresno Animal Shelter 2) Fire Station 18, and 3) Southeast Police Sub-Station (Council Districts 1, 4 and 5):

Contents of Supplement: PowerPoint re: Solar Phase 2.

Item(s)

Supplemental Information:

Any agenda related public documents received and distributed to a majority of the City Council after the Agenda Packet is printed are included in Supplemental Packets. Supplemental Packets are produced as needed. The Supplemental Packet is available for public inspection in the City Clerk's Office, 2600 Fresno Street, during normal business hours (main location pursuant to the Brown Act, G.C. 54957.5(2)). In addition, Supplemental Packets are available for public review at the City Council meeting in the City Council Chambers, 2600 Fresno Street. Supplemental Packets are also available on-line on the City Clerk's website.

Americans with Disabilities Act (ADA):

The meeting room is accessible to the physically disabled, and the services of a translator can be made available. Requests for additional accommodations for the disabled, sign language interpreters, assistive listening devices, or translators should be made one week prior to the meeting. Please call City Clerk's Office at 621-7650. Please keep the doorways, aisles and wheelchair seating areas open and accessible. If you need assistance with seating because of a disability, please see Security.



City of Fresno

Phase 2 Renewable Energy Proposal

Ann Kloose – Fresno Sustainability Manager

Sam Zantzinger – ForeFront Power Manager

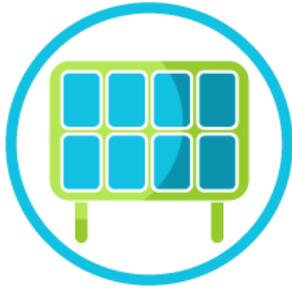
Kevin Flanagan – SPURR REAP Program Manager

November 19, 2020





City of Fresno Renewable Strategy



- On Site Solar Solutions
 - 517 kW across 3 sites
 - 90% Energy Offset
 - Shaded Parking, LED Lighting
- Save on Electricity
 - +\$35k Year 1 Savings
 - +\$1.9 Million over 20 years
 - 33% Savings over 20 Years
- PPA: 0% Escalation = Rate Stabilization
- 95% Performance Guarantee
- Operations & Maintenance for 20 Years
- City Local Hire Requirements
 - Local Hiring = Local Job Creation

