



Alvord Unified School District

Our Promise: All students will realize their unlimited potential.

Facilities Report December 2020 January 2021 and February 2021

Kevin Emenaker

Executive Director, Administrative Services

March 18, 2021





Alvord Unified School District

Our Promise: All students will realize their unlimited potential.

Agenda

- Facility Projects
 - Before and After Photos
- Energy Master Plan Update
- Work Orders by Site – December 2020, January and February 2021
- Latest OSH Report



Arlanza Elementary School Before Photos

School: Arlanza Elementary School

Project Description: Roof Repair – Rooms 13-16

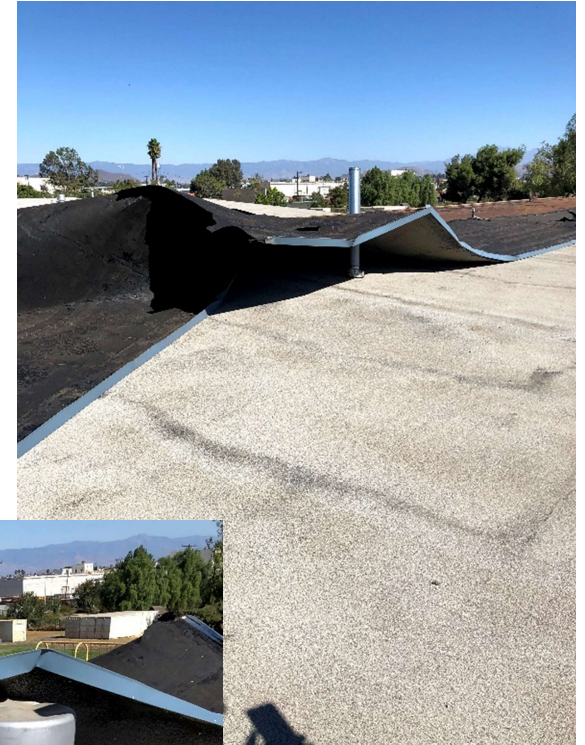
Board Approval Date: November 19, 2020

Fiscal Impact: \$95,000 – Special Reserve Fund

Project Duration: 2 Months

Start Date: November 2020

Completed: December 2020



Arlanza Elementary School After Photos



Wells Middle School Before Photos

School: Wells Middle School

Project Description: Multi-Purpose Room Roof Awning Repair

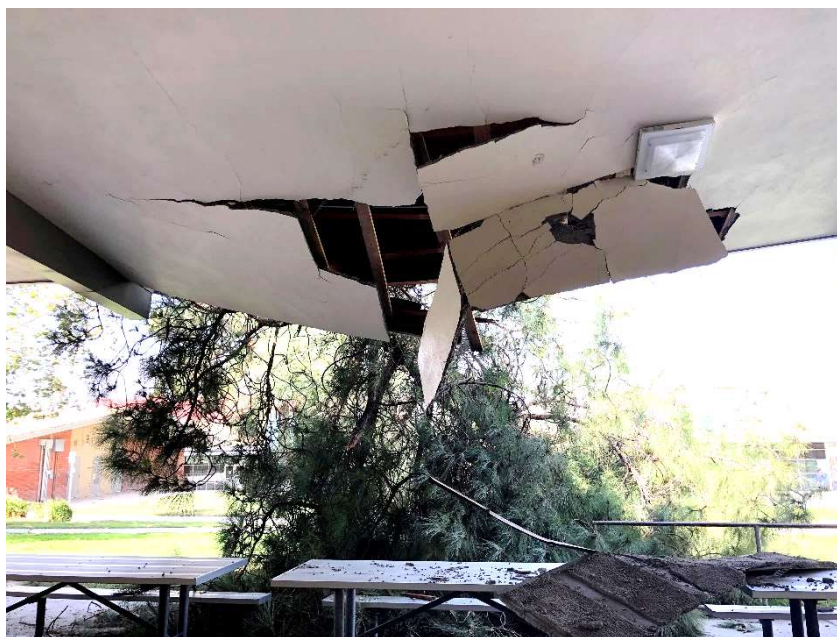
Board Approval Date:
December 17, 2020

Fiscal Impact: \$34,000 –
Special Reserve Fund

Project Duration: 3 Months

Start Date: December 2020

Completed: February 2021



Wells Middle School After Photo



La Sierra High School Before Photos

School: La Sierra High School

Project Description: Tennis Courts Resurfacing

Board Approval Date: October 8, 2020

Fiscal Impact: \$89,000 – Deferred Maintenance Fund

Project Duration: 2 Months

Start Date: December 2020

Completed: January 2021



La Sierra High School After Photos



Energy Master Plan Update

		Phase I	Phase II	Phase III	Future Phases	Alvord HS	Arizona MS	Arlanza ES	Collett ES	Facilities (M.O.T.)	Foothill ES	Hillcrest HS	La Granada ES	La Sierra HS	Lake Hills ES	Loma Vista MS	McAuliffe ES	Myra Linn ES	Norte Vista HS	Orrenma ES	Stokoe ES	Promenade ES	RMK ES	Terrace ES	Twinhill ES	Valley View ES	Villegas MS	Wells MS
BUILDING AUTOMATION SYSTEM (BAS)	New Non-Proprietary BAS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Advanced BAS Programming				✓	✓		✓	✓		✓	✓		✓		✓			✓	✓	✓			✓				
	Integrate Occupancy Sensors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓
	Exterior Lighting Control	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Demand Control Ventilation Upgrades		✓		✓	✓	✓	✓	✓		✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓	✓	✓	✓
