

**Gilbane Building Company
Authorization To Proceed**



CONTRACT FOR: Brookline - Driscoll School
OWNER: Town of Brookline
ADDRESS: 333 Washington Street
 Brookline , MA, 02445

PROJECT NUMBER: J08864.000
ATP NO: ATP-0012
ATP VERSION: 0
DATE OF ISSUANCE: 10/05/2021
SUBMITTED BY: Gilbane Building Company

ARCHITECT: Jonathan Levi Architects LLC, Mark Warner

ALTERNATE TRACKING #:

The Contract Documents are hereby amended to include the additional Work described below, which is outside of the current scope of the Work and constitutes a change.

Upon Owner approval, Gilbane Building Company **will proceed with the Work promptly.**

Costs as incurred are in addition to the current contract Sum and will be invoiced and paid on a monthly basis and identified as separate items within the requisition. Once final cost of the Work involved and change in Sum and Time (if any) are fully determined, it will be submitted for inclusion in a final Change Order adjusting the Contract Sum and/or Time.

TITLE: Add GEOTHERMAL Wells

DESCRIPTION: This ATP represents cost to add 49 wells at 900', includes erosion control, dewatering (containment up to 100gpm), excavation, backfill, piping, glycol, rygan piping, testing, grouting. Includes Temporary Adiabatic cooler installed at ground level, glycol inside the building. Underground piping as shown per M001. Adding this scope of work will add months to the schedule. New Substantial completion date for Phase 2 is July 8, 2024.

Attachments:

Number	Description:	PCI Number	Change Date	Revision

The Following information is provided by Gilbane Building Company

Method of determining change in Contract:

- Guaranteed Maximum Price Cost Plus Fee Unit Price Lump Sum
 Other

Change In Contract Sum
 Dollar Amount: \$4,700,307.00

- Fixed Maximum Estimated Time and Material

Change In Contract Time
 Time (Days): 50

- Fixed Maximum Estimated

Job	PCI No.	Description	Phase Code	SubContractor	Amount	Accept?
J08864.000	OS-00014	Plumbing	01.22A.220000.TC	Patrick J Kennedy & Sons Inc	\$63,000.00	<input checked="" type="radio"/> Yes <input type="radio"/> No

Job	PCI No.	Description	Phase Code	SubContractor	Amount	Accept?
J08864.000	OS-00014	HVAC	01.23A.230000.TC	Patrick J Kennedy & Sons Inc	\$440,000.00	<input type="radio"/> Yes <input type="radio"/> No
J08864.000	OS-00014	Electrical	01.26A.110000.X	Wayne J. Griffin Electric, Inc.	-\$8,000.00	<input type="radio"/> Yes <input type="radio"/> No
J08864.000	OS-00014	Sitework	01.31A.311000.X	J. Derenzo Company	\$3,740,800.00	<input type="radio"/> Yes <input type="radio"/> No
J08864.000	OS-00014	General Superintendent	90.920.912000.Z		\$27,000.00	<input type="radio"/> Yes <input type="radio"/> No
J08864.000	OS-00014	Superintendent-Seifirth	90.920.912001.Z		\$23,000.00	<input type="radio"/> Yes <input type="radio"/> No
J08864.000	OS-00014	Gen & Excess Liability Insurance	99.970.950050.Z		\$119,809.00	<input type="radio"/> Yes <input type="radio"/> No
J08864.000	OS-00014	Performance & Payment Bond	99.970.997000.Z		\$25,984.00	<input type="radio"/> Yes <input type="radio"/> No
J08864.000	OS-00014	Subcontractor Default Insurance	99.975.996000.Z		\$44,890.00	<input type="radio"/> Yes <input type="radio"/> No
J08864.000	OS-00014	Fee	99.999.999000.Z		\$223,824.00	<input type="radio"/> Yes <input type="radio"/> No
TOTAL FOR PCI No. OS-00014					\$4,700,307.00	

Submitted Amt: \$4,700,307.00

Gilbane Building Company

Gilbane Building Company
Signed: 10/5/2021 4:52:11 PM Eastern Standard Time - By: Michael O'Brien (Business Unit Leader)
Gilbane Building Company: 10.129.22.138

Jonathan Levi Architects LLC

By: <u>Carol Harris</u>
Title: <u>Project Manager</u>
Company: <u>Jonathan Levi Architects</u>
Date: <u>10/6/21</u>
Printed Name: <u>Carol Harris</u>

LEFTFIELD, LLC

By: <u>Lynn Stapleton</u>
Title: <u>OPM</u>
Company: <u>LeftField Project Management</u>
Date: <u>October 6, 2021</u>
Printed Name: <u>Lynn Stapleton</u>

Town of Brookline

By: _____
Title: _____
Company: _____
Date: _____
Printed Name: _____

GEO THERMAL WELLS

Michael Driscoll School

Line Name	Employee Name	Start	End	Total Days	Hrs/Week	Total Hours	Cost Rate/Hr	Total Cost
Superintendent	Derek Ullman	6/30/2024	8/19/2024	50.00	40.00	285.71	91.43	\$ 26,121.43
Superintendent	Lucas Seiferth	5/31/2024	7/20/2024	50.00	40.00	285.71	83.86	\$ 23,959.03
TOTAL:								\$ 50,080.46

Date: 10/5/2021
Revised:

