# ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT

# BOARD OF TRUSTEES

## Special Board Meeting

## April 22, 2024

## Monday, April 22, 2024
## NOTICE OF SPECIAL MEETING AND SPECIAL BOARD MEETING AGENDA

**Type: NOTICE OF SPECIAL MEETING AND SPECIAL BOARD MEETING AGENDA**
**Time: 6:30 pm**
**Code: Special #19-23/24**
**Location: ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT, 2930 Gay Avenue, San Jose, CA 95127; Board Room.**

**In compliance with the Americans with Disabilities Act, if you need special assistance in order to participate in the public meeting of the Board of Trustees, please contact the Office of the Superintendent at (408) 928-6822. Notification 72 hours prior to the meeting will enable the District to make reasonable accommodations.**

**THE MEETING WILL BE AVAILABLE FOR VIEWING LIVE VIA ZOOM WEBINAR MODE AND CAN BE ACCESSED AS FOLLOWS:**
**Join Zoom Meeting: https://arusd-org.zoom.us/j/81649327765**
**Webinar ID:816 4932 7765**
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**THE MEETING MAY ALSO BE VIEWED THROUGH LIVE STREAM AS FOLLOWS:**
**1. Live stream Youtube English Channel "AlumRock TV"**
**https://www.arusd.org/alumrocktv**

*********PUBLIC COMMENT WILL BE ONLY IN PERSON: NO PUBLIC COMMENT WILL BE AVAILABLE THROUGH ZOOM*********

**Members of the public shall have an opportunity to address the Board of Trustees on the agenda items identified below. (Government Code Section 54954.3)**

### 1. OPEN SESSION - CALL TO ORDER AND ROLL CALL

1.01 CALL TO ORDER/ ROLL CALL/LAND ACKNOWLEDGMENT- Board of Trustees of the Alum Rock Union Elementary School District does hereby acknowledge that the District schools and facilities sit on the traditional lands of the Muwekma Ohlone people, and the Board of Trustees further acknowledges with respect and reverence the Muwekma Ohlone People Tribe of the San Francisco Bay Area for their stewardship of these lands; PLEDGE OF ALLEGIANCE -- PRESIDENT CORINA HERRERA-LOERA.

### 2. SUPERINTENDENT/BOARD BUSINESS--BOARD DISCUSSION AND/OR ACTION (The Board may take action on any item in this section, unless it is designated for information only.)

2.01 Energy Plan Presentation (Information Only).

2.02 Approve Resolution #52-23/24 Outdoor Equity Grants Program Grant Fund.

2.03 The Board will Provide Guidance and Set Parameters Regarding the Comprehensive Budget Solution Plan.

### 3. CONSENT CALENDAR--BOARD DISCUSSION AND/ OR ACTION (The Board may take action on any item in this section, unless it is designated for information only.)

3.01 Approve/Ratify Notices of Employment and Changes of Status/April 22, 2024.

## 4. CLOSED SESSION

4.01 ANNOUNCEMENT AND PUBLIC COMMENTS REGARDING ITEMS TO BE DISCUSSED IN CLOSED SESSION (Government Code Section 54957.7).

4.02 RECESS TO CLOSED SESSION: The Board will recess to Closed Session at approximately 7:30 p.m. Open Session will resume at conclusion of Closed Session.

4.03 CONFERENCE WITH LABOR NEGOTIATORS, EMPLOYEE ORGANIZATION: AREA (Alum Rock Educators Association); District Negotiators: (1) Imee Almazan Ed.D., Superintendent; (2) Cesar Torrico, Assistant Superintendent, Human Resources; Lead Negotiator (3) Kolvira Chheng, Assistant Superintendent, Business.

4.04 Appeal of Findings in Investigation Report (Gov. Code section 54957(b)(1); District's Administrative Regulation 1312.1).

4.05 Public Employee Discipline/Dismissal/Release/Non-Reelection (Government Code Section 54957).

## 5. RECONVENE TO OPEN SESSION

5.01 REPORT OF ACTION TAKEN IN CLOSED SESSION.

## 6. ADJOURNMENT

6.01 President adjourns the meeting.

2.07

ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT
2930 Gay Avenue, San Jose, CA 95127

Office of Superintendent of Schools

**ITEM REQUIRING ATTENTION - BOARD OF EDUCATION**

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To the Board of Trustees: April 19, 2024

**Subject**: Energy Plan Presentation.

**Staff Analysis**: Staff will present information regarding the Strategic Energy Plan.

**Recommendation**: Information Only.

Submitted by: Imee Almazan Ed.D. Title: Interim Superintendent

To the Board of Trustees:

Meeting: April 22, 2024
Special Board Meeting

**Information Only**

2.01
Agenda Placement

Imee Almazan, Ed.D., Interim Superintendent

**DISPOSITION BY BOARD OF TRUSTEES**

Motion by:_____ Seconded by:_____

Approved: _____ Not Approved: _____ Tabled:_____

# Alum Rock
# Union School District

# Strategic Energy Plan
# (DRAFT)

Submitted by:

ARC Alternatives
www.arcalternatives.com
January 12, 2024

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# 1. Executive Summary

This Strategic Energy Plan (SEP) provides the Alum Rock Union School District (District) with an overarching view of their energy project potential and a roadmap for developing and delivering a cost-effective energy program. The SEP has been developed to aid in the District's planning efforts and coordination with the bond program, taking into account cost effectiveness, operations, maintenance, and the age and infrastructure of existing facilities.

The Plan identifies both energy efficiency and solar opportunities and provides estimates for project costs and financial savings.

## Energy Efficiency

### Scope

The SEP identifies strategies and projects for energy efficiency retrofits, presenting the findings of a two-stage detailed audit process. It includes the approaches and priorities discussed with Alum Rock Union School District during the audit process and incorporates those into the recommended implementation plan.

The energy efficiency audits identified over $19 million of energy efficiency project opportunities. Considering the scope, project costs, and payback periods of several projects, this was further refined into $11.5 million of recommended projects with a simple payback (SPB) of 14 years. The District's bond program and planned modernizations were also taken into account in the process of fine paring down the overall opportunity to recommended project, especially considering timing of projects to be done in conjunction with modernization. These recommended energy efficiency projects include:

- Over 2,400,000 kWh/yr and 2,000 therms/yr savings
- Approximately $832,000/yr bill savings
- $11,528,000 of project cost, yielding a simple payback of 14 years

### Financial Summary, by Measure Type

The recommended primary retrofit potential identified districtwide is shown in Figure 1.1 below by measure category. The intention for the primary recommended projects is to exclude projects with extremely long payback periods which would be less economically feasible for the District. In those cases, the payback period often exceeded the life of the measure itself. The primary recommended measures also do not include electrification projects, as they are often carried out in conjunction with major renovations, and additionally are driven by carbon savings rather than cost savings. These primary recommendations are the most effective if implemented now to maximize energy efficiency savings, so long as the bond modernization will not replace the same equipment within the simple payback of the measure.

Figure 1.1: Primary Recommended Energy Efficiency (EE) Project Summary

| Measure Type | Total Savings ($/year) | Total Cost | SPB (years) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|
| Lighting | $ 449,115 | $ 4,119,746 | 9.2 | 871,039 |
| HVAC | $ 377,153 | $ 7,387,000 | 19.6 | 711,726 |
| Controls | $ 1,783 | $ 6,900 | 3.9 | 3,375 |
| Kitchen Eq. | $ 3,629 | $ 13,942 | 3.8 | 25,485 |
| **Total** | **$ 831,681** | **$ 11,527,588** | **13.9** | **1,611,624** |

Figure 1.2 below shows the electrification measures can be considered primarily for carbon savings. Due to relatively high project costs and low (and sometimes negative) yearly economic benefit, these projects do not provide a favorable payback period on their own. Instead, they should be considered for the District's ultimate decarbonization goals, as they provide substantial carbon savings. It is recommended to implement these in conjunction with the District's modernization efforts, instead of implementing them right now, as the primary measures are. For economic calculations for these measures, incremental cost is considered instead of full project cost, which accounts for the cost difference between the electrification upgrade at the time of replacement and the original piece of equipment. Considering this incremental cost at time of replacement, the measures economics are more favorable and reflect going above and beyond what might otherwise be done.

Figure 1.2: Electrification Energy Efficiency (EE) Project Summary

| Measure Type | Total Savings ($/year) | Total Cost | SPB (years) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|
| HVAC | $ 52,369 | $ 882,500 | 16.9 | 577,226 |
| Boilers | $ (73,080) | $ 216,825 | N/A | 103,582 |
| Water Heating | $ (11,218) | $ 99,710 | N/A | 139,501 |
| **Total** | **$ (31,929)** | **$ 1,199,035** | **N/A** | **820,309** |

Lastly, in some cases there were several alternate measures considered. These measures are mutually exclusive to the recommended/electrification measures listed above and are provided as an alternative approach for either economic or carbon savings. Overall, they are less desirable as a replacement, and only serve as an alternative approach for the District. ARC is not recommending these projects for the District to pursue, but has included them in the more detailed discussions later in this report for comprehensiveness.

## Solar Projects

### Scope

As part of the SEP, ARC analyzed solar project potential at many of the schools and facilities within the District. Our analysis finds potential Net Energy Metering (NEM) projects have a positive net financial return (largely as a result of the District getting grandfathered under NEM 2.0 rules), even with conservative cost assumptions, though the paybacks are lengthy. For the NEM projects, ARC proposes approximately 4 MW of capacity across 23 sites.

### Solar System Sizing

As part of ARC's Solar Feasibility Analysis, system sizes were developed (measured in kilowatts DC) for solar systems at each school site. The primary considerations for developing these system size estimates include current consumption rates and physical space availability at a site.

Typically, for sites where there are planned energy efficiency upgrades, it is prudent to design solar systems after implementing energy efficiency measures. This is done to avoid oversizing the systems, as energy efficiency measures will most likely cause a reduction in electrical load once implemented. However, in this case, due to NEM deadlines mentioned below (see "Interconnection"), ARC designed the system sizes conservatively and submitted solar Interconnection Applications to PG&E before the Energy Efficiency measures were developed in order to maximize the savings provided by solar.

To ensure that the solar systems are not designed to be oversized, ARC will conduct energy efficiency impact analysis for measures chosen for implementation to determine the overall reduction in load at each site, and how this might affect the current proposed solar system sizes. We estimate, however, that the reduction of load from energy efficiency measures will be partially offset by the implementation of electrification measures, which will increase the electric load for every gas appliance that is replaced. Additionally, PG&E allows for a reduction of the proposed system size by up to 20% while maintaining the current interconnection applications, which will ensure the systems won't ultimately be oversized.

### Interconnection

In April of 2023, on behalf of the District, ARC Alternatives submitted Interconnection (IX) Applications to PG&E for all sites within the District's solar portfolio. This allowed the District to be grandfathered in the NEM 2.0 program for all sites, instead of being subject to NEM 3.0 which negatively impacts savings from solar. In order for the District to maintain this NEM 2.0 grandfathering for greater solar savings, each system will need to reach their respective PTO (Permission To Operate) date by April 2026. This gives the District about two and a half years for the procurement and implementation of the solar systems to maximize lifetime savings and net benefit.

## Financial Summary, by Site

ARC analyzed two financing methods to compare the benefits of solar in the financial analysis:

- A direct purchase option financed over a 20-year loan term, with interest.
- A Power Purchase Agreement (PPA) with the solar vendor, where the cost of the system is paid back incrementally based on the amount of solar energy produced.

All proposed solar systems are shown in Figure 1.5 below. The 'Site Info' section describes each site along with the preliminary design estimate for the system size, given the considerations noted above. The next two sections, 'Purchase' and 'PPA,' correspond to the two financial scenarios described above. These sections show the initial cost/rate for each system, along with the financial outlook in the first year as well as the system lifetime of 20 years. All costs (both purchase prices and PPA rates) are estimates only. However, ARC will provide the District with updated financial models once the solar projects enter the procurement phase and solar vendors submit fixed pricing as part of their proposals.

Figure 1.5: Solar Project Summary

| Site Info | | Purchase | | | PPA | | |
|---|---|---|---|---|---|---|---|
| Site Name | System Size (kW) | Purchase Price | Purchase First Year Benefit | Purchase 20-Year Total Net Benefit | PPA Rate ($/kWh) | PPA First Year Benefit | PPA 20-Year Total Net Benefit |
| Adelante Academy - Ridgemont | 152 | $ 501,197 | $ 15,635 | $ 693,624 | $ 0.1875 | $ 13,148 | $ 705,197 |
| Alum Rock School District Office | 397 | $ 1,150,517 | $ 41,697 | $ 1,747,931 | $ 0.1875 | $ 22,202 | $ 1,518,307 |
| A. J. Dorsa Elementary | 175 | $ 577,265 | $ 15,350 | $ 727,608 | $ 0.1875 | $ 12,506 | $ 741,338 |
| Aptitud Academy | 117 | $ 512,963 | $ 1,517 | $ 321,424 | $ 0.1875 | $ 9,805 | $ 534,354 |
| Cesar Chavez Early Learning Center | 112 | $ 492,357 | $ 9,906 | $ 535,162 | $ 0.1875 | $ 17,960 | $ 741,424 |
| Adelante II Academy - Cinderella | 93 | $ 405,986 | $ 2,256 | $ 282,685 | $ 0.1875 | $ 8,695 | $ 448,914 |
| Clyde L. Fischer Middle | 339 | $ 1,115,344 | $ 27,250 | $ 1,341,213 | $ 0.1875 | $ 21,491 | $ 1,362,708 |
| Donald Meyer Elementary | 104 | $ 457,283 | $ 1,960 | $ 302,825 | $ 0.1875 | $ 9,437 | $ 494,347 |
| Horace Cureton Elementary | 109 | $ 477,450 | $ 5,523 | $ 409,425 | $ 0.1875 | $ 13,094 | $ 604,901 |
| Joseph George Middle | 236 | $ 777,481 | $ 25,467 | $ 1,108,519 | $ 0.1875 | $ 21,303 | $ 1,120,639 |
| Lee Mathson Middle | 305 | $ 1,004,369 | $ 30,066 | $ 1,356,027 | $ 0.1875 | $ 25,962 | $ 1,396,021 |
| Linda Vista Elementary | 129 | $ 566,452 | $ (629) | $ 293,127 | $ 0.1875 | $ 8,450 | $ 526,864 |
| Lyndale Elementary | 191 | $ 628,966 | $ 16,779 | $ 794,210 | $ 0.1875 | $ 13,386 | $ 803,555 |
| Millard McCollam Elementary | 99 | $ 434,923 | $ 929 | $ 262,942 | $ 0.1875 | $ 7,914 | $ 442,680 |
| Hubbard Media Arts Academy | 228 | $ 749,819 | $ 29,585 | $ 1,203,850 | $ 0.1875 | $ 25,685 | $ 1,217,750 |
| Ocala STEAM Academy | 253 | $ 831,486 | $ 18,609 | $ 954,116 | $ 0.1875 | $ 14,233 | $ 968,565 |
| Russo / McEntee Academy | 104 | $ 454,214 | $ 15,883 | $ 674,607 | $ 0.1875 | $ 22,995 | $ 858,820 |
| Ryan STEAM Academy | 92 | $ 404,671 | $ (1,050) | $ 193,310 | $ 0.1875 | $ 5,578 | $ 362,995 |
| San Antonio Elementary | 186 | $ 612,171 | $ 8,448 | $ 561,574 | $ 0.1875 | $ 5,917 | $ 585,379 |
| LUCHA Elementary | 105 | $ 460,790 | $ 1,018 | $ 279,475 | $ 0.1875 | $ 8,836 | $ 477,882 |
| Sylvia Cassell Elementary | 143 | $ 626,078 | $ 46 | $ 343,859 | $ 0.1875 | $ 10,101 | $ 602,593 |
| Ben Painter Elementary | 135 | $ 592,319 | $ 2,106 | $ 380,653 | $ 0.1875 | $ 12,149 | $ 635,539 |
| William Sheppard Middle | 254 | $ 835,767 | $ 24,899 | $ 1,125,178 | $ 0.1875 | $ 21,425 | $ 1,157,328 |
| Totals | 4,057 | $ 14,669,868 | $ 293,250 | $ 15,893,346 | $ 0.1875 | $ 332,271 | $ 18,308,099 |

Using conservative assumptions, these projects are estimated to cost $14.7 million to implement (unless the District enters a Power Purchase Agreement) and result in $15.8-18.3 million in net benefit over the expected life of the systems. Based on the financial analysis and feedback from District staff, ARC recommends the District proceed with solar implementation through a PPA.

# 2. Benchmarking

ARC Alternatives gathered utility data from the District to conduct preliminary analysis of the District's energy-related data. The results of the analysis were shared during the initial kickoff meeting and have been updated as information was firmed up during the walkthrough audits. Benchmarking data, especially Energy Use Intensity (EUI), helps provide context for the energy analysis and allows us to focus on facilities and end-uses that may be driving energy use at the District, as shown in the following table in Figure 2.1.

Figure 2.1: Benchmarking Context

| Site | Observation | Audit Result |
|---|---|---|
| District Office | High EUI for both gas and electricity, opportunities likely both for electricity and gas savings | Savings on lighting upgrades and a variety of HVAC measures. Higher than average gas usage for boilers and water heaters, electrification possible |
| Lee Mathson, Middle, Hubbard Media Arts Academy | Higher than average electric EUIs, considering Buildings & Climate | Savings on lighting upgrades and a variety of HVAC measures |
| Adelante Academy (Ridgemont) | Extremely high electric EUI, opportunity likely | Savings on lighting upgrades and a variety of HVAC measures |
| Cesar Chavez ELC, Horace Cureton Elementary, Ryan STEAM Academy | Higher than average gas EUIs, electrification projects likely | Gas usage found from boilers and water heaters. Electrification projects possible |
| Clyde L. Fischer Middle, Millard McCollam Elementary, and San Antonio Elementary | Extremely high gas EUI, warrants investigation | Heavy gas boiler, package unit and water heater usage; carbon savings possible with electrification |
| Remainder | EUIs below average, limited opportunities likely | Confirmed, fewer project opportunities available |

Figure 2.2: Site-by-Site Baseline Energy Usage

| Site Name | Square Feet | Annual Energy Use (kWh) | Annual Gas Usage (Therms) | Electricity EUI (kWh/ft^2) | Gas EUI (Therms/ft^2) |
|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | 25,796 | 324,807 | 154 | 12.59 | 0.01 |
| Alum Rock School District Office | 66,500 | 717,064 | 6,553 | 10.78 | 0.10 |
| A. J. Dorsa Elementary | 48,427 | 270,842 | 607 | 5.59 | 0.01 |
| Aptitud Academy | 34,237 | 196,496 | 923 | 5.74 | 0.03 |
| Cesar Chavez Early Learning Center | 53,218 | 202,078 | 4,289 | 3.80 | 0.08 |
| Adelante II Academy - Cinderella | 40,469 | 211,979 | 1,515 | 5.24 | 0.04 |
| Clyde L. Fischer Middle | 70,776 | 552,023 | 14,722 | 7.80 | 0.21 |
| Donald Meyer Elementary | 44,492 | 170,034 | 274 | 3.82 | 0.01 |
| Horace Cureton Elementary | 25,660 | 185,009 | 2,539 | 7.21 | 0.10 |
| Joseph George Middle | 57,287 | 384,810 | 3,188 | 6.72 | 0.06 |
| Lee Mathson Middle | 52,811 | 497,127 | 3,159 | 9.41 | 0.06 |
| Linda Vista Elementary | 44,687 | 302,865 | 1,689 | 6.78 | 0.04 |
| Lyndale Elementary | 44,301 | 311,334 | 1,801 | 7.03 | 0.04 |
| Millard McCollam Elementary | 36,394 | 161,755 | 7,693 | 4.44 | 0.21 |
| Hubbard Media Arts Academy | 40,605 | 371,155 | 1,572 | 9.14 | 0.04 |
| Ocala STEAM Academy | 55,901 | 443,598 | 2,951 | 7.94 | 0.05 |
| Russo / McEntee Academy | 48,859 | 179,304 | 3,460 | 3.67 | 0.07 |
| Ryan STEAM Academy | 35,862 | 179,873 | 4,472 | 5.02 | 0.12 |
| San Antonio Elementary | 39,153 | 303,006 | 9,179 | 7.74 | 0.23 |
| LUCHA Elementary | 23,252 | 171,296 | - | 7.37 | - |
| Sylvia Cassell Elementary | 41,380 | 259,784 | - | 6.28 | - |
| Ben Painter Elementary | 56,180 | 220,163 | 1,323 | 3.92 | 0.02 |
| William Sheppard Middle | 63,358 | 413,686 | 1,550 | 6.53 | 0.02 |
| **Total** | **1,049,605** | **7,030,087** | **73,613** | **6.70** | **0.07** |

# 3. Energy Efficiency Project Identification

## Process

The following outlines the highlights of the process used to identify projects:

1. Data Gathering & Analysis
    - Reviewed previous audit, long range plans, and Facilities Condition Assessment to assess current facility equipment and opportunities
    - Reviewed and incorporated Prop 39 Expenditure Plans & Work Completed
    - Interviewed various District staff for site specific information and insights
    - Reviewed utility data to gather a baseline energy use, for both gas and electricity consumption

2. Benchmarking
    - Included PG&E electric and gas data from 2017 through 2021 to see changing consumption over time
    - Updated utility rates to apply to most recent set of data (FY 2021-2022)

3. Site Visits & Engineering
    - ARC performed a detailed audit for all sites using AssetCalc inventories (August 2023) to determine the status of major building energy systems at each site.
    - ARC conducted on-site energy audits to confirm findings and gather additional details.
    - As a result, many retrofit opportunities were identified to further analyze.
    - ARC evaluated energy savings and project costs of the various measures.
    - Project costs were determined considering either the full cost, if recommended for immediate implementation, or incremental costs were considered if recommended to be implemented when the equipment would otherwise be replaced (either during modernization or at equipment failure).
    - Carbon savings were calculated, which are especially important drivers for electrification projects.

## Analysis

The following considerations were taken into account by ARC while analyzing the projects:

Energy Savings Calculations

- Engineering calculations using industry standard methods and assumptions were performed for most measures.

- The CPUC Database for Energy Efficient Resources (DEER) references were used where applicable. These are common measures that have been analyzed to provide average savings on a per unit basis taking into account specific inputs that include existing conditions, building type and climate zones.
- Lighting measures savings consider direct savings only. With a lighting retrofit, there is a reduced internal heat load, which translates to cooling savings and a heating penalty. These indirect savings are partially offsetting and minor, so are typically excluded in initial project evaluations.
- HVAC measures use existing and proposed equipment specifications and generally conservative assumptions.
- All take into account baseline energy use, and are balanced to historical consumption and end uses to avoid over-estimation of savings.

Current Utility Rates

- Updated energy and demand rates, as defined by applicable PG&E tariffs, were used in calculating the cost and benefit of energy savings specific to each site.

Cost Estimates

- Standard project costs were used, including recent experience with real-world costs.
- Past project costs at ARUSD (lighting) influenced ARC's costs estimates.

Economic Calculations

- The primary measure on which ARC judged the economic outlook of the various energy efficiency measures is Simple Payback, which describes the payback period for which the project will break even, in years.
- Payback periods for primary measures are calculated assuming the energy efficiency upgrade is done now, and the full project cost is the basis,
- Projects are recommended for primary measures if the payback period is shorter than the project lifetime period.
- Electrification measure payback periods are calculated on the basis of upgrading at the time of modernization through the bond program in the future; thus, incremental cost is considered for these measures to capture the investment required to go beyond what might otherwise be funded.
- All projects represent stand-alone savings:
    - Some projects represent alternative approaches to the same equipment and would be mutually exclusive of each other. These have been distinguished as alternate projects.
    - Interactive and cascading effects of multiple measures are not included. Neither effect the strategic direction

## Resulting Projects

The resulting projects are shown in Figure 3.1 below, along with indications of recommended projects underlined. Details and considerations on each identified project type follow.

Figure 3.1: Results – Projects Identified

| Category | Identified Project |
|---|---|
| Lighting | Campuswide LED Lighting Upgrades<br>Targeted Lighting Retrofit |
| HVAC | Package/Cabinet Heat Pump Replacement<br>Wall Mount Heat Pump Replacement<br>Package Unit Replacement<br>Replace PTAC with ductless mini split<br>Replace Furnace with Condensing Furnace<br>Replace Unit Heater (Reznor) with Gas<br>Replace Unit Heater (Reznor) with Electric<br>Replace ductless mini split<br>Split System Replacement<br>Package/Split System Electrification<br>PTAC/Furnace System Electrification<br>Furnace Electrification |
| Boiler Replacements | Condensing Boiler replacement<br>Air to Water Heat Pump (electrification) |
| Water Heaters | Het pump water heaters (electrification) |
| Controls and EMS | Install New EMS<br>Upgrade IBEX<br>Upgrade BACtalk<br>Upgrade EMS at modernization<br>Install Smart/Programmable Thermostat |
| Kitchen Equipment | Dishwasher Replacements<br>Gas Oven Replacement (electrification) |

## Lighting

### Scope

The proposed energy efficiency measures for the District's lighting systems are as follows:

1. Campuswide LED Retrofit (LED1)
   - Exterior: Retrofit high pressure sodium, metal halide, incandescent and CFL fixtures exterior with LED fixtures:
     - Pole lights retrofit with similar style fixtures
     - Wallpack fixtures replaced with new LED wallpack fixtures.
     - Floodlight & canopy fixtures replaced with like style LED fixtures
   - Interior: Majority of scope is linear fluorescents. Several variations of project types:
     - Retrofit troffer fixtures with LED 'door kits'
     - Replace existing T8 lamps with LED tube lights (wrap & strip fixtures)
     - Retrofit recessed fixtures with LED kits
     - Replace lamps with LED lamps
     - Incorporate Occupancy sensors
2. Targeted LED Retrofit (LED2)
   - Same scope as campuswide, only PAC/SEL:
     - Primarily TLED retrofit of pendant fixtures
     - Strip & wrap fixtures
     - CFL Floodlights

### Assumptions and Considerations

- DesignLights Consortium (DLC) approved fixtures recommended
- Fixture life generally >50,000 hrs, great added maintenance benefit
- CFLs could be removed from scope to improve economics



## Results

Figure 3.2 below shows the resulting lighting projects for each site. Savings are consistent with the lighting savings identified for Prop 39 projects, with updated economics.

Figure 3.2: Summary of Lighting Replacement Measures

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | LED1 | Campuswide LED Retrofit | 68,491 | - | $ 23,885 | $ 294,124 | 12.3 | 45,286 |
| Alum Rock School District Office | LED1 | Campuswide LED Retrofit | 117,895 | - | $ 38,683 | $ 368,130 | 9.5 | 77,952 |
| A. J. Dorsa Elementary | LED1 | Campuswide LED Retrofit | 86,802 | - | $ 28,984 | $ 132,245 | 4.6 | 57,394 |
| Aptitud Academy | LED1 | Campuswide LED Retrofit | 72,984 | - | $ 26,772 | $ 215,802 | 8.1 | 48,257 |
| Cesar Chavez Early Learning Center | LED2 | Targeted LED Retrofit | 6,713 | - | $ 2,477 | $ 10,130 | 4.1 | 4,439 |
| Horace Cureton Elementary | LED1 | Campuswide LED Retrofit | 58,932 | - | $ 20,254 | $ 258,305 | 12.8 | 38,966 |
| Joseph George Middle | LED1 | Campuswide LED Retrofit | 106,088 | - | $ 36,107 | $ 447,360 | 12.4 | 70,145 |
| Lee Mathson Middle | LED1 | Campuswide LED Retrofit | 138,972 | - | $ 43,395 | $ 432,052 | 10.0 | 91,888 |
| Lyndale Elementary | LED1 | Campuswide LED Retrofit | 89,178 | - | $ 31,987 | $ 327,477 | 10.2 | 58,965 |
| Hubbard Media Arts Academy | LED1 | Campuswide LED Retrofit | 87,406 | - | $ 29,295 | $ 277,205 | 9.5 | 57,793 |
| Russo / McEntee Academy | LED1 | Campuswide LED Retrofit | 96,100 | - | $ 32,803 | $ 243,082 | 7.4 | 63,541 |
| Ryan STEAM Academy | LED1 | Campuswide LED Retrofit | 66,740 | - | $ 24,342 | $ 224,505 | 9.2 | 44,129 |
| San Antonio Elementary | LED1 | Campuswide LED Retrofit | 92,794 | - | $ 29,994 | $ 254,680 | 8.5 | 61,355 |
| LUCHA Elementary | LED1 | Campuswide LED Retrofit | 53,477 | - | $ 18,757 | $ 98,676 | 5.3 | 35,359 |
| Ben Painter Elementary | LED1 | Campuswide LED Retrofit | 59,960 | - | $ 21,102 | $ 197,547 | 9.4 | 39,646 |
| William Sheppard Middle | LED1 | Campuswide LED Retrofit | 114,827 | - | $ 40,275 | $ 338,426 | 8.4 | 75,924 |
| **Total** | | | **1,317,359** | | **$ 449,115** | **$ 4,119,746** | | **871,039** |

## HVAC

### Scope

The proposed energy efficiency and electrification measures for the District's HVAC systems are as follows:

1. Package/Cabinet Heat Pump Replacement (HVAC1)
   - Replace older heat pump with high-efficiency heat pump
   - Basis of Design Bard I-TEC series; IPLV up to 16.5
   - Applies primarily to cabinet style classroom units (Airedale)
   - Payback generally equal to equipment life
   - Recommend implement only in areas not being affected by bond program

2. Wall Mount Heat Pump Replacement (HVAC2)
   - Replace older wall mount heat pumps with high-efficiency heat pump
   - Basis of Design Bard Quiet Climate series; IPLV up to 15
   - Applies primarily to Bard style units, primarily classrooms
   - Measure intended now
   - Payback generally equal to equipment life
   - Recommend implement only in areas not being affected by bond program

3. Package Unit Replacement (HVAC3)
   - Replace older package unit with high-efficiency units
   - Like for like option; Gas heating, electric cooling
   - Efficiencies of 14 SEER / 82% AFUE used as basis of design
   - Measure is mutually exclusive with HVAC12 (electrification option)
   - Measure intended now
   - Payback generally exceeds equipment life; only recommended for carbon savings

4. Replace PTAC with Ductless Mini Split (HVAC4)
   - Replace Package Terminal Air Conditioner with high efficiency ductless mini split systems
   - 16 SEER utilized as basis of design (conservative)
   - Single zone Mitsubishi split system can be up to 30 SEER
   - Payback generally less than equipment life
   - Measure intended now
   - Recommended where major renovation is not scheduled
   - Measure is mutually exclusive with HVAC5 in classrooms (electrification)

5. PTAC/Furnace System Electrification (HVAC5)
   - Generally applies to schools where separate heating and cooling systems serve same space, target older systems

- Measure requires holistic approach and replacement of gas heating sources with electric and integration with cooling systems
- Variable Refrigerant Flow (VRF) basis of design to provide integrated, all electric heating and cooling
- 16 SEER utilized for calculations (conservative)
- Multi zone systems Mitsubishi City Multi® can be up to 26 IEER
- Due to extensive retrofit needs, intended at normal replacement
- Incremental cost considered
- Similar design to Dorsa (photo); recommend as District Standard design approach
- Overlaps with HVAC4 PTAC Replacement Measure

**6.** Replace Furnace with Condensing Furnace (HVAC6)
- Replace older existing furnaces with condensing furnace
- 90% AFUE utilized as basis of design
- Payback generally longer than equipment life
- Measure intended now (full cost)
- But due to long payback, recommended only if equipment fails
- Consider all electric approach at modernization
- Mutually exclusive with HVAC7

**7.** Furnace Electrification (HVAC7)
- Applies to heating only locker room systems at Sheppard Middle
- Measure requires wholistic approach and replacement of gas heating sources with electric and integration with cooling systems (if added)
- Variable Refrigerant Flow (VRF) basis of design to provide integrated, all electric heating and cooling (if added)
- 4.7 COP utilized for calculations (conservative)
- Multi zone systems Mitsubishi City Multi® can be up to 5.5 COP
- Alternative would be air to water heat pump (AWHP)
- Due to extensive retrofit needs, intended at normal replacement
- Incremental cost considered
- Project does not generate economic savings; only recommended for carbon savings (or in conjunction with adding cooling)
- Overlaps with HVAC6 Furnace Replacement Measure

**8.** Replace Unit Heater (Reznor) with Gas Unit Heater (HVAC8)
- Only applies to large unit heaters (>50 MBH)
- Reznor UEZ basis of design (up to 93% AFUE)
- Payback generally longer than equipment life
- Measure intended now (full cost)
- But due to long payback, recommended only if equipment fails
- Consider all electric approach at modernization

**9.** Replace Unit Heater (Reznor) with Electric Unit heater (HVAC9)
- Intended for small units (<50 MBH) based on market availability
- Measure intended now (full cost)
- Project does not generate economic savings; only recommended for carbon savings

**10.** Replace Ductless Mini Split (HVAC10)
- Replace older existing ductless mini split system with high-efficiency min split
- 16 SEER utilized as basis of design (conservative)
- Single zone Mitsubishi split system can be up to 30 SEER
- Payback generally less than equipment life
- Measure intended now (full cost)
- Recommended where major renovation is not scheduled

**11.** Split System Replacement (HVAC11)
- Replace older split systems with high-efficiency units
- Like for like option; most are supplemental cooling only
- Efficiencies of 14 SEER / 90% AFUE used as basis of design
- Measure is mutually exclusive with HVAC12 (electrification option)
- Measure intended now
- Payback generally exceeds equipment life; only recommended for carbon savings or upon failure

**12.** Package Unit/Split System Electrification (HVAC12)
- Similar to HVAC5 but, applies to schools where heating and cooling systems serve same space, target older systems
- Measure requires holistic approach and replacement of gas/electric units with electric only
- Variable Refrigerant Flow (VRF) basis of design to provide integrated, all electric heating and cooling
- 16 SEER utilized for calculations (conservative)
- Multi zone systems Mitsubishi City Multi® can be up to 26 IEER
- Due to extensive retrofit needs, intended at normal replacement
- Incremental cost considered
- Similar design to Dorsa; recommend as District Standard design approach
- Overlaps with HVAC3 Package Unit and HVAC 11 Split System (S/S) Measures

## Results

The scope and economics for all HVAC primary measures are summarized below in Figure 3.3, by site. Figure 3.4 details the economics and carbon savings for alternative electrification projects. Primary recommended HVAC measures include HVAC1, HVAC2, HVAC4, and HVAC10. Measures considered for electrification only were HVAC5, HVAC7, HVAC9 and HVAC12. The remainder of the HVAC project measures are not recommended due to long payback periods exceeding equipment lifecycle.

Figure 3.3: Summary of all HVAC Measure Projects, by Site

| Site Name | HVAC1 | HVAC2 | HVAC3 | HVAC4 | HVAC6 | HVAC8 | HVAC9 | HVAC10 | HVAC11 | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | X | X | | X | | | | | | 80,867 | - | $ 28,201 | $ 481,000 | 17.1 | 53,469 |
| Alum Rock School District Office | X | X | X | X | | | X | X | X | 67,847 | 426 | $ 23,047 | $ 460,750 | 20.0 | 49,841 |
| A. J. Dorsa Elementary | | X | | X | | | | | | 24,277 | - | $ 8,106 | $ 169,000 | 20.8 | 16,052 |
| Aptitud Academy | X | X | X | | X | | | X | X | 50,470 | 120 | $ 18,675 | $ 375,940 | 20.1 | 34,770 |
| Cesar Chavez Early Learning Center | | X | X | | | | | | X | 24,109 | 166 | $ 9,106 | $ 332,000 | 36.5 | 17,883 |
| Adelante II Academy - Cinderella | | X | | X | | | | | | 38,740 | - | $ 14,541 | $ 197,500 | 13.6 | 25,615 |
| Clyde L. Fischer Middle | | X | X | | | | | X | X | 31,275 | 51 | $ 9,746 | $ 220,000 | 22.6 | 21,278 |
| Donald Meyer Elementary | X | X | | X | X | | | | | 46,268 | 30 | $ 18,359 | $ 561,720 | 30.6 | 30,945 |
| Horace Cureton Elementary | | X | | X | | | | | | 35,185 | - | $ 12,093 | $ 307,750 | 25.4 | 23,265 |
| Joseph George Middle | X | X | | X | X | | | X | X | 76,138 | 368 | $ 26,369 | $ 620,160 | 23.5 | 54,648 |
| Lee Mathson Middle | X | | X | | | | | X | | 118,458 | 113 | $ 37,127 | $ 798,750 | 21.5 | 79,640 |
| Linda Vista Elementary | X | X | X | | | | | X | X | 72,692 | 48 | $ 29,854 | $ 654,000 | 21.9 | 48,625 |
| Lyndale Elementary | X | X | X | | | | | X | | 69,943 | 47 | $ 25,183 | $ 551,500 | 21.9 | 46,794 |
| Millard McCollam Elementary | | X | X | X | | | | | | 33,759 | 120 | $ 13,301 | $ 209,000 | 15.7 | 23,718 |
| Hubbard Media Arts Academy | X | X | X | X | | X | | X | X | 61,149 | 108 | $ 20,637 | $ 445,000 | 21.6 | 41,698 |
| Ocala STEAM Academy | X | X | | X | X | | | | | 85,390 | 373 | $ 28,374 | $ 562,880 | 19.8 | 60,823 |
| Russo / McEntee Academy | | X | | X | X | X | | | X | 34,491 | 134 | $ 11,937 | $ 316,940 | 26.6 | 24,373 |
| Ryan STEAM Academy | | X | X | X | | X | X | | | 31,622 | 277 | $ 11,890 | $ 182,500 | 15.3 | 24,148 |
| San Antonio Elementary | | | X | | | | | X | | 48,832 | 324 | $ 16,165 | $ 505,750 | 31.3 | 36,080 |
| LUCHA Elementary | | | | | | | | X | X | 7,928 | - | $ 2,781 | $ 66,250 | 23.8 | 5,242 |
| Sylvia Cassell Elementary | X | X | | | | | | | | 58,582 | - | $ 21,196 | $ 468,000 | 22.1 | 38,734 |
| Ben Painter Elementary | | X | X | | | | X | X | X | 34,373 | 232 | $ 12,398 | $ 444,750 | 35.9 | 25,437 |
| William Sheppard Middle | X | | | X | X | | | X | | 95,583 | 154 | $ 33,706 | $ 711,360 | 21.1 | 64,998 |
| **Total, Primary HVAC Measures** | | | | | | | | | | **1,227,978** | **3,091** | **$ 432,792** | **$ 9,642,500** | **22.3** | **848,077** |

Figure 3.4: Summary of HVAC Electrification Projects, by Site

| Site Name | HVAC5 | HVAC7 | HVAC12 | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|---|
| Aptitud Academy | | | x | 2,000 | 100 | $ 868 | $ 5,000 | 5.8 | 2,491 |
| Ben Painter Elementary | | | x | 10,758 | 875 | $ 4,922 | $ 43,000 | 8.7 | 17,341 |
| Cesar Chavez Early Learning Center | | | x | 2,333 | 1,260 | $ 2,447 | $ 35,000 | 14.3 | 16,271 |
| Adelante II Academy - Cinderella | x | | | 19,018 | 1,364 | $ 8,925 | $ 76,500 | 8.6 | 28,513 |
| Clyde L. Fischer Middle | | | x | (20,045) | 13,250 | $ 9,358 | $ 166,500 | 17.8 | 141,627 |
| Horace Cureton Elementary | x | | | (4,624) | 2,308 | $ 1,281 | $ 50,250 | 39.2 | 23,918 |
| Joseph George Middle | x | | | (7,610) | 2,485 | $ 488 | $ 55,750 | >50 yr SPB | 24,012 |
| Lee Mathson Middle | | | x | (383) | 2,308 | $ 2,692 | $ 39,000 | 14.5 | 26,722 |
| Linda Vista Elementary | | | x | 5,090 | 1,300 | $ 3,700 | $ 39,000 | 10.5 | 18,565 |
| Lyndale Elementary | | | x | 2,293 | 962 | $ 2,779 | $ 20,500 | 7.4 | 12,756 |
| Millard McCollam Elementary | x | | | (24,869) | 6,924 | $ (1,492) | $ 54,000 | n/a | 64,490 |
| Hubbard Media Arts Academy | | | x | 4,103 | 1,105 | $ 2,827 | $ 36,000 | 12.7 | 15,631 |
| Ocala STEAM Academy | x | | | (8,626) | 2,378 | $ 156 | $ 18,000 | >50 yr SPB | 22,097 |
| Russo / McEntee Academy | x | | | (9,434) | 2,599 | $ (50) | $ 19,000 | n/a | 24,147 |
| Ryan STEAM Academy | x | | | 1,698 | 3,735 | $ 5,426 | $ 44,000 | 8.1 | 44,778 |
| San Antonio Elementary | | | x | 12,658 | 6,651 | $ 11,892 | $ 120,500 | 10.1 | 86,111 |
| William Sheppard Middle | | x | | (7,411) | 1,304 | $ (1,070) | $ 32,000 | n/a | 10,341 |
| **Total, Electrification Alternatives** | | | | **(23,051)** | **50,906** | **$ 55,147** | **$ 854,000** | **15.5** | **579,813** |

## Boilers

### Scope

The proposed energy efficiency and electrification measures for the District's boilers are as follows:

1. Replace Boiler with 90% Efficient Boiler (B1)
   - Replace existing boiler with condensing (90% efficient) boiler
   - Intended now, but all instances >50 year SPB
2. Replace boiler with 96% Efficient Boiler (B2)
   - Replace existing boiler with condensing (96% efficient) boiler
   - Requires low entering water temperature water to get actual 96% efficiency, often performs lower than nameplate
   - Intended now, but a few instances where SPB < EUL, but not likely before modernization.
3. Electrify boiler with AWHP (B3)
   - Electrify with an Air to Water Heat Pump (AWHP)
   - Produces low temp hot water, requires integration with loads served to run on 120-130°F water
   - Intended at normal replacement, incremental cost considered
   - Alternatively, remove hydronic systems and use combination of heat pumps, VRF systems and heat pump water heaters
   - Project does not generate economic savings; only recommended for carbon savings

## Results

Figures 3.5, 3.6, and 3.7 shown the project economics for the efficiency upgrades for measures B1 and B2, along with the electrification upgrades detailed in measure B3 respectively. These projects don't provide short payback periods, but are intended for the District to pursue carbon savings.