	BAS Training	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	
LIGHTING	Interior Fluorescent Lighting Upgrades	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	Interior LED Lighting Modernization	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Exterior LED Lighting Modernization	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	Remaining Exterior LED Lighting Modernization	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Install/Modify Dual Technology Occupancy Sensors	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓					✓	✓	✓	✓	✓	
	Fixture Mounted Dimming Sensor		✓			✓		✓	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓				✓		✓
HEATING & COOLING	New High Efficiency HVAC Units	Complete	2		26	30	12	7		15								21	92				13					34
		25 Yrs & Older				2		15		7															15			
		21 – 25 Yrs Old	18	5	6			4		5	13	16			12	8	2	3	4		1	7	43	4	10	20	7	
		15 -20 Yrs Old	1		1	3					79	4			2					1	1			2	1	7	69	
	Add High Efficiency Air Conditioning to Gym										✓			✓				✓										
	New High Efficiency Chiller / Re-Condition Chiller		1											1		2			1	1								
	New Air Handling Unit		1											5		8			5									
	New High Efficiency Boiler		2											1		2			1	2								
WATER	Weather-Based Smart Irrigation Control System	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Master Valve w/ Leak Detection Technology													✓					✓									
RENEWABLE ENERGY	Pool Solar Thermal Upgrades							✓			✓							✓										
	Solar Photovoltaic (PV)		✓					✓			✓	✓	✓						✓			✓					✓	✓
	Student & Community Engagement Program		✓					✓			✓	✓	✓						✓			✓					✓	✓

Phase I

(FY 15/16)

- Modernize HVAC older than 25 yrs
- Lighting Modernizations
- New Building Automation Systems (BAS) @ 6 Sites
- New Chiller & Air Handling Units
- Solar Thermal Pool Heating

Phase II

(FY 19/20)

- Modernize HVAC older than 25 yrs + units in worst condition > 20 yrs
- Add A/C to La Sierra & Norte Vista Gyms
- New Chillers
- New BAS + BAS upgrades @ 14 sites
- LED Lighting Districtwide
- Solar Parking Structures @ Villegas

Phase III

(FY 21/22)

- Modernize HVAC older than 20 yrs + units in worst condition > 15 yrs
- Ventilation & Indoor Air Quality Improvements
- New BAS + BAS upgrades @ 7 sites
- Solar Parking or Outdoor Learning Structures @ 5 Sites