Project Name: Michael Driscoll School
Project No: J08864.000

Change Summary

Change Number:	OS-00014
Description:	GEOHERMAL WELLS

Bid Package / Scope of Work	Subcontractor	Cost
02A Abatement / Demolition	American	\$0.00
03A Concrete	Marguerite Concrete	\$0.00
05A Structural Steel	Supermetal	\$0.00
06A Millwork	Polybois	\$0.00
07D Metal Panels	Salem Glass	\$0.00
08B Doors, Frames, and Hardware	Kamco/Oconnor	\$0.00
08C Special Doors	Frommelt	\$0.00
09A Drywall & General Trades	Central Ceilings	\$0.00
09E Wood Flooring	Keifer Northeast	\$0.00
09F Epoxy Flooring	Stonhard	\$0.00
09G Carpeting	Pavilion	\$0.00
10A Specialties		
10B Signage		\$0.00
11A Food Service Equipment	Kitteridge	\$0.00
11B Gym Equipment and Bleachers	Robert H. Lord Company	\$0.00
11D Theater Equipment	Barbazon	\$0.00
12A Window Treatment	Walker Specialties	
31A Site Enabling	J. Derenzo Co.	\$3,740,800.00
32A Landscaping		\$0.00
Subguard Insurance (CDI)		1.20% \$44,890.00
Subcontractor Total		\$3,785,690.00

Bid Package / Scope of Work	Trade Contractor	Cost
04A Masonry	Lighthouse Masonry, Inc.	\$0.00
07A Foundation Waterproofing	P.J. Spillane Company Inc.	\$0.00
07B Waterproofing and Caulking	P.J. Spillane Company Inc.	\$0.00
07C Roofing and Flashing	Stanley roofing Company, Inc.	\$0.00
08A Metal Windows	Chandler Architectural Products,	\$0.00
08D Glass and Glazing	Kapiloff Glass	\$0.00
09B Tile	Joseph Cohn & Son	\$0.00
09C Acoustical Ceiling Tile	Central Ceilings	\$0.00
09D Resilient Flooring	CJM	\$0.00
09H Painting	Color Concepts	\$0.00
14A Elevator	Delta Beckwith Elevator Company	\$0.00
21A Fire Protection	Johnson Controls	\$0.00
22A Plumbing	PJ Kennedy	\$63,000.00
23A HVAC	PJ Kennedy	\$440,000.00
26A Electric	Wayne J. Griffin	(\$8,000.00)
Bond (included in above cost)		
Trade Contractor Total		\$495,000.00

Subcontractor/Trade Contractor Total	-	\$4,280,690.00
General Conditions		\$50,000.00
CM Bond	0.600%	\$25,984.00
Total CCIP (including mark-up on CCIP)	2.750%	\$119,809.00
Fee	5.00%	\$223,824.00
TOTAL		\$4,700,307.00



Patrick J. Kennedy & Sons, Inc.
MECHANICAL CONTRACTORS

39 Gibson Street
 Boston, MA 02122-1222
 Ph : (617)265-5535

PROPOSED CHANGE ORDER

Number: 1-R1

Date: 10/4/21

Phone:

Job: 2021-05 Driscoll School - HVAC

To: Colleen Shouldice
 Gilbane Building Co
 Driscoll School
 10 Channel Center St, Suite 10
 Boston, MA 02120

Description: Alternate 1 Scope

Additional costs to add Alternate #1 Scope.

We include the following changes in this proposal:

- Remove Adiabatic Cooler and associated 10 Piping from Scope
- Remove (2) Buffer Tanks from Scope
- Add Filtration System to scope (PC-1)
- Add 400 Ton Cooling Tower Rental & Associated Temp Piping (6 Mths Included)
- Add 8 Underground & Above Ground Piping Indicated on Drawing (M001) 2/15/21 Drawing.
- Includes Glycol Solution in all Above Ground Piping Systems per Equipment Schedule.

This is Not accepted for use- Open cell too close to plume, odors.-See adjustment below.

This proposal is valid until 10/12/21, after this date it will need to be re-evaluated due to material cost escalation.

Description	Quantity	Unit	Unit Price	Price
Lump Sum				\$396,000.00
			Subtotal:	\$396,000.00
			Total:	\$396,000.00
				\$44,000
				\$440,000.00

Add \$40,000 x 10% OHP = \$44,000 to provide Temporary Fluid Cooler at Ground Level in lieu of open cell cooling tower rental.

** The Fluid Cooler and associated piping in the orginial design at roof has been deleted from scope of work

If you have any questions, please contact me at 617-446-8000.

Submitted by: Patrick Kennedy
 Patrick J. Kennedy & Sons, Inc

Approved by: _____
 Date: _____



Patrick J. Kennedy & Sons, Inc.
MECHANICAL CONTRACTORS

39 Gibson Street
 Boston, MA 02122-1222
 Ph : (617)265-5535

PROPOSED CHANGE ORDER

Number: P-002
Date: 9/28/21
Phone:

Job: 2021-04 Driscoll School Plumbing

To: Colleen Shouldice
 Gilbane Building Co
 Driscoll School
 10 Channel Center St, Suite 10
 Boston, MA 02120

Description: Plumbing Alternate 1 Pricing

Source: Other # Alt1

Additional Plumbing Costs associated with Alternate #1 Plumbing Scope.

Notes:

-This proposal is valid until 10/12/21, after this date it will need to re-evaluated due to material cost escalation.

Description	Quantity	Unit	Unit Price	Price
Lump Sum	1.00	ls	\$63,000.00	\$63,000.00
			Subtotal:	\$63,000.00
			Total:	\$63,000.00

Please note that Patrick J. Kennedy & Sons, Inc. will require an extra 0 days.
 If you have any questions, please contact me at 617-446-8000.