Figure 3.5: Summary of Boiler Replacements for Measure B1

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | B1 | Replace Boiler with 90% Efficient Boiler 300 MBH Boiler, FCA ID 4816808 | - | 15 | 27 | $ 137,019 | > 50 yrs | 180 |
| Alum Rock School District Office | B1 | Replace Boiler with 90% Efficient Boiler 210 MBH Boiler, FCA ID 4497614 | - | 66 | 121 | $ 17,213 | > 50 yrs | 766 |
| Adelante - Cinderella | B1 | Replace Boiler with 90% Efficient Boiler 2750 MBH Boiler, FCA ID 4731064 | - | 157 | 198 | $ 153,508 | > 50 yrs | 1,771 |
| Clyde L. Fischer Middle | B1 | Replace Boiler with 90% Efficient Boiler 315 MBH Boiler, FCA ID 4297570 | - | 62 | 73 | $ 24,620 | > 50 yrs | 730 |
| Clyde L. Fischer Middle | B1 | Replace Boiler with 90% Efficient Boiler 3050 MBH Boiler, FCA ID 4294726 | - | 605 | 710 | $ 155,527 | > 50 yrs | 7,069 |
| Clyde L. Fischer Middle | B1 | Replace Boiler with 90% Efficient Boiler 3050 MBH Boiler, FCA ID 4294738 | - | 605 | 710 | $ 155,527 | > 50 yrs | 7,069 |
| Clyde L. Fischer Middle | B1 | Replace Boiler with 90% Efficient Boiler 1010 MBH Boiler, FCA ID 4297553 | - | 200 | 235 | $ 57,597 | > 50 yrs | 2,341 |
| Millard McCollam Elementary | B1 | Replace Boiler with 90% Efficient Boiler 1050 MBH Boiler, FCA ID 4734956 | - | 351 | 416 | $ 57,867 | > 50 yrs | 4,105 |
| Millard McCollam Elementary | B1 | Replace Boiler with 90% Efficient Boiler 1250 MBH Boiler, FCA ID 4734984 | - | 418 | 495 | $ 59,213 | > 50 yrs | 4,887 |
| William Sheppard Middle | B1 | Replace Boiler with 90% Efficient Boiler 1470 MBH Boiler, FCA ID 4788751 | - | 155 | 182 | $ 57,393 | > 50 yrs | 1,812 |
| **Subtotal, B1** | | | **-** | **2,629** | **3,169** | **$ 875,482** | **> 50 yrs** | **30,730** |

Figure 3.6: Summary of Boiler Replacements for Measure B2

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | B2 | Replace with 96% Efficient Boiler 300 MBH Boiler, FCA ID 4816808 | - | 25 | 44 | $ 3,720 | > 50 yrs | 295 |
| Alum Rock School District Office | B2 | Replace with 96% Efficient Boiler 210 MBH Boiler, FCA ID 4497614 | - | 107 | 198 | $ 2,604 | 13 | 1,256 |
| Adelante - Cinderella | B2 | Replace with 96% Efficient Boiler 2750 MBH Boiler, FCA ID 4731064 | - | 248 | 326 | $ 34,100 | > 50 yrs | 2,904 |
| Clyde L. Fischer Middle | B2 | Replace with 96% Efficient Boiler 315 MBH Boiler, FCA ID 4297570 | - | 102 | 120 | $ 3,906 | 32 | 1,197 |
| Clyde L. Fischer Middle | B2 | Replace with 96% Efficient Boiler 3050 MBH Boiler, FCA ID 4294726 | - | 992 | 1,165 | $ 37,820 | 32 | 11,593 |
| Clyde L. Fischer Middle | B2 | Replace with 96% Efficient Boiler 3050 MBH Boiler, FCA ID 4294738 | - | 992 | 1,165 | $ 37,820 | 32 | 11,593 |
| Clyde L. Fischer Middle | B2 | Replace with 96% Efficient Boiler 1010 MBH Boiler, FCA ID 4297553 | - | 328 | 386 | $ 12,524 | 32 | 3,839 |
| Millard McCollam Elementary | B2 | Replace with 96% Efficient Boiler 1050 MBH Boiler, FCA ID 4734956 | - | 576 | 682 | $ 13,020 | 19 | 6,733 |
| Millard McCollam Elementary | B2 | Replace with 96% Efficient Boiler 1250 MBH Boiler, FCA ID 4734984 | - | 686 | 812 | $ 15,500 | 19 | 8,015 |
| William Sheppard Middle | B2 | Replace with 96% Efficient Boiler 1470 MBH Boiler, FCA ID 4788751 | - | 254 | 298 | $ 18,228 | > 50 yrs | 2,971 |
| **Subtotal, B2** | | | **-** | **4,311** | **5,197** | **$ 179,242** | **34** | **50,398** |

Figure 3.7: Summary of Boiler Electrification for Measure B3

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | B3 | Electrify Boiler with AWHP 300 MBH Boiler, FCA ID 4816808 | (1,805) | 154 | (360) | $ 4,500 | n/a | 607 |
| Alum Rock School District Office | B3 | Electrify Boiler with AWHP 210 MBH Boiler, FCA ID 4497614 | (7,680) | 655 | (1,312) | $ 3,150 | n/a | 2,582 |
| Adelante - Cinderella | B3 | Electrify Boiler with AWHP 2750 MBH Boiler, FCA ID 4731064 | (17,756) | 1,515 | (4,680) | $ 41,250 | n/a | 5,969 |
| Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 315 MBH Boiler, FCA ID 4297570 | (7,320) | 625 | (1,533) | $ 4,725 | n/a | 2,461 |
| Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 3050 MBH Boiler, FCA ID 4294726 | (70,876) | 6,047 | (14,846) | $ 45,750 | n/a | 23,827 |
| Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 3050 MBH Boiler, FCA ID 4294738 | (70,876) | 6,047 | (14,846) | $ 45,750 | n/a | 23,827 |
| Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 1010 MBH Boiler, FCA ID 4297553 | (23,470) | 2,003 | (4,916) | $ 15,150 | n/a | 7,890 |
| Millard McCollam Elementary | B3 | Electrify Boiler with AWHP 1050 MBH Boiler, FCA ID 4734956 | (41,161) | 3,512 | (11,685) | $ 15,750 | n/a | 13,838 |
| Millard McCollam Elementary | B3 | Electrify Boiler with AWHP 1250 MBH Boiler, FCA ID 4734984 | (49,001) | 4,181 | (14,149) | $ 18,750 | n/a | 16,473 |
| William Sheppard Middle | B3 | Electrify Boiler with AWHP 1470 MBH Boiler, FCA ID 4788751 | (18,166) | 1,550 | (4,554) | $ 22,050 | n/a | 6,107 |
| **Subtotal, B3** | | | **(308,111)** | **26,289** | **(73,080)** | **$ 216,825** | **n/a** | **103,582** |

## Water Heaters

### Scope

The proposed energy efficiency and electrification measures for the District's water heaters are as follows:

1. Replace Gas Water Heater with Heat Pump Water Heater (WH1-5)
   - Replace existing gas water heater with heat pump water heater
   - COP generally ranges 2.5-3.0
   - Compared to electric resistance water heater COP of 1.0
   - Project does not generate economic savings—only recommended for carbon savings
   - Measures 1 through 5 are based on the size of the heat pump water heater replacement system:
     - WH1 – 30 Gallon Heat Pump Water Heater
     - WH2 – 40 Gallon Heat Pump Water Heater
     - WH3 – 50 Gallon Heat Pump Water Heater
     - WH4 – 60 Gallon Heat Pump Water Heater
     - WH5 – 75 Gallon Heat Pump Water Heater

### Results

Figure 3.8: Summary of Water Heater Replacement Measures

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4816783 | (8,070) | 967 | $ (18) | $ 3,704 | N/A | 5,968 |
| Alum Rock School District Office | WH1 | Replace with 30 Gal Heat Pump Water Heater, FCA ID 4497636 | (6,480) | 715 | $ (202) | $ 2,757 | N/A | 4,073 |
| Alum Rock School District Office | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4498294 | (6,480) | 709 | $ (344) | $ 2,900 | N/A | 4,003 |
| Alum Rock School District Office | WH1 | Replace with 30 Gal Heat Pump Water Heater, FCA ID 4525589 | (6,480) | 715 | $ (202) | $ 2,757 | N/A | 4,073 |
| A. J. Dorsa Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4576801 | (8,070) | 967 | $ (83) | $ 3,769 | N/A | 5,968 |
| Aptitud Academy | WH4 | Replace with 60 Gal Heat Pump Water Heater, FCA ID 4540950 | (7,150) | 741 | $ (203) | $ 3,313 | N/A | 3,934 |
| Cesar Chavez Early Learning Center | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4737567 | (8,070) | 967 | $ (509) | $ 4,196 | N/A | 5,968 |
| Cesar Chavez Early Learning Center | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4737589 | (6,480) | 707 | $ (317) | $ 2,872 | N/A | 3,980 |
| Adelante II Academy - Cinderella | WH4 | Replace with 60 Gal Heat Pump Water Heater, FCA ID 4731173 | (7,150) | 741 | $ (350) | $ 3,461 | N/A | 3,934 |
| Clyde L. Fischer Middle | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4294739 | (8,070) | 967 | $ (1,363) | $ 5,050 | N/A | 5,968 |
| Donald Meyer Elementary | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4661572 | (6,480) | 709 | $ (38) | $ 2,593 | N/A | 4,003 |
| Horace Cureton Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4585912 | (8,070) | 967 | $ (412) | $ 4,099 | N/A | 5,968 |
| Joseph George Middle | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4883721 | (8,070) | 967 | $ (333) | $ 4,019 | N/A | 5,968 |
| Joseph George Middle | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4870854 | (6,480) | 707 | $ (209) | $ 2,764 | N/A | 3,980 |
| Lee Mathson Middle | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4589967 | (8,070) | 967 | $ (438) | $ 4,125 | N/A | 5,968 |
| Linda Vista Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4540682 | (8,070) | 967 | $ (184) | $ 3,870 | N/A | 5,968 |
| Linda Vista Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4540768 | (8,070) | 967 | $ (184) | $ 3,870 | N/A | 5,968 |
| Lyndale Elementary | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4795513 | (6,480) | 709 | $ (224) | $ 2,779 | N/A | 4,003 |
| Millard McCollam Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4735097 | (8,070) | 967 | $ (1,591) | $ 5,278 | N/A | 5,968 |
| Hubbard Media Arts Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4557749 | (8,070) | 967 | $ (233) | $ 3,919 | N/A | 5,968 |
| Ocala STEAM Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4733167 | (6,480) | 709 | $ (128) | $ 2,683 | N/A | 4,003 |
| Ocala STEAM Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4862604 | (8,070) | 967 | $ (163) | $ 3,850 | N/A | 5,968 |
| Ocala STEAM Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4862603 | (8,070) | 967 | $ (163) | $ 3,850 | N/A | 5,968 |
| Russo / McEntee Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4744425 | (6,480) | 709 | $ (658) | $ 3,213 | N/A | 4,003 |
| Ryan STEAM Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4559738 | (6,480) | 709 | $ (915) | $ 3,470 | N/A | 4,003 |
| San Antonio Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4581654 | (8,070) | 967 | $ (1,260) | $ 4,946 | N/A | 5,968 |
| LUCHA Elementary | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4471418 | (6,480) | 707 | $ (187) | $ 2,743 | N/A | 3,980 |
| William Sheppard Middle | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4788768 | (6,480) | 707 | $ (304) | $ 2,860 | N/A | 3,980 |
| **Subtotal, Water Heaters** | | | **(205,040)** | **23,532** | **$ (11,218)** | **$ 99,710** | **N/A** | **139,501** |

## Controls

### Scope

The proposed upgrades for the District's control systems are as follows:

1. EMS Upgrades
   - There are three baselines for existing EMS at the school sites:
     - Alerton IBEX, a modem-based system, which is no longer supported and failing
     - Alterton BACtalk, an internet-based system, which appears to communicate sporadically (was down during site visits) and used for basic temperature and scheduling
     - Local controls only, which are a mix of programmable and non-programmable thermostat
   - Four measures were evaluated:
     - EMS1: Install new EMS such as Alerton Compass2, for the case where there are local controls only and HVAC units can be integrated with an EMS. This excludes sites where PTAC units are prevalent.
     - EMS2: Upgrade IBEX to the currently available technology, which will replace the dial-up modem access and add capabilities
     - EMS3: Upgrade BACTalk to currently available technology, which would add capabilities and address the intermittent communications issues experienced.
     - EMS4: Upgrade EMS at modernization, to address the schools where the majority of units (PTACs) will not be easily integrated into an EMS.
   - Considerations
     - Unfortunately, due to high project costs and some level of control existing already, no measures are economically viable.
     - Recommend integrating a district standard for control systems into the modernization, when most equipment will be replaced. The incremental cost at that time could be considered and will provide better project economics.

2. Programmable Thermostats
   - Local thermostats are being installed as controls fail
   - Many thermostats observed are non-programmable
   - Programmable thermostats would remove occupant control, ensuring temperature setpoints and schedules are maintained
   - A comprehensive project to replace non-programmable thermostats is not of a scale that will be economically viable, so we recommend installing programmable thermostats as opportunities arise
   - Savings below are shown on a per thermostat basis for each school site.

## Results

Figure 3.9: Summary of EMS Upgrade Measures

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | EMS2 | Upgrade IBEX | 9,840 | 10 | $ 3,449 | $ 144,500 | 42 | 6,623 |
| Alum Rock School District Office | EMS4 | Upgrade EMS at modernization | 4,345 | 83 | $ 1,579 | $ 284,000 | > 50 yrs | 3,843 |
| A. J. Dorsa Elementary | EMS3 | Upgrade BACtalk | 6,564 | 31 | $ 2,236 | $ 136,000 | > 50 yrs | 4,702 |
| Aptitud Academy | EMS2 | Upgrade IBEX | 5,953 | 58 | $ 2,262 | $ 116,500 | > 50 yrs | 4,614 |
| Cesar Chavez Early Learning Center | EMS4 | Upgrade EMS at modernization | 1,224 | 54 | $ 520 | $ 152,000 | > 50 yrs | 1,441 |
| Adelante II Academy - Cinderella | EMS4 | Upgrade EMS at modernization | 1,284 | 19 | $ 507 | $ 164,000 | > 50 yrs | 1,071 |
| Clyde L. Fischer Middle | EMS1 | Install New EMS | 25,085 | 1,394 | $ 9,406 | $ 312,000 | 33 | 32,881 |
| Donald Meyer Elementary | EMS2 | Upgrade IBEX | 5,151 | 17 | $ 2,074 | $ 151,500 | > 50 yrs | 3,605 |
| Horace Cureton Elementary | EMS4 | Upgrade EMS at modernization | 1,121 | 32 | $ 425 | $ 256,000 | > 50 yrs | 1,115 |
| Joseph George Middle | EMS2 | Upgrade IBEX | 11,658 | 201 | $ 4,217 | $ 193,500 | 46 | 10,058 |
| Lee Mathson Middle | EMS3 | Upgrade BACtalk | 12,048 | 160 | $ 3,957 | $ 89,500 | 23 | 9,836 |
| Linda Vista Elementary | EMS3 | Upgrade BACtalk | 7,340 | 85 | $ 3,114 | $ 74,500 | 24 | 5,847 |
| Lyndale Elementary | EMS2 | Upgrade IBEX | 9,432 | 114 | $ 3,615 | $ 151,500 | 42 | 7,569 |
| Millard McCollam Elementary | EMS2 | Upgrade IBEX | 4,900 | 486 | $ 2,486 | $ 78,000 | 31 | 8,921 |
| Hubbard Media Arts Academy | EMS3 | Upgrade BACtalk | 8,995 | 79 | $ 3,119 | $ 80,500 | 26 | 6,871 |
| Ocala STEAM Academy | EMS2 | Upgrade IBEX | 13,439 | 186 | $ 4,625 | $ 162,000 | 35 | 11,060 |
| Russo / McEntee Academy | EMS4 | Upgrade EMS at modernization | 1,086 | 44 | $ 424 | $ 132,000 | > 50 yrs | 1,232 |
| Ryan STEAM Academy | EMS4 | Upgrade EMS at modernization | 1,090 | 56 | $ 470 | $ 152,000 | > 50 yrs | 1,375 |
| San Antonio Elementary | EMS3 | Upgrade BACtalk | 7,344 | 417 | $ 2,863 | $ 64,000 | 22 | 9,730 |
| LUCHA Elementary | EMS3 | Upgrade BACtalk | 4,152 | 46 | $ 1,510 | $ 32,500 | 22 | 3,283 |
| Sylvia Cassell Elementary | EMS2 | Upgrade IBEX | 7,870 | - | $ 2,848 | $ 183,000 | > 50 yrs | 5,204 |
| Ben Painter Elementary | EMS2 | Upgrade IBEX | 6,670 | 84 | $ 2,456 | $ 151,500 | > 50 yrs | 5,392 |
| William Sheppard Middle | EMS3 | Upgrade BACtalk | 10,026 | 78 | $ 3,608 | $ 74,500 | 21 | 7,541 |
| Total, EMS Upgrades | | | 166,617 | 3,734 | $ 61,769 | $3,335,500 | > 50 yrs | 153,815 |

Figure 3.10: Summary of Programmable Thermostat Installation Measures

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | Ptstat | Install programmable Thermostat | 266 | - | $ 93 | $ 300 | 3 | 176 |
| Alum Rock School District Office | Ptstat | Install programmable Thermostat | 329 | - | $ 108 | $ 300 | 3 | 218 |
| A. J. Dorsa Elementary | Ptstat | Install programmable Thermostat | 98 | - | $ 33 | $ 300 | 9 | 65 |
| Aptitud Academy | Ptstat | Install programmable Thermostat | 205 | - | $ 75 | $ 300 | 4 | 136 |
| Cesar Chavez Early Learning Center | Ptstat | Install programmable Thermostat | 186 | - | $ 68 | $ 300 | 4 | 123 |
| Adelante II Academy - Cinderella | Ptstat | Install programmable Thermostat | 178 | - | $ 67 | $ 300 | 4 | 118 |
| Clyde L. Fischer Middle | Ptstat | Install programmable Thermostat | 229 | - | $ 71 | $ 300 | 4 | 151 |
| Donald Meyer Elementary | Ptstat | Install programmable Thermostat | 132 | - | $ 52 | $ 300 | 6 | 87 |
| Horace Cureton Elementary | Ptstat | Install programmable Thermostat | 95 | - | $ 33 | $ 300 | 9 | 63 |
| Joseph George Middle | Ptstat | Install programmable Thermostat | 229 | - | $ 78 | $ 300 | 4 | 151 |
| Lee Mathson Middle | Ptstat | Install programmable Thermostat | 284 | - | $ 89 | $ 300 | 3 | 188 |
| Linda Vista Elementary | Ptstat | Install programmable Thermostat | 213 | - | $ 87 | $ 300 | 3 | 141 |
| Lyndale Elementary | Ptstat | Install programmable Thermostat | 242 | - | $ 87 | $ 300 | 3 | 160 |
| Millard McCollam Elementary | Ptstat | Install programmable Thermostat | 272 | - | $ 106 | $ 300 | 3 | 180 |
| Hubbard Media Arts Academy | Ptstat | Install programmable Thermostat | 239 | - | $ 80 | $ 300 | 4 | 158 |
| Ocala STEAM Academy | Ptstat | Install programmable Thermostat | 320 | - | $ 105 | $ 300 | 3 | 212 |
| Russo / McEntee Academy | Ptstat | Install programmable Thermostat | 194 | - | $ 66 | $ 300 | 5 | 128 |
| Ryan STEAM Academy | Ptstat | Install programmable Thermostat | 165 | - | $ 60 | $ 300 | 5 | 109 |
| San Antonio Elementary | Ptstat | Install programmable Thermostat | 255 | - | $ 82 | $ 300 | 4 | 169 |
| LUCHA Elementary | Ptstat | Install programmable Thermostat | 346 | - | $ 121 | $ 300 | 2 | 229 |
| Sylvia Cassell Elementary | Ptstat | Install programmable Thermostat | 164 | - | $ 59 | $ 300 | 5 | 108 |
| Ben Painter Elementary | Ptstat | Install programmable Thermostat | 171 | - | $ 60 | $ 300 | 5 | 113 |
| William Sheppard Middle | Ptstat | Install programmable Thermostat | 291 | - | $ 102 | $ 300 | 3 | 193 |

## Kitchen Equipment

### Scope

The proposed energy efficiency and electrification measures for the District's kitchen equipment are as follows:

1. Replace Dishwasher with Tier 1/Tier 2 Commercial Dishwasher (FS1/FS2)
   - Energy Star Tier 2 recommended over Tier 1
   - Intended now, full cost considered. SPB approximately equal to life of equipment
   - Also looked at normal replacement, incremental cost yields very good economics
2. Replace Gas Convection oven with Electric Convection Oven (FS3)
   - Indicative savings figures evaluated provided
   - Intended now, full cost considered
   - Project does not generate economic savings; only recommended for carbon savings
   - Could be considered with modernization to eliminate gas from site

### Results

Figure 3.11 Summary of Dishwasher Replacement Measures

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|
| A. J. Dorsa Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 315 | $ 4,578 | 14.5 | 2,310 |
| Adelante II Academy - Cinderella | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 300 | $ 4,578 | 15.3 | 2,310 |
| Donald Meyer Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 475 | $ 4,578 | 9.6 | 2,310 |
| Joseph George Middle | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 281 | $ 4,578 | 16.3 | 2,310 |
| Lyndale Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 435 | $ 4,578 | 10.5 | 2,310 |
| Millard McCollam Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 278 | $ 4,578 | 16.5 | 2,310 |
| Russo / McEntee Academy | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 278 | $ 4,578 | 16.5 | 2,310 |
| LUCHA Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 270 | $ 4,578 | 16.9 | 2,310 |
| **Subtotal, FS1 - Full Cost** | | | **1,080** | **1,520** | **$ 2,632** | **$ 36,625** | **13.9** | **18,482** |
| A. J. Dorsa Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 435 | $ 6,054 | 13.9 | 3,186 |
| Adelante II Academy - Cinderella | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 413 | $ 6,054 | 14.7 | 3,186 |
| Donald Meyer Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 655 | $ 6,054 | 9.2 | 3,186 |
| Joseph George Middle | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 388 | $ 6,054 | 15.6 | 3,186 |
| Lyndale Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 600 | $ 6,054 | 10.1 | 3,186 |
| Millard McCollam Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 383 | $ 6,054 | 15.8 | 3,186 |
| Russo / McEntee Academy | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 383 | $ 6,054 | 15.8 | 3,186 |
| LUCHA Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 373 | $ 6,054 | 16.3 | 3,186 |
| **Subtotal, FS2 - Full Cost** | | | **1,488** | **2,096** | **$ 3,629** | **$ 48,429** | **13.3** | **25,485** |
| A. J. Dorsa Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 315 | $ 267 | 0.8 | 2,310 |
| Adelante II Academy - Cinderella | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 300 | $ 267 | 0.9 | 2,310 |
| Donald Meyer Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 475 | $ 267 | 0.6 | 2,310 |
| Joseph George Middle | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 281 | $ 267 | 1.0 | 2,310 |
| Lyndale Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 435 | $ 267 | 0.6 | 2,310 |
| Millard McCollam Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 278 | $ 267 | 1.0 | 2,310 |
| Russo / McEntee Academy | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 278 | $ 267 | 1.0 | 2,310 |
| LUCHA Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 270 | $ 267 | 1.0 | 2,310 |
| **Subtotal, FS1 - Incremental Cost** | | | **1,080** | **1,520** | **$ 2,632** | **$ 2,138** | **0.8** | **18,482** |
| A. J. Dorsa Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 435 | $ 1,743 | 4.0 | 3,186 |
| Adelante II Academy - Cinderella | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 413 | $ 1,743 | 4.2 | 3,186 |
| Donald Meyer Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 655 | $ 1,743 | 2.7 | 3,186 |
| Joseph George Middle | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 388 | $ 1,743 | 4.5 | 3,186 |
| Lyndale Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 600 | $ 1,743 | 2.9 | 3,186 |
| Millard McCollam Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 383 | $ 1,743 | 4.6 | 3,186 |
| Russo / McEntee Academy | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 383 | $ 1,743 | 4.6 | 3,186 |
| LUCHA Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 373 | $ 1,743 | 4.7 | 3,186 |
| **Subtotal, FS2 - Incremental Cost** | | | **1,488** | **2,096** | **$ 3,629** | **$ 13,942** | **3.8** | **25,485** |

Figure 3.12 Summary of Oven Replacement Measure Costs

| Site Name | Ave Elect Cost ($/kWh)* | Ave Gas Cost ($/therm)** | Cost Savings, Per Oven |
|---|---|---|---|
| Adelante Academy - Ridgemont | $ 0.349 | $ 1.747 | $ (1,262) |
| Alum Rock School District Office | $ 0.328 | $ 1.843 | $ (1,068) |
| A. J. Dorsa Elementary | $ 0.334 | $ 1.423 | $ (1,359) |
| Aptitud Academy | $ 0.367 | $ 1.344 | $ (1,624) |
| Cesar Chavez Early Learning Center | $ 0.369 | $ 1.259 | $ (1,690) |
| Adelante II Academy - Cinderella | $ 0.375 | $ 1.310 | $ (1,701) |
| Clyde L. Fischer Middle | $ 0.310 | $ 1.175 | $ (1,347) |
| Donald Meyer Elementary | $ 0.395 | $ 2.220 | $ (1,287) |
| Horace Cureton Elementary | $ 0.344 | $ 1.244 | $ (1,531) |
| Joseph George Middle | $ 0.340 | $ 1.238 | $ (1,512) |
| Lee Mathson Middle | $ 0.312 | $ 1.218 | $ (1,338) |
| Linda Vista Elementary | $ 0.410 | $ 1.241 | $ (1,972) |
| Lyndale Elementary | $ 0.359 | $ 2.035 | $ (1,155) |
| Millard McCollam Elementary | $ 0.390 | $ 1.185 | $ (1,873) |
| Hubbard Media Arts Academy | $ 0.335 | $ 1.314 | $ (1,433) |
| Ocala STEAM Academy | $ 0.327 | $ 1.251 | $ (1,415) |
| Russo / McEntee Academy | $ 0.341 | $ 1.219 | $ (1,530) |
| Ryan STEAM Academy | $ 0.365 | $ 1.287 | $ (1,645) |
| San Antonio Elementary | $ 0.323 | $ 1.173 | $ (1,438) |
| LUCHA Elementary | $ 0.351 | $ 1.173 | $ (1,621) |
| Sylvia Cassell Elementary | $ 0.362 | $ - | $ (2,399) |
| Ben Painter Elementary | $ 0.352 | $ 1.298 | $ (1,553) |
| William Sheppard Middle | $ 0.351 | $ 1.173 | $ (1,621) |
| Average | $ 0.351 | $ 1.301 | $ (1,547) |

# 4. Measure Results Summary

## Primary Recommended Measures

### Scope

The energy efficiency measures recommended for the District to pursue involves a total cost of just over $11.5 million. But, with a payback period of 13.9 years, these measures will eventually provide the District with net-positive savings over the systems' respective lifetimes. Measures evaluated and recommended include:

- All lighting upgrades identified (both LED1 and LED2)
- Upgrading to Tier 2 commercial dishwashers (FS2)
- Replacing existing heat pumps to high-efficiency heat pumps, upgrading existing package AC units to high-efficiency split systems, and replacing existing mini split systems with high-efficiency mini split systems (HVAC1, HVAC2, HVAC4, HVAC10). These measures are like-for-like, not requiring major infrastructure changes and would be more cost effective to be done in conjunction with modernization.
- Installing District-wide programmable thermostats (Ptstat)

The primary recommended projects and economics are summarized below in Figure 3.13. Project costs include full project costs, as if the measure were to be implemented today. It is recommended that these measures are pursued by the District now, but with caution taken to not implement a project retrofit at a site or in areas which would involve building renovations before the project achieves its payback.

Figure 4.1: Recommended Primary Measure Results

| Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|
| FS2 | Tier 2 Dishwasher (Full Cost) | 1,488 | 2,096 | $ 3,629 | $ 13,942 | 3.8 | 25,485 |
| HVAC1 | Package/Cabinet Heat Pump Replacement | 635,615 | - | $ 222,227 | $ 4,510,000 | 20.3 | 420,269 |
| HVAC10 | Replace ductless mini split | 58,421 | - | $ 18,882 | $ 190,500 | 10.1 | 38,628 |
| HVAC2 | Wall Mount Heat Pump Replacement | 264,403 | - | $ 94,113 | $ 2,074,000 | 22.0 | 174,823 |
| HVAC4 | Replace PTAC with ductless mini split | 117,975 | - | $ 41,931 | $ 612,500 | 14.6 | 78,005 |
| LED1 | Campuswide LED Retrofit | 1,310,646 | - | $ 446,638 | $ 4,109,616 | 9.2 | 866,600 |
| LED2 | Targeted LED Retrofit | 6,713 | - | $ 2,477 | $ 10,130 | 4.1 | 4,439 |
| Ptstat | Install programmable Thermostat | 4,813 | - | $ 1,681 | $ 6,600 | 3.9 | 3,182 |
| | **Total, Recommended Primary Measures** | **2,400,074** | **2,096** | **$ 831,578** | **$11,527,288** | **13.9** | **1,611,432** |

## Measures Investigated, Not Recommended

### Scope

Measures looked at but not recommended include:

- Upgrading to 96% efficient boilers (B2) due to long payback periods
- All EMS upgrades (EMS1-4) due to high project costs
- Replacing package units, furnaces to condensing furnaces, and split systems (HVAC3, HVAC6, HVAC11) due to the payback period exceeding the equipment lifespan—only recommended for carbon savings
- Replacing Reznor gas heaters with gas unit heaters (HVAC8), due to the long payback period—only recommended if the equipment fails

The non-recommended projects and economics are summarized below in Figure 3.14.

Figure 4.2: Non-recommended Measure Results

| Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|
| B2 | Replace with 96% Efficient Boiler | - | 4,311 | $ 5,197 | $ 179,242 | 34.5 | 50,398 |
| EMS1 | Install New EMS | 25,085 | 1,394 | $ 9,406 | $ 312,000 | 33.2 | 32,881 |
| EMS2 | Upgrade IBEX | 74,913 | 1,156 | $ 28,031 | $ 1,332,000 | 47.5 | 63,045 |
| EMS3 | Upgrade BACtalk | 46,443 | 818 | $ 16,799 | $ 477,000 | 28.4 | 40,270 |
| EMS4 | Upgrade EMS at modernization | 10,150 | 288 | $ 3,924 | $ 1,140,000 | >50 yr SPB | 10,078 |
| HVAC11 | Split System Replacement | 44,024 | 245 | $ 15,453 | $ 573,000 | 37.1 | 31,972 |
| HVAC3 | Package Unit Replacement | 117,400 | 1,066 | $ 41,128 | $ 1,362,000 | 33.1 | 90,089 |
| HVAC6 | Replace Furnace with Condensing Furnace | - | 1,078 | $ 1,371 | $ 252,000 | >50 yr SPB | 12,606 |
| HVAC8 | Replace Unit Heater (Reznor) with Gas UH | - | 365 | $ 466 | $ 40,000 | >50 yr SPB | 4,270 |
| | **Total, Not Recommended Measures** | **318,015** | **10,722** | **$ 121,775** | **$ 5,667,242** | **46.5** | **335,610** |

## Measures Proposed for Electrification

### Scope

Several measures involving electrification were identified that yield substantial carbon savings but have poor economic returns. Most electrification projects resulted in a higher overall energy cost for the District due to the increased electricity consumption. With negative savings, there is not a payback period, and the measures should be considered for environmental attributes only. These measures include:

- Electrifying boilers with an Air-to-Water Heat Pump (B3)
- Replacing existing ovens with electric convection ovens (Oven)
- Electrifying HVAC systems for furnaces, heaters, and package units (HVAC5, HVAC7, HVAC9, HVAC11)
- All water heater replacement measures to heat pump (electric) water heaters (WH1-5)

The electrification projects and economics are summarized below in Figure 3.15. Project costs include incremental cost, which is considered for measures that will be implemented at the time of overall project modernization. This incremental cost for each measure is the difference between the proposed electrified equipment at replacement and a like-kind replacement that would likely be installed during modernization or at equipment failure.

Figure 4.3: Electrification Measure Results

| Measure ID | Electrification Measures | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|
| B3 | Electrify Boiler with AWHP | (308,111) | 26,289 | $ (73,080) | $ 216,825 | n/a | 103,582 |
| HVAC12 | Package Unit/Split System Electrification | 18,807 | 27,810 | $ 41,484 | $ 504,500 | 12.2 | 337,516 |
| HVAC5 | PTAC/Furnace System Electrification | (34,447) | 21,792 | $ 14,734 | $ 317,500 | 21.5 | 231,955 |
| HVAC7 | Furnace Electrification | (7,411) | 1,304 | $ (1,070) | $ 32,000 | n/a | 10,341 |
| HVAC9 | Replace Unit Heater (Reznor) with Electric UH | (9,860) | 336 | $ (2,779) | $ 28,500 | n/a | (2,587) |
| Oven | Replace Gas Convection Oven with Electric | (6,630) | 601 | $ (1,547) | $ 8,339 | n/a | 2,642 |
| WH1 | Replace with 30 Gal Heat Pump Water Heater | (12,960) | 1,430 | $ (404) | $ 5,515 | n/a | 8,147 |
| WH2 | Replace with 40 Gal Heat Pump Water Heater | (25,920) | 2,828 | $ (1,017) | $ 11,238 | n/a | 15,919 |
| WH3 | Replace with 50 Gal Heat Pump Water Heater | (38,880) | 4,254 | $ (2,307) | $ 17,639 | n/a | 24,019 |
| WH4 | Replace with 60 Gal Heat Pump Water Heater | (14,300) | 1,482 | $ (553) | $ 6,774 | n/a | 7,868 |
| WH5 | Replace with 75 Gal Heat Pump Water Heater | (112,980) | 13,538 | $ (6,936) | $ 58,544 | n/a | 83,548 |
| | **Total, Electrification Measures** | **(552,691)** | **101,664** | **$ (33,476)** | **$ 1,207,375** | **n/a** | **822,950** |

## Alternate Measures

### Scope

Several alternate measures were considered, to provide the District with multiple options beyond the primary recommended measures. These include:

- Replacing existing boilers with 90% efficient boilers (B1)
- Tiers 1 and 2 dishwasher replacements (FS1, FS2)

The alternate measure projects and economics are summarized below in Figure 3.17. The alternate dishwasher replacement measures are considered at their full cost, compared to the recommended project which assumes replacement at equipment failure and uses incremental cost. The boiler measure is considered at full cost for replacement and is an alternate to a 96% efficient boiler.

Figure 4.4: Alternate Measure Results

| Measure ID | Alternate Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|
| B1 | Replace Boiler with 90% Efficient Boiler | - | 2,629 | $ 3,169 | $ 875,482 | >50 yr SPB | 30,730 |
| FS1 | Tier 1 Dishwasher (Full Cost) | 2,160 | 3,040 | $ 5,264 | $ 38,764 | 7.4 | 36,964 |
| FS2 | Tier 2 Dishwasher (Full Cost) | 1,488 | 2,096 | $ 3,629 | $ 48,429 | 13.3 | 25,485 |
| | **Alternate Measures** | **3,648** | **7,765** | **$ 12,062** | **$ 962,675** | **>50 yr SPB** | **93,179** |

# 5. Energy Efficiency Audit Findings by Site

The following section breaks down each measure recommended (both for primary replacement and electrification) by site at ARUSD, with 23 sites in total. For the sake of brevity, this section only includes the primary energy efficiency measures that ARC is recommending the District pursue now, along with the electrification measures that ARC is recommending the District pursue at overall site modernization and renovation. Alternate measures are not presented here—they can instead be found in the project list in the previous section.

## Adelante Academy – Ridgemont

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Boiler electrification
- Water heater electrification

In total, at this site ARC identified and recommends $775,000 worth of energy efficiency projects. Additionally, ARC identified $8,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $783,000. These projects will have an estimated cost savings value of roughly $52,000 per year, leading to a combined simple payback period of 15 years. Additionally, this will yield 140,000 kWh in electricity savings and 1,100 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 105,000 lbs of $CO_2$ annually.

Figure 5.1: Adelante Academy at Ridgemont Dr

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Adelante Academy - Ridgemont | HVAC1 | Package/Cabinet Heat Pump Replacement (21 units) | 58,545 | - | $ 20,417 | $ 336,000 | 16.5 | 38,710 | Recommended |
| Adelante Academy - Ridgemont | HVAC2 | Wall Mount Heat Pump Replacement (10 units) | 21,467 | - | $ 7,486 | $ 140,000 | 18.7 | 14,194 | Recommended |
| Adelante Academy - Ridgemont | HVAC4 | Replace PTAC with ductless mini split (1 units) | 855 | - | $ 298 | $ 5,000 | 16.8 | 565 | Recommended |
| Adelante Academy - Ridgemont | LED1 | Campuswide LED Retrofit | 68,491 | - | $ 23,885 | $ 294,124 | 12.3 | 45,286 | Recommended |
| Adelante Academy - Ridgemont | Ptstat | Install programmable Thermostat | 266 | - | $ 93 | $ 300 | 3.2 | 176 | Recommended |
| Adelante Academy - Ridgemont | B3 | Electrify Boiler with AWHP 300 MBH Boiler, FCA ID 4816808 | (1,805) | 154 | $ (360) | $ 4,500 | n/a | 607 | Electrification |
| Adelante Academy - Ridgemont | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4816783 | (8,070) | 967 | $ (18) | $ 3,704 | N/A | 5,968 | Electrification |
| | | | 139,749 | 1,121 | $ 51,800 | $ 783,628 | 15 | 105,506 | |

## ARUSD District Office

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Boiler electrification
- Water heater electrification
- Unit heater electrification

In total, at this site ARC identified and recommends $545,000 worth of energy efficiency projects. Additionally, ARC identified $21,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $566,000. These projects will have an estimated cost savings value of roughly $52,000 per year, leading to a combined simple payback period of 12 years. Additionally, this will yield 128,000 kWh in electricity savings and 3,000 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 120,000 lbs of $CO_2$ annually.

Figure 5.2: ARUSD District Office

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Alum Rock School District Office | HVAC1 | Package/Cabinet Heat Pump Replacement (2 units) | 5,673 | - | $ 1,861 | $ 32,000 | 17.2 | 3,751 | Recommended |
| Alum Rock School District Office | HVAC10 | Replace ductless mini split (2 units) | 2,350 | - | $ 771 | $ 5,000 | 6.5 | 1,554 | Recommended |
| Alum Rock School District Office | HVAC2 | Wall Mount Heat Pump Replacement (2 units) | 3,200 | - | $ 1,050 | $ 16,000 | 15.2 | 2,116 | Recommended |
| Alum Rock School District Office | HVAC4 | Replace PTAC with ductless mini split (36 units) | 31,763 | - | $ 10,422 | $ 123,750 | 11.9 | 21,001 | Recommended |
| Alum Rock School District Office | LED1 | Campuswide LED Retrofit | 117,895 | - | $ 38,683 | $ 368,130 | 9.5 | 77,952 | Recommended |
| Alum Rock School District Office | Ptstat | Install programmable Thermostat | 329 | - | $ 108 | $ 300 | 2.8 | 218 | Recommended |
| Alum Rock School District Office | B3 | Electrify Boiler with AWHP 210 MBH Boiler, FCA ID 4497614 | (7,680) | 655 | $ (1,312) | $ 3,150 | n/a | 2,582 | Electrification |
| Alum Rock School District Office | HVAC9 | Replace Unit Heater (Reznor) with Electric UH (4 units) | (6,252) | 213 | $ (1,658) | $ 10,000 | n/a | (1,640) | Electrification |
| Alum Rock School District Office | WH1 | Replace with 30 Gal Heat Pump Water Heater, FCA ID 4497636 | (6,480) | 715 | $ (202) | $ 2,757 | N/A | 4,073 | Electrification |
| Alum Rock School District Office | WH1 | Replace with 30 Gal Heat Pump Water Heater, FCA ID 4525589 | (6,480) | 715 | $ (202) | $ 2,757 | N/A | 4,073 | Electrification |
| Alum Rock School District Office | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4498294 | (6,480) | 709 | $ (344) | $ 2,900 | N/A | 4,003 | Electrification |
| | | | **127,837** | **3,008** | **$ 49,176** | **$ 566,744** | **12** | **119,683** | |

## A.J. Dorsa Elementary School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements
- Dishwasher replacement

### Identified Electrification Projects

- Water heater electrification

In total, at this site ARC identified and recommends $303,000 worth of energy efficiency projects. Additionally, ARC identified $4,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $307,000. These projects will have an estimated cost savings value of roughly $37,000 per year, leading to a combined simple payback period of 8 years. Additionally, this will yield 103,000 kWh in electricity savings and 1,200 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 83,000 lbs of $CO_2$ annually.

Figure 5.3: A.J. Dorsa Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| A. J. Dorsa Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 435 | $ 1,743 | 4 | 3,186 | Recommended |
| A. J. Dorsa Elementary | HVAC2 | Wall Mount Heat Pump Replacement (11 units) | 23,467 | - | $ 7,836 | $ 164,000 | 20.9 | 15,516 | Recommended |
| A. J. Dorsa Elementary | HVAC4 | Replace PTAC with ductless mini split (1 units) | 810 | - | $ 270 | $ 5,000 | 18.5 | 536 | Recommended |
| A. J. Dorsa Elementary | LED1 | Campuswide LED Retrofit | 86,802 | - | $ 28,984 | $ 132,245 | 4.6 | 57,394 | Recommended |
| A. J. Dorsa Elementary | Ptstat | Install programmable Thermostat | 98 | - | $ 33 | $ 300 | 9.2 | 65 | Recommended |
| A. J. Dorsa Elementary | WHS | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4576801 | (8,070) | 967 | $ (83) | $ 3,769 | N/A | 5,968 | Electrification |
| | | | **103,292** | **1,229** | **$ 37,476** | **$ 307,057** | **8** | **82,663** | |

## Aptitud Academy

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Split system/package unit electrification
- Water heater electrification

In total, at this site ARC identified and recommends $532,000 worth of energy efficiency projects. Additionally, ARC identified $8,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $540,000. These projects will have an estimated cost savings value of roughly $45,000 per year, leading to a combined simple payback period of 15 years. Additionally, this will yield 115,000 kWh in electricity savings and 800 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 86,000 lbs of $CO_2$ annually.