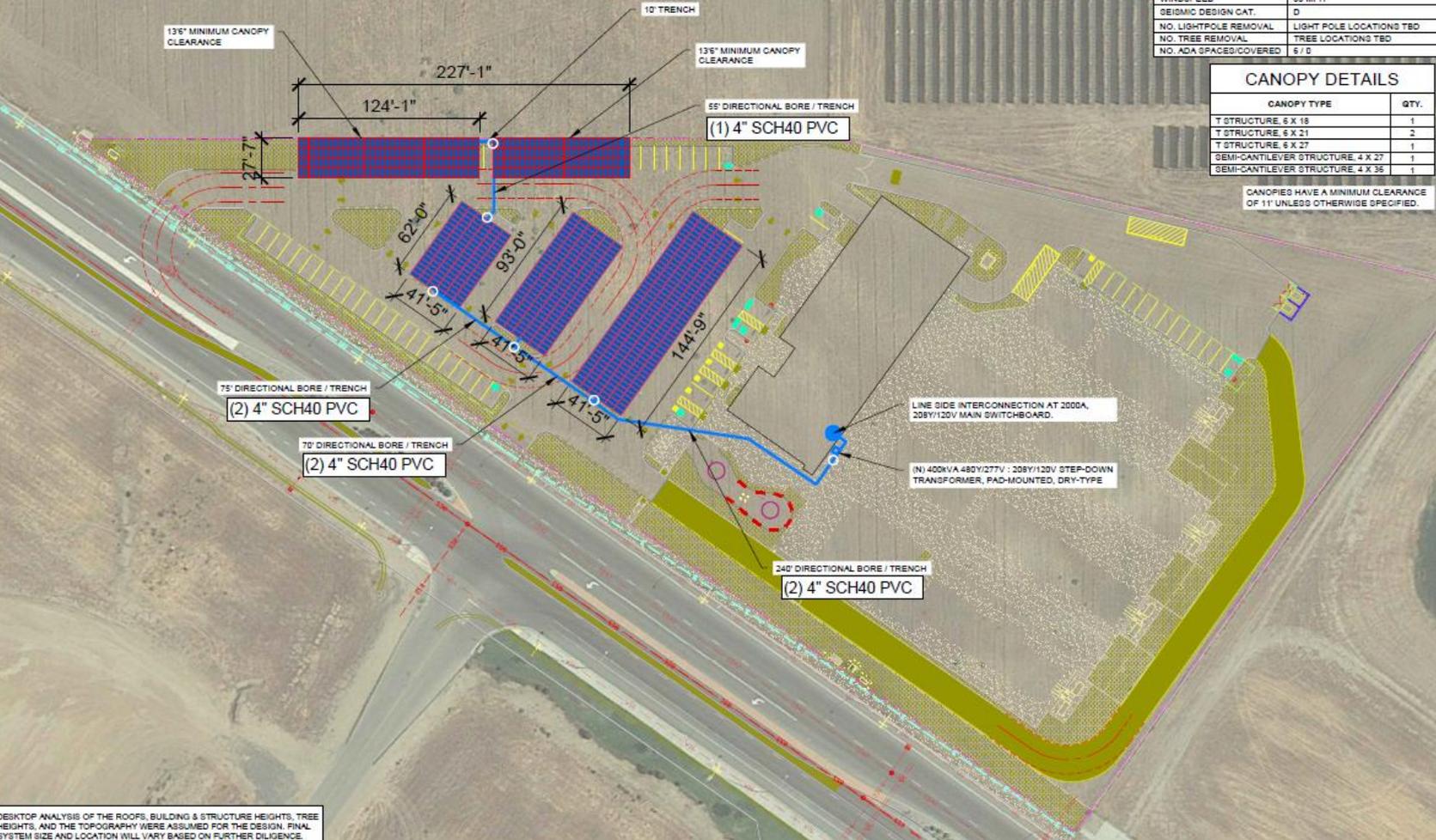
Animal Shelter Facility – 337 kW



PV SYSTEM DESCRIPTION	
MODULE TYPE	LONGI LR4-72HPH-43EM
MODULE QTY.	774
INVERTERS	(1) SOLECTRIA PVI 50TL (5) SOLECTRIA PVI 50TL
SYSTEM SIZE (DC)	336.69 kW
SYSTEM SIZE (AC)	310.0 kW
SYSTEM SIZE (DC-AC)	311.13 kW
LAT/LONG	36.783042°, -119.714655°
AZIMUTH (°)	125°, 180°
TILT ANGLE (°)	7°
SNOWLOAD	0 PSF
WINDSPEED	88 MPH
SEISMIC DESIGN CAT.	D
NO. LIGHTPOLE REMOVAL	LIGHT POLE LOCATIONS TBD
NO. TREE REMOVAL	TREE LOCATIONS TBD
NO. ADA SPACES COVERED	5 / 0

CANOPY DETAILS	
CANOPY TYPE	QTY.
T STRUCTURE, 6 X 18	1
T STRUCTURE, 6 X 21	2
T STRUCTURE, 6 X 27	1
SEMI-CANTILEVER STRUCTURE, 4 X 27	1
SEMI-CANTILEVER STRUCTURE, 4 X 36	1

CANOPIES HAVE A MINIMUM CLEARANCE OF 11' UNLESS OTHERWISE SPECIFIED.



DESKTOP ANALYSIS OF THE ROOFS, BUILDING & STRUCTURE HEIGHTS, TREE HEIGHTS, AND THE TOPOGRAPHY WERE ASSUMED FOR THE DESIGN. FINAL SYSTEM SIZE AND LOCATION WILL VARY BASED ON FURTHER DILIGENCE.