Phase IV

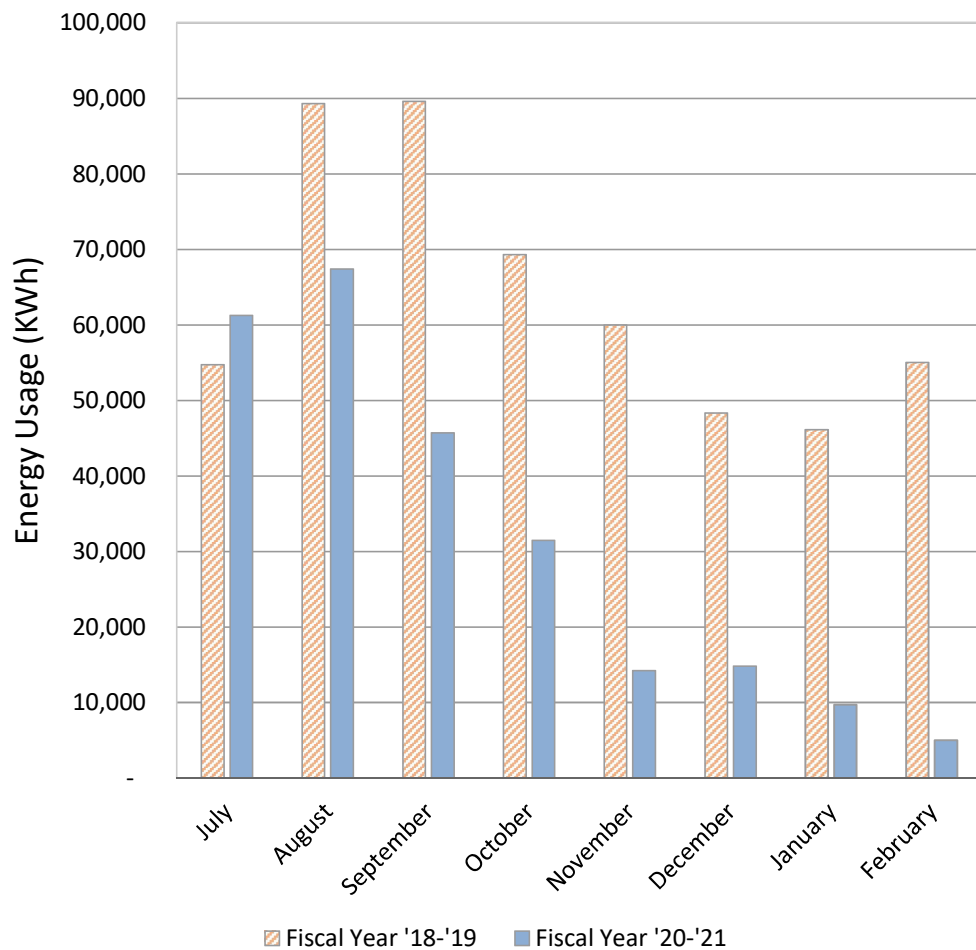
(FY 22/23)

- Complete HVAC Modernizations for all remaining units past useful life
- New Chillers, Air Handlers & Boilers
- Complete Ventilation & Indoor Air Quality Improvements
- New BAS + BAS upgrades @ 8 sites
- Solar Parking or Outdoor Learning Structures @ 3 Sites