Figure 5.4: Aptitud Academy

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Aptitud Academy | HVAC1 | Package/Cabinet Heat Pump Replacement (20 units) | 41,212 | - | $ 15,118 | $ 272,000 | 18.0 | 27,249 | Recommended |
| Aptitud Academy | HVAC10 | Replace ductless mini split (1 units) | 658 | - | $ 241 | $ 2,500 | 10.4 | 435 | Recommended |
| Aptitud Academy | HVAC2 | Wall Mount Heat Pump Replacement (3 units) | 5,600 | - | $ 2,054 | $ 42,000 | 20.4 | 3,703 | Recommended |
| Aptitud Academy | LED1 | Campuswide LED Retrofit | 72,984 | - | $ 26,772 | $ 215,802 | 8.1 | 48,257 | Recommended |
| Aptitud Academy | Ptstat | Install programmable Thermostat | 205 | - | $ 75 | $ 300 | 4.0 | 136 | Recommended |
| Aptitud Academy | HVAC12 | Package Unit/Split System Electrification (1 RTU) | 2,000 | 100 | $ 868 | $ 5,000 | 5.8 | 2,491 | Electrification |
| Aptitud Academy | WH4 | Replace with 60 Gal Heat Pump Water Heater, FCA ID 4540950 | (7,150) | 741 | $ (203) | $ 3,313 | N/A | 3,934 | Electrification |
| | | | 115,510 | 841 | $ 44,927 | $ 540,915 | 12 | 86,206 | |

## Cesar Chavez Early Learning Center

### Primary Identified Projects

- Targeted LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Package unit/split system electrification
- Water heater electrification

In total, at this site ARC identified and recommends $184,000 worth of energy efficiency projects. Additionally, ARC identified $42,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $226,000. These projects will have an estimated cost savings value of roughly $10,000 per year, leading to a combined simple payback period of 23 years. Additionally, this will yield 10,000 kWh in electricity savings and 3,000 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 41,000 lbs of $CO_2$ annually.

Figure 5.5: Cesar Chavez Early Learning Center

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Cesar Chavez Early Learning Center | HVAC2 | Wall Mount Heat Pump Replacement (12 units) | 15,776 | - | $ 5,822 | $ 174,000 | 29.9 | 10,431 | Recommended |
| Cesar Chavez Early Learning Center | LED2 | Targeted LED Retrofit | 6,713 | - | $ 2,477 | $ 10,130 | 4.1 | 4,439 | Recommended |
| Cesar Chavez Early Learning Center | Ptstat | Install programmable Thermostat | 186 | - | $ 68 | $ 300 | 4.4 | 123 | Recommended |
| Cesar Chavez Early Learning Center | HVAC12 | Package Unit/Split System Electrification (4 Split Systems, 4 RTUs) | 2,333 | 1,260 | $ 2,447 | $ 35,000 | 14.3 | 16,271 | Electrification |
| Cesar Chavez Early Learning Center | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4737589 | (6,480) | 707 | $ (317) | $ 2,872 | N/A | 3,980 | Electrification |
| Cesar Chavez Early Learning Center | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4737567 | (8,070) | 967 | $ (509) | $ 4,196 | N/A | 5,968 | Electrification |
| | | | **10,458** | **2,934** | **$ 9,988** | **$ 226,498** | **23** | **41,211** | |

## Adelante II Academy – Cinderella

### Primary Identified Projects

- Install programmable thermostats
- Heat pump and other HVAC replacements
- Dishwasher upgrades

### Identified Electrification Projects

- Boiler electrification
- Water heater electrification
- Furnace electrification

In total, at this site ARC identified and recommends $200,000 worth of energy efficiency projects. Additionally, ARC identified $121,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $321,000. These projects will have an estimated cost savings value of roughly $19,000 per year, leading to a combined simple payback period of 17 years. Additionally, this will yield 33,000 kWh in electricity savings and 3,800 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 67,000 lbs of $CO_2$ annually.

Figure 5.6: Adelante II Academy at Cinderella Ln

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Adelante II Academy - Cinderella | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 413 | $ 1,743 | 4 | 3,186 | Recommended |
| Adelante II Academy - Cinderella | HVAC2 | Wall Mount Heat Pump Replacement (5 units) | 11,200 | - | $ 4,204 | $ 70,000 | 16.7 | 7,405 | Recommended |
| Adelante II Academy - Cinderella | HVAC4 | Replace PTAC with ductless mini split (28 units) | 27,540 | - | $ 10,337 | $ 127,500 | 12.3 | 18,209 | Recommended |
| Adelante II Academy - Cinderella | Ptstat | Install programmable Thermostat | 178 | - | $ 67 | $ 300 | 4.5 | 118 | Recommended |
| Adelante II Academy - Cinderella | B3 | Electrify Boiler with AWHP 2750 MBH Boiler, FCA ID 4731064 | (17,756) | 1,515 | $ (4,680) | $ 41,250 | n/a | 5,969 | Electrification |
| Adelante II Academy - Cinderella | HVAC5 | PTAC/Furnace System Electrification (3 AHUs, Boilers, 28 PTAC) | 19,018 | 1,364 | $ 8,925 | $ 76,500 | 8.6 | 28,513 | Electrification |
| Adelante II Academy - Cinderella | WH4 | Replace with 60 Gal Heat Pump Water Heater, FCA ID 4731173 | (7,150) | 741 | $ (350) | $ 3,461 | N/A | 3,934 | Electrification |
| | | | 33,217 | 3,882 | $ 18,916 | $ 320,754 | 17 | 67,335 | |

## Clyde L. Fischer Middle School

### Primary Identified Projects

- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Boiler electrification
- Water heater electrification
- Package unit/split system electrification

In total, at this site ARC identified and recommends $114,000 worth of energy efficiency projects. Additionally, ARC identified $283,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $397,000. These projects will have an estimated cost savings value of roughly -$22,000 per year, as the extensive electrification efforts would result in greater annual utility costs due to increased electric consumption—thus, simple payback was either not evaluated or is long for electrification measures. Additionally, this will yield -180,000 kWh in electricity savings due to increased consumption, as well as 29,000 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 220,000 lbs of $CO_2$ annually.

Figure 5.7: Clyde L. Fischer Middle School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Clyde L. Fischer Middle | HVAC10 | Replace ductless mini split (12 units) | 10,400 | - | $ 3,221 | $ 30,000 | 9.3 | 6,876 | Recommended |
| Clyde L. Fischer Middle | HVAC2 | Wall Mount Heat Pump Replacement (6 units) | 10,780 | - | $ 3,339 | $ 84,000 | 25.2 | 7,128 | Recommended |
| Clyde L. Fischer Middle | Ptstat | Install programmable Thermostat | 229 | - | $ 71 | $ 300 | 4.2 | 151 | Recommended |
| Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 315 MBH Boiler, FCA ID 4297570 | (7,320) | 625 | $ (1,533) | $ 4,725 | n/a | 2,461 | Electrification |
| Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 3050 MBH Boiler, FCA ID 4294726 | (70,876) | 6,047 | $ (14,846) | $ 45,750 | n/a | 23,827 | Electrification |
| Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 3050 MBH Boiler, FCA ID 4294738 | (70,876) | 6,047 | $ (14,846) | $ 45,750 | n/a | 23,827 | Electrification |
| Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 1010 MBH Boiler, FCA ID 4297553 | (23,470) | 2,003 | $ (4,916) | $ 15,150 | n/a | 7,890 | Electrification |
| Clyde L. Fischer Middle | HVAC12 | Package Unit/Split System Electrification (35 FCUs, 3 S/S, 1 RTU, 7 F | (20,045) | 13,250 | $ 9,358 | $ 166,500 | 17.8 | 141,627 | Electrification |
| Clyde L. Fischer Middle | WHS | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4294739 | (8,070) | 967 | $ (1,363) | $ 5,050 | N/A | 5,968 | Electrification |
| | | | **(179,248)** | **28,939** | **$ (21,515)** | **$ 397,225** | **-18** | **219,757** | |

## Donald Meyer Elementary School

### Primary Identified Projects

- Install programmable thermostats
- Heat pump and other HVAC replacements
- Dishwasher upgrades

### Identified Electrification Projects

- Boiler electrification
- Water heater electrification
- Unit heater electrification

In total, at this site ARC identified and recommends $527,000 worth of energy efficiency projects. Additionally, ARC identified $3,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $530,000. These projects will have an estimated cost savings value of roughly $19,000 per year, leading to a combined simple payback period of 28 years. Additionally, this will yield 40,000 kWh in electricity savings and 1,000 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 38,000 lbs of $CO_2$ annually.

Figure 5.8: Donald Meyer Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Donald Meyer Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 655 | $ 1,743 | 3 | 3,186 | Recommended |
| Donald Meyer Elementary | HVAC1 | Package/Cabinet Heat Pump Replacement (27 units) | 37,636 | - | $ 14,880 | $ 432,000 | 29.0 | 24,885 | Recommended |
| Donald Meyer Elementary | HVAC2 | Wall Mount Heat Pump Replacement (4 units) | 4,140 | - | $ 1,637 | $ 58,000 | 35.4 | 2,737 | Recommended |
| Donald Meyer Elementary | HVAC4 | Replace PTAC with ductless mini split (7 units) | 4,492 | - | $ 1,776 | $ 35,000 | 19.7 | 2,970 | Recommended |
| Donald Meyer Elementary | Ptstat | Install programmable Thermostat | 132 | - | $ 52 | $ 300 | 5.7 | 87 | Recommended |
| Donald Meyer Elementary | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4661572 | (6,480) | 709 | $ (38) | $ 2,593 | N/A | 4,003 | Electrification |
| | | | 40,106 | 971 | $ 18,962 | $ 529,636 | 28 | 37,869 | |

## Horace Cureton Elementary School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Water heater electrification
- Furnace electrification

In total, at this site ARC identified and recommends $566,000 worth of energy efficiency projects. Additionally, ARC identified $54,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $620,000. These projects will have an estimated cost savings value of roughly $33,000 per year, leading to a combined simple payback period of 19 years. Additionally, this will yield 82,000 kWh in electricity savings and 3,200 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 92,000 lbs of $CO_2$ annually.

Figure 5.9: Horace Cureton Elementary School

| me | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Horace Cureton Elementary | HVAC2 | Wall Mount Heat Pump Replacement (14 units) | 25,387 | - | $ 8,725 | $ 224,000 | 25.7 | 16,786 | Recommended |
| Horace Cureton Elementary | HVAC4 | Replace PTAC with ductless mini split (24 units) | 9,799 | - | $ 3,368 | $ 83,750 | 24.9 | 6,479 | Recommended |
| Horace Cureton Elementary | LED1 | Campuswide LED Retrofit | 58,932 | - | $ 20,254 | $ 258,305 | 12.8 | 38,966 | Recommended |
| Horace Cureton Elementary | Ptstat | Install programmable Thermostat | 95 | - | $ 33 | $ 300 | 9.2 | 63 | Recommended |
| Horace Cureton Elementary | HVAC5 | PTAC/Furnace System Electrification (18 Furnaces, 22 PTAC) | (4,624) | 2,308 | $ 1,281 | $ 50,250 | 39.2 | 23,918 | Electrification |
| Horace Cureton Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4585912 | (8,070) | 967 | $ (412) | $ 4,099 | N/A | 5,968 | Electrification |
| | | | **81,518** | **3,275** | **$ 33,248** | **$ 620,704** | **19** | **92,179** | |

## Joseph George Middle School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements
- Dishwasher upgrades

### Identified Electrification Projects

- Furnace electrification
- Water heater electrification

In total, at this site ARC identified and recommends $963,000 worth of energy efficiency projects. Additionally, ARC identified $63,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $1,026,000. These projects will have an estimated cost savings value of roughly $61,000 per year, leading to a combined simple payback period of 17 years. Additionally, this This will yield 157,000 kWh in electricity savings and 4,400 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 155,000 lbs of $CO_2$ annually.

Figure 5.10: Joseph George Middle School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Joseph George Middle | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 388 | $ 1,743 | 4 | 3,186 | Recommended |
| Joseph George Middle | HVAC1 | Package/Cabinet Heat Pump Replacement (26 units) | 59,879 | - | $ 20,380 | $ 416,000 | 20.4 | 39,592 | Recommended |
| Joseph George Middle | HVAC10 | Replace ductless mini split (2 units) | 1,095 | - | $ 373 | $ 7,500 | 20 1 | 724 | Recommended |
| Joseph George Middle | HVAC2 | Wall Mount Heat Pump Replacement (5 units) | 11,147 | - | $ 3,794 | $ 88,000 | 23.2 | 7,370 | Recommended |
| Joseph George Middle | HVAC4 | Replace PTAC with ductless mini split (1 units) | 360 | - | $ 123 | $ 2,500 | 20.4 | 238 | Recommended |
| Joseph George Middle | LED1 | Campuswide LED Retrofit | 106,088 | - | $ 36,107 | $ 447,360 | 12.4 | 70,145 | Recommended |
| Joseph George Middle | Ptstat | Install programmable Thermostat | 229 | - | $ 78 | $ 300 | 3.9 | 151 | Recommended |
| Joseph George Middle | HVAC5 | PTAC/Furnace System Electrification (2 RTU, 5 S/S, 1 PTAC, 12 Furn | (7,610) | 2,485 | $ 488 | $ 55,750 | >50 yr SPB | 24,012 | Electrification |
| Joseph George Middle | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4870854 | (6,480) | 707 | $ (209) | $ 2,764 | N/A | 3,980 | Electrification |
| Joseph George Middle | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4883721 | (8,070) | 967 | $ (333) | $ 4,019 | N/A | 5,968 | Electrification |
| | | | 156,823 | 4,421 | $ 61,188 | $ 1,025,936 | 17 | 155,366 | |

## Lee Mathson Middle School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Package unit/split system electrification
- Water heater electrification

In total, at this site ARC identified and recommends $1,075,000 worth of energy efficiency projects. Additionally, ARC identified $43,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to$1,118,000. These projects will have an estimated cost savings value of roughly $79,000 per year, leading to a combined simple payback period of 14 years. Additionally, this will yield 239,000 kWh in electricity savings and 3,300 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 196,000 lbs of $CO_2$ annually.

Figure 5.11: Lee Mathson Middle School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Lee Mathson Middle | HVAC1 | Package/Cabinet Heat Pump Replacement (36 units) | 81,404 | - | $ 25,419 | $ 574,000 | 22.6 | 53,824 | Recommended |
| Lee Mathson Middle | HVAC10 | Replace ductless mini split (13 units) | 26,357 | - | $ 8,230 | $ 68,750 | 8.4 | 17,427 | Recommended |
| Lee Mathson Middle | LED1 | Campuswide LED Retrofit | 138,972 | - | $ 43,395 | $ 432,052 | 10.0 | 91,888 | Recommended |
| Lee Mathson Middle | Ptstat | Install programmable Thermostat | 284 | - | $ 89 | $ 300 | 3.4 | 188 | Recommended |
| Lee Mathson Middle | HVAC12 | Package Unit/Split System Electrification (5 RTUs) | (383) | 2,308 | $ 2,692 | $ 39,000 | 14.5 | 26,722 | Electrification |
| Lee Mathson Middle | WHS | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4589967 | (8,070) | 967 | $ (438) | $ 4,125 | N/A | 5,968 | Electrification |
| | | | 238,564 | 3,275 | $ 79,387 | $ 1,118,227 | 14 | 196,018 | |

## Linda Vista Elementary School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Package unit/split system electrification
- Water heater electrification

In total, at this site ARC identified and recommends $538,000 worth of energy efficiency projects. Additionally, ARC identified $47,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $585,000. These projects will have an estimated cost savings value of roughly $30,000 per year, leading to a combined simple payback period of 19 years. Additionally, this will yield 54,000 kWh in electricity savings and 3,200 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 74,000 lbs of $CO_2$ annually.

Figure 5.12: Linda Vista Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Linda Vista Elementary | HVAC1 | Package/Cabinet Heat Pump Replacement (22 units) | 42,002 | - | $ 17,215 | $ 360,000 | 20.9 | 27,772 | Recommended |
| Linda Vista Elementary | HVAC10 | Replace ductless mini split (2 units) | 1,093 | - | $ 448 | $ 10,000 | 22.3 | 723 | Recommended |
| Linda Vista Elementary | HVAC2 | Wall Mount Heat Pump Replacement (12 units) | 21,840 | - | $ 8,952 | $ 168,000 | 18.8 | 14,441 | Recommended |
| Linda Vista Elementary | Ptstat | Install programmable Thermostat | 213 | - | $ 87 | $ 300 | 3.4 | 141 | Recommended |
| Linda Vista Elementary | HVAC12 | Package Unit/Split System Electrification (6 RTU, 1 S/S) | 5,090 | 1,300 | $ 3,700 | $ 39,000 | 10.5 | 18,565 | Electrification |
| Linda Vista Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4540682 | (8,070) | 967 | $ (184) | $ 3,870 | N/A | 5,968 | Electrification |
| Linda Vista Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4540768 | (8,070) | 967 | $ (184) | $ 3,870 | N/A | 5,968 | Electrification |
| | | | 54,099 | 3,234 | $ 30,034 | $ 585,041 | 19 | 73,576 | |

## Lyndale Elementary School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements
- Dishwasher upgrades

### Identified Electrification Projects

- Boiler electrification
- Water heater electrification
- Unit heater electrification

In total, at this site ARC identified and recommends $799,000 worth of energy efficiency projects. Additionally, ARC identified $23,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $822,000. These projects will have an estimated cost savings value of roughly $58,000 per year, leading to a combined simple payback period of 14 years. Additionally, this will yield 149,000 kWh in electricity savings and 1,900 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 121,000 lbs of $CO_2$ annually.

Figure 5.13: Lyndale Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Lyndale Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 600 | $ 1,743 | 3 | 3,186 | Recommended |
| Lyndale Elementary | HVAC1 | Package/Cabinet Heat Pump Replacement (23 units) | 47,840 | - | $ 17,160 | $ 368,000 | 21.4 | 31,632 | Recommended |
| Lyndale Elementary | HVAC10 | Replace ductless mini split (3 units) | 3,970 | - | $ 1,424 | $ 17,500 | 12.3 | 2,625 | Recommended |
| Lyndale Elementary | HVAC2 | Wall Mount Heat Pump Replacement (6 units) | 11,807 | - | $ 4,235 | $ 84,000 | 19.8 | 7,807 | Recommended |
| Lyndale Elementary | LED1 | Campuswide LED Retrofit | 89,178 | - | $ 31,987 | $ 327,477 | 10.2 | 58,965 | Recommended |
| Lyndale Elementary | Ptstat | Install programmable Thermostat | 242 | - | $ 87 | $ 300 | 3.5 | 160 | Recommended |
| Lyndale Elementary | HVAC12 | Package Unit/Split System Electrification (5 RTU) | 2,293 | 962 | $ 2,779 | $ 20,500 | 7.4 | 12,756 | Electrification |
| Lyndale Elementary | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4795513 | (6,480) | 709 | $ (224) | $ 2,779 | N/A | 4,003 | Electrification |
| | | | 149,036 | 1,933 | $ 58,047 | $ 822,299 | 14 | 121,133 | |

## Millard McCollam Elementary School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements
- Dishwasher upgrades

### Identified Electrification Projects

- Boiler electrification
- Water heater electrification
- Package unit electrification

In total, at this site ARC identified and recommends $151,000 worth of energy efficiency projects. Additionally, ARC identified $94,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $245,000. These projects will have an estimated cost savings value of roughly -$18,000 per year, as the extensive electrification efforts would result in greater annual utility costs due to increased electric consumption—thus, simple payback was either not evaluated or is long for electrification measures. Additionally, this will yield -95,000 kWh in electricity savings due to increased electricity consumption, and 15,800 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 122,000 lbs of $CO_2$ annually.

Figure 5.14: Millard McCollam Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Millard McCollam Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 383 | $ 1,743 | 5 | 3,186 | Recommended |
| Millard McCollam Elementary | HVAC2 | Wall Mount Heat Pump Replacement (6 units) | 16,800 | - | $ 6,549 | $ 84,000 | 12.8 | 11,108 | Recommended |
| Millard McCollam Elementary | HVAC4 | Replace PTAC with ductless mini split (26 units) | 10,530 | - | $ 4,105 | $ 65,000 | 15.8 | 6,962 | Recommended |
| Millard McCollam Elementary | Ptstat | Install programmable Thermostat | 272 | - | $ 106 | $ 300 | 2.8 | 180 | Recommended |
| Millard McCollam Elementary | B3 | Electrify Boiler with AWHP 1050 MBH Boiler, FCA ID 4734956 | (41,161) | 3,512 | $ (11,885) | $ 15,750 | n/a | 13,838 | Electrification |
| Millard McCollam Elementary | B3 | Electrify Boiler with AWHP 1250 MBH Boiler, FCA ID 4734984 | (49,001) | 4,181 | $ (14,149) | $ 18,750 | n/a | 16,473 | Electrification |
| Millard McCollam Elementary | HVAC5 | PTAC/Package Unit Electrification (2 RTU, 26 PTAC) | (24,869) | 6,924 | $ (1,492) | $ 54,000 | n/a | 64,490 | Electrification |
| Millard McCollam Elementary | WHS | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4735097 | (8,070) | 967 | $ (1,591) | $ 5,278 | N/A | 5,968 | Electrification |
| | | | (95,312) | 15,846 | $ (17,974) | $ 244,820 | -14 | 122,205 | |

## Hubbard Media Arts Academy

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Package unit/split system electrification
- Water heater electrification

In total, at this site ARC identified and recommends $610,000 worth of energy efficiency projects. Additionally, ARC identified $40,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $650,000. These projects will have an estimated cost savings value of roughly $50,000 per year, leading to a combined simple payback period of 13 years. Additionally, this will yield 136,000 kWh in electricity savings and 2,000 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 114,000 lbs of $CO_2$ annually.

Figure 5.15: Hubbard Media Arts Academy

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Hubbard Media Arts Academy | HVAC1 | Package/Cabinet Heat Pump Replacement (21 units) | 42,000 | - | $ 14,077 | $ 252,000 | 17.9 | 27,770 | Recommended |
| Hubbard Media Arts Academy | HVAC10 | Replace ductless mini split (1 units) | 268 | - | $ 90 | $ 2,500 | 27.8 | 177 | Recommended |
| Hubbard Media Arts Academy | HVAC2 | Wall Mount Heat Pump Replacement (5 units) | 9,973 | - | $ 3,343 | $ 76,000 | 22.7 | 6,594 | Recommended |
| Hubbard Media Arts Academy | HVAC4 | Replace PTAC with ductless mini split (1 units) | 405 | - | $ 136 | $ 2,500 | 18.4 | 268 | Recommended |
| Hubbard Media Arts Academy | LED1 | Campuswide LED Retrofit | 87,406 | - | $ 29,295 | $ 277,205 | 9.5 | 57,793 | Recommended |
| Hubbard Media Arts Academy | Ptstat | Install programmable Thermostat | 239 | - | $ 80 | $ 300 | 3.7 | 158 | Recommended |
| Hubbard Media Arts Academy | HVAC12 | Package Unit/Split System Electrification (3 RTU, 1 S/S, 1 Unit Heat | 4,103 | 1,105 | $ 2,827 | $ 36,000 | 12.7 | 15,631 | Electrification |
| Hubbard Media Arts Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4557749 | (8,070) | 967 | $ (233) | $ 3,919 | N/A | 5,968 | Electrification |
| | | | **136,324** | **2,072** | **$ 49,615** | **$ 650,424** | **13** | **114,360** | |

## Ocala STEAM Academy

### Primary Identified Projects

- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Furnace electrification
- Water heater electrification

In total, at this site ARC identified and recommends $495,000 worth of energy efficiency projects. Additionally, ARC identified $28,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $523,000. These projects will have an estimated cost savings value of roughly $28,000 per year, leading to a combined simple payback period of 19 years. Additionally, this will yield 54,000 kWh in electricity savings and 5,000 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 94,000 lbs of $CO_2$ annually.

Figure 5.16: Ocala STEAM Academy

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Ocala STEAM Academy | HVAC1 | Package/Cabinet Heat Pump Replacement (27 units) | 75,970 | - | $ 24,828 | $ 436,000 | 17.6 | 50,231 | Recommended |
| Ocala STEAM Academy | HVAC2 | Wall Mount Heat Pump Replacement (2 units) | 3,220 | - | $ 1,052 | $ 28,000 | 26.6 | 2,129 | Recommended |
| Ocala STEAM Academy | HVAC4 | Replace PTAC with ductless mini split (6 units) | 6,200 | - | $ 2,026 | $ 30,000 | 14.8 | 4,099 | Recommended |
| Ocala STEAM Academy | Ptstat | Install programmable Thermostat | 320 | - | $ 105 | $ 300 | 2.9 | 212 | Recommended |
| Ocala STEAM Academy | HVAC5 | PTAC/Furnace System Electrification (1 RTU, 9 Furnaces, 6 PTAC) | (8,626) | 2,378 | $ 156 | $ 18,000 | >50 yr SPB | 22,097 | Electrification |
| Ocala STEAM Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4733167 | (6,480) | 709 | $ (128) | $ 2,683 | N/A | 4,003 | Electrification |
| Ocala STEAM Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4862604 | (8,070) | 967 | $ (163) | $ 3,850 | N/A | 5,968 | Electrification |
| Ocala STEAM Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4862603 | (8,070) | 967 | $ (163) | $ 3,850 | N/A | 5,968 | Electrification |
| | | | **54,463** | **5,021** | **$ 27,712** | **$ 522,683** | **19** | **94,707** | |

## Russo / McEntee Academy

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements
- Dishwasher upgrades

### Identified Electrification Projects

- Furnace electrification
- Water heater electrification

In total, at this site ARC identified and recommends $523,000 worth of energy efficiency projects. Additionally, ARC identified $22,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $545,000. These projects will have an estimated cost savings value of roughly $44,000 per year, leading to a combined simple payback period of 12 years. Additionally, this will yield 114,000 kWh in electricity savings and 3,600 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 117,000 lbs of CO2 annually.

Figure 5.17: Russo / McEntee Academy

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Russo / McEntee Academy | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 383 | $ 1,743 | 5 | 3,186 | Recommended |
| Russo / McEntee Academy | HVAC2 | Wall Mount Heat Pump Replacement (15 units) | 28,000 | - | $ 9,558 | $ 240,000 | 25.1 | 18,514 | Recommended |
| Russo / McEntee Academy | HVAC4 | Replace PTAC with ductless mini split (12 units) | 5,063 | - | $ 1,728 | $ 37,500 | 21.7 | 3,347 | Recommended |
| Russo / McEntee Academy | LED1 | Campuswide LED Retrofit | 96,100 | - | $ 32,803 | $ 243,082 | 7.4 | 63,541 | Recommended |
| Russo / McEntee Academy | Ptstat | Install programmable Thermostat | 194 | - | $ 66 | $ 300 | 4.5 | 128 | Recommended |
| Russo / McEntee Academy | HVAC5 | PTAC/Furnace System Electrification (1 Furnace, 2 Unit Heaters, 12 | (9,434) | 2,599 | $ (50) | $ 19,000 | n/a | 24,147 | Electrification |
| Russo / McEntee Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4744425 | (6,480) | 709 | $ (658) | $ 3,213 | N/A | 4,003 | Electrification |
| | | | 113,629 | 3,570 | $ 43,830 | $ 544,838 | 12 | 116,867 | |

## Ryan STEAM Academy

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Furnace electrification
- Water heater electrification
- Unit heater electrification

In total, at this site ARC identified and recommends $357,000 worth of energy efficiency projects. Additionally, ARC identified $50,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $407,000. These projects will have an estimated cost savings value of roughly $39,000 per year, leading to a combined simple payback period of 10 years. Additionally, this will yield 89,000 kWh in electricity savings and 4,500 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 111,000 lbs of $CO_2$ annually.

Figure 5.18: Ryan STEAM Academy

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Ryan STEAM Academy | HVAC2 | Wall Mount Heat Pump Replacement (3 units) | 8,400 | - | $ 3,064 | $ 42,000 | 13.7 | 5,554 | Recommended |
| Ryan STEAM Academy | HVAC4 | Replace PTAC with ductless mini split (24 units) | 19,440 | - | $ 7,090 | $ 90,000 | 12.7 | 12,854 | Recommended |
| Ryan STEAM Academy | LED1 | Campuswide LED Retrofit | 66,740 | - | $ 24,342 | $ 224,505 | 9.2 | 44,129 | Recommended |
| Ryan STEAM Academy | Ptstat | Install programmable Thermostat | 165 | - | $ 60 | $ 300 | 5.0 | 109 | Recommended |
| Ryan STEAM Academy | HVAC5 | PTAC/Furnace System Electrification (18 Furnaces, 3 Unit Heaters, | 1,698 | 3,735 | $ 5,426 | $ 44,000 | 8.1 | 44,778 | Electrification |
| Ryan STEAM Academy | HVAC9 | Replace Unit Heater (Reznor) with Electric UH (1 units) | (789) | 27 | $ (253) | $ 2,500 | n/a | (207) | Electrification |
| Ryan STEAM Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4559738 | (6,480) | 709 | $ (915) | $ 3,470 | N/A | 4,003 | Electrification |
| | | | **89,175** | **4,471** | **$ 38,815** | **$ 406,775** | **10** | **111,220** | |

## San Antonio Elementary School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Mini split system replacements

### Identified Electrification Projects

- Package unit/split system electrification
- Water heater electrification

In total, at this site ARC identified and recommends $279,000 worth of energy efficiency projects. Additionally, ARC identified $125,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $404,000. These projects will have an estimated cost savings value of roughly $43,000 per year, leading to a combined simple payback period of 9 years. Additionally, this will yield 105,000 kWh in electricity savings and 7,600 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 159,000 lbs of $CO_2$ annually.

Figure 5.19: San Antonio Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| San Antonio Elementary | HVAC10 | Replace ductless mini split (7 units) | 7,518 | - | $ 2,430 | $ 23,750 | 9.8 | 4,971 | Recommended |
| San Antonio Elementary | LED1 | Campuswide LED Retrofit | 92,794 | - | $ 29,994 | $ 254,680 | 8.5 | 61,355 | Recommended |
| San Antonio Elementary | Ptstat | Install programmable Thermostat | 255 | - | $ 82 | $ 300 | 3.6 | 169 | Recommended |
| San Antonio Elementary | HVAC12 | Package Unit/Split System Electrification (28 RTUs) | 12,658 | 6,651 | $ 11,892 | $ 120,500 | 10.1 | 86,111 | Electrification |
| San Antonio Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4581654 | (8,070) | 967 | $ (1,260) | $ 4,946 | N/A | 5,968 | Electrification |
| | | | **105,155** | **7,618** | **$ 43,139** | **$ 404,176** | **9** | **158,574** | |

## LUCHA Elementary School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Mini split system replacements
- Dishwasher upgrades

### Identified Electrification Projects

- Water heater electrification

In total, at this site ARC identified and recommends $107,000 worth of energy efficiency projects. Additionally, ARC identified $3,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $110,000. These projects will have an estimated cost savings value of roughly $20,000 per year, leading to a combined simple payback period of 6 years. Additionally, this will yield 50,000 kWh in electricity savings and 1,000 therms in gas consumption savings annually, leading to an overall carbon footprint reduction of 44,000 lbs of $CO_2$ annually.

Figure 5.20: LUCHA Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| LUCHA Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 373 | $ 1,743 | 5 | 3,186 | Recommended |
| LUCHA Elementary | HVAC10 | Replace ductless mini split (1 units) | 2,271 | - | $ 796 | $ 6,250 | 7.8 | 1,501 | Recommended |
| LUCHA Elementary | LED1 | Campuswide LED Retrofit | 53,477 | - | $ 18,757 | $ 98,676 | 5.3 | 35,359 | Recommended |
| LUCHA Elementary | Ptstat | Install programmable Thermostat | 346 | - | $ 121 | $ 300 | 2.5 | 229 | Recommended |
| LUCHA Elementary | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4471418 | (6,480) | 707 | $ (187) | $ 2,743 | N/A | 3,980 | Electrification |
| | | | 49,800 | 969 | $ 19,860 | $ 109,711 | 6 | 44,255 | |

## Sylvia Cassell Elementary School

### Primary Identified Projects

- Install programmable thermostats
- Heat pump and other HVAC replacements

In total, at this site ARC identified and recommends $468,000 worth of energy efficiency projects. These projects will have an estimated cost savings value of roughly $21,000 per year, leading to a combined simple payback period of 22 years. Additionally, this will yield 59,000 kWh in electricity savings annually, leading to an overall carbon footprint reduction of 39,000 lbs of $CO_2$ annually.

Figure 5.21: Sylvia Cassell Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Sylvia Cassell Elementary | HVAC1 | Package/Cabinet Heat Pump Replacement (24 units) | 50,182 | - | $ 18,157 | $ 384,000 | 21.1 | 33,180 | Recommended |
| Sylvia Cassell Elementary | HVAC2 | Wall Mount Heat Pump Replacement (6 units) | 8,400 | - | $ 3,039 | $ 84,000 | 27.6 | 5,554 | Recommended |
| Sylvia Cassell Elementary | Ptstat | Install programmable Thermostat | 164 | - | $ 59 | $ 300 | 5.1 | 108 | Recommended |
| | | | **58,746** | - | **$ 21,256** | **$ 468,300** | **22** | **38,843** | |

## Ben Painter Elementary School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Package unit/split system electrification
- Unit heater electrification

In total, at this site ARC identified and recommends $410,000 worth of energy efficiency projects. Additionally, ARC identified $59,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $469,000. These projects will have an estimated cost savings value of roughly $34,000 per year, leading to a combined simple payback period of 14 years. Additionally, this will yield 93,000 kWh in electricity savings and 1,000 in gas consumption savings annually, leading to an overall carbon footprint reduction of 73,000 lbs of $CO_2$ annually.

Figure 5.22: Ben Painter Elementary School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| Ben Painter Elementary | HVAC10 | Replace ductless mini split (1 units) | 850 | - | $ 299 | $ 3,750 | 12.5 | 562 | Recommended |
| Ben Painter Elementary | HVAC2 | Wall Mount Heat Pump Replacement (13 units) | 23,800 | - | $ 8,376 | $ 208,000 | 24.8 | 15,737 | Recommended |
| Ben Painter Elementary | LED1 | Campuswide LED Retrofit | 59,960 | - | $ 21,102 | $ 197,547 | 9.4 | 39,646 | Recommended |
| Ben Painter Elementary | Ptstat | Install programmable Thermostat | 171 | - | $ 60 | $ 300 | 5.0 | 113 | Recommended |
| Ben Painter Elementary | HVAC12 | Package Unit/Split System Electrification (10 Split Systems) | 10,758 | 875 | $ 4,922 | $ 43,000 | 8.7 | 17,341 | Electrification |
| Ben Painter Elementary | HVAC9 | Replace Unit Heater (Reznor) with Electric UH (2 units) | (2,818) | 96 | $ (867) | $ 16,000 | n/a | (739) | Electrification |
| | | | **92,721** | **971** | **$ 33,893** | **$ 468,597** | **14** | **72,659** | |

## William Sheppard Middle School

### Primary Identified Projects

- Campuswide LED retrofit
- Install programmable thermostats
- Heat pump and other HVAC replacements

### Identified Electrification Projects

- Boiler electrification
- Water heater electrification
- Furnace electrification

In total, at this site ARC identified and recommends $1,005,000 worth of energy efficiency projects. Additionally, ARC identified $57,000 worth of electrification projects, bringing the sum of the combination of recommended and electrification projects to $1,062,000. These projects will have an estimated cost savings value of roughly $68,000 per year, leading to a combined simple payback period of 16 years. Additionally, this will yield 179,000 kWh in electricity savings and 3,600 in gas consumption savings annually, leading to an overall carbon footprint reduction of 160,000 lbs of $CO_2$ annually.

Figure 5.23: William Sheppard Middle School

| Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category |
|---|---|---|---|---|---|---|---|---|---|
| William Sheppard Middle | HVAC1 | Package/Cabinet Heat Pump Replacement (40 units) | 93,273 | - | $ 32,715 | $ 648,000 | 19.8 | 61,672 | Recommended |
| William Sheppard Middle | HVAC10 | Replace ductless mini split (2 units) | 1,590 | - | $ 558 | $ 13,000 | 23.3 | 1,052 | Recommended |
| William Sheppard Middle | HVAC4 | Replace PTAC with ductless mini split (1 units) | 720 | - | $ 253 | $ 5,000 | 19.8 | 476 | Recommended |
| William Sheppard Middle | LED1 | Campuswide LED Retrofit | 114,827 | - | $ 40,275 | $ 338,426 | 8.4 | 75,924 | Recommended |
| William Sheppard Middle | Ptstat | Install programmable Thermostat | 291 | - | $ 102 | $ 300 | 2.9 | 193 | Recommended |
| William Sheppard Middle | B3 | Electrify Boiler with AWHP 1470 MBH Boiler, FCA ID 4788751 | (18,166) | 1,550 | $ (4,554) | $ 22,050 | n/a | 6,107 | Electrification |
| William Sheppard Middle | HVAC7 | Furnace Electrification (3 Furnaces, 1 S/S) | (7,411) | 1,304 | $ (1,070) | $ 32,000 | n/a | 10,341 | Electrification |
| William Sheppard Middle | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4788768 | (6,480) | 707 | $ (304) | $ 2,860 | N/A | 3,980 | Electrification |
| | | | 178,645 | 3,561 | $ 67,975 | $ 1,061,636 | 16 | 159,744 | |

# 6. Solar PV Considerations

## NEM Solar Opportunities

The District purchases electricity from Pacific Gas & Electric (PG&E) which offers a "behind the meter" NEM (Net Energy Metering) program for interconnection with the utility.

### PG&E NEM Program Overview

- Solar generated on-site offsets consumption on a kWh per kWh basis
- Solar energy exported to PG&E are credited back to the District at a reduced retail energy price

### Interconnection

In April of 2023, on behalf of the District, ARC Alternatives submitted Interconnection (IX) Applications to PG&E for all sites within the District's solar portfolio. This allowed the District to maintain grandfathering into the NEM 2.0 program for all sites, instead of being considered under NEM 3.0 which negatively impacts savings from solar. The sizes were developed from initial feasibility studies which analyzed the District's current electricity consumption at each site while taking feasible space into account. The result of the sizing for the IX Applications and subsequent estimates for annual solar production are outlined in Figure 6.1 below.

Figure 6.1: PG&E NEM Projects

| Site Name | Annual Site Use (kWh) | System Size as submitted on IX Applications (kW dc) | Estimated Annual Solar Production (kWh) |
|---|---|---|---|
| Adelante Academy - Ridgemont | 284,643 | 152.2 | 242,775 |
| Alum Rock School District Office | 661,311 | 396.5 | 635,467 |
| A. J. Dorsa Elementary | 290,670 | 175.3 | 279,510 |
| Aptitud Academy | 215,074 | 117.0 | 186,872 |
| Cesar Chavez Early Learning Center | 168,456 | 112.3 | 178,838 |
| Adelante II Academy - Cinderella | 183,115 | 92.6 | 148,542 |
| Clyde L. Fischer Middle | 514,266 | 338.7 | 541,453 |
| Donald Meyer Elementary | 186,288 | 104.3 | 166,111 |
| Horace Cureton Elementary | 175,140 | 108.9 | 174,693 |
| Joseph George Middle | 421,080 | 236.1 | 378,235 |
| Lee Mathson Middle | 539,190 | 305.0 | 481,810 |
| Linda Vista Elementary | 199,089 | 129.2 | 206,748 |
| Lyndale Elementary | 315,198 | 191.0 | 306,113 |
| Millard McCollam Elementary | 163,251 | 99.2 | 158,665 |
| Hubbard Media Arts Academy | 455,314 | 227.7 | 364,160 |
| Ocala STEAM Academy | 374,591 | 252.5 | 404,092 |
| Russo / McEntee Academy | 183,329 | 103.6 | 166,680 |
| Ryan STEAM Academy | 135,275 | 92.3 | 146,944 |
| San Antonio Elementary | 247,075 | 185.9 | 293,827 |
| LUCHA Elementary | 204,472 | 105.1 | 165,871 |
| Sylvia Cassell Elementary | 259,706 | 142.8 | 228,401 |
| Ben Painter Elementary | 227,148 | 135.1 | 213,261 |
| William Sheppard Middle | 460,093 | 253.8 | 401,245 |
| **Total** | **6,863,774** | **4,057.1** | **6,470,313** |

## Solar Financial Analysis Results

### Solar Financial Analysis

ARC analyzed the lifetime financial performance of the 23 solar sites listed in Figure 6.1, focusing on the effects of the cost of the solar systems on the net financial benefit over time. In this financial analysis, two financing methods were analyzed to compare the benefit of each; these two methods analyzed were a direct purchase option financed over a 20-year loan term, or a Power Purchase Agreement (PPA) with the solar vendor, where the cost of the system is paid back incrementally based on the amount of solar energy produced.

In order to perform this financial analysis, several assumptions were made in terms of both cost and performance of the solar systems. These are listed below:

- A conservative 3.5% annual utility escalation rate to account for rising electricity costs
- 0.5% annual solar degradation rate of each solar system
- Power Purchase Agreement (PPA) assumptions:
    - A PPA rate of $0.1875 per kWh, as a cost paid back to the solar vendor for each kWh of energy produced. No up-front payment required—the solar vendor covers all operations and maintenance (O&M) and material costs.
- Up-front purchase assumptions:
    - An estimated $21 million up-front cost for all systems, with an average cost basis of $5.17/W for each system, before any incentives are applied
    - A 5% financing interest rate with a loan term of 20 years
    - An operations and maintenance fee of $18.50/kW for each system in the first year, with an annual escalation rate of 3%
    - A 30% Federal Investment Tax Credit discount as a result of the Inflation Reduction Act of 2022, allowing for a direct-pay tax refund from purchases of renewable energy systems under certain criteria. This reduces the overall up-front cost of solar for all systems to be $14.7 million.

The following figures will describe the financial results for both PPA and purchase options for all sites, in the first year after the project commencement date (Figure 6.2) along with a 20-year lifetime forecast analysis (Figure 6.3). Additionally, ARC will update the solar financial analysis with specific cost information proposed by solar vendors during the procurement process. This will help provide the District a more accurate assessment of the financial solvency of each vendor's proposal, allowing the District to make a confident choice of which proposal to accept.

