



**GARCIA • GALUSKA • DESOUSA**  
 Consulting Engineers Inc.

370 Faunce Corner Road, Dartmouth, MA 02747-1217

**PROJECT: Acton Fire Station**

**JOB NO: 945 006 00**

**CLIENT: Town of Acton**

**DATE: 7/9/13**

**BY: DP**

**Fire Station No. 1(Center) HVAC**

| ITEM OF WORK  | NO. | UNIT PRICE | AREA FT <sup>2</sup> | PRICE/S.F. | TOTAL                |
|---|-----|------------|----------------------|------------|----------------------|
| High-Efficiency Gas-Fired Condensing Boiler and Accessories | 1   | \$ 32,000  |                      |            | \$ 32,000.00         |
| Boiler Venting  | 1   | \$ 15,000  |                      |            | \$ 15,000.00         |
| Boiler Condensate Neuralization Kit and Piping              | 1   | \$ 8,500   |                      |            | \$ 8,500.00          |
| Hot Water Pumps w/ VFD's                                    | 2   | \$ 5,750   |                      |            | \$ 11,500.00         |
| HHW expansion Tank, Air Seperator & Accessories             | 1   | \$ 4,250   |                      |            | \$ 4,250.00          |
| HHW Piping & Ins. and Accessories                           |     |            | 4,678                | \$ 8.50    | \$ 39,763.00         |
| Heating Terminal Units, Fintube Radiation & Unit Heaters    | 1   |            | 4,678                | \$ 4.00    | \$ 18,712.00         |
| Apparatus Bay Unit Heaters                                  | 4   | \$ 2,000   |                      |            | \$ 8,000.00          |
| Split-System Heat Pump AC Air Handling Units                | 3   | \$ 8,500   |                      |            | \$ 25,500.00         |
| Split System High-Efficiency Condensing Units               | 3   | \$ 3,500   |                      |            | \$ 10,500.00         |
| AHU Refrigerant Piping & Insulation and Condensate          | 3   | \$ 5,000   |                      |            | \$ 15,000.00         |
| Ventilation System ERV Unit (2,000 CFM)                     | 1   | \$ 20,000  |                      |            | \$ 20,000.00         |
| Exhaust Air Fans  | 2   | \$ 1,500   |                      |            | \$ 3,000.00          |
| Ductwork & Ins.   |     |            | 4,678                | \$ 9.00    | \$ 42,102.00         |
| Controls  |     |            | 4,678                | \$ 8.00    | \$ 37,424.00         |
| Testing And Balancing                                       |     |            | 4,678                | \$ 1.10    | \$ 5,145.80          |
| Electrical  |     |            | 4,768                | \$ 6.50    | \$ 30,992.00         |
| Demolition  |     |            | 4,768                | \$ 1.25    | \$ 5,960.00          |
| Rigging   | 1   |            |                      |            | \$ 3,200.00          |
| Coring, Patch & Repair, etc.                                | 1   | 12500      |                      |            | \$ 12,500.00         |
| O&M, AsBuilts, Close-out                                    | 1   | 4000       |                      |            | \$ 3,500.00          |
| <b>TOTAL HVAC Cost</b>                                      |     |            |                      |            | <b>\$ 352,548.80</b> |

|   |               |
|---|---------------|
| <b>Air Conditioning &amp; Ventilation System Cost</b> | \$ 130,602.00 |
| <b>Heating System Only Cost</b>                       | \$ 221,946.80 |

HVAC System Cost estimates above have been derived based on recent project cost data, July 2014, and do not include escalation and contingency. See below for Total Project Cost estimates which include General Conditions, escalation, contingency and design fee estimates.

|   |                      |
|---|----------------------|
| <b>Total Project Cost Summary - HVAC System Upgrade</b> |                      |
| Total HVAC System Cost                                  | \$ 352,548.80        |
| General Conditions @ 10%                                | \$ 35,254.88         |
| Design, Estimating Contingency @ 5%                     | \$ 17,627.44         |
| Construction Contingency @10%                           | \$ 35,254.88         |
| Escalation @ 4% to 7/2015                               | \$ 14,101.95         |
| <b>Total Project Construction Cost</b>                  | <b>\$ 454,787.95</b> |
| Engineering Design Fee *Based on 10% HVAC System Cost   | \$ 35,254.88         |
| <b>Total Project Cost</b>                               | <b>\$ 490,042.83</b> |

|  |                      |
|--|----------------------|
| <b>Total Project Cost Summary - Heating Only Upgrade</b> |                      |
| Total Heating System Cost                                | \$ 221,946.80        |
| General Conditions @ 10%                                 | \$ 22,194.68         |
| Design, Estimating Contingency @ 5%                      | \$ 11,097.34         |
| Construction Contingency @10%                            | \$ 22,194.68         |
| Escalation @ 4% to 7/2015                                | \$ 8,877.87          |
| <b>Total Project Construction Cost</b>                   | <b>\$ 286,311.37</b> |
| Engineering Design Fee *Based on 10% Heating System Cost | \$ 22,194.68         |
| <b>Total Project Cost</b>                                | <b>\$ 308,506.05</b> |