Submitted by: Raymond Hanley
 Patrick J. Kennedy & Sons, Inc

Approved by: _____
 Date: _____

Callahan, Lynda M.

From: Andrew Paul <apaul@WJGEL.com>
Sent: Monday, August 9, 2021 2:16 PM
To: Callahan, Lynda M.
Cc: Ullman, Derek R.; Tom Donahue
Subject: RE: 2732 MDS - GEO THERAML - Alternate #1

[EXTERNAL]
Generator Credit = \$95,000
Material/Labor credit = \$8,000

Cannot take this credit-
Generator in base bid
has been released.

Most of the credit/savings in Alt #1 is the generator system.

AJ

From: Callahan, Lynda M. <LCallahan@gilbaneco.com>
Sent: Monday, August 9, 2021 2:13 PM
To: Andrew Paul <apaul@WJGEL.com>
Cc: Ullman, Derek R. <DUllman@gilbaneco.com>; Tom Donahue <tdonahue@WJGEL.com>
Subject: RE: 2732 MDS - GEO THERAML - Alternate #1

Note: This email originated outside Wayne J. Griffin Electric. Use caution with replies, links and attachments. Please forward any suspicious looking email to spamcatcher@wigel.com.

Can you provide the breakout on the generator? In otherwords if they decide to keep the larger Generator what does the alternate look like?

From: Andrew Paul <apaul@WJGEL.com>
Sent: Monday, August 9, 2021 1:44 PM
To: Callahan, Lynda M. <LCallahan@gilbaneco.com>
Cc: Ullman, Derek R. <DUllman@gilbaneco.com>; Tom Donahue <tdonahue@WJGEL.com>
Subject: 2732 MDS - GEO THERAML - Alternate #1

[EXTERNAL]
Good afternoon Lynda,

Please see the following Rough Order of Magnitude (ROM) for the Alternate #1 package regarding the Michael Driscoll School.

Alternat #1 (ROM) = -\$103,000.00 – Credit of one hundred and three thousand dollars.

This credit factors in the increased cost for the Generator units and Copper since last bid. With that said, material and equipment cost are fluctuating daily; therefore, this ROM is only valid through the end of the week, 8/13/2021 5:00pm Eastern time.

Please see the detailed outline below of what is included within the credit provided above.

WJGEL is providing the following proposal for the scope outlined in the project changed referred below.

Per direction of Gilbane and the Town of Brookline WJGEL has been requested to revisit Alternate #1. Since there is no direct package for Alternate #1 WJGEL is performing the takeoff based on the notes provided by the team as well as drawing and spec sets dated 2/15/2021. WJGEL reserves our rights to capture costs or deductions related to Alternate #1 that are not clearly identified in the take-off description below.

Drawing E200:

Adds equipment BT-1 and RP-3, both units are fed from panel MP3 and are located in the mechanical room. All feeder characteristics were provided on Drawing E308.

Drawing E201A:

Adds Geothermal System "FCT-1", this is a temp unit that shall be used on the project and removed once its use is no longer needed. This unit is fed from "MSBG" at 480volts. Per the unit description on Drawing E307, this also calls for 120v receptacle and light at the unit. Also, the ADC-1 unit will need to be removed upon completion.

Drawing E301:

The Electrical Riser changes the size of the Stand-by generator and ATS-OS. The generator is now reduced from 900KW to 400KW and ATS-OS is reduced from 2,000amps to 1,600amps. ATS-LS remains the same.

Drawing E307:

Adds equipment "EBP-1A and EBP-1B" these items are shown on the equipment schedule drawing but are not located on the floor plan drawing E200A. WJGEL locating these units at the intersection of column AV / A17.

Removes equipment "EBP-3 & HRC-1".

Excludes:

This Cost Proposal does not include any cutting, patching, painting, ceiling tile replacement, floor protection, controls, equipment other than what is specified above, overtime, acceleration, permit.

Thank you,

AJ Paul

Project Manager

Wayne J. Griffin Electric, Inc.
Office: (508)306-5408
Cell: (774)217-3272
Email: apaul@wjgei.com

From: Callahan, Lynda M. <LCallahan@Gilbaneco.com>
Sent: Monday, August 9, 2021 8:47 AM
To: Andrew Paul <apaul@WJGEI.com>
Cc: Ullman, Derek R. <DUllman@GilbaneCo.com>
Subject: RE: MDS - GEO THERAML - Alternate #1
Importance: High

Note: *This email originated outside Wayne J. Griffin Electric. Use caution with replies, links and attachments. Please forward any suspicious looking email to spamcatcher@wjgei.com.*

Hello AJ
I know you spoke to Derek about breaking out the Generator portion of this request so that the owner could evaluate it separately, just wanted to follow up on Overall pricing of this Request? Please let me know.
Thanks
Lynda

From: Andrew Paul <apaul@WJGEI.com>
Sent: Thursday, August 5, 2021 7:47 AM
To: Callahan, Lynda M. <LCallahan@Gilbaneco.com>
Cc: Ullman, Derek R. <DUllman@GilbaneCo.com>
Subject: RE: MDS - GEO THERAML - Alternate #1

[EXTERNAL]

Good morning Lynda,

I am currently working on pricing this Alternate.
AS I am sure you are aware this is a very involved Alternate that changes Switchgear and Generator sizes as well as adding and removing equipment.

I am working with our vendors to get quotes for these changes. With that I will try my best to get something out the door Friday end of day but most likely this will be Monday. With a 3-4 day turn around this request is difficult, but WJGEI is here to do our very best for the Gilbane Team and the client.