Figure 6.2: First Year Solar Financial Analysis

| First Year Solar Analysis | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Site Info | | Solar System Info and Utility Savings | | | | First Year Financials, PPA | | First Year Financials, Purchase | |
| Site Name | System Size (kW dc) | Annual Site Use (kWh) | First Year Solar Production (kWh) | First Year Utility Bill Before Solar | First Year Utility Savings | First Year Solar Costs Under a PPA | First Year Solar Net Benefit Under a PPA | First Year Solar Costs if System is Purchased | First Year Solar Net Benefit if System is Purchased |
| Adelante Academy - Ridgemont | 152.2 | 284,643 | 242,775 | $ 99,264 | $ 58,668 | $ (45,520) | $ 13,148 | $ (43,029) | $ 15,639 |
| Alum Rock School District Office | 396.5 | 661,311 | 635,467 | $ 216,987 | $ 141,353 | $ (119,150) | $ 22,202 | $ (99,656) | $ 41,697 |
| A. J. Dorsa Elementary | 175.3 | 290,670 | 279,510 | $ 97,059 | $ 64,915 | $ (52,408) | $ 12,506 | $ (49,559) | $ 15,356 |
| Aptitud Academy | 117.0 | 215,074 | 186,872 | $ 78,895 | $ 44,843 | $ (35,039) | $ 9,805 | $ (43,326) | $ 1,517 |
| Cesar Chavez Early Learning Center | 112.3 | 168,456 | 178,838 | $ 62,165 | $ 51,492 | $ (33,532) | $ 17,960 | $ (41,580) | $ 9,912 |
| Adelante II Academy - Cinderella | 92.6 | 183,115 | 148,542 | $ 68,731 | $ 36,546 | $ (27,852) | $ 8,695 | $ (34,298) | $ 2,248 |
| Clyde L. Fischer Middle | 338.7 | 514,266 | 541,453 | $ 159,267 | $ 123,014 | $ (101,522) | $ 21,491 | $ (95,770) | $ 27,244 |
| Donald Meyer Elementary | 104.3 | 186,288 | 166,111 | $ 73,651 | $ 40,583 | $ (31,146) | $ 9,437 | $ (38,618) | $ 1,966 |
| Horace Cureton Elementary | 108.9 | 175,140 | 174,693 | $ 60,193 | $ 45,849 | $ (32,755) | $ 13,094 | $ (40,327) | $ 5,523 |
| Joseph George Middle | 236.1 | 421,080 | 378,235 | $ 143,313 | $ 92,222 | $ (70,919) | $ 21,303 | $ (66,753) | $ 25,469 |
| Lee Mathson Middle | 305.0 | 539,190 | 481,810 | $ 168,368 | $ 116,301 | $ (90,339) | $ 25,962 | $ (86,236) | $ 30,066 |
| Linda Vista Elementary | 129.2 | 199,089 | 206,748 | $ 81,600 | $ 47,215 | $ (38,765) | $ 8,450 | $ (47,840) | $ (625) |
| Lyndale Elementary | 191.0 | 315,198 | 306,113 | $ 113,058 | $ 70,782 | $ (57,396) | $ 13,386 | $ (54,003) | $ 16,779 |
| Millard McCollam Elementary | 99.2 | 163,251 | 158,665 | $ 63,638 | $ 37,664 | $ (29,750) | $ 7,914 | $ (36,731) | $ 933 |
| Hubbard Media Arts Academy | 227.7 | 455,314 | 364,160 | $ 152,605 | $ 93,965 | $ (68,280) | $ 25,685 | $ (64,380) | $ 29,585 |
| Ocala STEAM Academy | 252.5 | 374,591 | 404,092 | $ 122,423 | $ 90,000 | $ (75,767) | $ 14,233 | $ (71,401) | $ 18,599 |
| Russo / McEntee Academy | 103.6 | 183,329 | 166,680 | $ 62,578 | $ 54,247 | $ (31,253) | $ 22,995 | $ (38,371) | $ 15,876 |
| Ryan STEAM Academy | 92.3 | 135,275 | 146,944 | $ 49,339 | $ 33,130 | $ (27,552) | $ 5,578 | $ (34,174) | $ (1,044) |
| San Antonio Elementary | 185.9 | 247,075 | 293,827 | $ 79,862 | $ 61,009 | $ (55,093) | $ 5,917 | $ (52,563) | $ 8,446 |
| LUCHA Elementary | 105.1 | 204,472 | 165,871 | $ 71,718 | $ 39,937 | $ (31,101) | $ 8,836 | $ (38,917) | $ 1,020 |
| Sylvia Cassell Elementary | 142.8 | 259,706 | 228,401 | $ 93,968 | $ 52,926 | $ (42,825) | $ 10,101 | $ (52,884) | $ 42 |
| Ben Painter Elementary | 135.1 | 227,148 | 213,261 | $ 79,943 | $ 52,135 | $ (39,986) | $ 12,149 | $ (50,027) | $ 2,108 |
| William Sheppard Middle | 253.8 | 460,093 | 401,245 | $ 157,417 | $ 96,658 | $ (75,233) | $ 21,425 | $ (71,763) | $ 24,895 |
| **Total** | **4,057.1** | **6,863,774** | **6,470,313** | **$ 2,356,043** | **$ 1,545,455** | **$ (1,213,184)** | **$ 332,271** | **$ (1,252,204)** | **$ 293,250** |

Figure 6.2 above shows the financial return in the first year of the solar projects for all 23 sites. In total, with the modeling assumptions listed previously, the PPA option will return an estimated $330,000 of net benefit in the first year while the purchase option will return an estimated $290,000 in the first year.

Figure 6.3: Lifetime Solar Financial Analysis

| Lifetime Solar Analysis | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Site Info | | Solar System Info and Utility Savings | | | | Lifetime Financials, PPA | | Lifetime Financials, Purchase | |
| Site Name | System Size (kW dc) | Lifetime Site Use (kWh) | Lifetime Solar Production (kWh) | Lifetime Utility Bill Before Solar | Lifetime Utility Savings | Lifetime Solar Costs Under a PPA | Lifetime Net Benefit Under a PPA | Lifetime Solar Costs if System is Purchased | Lifetime Solar Net Benefit if System is Purchased |
| Adelante Academy - Ridgemont | 152.2 | 5,692,860 | 4,631,638 | $ 2,807,161 | $ 1,573,629 | $ (868,432) | $ 705,197 | $ (879,906) | $ 693,723 |
| Alum Rock School District Office | 396.5 | 13,226,220 | 12,123,378 | $ 6,136,318 | $ 3,791,441 | $ (2,273,133) | $ 1,518,307 | $ (2,043,509) | $ 1,747,931 |
| A. J. Dorsa Elementary | 175.3 | 5,813,400 | 5,332,465 | $ 2,744,795 | $ 1,741,175 | $ (999,837) | $ 741,338 | $ (1,013,418) | $ 727,757 |
| Aptitud Academy | 117.0 | 4,301,480 | 3,565,126 | $ 2,231,119 | $ 1,202,815 | $ (668,461) | $ 534,354 | $ (881,391) | $ 321,424 |
| Cesar Chavez Early Learning Center | 112.3 | 3,369,120 | 3,411,854 | $ 1,757,994 | $ 1,381,147 | $ (639,723) | $ 741,424 | $ (845,831) | $ 535,316 |
| Adelante II Academy - Cinderella | 92.6 | 3,662,300 | 2,833,870 | $ 1,943,690 | $ 980,264 | $ (531,351) | $ 448,914 | $ (697,778) | $ 282,486 |
| Clyde L. Fischer Middle | 338.7 | 10,285,320 | 10,329,788 | $ 4,504,021 | $ 3,299,544 | $ (1,936,835) | $ 1,362,708 | $ (1,958,479) | $ 1,341,064 |
| Donald Meyer Elementary | 104.3 | 3,725,760 | 3,169,050 | $ 2,082,825 | $ 1,088,543 | $ (594,197) | $ 494,347 | $ (785,569) | $ 302,974 |
| Horace Cureton Elementary | 108.9 | 3,502,800 | 3,332,776 | $ 1,702,251 | $ 1,229,796 | $ (624,896) | $ 604,901 | $ (820,372) | $ 409,424 |
| Joseph George Middle | 236.1 | 8,421,600 | 7,215,931 | $ 4,052,849 | $ 2,473,626 | $ (1,352,987) | $ 1,120,639 | $ (1,365,057) | $ 1,108,569 |
| Lee Mathson Middle | 305.0 | 10,783,800 | 9,191,925 | $ 4,761,384 | $ 3,119,507 | $ (1,723,486) | $ 1,396,021 | $ (1,763,480) | $ 1,356,027 |
| Linda Vista Elementary | 129.2 | 3,981,780 | 3,944,318 | $ 2,307,636 | $ 1,266,424 | $ (739,560) | $ 526,864 | $ (973,197) | $ 293,227 |
| Lyndale Elementary | 191.0 | 6,303,960 | 5,839,994 | $ 3,197,251 | $ 1,898,554 | $ (1,094,999) | $ 803,555 | $ (1,104,343) | $ 794,210 |
| Millard McCollam Elementary | 99.2 | 3,265,020 | 3,026,996 | $ 1,799,669 | $ 1,010,241 | $ (567,562) | $ 442,680 | $ (747,199) | $ 263,042 |
| Hubbard Media Arts Academy | 227.7 | 9,106,280 | 6,947,410 | $ 4,315,628 | $ 2,520,389 | $ (1,302,639) | $ 1,217,750 | $ (1,316,539) | $ 1,203,850 |
| Ocala STEAM Academy | 252.5 | 7,491,820 | 7,709,228 | $ 3,462,075 | $ 2,414,046 | $ (1,445,480) | $ 968,565 | $ (1,460,179) | $ 953,867 |
| Russo / McEntee Academy | 103.6 | 3,666,580 | 3,179,905 | $ 1,769,688 | $ 1,455,052 | $ (596,232) | $ 858,820 | $ (780,645) | $ 674,408 |
| Ryan STEAM Academy | 92.3 | 2,705,500 | 2,803,384 | $ 1,395,291 | $ 888,629 | $ (525,634) | $ 362,995 | $ (695,170) | $ 193,459 |
| San Antonio Elementary | 185.9 | 4,941,500 | 5,605,603 | $ 2,258,484 | $ 1,636,430 | $ (1,051,051) | $ 585,379 | $ (1,074,905) | $ 561,525 |
| LUCHA Elementary | 105.1 | 4,089,440 | 3,164,471 | $ 2,028,168 | $ 1,071,220 | $ (593,338) | $ 477,882 | $ (791,695) | $ 279,525 |
| Sylvia Cassell Elementary | 142.8 | 5,194,120 | 4,357,412 | $ 2,657,376 | $ 1,419,608 | $ (817,015) | $ 602,593 | $ (1,075,848) | $ 343,760 |
| Ben Painter Elementary | 135.1 | 4,542,960 | 4,068,573 | $ 2,260,756 | $ 1,398,396 | $ (762,857) | $ 635,539 | $ (1,017,693) | $ 380,703 |
| William Sheppard Middle | 253.8 | 9,201,860 | 7,654,914 | $ 4,451,712 | $ 2,592,624 | $ (1,435,296) | $ 1,157,328 | $ (1,467,546) | $ 1,125,078 |
| **Total** | **4,057.1** | **137,275,480** | **123,440,010** | **$ 66,628,138** | **$ 41,453,100** | **$ (23,145,002)** | **$ 18,308,099** | **$ (25,559,752)** | **$ 15,893,349** |

Figure 6.3 above shows the financial return in the 20-year lifetime of the solar projects for all 23 sites. In total, with the modeling assumptions listed previously, the PPA option will return an estimated $18.3 million of net benefit in the project lifetime while the purchase option will return an estimated $15.9 million in the project lifetime.

Figure 6.4: Cumulative Net Benefit Cash Flow Comparison: PPA vs. Purchase

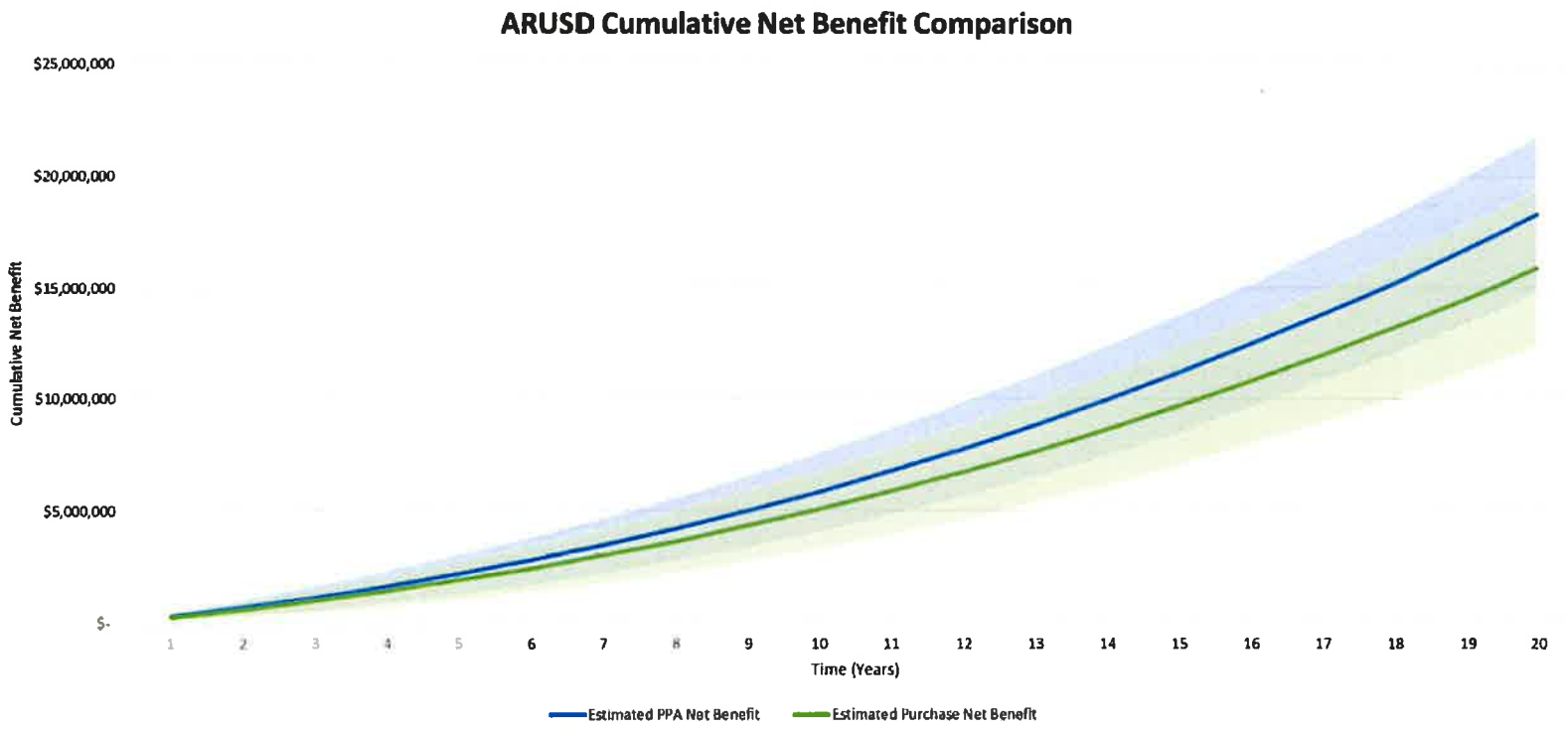



Figure 6.4 above shows the cumulative net benefit cash flow for 20 years of the solar projects, analyzing and comparing the PPA option to the purchase option. Ultimately, the PPA option yields a larger net benefit, given the cost assumptions listed previously. The error bars represent a possible spread in net benefit, based on both cost assumptions and actual solar system performance (due to either hypothetical weather impacts or system outages).

Notes on Column Headings (applies to all tables in this section)

- Bill Before Solar – The modeled electricity costs for the site, assuming no change in PG&E tariff and no solar installed. "First Year Bill Before Solar" represents existing electricity costs for the District at the current tariff, while "Lifetime Bill Before Solar" is the 20-year total of modeled electricity costs (without solar), accounting for utility escalation.
- Utility Savings – The projected savings on the District's electricity bills, which is based on the "avoided cost" of each solar system, a figure measured by dollars in savings per kilowatt-hour of solar energy generated. Thus, systems that produce more energy will generally provide more utility savings. Additionally, a larger avoided cost gives a given solar system a relatively higher amount of utility savings. Avoided cost values are influenced by factors such as the tariff and solar system orientation.
- Solar Costs – The estimated cost of installing, implementing and maintaining the solar systems. The District will either pay for this directly (purchase option), or finance the systems with a vendor through a Power Purchase Agreement (PPA).
    - Costs involved for the District to directly pay for the systems are the interest from a 20-year financing loan term at a specific interest rate, along with the yearly operations and maintenance (O&M) fees.
    - If the District enters a PPA, the solar vendors will cover the up-front cost along with O&M fees, however the District will pay back the costs of the solar system incrementally though the defined PPA rate, where a certain dollar amount is paid out for each kilowatt-hour of energy generated.
    - Each of these cost assumptions are outlined in the "Solar Financial Analysis" section of this report.
- Net Benefit – The overall net savings that the District will benefit from, where the total is utility savings – solar costs. This is shown in Figures 6.2 and 6.3, and is to be understood as the final metric which the District can use to judge the financial strength of these project

# 7. Conclusion & Next Steps

## Energy Efficiency

ARC recommends the District pursue:

- All primary recommended energy efficiency projects with a payback period ending before the building will be modernized.
- Specific projects at equipment failure, including lighting replacements and installing programmable thermostats.
- Electrification projects at site-specific modernization periods, but with the intention of carbon savings only.
- Alternate projects as desired.

## Solar

- The District should proceed with procuring solar systems based on the preliminary designs proposed in ARC's feasibility study and with sizing as submitted on the Interconnection Applications.
- Request For Proposal (RFP) development should include additional work to refine system layouts (and sizing), define structural and geotechnical issues, and develop system requirements and specifications.
- Procurement Process:
    - Procurement support is in scope of ARC's support contract
    - ARC to develop an RFP with District input in order to best tailor the solar projects to District goals
    - Modeled pricing and overall net benefit would be updated based on vendor pricing
    - Rising utility rates are likely to make the projects more attractive over time
    - Must complete the projects by April 2026 to comply with NEM 2.0 grandfathering requirements

## Overall

In short, ARC recommends a phased approach to project implementation:

First, we recommend the District pursue primary recommended projects now, but only if a planned renovation at each site that would affect the new equipment isn't within payback period of those measures.

Second, most of the deeper measures are likely to be best implemented in conjunction with the bond modernization program. This includes most of the electrification measures, where major reconfigurations will be required regardless. Careful consideration will need to be made as the bond schedule develops and changes over time. The approach and possible prioritization as part of this report was discussed with the District and determined that since the schedule may change it was the District's preference to have a more comprehensive 'playbook' list of projects to choose from.

Lastly, for measures with longer payback periods, we recommend the District consider the incremental cost of pursuing the higher efficiency options of certain project measures like boilers at equipment failure if the opportunity presents itself.

The solar projects that ARC is recommending have a time-sensitive design and implementation period and likely will be finished before EE Measures are completed, but conservative sizing in the feasibility design and the additional flexibility allowed by the Interconnection Applications ensure the systems will not be ultimately oversized.

Thus, the District can begin entering the procurement process for the solar projects, while at the same time the District can analyze the recommended energy efficiency projects and start pursuing them as part of the overall strategic energy plan.

# 8. Appendix 1 – Project List

See also soft copy file 'ARUSD SEP Appendix 1 - Project List.xlsx'

| Site ID | Site Name | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lbs CO2e) | Category | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Adelante Academy - Ridgemont | HVAC1 | Package/Cabinet Heat Pump Replacement (21 units) | 58,545 | - | $ 20,417 | $ 336,000 | 16.5 | 38,710 | Recommended | HVAC |
| 1 | Adelante Academy - Ridgemont | HVAC2 | Wall Mount Heat Pump Replacement (10 units) | 21,467 | - | $ 7,486 | $ 140,000 | 18.7 | 14,194 | Recommended | HVAC |
| 1 | Adelante Academy - Ridgemont | HVAC4 | Replace PTAC with ductless mini split (1 units) | 855 | - | $ 298 | $ 5,000 | 16.8 | 565 | Recommended | HVAC |
| 1 | Adelante Academy - Ridgemont | LED1 | Campuswide LED Retrofit | 68,491 | - | $ 23,885 | $ 294,124 | 12.3 | 45,286 | Recommended | Lighting |
| 1 | Adelante Academy - Ridgemont | Ptstat | Install programmable Thermostat | 266 | - | $ 93 | $ 300 | 3.2 | 176 | Recommended | Controls |
| 1 | Adelante Academy - Ridgemont | B2 | Replace with 96% Efficient Boiler 300 MBH Boiler, FCA ID 4816808 | - | 25 | $ 44 | $ 3,720 | > 50 yrs | 295 | Not Recommend | Boilers |
| 1 | Adelante Academy - Ridgemont | EMS2 | Upgrade IBEX | 9,840 | 10 | $ 3,449 | $ 144,500 | 42 | 6,623 | Not Recommend | Controls |
| 1 | Adelante Academy - Ridgemont | B3 | Electrify Boiler with AWHP 300 MBH Boiler, FCA ID 4816808 | (1,805) | 154 | $ (360) | $ 4,500 | n/a | 607 | Electrification | Boilers |
| 1 | Adelante Academy - Ridgemont | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4816783 | (8,070) | 967 | $ (18) | $ 3,704 | N/A | 5,968 | Electrification | Water Heating |
| 1 | Adelante Academy - Ridgemont | B1 | Replace Boiler with 90% Efficient Boiler 300 MBH Boiler, FCA ID 4816 | - | 15 | $ 27 | $ 137,019 | > 50 yrs | 180 | Alternate | Boilers |
| 2 | Alum Rock School District Office | HVAC1 | Package/Cabinet Heat Pump Replacement (2 units) | 5,673 | - | $ 1,861 | $ 32,000 | 17.2 | 3,751 | Recommended | HVAC |
| 2 | Alum Rock School District Office | HVAC10 | Replace ductless mini split (2 units) | 2,350 | - | $ 771 | $ 5,000 | 6.5 | 1,554 | Recommended | HVAC |
| 2 | Alum Rock School District Office | HVAC2 | Wall Mount Heat Pump Replacement (2 units) | 3,200 | - | $ 1,050 | $ 16,000 | 15.2 | 2,116 | Recommended | HVAC |
| 2 | Alum Rock School District Office | HVAC4 | Replace PTAC with ductless mini split (36 units) | 31,763 | - | $ 10,422 | $ 123,750 | 11.9 | 21,001 | Recommended | HVAC |
| 2 | Alum Rock School District Office | LED1 | Campuswide LED Retrofit | 117,895 | - | $ 38,683 | $ 368,130 | 9.5 | 77,952 | Recommended | Lighting |
| 2 | Alum Rock School District Office | Ptstat | Install programmable Thermostat | 329 | - | $ 108 | $ 300 | 2.8 | 218 | Recommended | Controls |
| 2 | Alum Rock School District Office | B2 | Replace with 96% Efficient Boiler 210 MBH Boiler, FCA ID 4497614 | - | 107 | $ 198 | $ 2,604 | 13 | 1,256 | Not Recommend | Boilers |
| 2 | Alum Rock School District Office | EMS4 | Upgrade EMS at modernization | 4,345 | 83 | $ 1,579 | $ 284,000 | > 50 yrs | 3,843 | Not Recommend | Controls |
| 2 | Alum Rock School District Office | HVAC11 | Split System Replacement (8 units) | 12,697 | - | $ 4,166 | $ 102,000 | 24.5 | 8,395 | Not Recommend | HVAC |
| 2 | Alum Rock School District Office | HVAC3 | Package Unit Replacement (7 units) | 18,417 | 213 | $ 6,435 | $ 172,000 | 26.7 | 14,664 | Not Recommend | HVAC |
| 2 | Alum Rock School District Office | B3 | Electrify Boiler with AWHP 210 MBH Boiler, FCA ID 4497614 | (7,680) | 655 | $ (1,312) | $ 3,150 | n/a | 2,582 | Electrification | Boilers |
| 2 | Alum Rock School District Office | HVAC9 | Replace Unit Heater (Reznor) with Electric UH (4 units) | (6,252) | 213 | $ (1,658) | $ 10,000 | n/a | (1,640) | Electrification | HVAC |
| 2 | Alum Rock School District Office | WH1 | Replace with 30 Gal Heat Pump Water Heater, FCA ID 4497636 | (6,480) | 715 | $ (202) | $ 2,757 | N/A | 4,073 | Electrification | Water Heating |
| 2 | Alum Rock School District Office | WH1 | Replace with 30 Gal Heat Pump Water Heater, FCA ID 4525589 | (6,480) | 715 | $ (202) | $ 2,757 | N/A | 4,073 | Electrification | Water Heating |
| 2 | Alum Rock School District Office | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4498294 | (6,480) | 709 | $ (344) | $ 2,900 | N/A | 4,003 | Electrification | Water Heating |
| 2 | Alum Rock School District Office | B1 | Replace Boiler with 90% Efficient Boiler 210 MBH Boiler, FCA ID 4497 | - | 66 | $ 121 | $ 17,213 | > 50 yrs | 766 | Alternate | Boilers |
| 3 | A. J. Dorsa Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 435 | $ 1,743 | 4 | 3,186 | Recommended | Kitchen Eq. |
| 3 | A. J. Dorsa Elementary | HVAC2 | Wall Mount Heat Pump Replacement (11 units) | 23,467 | - | $ 7,836 | $ 164,000 | 20.9 | 15,516 | Recommended | HVAC |
| 3 | A. J. Dorsa Elementary | HVAC4 | Replace PTAC with ductless mini split (1 units) | 810 | - | $ 270 | $ 5,000 | 18.5 | 536 | Recommended | HVAC |
| 3 | A. J. Dorsa Elementary | LED1 | Campuswide LED Retrofit | 86,802 | - | $ 28,984 | $ 132,245 | 4.6 | 57,394 | Recommended | Lighting |
| 3 | A. J. Dorsa Elementary | Ptstat | Install programmable Thermostat | 98 | - | $ 33 | $ 300 | 9.2 | 65 | Recommended | Controls |
| 3 | A. J. Dorsa Elementary | EMS3 | Upgrade BACtalk | 6,564 | 31 | $ 2,236 | $ 136,000 | > 50 yrs | 4,702 | Not Recommend | Controls |
| 3 | A. J. Dorsa Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4576801 | (8,070) | 967 | $ (83) | $ 3,769 | N/A | 5,968 | Electrification | Water Heating |
| 3 | A. J. Dorsa Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 315 | $ 4,578 | 15 | 2,310 | Alternate | Kitchen Eq. |
| 3 | A. J. Dorsa Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 315 | $ 267 | 1 | 2,310 | Alternate | Kitchen Eq. |
| 3 | A. J. Dorsa Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 435 | $ 6,054 | 14 | 3,186 | Alternate | Kitchen Eq. |
| 4 | Aptitud Academy | HVAC1 | Package/Cabinet Heat Pump Replacement (20 units) | 41,212 | - | $ 15,118 | $ 272,000 | 18.0 | 27,249 | Recommended | HVAC |
| 4 | Aptitud Academy | HVAC10 | Replace ductless mini split (1 units) | 658 | - | $ 241 | $ 2,500 | 10.4 | 435 | Recommended | HVAC |
| 4 | Aptitud Academy | HVAC2 | Wall Mount Heat Pump Replacement (3 units) | 5,600 | - | $ 2,054 | $ 42,000 | 20.4 | 3,703 | Recommended | HVAC |
| 4 | Aptitud Academy | LED1 | Campuswide LED Retrofit | 72,984 | - | $ 26,772 | $ 215,802 | 8.1 | 48,257 | Recommended | Lighting |
| 4 | Aptitud Academy | Ptstat | Install programmable Thermostat | 205 | - | $ 75 | $ 300 | 4.0 | 136 | Recommended | Controls |
| 4 | Aptitud Academy | EMS2 | Upgrade IBEX | 5,953 | 58 | $ 2,262 | $ 116,500 | > 50 yrs | 4,614 | Not Recommend | Controls |
| 4 | Aptitud Academy | HVAC11 | Split System Replacement (1 units) | 857 | - | $ 314 | $ 8,000 | 25.4 | 567 | Not Recommend | HVAC |
| 4 | Aptitud Academy | HVAC3 | Package Unit Replacement (1 units) | 2,143 | 9 | $ 798 | $ 20,000 | 25.1 | 1,517 | Not Recommend | HVAC |
| 4 | Aptitud Academy | HVAC6 | Replace Furnace with Condensing Furnace (2 units) | - | 111 | $ 149 | $ 31,440 | >50 yr SPB | 1,299 | Not Recommend | HVAC |
| 4 | Aptitud Academy | HVAC12 | Package Unit/Split System Electrification (1 RTU) | 2,000 | 100 | $ 868 | $ 5,000 | 5.8 | 2,491 | Electrification | HVAC |
| 4 | Aptitud Academy | WH4 | Replace with 60 Gal Heat Pump Water Heater, FCA ID 4540950 | (7,150) | 741 | $ (203) | $ 3,313 | N/A | 3,934 | Electrification | Water Heating |
| 5 | Cesar Chavez Early Learning Center | HVAC2 | Wall Mount Heat Pump Replacement (12 units) | 15,776 | - | $ 5,822 | $ 174,000 | 29.9 | 10,431 | Recommended | HVAC |
| 5 | Cesar Chavez Early Learning Center | LED2 | Targeted LED Retrofit | 6,713 | - | $ 2,477 | $ 10,130 | 4.1 | 4,439 | Recommended | Lighting |
| 5 | Cesar Chavez Early Learning Center | Ptstat | Install programmable Thermostat | 186 | - | $ 68 | $ 300 | 4.4 | 123 | Recommended | Controls |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Cesar Chavez Early Learning Center | EMS4 | Upgrade EMS at modernization | 1,224 | 54 | $ 520 | $ 152,000 | > 50 yrs | 1,441 | Not Recommend | Controls |
| 5 | Cesar Chavez Early Learning Center | HVAC11 | Split System Replacement (8 units) | 4,762 | 120 | $ 1,908 | $ 98,000 | >50 yr SPB | 4,551 | Not Recommend | HVAC |
| 5 | Cesar Chavez Early Learning Center | HVAC3 | Package Unit Replacement (3 units) | 3,571 | 46 | $ 1,376 | $ 60,000 | 43.6 | 2,900 | Not Recommend | HVAC |
| 5 | Cesar Chavez Early Learning Center | HVAC12 | Package Unit/Split System Electrification (4 Split Systems, 4 RTUs) | 2,333 | 1,260 | $ 2,447 | $ 35,000 | 14.3 | 16,271 | Electrification | HVAC |
| 5 | Cesar Chavez Early Learning Center | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4737589 | (6,480) | 707 | $ (317) | $ 2,872 | N/A | 3,980 | Electrification | Water Heating |
| 5 | Cesar Chavez Early Learning Center | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4737567 | (8,070) | 967 | $ (509) | $ 4,196 | N/A | 5,968 | Electrification | Water Heating |
| 6 | Adelante II Academy - Cinderella | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 413 | $ 1,743 | 4 | 3,186 | Recommended | Kitchen Eq. |
| 6 | Adelante II Academy - Cinderella | HVAC2 | Wall Mount Heat Pump Replacement (5 units) | 11,200 | - | $ 4,204 | $ 70,000 | 16.7 | 7,405 | Recommended | HVAC |
| 6 | Adelante II Academy - Cinderella | HVAC4 | Replace PTAC with ductless mini split (28 units) | 27,540 | - | $ 10,337 | $ 127,500 | 12.3 | 18,209 | Recommended | HVAC |
| 6 | Adelante II Academy - Cinderella | Ptstat | Install programmable Thermostat | 178 | - | $ 67 | $ 300 | 4.5 | 118 | Recommended | Controls |
| 6 | Adelante II Academy - Cinderella | B2 | Replace with 96% Efficient Boiler 2750 MBH Boiler, FCA ID 4731064 | - | 248 | $ 326 | $ 34,100 | > 50 yrs | 2,904 | Not Recommend | Boilers |
| 6 | Adelante II Academy - Cinderella | EMS4 | Upgrade EMS at modernization | 1,284 | 19 | $ 507 | $ 164,000 | > 50 yrs | 1,071 | Not Recommend | Controls |
| 6 | Adelante II Academy - Cinderella | B3 | Electrify Boiler with AWHP 2750 MBH Boiler, FCA ID 4731064 | (17,756) | 1,515 | $ (4,680) | $ 41,250 | n/a | 5,969 | Electrification | Boilers |
| 6 | Adelante II Academy - Cinderella | HVAC5 | PTAC/Furnace System Electrification (3 AHUs, Boilers, 28 PTAC) | 19,018 | 1,364 | $ 8,925 | $ 76,500 | 8.6 | 28,513 | Electrification | HVAC |
| 6 | Adelante II Academy - Cinderella | WH4 | Replace with 60 Gal Heat Pump Water Heater, FCA ID 4731173 | (7,150) | 741 | $ (350) | $ 3,461 | N/A | 3,934 | Electrification | Water Heating |
| 6 | Adelante II Academy - Cinderella | B1 | Replace Boiler with 90% Efficient Boiler 2750 MBH Boiler, FCA ID 473 | - | 152 | $ 198 | $ 153,508 | > 50 yrs | 1,771 | Alternate | Boilers |
| 6 | Adelante II Academy - Cinderella | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 300 | $ 4,578 | 15 | 2,310 | Alternate | Kitchen Eq. |
| 6 | Adelante II Academy - Cinderella | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 300 | $ 267 | 1 | 2,310 | Alternate | Kitchen Eq. |
| 6 | Adelante II Academy - Cinderella | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 413 | $ 6,054 | 15 | 3,186 | Alternate | Kitchen Eq. |
| 7 | Clyde L. Fischer Middle | HVAC10 | Replace ductless mini split (12 units) | 10,400 | - | $ 3,221 | $ 30,000 | 9.3 | 6,876 | Recommended | HVAC |
| 7 | Clyde L. Fischer Middle | HVAC2 | Wall Mount Heat Pump Replacement (6 units) | 10,780 | - | $ 3,339 | $ 84,000 | 25.2 | 7,128 | Recommended | HVAC |
| 7 | Clyde L. Fischer Middle | Ptstat | Install programmable Thermostat | 229 | - | $ 71 | $ 300 | 4.2 | 151 | Recommended | Controls |
| 7 | Clyde L. Fischer Middle | B2 | Replace with 96% Efficient Boiler 315 MBH Boiler, FCA ID 4297570 | - | 102 | $ 120 | $ 3,906 | 32 | 1,197 | Not Recommend | Boilers |
| 7 | Clyde L. Fischer Middle | B2 | Replace with 96% Efficient Boiler 3050 MBH Boiler, FCA ID 4294726 | - | 992 | $ 1,165 | $ 37,820 | 32 | 11,593 | Not Recommend | Boilers |
| 7 | Clyde L. Fischer Middle | B2 | Replace with 96% Efficient Boiler 3050 MBH Boiler, FCA ID 4294738 | - | 992 | $ 1,165 | $ 37,820 | 32 | 11,593 | Not Recommend | Boilers |
| 7 | Clyde L. Fischer Middle | B2 | Replace with 96% Efficient Boiler 1010 MBH Boiler, FCA ID 4297553 | - | 328 | $ 386 | $ 12,524 | 32 | 3,839 | Not Recommend | Boilers |
| 7 | Clyde L. Fischer Middle | EMS1 | Install New EMS | 25,085 | 1,394 | $ 9,406 | $ 312,000 | 33 | 32,881 | Not Recommend | Controls |
| 7 | Clyde L. Fischer Middle | HVAC11 | Split System Replacement (3 units) | 2,476 | - | $ 767 | $ 26,000 | 33.9 | 1,637 | Not Recommend | HVAC |
| 7 | Clyde L. Fischer Middle | HVAC3 | Package Unit Replacement (1 units) | 7,619 | 51 | $ 2,420 | $ 80,000 | 33.1 | 5,636 | Not Recommend | HVAC |
| 7 | Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 315 MBH Boiler, FCA ID 4297570 | (7,320) | 625 | $ (1,533) | $ 4,725 | n/a | 2,461 | Electrification | Boilers |
| 7 | Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 3050 MBH Boiler, FCA ID 4294726 | (70,876) | 6,047 | $ (14,846) | $ 45,750 | n/a | 23,827 | Electrification | Boilers |
| 7 | Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 3050 MBH Boiler, FCA ID 4294738 | (70,876) | 6,047 | $ (14,846) | $ 45,750 | n/a | 23,827 | Electrification | Boilers |
| 7 | Clyde L. Fischer Middle | B3 | Electrify Boiler with AWHP 1010 MBH Boiler, FCA ID 4297553 | (23,470) | 2,003 | $ (4,916) | $ 15,150 | n/a | 7,890 | Electrification | Boilers |
| 7 | Clyde L. Fischer Middle | HVAC12 | Package Unit/Split System Electrification (35 FCUs, 3 S/S, 1 RTU, 7 AH | (20,045) | 13,250 | $ 9,358 | $ 166,500 | 17.8 | 141,627 | Electrification | HVAC |
| 7 | Clyde L. Fischer Middle | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4294739 | (8,070) | 967 | $ (1,363) | $ 5,050 | N/A | 5,968 | Electrification | Water Heating |
| 7 | Clyde L. Fischer Middle | B1 | Replace Boiler with 90% Efficient Boiler 315 MBH Boiler, FCA ID 4297 | - | 62 | $ 73 | $ 24,620 | > 50 yrs | 730 | Alternate | Boilers |
| 7 | Clyde L. Fischer Middle | B1 | Replace Boiler with 90% Efficient Boiler 3050 MBH Boiler, FCA ID 429 | - | 605 | $ 710 | $ 155,527 | > 50 yrs | 7,069 | Alternate | Boilers |
| 7 | Clyde L. Fischer Middle | B1 | Replace Boiler with 90% Efficient Boiler 3050 MBH Boiler, FCA ID 429 | - | 605 | $ 710 | $ 155,527 | > 50 yrs | 7,069 | Alternate | Boilers |
| 7 | Clyde L. Fischer Middle | B1 | Replace Boiler with 90% Efficient Boiler 1010 MBH Boiler, FCA ID 429 | - | 200 | $ 235 | $ 57,597 | > 50 yrs | 2,341 | Alternate | Boilers |
| 8 | Donald Meyer Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 655 | $ 1,743 | 3 | 3,186 | Recommended | Kitchen Eq. |
| 8 | Donald Meyer Elementary | HVAC1 | Package/Cabinet Heat Pump Replacement (27 units) | 37,636 | - | $ 14,880 | $ 432,000 | 29.0 | 24,885 | Recommended | HVAC |
| 8 | Donald Meyer Elementary | HVAC2 | Wall Mount Heat Pump Replacement (4 units) | 4,140 | - | $ 1,637 | $ 58,000 | 35.4 | 2,737 | Recommended | HVAC |
| 8 | Donald Meyer Elementary | HVAC4 | Replace PTAC with ductless mini split (7 units) | 4,492 | - | $ 1,776 | $ 35,000 | 19.7 | 2,970 | Recommended | HVAC |
| 8 | Donald Meyer Elementary | Ptstat | Install programmable Thermostat | 132 | - | $ 52 | $ 300 | 5.7 | 87 | Recommended | Controls |
| 8 | Donald Meyer Elementary | EMS2 | Upgrade IBEX | 5,151 | 17 | $ 2,074 | $ 151,500 | > 50 yrs | 3,605 | Not Recommend | Controls |
| 8 | Donald Meyer Elementary | HVAC6 | Replace Furnace with Condensing Furnace (3 units) | - | 30 | $ 67 | $ 36,720 | >50 yr SPB | 352 | Not Recommend | HVAC |
| 8 | Donald Meyer Elementary | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4661572 | (6,480) | 709 | $ (38) | $ 2,593 | N/A | 4,003 | Electrification | Water Heating |
| 8 | Donald Meyer Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 475 | $ 4,578 | 10 | 2,310 | Alternate | Kitchen Eq. |
| 8 | Donald Meyer Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 475 | $ 267 | 1 | 2,310 | Alternate | Kitchen Eq. |
| 8 | Donald Meyer Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 655 | $ 6,054 | 9 | 3,186 | Alternate | Kitchen Eq. |
| 9 | Horace Cureton Elementary | HVAC2 | Wall Mount Heat Pump Replacement (14 units) | 25,387 | - | $ 8,725 | $ 224,000 | 25.7 | 16,786 | Recommended | HVAC |
| 9 | Horace Cureton Elementary | HVAC4 | Replace PTAC with ductless mini split (24 units) | 9,799 | - | $ 3,368 | $ 83,750 | 24.9 | 6,479 | Recommended | HVAC |
| 9 | Horace Cureton Elementary | LED1 | Campuswide LED Retrofit | 58,932 | - | $ 20,254 | $ 258,305 | 12.8 | 38,966 | Recommended | Lighting |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Horace Cureton Elementary | Ptstat | Install programmable Thermostat | 95 | - | $ 33 | $ 300 | 9.2 | 63 | Recommended | Controls |
| 9 | Horace Cureton Elementary | EMS4 | Upgrade EMS at modernization | 1,121 | 32 | $ 425 | $ 256,000 | > 50 yrs | 1,115 | Not Recommend | Controls |
| 9 | Horace Cureton Elementary | HVAC5 | PTAC/Furnace System Electrification (18 Furnaces, 22 PTAC) | (4,624) | 2,308 | $ 1,281 | $ 50,250 | 39.2 | 23,918 | Electrification | HVAC |
| 9 | Horace Cureton Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4585912 | (8,070) | 967 | $ (412) | $ 4,099 | N/A | 5,968 | Electrification | Water Heating |
| 10 | Joseph George Middle | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 388 | $ 1,743 | 4 | 3,186 | Recommended | Kitchen Eq. |
| 10 | Joseph George Middle | HVAC1 | Package/Cabinet Heat Pump Replacement (26 units) | 59,879 | - | $ 20,380 | $ 416,000 | 20.4 | 39,592 | Recommended | HVAC |
| 10 | Joseph George Middle | HVAC10 | Replace ductless mini split (2 units) | 1,095 | - | $ 373 | $ 7,500 | 20.1 | 724 | Recommended | HVAC |
| 10 | Joseph George Middle | HVAC2 | Wall Mount Heat Pump Replacement (5 units) | 11,147 | - | $ 3,794 | $ 88,000 | 23.2 | 7,370 | Recommended | HVAC |
| 10 | Joseph George Middle | HVAC4 | Replace PTAC with ductless mini split (1 units) | 360 | - | $ 123 | $ 2,500 | 20.4 | 238 | Recommended | HVAC |
| 10 | Joseph George Middle | LED1 | Campuswide LED Retrofit | 106,088 | - | $ 36,107 | $ 447,360 | 12.4 | 70,145 | Recommended | Lighting |
| 10 | Joseph George Middle | Ptstat | Install programmable Thermostat | 229 | - | $ 78 | $ 300 | 3.9 | 151 | Recommended | Controls |
| 10 | Joseph George Middle | EMS2 | Upgrade IBEX | 11,658 | 201 | $ 4,217 | $ 193,500 | 46 | 10,058 | Not Recommend | Controls |
| 10 | Joseph George Middle | HVAC11 | Split System Replacement (3 units) | 3,657 | - | $ 1,245 | $ 44,000 | 35.4 | 2,418 | Not Recommend | HVAC |
| 10 | Joseph George Middle | HVAC6 | Replace Furnace with Condensing Furnace (9 units) | - | 368 | $ 456 | $ 62,160 | >50 yr SPB | 4,306 | Not Recommend | HVAC |
| 10 | Joseph George Middle | HVAC5 | PTAC/Furnace System Electrification (2 RTU, 5 S/S, 1 PTAC, 12 Furnac | (7,610) | 2,485 | $ 488 | $ 55,750 | >50 yr SPB | 24,012 | Electrification | HVAC |
| 10 | Joseph George Middle | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4870854 | (6,480) | 707 | $ (209) | $ 2,764 | N/A | 3,980 | Electrification | Water Heating |
| 10 | Joseph George Middle | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4883721 | (8,070) | 967 | $ (333) | $ 4,019 | N/A | 5,968 | Electrification | Water Heating |
| 10 | Joseph George Middle | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 281 | $ 4,578 | 16 | 2,310 | Alternate | Kitchen Eq. |
| 10 | Joseph George Middle | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 281 | $ 267 | 1 | 2,310 | Alternate | Kitchen Eq. |
| 10 | Joseph George Middle | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 388 | $ 6,054 | 16 | 3,186 | Alternate | Kitchen Eq. |
| 11 | Lee Mathson Middle | HVAC1 | Package/Cabinet Heat Pump Replacement (36 units) | 81,404 | - | $ 25,419 | $ 574,000 | 22.6 | 53,824 | Recommended | HVAC |
| 11 | Lee Mathson Middle | HVAC10 | Replace ductless mini split (13 units) | 26,357 | - | $ 8,230 | $ 68,750 | 8.4 | 17,427 | Recommended | HVAC |
| 11 | Lee Mathson Middle | LED1 | Campuswide LED Retrofit | 138,972 | - | $ 43,395 | $ 432,052 | 10.0 | 91,888 | Recommended | Lighting |
| 11 | Lee Mathson Middle | Ptstat | Install programmable Thermostat | 284 | - | $ 89 | $ 300 | 3.4 | 188 | Recommended | Controls |
| 11 | Lee Mathson Middle | EMS3 | Upgrade BACtalk | 12,048 | 160 | $ 3,957 | $ 89,500 | 23 | 9,836 | Not Recommend | Controls |
| 11 | Lee Mathson Middle | HVAC3 | Package Unit Replacement (5 units) | 10,697 | 113 | $ 3,477 | $ 156,000 | 44.9 | 8,389 | Not Recommend | HVAC |
| 11 | Lee Mathson Middle | HVAC12 | Package Unit/Split System Electrification (5 RTUs) | (383) | 2,308 | $ 2,692 | $ 39,000 | 14.5 | 26,722 | Electrification | HVAC |
| 11 | Lee Mathson Middle | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4589967 | (8,070) | 967 | $ (438) | $ 4,125 | N/A | 5,968 | Electrification | Water Heating |
| 12 | Linda Vista Elementary | HVAC1 | Package/Cabinet Heat Pump Replacement (22 units) | 42,002 | - | $ 17,215 | $ 360,000 | 20.9 | 27,772 | Recommended | HVAC |
| 12 | Linda Vista Elementary | HVAC10 | Replace ductless mini split (2 units) | 1,093 | - | $ 448 | $ 10,000 | 22.3 | 723 | Recommended | HVAC |
| 12 | Linda Vista Elementary | HVAC2 | Wall Mount Heat Pump Replacement (12 units) | 21,840 | - | $ 8,952 | $ 168,000 | 18.8 | 14,441 | Recommended | HVAC |
| 12 | Linda Vista Elementary | Ptstat | Install programmable Thermostat | 213 | - | $ 87 | $ 300 | 3.4 | 141 | Recommended | Controls |
| 12 | Linda Vista Elementary | EMS3 | Upgrade BACtalk | 7,340 | 85 | $ 3,114 | $ 74,500 | 24 | 5,847 | Not Recommend | Controls |
| 12 | Linda Vista Elementary | HVAC11 | Split System Replacement (1 units) | 900 | - | $ 369 | $ 14,000 | 38.0 | 595 | Not Recommend | HVAC |
| 12 | Linda Vista Elementary | HVAC3 | Package Unit Replacement (3 units) | 6,857 | 48 | $ 2,870 | $ 102,000 | 35.5 | 5,095 | Not Recommend | HVAC |
| 12 | Linda Vista Elementary | HVAC12 | Package Unit/Split System Electrification (6 RTU, 1 S/S) | 5,090 | 1,300 | $ 3,700 | $ 39,000 | 10.5 | 18,565 | Electrification | HVAC |
| 12 | Linda Vista Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4540682 | (8,070) | 967 | $ (184) | $ 3,870 | N/A | 5,968 | Electrification | Water Heating |
| 12 | Linda Vista Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4540768 | (8,070) | 967 | $ (184) | $ 3,870 | N/A | 5,968 | Electrification | Water Heating |
| 13 | Lyndale Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 600 | $ 1,743 | 3 | 3,186 | Recommended | Kitchen Eq. |
| 13 | Lyndale Elementary | HVAC1 | Package/Cabinet Heat Pump Replacement (23 units) | 47,840 | - | $ 17,160 | $ 368,000 | 21.4 | 31,632 | Recommended | HVAC |
| 13 | Lyndale Elementary | HVAC10 | Replace ductless mini split (3 units) | 3,970 | - | $ 1,424 | $ 17,500 | 12.3 | 2,625 | Recommended | HVAC |
| 13 | Lyndale Elementary | HVAC2 | Wall Mount Heat Pump Replacement (6 units) | 11,807 | - | $ 4,235 | $ 84,000 | 19.8 | 7,807 | Recommended | HVAC |
| 13 | Lyndale Elementary | LED1 | Campuswide LED Retrofit | 89,178 | - | $ 31,987 | $ 327,477 | 10.2 | 58,965 | Recommended | Lighting |
| 13 | Lyndale Elementary | Ptstat | Install programmable Thermostat | 242 | - | $ 87 | $ 300 | 3.5 | 160 | Recommended | Controls |
| 13 | Lyndale Elementary | EMS2 | Upgrade IBEX | 9,432 | 114 | $ 3,615 | $ 151,500 | 42 | 7,569 | Not Recommend | Controls |
| 13 | Lyndale Elementary | HVAC3 | Package Unit Replacement (5 units) | 6,326 | 47 | $ 2,364 | $ 82,000 | 34.7 | 4,731 | Not Recommend | HVAC |
| 13 | Lyndale Elementary | HVAC12 | Package Unit/Split System Electrification (5 RTU) | 2,293 | 962 | $ 2,779 | $ 20,500 | 7.4 | 12,756 | Electrification | HVAC |
| 13 | Lyndale Elementary | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4795513 | (6,480) | 709 | $ (224) | $ 2,779 | N/A | 4,003 | Electrification | Water Heating |
| 13 | Lyndale Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 435 | $ 4,578 | 11 | 2,310 | Alternate | Kitchen Eq. |
| 13 | Lyndale Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 435 | $ 267 | 1 | 2,310 | Alternate | Kitchen Eq. |
| 13 | Lyndale Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 600 | $ 6,054 | 10 | 3,186 | Alternate | Kitchen Eq. |
| 14 | Millard McCollam Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 383 | $ 1,743 | 5 | 3,186 | Recommended | Kitchen Eq. |
| 14 | Millard McCollam Elementary | HVAC2 | Wall Mount Heat Pump Replacement (6 units) | 16,800 | - | $ 6,549 | $ 84,000 | 12.8 | 11,108 | Recommended | HVAC |