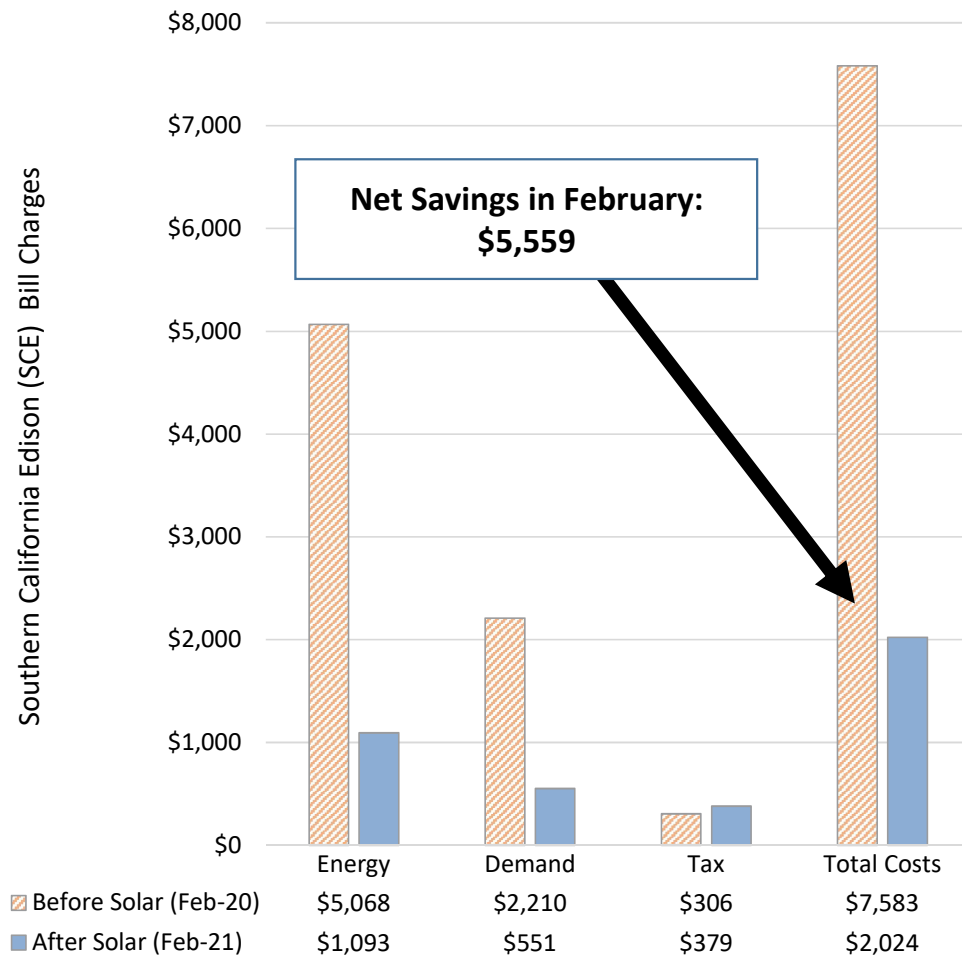


Solar Pilot Program At Villegas: Actual Performance

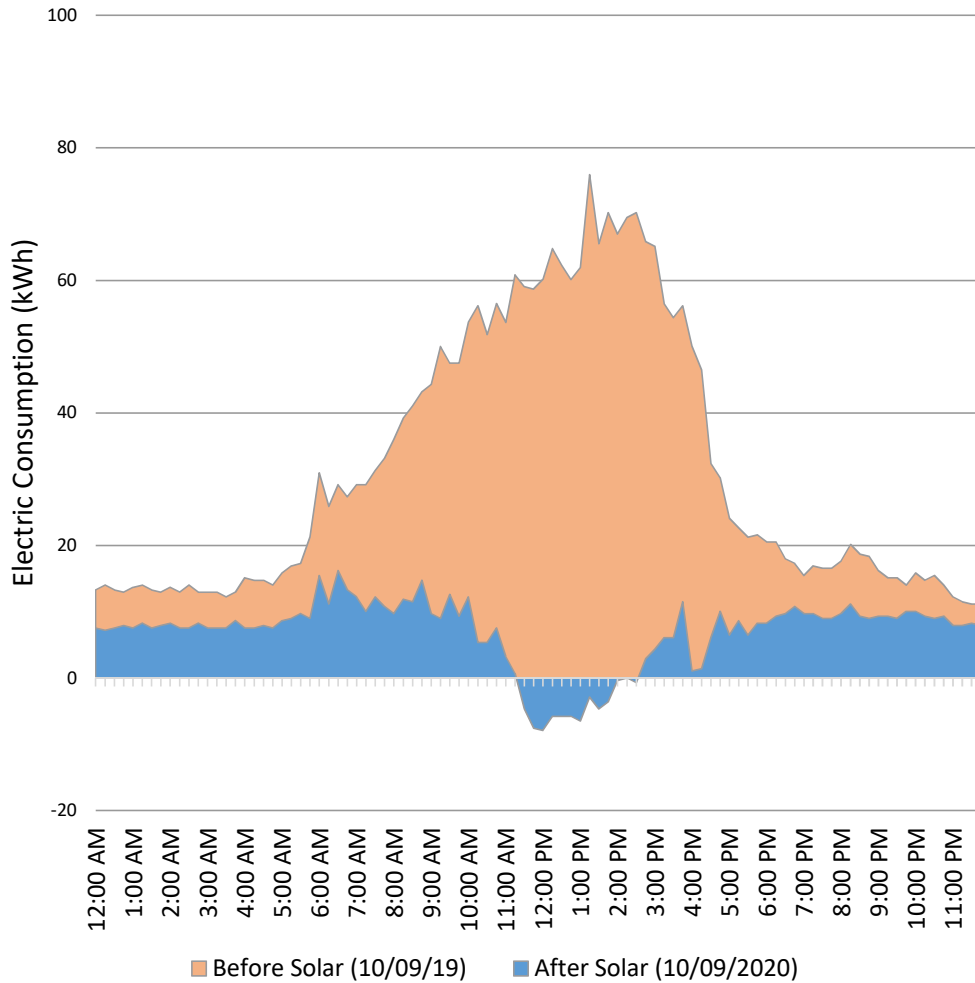
Villegas Energy Usage: Before & After Solar