J.DERENZO COMPANY



338 HOWARD ST. | BROCKTON, MA | 02302

August 10, 2021

Gilbane Building Company
10 Channel Center St.
Boston, MA 02210

Attn: Lynda Callahan, Sr. Project Manager
Project: Michael Driscoll School – Brookline, MA
Re: JDC PCO 002 – Furnish & Install Geothermal Well System

Lynda,

J. Derenzo Co. proposes to perform the scope detailed herein, based on the stated qualifications, inclusions, and exclusions, for a lump sum price of ~~\$3,583,000.00~~

A detailed breakdown of change in scope referenced in this cover sheet is enclosed.

Qualifications:

- Furnish & Install Geothermal Well System
 - o Per drawings GT1.1/1.2, dated 2/15/21
 - o Per specification section 332313 – HPGX Geothermal Well Field (Add Alternate), dated 2/15/21

Inclusions:

- Mobilization
- Excavation & Backfill (piping, vault, etc.)
- Furnish & Install drilled wells (49 ea – 905' wells, 6" diameter casing)
- Material containment up to 50 gpm ← 100gpm add
- Horizontal piping/supply vault/glycol/testing
- Rygan piping/grouting/testing

Added Cost
Dewatering \$129,800
Storage/Ins \$28,000 (26 months)

Total
\$3,740,800.00

Exclusions:

- Premium time - Nights, weekends, holidays, etc.
- Furnish & Install geothermal vault
- Glycol in building
- Interior piping
- Electrical conduit, wiring, etc.

If you have any questions concerning this proposal, please do not hesitate to contact me using the information listed below.

Respectfully,
J. DERENZO CO.

Ryan Little
Project Manager
508-649-9702
rlittle@jderenzo.com

UNIT PRICES: (do not include mark up)
Cement for well if needs abandoning \$4,120 /ea
add well \$31,500
"6 casing /ft \$40.50 per ft

Proposal

From:

Project:
Description:

DRISCOLL SCHOOL - PCO 002 - G
ADDED COSTS FOR GEOTHERMA
WELLS

ITEM / DESCRIPTION	BID QTY	U/M	UNIT BID	AMOUNT
001.1 F/I WELLS (500CY SPOILS)	1.000	LUMP SUM	3,384,104.20 *	\$3,384,104.20
002.1 E/B WELL PIPING (515CY SPOILS)	2,240.000	LINEAR FEE	71.25 *	\$159,607.00
002.2 E/B 2-8" SUPPLY & RETURN (105CY SPOILS)	230.000	LINEAR FEE	93.80 *	\$21,574.55
002.3 E/B WELL VAULT (30CY SPOILS)	1.000	EACH	17,974.55 *	\$17,974.55

TOTAL BID: \$3,583,260.30

* CAUTION!!! The total bid shown may not be correct because of rounding. To correct rounding, return to the bid sheet and physically type Bid Units for all items with an * next to the Bid Unit value.

Signature: _____

**PROJECT :
DRISCOLL SCHOOL - PC**

**ITEM SHEET COSTS
AS SHOWN**

Date : 8/10/2021 11:02:00 A

ITEM : 001.1
 DESCRIPTION : F/I WELLS (500CY SPOILS)
 COST CODE :
 PRODUCTION : Days
 HRS/DAY : 8

U/M : LUMP SUM
 BID QTY : 1.00
 TO QTY : 1.00
 TOTAL MHS : 400.00
 MHS / UNIT : 400.0000
 UNITS / MH : 0.0025

Item Production

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>U/M</u>	<u>QTY</u>	<u>UNITS/DAY</u>	<u>DAYS REQD</u>
001.1	F/I WELLS (500CY SPOILS)	LUMP	1.00	0.05	20.00

Cost Detail for Item 001.1

<u>C CODE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>U/M</u>	<u>FACTORS</u>	<u>RATE</u>	<u>COSTS</u>
S WRITEIN	WELL INSTALL	1.000	LS	1.000	2896628.000	2896628.00
S WRITEIN	ADD FOR PUMPING RATE	1.000	LS	1.000	65240.000	65240.00

E JDC- 94	STOCKPILE SPOILS (500CY) Cat 950 loader w/OP	0.500		20.000	2334.360	23343.60

L JDC-LAB	BUILD & MAINTAIN RECHARGE PIT LABORER	2.000		5.000	764.480	7644.80
E JDC-909	Cat 328 Excavator w/OP	1.000		5.000	3348.360	16741.80
M 9.99.1	4" TRAP ROCK	200.000	TONS	1.000	17.250	3450.00

L JDC-LAB	JDC SUPPORT FOR DRILLING SUB LABORER	2.000		20.000	764.480	30579.20

S WRITEIN	SPOIL DISPOSAL	850.000	TON	1.000	47.000	39950.00
Item Unit Cost : 3,083,577.40						Item Total Cost : 3,083,577.40

	<u>Labor</u>	<u>Equipment</u>	<u>Rental Eq</u>	<u>Material</u>	<u>Subcontract</u>	<u>Other</u>
Total :	38,224.00	40,085.40	0.00	3,450.00	3,001,818.00	0.00
Unit :	38,224.00	40,085.40	0.00	3,450.00	3,001,818.00	0.00

