



# Solar Power Arrays at CUSD

February 2013 presentation to the  
Coronado USD School Board  
by Indoor Environmental Services (IES)

[illegible]

CORONADO HIGH SCHOOL					
METER NUMBER	WASTE SCHEDULE	PRE-BOW PEAK LOAD	BOW'S (KWH)	POST-BOW ANNUAL USAGE (KWH)	CALCULATED PRODUCTION (KWH)
1752851	A	--	780	0	
1867864	A,10U	378	780	1,108,153	*340,000 WITH 10 ASSUMED SHOWN
1752858	A	--	780	128	
1480125	A,10U	144	780	340,840	

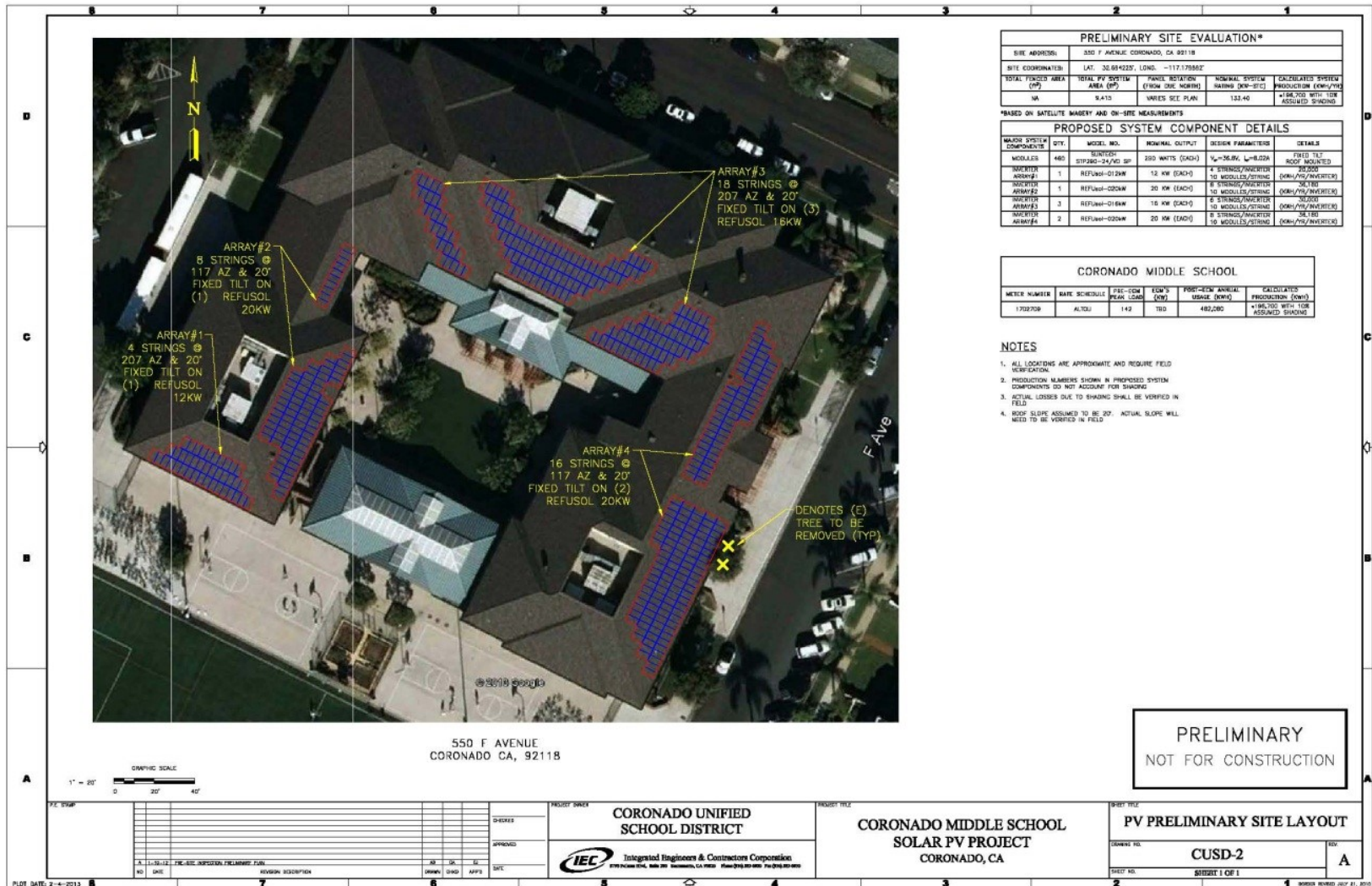
1. ALL LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
2. PRODUCTION NUMBERS SHOWN IN PROPOSED SYSTEM COMPONENTS DO NOT ACCOUNT FOR SHADING
3. ACTUAL LOSSES DUE TO SHADING SHALL BE VERIFIED IN FIELD
4. ROOF SLOPE ASSUMED TO BE 20°. ACTUAL SLOPE WILL NEED TO BE VERIFIED IN FIELD