STAMP:

NOT FOR CONSTRUCTION

CITY OF FRESNO
HUMANE ANIMAL SERVICES
PHOTOVOLTAIC SYSTEM

8 AIRWAYS BLVD,
FRESNO, CA 93706

PROJECT NUMBER
CA-20-0130

SHEET TITLE
LAYOUT

SHEET SIZE
ANSI B
11" X 17"

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NO.	REVISION	DATE	INIT.
1	LAYOUT	5.14.2020	AF
2	LAYOUT, INV	6.18.2020	AF
3	DK	8.31.2020	AF
4	LAYOUT	9.14.2020	AF

DATE: 4.24.2020
DRAWN BY: AF
ENGINEER: AF
APPROVED BY: XXX

PROJECT PHASE: PRELIMINARY

SCALE: 1"=70'

SHEET NO.: E-111

Southeast Police Station – 102 kW



SYSTEM DESCRIPTION	
MODULE TYPE	Longi LR4_72HPH_435M
QUANTITY	234
INVERTERS	(1) PVI 50TL; (1) PVI 36TL
SYSTEM SIZE (DC)	101.79 kW
SYSTEM SIZE (AC)	96.00 kW; 93.677 kW CEC AC
LAT/LONG	36.740960, -119.694536
AZIMUTH ANGLE	225°, 247°
TILT ANGLE	7°
SNOWLOAD	0 PSF
WINDSPEED	94 MPH
SEISMIC CATEGORY	C
TREES/LIGHTS TO BE REMOVED	N/A
TOTAL ADA SPACES/COVERED	N/A

CANOPY BLOCKS:
1 x 7 STRING BLOCK
1 x 6 STRING BLOCK

NOTE: DESKTOP ANALYSIS OF TOPOGRAPHY AND TREE HEIGHTS WERE ASSUMED FOR THE DESIGNS. FINAL SYSTEM SIZE AND LOCATION WILL VARY BASED ON FURTHER DILIGENCE



FOREFRONT POWER
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100 MONTGOMERY STREET #1400
SAN FRANCISCO, CA 94104
(855) 204-5083
www.ForefrontPower.com

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**City of Fresno
SE Police Substation**

224 South Argyle,
Fresno, CA 93727

PROJECT NUMBER:
CA-20-0220

SHEET TITLE:
CONCEPTUAL LAYOUT

SHEET SIZE:
TABLOID 11" X 17"

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NO.	REVISION	DATE	INIT.