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|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | Millard McCollam Elementary | HVAC4 | Replace PTAC with ductless mini split (26 units) | 10,530 | - | $ 4,105 | $ 65,000 | 15.8 | 6,962 | Recommended | HVAC |
| 14 | Millard McCollam Elementary | Ptstat | Install programmable Thermostat | 272 | - | $ 106 | $ 300 | 2.8 | 180 | Recommended | Controls |
| 14 | Millard McCollam Elementary | B2 | Replace with 96% Efficient Boiler 1050 MBH Boiler, FCA ID 4734956 | - | 576 | $ 682 | $ 13,020 | 19 | 6,733 | Not Recommend | Boilers |
| 14 | Millard McCollam Elementary | B2 | Replace with 96% Efficient Boiler 1250 MBH Boiler, FCA ID 4734984 | - | 686 | $ 812 | $ 15,500 | 19 | 8,015 | Not Recommend | Boilers |
| 14 | Millard McCollam Elementary | EMS2 | Upgrade IBEX | 4,900 | 486 | $ 2,486 | $ 78,000 | 31 | 8,921 | Not Recommend | Controls |
| 14 | Millard McCollam Elementary | HVAC3 | Package Unit Replacement (2 units) | 6,429 | 120 | $ 2,648 | $ 60,000 | 22.7 | 5,648 | Not Recommend | HVAC |
| 14 | Millard McCollam Elementary | B3 | Electrify Boiler with AWHP 1050 MBH Boiler, FCA ID 4734956 | (41,161) | 3,512 | $ (11,885) | $ 15,750 | n/a | 13,838 | Electrification | Boilers |
| 14 | Millard McCollam Elementary | B3 | Electrify Boiler with AWHP 1250 MBH Boiler, FCA ID 4734984 | (49,001) | 4,181 | $ (14,149) | $ 18,750 | n/a | 16,473 | Electrification | Boilers |
| 14 | Millard McCollam Elementary | HVAC5 | PTAC/Package Unit Electrification (2 RTU, 26 PTAC) | (24,869) | 6,924 | $ (1,492) | $ 54,000 | n/a | 64,490 | Electrification | HVAC |
| 14 | Millard McCollam Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4735097 | (8,070) | 967 | $ (1,591) | $ 5,278 | N/A | 5,968 | Electrification | Water Heating |
| 14 | Millard McCollam Elementary | B1 | Replace Boiler with 90% Efficient Boiler 1050 MBH Boiler, FCA ID 473 | - | 351 | $ 416 | $ 57,867 | > 50 yrs | 4,105 | Alternate | Boilers |
| 14 | Millard McCollam Elementary | B1 | Replace Boiler with 90% Efficient Boiler 1250 MBH Boiler, FCA ID 473 | - | 418 | $ 495 | $ 59,213 | > 50 yrs | 4,887 | Alternate | Boilers |
| 14 | Millard McCollam Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 278 | $ 4,578 | 16 | 2,310 | Alternate | Kitchen Eq. |
| 14 | Millard McCollam Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 278 | $ 267 | 1 | 2,310 | Alternate | Kitchen Eq. |
| 14 | Millard McCollam Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 383 | $ 6,054 | 16 | 3,186 | Alternate | Kitchen Eq. |
| 15 | Hubbard Media Arts Academy | HVAC1 | Package/Cabinet Heat Pump Replacement (21 units) | 42,000 | - | $ 14,077 | $ 252,000 | 17.9 | 27,770 | Recommended | HVAC |
| 15 | Hubbard Media Arts Academy | HVAC10 | Replace ductless mini split (1 units) | 268 | - | $ 90 | $ 2,500 | 27.8 | 177 | Recommended | HVAC |
| 15 | Hubbard Media Arts Academy | HVAC2 | Wall Mount Heat Pump Replacement (5 units) | 9,973 | - | $ 3,343 | $ 76,000 | 22.7 | 6,594 | Recommended | HVAC |
| 15 | Hubbard Media Arts Academy | HVAC4 | Replace PTAC with ductless mini split (1 units) | 405 | - | $ 136 | $ 2,500 | 18.4 | 268 | Recommended | HVAC |
| 15 | Hubbard Media Arts Academy | LED1 | Campuswide LED Retrofit | 87,406 | - | $ 29,295 | $ 277,205 | 9.5 | 57,793 | Recommended | Lighting |
| 15 | Hubbard Media Arts Academy | Ptstat | Install programmable Thermostat | 239 | - | $ 80 | $ 300 | 3.7 | 158 | Recommended | Controls |
| 15 | Hubbard Media Arts Academy | EMS3 | Upgrade BACtalk | 8,995 | 79 | $ 3,119 | $ 80,500 | 26 | 6,871 | Not Recommend | Controls |
| 15 | Hubbard Media Arts Academy | HVAC11 | Split System Replacement (1 units) | 1,714 | - | $ 575 | $ 16,000 | 27.8 | 1,133 | Not Recommend | HVAC |
| 15 | Hubbard Media Arts Academy | HVAC3 | Package Unit Replacement (3 units) | 6,789 | 34 | $ 2,320 | $ 88,000 | 37.9 | 4,891 | Not Recommend | HVAC |
| 15 | Hubbard Media Arts Academy | HVAC8 | Replace Unit Heater (Reznor) with Gas UH (1 units) | - | 74 | $ 97 | $ 8,000 | >50 yr SPB | 864 | Not Recommend | HVAC |
| 15 | Hubbard Media Arts Academy | HVAC12 | Package Unit/Split System Electrification (3 RTU, 1 S/S, 1 Unit Heater | 4,103 | 1,105 | $ 2,827 | $ 36,000 | 12.7 | 15,631 | Electrification | HVAC |
| 15 | Hubbard Media Arts Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4557749 | (8,070) | 967 | $ (233) | $ 3,919 | N/A | 5,968 | Electrification | Water Heating |
| 16 | Ocala STEAM Academy | HVAC1 | Package/Cabinet Heat Pump Replacement (27 units) | 75,970 | - | $ 24,828 | $ 436,000 | 17.6 | 50,231 | Recommended | HVAC |
| 16 | Ocala STEAM Academy | HVAC2 | Wall Mount Heat Pump Replacement (2 units) | 3,220 | - | $ 1,052 | $ 28,000 | 26.6 | 2,129 | Recommended | HVAC |
| 16 | Ocala STEAM Academy | HVAC4 | Replace PTAC with ductless mini split (6 units) | 6,200 | - | $ 2,026 | $ 30,000 | 14.8 | 4,099 | Recommended | HVAC |
| 16 | Ocala STEAM Academy | Ptstat | Install programmable Thermostat | 320 | - | $ 105 | $ 300 | 2.9 | 212 | Recommended | Controls |
| 16 | Ocala STEAM Academy | EMS2 | Upgrade IBEX | 13,439 | 186 | $ 4,625 | $ 162,000 | 35 | 11,060 | Not Recommend | Controls |
| 16 | Ocala STEAM Academy | HVAC6 | Replace Furnace with Condensing Furnace (9 units) | - | 373 | $ 467 | $ 68,880 | >50 yr SPB | 4,364 | Not Recommend | HVAC |
| 16 | Ocala STEAM Academy | HVAC5 | PTAC/Furnace System Electrification (1 RTU, 9 Furnaces, 6 PTAC) | (8,626) | 2,378 | $ 156 | $ 18,000 | >50 yr SPB | 22,097 | Electrification | HVAC |
| 16 | Ocala STEAM Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4733167 | (6,480) | 709 | $ (128) | $ 2,683 | N/A | 4,003 | Electrification | Water Heating |
| 16 | Ocala STEAM Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4862604 | (8,070) | 967 | $ (163) | $ 3,850 | N/A | 5,968 | Electrification | Water Heating |
| 16 | Ocala STEAM Academy | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4862603 | (8,070) | 967 | $ (163) | $ 3,850 | N/A | 5,968 | Electrification | Water Heating |
| 17 | Russo / McEntee Academy | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 383 | $ 1,743 | 5 | 3,186 | Recommended | Kitchen Eq. |
| 17 | Russo / McEntee Academy | HVAC2 | Wall Mount Heat Pump Replacement (15 units) | 28,000 | - | $ 9,558 | $ 240,000 | 25.1 | 18,514 | Recommended | HVAC |
| 17 | Russo / McEntee Academy | HVAC4 | Replace PTAC with ductless mini split (12 units) | 5,063 | - | $ 1,728 | $ 37,500 | 21.7 | 3,347 | Recommended | HVAC |
| 17 | Russo / McEntee Academy | LED1 | Campuswide LED Retrofit | 96,100 | - | $ 32,803 | $ 243,082 | 7.4 | 63,541 | Recommended | Lighting |
| 17 | Russo / McEntee Academy | Ptstat | Install programmable Thermostat | 194 | - | $ 66 | $ 300 | 4.5 | 128 | Recommended | Controls |
| 17 | Russo / McEntee Academy | EMS4 | Upgrade EMS at modernization | 1,086 | 44 | $ 424 | $ 132,000 | > 50 yrs | 1,232 | Not Recommend | Controls |
| 17 | Russo / McEntee Academy | HVAC11 | Split System Replacement (1 units) | 1,429 | - | $ 488 | $ 16,000 | 32.8 | 945 | Not Recommend | HVAC |
| 17 | Russo / McEntee Academy | HVAC6 | Replace Furnace with Condensing Furnace (1 units) | - | 42 | $ 51 | $ 7,440 | >50 yr SPB | 487 | Not Recommend | HVAC |
| 17 | Russo / McEntee Academy | HVAC8 | Replace Unit Heater (Reznor) with Gas UH (2 units) | - | 92 | $ 113 | $ 16,000 | >50 yr SPB | 1,080 | Not Recommend | HVAC |
| 17 | Russo / McEntee Academy | HVAC5 | PTAC/Furnace System Electrification (1 Furnace, 2 Unit Heaters, 12 P | (9,434) | 2,599 | $ (50) | $ 19,000 | n/a | 24,147 | Electrification | HVAC |
| 17 | Russo / McEntee Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4744425 | (6,480) | 709 | $ (658) | $ 3,213 | N/A | 4,003 | Electrification | Water Heating |
| 17 | Russo / McEntee Academy | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 278 | $ 4,578 | 16 | 2,310 | Alternate | Kitchen Eq. |
| 17 | Russo / McEntee Academy | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 278 | $ 267 | 1 | 2,310 | Alternate | Kitchen Eq. |
| 17 | Russo / McEntee Academy | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 383 | $ 6,054 | 16 | 3,186 | Alternate | Kitchen Eq. |
| 18 | Ryan STEAM Academy | HVAC2 | Wall Mount Heat Pump Replacement (3 units) | 8,400 | - | $ 3,064 | $ 42,000 | 13.7 | 5,554 | Recommended | HVAC |
| 18 | Ryan STEAM Academy | HVAC4 | Replace PTAC with ductless mini split (24 units) | 19,440 | - | $ 7,090 | $ 90,000 | 12.7 | 12,854 | Recommended | HVAC |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | Ryan STEAM Academy | LED1 | Campuswide LED Retrofit | 66,740 | - | $ 24,342 | $ 224,505 | 9.2 | 44,129 | Recommended | Lighting |
| 18 | Ryan STEAM Academy | Ptstat | Install programmable Thermostat | 165 | - | $ 60 | $ 300 | 5.0 | 109 | Recommended | Controls |
| 18 | Ryan STEAM Academy | EMS4 | Upgrade EMS at modernization | 1,090 | 56 | $ 470 | $ 152,000 | > 50 yrs | 1,375 | Not Recommend | Controls |
| 18 | Ryan STEAM Academy | HVAC3 | Package Unit Replacement (2 units) | 4,571 | 51 | $ 1,733 | $ 32,000 | 18.5 | 3,621 | Not Recommend | HVAC |
| 18 | Ryan STEAM Academy | HVAC8 | Replace Unit Heater (Reznor) with Gas UH (2 units) | - | 199 | $ 256 | $ 16,000 | >50 yr SPB | 2,326 | Not Recommend | HVAC |
| 18 | Ryan STEAM Academy | HVAC5 | PTAC/Furnace System Electrification (18 Furnaces, 3 Unit Heaters, 2 | 1,698 | 3,735 | $ 5,426 | $ 44,000 | 8.1 | 44,778 | Electrification | HVAC |
| 18 | Ryan STEAM Academy | HVAC9 | Replace Unit Heater (Reznor) with Electric UH (1 units) | (789) | 27 | $ (253) | $ 2,500 | n/a | (207) | Electrification | HVAC |
| 18 | Ryan STEAM Academy | WH3 | Replace with 50 Gal Heat Pump Water Heater, FCA ID 4559738 | (6,480) | 709 | $ (915) | $ 3,470 | N/A | 4,003 | Electrification | Water Heating |
| 19 | San Antonio Elementary | HVAC10 | Replace ductless mini split (7 units) | 7,518 | - | $ 2,430 | $ 23,750 | 9.8 | 4,971 | Recommended | HVAC |
| 19 | San Antonio Elementary | LED1 | Campuswide LED Retrofit | 92,794 | - | $ 29,994 | $ 254,680 | 8.5 | 61,355 | Recommended | Lighting |
| 19 | San Antonio Elementary | Ptstat | Install programmable Thermostat | 255 | - | $ 82 | $ 300 | 3.6 | 169 | Recommended | Controls |
| 19 | San Antonio Elementary | EMS3 | Upgrade BACtalk | 7,344 | 417 | $ 2,863 | $ 64,000 | 22 | 9,730 | Not Recommend | Controls |
| 19 | San Antonio Elementary | HVAC3 | Package Unit Replacement (28 units) | 41,314 | 324 | $ 13,735 | $ 482,000 | 35.1 | 31,109 | Not Recommend | HVAC |
| 19 | San Antonio Elementary | HVAC12 | Package Unit/Split System Electrification (28 RTUs) | 12,658 | 6,651 | $ 11,892 | $ 120,500 | 10.1 | 86,111 | Electrification | HVAC |
| 19 | San Antonio Elementary | WH5 | Replace with 75 Gal Heat Pump Water Heater, FCA ID 4581654 | (8,070) | 967 | $ (1,260) | $ 4,946 | N/A | 5,968 | Electrification | Water Heating |
| 20 | LUCHA Elementary | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $ 373 | $ 1,743 | 5 | 3,186 | Recommended | Kitchen Eq. |
| 20 | LUCHA Elementary | HVAC10 | Replace ductless mini split (1 units) | 2,271 | - | $ 796 | $ 6,250 | 7.8 | 1,501 | Recommended | HVAC |
| 20 | LUCHA Elementary | LED1 | Campuswide LED Retrofit | 53,477 | - | $ 18,757 | $ 98,676 | 5.3 | 35,359 | Recommended | Lighting |
| 20 | LUCHA Elementary | Ptstat | Install programmable Thermostat | 346 | - | $ 121 | $ 300 | 2.5 | 229 | Recommended | Controls |
| 20 | LUCHA Elementary | EMS3 | Upgrade BACtalk | 4,152 | 46 | $ 1,510 | $ 32,500 | 22 | 3,283 | Not Recommend | Controls |
| 20 | LUCHA Elementary | HVAC11 | Split System Replacement (1 units) | 5,657 | - | $ 1,984 | $ 60,000 | 30.2 | 3,741 | Not Recommend | HVAC |
| 20 | LUCHA Elementary | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4471418 | (6,480) | 707 | $ (187) | $ 2,743 | N/A | 3,980 | Electrification | Water Heating |
| 20 | LUCHA Elementary | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $ 270 | $ 4,578 | 17 | 2,310 | Alternate | Kitchen Eq. |
| 20 | LUCHA Elementary | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $ 270 | $ 267 | 1 | 2,310 | Alternate | Kitchen Eq. |
| 20 | LUCHA Elementary | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $ 373 | $ 6,054 | 16 | 3,186 | Alternate | Kitchen Eq. |
| 21 | Sylvia Cassell Elementary | HVAC1 | Package/Cabinet Heat Pump Replacement (24 units) | 50,182 | - | $ 18,157 | $ 384,000 | 21.1 | 33,180 | Recommended | HVAC |
| 21 | Sylvia Cassell Elementary | HVAC2 | Wall Mount Heat Pump Replacement (6 units) | 8,400 | - | $ 3,039 | $ 84,000 | 27.6 | 5,554 | Recommended | HVAC |
| 21 | Sylvia Cassell Elementary | Ptstat | Install programmable Thermostat | 164 | - | $ 59 | $ 300 | 5.1 | 108 | Recommended | Controls |
| 21 | Sylvia Cassell Elementary | EMS2 | Upgrade IBEX | 7,870 | - | $ 2,848 | $ 183,000 | > 50 yrs | 5,204 | Not Recommend | Controls |
| 22 | Ben Painter Elementary | HVAC10 | Replace ductless mini split (1 units) | 850 | - | $ 299 | $ 3,750 | 12.5 | 562 | Recommended | HVAC |
| 22 | Ben Painter Elementary | HVAC2 | Wall Mount Heat Pump Replacement (13 units) | 23,800 | - | $ 8,376 | $ 208,000 | 24.8 | 15,737 | Recommended | HVAC |
| 22 | Ben Painter Elementary | LED1 | Campuswide LED Retrofit | 59,960 | - | $ 21,102 | $ 197,547 | 9.4 | 39,646 | Recommended | Lighting |
| 22 | Ben Painter Elementary | Ptstat | Install programmable Thermostat | 171 | - | $ 60 | $ 300 | 5.0 | 113 | Recommended | Controls |
| 22 | Ben Painter Elementary | EMS2 | Upgrade IBEX | 6,670 | 84 | $ 2,456 | $ 151,500 | > 50 yrs | 5,392 | Not Recommend | Controls |
| 22 | Ben Painter Elementary | HVAC11 | Split System Replacement (20 units) | 9,874 | 125 | $ 3,637 | $ 189,000 | >50 yr SPB | 7,990 | Not Recommend | HVAC |
| 22 | Ben Painter Elementary | HVAC3 | Package Unit Replacement (2 units) | 2,667 | 11 | $ 952 | $ 28,000 | 29.4 | 1,888 | Not Recommend | HVAC |
| 22 | Ben Painter Elementary | HVAC12 | Package Unit/Split System Electrification (10 Split Systems) | 10,758 | 875 | $ 4,922 | $ 43,000 | 8.7 | 17,341 | Electrification | HVAC |
| 22 | Ben Painter Elementary | HVAC9 | Replace Unit Heater (Reznor) with Electric UH (2 units) | (2,818) | 96 | $ (867) | $ 16,000 | n/a | (739) | Electrification | HVAC |
| 23 | William Sheppard Middle | HVAC1 | Package/Cabinet Heat Pump Replacement (40 units) | 93,273 | - | $ 32,715 | $ 648,000 | 19.8 | 61,672 | Recommended | HVAC |
| 23 | William Sheppard Middle | HVAC10 | Replace ductless mini split (2 units) | 1,590 | - | $ 558 | $ 13,000 | 23.3 | 1,052 | Recommended | HVAC |
| 23 | William Sheppard Middle | HVAC4 | Replace PTAC with ductless mini split (1 units) | 720 | - | $ 253 | $ 5,000 | 19.8 | 476 | Recommended | HVAC |
| 23 | William Sheppard Middle | LED1 | Campuswide LED Retrofit | 114,827 | - | $ 40,275 | $ 338,426 | 8.4 | 75,924 | Recommended | Lighting |
| 23 | William Sheppard Middle | Ptstat | Install programmable Thermostat | 291 | - | $ 102 | $ 300 | 2.9 | 193 | Recommended | Controls |
| 23 | William Sheppard Middle | B2 | Replace with 96% Efficient Boiler 1470 MBH Boiler, FCA ID 4788751 | - | 254 | $ 298 | $ 18,228 | > 50 yrs | 2,971 | Not Recommend | Boilers |
| 23 | William Sheppard Middle | EMS3 | Upgrade BACtalk | 10,026 | 78 | $ 3,608 | $ 74,500 | 21 | 7,541 | Not Recommend | Controls |
| 23 | William Sheppard Middle | HVAC6 | Replace Furnace with Condensing Furnace (3 units) | - | 154 | $ 180 | $ 45,360 | >50 yr SPB | 1,798 | Not Recommend | HVAC |
| 23 | William Sheppard Middle | B3 | Electrify Boiler with AWHP 1470 MBH Boiler, FCA ID 4788751 | (18,166) | 1,550 | $ (4,554) | $ 22,050 | n/a | 6,107 | Electrification | Boilers |
| 23 | William Sheppard Middle | HVAC7 | Furnace Electrification (3 Furnaces, 1 S/S) | (7,411) | 1,304 | $ (1,070) | $ 32,000 | n/a | 10,341 | Electrification | HVAC |
| 23 | William Sheppard Middle | WH2 | Replace with 40 Gal Heat Pump Water Heater, FCA ID 4788768 | (6,480) | 707 | $ (304) | $ 2,860 | N/A | 3,980 | Electrification | Water Heating |
| 23 | William Sheppard Middle | B1 | Replace Boiler with 90% Efficient Boiler 1470 MBH Boiler, FCA ID 478 | - | 155 | $ 182 | $ 57,393 | > 50 yrs | 1,812 | Alternate | Boilers |
| **Subtotal** | | | | **2,185,993** | **121,725** | **$ 937,197** | **$ 19,431,040** | **21** | **2,868,263** | | |

# 9. Appendix 2 – Savings Calculations

| | | | | | | | | | | Baseline | | | | | | | Proposed | | Savings & Costs | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Total Capacities | | | Cooling | Heating | Heating | Cooling | Heating | Heating | | | | | | Electricity | Gas | Bill | Project | SPB | Carbon |
| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Property | System | Type | MBH | SEER | HSPF | Eff | kWh | kWh | Therms | Measure | Project Name | kW/yr | IN/yr | kW/yr | IN/yr | $/yr | Cost | Yrs | Savings |
| 1 | Adelante Academy - Ridgemont | Airedale | CMH 4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | 5,067 | 1,067 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 3,345 | - | 2,788 | - | $972 22 | $16,000 | 16 5 | 1,843 

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Process | Baseline System | Total Capacities Tons | MBH | Htg kW | Cooling SEER | Heating HSPF | Heating EFF | Baseline Cooling kWh | Baseline Heating kWh | Baseline Heating Therms | Measure | Project Name | Proposed kWh/yr | Proposed therms/yr | Savings & Costs Electricity kWh/yr | Gas therms/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | | | null | 1 | EA | Adequate | HVAC4 | PTAC | 2 | 0 | | | 10 na | na | 2,160 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4576653) | 1,350 | - | 810 | - | $270.47 | $5,000 | 18.5 | 536 |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PURY-P120TLMU | 10 TON | 1 | EA | Adequate | None | Ductless | 10 | 0 | | | 14 | 14 na | 7,714 | 1,714 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PURY-P120TLMU | 10 TON | 1 | EA | Adequate | None | Ductless | 10 | 0 | | | 14 | 14 na | 7,714 | 1,714 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PURY-P168TLMU | 14 TON | 1 | EA | Adequate | None | Ductless | 14 | 0 | | | 14 | 14 na | 10,800 | 2,400 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PURY-P168TLMU | 14 TON | 1 | EA | Adequate | None | Ductless | 14 | 0 | | | 14 | 14 na | 10,800 | 2,400 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 14 | 0 | | | 14 | 14 na | 10,800 | 2,400 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 14 TON | 1 | EA | Adequate | None | Ductless | 14 | 0 | | | 14 | 14 na | 10,800 | 2,400 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PURY-P120TLMU | 10 TON | 1 | EA | Adequate | None | Ductless | 10 | 0 | | | 14 | 14 na | 7,714 | 1,714 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PURY-P120TLMU | 10 TON | 1 | EA | Adequate | None | Ductless | 10 | 0 | | | 14 | 14 na | 7,714 | 1,714 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 10 TON | 1 | EA | Adequate | None | Ductless | 0 | 0 | | | 14 | 14 na | - | - | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Bard | W/H48Z-A1OVX44 | TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | 4,800 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576597) | 3,520 | - | 2,347 | - | $783.59 | $16,000 | 20.4 | 1,552 |
| | 3 A. J. Dorsa Elementary | Bard | W/H48Z-A1OVX44 | 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | 4,800 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576920) | 3,520 | - | 2,347 | - | $783.59 | $16,000 | 20.4 | 1,552 |
| | 3 A. J. Dorsa Elementary | Bard | WH42118WX4XX | 3.5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 4,200 | 933 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576738) | 3,080 | - | 2,053 | - | $685.64 | $14,000 | 20.4 | 1,358 |
| | 3 A. J. Dorsa Elementary | Bard | Illegible | 3.5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 4,200 | 933 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576748) | 3,080 | - | 2,053 | - | $685.64 | $14,000 | 20.4 | 1,358 |
| | 3 A. J. Dorsa Elementary | Bard | 3WH48Z A10XX-4 | TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | 4,800 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576892) | 3,520 | - | 2,347 | - | $783.59 | $16,000 | 20.4 | 1,552 |
| | 3 A. J. Dorsa Elementary | Bard | 3WH48Z A10XX-4 | TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | 4,800 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576742) | 3,520 | - | 2,347 | - | $783.59 | $16,000 | 20.4 | 1,552 |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | Inaccessible | 15 TON | 1 | EA | Adequate | None | Ductless | 15 | 0 | | | 14 | 14 na | 11,571 | 2,571 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PUZ-A12NKA7 | 1 TON | 1 | EA | Adequate | None | Ductless | 1 | 0 | | | 14 | 14 na | 771 | 171 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PUZ-A36NKA7 | 3 TON | 1 | EA | Adequate | None | Ductless | 3 | 0 | | | 14 | 14 na | 2,314 | 514 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | York | YJT1S060A2GEB | 15 TON | 1 | EA | Adequate | None | RTU | 15 | 0 | | | 10 na | na | 16,200 | - | 0.78 | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | Mitsubishi Elec | PUZ-A12NKA7 | 1 TON | 1 | EA | Adequate | None | Ductless | 1 | 0 | | | 14 | 14 na | 771 | 171 | - | | | | | - | - | $0.00 | | | - |
| | 3 A. J. Dorsa Elementary | INTERTHERM | Illegible | 3 TON | 1 | EA | Marginal | HVAC2 | Bard | 3 | 0 | | | 9 | 9 na | 3,600 | 800 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576918) | 2,640 | - | 1,760 | - | $587.69 | $12,000 | 20.4 | 1,164 |
| | 3 A. J. Dorsa Elementary | Bard | Illegible | 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | 4,800 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576693) | 3,520 | - | 2,347 | - | $783.59 | $16,000 | 20.4 | 1,552 |
| | 3 A. J. Dorsa Elementary | Bard | Illegible | 4 TON | 1 | EA | Adequate | HVAC2 | Bard | 4 | 0 | | | 10 | 10 na | 4,320 | 960 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576816) | 3,520 | - | 1,760 | - | $587.69 | $16,000 | 27.2 | 1,164 |
| | 3 A. J. Dorsa Elementary | INTERTHERM | Illegible | 3 TON | 1 | EA | Marginal | HVAC2 | Bard | 3 | 0 | | | 9 | 9 na | 3,600 | 800 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4576657) | 2,640 | - | 1,760 | - | $587.69 | $12,000 | 20.4 | 1,164 |
| | 3 A. J. Dorsa Elementary | Bard | Illegible | 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | 4,800 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (3 Bard FCA ID 4576864) | 3,520 | - | 2,347 | - | $783.59 | $16,000 | 20.4 | 1,552 |
| | 3 A. J. Dorsa Elementary | Daitech | D AHU6 | 6500 CFM | 1 | EA | Good | None | AHU | 0 | 0 | na | na | na | | - | - | - | | | | | - | - | $0.00 | | | - |
| | 4 Aptitud Academy | Reznor | CAUA150 | 150 MBH | 1 | EA | Poor | HVAC6 | Unit Heater | 0 | 150 | na | na | | 0.75 | - | - | 200 | HVAC6 | Replace Furnace with Condensing Furnace (1 Unit Heater FCA ID 45 | - | 167 | - | 33 | $44.79 | $7,440 | 166.1 | 390 |
| | 4 Aptitud Academy | Reznor | CAUA350 | 350 MBH | 1 | EA | Poor | HVAC6 | Unit Heater | 0 | 350 | na | na | | 0.75 | - | - | 467 | HVAC6 | Replace Furnace with Condensing Furnace (1 Unit Heater FCA ID 45 | - | 389 | - | 78 | $104.52 | $24,000 | 229.6 | 909 |
| | 4 Aptitud Academy | Airedale | CMH-4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 4,800 | 533 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,909 | - | 2,424 | - | $849.28 | $16,000 | 18.0 | 1,603 |
| | 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| | 4 Aptitud Academy | Sanyo | CH1822 | 2 TON | 1 | EA | Marginal | HVAC11 | Split System-H | 2 | 0 | | | 9 na | na | 2,400 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4541 | 1,543 | - | 857 | - | $314.42 | $8,000 | 25.4 | 567 |
| | 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| | 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| | 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| | 4 Aptitud Academy | Airedale | CMH-4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 4,800 | 533 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,909 | - | 2,424 | - | $849.28 | $16,000 | 18.0 | 1,603 |
| | 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| | 4 Aptitud Academy | Airedale | CMH-4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 4,800 | 533 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,909 | - | 2,424 | - | $849.28 | $16,000 | 18.0 | 1,603 |
| | 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| | 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| | 4 Aptitud Academy | Airedale | CMH-4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 4,800 | 533 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,909 | - | 2,424 | - | $849.28 | $16,000 | 18.0 | 1,603 |
| | 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| | 4 Aptitud Academy | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 4,800 | 533 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,909 | - | 2,424 | - | $849.28 | $16,000 | 18.0 | 1,603 |
| | 4 Aptitud Academy | Sanyo | C1822 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,200 | 133 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4540914) | 675 | - | 658 | - | $241.49 | $2,500 | 10.4 | 435 |
| | 4 Aptitud Academy | Airedale | CMH-4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 4,800 | 533 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,909 | - | 2,424 | - | $849.28 | $16,000 | 18.0 | 1,603 |

| Site / School | Make | Model | Capacity | Quantity | Unit | Condition | Project | Baseline System | Total Capacities Tons | MBH | Htg kW | Cooling SEER | Heating HSPF | Heating Eff | Baseline Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed kW/yr | kW/yr | Savings & Costs Electricity kW/yr | Gas th/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | IIVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| 4 Aptitud Academy | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | IIVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 4,800 | 533 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,909 | - | 2,424 | - | $889.28 | $16,000 | 18.0 | 1,603 |
| 4 Aptitud Academy | Airedale | CMH-3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | 0 | | | 9 | 9 na | 3,600 | 400 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,182 | - | 1,818 | - | $666.96 | $12,000 | 18.0 | 1,202 |
| 4 Aptitud Academy | Bard | 42WH1 A08CDL3 | 3.5 TON | 1 | EA | Poor | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 4,200 | 467 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4540912) | 2,800 | - | 1,867 | - | $684.74 | $14,000 | 20.4 | 1,234 |
| 4 Aptitud Academy | Bard | WH421 A10UXF3 | 3.5 TON | 1 | EA | Poor | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 4,200 | 467 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4541051) | 2,800 | - | 1,867 | - | $684.74 | $14,000 | 20.4 | 1,234 |
| 4 Aptitud Academy | Bard | WH421AQ08UX | 3.5 TON | 1 | EA | Poor | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 4,200 | 467 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4540960) | 2,800 | - | 1,867 | - | $684.74 | $14,000 | 20.4 | 1,234 |
| 4 Aptitud Academy | Rheem | Illegible | 5 TON | 1 | EA | Poor | HVAC3,12 | RTU | 5 | 75 | | | 9 na | 0.75 | 6,000 | - | 100 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4541061) | 3,857 | 91 | 2,143 | 9 | $797.53 | $20,000 | 25.1 | 1,517 |
| 22 Ben Painter Elementary | International C | GNLD7SN12C3 | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System H | 0 | 75 | na | | na | 0.75 | - | - | 75 | HVAC11 | Split System Replacement (1 Split System Heating Side FCA ID 4489 | - | 63 | - | 13 | $16.23 | $4,500 | 277.3 | 146 |
| 22 Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System H | 0 | 75 | na | | na | 0.75 | - | - | 75 | HVAC11 | Split System Replacement (1 Split System Heating Side FCA ID 4489 | - | 63 | - | 13 | $16.23 | $4,500 | 277.3 | 146 |
| 22 Ben Painter Elementary | International C | | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System H | 0 | 75 | na | | na | 0.75 | - | - | 75 | HVAC11 | Split System Replacement (1 Split System Heating Side FCA ID 4489 | - | 63 | - | 13 | $16.23 | $4,500 | 277.3 | 146 |
| 22 Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System H | 0 | 75 | na | | na | 0.75 | - | - | 75 | HVAC11 | Split System Replacement (1 Split System Heating Side FCA ID 4489 | - | 63 | - | 13 | $16.23 | $4,500 | 277.3 | 146 |
| 22 Ben Painter Elementary | International C | GNLD7SN12C3 | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System H | 0 | 75 | na | | na | 0.75 | - | - | 75 | HVAC11 | Split System Replacement (1 Split System Heating Side FCA ID 4489 | - | 63 | - | 13 | $16.23 | $4,500 | 277.3 | 146 |
| 22 Ben Painter Elementary | International C | No tag/plate for