SHEET 1 OF 1

A

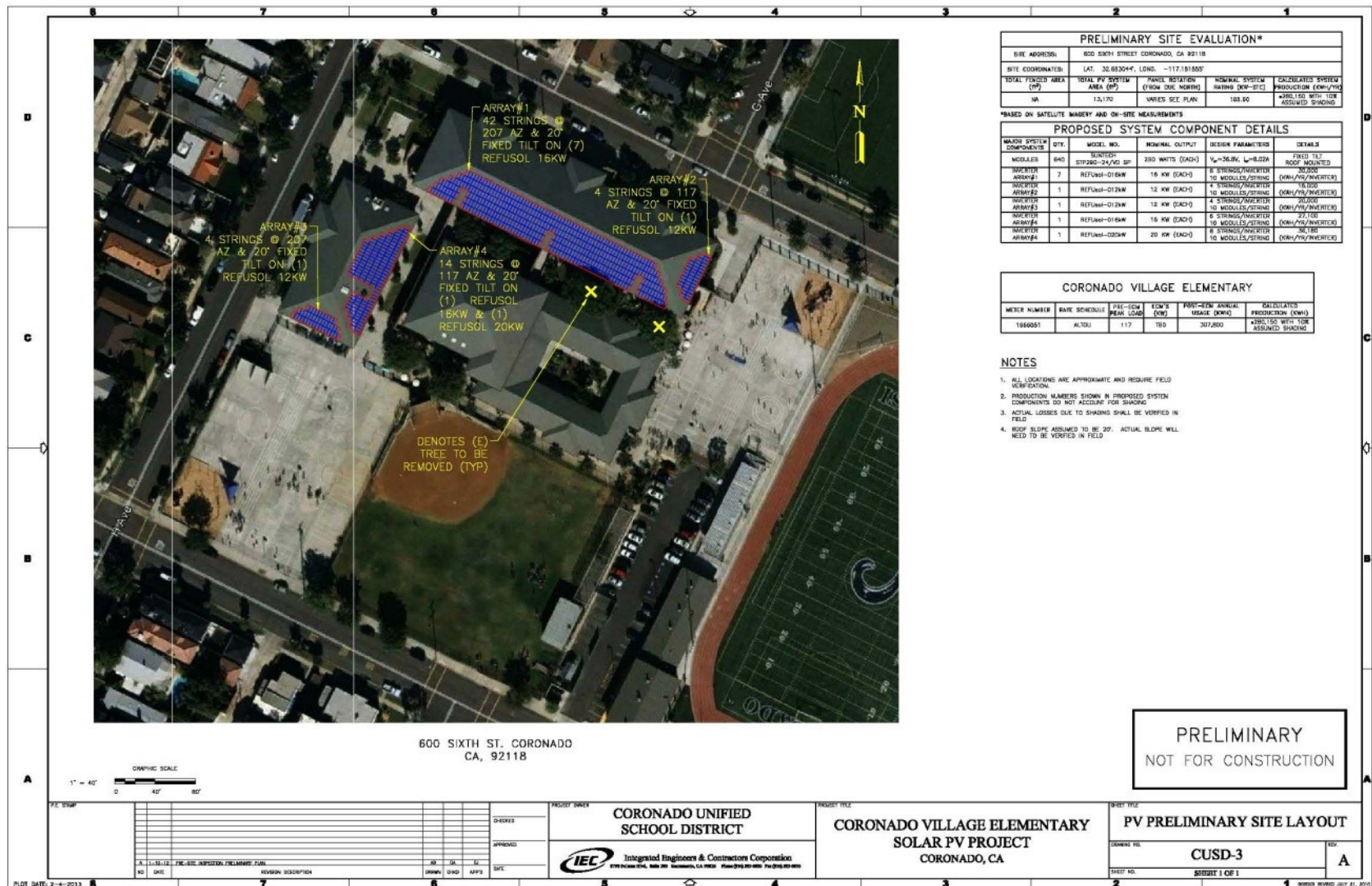
P.E. DRAW  NO. DATE 1 2 3 4 5 6 7 8 9 10 11 12	CHECKED  APPROVED  J.A. J.R. R.C. OWNER DESG APPS DATE	PROJECT NAME <b>CORONADO UNIFIED SCHOOL DISTRICT</b>  <b>Integrated Engineers &amp; Contractors Corporation</b> <small>2700 PALM BLVD., SUITE 200, THOUSAND OAKS, CALIF. 91320 Phone (805) 499-0000 Fax (805) 499-0001</small>	PROJECT TITLE <b>CORONADO HIGH SCHOOL SOLAR PV PROJECT</b> <b>CORONADO, CA</b>	SHEET TITLE <b>PV PRELIMINARY SITE LAYOUT</b>  DRAWING NO. <b>CUSD-1</b>  SHEET NO. <b>SUBMIT 1 OF 1</b>
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# Coronado Middle School