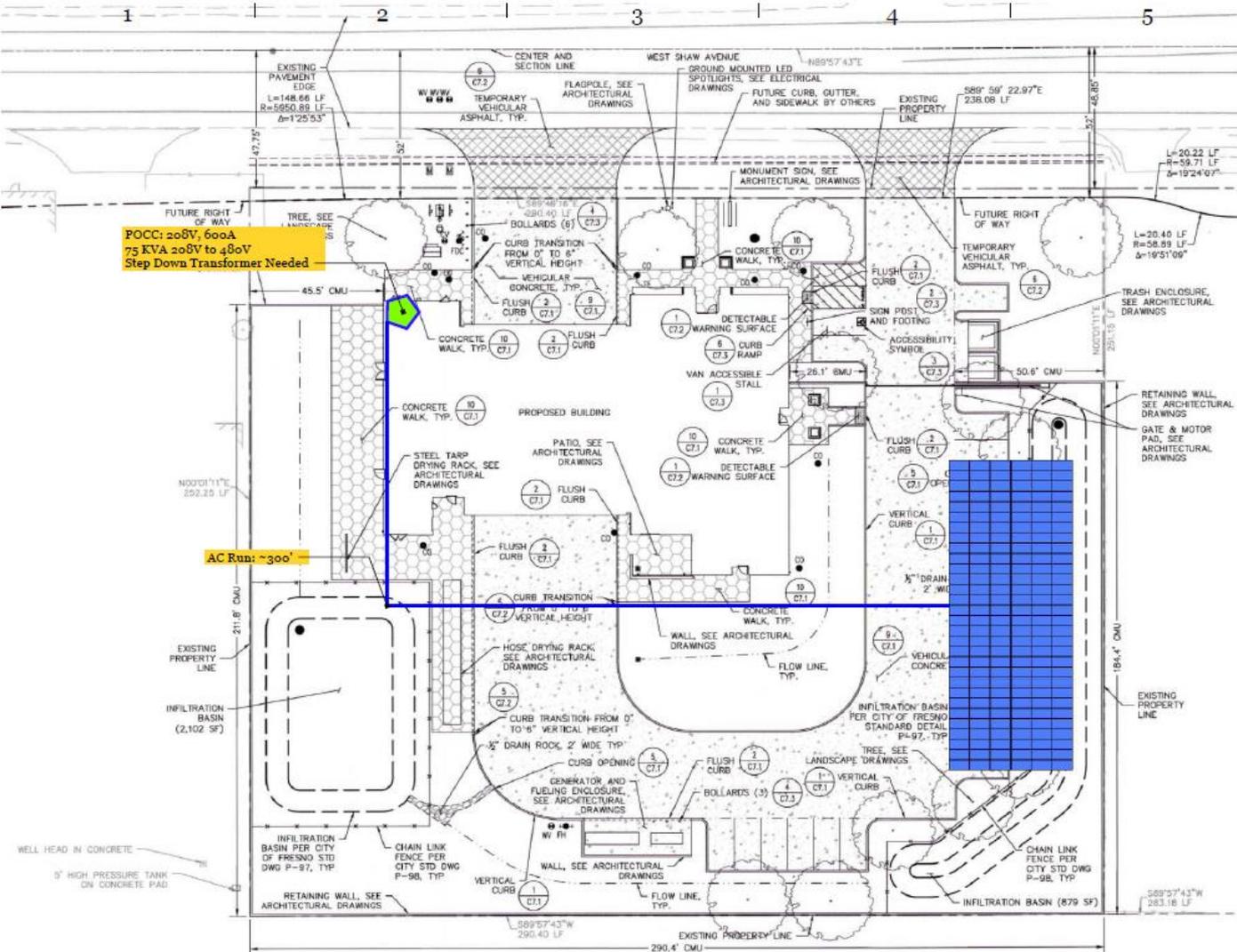
DATE: 23-July-2020
DRAWN BY: RP
ENGINEER: RP
APPROVED BY:

PROJECT PHASE:
PRELIMINARY DESIGN
SCALE: 1" = 60'

SHEET NO:
CL-1

SITE ELECTRICAL PLAN 1" = 30'-0"

Fire Station No. 18 – 78 kW



SYSTEM DESCRIPTION	
MODULE TYPE	LongI LR4_72HPH_435M
QUANTITY	180
INVERTERS	(1) PVI 60TL
SYSTEM SIZE (DC)	78.30 kW
SYSTEM SIZE (AC)	60.00 kW; 72.06 kW CEC AC
LAT/LONG	36.807175, -119.909094
AZIMUTH ANGLE	270°
TILT ANGLE	7°
SNOWLOAD	0 PSF
WINDSPEED	94 MPH
SEISMIC CATEGORY	C
TREES/LIGHTS TO BE REMOVED	N/A
TOTAL ADA SPACES/COVERED	N/A

CANOPY BLOCKS:
1 x 10 STRING BLOCK

NOTE: DESKTOP ANALYSIS OF TOPOGRAPHY AND TREE HEIGHTS WERE ASSUMED FOR THE DESIGNS. FINAL SYSTEM SIZE AND LOCATION WILL VARY BASED ON FURTHER DILIGENCE



STAMP:
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**City of Fresno
Fire Station 18**

6605 W Shaw Ave,
Fresno, CA 93723

PROJECT NUMBER:
CA-20-0221

SHEET TITLE:
CONCEPTUAL LAYOUT

SHEET SIZE:
TABLOID 11" X 17"

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NO.	REVISION	DATE	INIT.