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Total Capacities Tons | MBH | mg kW | Cooling SEER | Heating HSPF | Heating Eff | Baseline Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed kWh/yr | Proposed thr | Savings & Costs Electricity kWh/yr | Gas thr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFAH2522R2 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | | 10 na | na | 2,880 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4731129) | 1,800 | - | 1,080 | - | $405.37 | $5,000 | 12.3 | 714 |
| 6 | Adelante II Academy - Cinderella | Frig daire | FFAH2522R2 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | | 10 na | na | 2,880 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4731103) | 1,800 | - | 1,080 | - | $405.37 | $5,000 | 12.3 | 714 |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFAH2522R2 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | | 10 na | na | 2,880 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4731102) | 1,800 | - | 1,080 | - | $405.37 | $5,000 | 12.3 | 714 |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFAH2522R2 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | | 10 na | na | 2,880 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4731156) | 1,800 | - | 1,080 | - | $405.37 | $5,000 | 12.3 | 714 |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R2 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | 2,160 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4731143) | 1,350 | - | 810 | - | $304.03 | $3,750 | 12.3 | 536 |
| 6 | Adelante II Academy - Cinderella | | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | 2,160 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4731174) | 1,350 | - | 810 | - | $304.03 | $3,750 | 12.3 | 536 |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R2 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | 2,160 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4731130) | 1,350 | - | 810 | - | $304.03 | $3,750 | 12.3 | 536 |
| 6 | Adelante II Academy - Cinderella | Bard | Inaccessible | 3.5 TON | 1 | EA | Adequate | HVAC2 | Bard | 3.5 | 0 | | | 10 | 10 na | 5,040 | 1,260 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4731194) | 4,200 | - | 2,100 | - | $788.22 | $14,000 | 17.8 | 1,389 |
| 6 | Adelante II Academy - Cinderella | Bard | Inaccessible | 3.5 TON | 1 | EA | Adequate | HVAC2 | Bard | 3.5 | 0 | | | 10 | 10 na | 5,040 | 1,260 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4731180) | 4,200 | - | 2,100 | - | $788.22 | $14,000 | 17.8 | 1,389 |
| 6 | Adelante II Academy - Cinderella | Bard | Inaccessible | 3.5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 5,600 | 1,400 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4731189) | 4,200 | - | 2,800 | - | $1,050.96 | $14,000 | 13.3 | 1,851 |
| 6 | Adelante II Academy - Cinderella | Bard | Inaccessible | 3.5 TON | 1 | EA | Adequate | HVAC2 | Bard | 3.5 | 0 | | | 10 | 10 na | 5,040 | 1,260 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4731183) | 4,200 | - | 2,100 | - | $788.22 | $14,000 | 17.8 | 1,389 |
| 6 | Adelante II Academy - Cinderella | Bard | Inaccessible | 3.5 TON | 1 | EA | Adequate | HVAC2 | Bard | 3.5 | 0 | | | 10 | 10 na | 5,040 | 1,260 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4731187) | 4,200 | - | 2,100 | - | $788.22 | $14,000 | 17.8 | 1,389 |
| 6 | Adelante II Academy - Cinderella | Kennard/Nelso | 2WHD110 | 3000 CFM | 1 | EA | Marginal | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | - | - | $0.00 | | | - |
| 6 | Adelante II Academy - Cinderella | | Inaccessible | 3000 CFM | 1 | EA | Marginal | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | - | - | $0.00 | | | - |
| 6 | Adelante II Academy - Cinderella | | No tag/plate la | 3000 CFM | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | - | - | $0.00 | | | - |
| 7 | Clyde L. Fischer Middle | EMI | S1HA2000D101 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4294646) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1HA2000D101 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4294654) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1HA2000D101 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4294661) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1HA2000D101 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4294647) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | Trane | 2TTA3060A400C | 2.5 TON | 1 | EA | Marginal | HVAC11,12 | Split System H | 2.5 | 0 | | | 9 na | na | 2,667 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4294 | 1,714 | - | 952 | - | $294.95 | $10,000 | 33.9 | 630 |
| 7 | Clyde L. Fischer Middle | EMI | S1HA2000D101 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4294657) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA4000D000 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4296974) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA8000D000 | 2 TON | 1 | EA | Marginal | HVAC11,12 | Split System H | 2 | 0 | | | 9 na | na | 2,133 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4294 | 1,371 | - | 762 | - | $235.96 | $8,000 | 33.9 | 504 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA8000D000 | 2 TON | 1 | EA | Marginal | HVAC11,12 | Split System H | 2 | 0 | | | 9 na | na | 2,133 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4296 | 1,371 | - | 762 | - | $235.96 | $8,000 | 33.9 | 504 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA2000D000 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4294732) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA2000D000 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4297038) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA2000D000 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4297036) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA2000D000 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4297004) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA4000D000 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4297546) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | EMI | S1CA4000D000 | 1 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | 1,067 | 400 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4297560) | 600 | - | 867 | - | $268.40 | $2,500 | 9.3 | 573 |
| 7 | Clyde L. Fischer Middle | Bard | No tag/plate fa | 3.5 - 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 3,733 | 1,400 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4298520) | 3,080 | - | 2,053 | - | $635.91 | $14,000 | 22.0 | 1,358 |
| 7 | Clyde L. Fischer Middle | Bard | WH421 A05XX43 | 3.5 - 4 TON | 1 | EA | Adequate | HVAC2 | Bard | 3.5 | 0 | | | 10 | 10 na | 3,360 | 1,260 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 5348319) | 3,080 | - | 1,540 | - | $476.93 | $14,000 | 29.4 | 1,018 |
| 7 | Clyde L. Fischer Middle | Bard | WH421 A05XX43 | 3.5 - 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 3,733 | 1,400 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4298511) | 3,080 | - | 2,053 | - | $635.91 | $14,000 | 22.0 | 1,358 |
| 7 | Clyde L. Fischer Middle | Bard | WH421 A05XX43 | 3.5 - 4 TON | 1 | EA | Adequate | HVAC2 | Bard | 3.5 | 0 | | | 10 | 10 na | 3,360 | 1,260 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 5348317) | 3,080 | - | 1,540 | - | $476.93 | $14,000 | 29.4 | 1,018 |
| 7 | Clyde L. Fischer Middle | Bard | WH421 A05XX43 | 3.5 - 4 TON | 1 | EA | Adequate | HVAC2 | Bard | 3.5 | 0 | | | 10 | 10 na | 3,360 | 1,260 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 5348318) | 3,080 | - | 1,540 | - | $476.93 | $14,000 | 29.4 | 1,018 |
| 7 | Clyde L. Fischer Middle | Bard | WH421 A04XX43 | 3.5 - 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | 3,733 | 1,400 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4298647) | 3,080 | - | 2,053 | - | $635.91 | $14,000 | 22.0 | 1,358 |
| 7 | Clyde L. Fischer Middle | Airedale | CHH3/2 460/41 | B01 - 1200 I | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | $0.00 | | | - |
| 7 | Clyde L. Fischer Middle | Trane | MCCB006JAOA | 2401 - 4000 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | - | - | $0.00 | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHH3/2 460/41 | B01 - 1200 I | 1 | EA | Fair | None | electrification only | 4 | 0 | | | 9.5 | 9.5 na | 4,042 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Trane | MCCA021GAP0 | 10001 - 150 | 1 | EA | Marginal | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | - | - | $0.00 | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Trane | MCCA017GAP0 | 8001 - 1000 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | - | - | $0.00 | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHH3/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHH3/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHH5/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Airedale | CHH5/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 7 | Clyde L. Fischer Middle | Trane | MCCA017GAP0 | 8001 - 1000 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | - | - | $0.00 | | | - |
| 7 | Clyde L. Fischer Middle | Trane | MCCA019GAP0 | 4001 - 6000 | 1 | EA | Marginal | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | - | - | $0.00 | | | - |
| 7 | Clyde L. Fischer Middle | Trane | TCH211C40BCA | 16 - 20 TON | 1 | EA | Poor | HVAC3,12 | RTU | 20 | 150 | | | 9 na | 0.75 | 21,333 | - | 600 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4297730) | 13,714 | 549 | 7,619 | 51 | $2,419.48 | $60,000 | 33.1 | 5,636 |
| 7 | Clyde L. Fischer Middle | Airedale | CHH5/2 460/41 | 1201 - 1800 | 1 | EA | Adequate | None | electrification only | 4 | 0 | | | 10 | 10 na | 3,840 | - | - | | | | | - | - | | | | - |
| 8 | Donald Meyer Elementary | Hayes | 250SED-VF | null | 1 | EA | Adequate | HVAC6/7 | Furnace | 0 | 250 | | na | na | 0.78 | - | - | 80 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 46641 | - | 69 | - | 11 | $23.72 | $18,000 | 759.0 | 125 |
| 8 | Donald Meyer Elementary | Hayes | 175SED-VF | 175 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 175 | | na | na | 0.75 | - | - | 58 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 46651 | - | 49 | - | 10 | $21.58 | $9,360 | 433.7 | 114 |
| 8 | Donald Meyer Elementary | Hayes | 175SED-VF | 175 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 175 | | na | na | 0.75 | - | - | 58 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 46651 | - | 49 | - | 10 | $21.58 | $9,360 | 433.7 | 114 |
| 8 | Donald Meyer Elementary | | | 55 MBH | 1 | EA | NA | None | Unit Heater | 0 | 55 | | | 0 | 0 | 0.75 | - | - | 18 | | | | | - | $0.00 | | | - |
| 8 | Donald Meyer Elementary | | | null | 5 | EA | Marginal | HVAC4 | PTAC | 10 | 0 | | | 9 na | na | 7,333 | - | - | HVAC4 | Replace PTAC with ductless mini split (5 PTAC FCA ID 4564363) | 4,125 | | 3,208 | | $1,264.45 | $25,000 | 19.7 | 2,171 |
| 8 | Donald Meyer Elementary | Airedale | CMH 5 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH R | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH 4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH 4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH 4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH R | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH 4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH 4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH 4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Project | Baseline System | Total Capacities Tons | MBH | Htg kW | Cooling SEER | Baseline Heating HSPF | Heating Eff | Heating Therms | Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed kWh/yr | Proposed therm/yr | Savings & Costs Electricity kWh/yr | Gas therm/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | Airedale | CMH-4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 2,933 | 133 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 1,673 | - | 1,394 | - | $551.11 | $16,000 | 29.0 | 922 |
| 8 | Donald Meyer Elementary | | | null | 2 | EA | Marginal | HVAC4 | PTAC | 4 | 0 | | | 9 na | na | | 2,933 | - | - | HVAC4 | Replace PTAC with ductless mini split (2 PTAC FCA ID 4661559) | 1,650 | - | 1,283 | - | $507.88 | $10,000 | 19.7 | 849 |
| 8 | Donald Meyer Elementary | Bard | Not a/plate fo | 4 TON | 1 | EA | Adequate | HVAC2 | Bard | 4 | 0 | | | 10 | 10 na | | 2,640 | 120 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4668463) | 1,840 | - | 920 | - | $363.73 | $16,000 | 44.0 | 608 |
| 8 | Donald Meyer Elementary | Hayes | 280VF232-3 | null | 1 | EA | Adequate | None | AHU | 0 | 0 | na | | na | na | | - | - | - | | | | | | | $0.00 | | | - |
| 8 | Donald Meyer Elementary | Bard | WH42I | 3.5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | | 2,567 | 117 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4669266) | 1,610 | - | 1,073 | - | $424.35 | $14,000 | 33.0 | 710 |
| 8 | Donald Meyer Elementary | Bard | WH42I | 3.5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | | 2,567 | 117 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4669264) | 1,610 | - | 1,073 | - | $424.35 | $14,000 | 33.0 | 710 |
| 8 | Donald Meyer Elementary | Bard | WH42I | 3.5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 na | | 2,567 | 117 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4669262) | 1,610 | - | 1,073 | - | $424.35 | $14,000 | 33.0 | 710 |
| 8 | Donald Meyer Elementary | Hayes | 30543-12 | 6000 CFM | 1 | EA | Marginal | None | AHU | 0 | 0 | na | | na | na | | - | - | - | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | null | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | null | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | null | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 128 | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Trane | null | null | 1 | EA | Adequate | None | Unit Heater | 0 | 0 | | 7.5 | 0 | 12 | 0 | - | 1,500 | - | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | ITT REZNOR | null | null | 1 | EA | Adequate | None | Unit Heater | 0 | 0 | | 7.5 | 0 | 12 | 0 | - | 1,500 | - | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | ITT REZNOR | null | null | 1 | EA | Adequate | None | Unit Heater | 0 | 0 | | 7.5 | 0 | 12 | 0 | - | 1,500 | - | | | | | | | $0.00 | | | - |
| 9 | Horace Cureton Elementary | Fredrich | null | null | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589709) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Barb Co. | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4589736) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Fredrich | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589738) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Frigidaire | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589734) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Frigidaire | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589720) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Frigidaire | | 1 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1 | 0 | | | 10 na | na | | 780 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589648) | 488 | - | 293 | - | $100.53 | $2,500 | 24.9 | 193 |
| 9 | Horace Cureton Elementary | Fredrich | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589636) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Frigidaire | | 1 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1 | 0 | | | 10 na | na | | 780 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589644) | 488 | - | 293 | - | $100.53 | $2,500 | 24.9 | 193 |
| 9 | Horace Cureton Elementary | Fredrich | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589643) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | null | null | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4587054) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4587053) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4587070) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | | 1 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1 | 0 | | | 10 na | na | | 780 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4587066) | 488 | - | 293 | - | $100.53 | $2,500 | 24.9 | 193 |
| 9 | Horace Cureton Elementary | Frigidaire | null | null | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589705) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | null | null | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589692) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Frigidaire | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589706) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589649) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | | 1 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1 | 0 | | | 10 na | na | | 780 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589662) | 488 | - | 293 | - | $100.53 | $2,500 | 24.9 | 193 |
| 9 | Horace Cureton Elementary | Fredrich | null | null | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589678) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589651) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | | 1 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1 | 0 | | | 10 na | na | | 780 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589676) | 488 | - | 293 | - | $100.53 | $2,500 | 24.9 | 193 |
| 9 | Horace Cureton Elementary | Fredrich | null | null | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589704) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | null | null | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589719) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | null | null | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589723) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Fredrich | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | | 10 na | na | | 1,170 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4589593) | 731 | - | 439 | - | $150.79 | $3,750 | 24.9 | 290 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586872) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Wall-King | Inaccessible | null | 1 | EA | Poor | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586875) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586837) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586840) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586843) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586836) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586858) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586847) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586853) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586841) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586860) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586838) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 9 | Horace Cureton Elementary | Bard | Inaccessible | null | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | | 9 | 9 na | | 3,467 | 1,067 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4586839) | 2,720 | - | 1,813 | - | $623.22 | $16,000 | 25.7 | 1,199 |
| 10 | Joseph George Middle | Carrier | 58PAV090-14 | 80 MBH | 1 | EA | Poor | HVAC6/7 | Furnace | 0 | 80 | na | | na | | 0.75 | - | - | 160 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48703 | - | 131 | - | 27 | $33.03 | $5,040 | 152.6 | 312 |
| 10 | Joseph George Middle | Carrier | Illegible | 80 MBH | 1 | EA | Poor | HVAC6/7 | Furnace | 0 | 80 | na | | na | | 0.75 | - | - | 160 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48703 | - | 133 | - | 27 | $33.03 | $5,040 | 152.6 | 312 |
| 10 | Joseph George Middle | Armstrong Air | 1Y25*168DE01K | 50 MBH | 1 | EA | Adequate | None | Furnace | 0 | 50 | na | | na | | 0.78 | - | - | 96 | | | | | | | $0.00 | | | - |
| 10 | Joseph George Middle | Carrier | | 135 MBH | 1 | EA | Poor | HVAC6/7 | Furnace | 0 | 135 | na | | na | | 0.75 | - | - | 270 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48837 | - | 225 | - | 45 | $55.73 | $7,440 | 133.5 | 526 |
| 10 | Joseph George Middle | Carrier | | 135 MBH | 1 | EA | Poor | HVAC6/7 | Furnace | 0 | 135 | na | | na | | 0.75 | - | - | 270 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48837 | - | 225 | - | 45 | $55.73 | $7,440 | 133.5 | 526 |
| 10 | Joseph George Middle | Carrier | Inaccessible | 135 MBH | 1 | EA | Poor | HVAC6/7 | Furnace | 0 | 135 | na | | na | | 0.75 | - | - | 270 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48837 | - | 225 | - | 45 | $55.73 | $7,440 | 133.5 | 526 |
| 10 | Joseph George Middle | Carrier | 58RAV135-20 | 135 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 135 | na | | na | | 0.75 | - | - | 270 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48704 | - | 225 | - | 45 | $55.73 | $7,440 | 133.5 | 526 |
| 10 | Joseph George Middle | Carrier | 58RAV135-20 | 135 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 135 | na | | na | | 0.75 | - | - | 270 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48704 | - | 225 | - | 45 | $55.73 | $7,440 | 133.5 | 526 |
| 10 | Joseph George Middle | Carrier | 58RAV135-20 | 135 MBH | 1 | EA | Marginal | N/A | Furnace | 0 | 135 | na | | na | | 0.75 | - | - | 270 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48704 | - | 225 | - | 45 | $55.73 | $7,440 | 133.5 | 526 |
| 10 | Joseph George Middle | Carrier | 58RAV135-20 | 135 MBH | 1 | EA | Marginal | Denisa D (C | Furnace | 0 | 135 | na | | na | | 0.75 | - | - | 270 | HVAC6 | Replace Furnace with Condensing Furnace (1 Furnace FCA ID 48704 | - | 225 | - | 45 | $55.73 | $7,440 | 133.5 | 526 |
| 10 | Joseph George Middle | Carrier | 2I58STX090-1E | 88 MBH | 1 | EA | Adequate | None | Furnace | 0 | 88 | na | | na | | 0.78 | - | - | 169 | | | | | | | $0.00 | | | - |
| 10 | Joseph George Middle | Carrier | 2I58STX090-1E | 88 MBH | 1 | EA | Adequate | None | Furnace | 0 | 88 | na | | na | | 0.78 | - | - | 169 | | | | | | | $0.00 | | | - |
| 10 | Joseph George Middle | International C | 2ITCA036AKAS | 3 TON | 1 | EA | Poor | HVAC11,12 | Split System I | 3 | 0 | | | 9 na | na | | 3,200 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4870 | 2,057 | - | 1,143 | - | $388.97 | $12,000 | 30.9 | 756 |
| 10 | Joseph George Middle | International C | 2ITCA036AKAS | 3 TON | 1 | EA | Poor | HVAC11,12 | Split System I | 3 | 0 | | | 9 na | na | | 3,200 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4870 | 2,057 | - | 1,143 | - | $388.97 | $12,000 | 30.9 | 756 |
| 10 | Joseph George Middle | | | null | 1 | EA | Adequate | HVAC4 | PTAC | 1 | 0 | | | 10 na | na | | 960 | - | - | HVAC4 | Replace PTAC with ductless mini split (1 PTAC FCA ID 4870378) | 600 | - | 360 | - | $122.52 | $2,500 | 20.4 | 238 |
| 10 | Joseph George Middle | Airedale | CMH4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783.83 | $16,000 | 20.4 | 1,523 |
| 10 | Joseph George Middle | Mitsubishi | Illegible | 3 TON | 1 | EA | Poor | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 na | | 1,067 | 200 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4878580) | 600 | - | 667 | - | $226.90 | $2,500 | 11.0 | 441 |
| 10 | Joseph George Middle | Airedale | CMH4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783.83 | $16,000 | 20.4 | 1,523 |
| 10 | Joseph George Middle | Armstrong Air | 4SCU16LS160P1 | 5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 5 | 0 | | | 10 na | na | | 4,800 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4878 | 3,429 | - | 1,371 | - | $466.76 | $20,000 | 42.8 | 907 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783.83 | $16,000 | 20.4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783.83 | $16,000 | 20.4 | 1,523 |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Total Capacities Tons | MBH | Mfg kW | Cooling SEER | Heating AFUE | Heating kW | Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed kWh/yr | Proposed kW/yr | Savings & Costs Electricity kWh/yr | Gas therm/yr | Bill $/yr | Project Cost | SIR Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CHM4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Aire-Flo | CMH4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Aire-Flo | CMH4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CMH4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CMH4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CMH4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CMH4 | 4 Ton | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Airedale | CMH4 | 4 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 48 | 2,764 | - | 2,303 | - | $783 83 | $16,000 | 20 4 | 1,523 |
| 10 | Joseph George Middle | Daikin Industrie | MXS24NMVJU | 2 TON | 1 | EA | Adequate | HVAC10 | Ductless | 2 | 0 | | 14 | 14 na | | 1,371 | 257 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4870849) | 1,200 | - | 429 | - | $145 86 | $5,000 | 34 3 | 283 |
| 10 | Joseph George Middle | Goodman | GSX140431KD | 3 5 TON | 1 | EA | Adequate | None | RTU | 3 5 | 0 | | 10 na | | 0 78 | 3,360 | - | - | | | | | - | - | $0 00 | | | - |
| 10 | Joseph George Middle | Carrier | 2I24AAA542A003 | 3 5 TON | 1 | EA | Adequate | None | RTU | 3 5 | 0 | | 10 na | | 0 78 | 3,360 | - | - | | | | | - | - | $0 00 | | | - |
| 10 | Joseph George Middle | Bard | WH6DZ B09XK4 | 5 TON | 1 | EA | Marginal | HVAC2 | Bard | 5 | 0 | | 9 | 9 na | | 5,333 | 1,000 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4883827) | 3,800 | - | 2,533 | - | $862 21 | $20,000 | 23 2 | 1,675 |
| 10 | Joseph George Middle | Bard | WH6DZ B09XK4 | 5 TON | 1 | EA | Marginal | HVAC2 | Bard | 5 | 0 | | 9 | 9 na | | 5,333 | 1,000 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4883841) | 3,800 | - | 2,533 | - | $862 21 | $20,000 | 23 2 | 1,675 |
| 10 | Joseph George Middle | Bard | Illegible | 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4884135) | 3,040 | - | 2,027 | - | $689 77 | $16,000 | 23 2 | 1,340 |
| 10 | Joseph George Middle | Bard | Illegible | 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4884118) | 3,040 | - | 2,027 | - | $689 77 | $16,000 | 23 2 | 1,340 |
| 10 | Joseph George Middle | Bard | Illegible | 4 TON | 1 | EA | Marginal | HVAC2 | Bard | 4 | 0 | | 9 | 9 na | | 4,267 | 800 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4884143) | 3,040 | - | 2,027 | - | $689 77 | $16,000 | 23 2 | 1,340 |
| 11 | Lee Mathson Middle | Carrier | 38HDR030-301 | 2 5 TON | 1 | EA | Marginal | HVAC10 | Ductless | 2.5 | 0 | | 9 | 9 na | | 2,667 | 1,333 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4589759) | 1,500 | - | 2,500 | - | $780 65 | $6,250 | 8.0 | 1,653 |
| 11 | Lee Mathson Middle | Airedale | CIH3/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Carrier | 38MVC018---3 | 1 5 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 5 | 0 | | 9 | 9 na | | 1,600 | 800 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4589776) | 900 | - | 1,500 | - | $468 39 | $3,750 | 8 0 | 992 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH5/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Changeair | Notag/plate fou | 3 5 - 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH5/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Illegible | | 2 5 - 3 TON | 1 | EA | Marginal | HVAC10 | Ductless | 2.5 | 0 | | 9 | 9 na | | 2,667 | 1,333 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4589765) | 1,500 | - | 2,500 | - | $780 65 | $6,250 | 8.0 | 1,653 |
| 11 | Lee Mathson Middle | Illegible | | 2 5 - 3 TON | 1 | EA | Marginal | HVAC10 | Ductless | 2.5 | 0 | | 9 | 9 na | | 2,667 | 1,333 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4589817) | 1,500 | - | 2,500 | - | $780 65 | $6,250 | 8.0 | 1,653 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Carrier | 3811VC018 | 1 5 - 2 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1.5 | 0 | | 9 | 9 na | | 1,600 | 800 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4589849) | 900 | - | 1,500 | - | $468 39 | $3,750 | 8 0 | 992 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Carrier | Illegible | 2 5 - 3 TON | 1 | EA | Marginal | HVAC10 | Ductless | 2.5 | 0 | | 9 | 9 na | | 2,667 | 1,333 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4589888 | 1,500 | - | 2,500 | - | $780 65 | $6,250 | 8.0 | 1,653 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Carrier | Illegible | 2 TON | 1 | EA | Marginal | HVAC10 | Ductless | 2 | 0 | | 9 | 9 na | | 2,133 | 1,067 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4589903) | 1,200 | - | 2,000 | - | $624 52 | $5,000 | 8.0 | 1,322 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $18,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 4 | TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Airedale | CHH4/2-460/41i3 5 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 1,920 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,491 | - | 2,269 | - | $708 55 | $16,000 | 22 6 | 1,500 |
| 11 | Lee Mathson Middle | Carrier | 38MVC018---3 | 1 5 - 2 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 5 | 0 | | 9 | 9 na | | 1,600 | 800 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4589896) | 900 | - | 1,500 | - | $468 39 | $3,750 | 8 0 | 992 |
| 11 | Lee Mathson Middle | | | 2 5 - 3 TON | 2 | EA | Marginal | HVAC10 | Ductless | 5 | 0 | | 9 | 9 na | | 5,333 | 2,667 | - | HVAC10 | Replace ductless mini split (2 Ductless FCA ID 45 78077) | 3,000 | - | 5 000 | - | $1,561 30 | $12,500 | 8 0 | 3,306 |
| 11 | Lee Mathson Middle | Trane | YHC060E4RLA0D | 5 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 na | | 0 78 | 4,800 | - | 385 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4589769) | 3,429 | 366 | 1,371 | 19 | $451 10 | $20,000 | 44 3 | 1,125 |
| 11 | Lee Mathson Middle | Trane | YHC048EARLAC4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 na | | 0 78 | 3,840 | - | 385 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4589758) | 2,743 | 366 | 1,097 | 19 | $363 45 | $16,000 | 43 8 | 945 |
| 11 | Lee Mathson Middle | Trane | YHC060E4RLA0L5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 na | | 0 78 | 4,800 | - | 385 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4589794) | 3,429 | 366 | 1,371 | 19 | $451 10 | $20,000 | 44 3 | 1,125 |
| 11 | Lee Mathson Middle | Trane | YHC060E4RLA0L5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 na | | 0 78 | 4,800 | - | 385 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4589788) | 3,429 | 366 | 1,371 | 19 | $451 10 | $20,000 | 44 3 | 1,125 |
| 11 | Lee Mathson Middle | Trane | YCH211E41QAA | 16 - 20 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 20 | 150 | | 10 na | | 0 78 | 19,200 | - | 769 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4589934) | 13,714 | 732 | 5,486 | 38 | $1,758 69 | $80,000 | 45 5 | 4,066 |
| 12 | Linda Vista Elementary | York | YCJD0254S1S2HA | 3 5 TON | 1 | EA | Adequate | HVAC1,12 | Split System ( | 3.5 | 0 | | 10 na | | na | 3,150 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4540 | 2,250 | - | 900 | - | $368 88 | $14,000 | 38.0 | 595 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH5 | 5 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 5 | 0 | | 10 | 10 na | | 4,500 | 1,350 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 3,545 | - | 2,305 | - | $944 56 | $20,000 | 21 2 | 1,524 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Carrier | Illegible | 2 TON | 1 | EA | Adequate | HVAC10 | Ductless | 2 | 0 | | 14 | 14 na | | 1,286 | 386 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4540780) | 1,125 | - | 546 | - | $223 96 | $5,000 | 22 3 | 361 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,000 | 1,200 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 2,364 | - | $968 78 | $16,000 | 16 5 | 1,563 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Carrier | Illegible | 2 TON | 1 | EA | Adequate | HVAC10 | Ductless | 2 | 0 | | 14 | 14 na | | 1,286 | 386 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4629594) | 1,125 | - | 546 | - | $223 96 | $5,000 | 22 3 | 361 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Total Capacities Tons | MBH | Heg kW | Cooling SEER | Heating HSPF | Heating Eff | Baseline Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed kWh/Yr | kW/yr | Electricity Gas kWh/Yr | Therms/Yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | Linda Vista Elementary | Airedale | CHH4 | 4 TON | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,600 | 1,080 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,836 | - | 1,844 | - | $755 65 | $16,000 | 21 2 | 1,219 |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | System | Baseline: Total Capacities: Tons | EAER | Htg kW | Baseline: Cooling SEER | Heating HSPF | Heating Eff | Baseline: Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed: kW/yr | kW/yr | Electricity kW/yr | Gas kW/yr | Savings & Costs: Bill $/yr | Project Cost | SPB Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | Hubbard Media Arts Academy | Airedale | CHM 3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | | 0 | 9 | 9 na | | 3,600 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,400 | - | 2,000 | - | $670 33 | $12,000 | 17 9 | 1,122 |
| 15 | Hubbard Media Arts Academy | Airedale | CMH 3 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | | 0 | 9 | 9 na | | 3,600 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,400 | - | 2,000 | - | $670 33 | $12,000 | 17 9 | 1,122 |
| 15 | Hubbard Media Arts Academy | Sanyo | Inaccessible | 1 TON | 1 | EA | Adequate | HVAC10 | Ductless | 1 | | 0 | 14 | 14 na | | 771 | 171 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4557857) | 675 | - | 268 | - | $89 78 | $2,500 | 27 8 | 377 |
| 15 | Hubbard Media Arts Academy | Airedale | CMH 4 | 3 TON | 1 | EA | Poor | HVAC1 | Heat Pump | 3 | | 0 | 9 | 9 na | | 3,600 | 800 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 45 | 2,400 | - | 2,000 | - | $670 33 | $12,000 | 17 9 | 1,122 |
| 15 | Hubbard Media Arts Academy | Bard | Illegible | 4 TON | 1 | EA | Adequate | HVAC2 | Bard | 4 | | 0 | 10 | 10 na | | 4,320 | 960 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4557720) | 3,520 | - | 1,760 | - | $589 89 | $16,000 | 27 1 | 1,164 |
| 15 | Hubbard Media Arts Academy | Bard Manufact | W48H2-A04VP4 | 3 5 TON | 1 | EA | Good | None | Bard | 3.5 | | 0 | 11 | 11 na | | 3,436 | 764 | - | | | | | - | - | $0 00 | | | - |
| 15 | Hubbard Media Arts Academy | Bard | W48H2-A04VP4 | 4 TON | 1 | EA | Adequate | None | Bard | 4 | | 0 | 10 | 10 na | | 4,320 | 960 | - | | | | | - | - | $0 00 | | | - |
| 15 | Hubbard Media Arts Academy | Bard | Illegible | 4 TON | 1 | EA | Adequate | None | Bard | 4 | | 0 | 10 | 10 na | | 4,320 | 960 | - | | | | | - | - | $0 00 | | | - |
| 15 | Hubbard Media Arts Academy | Bard | No tag/plate loc | 4 TON | 1 | EA | Adequate | HVAC2 | Bard | 4 | | 0 | 10 | 10 na | | 4,320 | 960 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4557839) | 3,520 | - | 1,760 | - | $589 89 | $16,000 | 27 1 | 1,164 |
| 15 | Hubbard Media Arts Academy | Bard Manufact | Inaccessible | 3 5 TON | 1 | EA | Poor | HVAC2 | Bard | 3 5 | | 0 | 9 | 9 na | | 4,200 | 933 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4557987) | 3,080 | - | 2,053 | - | $568 21 | $14,000 | 20 3 | 1,358 |
| 15 | Hubbard Media Arts Academy | Bard Manufact | | 3 5 TON | 1 | EA | Poor | HVAC2 | Bard | 3.5 | | 0 | 9 | 9 na | | 4,200 | 933 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4557906) | 3,080 | - | 2,053 | - | $568 21 | $14,000 | 20 3 | 1,358 |
| 15 | Hubbard Media Arts Academy | Bard Manufact | W42H2-A05sx4 | 3 5 TON | 1 | EA | Good | None | Bard | 3.5 | | 0 | 11 | 11 na | | 3,436 | 764 | - | | | | | - | - | $0 00 | | | -

| Site ID | School | Make | Model | Capacity | Quantity | Units | Condition | Project? | Baseline System | Total Capacities: Tons | MBH | Avg kW | Cooling SEER | Heating HPSF | Heating EF | Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed: kWh/yr | kW/yr | Electricity Savings: kWh/yr | kW/yr | Gas Savings: Therms/yr | Bill Savings: $/yr | Project Cost | SPB: Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | Ryan STEAM Academy | Williams | Illeg ible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Williams | Illegible | null | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Williams | Illegible | null | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | | na | na | 0.75 | - | - | 100 | | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Reznor | XL170-1 | 170 MBH | 1 | EA | Adequate | HVAC8 | Unit Heater | 0 | 170 | | | 0 | 0.78 | - | - | 654 | HVAC8 | Replace Unit Heater (Reznor) with Gas UH (1 Unit Heater FCA ID 45 | - | - | 554 | - | 99 | $128.06 | $8,000 | 62.5 | 1,163 |
| 18 | Ryan STEAM Academy | Trane | Not applicable | 7 MBH | 1 | EA | Adequate | HVAC9 | Unit Heater | 0 | 7 | | | 0 | 0.78 | - | - | 27 | HVAC9 | Replace Unit Heater (Reznor) with Electric UH (1 Unit Heater FCA ID | 789 | - | (789) | 27 | (253.15) | $2,500 | na | | (207) |
| 18 | Ryan STEAM Academy | Reznor | XL170-3 | 170 MBH | 1 | EA | Adequate | HVAC8 | Unit Heater | 0 | 170 | | | 0 | 0.78 | - | - | 654 | HVAC8 | Replace Unit Heater (Reznor) with Gas UH (1 Unit Heater FCA ID 45 | - | - | 554 | - | 99 | $128.06 | $8,000 | 62.5 | 1,163 |
| 18 | Ryan STEAM Academy | | | null | 2 | EA | Adequate | HVAC4,5 | PTAC | 3 | 0 | | | 10 | na | na | 4,320 | - | - | HVAC4 | Replace PTAC with ductless mini split (3 PTAC FCA ID 4559677) | 2,700 | - | 1,620 | - | | $590.86 | $7,500 | 12.7 | 1,071 |
| 18 | Ryan STEAM Academy | | | null | 4 | EA | Adequate | HVAC4,5 | PTAC | 6 | 0 | | | 10 | na | na | 8,640 | - | - | HVAC4 | Replace PTAC with ductless mini split (4 PTAC FCA ID 4559676) | 5,400 | - | 3,240 | - | | $1,181.73 | $15,000 | 12.7 | 2,142 |
| 18 | Ryan STEAM Academy | | | null | 6 | EA | Adequate | HVAC4,5 | PTAC | 9 | 0 | | | 10 | na | na | 12,960 | - | - | HVAC4 | Replace PTAC with ductless mini split (6 PTAC FCA ID 4559572) | 8,100 | - | 4,860 | - | | $1,772.59 | $22,500 | 12.7 | 3,213 |
| 18 | Ryan STEAM Academy | | | null | 4 | EA | Adequate | HVAC4,5 | PTAC | 6 | 0 | | | 10 | na | na | 8,640 | - | - | HVAC4 | Replace PTAC with ductless mini split (4 PTAC FCA ID 4559544) | 5,400 | - | 3,240 | - | | $1,181.73 | $15,000 | 12.7 | 2,142 |
| 18 | Ryan STEAM Academy | | | null | 3 | EA | Adequate | HVAC4,5 | PTAC | 4.5 | 0 | | | 10 | na | na | 6,480 | - | - | HVAC4 | Replace PTAC with ductless mini split (3 PTAC FCA ID 4559649) | 4,050 | - | 2,430 | - | | $886.30 | $11,250 | 12.7 | 1,607 |
| 18 | Ryan STEAM Academy | | | null | 5 | EA | Adequate | HVAC4,5 | PTAC | 7.5 | 0 | | | 10 | na | na | 10,800 | - | - | HVAC4 | Replace PTAC with ductless mini split (5 PTAC FCA ID 4559714) | 6,750 | - | 4,050 | - | | $1,477.16 | $18,750 | 12.7 | 2,678 |
| 18 | Ryan STEAM Academy | Bard | WH421-A10UX4-3 | 5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 | na | 5,600 | 1,400 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4559728) | 4,200 | - | 2,800 | - | | $1,021.25 | $14,000 | 13.7 | 1,851 |
| 18 | Ryan STEAM Academy | Bard | WH421-A10UX4-3 | 5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 | na | 5,600 | 1,400 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4559590) | 4,200 | - | 2,800 | - | | $1,021.25 | $14,000 | 13.7 | 1,851 |
| 18 | Ryan STEAM Academy | Bard | WH421-A10UX4-3 | 5 TON | 1 | EA | Marginal | HVAC2 | Bard | 3.5 | 0 | | | 9 | 9 | na | 5,600 | 1,400 | - | HVAC2 | Wall Mount Heat Pump Replacement (1 Bard FCA ID 4559725) | 4,200 | - | 2,800 | - | | $1,021.25 | $14,000 | 13.7 | 1,851 |
| 18 | Ryan STEAM Academy | Bard | Inaccessible | 3.5 TON | 1 | EA | Adequate | None | Bard | 3.5 | 0 | | | 10 | 10 | na | 5,040 | 1,260 | - | | | | | | | $0.00 | | | - |
| 18 | Ryan STEAM Academy | Trane | 2YCC3048A1094 | 4 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 4 | 75 | | | 9 | na | | 0.75 | 5,400 | - | 300 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4559732) | 4,114 | 274 | 2,286 | 26 | $866.63 | $16,000 | 18.5 | 1,811 |
| 18 | Ryan STEAM Academy | Trane | 2YCC3048A1094 | TON | 1 | EA | Marginal | HVAC3,12 | RTU | 4 | 75 | | | 9 | na | | 0.75 | 5,400 | - | 300 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4559694) | 4,114 | 274 | 2,286 | 26 | $866.63 | $16,000 | 18.5 | 1,811 |
| 19 | San Antonio Elementary | Daikin Industry | RXB18AXVJU | 1.5 TON | 1 | EA | Good | None | Ductless | 1.5 | 0 | | | 16 | 16 | na | 1,125 | 281 | - | | | | | | | $0.00 | | | - |
| 19 | San Antonio Elementary | Carrier | 38MVC018---30 | 1.5 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1.5 | 0 | | | 9 | 9 | na | 2,000 | 500 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4581426) | 1,125 | - | 1,375 | - | | $444.44 | $3,750 | 8.4 | 909 |
| 19 | San Antonio Elementary | Carrier | 38MVC012-301-1 | TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 | na | 1,333 | 333 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4581480) | 750 | - | 917 | - | | $296.30 | $2,500 | 8.4 | 606 |
| 19 | San Antonio Elementary | Carrier | 38MAQB24A---3 | 2 TON | 1 | EA | Adequate | HVAC10 | Ductless | 2 | 0 | | | 14 | 14 | na | 1,714 | 429 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4581537) | 1,500 | - | 643 | - | | $207.76 | $5,000 | 24.1 | 425 |
| 19 | San Antonio Elementary | Carrier | 38MVC0124-3011 | TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 | na | 1,333 | 333 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4581495) | 750 | - | 917 | - | | $296.30 | $2,500 | 8.4 | 606 |
| 19 | San Antonio Elementary | Carrier | 38MVC012-301-1 | TON | 1 | EA | Marginal | HVAC10 | Ductless | 1 | 0 | | | 9 | 9 | na | 1,333 | 333 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4581530) | 750 | - | 917 | - | | $296.30 | $2,500 | 8.4 | 606 |
| 19 | San Antonio Elementary | Carrier | 38MVC018---30 | 1.5 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1.5 | 0 | | | 9 | 9 | na | 2,000 | 500 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4581644) | 1,125 | - | 1,375 | - | | $444.44 | $3,750 | 8.4 | 909 |
| 19 | San Antonio Elementary | Carrier | 38MVC018---30 | 1.5 TON | 1 | EA | Marginal | HVAC10 | Ductless | 1.5 | 0 | | | 9 | 9 | na | 2,000 | 500 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4581643) | 1,125 | - | 1,375 | - | | $444.44 | $3,750 | 8.4 | 909 |
| 19 | San Antonio Elementary | Trane | 4YCCJ024B1064 | 2 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 2 | 50 | | | 10 | na | | 0.78 | 2,400 | - | 160 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581423) | 1,714 | 152 | 686 | 8 | $230.81 | $8,000 | 34.7 | 545 |
| 19 | San Antonio Elementary | Trane | 4YCCJ030A1042 | 2 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 3.5 | 50 | | | 10 | na | | 0.78 | 1,800 | - | 160 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581449) | 1,286 | 152 | 514 | 8 | $175.40 | $6,000 | 34.2 | 431 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0T4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581420) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC036E4RLA0T3 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 3 | 75 | | | 10 | na | | 0.78 | 3,600 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581446) | 2,571 | 229 | 1,029 | 12 | $346.22 | $12,000 | 34.7 | 817 |
| 19 | San Antonio Elementary | Trane | YHC050E4RLA0T5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581475) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC050E4RLA0T5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581457) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YMC048E4RLAD4T | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581528) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0T4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581502) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0T5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581540) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0T5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581542) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC050E4RLA0T5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581501) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC050E4RLA0T5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581547) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC050E4RLA0J5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581509) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC048E4PLAG4T | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581529) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0J4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581533) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0J5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581517) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0T4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581546) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0T4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581532) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0T4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581448) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC050E4RLA0J5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581524) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0T4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581531) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0J4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581548) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC050E4RLA0J5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581519) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0T4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581545) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0J5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581543) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0T4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | | 10 | na | | 0.78 | 4,800 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581539) | 3,429 | 229 | 1,371 | 12 | $457.04 | $16,000 | 35.0 | 1,044 |
| 19 | San Antonio Elementary | Trane | YSC072E4RXA116 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 6 | 100 | | | 10 | na | | 0.78 | 7,200 | - | 321 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581645) | 5,143 | 305 | 2,057 | 16 | $683.27 | $24,000 | 35.1 | 1,543 |
| 19 | San Antonio Elementary | Trane | YCHJ360B4HC0B | 5 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | | 10 | na | | 0.78 | 6,000 | - | 240 | HVAC3 | Package Unit Replacement (1 RTU FCA ID 4581665) | 4,286 | 229 | 1,714 | 12 | $567.85 | $20,000 | 35.2 | 1,271 |
| 20 | LUCHA Elementary | | | 25 MBH | 1 | EA | Poor | None | Unit Heater | 0 | 0 | | | 0 | 0 | 0.75 | - | - | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | Mitsubishi Elec | PURY-P120TLMU | 10 TON | 1 | EA | Adequate | None | VRF | 10 | 0 | | | 14 | 14 | na | 9,429 | 1,714 | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | Mitsubishi Elec | | 1.5 - 2 TON | 1 | EA | Marginal | None | Ductless | 1.5 | 0 | | | 9 | 9 | na | 2,200 | 400 | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | Mitsubishi Elec | PURY-P96TLMU | 8 TON | 1 | EA | Adequate | None | VRF | 8 | 0 | | | 14 | 14 | na | 7,543 | 1,371 | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | Mitsubishi Elec | PURY-P120TLMU | 10 TON | 1 | EA | Adequate | None | VRF | 10 | 0 | | | 14 | 14 | na | 9,429 | 1,714 | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | Mitsubishi Elec | PURY-P144TLMU | 12 TON | 1 | EA | Adequate | None | VRF | 12 | 0 | | | 14 | 14 | na | 11,314 | 2,057 | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | Mitsubishi Elec | PURY-P120TLMU | 10 TON | 1 | EA | Adequate | None | VRF | 10 | 0 | | | 14 | 14 | na | 9,429 | 1,714 | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | Mitsubishi Elec | PURY-P144TLMU | 12 TON | 1 | EA | Adequate | None | VRF | 12 | 0 | | | 14 | 14 | na | 11,314 | 2,057 | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | | | 2.5 - 3 TON | 1 | EA | Poor | HVAC10 | Ductless | 2.5 | 0 | | | 9 | 9 | na | 3,667 | 667 | - | HVAC10 | Replace ductless mini split (1 Ductless FCA ID 4471445) | 2,063 | - | 2,271 | - | | $796.49 | $6,250 | 7.8 | 1,501 |
| 20 | LUCHA Elementary | | YJT15C00A2GEB | 15 TON | 1 | EA | Adequate | HVAC11,12 | Split System I | 15 | 0 | | | 10 | na | na | 19,800 | - | - | HVAC11 | Split System Replacement (1 Split System Cooling Side FCA ID 4471 | 14,143 | - | 5,657 | - | | $1,984.23 | $60,000 | 30.2 | 3,741 |
| 20 | LUCHA Elementary | Mitsubishi Elec | PUMY-P36NKMU | 3 TON | 1 | EA | Adequate | None | Ductless | 3 | 0 | | | 14 | 14 | na | 2,829 | 514 | - | | | | | | | $0.00 | | | - |
| 20 | LUCHA Elementary | | D AHU6 | 6001 - 8000 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Hayes | 280VE2-12-3 | 100 MBH | 1 | EA | Adequate | None | Furnace | 0 | 100 | | na | na | | 0.78 | - | - | 216 | | | | | | | | | | | - |
| 21 | Sylvia Cassell Elementary | Carrier | | 50 MBH | 1 | EA | Adequate | None | Furnace | 0 | 50 | | na | na | | 0.78 | - | - | 128 | | | | | | | | | | | - |
| 21 | Sylvia Cassell Elementary | Carrier | | 50 MBH | 1 | EA | Adequate | None | Furnace | 0 | 50 | | na | na | | 0.78 | - | - | 128 | | | | | | | | | | | - |
| 21 | Sylvia Cassell Elementary | | | 50 MBH | 1 | EA | Adequate | None | Furnace | 0 | 50 | | na | na | | 0.78 | - | - | 128 | | | | | | | | | | | - |
| 21 | Sylvia Cassell Elementary | | | 50 MBH | 1 | EA | Adequate | None | Furnace | 0 | 50 | | na | na | | 0.78 | - | - | 128 | | | | | | | | | | | - |
| 21 | Sylvia Cassell Elementary | Wesix | Not applicable | 7 KW | 1 | EA | Adequate | None | Unit Heater | 0 | 0 | | 7 | 0 | 12 | 0 | - | 1,400 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 3 TON | 1 | EA | Adequate | None | Ductless | 3 | 0 | | | 14 | 14 | na | 2,057 | 514 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | PURY-P192TGM | 16 TON | 1 | EA | Adequate | None | Ductless | 16 | 0 | | | 14 | 14 | na | 10,971 | 2,743 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 2 TON | 1 | EA | Adequate | None | Ductless | 2 | 0 | | | 14 | 14 | na | 1,371 | 343 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 2 TON | 1 | EA | Adequate | None | Ductless | 2 | 0 | | | 14 | 14 | na | 1,371 | 343 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 2 TON | 1 | EA | Adequate | None | Ductless | 2 | 0 | | | 14 | 14 | na | 1,371 | 343 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 2 TON | 1 | EA | Adequate | None | Ductless | 2 | 0 | | | 14 | 14 | na | 1,371 | 343 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 2 TON | 1 | EA | Adequate | None | Ductless | 2 | 0 | | | 14 | 14 | na | 1,371 | 343 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 2 TON | 1 | EA | Adequate | None | Ductless | 2 | 0 | | | 14 | 14 | na | 1,371 | 343 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 3 TON | 1 | EA | Adequate | None | Ductless | 3 | 0 | | | 14 | 14 | na | 2,057 | 514 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 3 TON | 1 | EA | Adequate | None | Ductless | 3 | 0 | | | 14 | 14 | na | 2,057 | 514 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Mitsubishi Elec | No tag/plate for | 2 TON | 1 | EA | Adequate | None | Ductless | 2 | 0 | | | 14 | 14 | na | 1,371 | 343 | - | | | | | | | $0.00 | | | - |
| 21 | Sylvia Cassell Elementary | Airedale | CMH-4 | 4 Ton | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 | na | 4,267 | 1,067 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 2,909 | - | 2,424 | - | | $877.15 | $16,000 | 18.2 | 1,603 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH-4 | 4 Ton | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | | 10 | 10 | na | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 2,909 | - | 1,891 | - | | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH-4 | 4 Ton | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | | 10 | 10 | na | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 2,909 | - | 1,891 | - | | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | -4 | 4 Ton | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 | na | 4,267 | 1,067 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 2,909 | - | 2,424 | - | | $877.15 | $16,000 | 18.2 | 1,603 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Tons | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 | na | 4,267 | 1,067 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 46 | 2,909 | - | 2,424 | - | | $877.15 | $16,000 | 18.2 | 1,603 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 | na | 4,267 | 1,067 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 2,424 | - | | $877.15 | $16,000 | 18.2 | 1,603 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | | 10 | 10 | na | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 1,891 | - | | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | | 10 | 10 | na | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 1,891 | - | | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | | 10 | 10 | na | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 1,891 | - | | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | | 10 | 10 | na | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 1,891 | - | | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | | 9 | 9 | na | 4,267 | 1,067 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 2,424 | - | | $877.15 | $16,000 | 18.2 | 1,603 |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Total Capacities Tons | MBH | Htg kW | Cooling SEER | Heating HSPF | Heating Eff | Baseline Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed kWh/yr | Proposed kW/yr | Savings & Costs Electricity kWh/yr | Gas therms/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Marginal | HVAC1 | Heat Pump | 4 | 0 | | 9 | 9 na | | 4,267 | 1,067 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 2,424 | - | $877.15 | $16,000 | 18.2 | 1,603 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 1,891 | - | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 1,891 | - | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 1300 CFM | 1 | EA | Adequate | HVAC1 | Heat Pump | 4 | 0 | | 10 | 10 na | | 3,840 | 960 | - | HVAC1 | Package/Cabinet Heat Pump Replacement (1 Heat Pump FCA ID 47 | 2,909 | - | 1,891 | - | $684.17 | $16,000 | 23.4 | 1,250 |
| 21 | Sylvia Cassell Elementary | Airedale | CMH 4 | 4 Ton