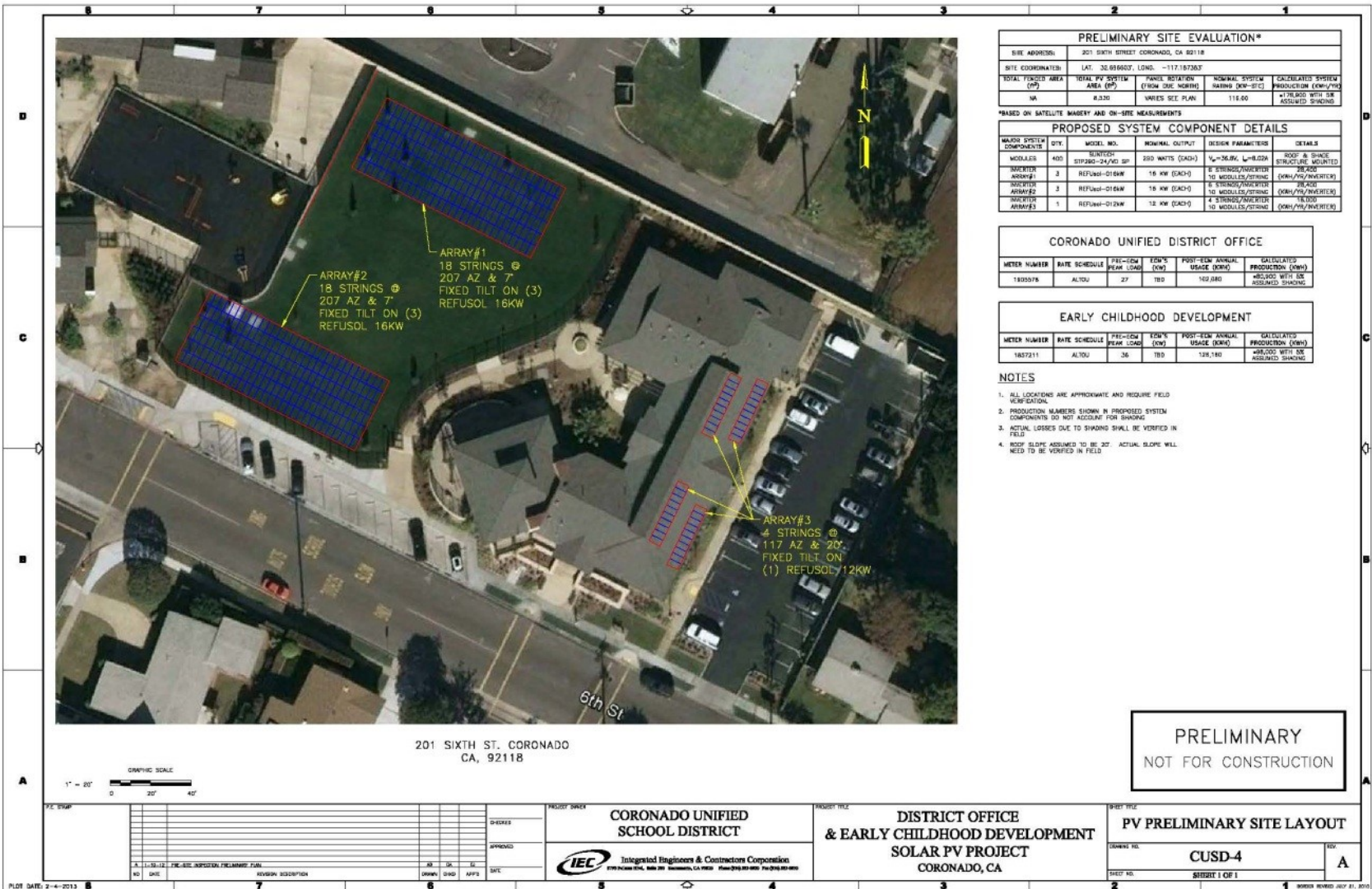




# Coronado Village Elementary

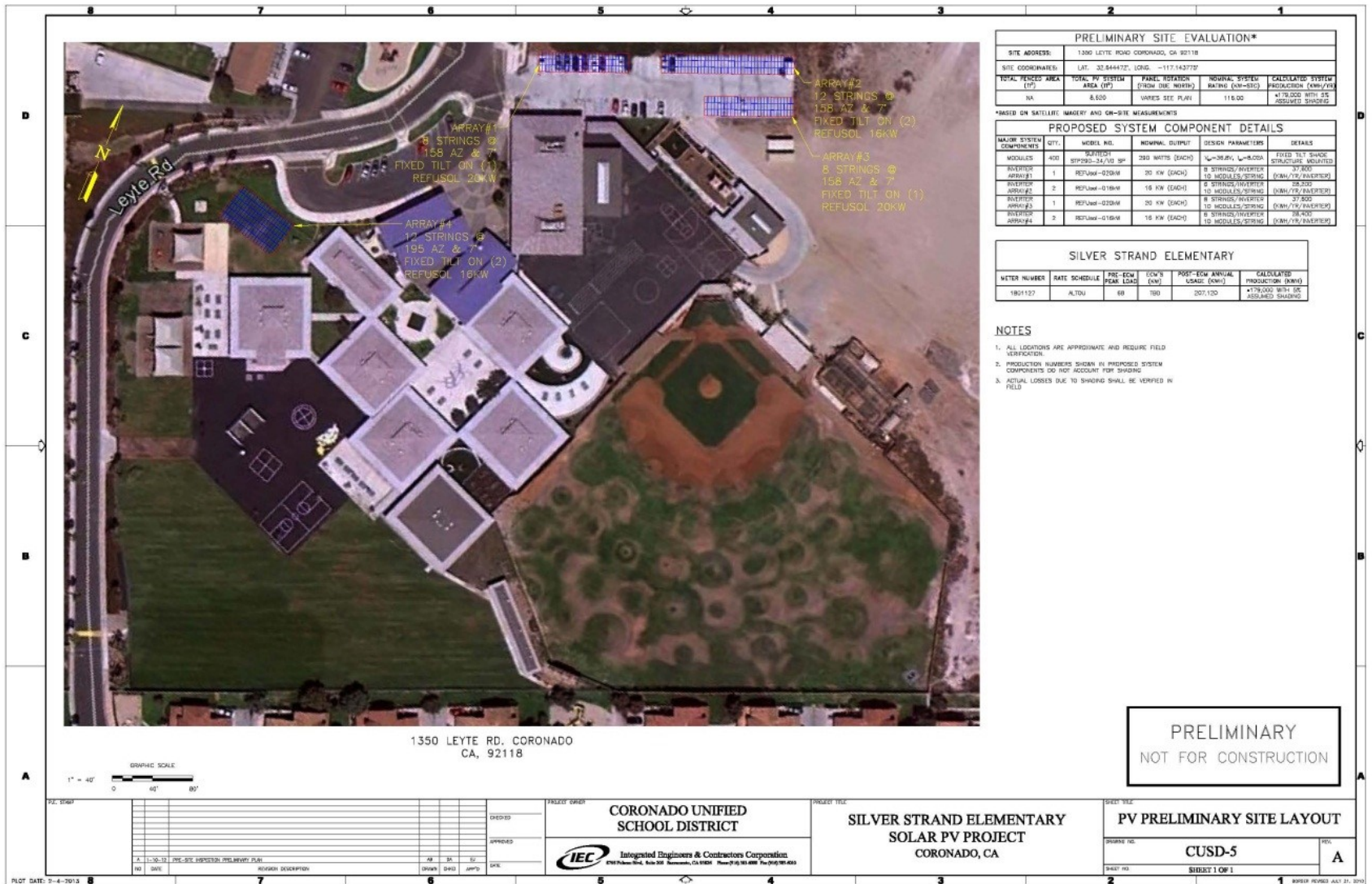


# District Office & ECDC





# Silver Strand Elementary





# Coronado High School

## **Building 400 HVAC Installation**

The existing Heating systems for building 400 can be modified for HVAC without major modifications to the existing systems or facility

### **General Scope of Work**

- Retrofit existing heating furnaces
- Installation of A/C equipment
- HVAC Condensers to be located on roof and ground
- Utilize existing electrical Infrastructure for HVAC