DATE: 23-July-2020
DRAWN BY: RP
ENGINEER: RP
APPROVED BY:

PROJECT PHASE:
PRELIMINARY DESIGN

SCALE: 1" = 35'

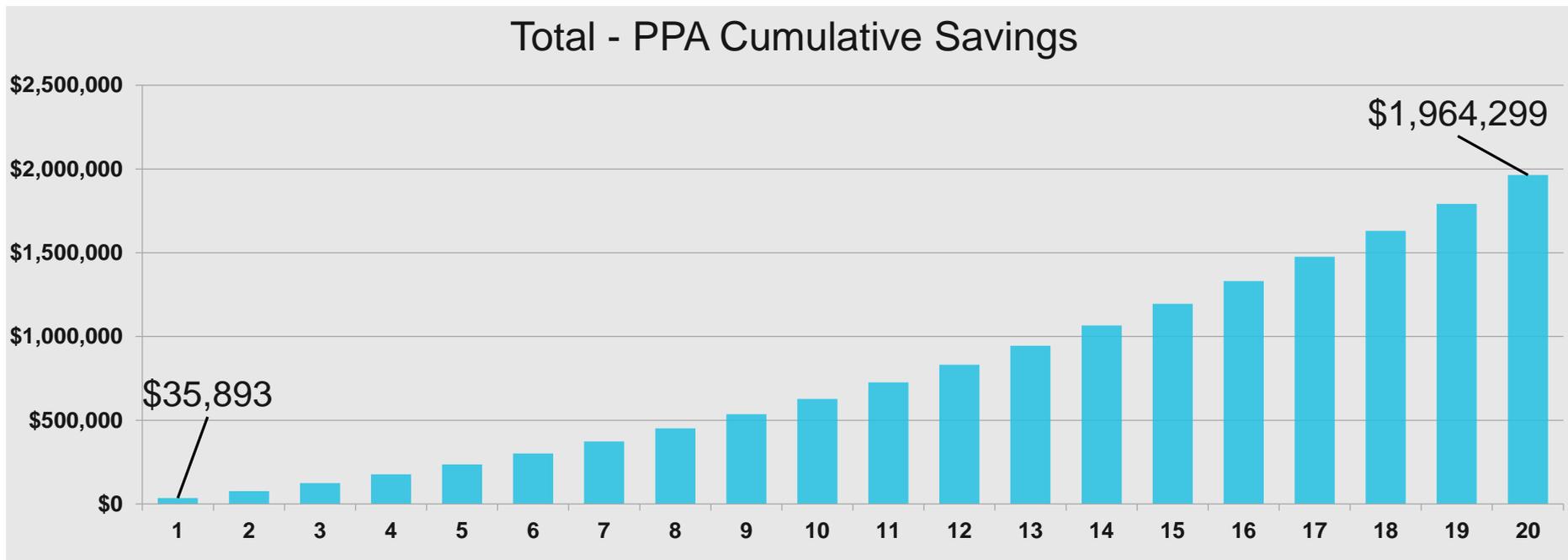
SHEET NO. **CL-1**





Phase 2 Summary & Savings

Site	PPA Rate	PPA Escalator	Solar System Size (kW)	Y1 Production (kWh)	% Energy Offset	Pre-Solar Utility Bill	Year 1 Savings	20 Year Savings
Animal Shelter	\$0.1425	0%	337	565,352	90%	\$137,655	\$20,644	\$1,138,137
SE Police Substation	\$0.1754	0%	102	172,411	90%	\$45,934	\$7,707	\$470,598
Fire Station #18	\$0.1830	0%	78	125,993	92%	\$36,793	\$7,541	\$355,563
Total	\$0.1550	0%	517	863,756	90%	\$220,382	\$35,893	\$1,964,299



Assumes 2.7% Annual Utility Energy Escalator, 5% Annual Demand Charge Escalator

Questions and Comments