| | | | | | | | | | | Baseline | | | | | | | | Proposed | | Savings & Costs | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Total Capacities Tons | MBH | Htg kW | Cooling SEER | Heating HSPF | Heating Eff | Cooling kWh | Heating kWh | Heating therms | Measure | Project Name | kWh/yr | th/yr | Electricity kWh/yr | Gas th/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings (lbs CO2e) |
| 4 | Aptitud Academy | Rheem | Illegible | 5 TON | 1 | EA | Poor | HVAC3,12 | RTU | 5 | 75 | | 9 | na | 0.75 | 6,000 | - | 100 | HVAC12 | Package Unit/Split System Electrification (1 RTU) | 4,000 | - | 2,000 | 100 | $846.03 | $5,000 | 5.8 | 2,491 |
| 22 | Ben Painter Elementary | International C | GNL075M12C3 | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | GNL075M12C3 | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | No tag/plate for | 75 MBH | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 75 | | | | 469 | - | (469) | 75 | ($67.62) | $0 | | |
| 22 | Ben Painter Elementary | International C | ACC042HAA | 3.5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 3.5 | 0 | | 10 | na | na | 3,360 | - | - | | | 2,100 | - | 1,260 | - | $443.45 | $3,500 | | |
| 22 | Ben Painter Elementary | International C | ACC042 AA | 3.5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 3.5 | 0 | | 10 | na | na | 3,360 | - | - | | | 2,100 | - | 1,260 | - | $443.45 | $3,500 | | |
| 22 | Ben Painter Elementary | International C | ACC042HAA | 3.5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 3.5 | 0 | | 10 | na | na | 3,360 | - | - | | | 2,100 | - | 1,260 | - | $443.45 | $3,500 | | |
| 22 | Ben Painter Elementary | Lennox | CCU10A48A-2 | 4 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 4 | 0 | | 10 | na | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $506.80 | $4,000 | | |
| 22 | Ben Painter Elementary | International C | ACC042HAA | 3.5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 3.5 | 0 | | 10 | na | na | 3,360 | - | - | | | 2,100 | - | 1,260 | - | $443.45 | $3,500 | | |
| 22 | Ben Painter Elementary | International C | ACC042HAA | 3.5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 3.5 | 0 | | 10 | na | na | 3,360 | - | - | | | 2,100 | - | 1,260 | - | $443.45 | $3,500 | | |
| 22 | Ben Painter Elementary | International C | ACC042HAA | 3.5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 3.5 | 0 | | 10 | na | na | 3,360 | - | - | | | 2,100 | - | 1,260 | - | $443.45 | $3,500 | | |
| 22 | Ben Painter Elementary | International C | ACC042HAA | 3.5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 3.5 | 0 | | 10 | na | na | 3,360 | - | - | | | 2,100 | - | 1,260 | - | $443.45 | $3,500 | | |
| 22 | Ben Painter Elementary | Lennox | CCU10A48A-2 | 4 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 4 | 0 | | 10 | na | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $506.80 | $4,000 | | |
| 22 | Ben Painter Elementary | International C | ACC042HAA | 3.5 TON | 1 | EA | Adequate | HVAC11,12 | Split System ( | 3.5 | 0 | | 10 | na | na | 3,360 | - | - | | | 2,100 | - | 1,260 | - | $443.45 | $3,500 | | |
| 22 | Ben Painter Elementary | International C | PGAD47F1HA | 4 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 4 | 75 | | 9 | na | 0.75 | 4,267 | - | 75 | | | 2,869 | - | 1,398 | 75 | $589.34 | $4,000 | | |
| 22 | Ben Painter Elementary | International C | PGAD36D1KS | 3 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 3 | 50 | | 9 | na | 0.75 | 3,200 | - | 50 | | | 2,113 | - | 1,087 | 50 | $447.64 | $3,000 | | |
| 22 | Subtotal Ben Painter | | | | | | | | | | | | | | | | | | HVAC12 | Package Unit/Split System Electrification (10 Split Systems) | | | 10,758 | 875 | $4,921.93 | $43,000 | 8.7 | 17,341 |
| 5 | Cesar Chavez Early Learning Center | Payne | No tag/plate for | 51 - 100 MB | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 180 | | | | 1,125 | - | (1,125) | 180 | ($188.62) | $0 | | |
| 5 | Cesar Chavez Early Learning Center | Payne | PGBJAAD561101 | 51 - 100 MB | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 180 | | | | 1,125 | - | (1,125) | 180 | ($188.62) | $0 | | |
| 5 | Cesar Chavez Early Learning Center | Payne | PGBJAAD561101 | 51 - 100 MB | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 180 | | | | 1,125 | - | (1,125) | 180 | ($188.62) | $0 | | |
| 5 | Cesar Chavez Early Learning Center | Payne | PGBJAAD561101 | 51 - 100 MB | 1 | EA | Marginal | HVAC11,12 | Split System ( | 0 | 75 | na | na | 0.75 | - | - | 180 | | | | 1,125 | - | (1,125) | 180 | ($188.62) | $0 | | |
| 5 | Cesar Chavez Early Learning Center | Payne | PA13NR006-J | 5 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 5 | 0 | | 9 | na | na | 3,333 | - | - | | | 1,875 | - | 1,458 | - | $538.16 | $5,000 | | |
| 5 | Cesar Chavez Early Learning Center | Payne | Illegible | 5 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 5 | 0 | | 9 | na | na | 3,333 | - | - | | | 1,875 | - | 1,458 | - | $538.16 | $5,000 | | |
| 5 | Cesar Chavez Early Learning Center | Payne | | 5 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 5 | 0 | | 9 | na | na | 3,333 | - | - | | | 1,875 | - | 1,458 | - | $538.16 | $5,000 | | |
| 5 | Cesar Chavez Early Learning Center | Payne | Illegible | 5 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 5 | 0 | | 9 | na | na | 3,333 | - | - | | | 1,875 | - | 1,458 | - | $538.16 | $5,000 | | |
| 5 | Cesar Chavez Early Learning Center | Carrier | 48HJE006-331- | 5 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 5 | 75 | | 9 | na | 0.75 | 3,333 | - | 180 | | | 3,000 | - | 333 | 180 | $349.54 | $5,000 | | |
| 5 | Cesar Chavez Early Learning Center | Carrier | Illegible | 5 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 5 | 75 | | 9 | na | 0.75 | 3,333 | - | 180 | | | 3,000 | - | 333 | 180 | $349.54 | $5,000 | | |
| 5 | Cesar Chavez Early Learning Center | Carrier | Illegible | 5 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 5 | 75 | | 9 | na | 0.75 | 3,333 | - | 180 | | | 3,000 | - | 333 | 180 | $349.54 | $5,000 | | |
| 5 | Subtotal, Cesar Chavez Early Learning Center | | | | | | | | | | | | | | | | | | HVAC12 | Package Unit/Split System Electrification (4 Split Systems, 4 RTUs) | | | 2,333 | 1,260 | 2,447 | 35,000 | 14.3 | 16,271 |
| 6 | Adelante II Academy - Cinderella | Frigidalre | FFRH1822R21 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R2 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R21 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R21 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Frigidalre | Inaccessible | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R21 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R21 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH252282 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH2522R21 | 2 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,880 | - | - | | | 1,800 | - | 1,080 | - | $405.37 | $3,000 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R21 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | | | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Frigidaire | FFRH1822R21 | 1.5 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1.5 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $304.03 | $2,250 | | |
| 6 | Adelante II Academy - Cinderella | Kennard/Nelso | ZWHD110 | 3000 CFM | 1 | EA | Marginal | None | AHU | 0 | 0 | na | na | na | - | - | - | | | | - | - | - | - | $0.00 | 0 | | |
| 6 | Adelante II Academy - Cinderella | | Inaccessible | 3000 CFM | 1 | EA | Marginal | None | AHU | 0 | 0 | na | na | na | - | - | - | | | | - | - | - | - | $0.00 | 0 | | |
| 6 | Adelante II Academy - Cinderella | | No tag/plate for | 3000 CFM | 1 | EA | Adequate | None | AHU | 0 | 0 | na | na | na | - | - | - | 1,364 | | | 8,522 | - | (8,522) | 1,364 | ($1,412.29) | 0 | | |
| 6 | Subtotal, Adelante II Academy - Cinderella | | | | | | | | | | | | | | | | | | HVAC5 | PTAC/Furnace System Electrification (3 AHUs, Boilers, 28 PTAC) | | | 19,018 | 1,364 | 8,925 | 76,500 | 8.6 | 28,513 |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Baseline Total Capacities Tons | MBH | Htg kW | Baseline Cooling SEER | Heating HPSF | Heating Eff | Baseline Cooling kWh | Baseline Heating kWh | Baseline Heating Therms | Measure | Project Name | Proposed kWh/yr | Proposed th/yr | Savings & Costs Electricity kWh/yr | Gas th/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | Clyde L. Fischer Middle | Trane | 2TTA3060A400C | 2.5 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 2.5 | 0 | | 9 | na | na | 2,667 | - | - | | | 1,500 | - | 1,167 | - | $361.31 | $2,500 | | |
| 7 | Clyde L. Fischer Middle | EMI | S1CAB000000 | 2 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 2 | 0 | | 9 | na | na | 2,133 | - | - | | | 1,200 | - | 933 | - | $289.05 | $2,000 | | |
| 7 | Clyde L. Fischer Middle | EMI | S1CAB000D00 | 2 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 2 | 0 | | 9 | na | na | 2,133 | - | - | | | 1,200 | - | 933 | - | $289.05 | $2,000 | | |
| 7 | Clyde L. Fischer Middle | Trane | MCCB006UA0AA | 2401 - 4000 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | - | - | - | - | $0.00 | $0 | | |
| 7 | Clyde L. Fischer Middle | Trane | MCCA021GAP0A | 10001 - 150 | 1 | EA | Marginal | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | - | - | - | - | $0.00 | $0 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Trane | MCCA021GAP0A | 10001 - 150 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | - | - | - | - | $0.00 | $0 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Trane | MCCA021GAP0A | 10001 - 150 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | - | - | - | - | $0.00 | $0 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Trane | MCCA021GAP0A | 10001 - 150 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | - | - | - | - | $0.00 | $0 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Trane | MCCA017GAP0A | 8001 - 1000 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | 12,650 | | | 79,062 | - | (79,062) | 12,650 | ($9,624.22) | $0 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHH3/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHX4/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHH5/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Clyde L. Fischer Middle | Trane | MCCA017GAP0A | 8001 - 1000 | 1 | EA | Adequate | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | - | - | - | - | $0.00 | $0 | | |
| 7 | Clyde L. Fischer Middle | Trane | MCCA010GAP0A | 4001 - 6000 | 1 | EA | Marginal | None | AHU | 0 | 0 | | na | na | na | - | - | - | | | - | - | - | - | $0.00 | $0 | | |
| 7 | Clyde L. Fischer Middle | Trane | TCH211C40BCA | 16 - 20 TON | 1 | EA | Poor | HVAC3,12 | RTU | 20 | 150 | | 9 | na | 0.75 | 21,333 | - | 600 | | | 15,750 | - | 5,583 | 600 | $2,434.02 | $20,000 | | |
| 7 | Clyde L. Fischer Middle | Airedale | CHH5/2-460/41 | 1201 - 1800 | 1 | EA | Adequate | HVAC1 | HP | 4 | 0 | | 10 | 10 | na | 3,840 | - | - | | | 2,400 | - | 1,440 | - | $445.96 | $4,000 | | |
| 7 | Subtotal, Clyde L. Fischer Middle | | | | | | | | | | | | | | | | | | HVAC12 | Package Unit/Split System Electrification (35 FCUs, 3 S/S, 1 RTU, 7 AHUs ) | (20,045) | 13,250 | 9,358 | 166,500 | 17.8 | 141,627 |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Baseline: Total Capacities Tons | MBH | Htg kW | Cooling SEER | Heating HSPF | Heating Eff | Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed: kWh/yr | th/yr | Savings & Costs: Electricity kWh/yr | Gas th/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Horace Cureton Elementary | Not applicable | Inaccessible | null | 1 | EA | Adequate | HVAC7 | Furnace | 0 | 50 | na | na | 0.78 | - | - | 128 | | | 801 | - | (801) | 128 | ($115.93) | 0 | | |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Total Capacities Tons | MBH | Htg kW | Baseline Cooling SEER | Heating HSPF | Heating Eff | Cooling kWh | Heating kWh | Heating therms | Measure | Project Name | Proposed kWh/yr | th/yr | Savings & Costs Electricity kWh/yr | Gas th/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | Lyndale Elementary | Carrier | 1PYHC036E4RLJ | 3 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 3 | 50 | | 10 | na | 0.78 | 3,240 | - | 128 | | | 2,826 | - | 414 | 128 | $409.14 | $3,000 | | |
| 13 | Subtotal, Lyndale Elementary | | | | | | | | | | | | | | | | | | HVAC12 | Package Unit/Split System Electrification (5 RTU) | | | 2,293 | 962 | $2,778.76 | $20,500 | 7.4 | 12,756 |
| 14 | Millard McCollam Elementary | | | 1 TON | 7 | EA | Adequate | HVAC4,5 | PTAC | 7 | 0 | | 10 | na | na | 7,560 | - | 5,524 | | | 39,248 | - | (31,688) | 5,524 | ($5,809.22) | $10,500 | | |
| 14 | Millard McCollam Elementary | | | 1 TON | 5 | EA | Adequate | HVAC4,5 | PTAC | 5 | 0 | | 10 | na | na | 5,400 | - | - | | | 3,375 | - | 2,025 | - | $789.38 | $7,500 | | |
| 14 | Millard McCollam Elementary | | | 1 TON | 5 | EA | Adequate | HVAC4,5 | PTAC | 5 | 0 | | 10 | na | na | 5,400 | - | - | | | 3,375 | - | 2,025 | - | $789.38 | $7,500 | | |
| 14 | Millard McCollam Elementary | | | 1 TON | 6 | EA | Adequate | HVAC4,5 | PTAC | 6 | 0 | | 10 | na | na | 6,480 | - | - | | | 4,050 | - | 2,430 | - | $947.26 | $9,000 | | |
| 14 | Millard McCollam Elementary | | | 1 TON | 2 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 2,160 | - | - | | | 1,350 | - | 810 | - | $315.75 | $3,000 | | |
| 14 | Millard McCollam Elementary | | | 1 TON | 1 | EA | Adequate | HVAC4,5 | PTAC | 1 | 0 | | 10 | na | na | 1,080 | - | - | | | 675 | - | 405 | - | $157.88 | $1,500 | | |
| 14 | Millard McCollam Elementary | Trane | WCH060C300BC | 5 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 5 | 75 | | 9 | na | 0.75 | 6,000 | - | 600 | | | 7,125 | - | (1,125) | 600 | $272.22 | $5,000 | | |
| 14 | Millard McCollam Elementary | Trane | No tag/plate for | 10 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 10 | 100 | | 9 | na | 0.75 | 12,000 | - | 800 | | | 11,750 | - | 250 | 800 | $1,045.14 | $10,000 | | |
| 14 | Subtotal, Millard McCollam Elementary | | | | | | | | | | | | | | | | | | HVAC5 | PTAC/Package Unit Electrification (2 RTU, 26 PTAC) | | | (24,869) | 6,924 | (1,492) | $54,000 | (36.2) | 64,490 |
| 15 | Hubbard Media Arts Academy | Reznor | CAUA150 | 150 MBH | 1 | EA | Poor | HVAC8 | Unit Heater | 0 | 150 | | 0 | 0 | 0.75 | - | - | 400 | | | 2,500 | - | (2,500) | 400 | ($312.44) | $10,000 | | |
| 15 | Hubbard Media Arts Academy | Trane | 4TTB4048E100C | 4 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 4 | 0 | | 9 | na | na | 4,800 | - | - | | | 2,700 | - | 2,100 | - | $703.85 | $4,000 | | |
| 15 | Hubbard Media Arts Academy | Trane | Illegible | 8 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 8 | 100 | | 10 | na | 0.78 | 8,640 | - | 256 | | | 7,003 | - | 1,637 | 256 | $885.66 | $8,000 | | |
| 15 | Hubbard Media Arts Academy | Trane | 1PYSC048E3RLA | 4 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,320 | - | 192 | | | 3,902 | - | 418 | 192 | $392.76 | $4,000 | | |
| 15 | Hubbard Media Arts Academy | Trane | 1PYHC120E3ELF | 10 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 10 | 100 | | 10 | na | 0.78 | 10,800 | - | 256 | | | 8,353 | - | 2,447 | 256 | $1,157.14 | $10,000 | | |
| 15 | Subtotal, Hubbard Media Arts Academy | | | | | | | | | | | | | | | | | | HVAC12 | Package Unit/Split System Electrification (3 RTU, 1 S/S, 1 Unit Heater) | | | 4,103 | 1,105 | 2,827 | $36,000 | 12.7 | 15,631 |
| 16 | Ocala STEAM Academy | Johnson Contr | TGL5120C20MP | 120 MBH | 1 | EA | Adequate | HVAC6/7 | Furnace | 0 | 120 | na | na | | 0.78 | - | - | 231 | | | 1,439 | - | (1,439) | 231 | ($181.49) | $0 | | |
| 16 | Ocala STEAM Academy | Johnson Contr | TGL5120C20MP | 120 MBH | 1 | EA | Adequate | HVAC6/7 | Furnace | 0 | 120 | na | na | | 0.78 | - | - | 231 | | | 1,439 | - | (1,439) | 231 | ($181.49) | $0 | | |
| 16 | Ocala STEAM Academy | Johnson Contr | TGL5120C20MP | 120 MBH | 1 | EA | Adequate | HVAC6/7 | Furnace | 0 | 120 | na | na | | 0.78 | - | - | 231 | | | 1,439 | - | (1,439) | 231 | ($181.49) | $0 | | |
| 16 | Ocala STEAM Academy | Shay Industries | SED-VF-140 | 140 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 140 | na | na | | 0.75 | - | - | 280 | | | 1,746 | - | (1,746) | 280 | ($220.21) | $0 | | |
| 16 | Ocala STEAM Academy | Shay Industries | SED-VF-175 | 175 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 175 | na | na | | 0.75 | - | - | 350 | | | 2,182 | - | (2,182) | 350 | ($275.26) | $0 | | |
| 16 | Ocala STEAM Academy | Carrier | 58PAV135 20 | 132 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 132 | na | na | | 0.75 | - | - | 264 | | | 1,646 | - | (1,646) | 264 | ($207.62) | $0 | | |
| 16 | Ocala STEAM Academy | Carrier | 58PAV13T 2P | 132 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 132 | na | na | | 0.75 | - | - | 264 | | | 1,646 | - | (1,646) | 264 | ($207.62) | $0 | | |
| 16 | Ocala STEAM Academy | Carrier | Inaccessible | 132 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 132 | na | na | | 0.75 | - | - | 264 | | | 1,646 | - | (1,646) | 264 | ($207.62) | $0 | | |
| 16 | Ocala STEAM Academy | Carrier | 58PAV135 2I | 132 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 132 | na | na | | 0.75 | - | - | 264 | | | 1,646 | - | (1,646) | 264 | ($207.62) | $0 | | |
| 16 | Ocala STEAM Academy | | | null | 3 | EA | Marginal | HVAC4 | PTAC | 6 | 0 | | 9 | na | na | 8,000 | - | - | | | 4,500 | - | 3,500 | - | $1,143.86 | $9,000 | | |
| 16 | Ocala STEAM Academy | | | null | 3 | EA | Adequate | HVAC4 | PTAC | 6 | 0 | | 10 | na | na | 7,200 | - | - | | | 4,500 | - | 2,700 | - | $882.41 | $9,000 | | |
| 16 | Ocala STEAM Academy | Shay Industries | VF-315 | 315 CFM | 1 | EA | Marginal | None | AHU | 0 | 0 | na | na | | na | - | - | - | | | - | - | - | - | $0.00 | 0 | | |
| 16 | Subtotal, Ocala STEAM Academy | | | | | | | | | | | | | | | | | | HVAC5 | PTAC/Furnace System Electrification (1 RTU, 9 Furnaces, 6 PTAC) | | | (8,626) | 2,378 | 156 | $18,000 | 115.5 | 22,097 |
| 17 | Russo / McEntee Academy | ICP | No tag/plate for | 150 MBH | 1 | EA | Marginal | HVAC6/7 | Furnace | 0 | 150 | na | na | | 0.75 | - | - | 250 | | | 1,563 | - | (1,563) | 250 | ($228.50) | $0 | | |
| 17 | Russo / McEntee Academy | Reznor | CXL-170-3 | 126 - 180 M | 1 | EA | Marginal | HVAC8 | Unit Heater | 0 | 150 | | 0 | 0 | 0.75 | - | - | 250 | | | 1,563 | - | (1,563) | 250 | ($228.50) | $0 | | |
| 17 | Russo / McEntee Academy | Reznor | CXL170-3-E | 150 MBH | 1 | EA | Marginal | HVAC8 | Unit Heater | 0 | 150 | | 0 | 0 | 0.75 | - | - | 250 | | | 1,563 | - | (1,563) | 250 | ($228.50) | $0 | | |
| 17 | Russo / McEntee Academy | | | 2.5 - 5 TON | 3 | EA | Adequate | HVAC4,5 | PTAC | 6 | 0 | | 10 | na | na | 5,400 | - | - | | | 3,375 | - | 2,025 | - | $691.22 | $6,000 | | |
| 17 | Russo / McEntee Academy | | | 751 - 1250 ( | 6 | EA | Adequate | HVAC7 | Furnace | 0 | 300 | na | na | | 0.78 | - | - | 481 | | | 3,005 | - | (3,005) | 481 | ($439.42) | $0 | | |
| 17 | Russo / McEntee Academy | | | 1250 CFM | 5 | EA | Adequate | HVAC7 | Furnace | 0 | 250 | na | na | | 0.78 | - | - | 401 | | | 2,504 | - | (2,504) | 401 | ($366.18) | $0 | | |
| 17 | Russo / McEntee Academy | | | 1 TON | 2 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 1,800 | - | - | | | 1,125 | - | 675 | - | $230.41 | $2,000 | | |
| 17 | Russo / McEntee Academy | | | 751 - 1250 ( | 5 | EA | Adequate | HVAC7 | Furnace | 0 | 250 | na | na | | 0.78 | - | - | 401 | | | 2,504 | - | (2,504) | 401 | ($366.18) | $0 | | |
| 17 | Russo / McEntee Academy | | | 1 TON | 5 | EA | Adequate | HVAC4,5 | PTAC | 5 | 0 | | 10 | na | na | 4,500 | - | - | | | 2,813 | - | 1,688 | - | $576.02 | $5,000 | | |
| 17 | Russo / McEntee Academy | | | 751 - 1250 ( | 5 | EA | Adequate | HVAC7 | Furnace | 0 | 250 | na | na | | 0.78 | - | - | 401 | | | 2,504 | - | (2,504) | 401 | ($366.18) | $0 | | |
| 17 | Russo / McEntee Academy | | | 1 TON | 2 | EA | Adequate | HVAC4,5 | PTAC | 2 | 0 | | 10 | na | na | 1,800 | - | - | | | 1,125 | - | 675 | - | $230.41 | $2,000 | | |
| 17 | Russo / McEntee Academy | | | 751 - 1250 ( | 2 | EA | Marginal | HVAC7 | Furnace | 0 | 100 | na | na | | 0.75 | - | - | 167 | | | 1,042 | - | (1,042) | 167 | ($152.33) | $0 | | |
| 17 | Russo / McEntee Academy | ICP | TCA048AKA1 | 4 TON | 1 | EA | Marginal | HVAC11,12 | Split System ( | 4 | 0 | | 9 | na | na | 4,000 | - | - | | | 2,250 | - | 1,750 | - | $597.35 | $4,000 | | |
| 17 | Subtotal, Russo / McEntee Academy | | | | | | | | | | | | | | | | | | HVAC5 | PTAC/Furnace System Electrification (1 Furnace, 2 Unit Heaters, 12 PTAC, 23 U | | | (9,434) | 2,599 | (50) | 19,000 | (376.9) | 24,147 |

| Site ID | School | Make | Model | Capacity | Quantity | Unit | Condition | Projects | Baseline System | Total Capacities Tons | MBH | Htg kW | Baseline Cooling SEER | Heating HSPF | Heating Eff | Cooling kWh | Heating kWh | Heating Therms | Measure | Project Name | Proposed kWh/yr | th/yr | Savings & Costs Electricity kWh/yr | Gas th/yr | Bill $/yr | Project Cost | SPB Yrs | Carbon Savings (lbs CO2e) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | null | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | null | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | null | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | null | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | null | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Williams | Illegible | 25 BTUH | 1 | EA | Marginal | HVAC7 | Furnace | 0 | 25 | na | na | | 0.75 | - | - | 100 | | | 625 | - | (625) | 100 | ($99.25) | 0 | | |
| 18 | Ryan STEAM Academy | Reznor | XL170-1 | 170 MBH | 1 | EA | Adequate | HVAC8 | Unit Heater | 0 | 170 | | | 0 | 0.78 | - | - | 654 | | | 4,087 | - | (4,087) | 654 | ($648.93) | $0 | | |
| 18 | Ryan STEAM Academy | Trane | Not applicable | 7 MBH | 1 | EA | Adequate | HVAC9 | Unit Heater | 0 | 7 | | | 0 | 0.78 | - | - | 27 | | | 168 | - | (168) | 27 | ($26.72) | $0 | | |
| 18 | Ryan STEAM Academy | Reznor | XL170-3 | 170 MBH | 1 | EA | Adequate | HVAC8 | Unit Heater | 0 | 170 | | | 0 | 0.78 | - | - | 654 | | | 4,087 | - | (4,087) | 654 | ($648.93) | $0 | | |
| 18 | Ryan STEAM Academy | | | null | 2 | EA | Adequate | HVAC4,5 | PTAC | 3 | 0 | | 10 | na | na | 4,320 | - | - | | | 2,700 | - | 1,620 | - | $590.86 | $3,000 | | |
| 18 | Ryan STEAM Academy | | | null | 4 | EA | Adequate | HVAC4,5 | PTAC | 6 | 0 | | 10 | na | na | 8,640 | - | - | | | 5,400 | - | 3,240 | - | $1,181.73 | $6,000 | | |
| 18 | Ryan STEAM Academy | | | null | 6 | EA | Adequate | HVAC4,5 | PTAC | 9 | 0 | | 10 | na | na | 12,960 | - | - | | | 8,100 | - | 4,860 | - | $1,772.59 | $9,000 | | |
| 18 | Ryan STEAM Academy | | | null | 4 | EA | Adequate | HVAC4,5 | PTAC | 6 | 0 | | 10 | na | na | 8,640 | - | - | | | 5,400 | - | 3,240 | - | $1,181.73 | $6,000 | | |
| 18 | Ryan STEAM Academy | | | null | 3 | EA | Adequate | HVAC4,5 | PTAC | 4.5 | 0 | | 10 | na | na | 6,480 | - | - | | | 4,050 | - | 2,430 | - | $886.30 | $4,500 | | |
| 18 | Ryan STEAM Academy | | | null | 5 | EA | Adequate | HVAC4,5 | PTAC | 7.5 | 0 | | 10 | na | na | 10,800 | - | - | | | 6,750 | - | 4,050 | - | $1,477.16 | $7,500 | | |
| 18 | Ryan STEAM Academy | Trane | 2YCC304BA109I | 4 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 4 | 75 | | 9 | na | 0.75 | 6,400 | - | 300 | | | 5,475 | - | 925 | 300 | $723.50 | $4,000 | | |
| 18 | Ryan STEAM Academy | Trane | 2YCC304BA109I | 4 TON | 1 | EA | Marginal | HVAC3,12 | RTU | 4 | 75 | | 9 | na | 0.75 | 6,400 | - | 300 | | | 5,475 | - | 925 | 300 | $723.50 | $4,000 | | |
| 18 | Subtotal, Ryan STEAM Academy | | | | | | | | | | | | | | | | | | HVAC5 | PTAC/Furnace System Electrification (18 Furnaces, 3 Unit Heaters, 24 PTAC, 2 I | 1,698 | 3,735 | $5,426.32 | $44,000 | 8.1 | 44,778 |
| 19 | San Antonio Elementary | Trane | 4YCC3024B1064 | 2 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 2 | 50 | | 10 | na | 0.78 | 2,400 | - | 160 | | | 2,502 | - | (102) | 160 | $155.12 | $2,000 | | |
| 19 | San Antonio Elementary | Trane | 4YCC3018A104( | 2 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 1.5 | 50 | | 10 | na | 0.78 | 1,800 | - | 160 | | | 2,127 | - | (327) | 160 | $82.39 | $1,500 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC036E4RLA0I3 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 3 | 75 | | 10 | na | 0.78 | 3,600 | - | 240 | | | 3,752 | - | (152) | 240 | $232.67 | $3,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YMC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4PLAG14 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YHC060E4RLA0I5 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | San Antonio Elementary | Trane | YHC048E4RLA0I4 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 4 | 75 | | 10 | na | 0.78 | 4,800 | - | 240 | | | 4,502 | - | 298 | 240 | $378.13 | $4,000 | | |
| 19 | San Antonio Elementary | Trane | YSC072E4RXA1I6 | TON | 1 | EA | Adequate | HVAC3,12 | RTU | 6 | 100 | | 10 | na | 0.78 | 7,200 | - | 321 | | | 6,503 | - | 697 | 321 | $601.14 | $6,000 | | |
| 19 | San Antonio Elementary | Trane | YCH360B4HC0B | 5 TON | 1 | EA | Adequate | HVAC3,12 | RTU | 5 | 75 | | 10 | na | 0.78 | 6,000 | - | 240 | | | 5,252 | - | 748 | 240 | $523.58 | $5,000 | | |
| 19 | Subtotal, San Antonio Elementary | | | | | | | | | | | | | | | | | | HVAC12 | Package Unit/Split System Electrification (28 RTUs) | | | 12,658 | 6,651 | $11,891.82 | $120,500 | 10.1 | 86,111 |
| 23 | William Sheppard Middle | null | null | 200 MBH es | 1 | EA | Adequate | HVAC6/7 | Furnace | 0 | 200 | na | na | | 0.78 | - | - | 385 | | | 2,398 | - | (2,398) | 385 | ($389.91) | $10,000 | | |
| 23 | William Sheppard Middle | null | null | 200 MBH es | 1 | EA | Adequate | HVAC6/7 | Furnace | 0 | 200 | na | na | | 0.78 | - | - | 385 | | | 2,398 | - | (2,398) | 385 | ($389.91) | $10,000 | | |
| 23 | William Sheppard Middle | null | null | 200 MBH es | 1 | EA | Adequate | HVAC6/7 | Furnace | 0 | 200 | na | na | | 0.78 | - | - | 385 | | | 2,398 | - | (2,398) | 385 | ($389.91) | $10,000 | | |
| 23 | William Sheppard Middle | null | null | null | 1 | EA | Marginal | HVAC11,12 | Split System I | 0 | 75 | na | na | | 0.75 | 1,920 | - | 150 | | | 2,138 | - | (218) | 150 | $99.63 | $2,000 | | |
| 23 | Subtotal, William Sheppard Middle | | | | | | | | | | | | | | | | | | HVAC7 | Furnace Electrification (3 Furnaces, 1 S/S) | | | (7,411) | 1,304 | ($1,070.10) | $32,000 | (29.9) | 10,341 |

| Measure ID | Description | Baseline Equip | Proposed Equip | Timeframe | Proposed Efficiency | Cost Basis |
|---|---|---|---|---|---|---|
| HVAC1 | Package/Cabinet Heat Pump Replacement | Heat Pump | Like for like | Intended now | 16.5 SEER | $4,000 /ton |
| HVAC2 | Wall Mount Heat Pump Replacement | Bard | Like for like | Intended now | 15 SEER | $4,000 /ton |
| HVAC3 | Package Unit Replacement | Pkg | Like for like | Intended now | 14 SEER 82% thermal eff | $4,000 /ton |
| HVAC4 | Replace PTAC with ductless mini split | PTAC | | Intended now | 16 SEER | $2,500 /ton |
| HVAC5 | PTAC/Furnace System Electrification | PTAC2/Furnace | VRF | Intended at replacement | 16 SEER | $1,500 /ton incremental cost |
| HVAC6 | Replace Furnace with Condensing Furnace | Furnace | | Intended now | 90% thermal eff | 20% premium |
| HVAC7 | Furnace Electrification | Furnace | VRF | Intended at replacement | 16 SEER | $1,500 /ton incremental cost |
| HVAC8 | Replace Unit Heater (Reznor) with Gas UH | Furnace (Reznor) | Like for like, only | Intended now | 92% thermal eff | $8,000 /unit (130 MBH) |
| HVAC9 | Replace Unit Heater (Reznor) with Electric UH | Furnace (Reznor) | Electric Option, c | Intended now | | Custom |
| HVAC10 | Replace ductless mini split | Ductless Mini Split | Like for like | Intended now | 16 SEER | $2,500 /ton |
| HVAC11 | Split System Replacement | Split System | Like for like | Intended now | 14 SEER 90% thermal eff | $4,000 /ton, or |
| | | | | | | $60 /MBH |
| HVAC12 | Package Unit/Split System Electrification | Package/Split | VRF | Intended at replacement | 16 SEER | $1,000 /ton incremental cost |

Alum Rock USD
Boiler Savings Calculation - Boiler Replacement

| Site ID | School | Make | Model | Capacity (MBH) | Condition | Baseline Therm use | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lb CO2e/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Adelante Academy - Ridgemont | National US | 66A | 300 | Poor | 154 | B1 | - | 15 | $27 | $137,019 | > 50 yrs | 180.02 |
| 2 | Alum Rock School District Office | Hayes | 210SED-VF | 210 | Marginal | 655 | B1 | - | 66 | $121 | $17,213 | > 50 yrs | 766.00 |
| 6 | Adelante - Cinderella | Underwriters Laboratories, INC. | 275 W | 2,750 | Adequate | 1,515 | B1 | - | 152 | $198 | $153,508 | > 50 yrs | 1,770.94 |
| 7 | Clyde L. Fischer Middle | Lochinvar | RWN315PM | 315 | Marginal | 625 | B1 | - | 62 | $73 | $24,620 | > 50 yrs | 730.08 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | HH3050IN18KCACK | 3,050 | Marginal | 6,047 | B1 | - | 605 | $710 | $155,527 | > 50 yrs | 7,069.04 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | HH3050IN18KCACK | 3,050 | Adequate | 6,047 | B1 | - | 605 | $710 | $155,527 | > 50 yrs | 7,069.04 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | PH 1010 IN 09 | 1,010 | Adequate | 2,003 | B1 | - | 200 | $235 | $57,597 | > 50 yrs | 2,341 |
| 14 | Millard McCollam Elementary | RBI Water Heaters | HB1050N0E2A2C | 1,050 | Adequate | 3,512 | B1 | - | 351 | $416 | $57,867 | > 50 yrs | 4,105 |
| 14 | Millard McCollam Elementary | RBI Water Heaters | FW1250 | 1,250 | Adequate | 4,181 | B1 | | 418 | $495 | $59,213 | > 50 yrs | 4,887 |
| 23 | William Sheppard Middle | Laars | LC-2-1470B | 1,470 | Marginal | 1,550 | B1 | - | 155 | $182 | $57,393 | > 50 yrs | 1,812 |
| 1 | Adelante Academy - Ridgemont | National US | 66A | 300 | Poor | 154 | B2 | - | 25 | $44 | $3,720 | > 50 yrs | 295 |
| 2 | Alum Rock School District Office | Hayes | 210SED-VF | 210 | Marginal | 655 | B2 | - | 107 | $198 | $2,604 | 13 | 1,256 |
| 6 | Adelante - Cinderella | Underwriters Laboratories, INC. | 275 W | 2,750 | Adequate | 1,515 | B2 | - | 248 | $326 | $34,100 | > 50 yrs | 2,904 |
| 7 | Clyde L. Fischer Middle | Lochinvar | RWN315PM | 315 | Marginal | 625 | B2 | - | 102 | $120 | $3,906 | 32 | 1,197 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | HH3050IN18KCACK | 3,050 | Marginal | 6,047 | B2 | - | 992 | $1,165 | $37,820 | 32 | 11,593 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | HH3050IN18KCACK | 3,050 | Adequate | 6,047 | B2 | - | 992 | $1,165 | $37,820 | 32 | 11,593 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | PH 1010 IN 09 | 1,010 | Adequate | 2,003 | B2 | - | 328 | $386 | $12,524 | 32 | 3,839 |
| 14 | Millard McCollam Elementary | RBI Water Heaters | HB1050N0E2A2C | 1,050 | Adequate | 3,512 | B2 | - | 576 | $682 | $13,020 | 19 | 6,733 |
| 14 | Millard McCollam Elementary | RBI Water Heaters | FW1250 | 1,250 | Adequate | 4,181 | B2 | | 686 | $812 | $15,500 | 19 | 8,015 |
| 23 | William Sheppard Middle | Laars | LC-2-1470B | 1,470 | Marginal | 1,550 | B2 | - | 254 | $298 | $18,228 | > 50 yrs | 2,971 |
| 1 | Adelante Academy - Ridgemont | National US | 66A | 300 | Poor | 154 | B3 | (1,805) | 154 | -$360 | $4,500 | n/a | 607 |
| 2 | Alum Rock School District Office | Hayes | 210SED-VF | 210 | Marginal | 655 | B3 | (7,680) | 655 | -$1,312 | $3,150 | n/a | 2,582 |
| 6 | Adelante - Cinderella | Underwriters Laboratories, INC. | 275 W | 2,750 | Adequate | 1,515 | B3 | (17,756) | 1,515 | -$4,680 | $41,250 | n/a | 5,969 |
| 7 | Clyde L. Fischer Middle | Lochinvar | RWN315PM | 315 | Marginal | 625 | B3 | (7,320) | 625 | -$1,533 | $4,725 | n/a | 2,461 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | HH3050IN18KCACK | 3,050 | Marginal | 6,047 | B3 | (70,876) | 6,047 | -$14,846 | $45,750 | n/a | 23,827 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | HH3050IN18KCACK | 3,050 | Adequate | 6,047 | B3 | (70,876) | 6,047 | -$14,846 | $45,750 | n/a | 23,827 |
| 7 | Clyde L. Fischer Middle | Teledyne Laars | PH 1010 IN 09 | 1,010 | Adequate | 2,003 | B3 | (23,470) | 2,003 | -$4,916 | $15,150 | n/a | 7,890 |
| 14 | Millard McCollam Elementary | RBI Water Heaters | HB1050N0E2A2C | 1,050 | Adequate | 3,512 | B3 | (41,161) | 3,512 | -$11,885 | $15,750 | n/a | 13,838 |
| 14 | Millard McCollam Elementary | RBI Water Heaters | FW1250 | 1,250 | Adequate | 4,181 | B3 | (49,001) | 4,181 | -$14,149 | $18,750 | n/a | 16,473 |
| 23 | William Sheppard Middle | Laars | LC-2-1470B | 1,470 | Marginal | 1,550 | B3 | (18,166) | 1,550 | -$4,554 | $22,050 | n/a | 6,107 |

| | | | Savings (therm/MBH) | Incremental | Max Savings | Timeline/Basis |
|---|---|---|---|---|---|---|
| B1 | Replace Boiler with 90% Efficient Boiler | Intended now | 1.75 | $6.73 | 10% | Immediately, Full Cost |
| B2 | Replace with 96% Efficient Boiler | Intended now | 2.43 | $12.40 | 16% | Immediately, Full Cost |
| B3 | Electrify Boiler with AWHP | Intended at normal replacement | | $15.00 | | At replacement, Incremental Cost, COP 2.5 |