- Utilize existing control system for HVAC

# **Energy Efficiency update for CUSD**

## **Revenues From Phase 1**

Term Energy Savings:	\$1,964,816
2010 Recovery Rebate:	\$ 148,685
Deferred Replacement Savings:	\$ 85,004
Utility Rebates:	<u>\$ 18,792</u>
<b>Total Term Savings:</b>	<b>\$2,217,296</b>

## **Investment**

Project Investment:	<u>\$1,128,573</u>
<b>Cash Flow To District:</b>	<b><u>\$1,088,723</u></b>

## **Revenues For Phase 2**

Term Energy Savings	\$9,353,753
Green Rebate	\$ 250,000
SDG&E CSI	\$ 819,000

## **Phase 2 Investment = HVAC in building 400 and District Wide Solar**

Project Investment:	<u>\$ 6,525,000</u>
<b>25 yr. Cash Flow To District:</b>	<b><u>\$10,423,678</u></b>
<b>Rate Of Return to District</b>	<b><u>59.7%</u></b>
<b>Simple Annualized ROI</b>	<b><u>2.4%</u></b>





# Assumptions Used for Preliminary Analysis

- Existing KWH Used 2,675,161
- Solar KWH production anticipated 1,179,750
- 95% production guarantee
- 3.9% Power escalation predicted
- Calculations based on SDG&E DGR rates
- Project costs are budget only numbers
- All engineering and site surveys must be completed upon LOA approval
- HVAC installation cost of \$687,000 included