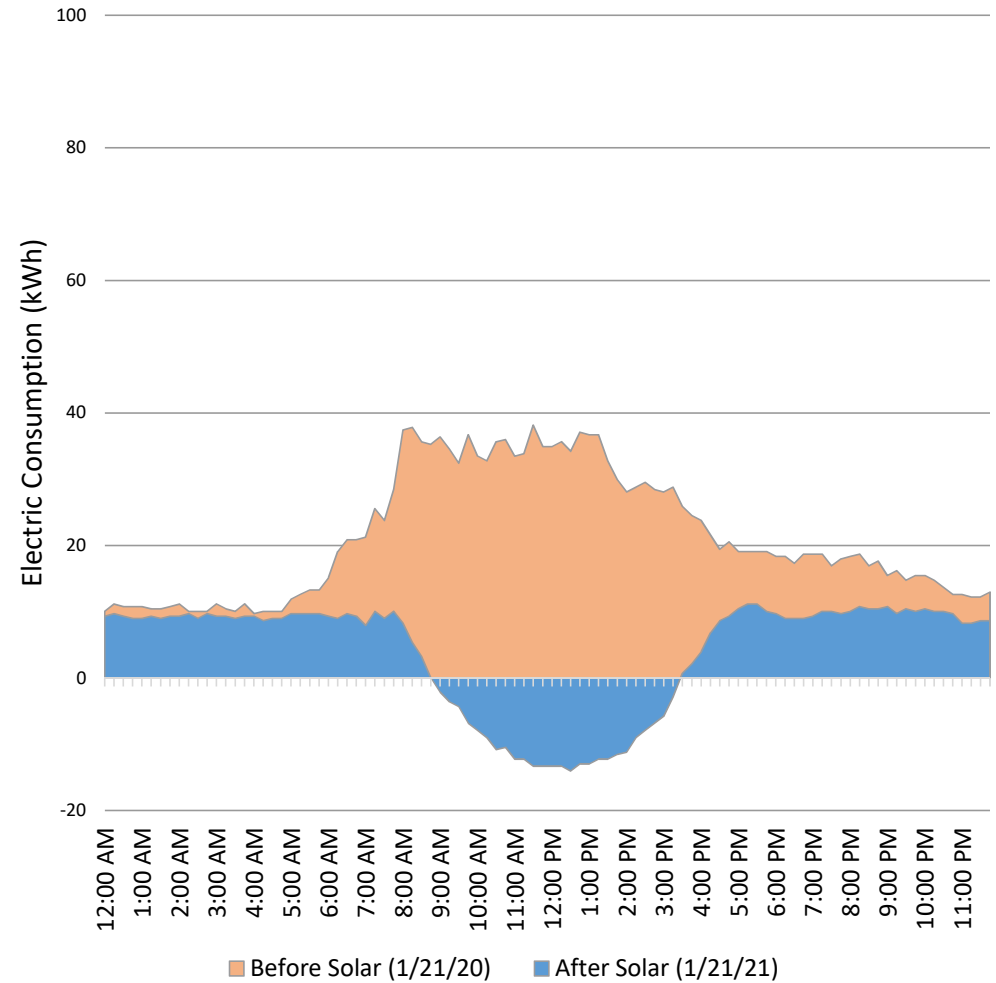
Villegas Energy Bill: Before & After Solar



Villegas Sample Fall Day: Before & After Solar



Villegas Sample Winter Day: Before & After Solar





Phase III Proposed Solar: Hillcrest HS



Phase III Proposed Solar: La Sierra HS

An aerial photograph of Norte Vista High School and its surrounding area. The school campus includes several large buildings, a central swimming pool, and multiple sports fields, including a large baseball field and several smaller baseball diamonds. Blue rectangular markers are overlaid on the image to indicate the proposed locations for solar panels. These markers are placed on the flat roofs of several school buildings, on a large paved area near the baseball field, and on a smaller building in the lower-left corner. A semi-transparent white banner with black text is centered across the middle of the image.