Bid Data for Item: 001.1

	<u>Quantity</u>	<u>Bid Unit</u>	<u>Bid Amt.</u>	<u>Total Cost</u>	<u>Prof & Ovhd</u>	<u>Windfall</u>
Bid Qty.	1.00	3,384,104.20 *	3,384,104.20	3,083,577.40	300,526.80	
Takeoff Qty.	1.00	3,384,104.20	3,384,104.20	3,083,577.40	300,526.80	0.00

**PROJECT :
DRISCOLL SCHOOL - PC**

**ITEM SHEET COSTS
AS SHOWN**

Date : 8/10/2021 11:02:00 A

ITEM : 002.1
 DESCRIPTION : E/B WELL PIPING (515CY SPOILS)
 COST CODE :
 PRODUCTION : Days
 HRS/DAY : 8

U/M : LINEAR FEET
 BID QTY : 2240.00
 TO QTY : 2240.00
 TOTAL MHS : 360.00
 MHS / UNIT : 0.1607
 UNITS / MH : 6.2222

Item Production

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>U/M</u>	<u>QTY</u>	<u>UNITS/DAY</u>	<u>DAYS REQD</u>
002.1	E/B WELL PIPING (515CY SPOILS)	LINEAR	2240.00	149.33	15.00

Cost Detail for Item 002.1

<u>C CODE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>U/M</u>	<u>FACTORS</u>	<u>RATE</u>	<u>COSTS</u>
L JDC-FOR	FOREMAN	1.000		15.000	831.360	12470.40
L JDC-LAB	LABORER	2.000		15.000	764.480	22934.40
E JDC-909	Cat 328 Excavator w/OP	1.000		15.000	3348.360	50225.40
E RENTAL2	10 WHEEL DUMP W/ TM	1.000		15.000	1611.040	24165.60
E TRENCH-1	TRENCH BOX 16` LONG	2.000		15.000	300.000	9000.00
E JDC- 94	Cat 950 loader w/OP	0.500		15.000	2334.360	17507.70
MATERIALS						
M 9.98	MARKING TAPE	2240.000	LF	1.000	0.250	560.00
M 9.99.2.1	SAND BACKFILL	825.000	TON	1.000	25.000	20625.00

Item Unit Cost : 70.31

Item Total Cost : 157,488.50

	<u>Labor</u>	<u>Equipment</u>	<u>Rental Eq</u>	<u>Material</u>	<u>Subcontract</u>	<u>Other</u>
Total :	35,404.80	100,898.70	0.00	21,185.00	0.00	0.00
Unit :	15.81	45.04	0.00	9.46	0.00	0.00

Bid Data for Item: 002.1

	<u>Quantity</u>	<u>Bid Unit</u>	<u>Bid Amt.</u>	<u>Total Cost</u>	<u>Prof & Ovhd</u>	<u>Windfall</u>
Bid Qty.	2,240.00	71.25 *	159,607.00	157,488.50	2,118.50	
Takeoff Qty.	2,240.00	71.25	159,607.00	157,488.50	2,118.50	0.00

**PROJECT :
DRISCOLL SCHOOL - PC**

**ITEM SHEET COSTS
AS SHOWN**

Date : 8/10/2021 11:02:00 A

ITEM : 002.2
 DESCRIPTION : E/B 2-8" SUPPLY & RETURN (105CY SPOILS)
 COST CODE :
 PRODUCTION : Days
 HRS/DAY : 8

U/M : LINEAR FEET
 BID QTY : 230.00
 TO QTY : 230.00
 TOTAL MHS : 48.00
 MHS / UNIT : 0.2087
 UNITS / MH : 4.7917

Item Production

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>U/M</u>	<u>QTY</u>	<u>UNITS/DAY</u>	<u>DAYS REQD</u>
002.2	E/B 2-8" SUPPLY & RETURN (105CY SPOIL	LINEAR	230.00	115.00	2.00

Cost Detail for Item 002.2

<u>C CODE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>U/M</u>	<u>FACTORS</u>	<u>RATE</u>	<u>COSTS</u>
L JDC-FOR	FOREMAN	1.000		2.000	831.360	1662.72
L JDC-LAB	LABORER	2.000		2.000	764.480	3057.92
E JDC-909	Cat 328 Excavator w/OP	1.000		2.000	3348.360	6696.72
E RENTAL2	10 WHEEL DUMP W/ TM	1.000		2.000	1611.040	3222.08
E JDC- 94	Cat 950 loader w/OP	0.500		2.000	2334.360	2334.36

 MATERIALS

M 9.98	MARKING TAPE	230.000	LF	1.000	0.250	57.50
M 9.99.2.1	SAND BACKFILL	165.000	TON	1.000	25.000	4125.00

Item Unit Cost : 91.98

Item Total Cost : 21,156.30

	<u>Labor</u>	<u>Equipment</u>	<u>Rental Eq</u>	<u>Material</u>	<u>Subcontract</u>	<u>Other</u>
Total :	4,720.64	12,253.16	0.00	4,182.50	0.00	0.00
Unit :	20.52	53.27	0.00	18.18	0.00	0.00

Bid Data for Item: 002.2

	<u>Quantity</u>	<u>Bid Unit</u>	<u>Bid Amt.</u>	<u>Total Cost</u>	<u>Prof & Ovhd</u>	<u>Windfall</u>
Bid Qty.	230.00	93.80 *	21,574.55	21,156.30	418.25	
Takeoff Qty.	230.00	93.80	21,574.55	21,156.30	418.25	0.00

