



Menifee, CA 92584 (800)-557-1467
License #976522

Proposal # 1180
October 21, 2015
Attention: Marika Erdely
Subject: Bert Corona Charter School HVAC Unit Replacement and Duct Renovation
Location: 9400 Remick Ave. Pacoima, Ca 91331

Inland Mechanical Services, Inc. Proposes to furnish labor and materials to perform the installation on the above mentioned project. This price is based on the outlined scope of work with the following qualifications and exclusions.

Client Investment

Total Client Investment \$188,795

The following payment schedule will apply

1st Progress Payment 50%

2nd Progress Payment 45%

Final Retention Payment 5%

Please note a \$50 late payment will be accessed after 30 days

Scope of Work

Energy Efficiency Increase Project:

Inland Mechanical Services, Inc. proposes to remove and replace the existing 17 Wall Mounted HVAC Units, and 1 Package Roof Top Unit. Remove and replace all existing ductwork. Remove and replace all existing supply and return registers. Remove and replace all existing thermostats.

Wall Mounted Unit Replacement

- Disconnect electrical
- Remove existing wall mounted unit
- Remove and replace existing ductwork, sealing properly to reduce duct loss
- Remove and replace existing supply and return registers to reduce duct loss
- Remove and replace existing thermostat and replace with Pelican Wireless System Thermostat
- Install new high efficiency wall mounted unit with 2 stage motor and economizer
- Connect all ductwork to new unit
- Connect electrical
- Install door switch to each classroom to trigger the unit to turn off mechanical cooling if the door is propped open. This will prevent a unit from attempting to cool the space and having the cool air blown outside
- Install motion sensors to each classroom to turn off the unit in the event the unit is left on and there is no movement in the room for a designated period of time. This will prevent a unit from running unnecessarily
- Startup and commission unit
- Appropriately dispose of existing unit, ductwork, registers, and thermostat

Package Roof Top Unit

- Disconnect electrical
- Remove existing RTU
- Remove and replace existing ductwork, sealing properly to reduce duct loss
- Remove and replace existing supply and return registers to reduce duct loss
- Remove and replace existing thermostat and replace with Pelican Wireless System Thermostat
- Install new high efficiency RTU with economizer
- Connect all ductwork to new unit
- Connect electrical
- Startup and commission unit
- Appropriately dispose of existing unit, ductwork, registers, and thermostat

HVAC System Performance Analysis

- Perform HVAC System Performance Analysis upon completion of project to confirm airflow of new units, and to calculate new efficiency score to determine the increase in efficiency as a result of renovations

Green Ecomore and Bert Corona Charter School will be provided with the report detailing the scope of work performed, equipment installed, and efficiency increase for each unit.

Material List

Proposed Equipment: A higher efficiency unit equipped with an upgraded 2 stage compressor, and Electronically Commuted Motor (ECM) to reduce energy consumption. In addition, this unit will come equipped with an economizer and Advanced Digital Economizer controller to utilize fresh outside air to cool the space when outside temperature conditions allow, instead of using mechanical cooling. Doing so limits the need for mechanical cooling. Utilizing outside air provides for better circulation of air, and improves indoor air quality. Adding a CO₂ Sensor provides for Demand Controlled Ventilation (DCV).

An economizer is required to bring in a minimum amount of outside air, at all times. The air brought in by the economizer first needs to be cooled and dehumidified before it enters the space. When the temperature outside is not ideal for utilizing the economizer, bringing in the warmer air now adds more of a heat load to the unit, requiring it to work harder than normal. A CO₂ Sensor monitors the indoor air quality and CO₂ levels, and allows the economizer to close completely, preventing the warmer air from being brought in. Demand Controlled Ventilation (DCV) will override the economizer function when conditions inside require ventilation, and the CO₂ sensor will open the economizer to ventilate the space, then close it completely again once the CO₂ reaches required levels.

Utilizing the economizer with the Advanced Digital Economizer Controller in concert with the Demand Controlled Ventilation, will result in a 25% - 40% decrease in energy consumption over a unit not utilizing these functions.

Proposed

16	Eubank 3 Ton 10 EER High Efficiency Heat Pump w/ ECM Motor & 2 Stage Compressor & Economizer with Advanced Digital Economizer Controller
1	Eubank 1.5 Ton 10 EER High Efficiency Heat Pump w/ ECM Motor & 2 Stage Compressor & Economizer with Advanced Digital Economizer Controller
18	Honeywell Duct Mounted CO ₂ Sensor
1	Day & Night 4 Ton 11.2 EER High Efficiency Heat Pump Roof Top Unit
60	Supply Grilles
17	Return Grilles
88	Duct Runs
18	Pelican Wireless System Digital Thermostat TS200
1	Pelican Wireless Extended Range Gateway GW400
18	Door Switches
18	Motion Sensors

Exclusions

1. Refrigerant leak repairs
2. Bonds, permits, utility fees, allowances, temporary power, lighting and phone service.
3. All underground conduit, trenching, encasement and/or backfill between buildings and/or mechanical yards.
4. All hardware, software, controllers, lighting relays, switches, panels, enclosures, control devices, transformers, or any other misc. control items, and 277/120v wiring.
5. Furnishing or Installation of Access Doors, Magnetic Starters, and any VFD controllers.
6. All dumpster fees, any and all asphalt and concrete cutting, breaking, removal, and patching of same; sealing of roof penetrations and/or repairs to existing roofing systems.
7. Any and all labor and/or material associated with Layout, coring, X-Ray, cutting, framing, patching, painting, removal/repair of existing ceilings, walls, floors, as required for electrical installations.
8. Lighting control, Security Access, Process Controls and/or Alarms, Utility Meters and/or Integration of any systems not specifically listed in the above proposal.
9. Duct smoke detectors, AHU/Equipment shutdown, smoke/fire dampers, end switch monitoring, and any fire life safety.
10. Any and all Structural engineering, seismic bracing, load calculations and engineered designs.
11. Any and all 3D BIM/Revit Modeling and/or ACAD design and/or services.
12. Any and all labor and/or material associated with Fiber Optic Cabling unless specifically listed above.
13. Any and all labor and/or material for Ethernet TCP/IP Cabling for intranet and extranet network connection to Network Area / Building Controller(s).
14. Any and all labor and/or material associated with Smoke Exhaust Control unless specifically listed above.
15. Any and all labor and/or material for tamper proof thermostats, and/or security hardware.
16. Accelerated construction schedule
17. Any and all work not specifically listed in the above proposal.

Inland Mechanical Services, Inc. provides 1 year warranty on labor and installation.
This proposal is valid for 60 Days.

Customer Signature _____ **Date** _____
Contractor Signature _____ **Date** _____

Thank you for the opportunity to provide you with this proposal. Please call or email me if you have any questions regarding this proposal.

Sincerely,

Brian Hungerford

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