Phase III Proposed Solar: Norte Vista HS



Phase III Proposed Solar: Lake Hills ES



Phase III Proposed Solar: Promenade ES



Current Situation:
370 HVAC units are past useful life &
in need of replacement





Proposed Solution:
Modernize HVAC & Improve Indoor Air
Quality at Sites w/ Greatest Need



Phase III Preliminary Funding Plan



Infrastructure & Indoor Air Quality Modernizations	\$ 7 million
Solar Outdoor Learning & Parking Structures	\$ 9.5 million
Lifecycle Savings	\$ 23 million
NEM 3.0 (Net Energy Metering)	

Funding Sources

- Current Federal Stimulus – ESSER II (*\$18 million available*)
- Future Stimulus (*American Rescue Plan Act – ESSER III*)
- Equipment Lease Purchase for Solar (*2%-2.5%*)

Maintenance Work Order Report - December 2020

School Site	W.O.'s Still Active from the Program End Date - Nov. 30, 2020	Work Orders Received	Work Orders Completed	Work Orders Still Active		School Site	W.O.'s Still Active from the Program End Date - Nov. 30, 2020	Work Orders Received	Work Orders Completed	Work Orders Still Active
Arlanza Elementary	20	5	19	6		Arizona Middle	87	31	3	115
Collett Elementary	32	5	1	36		Loma Vista Middle	45	16	5	56
Foothill Elementary	16	4	4	16		Villegas Middle	76	7	5	78
La Granada Elementary	15	5	3	17		Wells Middle	34	44	6	72
Lake Hills Elementary	25	4	4	25		Hillcrest High	36	14	9	41
McAulliffe Elementary	26	8	5	29		La Sierra High	181	9	6	184
Myra Lynn Elementary	80	24	2	102		Norte Vista High=	176	45	21	200
Orrenmaa Elementary	45	7	3	49		Alvord Continuation	31	2	1	32
Promenade Elementary	49	10	7	52		Alvord Alternative Education	8	11	9	10
RMK Elementary	55	15	5	65						
Stokoe Elementary	34	9	6	37		Total	1117	286	129	1274
Terrace Elementary=	11	1	1	11						
Twinhill Elementary	17	5	3	19						
Valley View Elementary	18	5	1	22						

Maintenance Work Order Report - January 2021

School Site	W.O.'s Still Active from the Program End Date - Dec. 31, 2020	Work Orders Received	Work Orders Completed	Work Orders Still Active		School Site	W.O.'s Still Active from the Program End Date - Dec. 31, 2020	Work Orders Received	Work Orders Completed	Work Orders Still Active
Arlanza Elementary	6	6	7	5		Arizona Middle	115	19	81	53
Collett Elementary	36	12	32	16		Loma Vista Middle	56	20	59	17
Foothill Elementary	16	8	20	4		Villegas Middle	78	10	63	25
La Granada Elementary	17	9	18	8		Wells Middle	72	21	57	36
Lake Hills Elementary	25	8	27	6		Hillcrest High	41	9	19	31
McAulliffe Elementary	29	28	39	18		La Sierra High	184	40	117	107
Myra Lynn Elementary	102	10	52	60		Norte Vista High	200	43	137	106
Orrenmaa Elementary	49	9	35	23		Alvord Continuation	32	6	30	8
Promenade Elementary	52	28	29	51		Alvord Alternative Education	10	3	11	2
RMK Elementary	65	21	50	36						
Stokoe Elementary	37	10	23	24		Total	1274	342	963	653
Terrace Elementary=	11	8	16	3						
Twinhill Elementary	19	10	24	5						
Valley View Elementary	22	4	17	9						

Maintenance Work Order Report - February 2021

School Site	W.O.'s Still Active from the Program End Date - Jan. 31, 2021	Work Orders Received	Work Orders Completed	Work Orders Still Active		School Site	W.O.'s Still Active from the Program End Date - Jan. 31, 2021	Work Orders Received	Work Orders Completed	Work Orders Still Active
Arlanza Elementary	5	16	7	14		Arizona Middle	53	7	4	56
Collett Elementary	16	11	11	16		Loma Vista Middle	17	67	35	49
Foothill Elementary	4	5	2	7		Villegas Middle	25	10	9	26
La Granada Elementary	8	7	5	10		Wells Middle	36	34	18	52
Lake Hills Elementary	6	14	13	7		Hillcrest High	31	27	17	41
McAulliffe Elementary	18	7	5	20		La Sierra High	107	34	21	120
Myra Lynn Elementary	60	25	7	78		Norte Vista High=	106	29	22	113
Orrenmaa Elementary	23	16	13	26		Alvord Continuation=	8	14	11	11
Promenade Elementary	51	15	8	58		Alvord Alternative Education	2	2	1	3
RMK Elementary	36	2	1	37						
Stokoe Elementary	24	47	17	54		Total	653	429	256	826
Terrace Elementary=	3	10	7	6						
Twinhill Elementary	5	13	6	12						
Valley View Elementary	9	17	16	10						

[illegible]