**PROJECT :
DRISCOLL SCHOOL - PC**

**ITEM SHEET COSTS
AS SHOWN**

Date : 8/10/2021 11:02:00 A

ITEM : 002.3
 DESCRIPTION : E/B WELL VAULT (30CY SPOILS)
 COST CODE :
 PRODUCTION : Days
 HRS/DAY : 8

U/M : EACH
 BID QTY : 1.00
 TO QTY : 1.00
 TOTAL MHS : 48.00
 MHS / UNIT : 48.0000
 UNITS / MH : 0.0208

Item Production

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>U/M</u>	<u>QTY</u>	<u>UNITS/DAY</u>	<u>DAYS REQD</u>
002.3	E/B WELL VAULT (30CY SPOILS)	EACH	1.00	0.50	2.00

Cost Detail for Item 002.3

<u>C CODE</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>U/M</u>	<u>FACTORS</u>	<u>RATE</u>	<u>COSTS</u>
L JDC-FOR	FOREMAN	1.000		2.000	831.360	1662.72
L JDC-LAB	LABORER	2.000		2.000	764.480	3057.92
E JDC-909	Cat 328 Excavator w/OP	1.000		2.000	3348.360	6696.72
E RENTAL2	10 WHEEL DUMP W/ TM	1.000		2.000	1611.040	3222.08
E JDC- 94	Cat 950 loader w/OP	0.500		2.000	2334.360	2334.36
E TRENCH-1	TRENCH BOX 16` LONG	1.000		2.000	300.000	600.00
E TRENCH-5	STEEL PLATES 8` X 20` LO	2.000		2.000	50.000	200.00

MATERIALS						
M 9.99.1.1	3/4" STONE FOR DRAINAG	10.000	TONS	1.000	18.250	182.50

Item Unit Cost : 17,956.30

Item Total Cost : 17,956.30

	<u>Labor</u>	<u>Equipment</u>	<u>Rental Eq</u>	<u>Material</u>	<u>Subcontract</u>	<u>Other</u>
Total :	4,720.64	13,053.16	0.00	182.50	0.00	0.00
Unit :	4,720.64	13,053.16	0.00	182.50	0.00	0.00

Bid Data for Item: 002.3

	<u>Quantity</u>	<u>Bid Unit</u>	<u>Bid Amt.</u>	<u>Total Cost</u>	<u>Prof & Ovhd</u>	<u>Windfall</u>
Bid Qty.	1.00	17,974.55 *	17,974.55	17,956.30	18.25	
Takeoff Qty.	1.00	17,974.55	17,974.55	17,956.30	18.25	0.00

120 Northgate Plaza
Morrisville, VT 05661

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(802) 888-5722
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nickm@manosh.com Email

The Manosh Corporation

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Revised Geothermal PROPOSAL

PROPOSAL SUBMITTED TO: J. Derenzo Company attn: Troy D.	DATE: 8/10/2021	PHONE NO. 1-508-897-8547 or 617-212-4519
STREET 338 Howard St		JOB NAME: Geothermal Well Field
CITY, STATE AND ZIP CODE: Brockton, MA 02302		JOB LOCATION: Driscoll School Brookline, MA
ARCHITECT: McPhail Assoc./ Jonathan Levi Architects	PLAN DATE: 9/20/2020	FAX NUMBER/Email tmorgado@jderenzo.com

We hereby submit specifications and estimates for:

We propose to drill 49- 905' foot deep geothermal wells as per design. Erosion control items will be onsite as well as containment system and filter bags for drilling cuttings control.

Mobilization - \$18,000.00

Material containment as proposed above – (\$38,000.00 in proposal) add \$65,240.00 per specifications on Bid to 50 gpm.

Horizontal piping/supply vault/ glycol, testing & installation - \$321,000.00

(49) 905' Drilling/casing 6-inch diameter 160 feet each minimum – \$1,546,084.00

Rygan piping/Grouting/, testing & installation – \$973,544.00

Exclusions: Dig Safe, excavation, backfill, compaction, site prep, interior piping, plumbing, electrical. Bond can be provided at additional cost if needed.

WE PROPOSE hereby to furnish material and labor - complete in accordance with above specifications, for the sum of: →\$ 2,896,628.00	\$2,896,628.00 And no/cents
---	------------------------------------

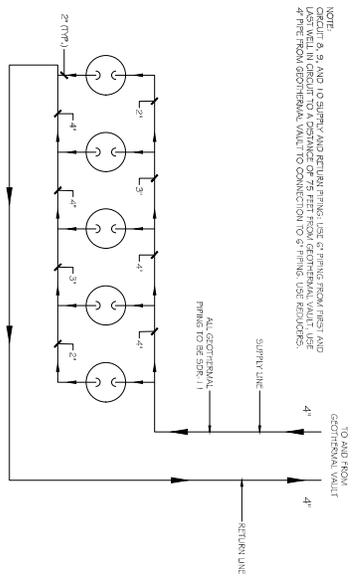
PAYMENT TO BE MADE AS FOLLOWS:
Per Requisition

AUTHORIZED SIGNATURE (CONTRACTOR)
Nick A. Manosh

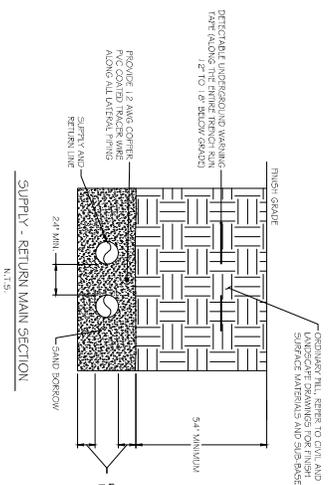
Note: This proposal may be withdrawn by us if not accepted within 10 days.

