



# BEKOLAY & Associates. Ltd.

Consulting Engineers

July 29, 2015

**Talco Building Innovations**  
Suite 2, 1341 Coker Street  
Greely, On K4P 1A1

Re: **Long Sault Villa**  
**Mechanical Cost Reduction Options**

Attention: **Keith Oster**

BAL Number: 2014-03

email: koster@tal-co.com

Dear Sir:

Per the meeting discussions, please have the pricing adjusted to reflect the following:

**1. Existing Bldg:**

- a. **M-6 :**
  - MUA#2 complete with piping (38 HPS & HPR, 50 HWS & HWR) to floor above (M-7)
- b. **M-7:**
  - delete 50 HWS & HWR back to boiler room of new building basement M/R
  - Retain heat pump piping and console units
- c. **M-9:**
  - delete ductwork associated with MUA#2 including the outdoor air louver and ductwork, motorized and fire dampers
  - Note: may be replaced with packaged gas fire MUA unit outside the building in future.
  - Retain duct run from MUA#2 M/R to risers for corridors and dining room
- d. **M-10 & M-11**
  - retain make-up air risers in closet and corridor supply grilles and fire dampers for corridor and dining room supplies.
  - delete from the original addition attic 300x300 supply and return ductwork, grilles and diffusers basement mech room MUA#1 (from dedicated rooftop unit in future)

**2. New Building:**

- a. **M-1:**
  - Replace DHW tanks DHWT-1 & DHW-2 with single tank of similar specs and capacity as follows: A.O Smith Cyclone MXI BTH-400 condensing boiler w/ modulating gas
    - Capacity: - 120 Gal
    - 400 MBH input, 95% efficiency
    - 460 Gal recovery thro' 100 deg.
  - delete one pair of hot water tank vents to chase and roof
  - retain DHWR pumps and heat recovery heat exchanger as indicated.

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- b. **M-6:**
- Delete Boiler B-2 , pump P-3 ( incl HKP) and all hot water piping to the coils in MUA#1 & MUA#2
  - Delete Boiler B-2 vents to the roof.
  - Delete MUA#1 c/w 65 HPS & HPR, 50 HWS & HWR
  - retain Boiler B-1 package and piping to heat pump system
- c. **M-9**
- Delete MUA#1 complete with all ductwork to the outside wall and louvers and 850x550 S/A to shaft and 850x400 to R/A riser.
  - Retain risers (to be inverted to connect new roof mounted unit described below) and ductwork to suites from risers.
- d. **M-11R (attached)**
- Provide new packaged gas fired rooftop unit complete with ductwork to risers as shown
  - See replacement MUA unit spec on the drawing.
  - Provide insulation on ductwork above the roof as shown
  - Provide 50 gas from basement as indicated.
- e. **E-2**
- Delete 100A -3P breaker and connection to MUA-#2 in distribution panel DP-1
- f. **E-4:**
- Delete connection to MAU-1
  - Delete connection to fan shut down from auxiliary relay contacts in fire alarm panel.
- g. **E-5**
- Delete motor starter and connection for DHW recirc pump P-6
  - Delete connection to hot water recirc pump P-3
  - Delete connection to hot water tank DHWT-2
  - Delete connection to boiler B-2
  - MAU-2 is relocated to roof. Connect fan shut down at new location on roof. Modify breaker and feeder size to reflect new unit load. Add connection to unit mounted GFI convenience receptacle connect on circuit H-33

Yours very truly,



**John Bekolay**, P.Eng.  
President