Carbon Intensity

0.661 lbs CO2e/kWh
11.689 lbs CO2e/therm

Alum Rock USD
Controls Savings Calculation - EMS Upgrade

| Site ID | Site Name | SF | Elect (kWh/yr) | Gas (th/yr) | Existing Controls | Primary HVAC Configuration | # Units/Equip Controlled | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lb CO2e/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Adelante Academy - Ridgemont | 25,796 | 324,807 | 154 | Alerton IBEX | Integrated Heat/Cool | 37 | EMS2 | 9,840 | 10 | $3,449 | $144,500 | 42 | 6,623.1 |
| 2 | Alum Rock School District Office | 65,800 | 717,064 | 6,553 | Local Stats | Stand alone Heat & Windov | 66 | EMS4 | 4,345 | 83 | $1,579 | $284,000 | > 50 yrs | 3,843.1 |
| 3 | A. J. Dorsa Elementary | 48,427 | 270,842 | 607 | Alerton BACtalk | Integrated Heat/Cool | 84 | EMS3 | 6,564 | 31 | $2,236 | $136,000 | > 50 yrs | 4,702.5 |
| 4 | Aptitud Academy | 34,237 | 196,496 | 923 | Alerton IBEX | Integrated Heat/Cool | 29 | EMS2 | 5,953 | 58 | $2,262 | $116,500 | > 50 yrs | 4,614.1 |
| 5 | Cesar Chavez Early Learning Center | 53,218 | 202,078 | 4,289 | Local Stats | Stand alone Heat & Windov | 33 | EMS4 | 1,224 | 54 | $520 | $152,000 | > 50 yrs | 1,440.5 |
| 6 | Adelante II Academy - Cinderella | 40,469 | 211,979 | 1,515 | Alerton IBEX | Stand alone Heat & Windov | 36 | EMS4 | 1,284 | 19 | $507 | $164,000 | > 50 yrs | 1,071.1 |
| 7 | Clyde L. Fischer Middle | 70,776 | 552,023 | 14,722 | Local Stats | Integrated Heat/Cool | 73 | EMS1 | 25,085 | 1,394 | $9,406 | $312,000 | 33 | 32,881.2 |
| 8 | Donald Meyer Elementary | 44,492 | 170,034 | 274 | Alerton IBEX | Integrated Heat/Cool | 39 | EMS2 | 5,151 | 17 | $2,074 | $151,500 | > 50 yrs | 3,604.6 |
| 9 | Horace Cureton Elementary | 25,660 | 185,009 | 2,539 | Local Stats | Stand alone Heat & Windov | 59 | EMS4 | 1,121 | 32 | $425 | $256,000 | > 50 yrs | 1,115.3 |
| 10 | Joseph George Middle | 57,287 | 384,810 | 3,188 | Alerton IBEX | Integrated Heat/Cool | 51 | EMS2 | 11,658 | 201 | $4,217 | $193,500 | 46 | 10,057.8 |
| 11 | Lee Mathson Middle | 52,811 | 497,127 | 3,159 | Alerton BACtalk | Integrated Heat/Cool | 53 | EMS3 | 12,048 | 160 | $3,957 | $89,500 | 23 | 9,836.4 |
| 12 | Linda Vista Elementary | 44,687 | 302,865 | 1,689 | Alerton BACtalk | Integrated Heat/Cool | 43 | EMS3 | 7,340 | 85 | $3,114 | $74,500 | 24 | 5,846.8 |
| 13 | Lyndale Elementary | 44,301 | 311,334 | 1,801 | Alerton IBEX | Integrated Heat/Cool | 39 | EMS2 | 9,432 | 114 | $3,615 | $151,500 | 42 | 7,569.0 |
| 14 | Millard McCollam Elementary | 36,394 | 161,755 | 7,693 | Alerton IBEX | Integrated Heat/Cool | 18 | EMS2 | 4,900 | 486 | $2,486 | $78,000 | 31 | 8,920.9 |
| 15 | Hubbard Media Arts Academy | 40,605 | 371,155 | 1,572 | Alerton BACtalk | Integrated Heat/Cool | 47 | EMS3 | 8,995 | 79 | $3,119 | $80,500 | 26 | 6,871.0 |
| 16 | Ocala STEAM Academy | 55,901 | 443,598 | 2,951 | Alerton IBEX | Integrated Heat/Cool | 42 | EMS2 | 13,439 | 186 | $4,625 | $162,000 | 35 | 11,060.1 |
| 17 | Russo / McEntee Academy | 48,859 | 179,304 | 3,460 | Local Stats | Stand alone Heat & Windov | 28 | EMS4 | 1,086 | 44 | $424 | $132,000 | > 50 yrs | 1,232.4 |
| 18 | Ryan STEAM Academy | 35,862 | 179,873 | 4,472 | Local Stats | Stand alone Heat & Windov | 33 | EMS4 | 1,090 | 56 | $470 | $152,000 | > 50 yrs | 1,375.3 |
| 19 | San Antonio Elementary | 39,153 | 303,006 | 8,261 | Alerton BACtalk | Integrated Heat/Cool | 36 | EMS3 | 7,344 | 417 | $2,863 | $64,000 | 22 | 9,730.3 |
| 20 | LUCHA Elementary | 23,252 | 171,296 | 918 | Alerton BACtalk | Integrated Heat/Cool | 15 | EMS3 | 4,152 | 46 | $1,510 | $32,500 | 22 | 3,283.0 |
| 21 | Sylvia Cassell Elementary | 41,380 | 259,784 | - | Alerton IBEX | Integrated Heat/Cool | 48 | EMS2 | 7,870 | - | $2,848 | $183,000 | > 50 yrs | 5,203.7 |
| 22 | Ben Painter Elementary | 56,180 | 220,163 | 1,323 | Mix: IBEX/Local | Integrated Heat/Cool | 39 | EMS2 | 6,670 | 84 | $2,456 | $151,500 | > 50 yrs | 5,392.1 |
| 23 | William Sheppard Middle | 63,358 | 413,686 | 1,550 | Alerton BACtalk | Integrated Heat/Cool | 43 | EMS3 | 10,026 | 78 | $3,608 | $74,500 | 21 | 7,541.0 |

| Measures: | | % Savings | Cost Basis Per Site | Per Unit |
|---|---|---|---|---|
| EMS1 | Install New EMS | 15% | $20,000 | $4,000 |
| EMS2 | Upgrade IBEX | 10% | $15,000 | $3,500 |
| EMS3 | Upgrade BACtalk | 8% | $10,000 | $1,500 |
| EMS4 | Upgrade EMS at modernization | 2% | $20,000 | $4,000 |

| | | | |
|---|---|---|---|
| EUI | CEUS Data for School: | | |
| | Average Electric EUI | 7.46 | kWh/sf-yr |
| | Average Electric HVAC EUI | 2.26 | kWh/sf-yr |
| | % Electric HVAC End Use | 30% | |
| | Average Gas EUI | 0.16 | th/sf-yr |
| | Average Gas HVAC EUI | 0.101 | th/sf-yr |
| | % Gas HVAC End Use | 63% | |
| | Average Total EUI | 41.45 | kBTU/sf-yr |
| | Average TotalHVAC EUI | 17.81 | kBTU/sf-yr |
| | % kBTU HVAC End Use | 43% | |
| Carbon Intensity | | 0.661 | lbs CO2e/kWh |
| | | 11.689 | lbs CO2e/therm |
| | | 41.45 | kBTU/sf-yr |
| | | 17.81 | kBTU/sf-yr |
| | | 43% | |

Alum Rock USD
Controls Savings Calculation - PTstat

| Site ID | Site Name | SF | Elect (kWh/yr) | Gas (th/yr) | Existing Controls | Primary HVAC Configuration | # Units/Equip Controlled | Measure | Electric Savings (kWh/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Adelante Academy - Ridgemont | 25,796 | 324,807 | 154 | Alerton IBEX | Integrated Heat/Cool | 37 | Ptstat | 266 | $93 | $300 | 3.2 |
| 2 | Alum Rock School District Office | 65,800 | 717,064 | 6,553 | Local Stats | Stand alone Heat & Window AC | 66 | Ptstat | 329 | $108 | $300 | 2.8 |
| 3 | A. J. Dorsa Elementary | 48,427 | 270,842 | 607 | Alerton BACtalk | Integrated Heat/Cool | 84 | Ptstat | 98 | $33 | $300 | 9.2 |
| 4 | Aptitud Academy | 34,237 | 196,496 | 923 | Alerton IBEX | Integrated Heat/Cool | 29 | Ptstat | 205 | $75 | $300 | 4.0 |
| 5 | Cesar Chavez Early Learning Center | 53,218 | 202,078 | 4,289 | Local Stats | Stand alone Heat & Window AC | 33 | Ptstat | 186 | $68 | $300 | 4.4 |
| 6 | Adelante II Academy - Cinderella | 40,469 | 211,979 | 1,515 | Alerton IBEX | Stand alone Heat & Window AC | 36 | Ptstat | 178 | $67 | $300 | 4.5 |
| 7 | Clyde L. Fischer Middle | 70,776 | 552,023 | 14,722 | Local Stats | Integrated Heat/Cool | 73 | Ptstat | 229 | $71 | $300 | 4.2 |
| 8 | Donald Meyer Elementary | 44,492 | 170,034 | 274 | Alerton IBEX | Integrated Heat/Cool | 39 | Ptstat | 132 | $52 | $300 | 5.7 |
| 9 | Horace Cureton Elementary | 25,660 | 185,009 | 2,539 | Local Stats | Stand alone Heat & Window AC | 59 | Ptstat | 95 | $33 | $300 | 9.2 |
| 10 | Joseph George Middle | 57,287 | 384,810 | 3,188 | Alerton IBEX | Integrated Heat/Cool | 51 | Ptstat | 229 | $78 | $300 | 3.9 |
| 11 | Lee Mathson Middle | 52,811 | 497,127 | 3,159 | Alerton BACtalk | Integrated Heat/Cool | 53 | Ptstat | 284 | $89 | $300 | 3.4 |
| 12 | Linda Vista Elementary | 44,687 | 302,865 | 1,689 | Alerton BACtalk | Integrated Heat/Cool | 43 | Ptstat | 213 | $87 | $300 | 3.4 |
| 13 | Lyndale Elementary | 44,301 | 311,334 | 1,801 | Alerton IBEX | Integrated Heat/Cool | 39 | Ptstat | 242 | $87 | $300 | 3.5 |
| 14 | Millard McCollam Elementary | 36,394 | 161,755 | 7,693 | Alerton IBEX | Integrated Heat/Cool | 18 | Ptstat | 272 | $106 | $300 | 2.8 |
| 15 | Hubbard Media Arts Academy | 40,605 | 371,155 | 1,572 | Alerton BACtalk | Integrated Heat/Cool | 47 | Ptstat | 239 | $80 | $300 | 3.7 |
| 16 | Ocala STEAM Academy | 55,901 | 443,598 | 2,951 | Alerton IBEX | Integrated Heat/Cool | 42 | Ptstat | 320 | $105 | $300 | 2.9 |
| 17 | Russo / McEntee Academy | 48,859 | 179,304 | 3,460 | Local Stats | Stand alone Heat & Window AC | 28 | Ptstat | 194 | $66 | $300 | 4.5 |
| 18 | Ryan STEAM Academy | 35,862 | 179,873 | 4,472 | Local Stats | Stand alone Heat & Window AC | 33 | Ptstat | 165 | $60 | $300 | 5.0 |
| 19 | San Antonio Elementary | 39,153 | 303,006 | 8,261 | Alerton BACtalk | Integrated Heat/Cool | 36 | Ptstat | 255 | $82 | $300 | 3.6 |
| 20 | LUCHA Elementary | 23,252 | 171,296 | 918 | Alerton BACtalk | Integrated Heat/Cool | 15 | Ptstat | 346 | $121 | $300 | 2.5 |
| 21 | Sylvia Cassell Elementary | 41,380 | 259,784 | - | Alerton IBEX | Integrated Heat/Cool | 48 | Ptstat | 164 | $59 | $300 | 5.1 |
| 22 | Ben Painter Elementary | 56,180 | 220,163 | 1,323 | Mix: IBEX/Local | Integrated Heat/Cool | 39 | Ptstat | 171 | $60 | $300 | 5.0 |
| 23 | William Sheppard Middle | 63,358 | 413,686 | 1,550 | Alerton BACtalk | Integrated Heat/Cool | 43 | Ptstat | 291 | $102 | $300 | 2.9 |

| Measure: | | % Savings | Cost Basis Per Unit | |
|---|---|---|---|---|
| Ptstat | Install programmable Thermostat | 10% | $300 | where existing thermostat fails or a non-programmable thermostat exists (like portables)<br>Since most applicable spaces are heat pumps, only electric savings are calculated, and are per thermostat |

| | | |
|---|---|---|
| EUI | CEUS Data for School: | |
| | Average Electric EUI | 7.46 kWh/sf-yr |
| | Average Electric HVAC EUI | 2.26 kWh/sf-yr |
| | % Electric HVAC End Use | 30% |
| | Average Gas EUI | 0.16 th/sf-yr |
| | Average Gas HVAC EUI | 0.101 th/sf-yr |
| | % Gas HVAC End Use | 63% |

Alum Rock USD
Savings Calculation - Lighting

| Site ID | Site Name | SF | Estimated Fixture Qty | Electric Savings (kWh/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) |
|---|---|---|---|---|---|---|---|
| 1 | Adelante Academy - Ridgemont | 25,796 | 403 | 68,491 | $23,885 | $294,124 | 12.3 |
| 2 | Alum Rock School District Office | 65,800 | 1,028 | 117,895 | $38,683 | $368,130 | 9.5 |
| 3 | A. J. Dorsa Elementary | 48,427 | 757 | 86,802 | $28,984 | $132,245 | 4.6 |
| 4 | Aptitud Academy | 34,237 | 535 | 72,984 | $26,772 | $215,802 | 8.1 |
| 5 | Cesar Chavez (SEL/PAC only) | 53,218 | 102 | 6,713 | $2,477 | $10,130 | 4.1 |
| 9 | Horace Cureton Elementary | 25,660 | 401 | 58,932 | $20,254 | $258,305 | 12.8 |
| 10 | Joseph George Middle | 57,287 | 895 | 106,088 | $36,107 | $447,360 | 12.4 |
| 11 | Lee Mathson Middle | 52,811 | 825 | 138,972 | $43,395 | $432,052 | 10.0 |
| 13 | Lyndale Elementary | 44,301 | 692 | 89,178 | $31,987 | $327,477 | 10.2 |
| 15 | Hubbard Media Arts Academy | 40,605 | 634 | 87,406 | $29,295 | $277,205 | 9.5 |
| 17 | Russo / McEntee Academy | 48,859 | 763 | 96,100 | $32,803 | $243,082 | 7.4 |
| 18 | Ryan STEAM Academy | 35,862 | 560 | 66,740 | $24,342 | $224,505 | 9.2 |
| 19 | San Antonio Elementary | 39,153 | 612 | 92,794 | $29,994 | $254,680 | 8.5 |
| 20 | LUCHA Elementary | 23,252 | 363 | 53,477 | $18,757 | $98,676 | 5.3 |
| 22 | Ben Painter Elementary | 56,180 | 878 | 59,960 | $21,102 | $197,547 | 9.4 |
| 23 | William Sheppard Middle | 63,358 | 990 | 114,827 | $40,275 | $338,426 | 8.4 |

Alum Rock USD
Savings Calculation - Chavez Lighting

| | | Existing | | | | | Proposed | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Area | Fixture | Estimated Fixture Qty | Operating Hours (hrs/yr) | Fixture W | Demand (kW) | Electric Consumption (kWh/yr) | Fixture | Fixture W | Demand (kW) | Electric Consumption (kWh/yr) | Electric Savings (kWh/yr) | Cost Savings ($/yr) | Unit Cost/fixt | Project Cost ($) |
| PAC & SEL - Interior | 2L F32T8 Wrap | 5 | 2445 | 59 | 0.30 | 721 | (2) 15W TLED | 30 | 0.15 | 367 | 354 | $131 | $100 | $500 |
| | 1L F32T8 Strip | 5 | 2445 | 31 | 0.16 | 379 | (1) 15W TLED | 15 | 0.08 | 183 | 196 | $72 | $50 | $250 |
| | 2L F17 Wrap | 6 | 2445 | 33 | 0.20 | 484 | (2) 9W TLED | 18 | 0.11 | 264 | 220 | $81 | $80 | $480 |
| | 2L F32T8 Pendant | 80 | 2445 | 59 | 4.72 | 11,540 | (2) 15W TLED | 30 | 2.40 | 5,868 | 5,672 | $2,093 | $100 | $8,000 |
| PAC & SEL - Exterior | LED Flood | 3 | 4100 | 30 | 0.09 | 369 | No change | 30 | 0.09 | 369 | - | $0 | $0 | $0 |
| | CFL Flood | 3 | 4100 | 42 | 0.13 | 517 | 20W LED Flood | 20 | 0.06 | 246 | 271 | $100 | $300 | $900 |
| Total | | 102 | | | 5.58 | 14,010 | | | 2.88 | 7,297 | 6,713 | $2,477 | | $10,130 |

| Site ID | Site Name | ID | Component | Make | Model | Capacity (Gal) | Condition | New Capacity (Gal) | Measure Name | Baseline Usage (Therms) | Electric Savings (kWh/yr) | Gas Savings (Therms/yr) | Adjusted Electric Savings (kWh/yr) | Adjusted Gas Savings (Therms/yr) | Cost Savings ($/yr) | Project Cost | Carbon Savings ( lb CO2e/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Adelante Academy - Ridgemont | 4816783 | Water Heater | Rheem | 3WA54 | 75 GAL | Marginal | 75 | WH5 | 15 | (8,070) | 967 | (129) | 15 | $ (18) | $ 3,704 | 95 |
| 2 | Alum Rock School District Office | 4497636 | Water Heater | Kenmore | | 30 GAL | Marginal | 30 | WH1 | 179 | (6,480) | 715 | (1,620) | 179 | $ (202) | $ 2,757 | 1,018 |
| 2 | Alum Rock School District Office | 4498294 | Water Heater | Servolift | CRKEXR90-52DL | 50 GAL | Adequate | 50 | WH3 | 298 | (6,480) | 709 | (2,722) | 298 | $ (344) | $ 2,900 | 1,682 |
| 2 | Alum Rock School District Office | 4525589 | Water Heater | Kenmore | | 30 GAL | Marginal | 30 | WH1 | 179 | (6,480) | 715 | (1,620) | 179 | $ (202) | $ 2,757 | 1,018 |
| 3 | A. J. Dorsa Elementary | 4576801 | Water Heater | A. O. Smith | BT 80 300 | 74 GAL | Adequate | 75 | WH5 | 61 | (8,070) | 967 | (507) | 61 | $ (83) | $ 3,769 | 375 |
| 4 | Aptitud Academy | 4540950 | Water Heater | | SG60T12YXS10 | 60 GAL | Marginal | 60 | WH4 | 92 | (7,150) | 741 | (891) | 92 | $ (203) | $ 3,313 | 490 |
| 5 | Cesar Chavez Early Learning Center | 4737567 | Water Heater | Bradford White | U75T80R3N | 75 GAL | Adequate | 75 | WH5 | 280 | (8,070) | 967 | (2,334) | 280 | $ (509) | $ 4,196 | 1,726 |
| 5 | Cesar Chavez Early Learning Center | 4737589 | Water Heater | Bradford White | U140T6FRN | 40 GAL | Adequate | 40 | WH2 | 149 | (6,480) | 707 | (1,367) | 149 | $ (317) | $ 2,872 | 840 |
| 6 | Adelante II Academy - Cinderella | 4731173 | Water Heater | A. O. Smith | Inaccessible | 60 GAL | Good | 60 | WH4 | 152 | (7,150) | 741 | (1,462) | 152 | $ (350) | $ 3,461 | 804 |
| 7 | Clyde L. Fischer Middle | 4294739 | Water Heater | Lochinvar | CNR125-075-DF9 | 75 - 99 GAL | Adequate | 75 | WH5 | 1,472 | (8,070) | 967 | (8,070) | 967 | $ (1,363) | $ 5,050 | 5,968 |
| 8 | Donald Meyer Elementary | 4661572 | Water Heater | Rheem | XG50T09HN38UI | 50 GAL | Good | 50 | WH3 | 27 | (6,480) | 709 | (250) | 27 | $ (38) | $ 2,593 | 155 |
| 9 | Horace Cureton Elementary | 4585912 | Water Heater | Bradford White | U75T80R3N | null | Marginal | 75 | WH5 | 254 | (8,070) | 967 | (2,119) | 254 | $ (412) | $ 4,099 | 1,567 |
| 10 | Joseph George Middle | 4883721 | Water Heater | | | 75 GAL | Poor | 75 | WH5 | 208 | (8,070) | 967 | (1,735) | 208 | $ (333) | $ 4,019 | 1,283 |
| 10 | Joseph George Middle | 4870854 | Water Heater | Ge | GG4PT6XA | 40 GAL | Poor | 40 | WH2 | 111 | (6,480) | 707 | (1,016) | 111 | $ (209) | $ 2,764 | 624 |
| 11 | Lee Mathson Middle | 4589967 | Water Heater | A. O. Smith | BTH 300A 100 | 100 - 199 GAL | Adequate | 75 | WH5 | 316 | (8,070) | 967 | (2,636) | 316 | $ (438) | $ 4,125 | 1,950 |
| 12 | Linda Vista Elementary | 4540682 | Water Heater | Bradford White | ULG2100H853N | 100 GAL | Good | 75 | WH5 | 84 | (8,070) | 967 | (705) | 84 | $ (184) | $ 3,870 | 521 |
| 12 | Linda Vista Elementary | 4540768 | Water Heater | Standard | D100-250-AS | 100 GAL | Poor | 75 | WH5 | 84 | (8,070) | 967 | (705) | 84 | $ (184) | $ 3,870 | 521 |
| 13 | Lyndale Elementary | 4795513 | Water Heater | Inaccessible | Inaccessible | 50 GAL | Marginal | 50 | WH3 | 180 | (6,480) | 709 | (1,646) | 180 | $ (224) | $ 2,779 | 1,017 |
| 14 | Millard McCollam Elementary | 4735097 | Water Heater | Bradford White | U75T80R3N | 75 - 99 GAL | Adequate | 75 | WH5 | 769 | (8,070) | 967 | (6,420) | 769 | $ (1,591) | $ 5,278 | 4,748 |
| 15 | Hubbard Media Arts Academy | 4557749 | Water Heater | A. O. Smith | BTN 31P 108 | 85 GAL | Poor | 75 | WH5 | 157 | (8,070) | 967 | (1,312) | 157 | $ (233) | $ 3,919 | 970 |
| 16 | Ocala STEAM Academy | 4733167 | Water Heater | Bradford White | U45036FRN | 50 GAL | Good | 50 | WH3 | 74 | (6,480) | 709 | (674) | 74 | $ (128) | $ 2,683 | 417 |
| 16 | Ocala STEAM Academy | 4862604 | Water Heater | Bradford White | M2XR7556BN | 75 GAL | Marginal | 75 | WH5 | 111 | (8,070) | 967 | (924) | 111 | $ (163) | $ 3,850 | 683 |
| 16 | Ocala STEAM Academy | 4862603 | Water Heater | Bradford White | ULG275H763N | 75 GAL | Adequate | 75 | WH5 | 111 | (8,070) | 967 | (924) | 111 | $ (163) | $ 3,850 | 683 |
| 17 | Russo / McEntee Academy | 4744425 | Water Heater | A. O. Smith | G6-UT5050NV 400 | 50 GAL | Good | 50 | WH3 | 346 | (6,480) | 709 | (3,162) | 346 | $ (658) | $ 3,213 | 1,954 |
| 18 | Ryan STEAM Academy | 4559738 | Water Heater | Rheem | XG50T06GEN38UD | 50 GAL | Good | 50 | WH3 | 447 | (6,480) | 709 | (4,087) | 447 | $ (915) | $ 3,470 | 2,525 |
| 19 | San Antonio Elementary | 4581654 | Water Heater | A. O. Smith | BTH-300 200 | 100 - 199 GAL | Adequate | 75 | WH5 | 826 | (8,070) | 967 | (6,894) | 826 | $ (1,260) | $ 4,946 | 5,098 |
| 20 | LUCHA Elementary | 4471418 | Water Heater | Rheem | XG40T09EN38U1 | 40 GAL | Good | 40 | WH2 | 92 | (6,480) | 707 | (841) | 92 | $ (187) | $ 2,743 | 517 |
| 23 | William Sheppard Middle | 4788768 | Water Heater | Rheem | XG40T09EN38U1 | null | Good | 40 | WH2 | 155 | (6,480) | 707 | (1,421) | 155 | $ (304) | $ 2,860 | 873 |
| | | | | | | | | | | 7,229 | (205,040) | 23,532 | (58,193) | 6,724 | $ (11,218) | $ 99,710 | 40,120 |

| Measure Name | Description | New Size |
|---|---|---|
| WH1 | Replace with 30 Gal Heat Pump Water Heater | 30 |
| WH2 | Replace with 40 Gal Heat Pump Water Heater | 40 |
| WH3 | Replace with 50 Gal Heat Pump Water Heater | 50 |
| WH4 | Replace with 60 Gal Heat Pump Water Heater | 60 |
| WH5 | Replace with 75 Gal Heat Pump Water Heater | 75 |

| Site ID | School | Make | Model | Replacement Year | Measure ID | Measure | Electric Savings (kWh/yr) | Gas Savings (th/yr) | Cost Savings ($/yr) | Project Cost ($) | SPB (yrs) | Carbon Savings (lb CO2e/yr) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | A. J. Dorsa Elementary | Stero | SC-20-1A-M | 2027 | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $315 | $4,578 | 14.5 | 2,310 |
| 6 | Adelante II Academy - Cinderella | Stero | SC-20-1A-M | 2023 | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $300 | $4,578 | 15.3 | 2,310 |
| 8 | Donald Meyer Elementary | Stero | SCT-44-CS | 2023 | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $475 | $4,578 | 9.6 | 2,310 |
| 10 | Joseph George Middle | Stero | | 2023 | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $281 | $4,578 | 16.3 | 2,310 |
| 13 | Lyndale Elementary | Stero | SC-20-1A | 2024 | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $435 | $4,578 | 10.5 | 2,310 |
| 14 | Millard McCollam Elementary | Stero | SC-20-1A | 2027 | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $278 | $4,578 | 16.5 | 2,310 |
| 17 | Russo / McEntee Academy | Edlund | | 2027 | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $278 | $4,578 | 16.5 | 2,310 |
| 24 | LUCHA Elementary | Hobart | No tag/plate found | 2023 | FS1 | Tier 1 Dishwasher (Full Cost) | 135 | 190 | $270 | $4,578 | 16.9 | 2,310 |
| 3 | A. J. Dorsa Elementary | Stero | SC-20-1A-M | 2027 | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $435 | $6,054 | 13.9 | 3,186 |
| 6 | Adelante II Academy - Cinderella | Stero | SC-20-1A-M | 2023 | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $413 | $6,054 | 14.7 | 3,186 |
| 8 | Donald Meyer Elementary | Stero | SCT-44-CS | 2023 | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $655 | $6,054 | 9.2 | 3,186 |
| 10 | Joseph George Middle | Stero | | 2023 | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $388 | $6,054 | 15.6 | 3,186 |
| 13 | Lyndale Elementary | Stero | SC-20-1A | 2024 | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $600 | $6,054 | 10.1 | 3,186 |
| 14 | Millard McCollam Elementary | Stero | SC-20-1A | 2027 | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $383 | $6,054 | 15.8 | 3,186 |
| 17 | Russo / McEntee Academy | Edlund | | 2027 | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $383 | $6,054 | 15.8 | 3,186 |
| 24 | LUCHA Elementary | Hobart | No tag/plate found | 2023 | FS2 | Tier 2 Dishwasher (Full Cost) | 186 | 262 | $373 | $6,054 | 16.3 | 3,186 |
| 3 | A. J. Dorsa Elementary | Stero | SC-20-1A-M | 2027 | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $315 | $267 | 0.8 | 2,310 |
| 6 | Adelante II Academy - Cinderella | Stero | SC-20-1A-M | 2023 | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $300 | $267 | 0.9 | 2,310 |
| 8 | Donald Meyer Elementary | Stero | SCT-44-CS | 2023 | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $475 | $267 | 0.6 | 2,310 |
| 10 | Joseph George Middle | Stero | | 2023 | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $281 | $267 | 1.0 | 2,310 |
| 13 | Lyndale Elementary | Stero | SC-20-1A | 2024 | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $435 | $267 | 0.6 | 2,310 |
| 14 | Millard McCollam Elementary | Stero | SC-20-1A | 2027 | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $278 | $267 | 1.0 | 2,310 |
| 17 | Russo / McEntee Academy | Edlund | | 2027 | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $278 | $267 | 1.0 | 2,310 |
| 24 | LUCHA Elementary | Hobart | No tag/plate found | 2023 | FS1 | Tier 1 Dishwasher (Incremental Cost) | 135 | 190 | $270 | $267 | 1.0 | 2,310 |
| 3 | A. J. Dorsa Elementary | Stero | SC-20-1A-M | 2027 | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $435 | $1,743 | 4.0 | 3,186 |
| 6 | Adelante II Academy - Cinderella | Stero | SC-20-1A-M | 2023 | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $413 | $1,743 | 4.2 | 3,186 |
| 8 | Donald Meyer Elementary | Stero | SCT-44-CS | 2023 | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $655 | $1,743 | 2.7 | 3,186 |
| 10 | Joseph George Middle | Stero | | 2023 | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $388 | $1,743 | 4.5 | 3,186 |
| 13 | Lyndale Elementary | Stero | SC-20-1A | 2024 | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $600 | $1,743 | 2.9 | 3,186 |
| 14 | Millard McCollam Elementary | Stero | SC-20-1A | 2027 | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $383 | $1,743 | 4.6 | 3,186 |
| 17 | Russo / McEntee Academy | Edlund | | 2027 | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $383 | $1,743 | 4.6 | 3,186 |
| 24 | LUCHA Elementary | Hobart | No tag/plate found | 2023 | FS2 | Tier 2 Dishwasher (Incremental Cost) | 186 | 262 | $373 | $1,743 | 4.7 | 3,186 |

| | | kWh Savings | Gas Savings | Incremental Cost | Full Cost |
|---|---|---|---|---|---|
| FS1 | Tier 1 Commercial Dishwasher | 135 | 190 | $267 | $4,578 |
| FS2 | Tier 2 Commercial Dishwasher | 186 | 262 | $1,743 | $6,054 |

Carbon Intensity: 0.661 lbs CO2e/kWh
11.689 lbs CO2e/therm

Conclusion:
All kitchen measures SPB exceed EUL of equipment, no replacments recommended from energy standpoint
Minor carbon savings if convert gas oven to electric, mention in report

| Site ID | Site Name | Ave Elect Cost ($/kWh)* | Ave Gas Cost ($/therm)** | Cost Savings, Per Oven |
|---|---|---|---|---|
| 1 | Adelante Academy - Ridgemont | $0.349 | $1.747 | ($1,262) |
| 2 | Alum Rock School District Office | $0.328 | $1.843 | ($1,068) |
| 3 | A. J. Dorsa Elementary | $0.334 | $1.423 | ($1,359) |
| 4 | Aptitud Academy | $0.367 | $1.344 | ($1,624) |
| 5 | Cesar Chavez Early Learning Center | $0.369 | $1.259 | ($1,690) |
| 6 | Adelante II Academy - Cinderella | $0.375 | $1.310 | ($1,701) |
| 7 | Clyde L. Fischer Middle | $0.310 | $1.175 | ($1,347) |
| 8 | Donald Meyer Elementary | $0.395 | $2.220 | ($1,287) |
| 9 | Horace Cureton Elementary | $0.344 | $1.244 | ($1,531) |
| 10 | Joseph George Middle | $0.340 | $1.238 | ($1,512) |
| 11 | Lee Mathson Middle | $0.312 | $1.218 | ($1,338) |
| 12 | Linda Vista Elementary | $0.410 | $1.241 | ($1,972) |
| 13 | Lyndale Elementary | $0.359 | $2.035 | ($1,155) |
| 14 | Millard McCollam Elementary | $0.390 | $1.185 | ($1,873) |
| 15 | Hubbard Media Arts Academy | $0.335 | $1.314 | ($1,433) |
| 16 | Ocala STEAM Academy | $0.327 | $1.251 | ($1,415) |
| 17 | Russo / McEntee Academy | $0.341 | $1.219 | ($1,530) |
| 18 | Ryan STEAM Academy | $0.365 | $1.287 | ($1,645) |
| 19 | San Antonio Elementary | $0.323 | $1.173 | ($1,438) |
| 20 | LUCHA Elementary | $0.351 | $1.173 | ($1,621) |
| 21 | Sylvia Cassell Elementary | $0.362 | $0.000 | ($2,399) |
| 22 | Ben Painter Elementary | $0.352 | $1.298 | ($1,553) |
| 23 | William Sheppard Middle | $0.351 | $1.173 | ($1,621) |
| | Average | $0.351 | $1.301 | ($1,547) |

| | Electric Sav | Gas Savings | Carbon | |
|---|---|---|---|---|
| Savings, Convection Oven | -6630 | 601 | 2,642 | lbs CO2e/year/oven |
| Cost | | $8,339 | | |

| | | |
|---|---|---|
| Carbon Intensity | 0.661 | lbs CO2e/kWh |
| | 11.689 | lbs CO2e/therm |

Conclusion:
All other kitchen measures SPB exceed EUL of equipment, no replacments recommended from energy standpoint
Minor carbon savings if convert gas oven to electric, mention in report

2.02

ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT
2930 Gay Avenue, San Jose, CA 95127

Office of Superintendent of Schools

**ITEM REQUIRING ATTENTION - BOARD OF EDUCATION**

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To the Board of Trustees: April 19, 2024

**Subject**: Resolution No. 52-23/24, Outdoor Equity Grants Program. The Outdoor Equity Grants Program (OEP) was established by Assembly Bill 209 (2019). The purpose of the Program is to increase the ability of underserved and at-risk populations to participate in outdoor environmental educational experiences at state parks and other public lands where outdoor environmental education programs take place.

**Staff Analysis**: The Administration is requesting the Board's approval to submit an application for a grant from the Program to enrich the educational experiences of Alum Rock students. The Grants administration requires that the Board adopt a resolution authorizing the application.

**Recommendation**: The administration respectfully requests that the Board consider and approve Resolution No. 52-23/24 to approve and authorize the Administration to submit the application for the Outdoor Equity Grant Program funds.

Submitted by: Imee Almazan Ed.D. Title: Interim Superintendent

To the Board of Trustees:

Meeting: April 22, 2024
Special Board Meeting

**Recommend Approval**

2.02
Agenda Placement

Imee Almazan, Ed.D., Interim Superintendent

**DISPOSITION BY BOARD OF TRUSTEES**

Motion by:_____ Seconded by:_____

Approved: _____ Not Approved: _____ Tabled:_____

**RESOLUTION # 52-23/24**
**of the Board of Trustees of the Alum Rock Union Elementary School District**
**Approving the Application for**
**OUTDOOR EQUITY GRANTS PROGRAM GRANT FUNDS**

**WHEREAS**, the State Department of Parks and Recreation has been delegated the responsibility by the Legislature of the State of California for the administration of the Outdoor Equity Grants Program, setting up necessary procedures governing the application; and

**WHEREAS**, said procedures established by the State Department of Parks and Recreation require the Applicant to certify by resolution the approval of the application before submission of said application to the State; and

**WHEREAS**, successful Applicants will enter into a contract with the State of California to complete the Grant Scope program;

**NOW, THEREFORE, BE IT RESOLVED** that the Board of the Alum Rock Union Elementary School District hereby: APPROVES THE FILING OF AN APPLICATION FOR THE Outdoor Equity Grants Program Grant Funds and further:

1. Certifies that said Applicant has or will have available, prior to commencement of any work on the program(s) included in this application, the sufficient funds to complete the program(s); and
2. Certifies that if the grant is awarded, the Applicant has or will have sufficient funds to operate the program(s) as described in the Grant Selection Criterion response, and
3. Certifies that the Applicant has reviewed, understands, and agrees to the General Provisions contained in the contract shown in the Grant Administration Guide; and
4. Delegates to the Superintendent or her designee the authority to conduct all negotiations, sign and submit all documents, including, but not limited to applications, agreements, amendments, and payment requests, which may be necessary for the completion of the Grant Scope; and
5. Agrees to comply with all applicable federal, state and local laws, ordinances, rules, regulations and guidelines.
6. Will consider promoting inclusion per Public Resources Code §80001(b)(8 A-G).

Approved and adopted the 22 day of April, 2024.

I, the undersigned, hereby certify that the foregoing Resolution Number # 52-23/24 was duly adopted by the Board of Trustees of the Alum Rock Union Elementary School District following a roll call vote:

Ayes:

Noes:

Absent:

_____ (Clerk)

2.03

ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT
2930 Gay Avenue, San Jose, CA 95127

Office of Superintendent of Schools

**ITEM REQUIRING ATTENTION - BOARD OF EDUCATION**

To the Board of Trustees: April 19, 2024

**Subject**: The Board will provide guidance and set parameters regarding the Comprehensive Budget Solution Plan.

Submitted by: Imee Almazan Ed.D. Title: Interim Superintendent

To the Board of Trustees:

Meeting: April 22, 2024
Special Board Meeting

2.03
Agenda Placement

Imee Almazan, Ed.D., Interim Superintendent

**DISPOSITION BY BOARD OF TRUSTEES**

Motion by:_____ Seconded by:_____

Approved: _____ Not Approved: _____ Tabled:_____

3.01

ALUM ROCK UNION ELEMENTARY SCHOOL DISTRICT
2930 Gay Avenue, San Jose, CA 95127

Office of Superintendent of Schools

**ITEM REQUIRING ATTENTION - BOARD OF EDUCATION**

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To the Board of Trustees: Date: **April 22, 2024**

**Subject:** **Approve/Ratify Notices of Employment and Changes of Status/April 22, 2024**

**Staff Analysis:** This item includes recommendations such as new hires, leaves of absence, or other changes in employee status.

**Recommendation:** Staff recommends the Board of Trustees approval of the hiring of any new employee, and any change of status for existing employees.

Submitted by: Cesar Torrico Title: Asst. Superintendent, Human Resources

Approved by: Cesar Torrico Title: Asst. Superintendent, Human Resources

To the Board of Trustees: Meeting: April 22, 2024
Regular Board Meeting

**Recommend Approval**

3.01
Agenda Placement

Assistant Superintendent, Human Resources

**DISPOSITION BY BOARD OF TRUSTEES**

Motion by:_____ Seconded by:_____

Approved: _____ Not Approved: _____ Tabled:_____

**CLASSIFIED PERSONNEL – April 22, 2024**

**CLASSIFIED OFFERS OF EMPLOYMENT:**

I. **Contracted Employees:**

| | | |
|---|---|---|
| **1.** De Vera Pastor, Erica | COPITA/Linda Vista | 04/19/2024-04/30/2024 |
| **2.** Logan, Davis | COPITA/Painter | 04/15/2024-04/26/2024 |
| **3.** Mendoza, Jared | COPITA/L.U.C.H.A Academy | 04/01/2024-06/06/2024 |
| **4.** Smith, Dejon | COPITA/San Antonio | 04/15/2024-04/29/2024 |
| **5.** Solis, Angelica | COPITA/Ocala | 04/24/2024-04/28/2024 |
| **6.** Vicente, Pedro | COPITA/Russo-McEntee | 04/26/2024-04/29/2024 |
| **7.** Villarreal, Carlos | COPITA/Adelante I | 04/01/2024-05/04/2024 |