Date of acceptance _____

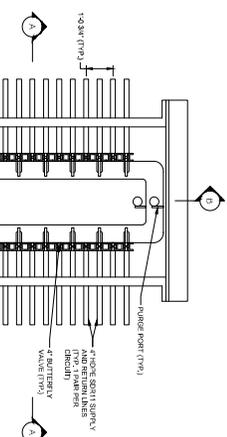
Signature _____



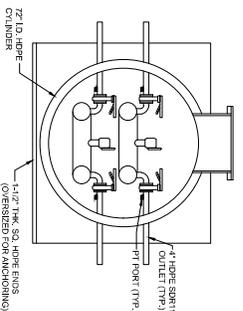
WELL CIRCUIT PIPING DETAIL
N.T.S.



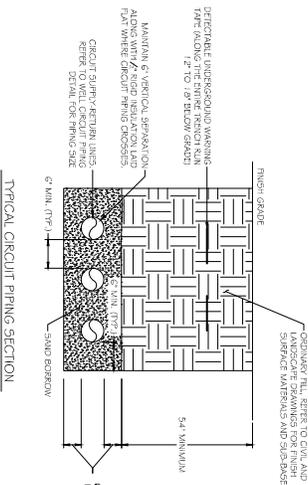
SUPPLY - RETURN MAIN SECTION
N.T.S.



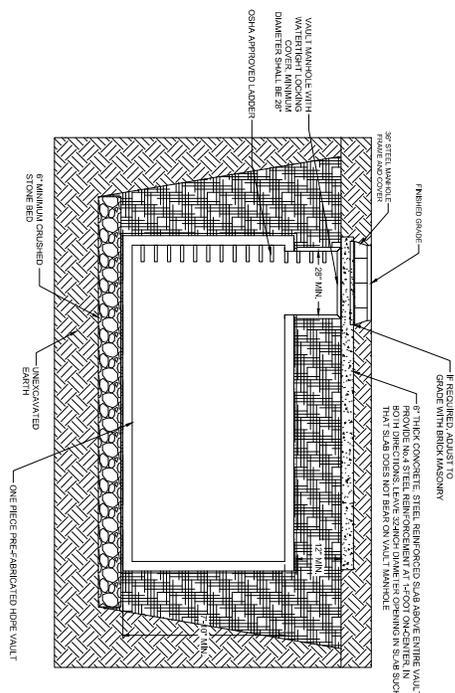
GEOTHERMAL VAULT PLAN VIEW
N.T.S.



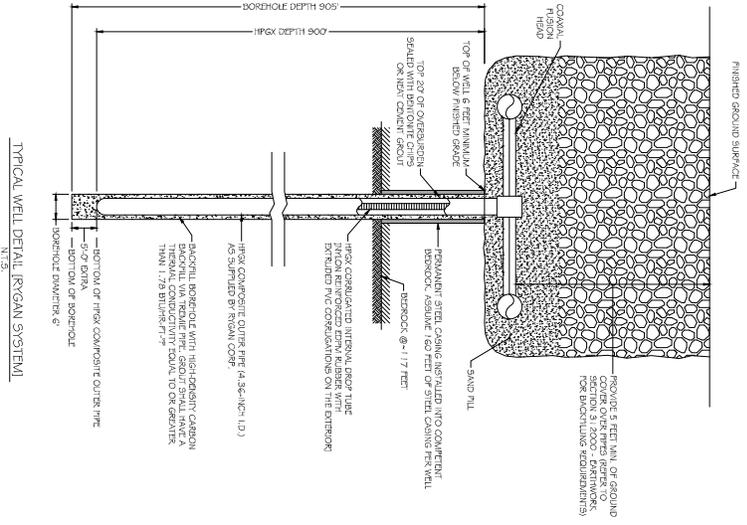
GEOTHERMAL VAULT CROSS SECTION A-A
N.T.S.



TYPICAL CIRCUIT PIPING SECTION
N.T.S.



GEOTHERMAL VAULT CROSS SECTION B-B PIPING NOT SHOWN FOR CLARITY
N.T.S.



TYPICAL WELL DETAIL (RIGAN SYSTEM)
N.T.S.

NOTE: 1. 2\"/>

CONCRETE FILL REFERS TO CONCRETE AND SAND FILL. REFER TO SPECIFICATIONS FOR SURFACE MATERIALS AND SLAB BASE.

NOTE: CONTRACTOR SHALL FOLLOW ALL MANUFACTURERS RECOMMENDATIONS FOR THE INSTALLATION OF PRE-FABRICATED MANHOLE VAULT SHALL CONFORM TO ALL APPLICABLE CODES.

NO.	REVISIONS	DATE	BY	CHKD.
1	ISSUED FOR PERMIT	11/15/2023	MM	MM
2	ISSUED FOR PERMIT	11/15/2023	MM	MM

DRISCOLL SCHOOL
4000 W. 100th Street, Suite 100, Overland Park, KS 66204
TEL: 913.241.1100 FAX: 913.241.1101

LEVA
LEVA ARCHITECTS
10000 W. 100th Street, Suite 100, Overland Park, KS 66204
TEL: 913.241.1100 FAX: 913.241.1101

Callahan, Lynda M.

From: Ryan Little <rlittle@JDerenzo.com>
Sent: Thursday, September 30, 2021 12:46 PM
To: Callahan, Lynda M.; Troy Morgado
Subject: RE: MDS - Update on GEOTHERMAL notes

[EXTERNAL]

Lynda

Here is a breakdown on Manosh pricing and durations, their pricing has increased 200k from the last proposal sent on August 10th.

Manosh Pricing

Drill 49- 905' foot deep geothermal wells as per design. Erosion control items will be onsite as well as containment system, and filter bags for drilling cuttings control.

Mobilization - \$18,000.00

Material containment as proposed above – \$103,240.00 (per specifications on Bid to 50 gpm)

Horizontal piping/supply vault/ glycol, testing & installation - \$321,000.00

(49) 905' Drilling/casing 6-inch diameter 160 feet each minimum – \$1,546,084.00

Rygan piping/Grouting/, testing & installation – \$973,544.00

Additional frac water tanks, filters to storm drain management to 100 gpm. – allowance of \$118,000.00

Cementing of problematic wells each occurrence - \$4120.00/ea – allowance of \$82,400.00

Total Bid - \$3,162,268.00

6-inch Casing beyond 160 feet – per foot @ \$40.50/per foot **(Not included in contract price.)**

Storage/insurance on stored materials per month @ \$1050.00-month **(Not included in contract price) No retainage on these stored materials.**

Exclusions: Dig Safe, excavation, backfill, compaction, site prep, interior piping, plumbing, electrical. Bond can be provided at additional cost if needed.

Manosh Schedule

Week One: 3 personnel onsite

Day one: Mobilize setup and prepare sediment and water measures onsite.

Day two: DR 24 starts drilling advances 160 feet of casing in 1.5 wells.

Day Three : DR 24 starts casing next 1.5 wells with 160 feet of casing each.

Day four : Same scenario

Day Five : Same scenario at the end of 1st week everything goes as planned we have 6 cased holes each to 160 feet. **Manosh is assuming we can work a minimum 10 – 12 hour days, machines operable.**

Week Two: 7 Personnel onsite

Day one : DR 24 continues casing same as above schedule, 2nd Drill mobilizes to site and starts advancing borehole to achievable 905 foot depth, one per day with no complications.

Day Two : Same scenario

Day Three : Same scenario

Day Four Same scenario

Day Five : Same scenario at the end of 2nd week we have 13.5 wells cased total and 4.5 wells drilled to 905 foot depth total.

Week Three : 9 Personnel onsite

Same scenario with drilling and Horizontal piping starts.

At the end of this week we should have 20.5 wells Cased and 9 wells drilled to depth.

Week : Four : 9 Personnel onsite

3rd Drill arrives onsite and starts setting over already cased holes.

At he end of this week and no complications 26.5 wells cased and 17.5 wells drilled to depth.

Weeks 5 thru 9 : 9 Personnel onsite

49 wells cased/drilled to spec depth in 45 days and Rygan piping installed and pre tested. The exterior horizontal piping is 95% completed to building

Week 10 : 9 personnel onsite

Finish Rygan piping Cleanup and prepare for mobilization out of site of all personnel and equipment along with some testing verification. **This is the best case scenario with no complications and longer hours onsite (if only 8 hours equipment operable then this time frame will not work and time would be extended. If schedule must be completed in this period we would want the option of working Saturdays. Manosh would ask for an additional 12k per working day for making the schedule work regardless of circumstances as we would have to provide standby equipment and personnel to achieve such a tight schedule of completion.**

Thanks

From: Callahan, Lynda M. <LCallahan@Gilbaneco.com>

Sent: Thursday, September 30, 2021 12:23 PM

To: Troy Morgado <TMorgado@JDerenzo.com>

Cc: Ryan Little <rlittle@JDerenzo.com>

Subject: RE: MDS - Update on GEOTHERMAL notes

Any ETA on this?

From: Troy Morgado <TMorgado@JDerenzo.com>
Sent: Thursday, September 30, 2021 7:51 AM
To: Callahan, Lynda M. <LCallahan@Gilbaneco.com>
Cc: Ryan Little <rlittle@JDerenzo.com>
Subject: RE: MDS - Update on GEOTHERMAL notes

[EXTERNAL]

Hi Lynda,
Ryan is putting it together. Ryan please try and get Lynda info ASAP

Thanks!

Troy Morgado
Sr. Estimator
J. Derenzo Co.
338 Howard St., Brockton, MA 02302
O 508-897-8047 | F 508-897-8547 | C 617-212-4519
tmorgado@jderenzo.com
www.jderenzo.com

[LinkedIn](#) / [Twitter](#) / [Flickr](#)



From: Callahan, Lynda M. <LCallahan@Gilbaneco.com>
Sent: Thursday, September 30, 2021 7:45 AM
To: Troy Morgado <TMorgado@JDerenzo.com>
Subject: MDS - Update on GEOTHERMAL notes
Importance: High

Hi Troy
Just checking to see when I can expect to have the items we discussed Tuesday related to Geothermal. Please let me know. Thanks!
Lynda

Lynda Callahan | Sr. Project Manager | [Gilbane Building Company](#)

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Callahan, Lynda M.

From: Ryan Little <riddle@JDerenzo.com>
Sent: Friday, October 1, 2021 8:00 AM
To: Troy Morgado
Cc: Callahan, Lynda M.
Subject: Re: MDS - Geothermal Unit price to add a well?
Attachments: image001.png

[EXTERNAL]

\$31500/well plus any markup

Ryan Little
J Derenzo Co.
5086499702

On Sep 30, 2021, at 2:32 PM, Troy Morgado <TMorgado@jderenzo.com> wrote:

I spoke to Ryan this morning and I'm pretty sure Ryan asked him for that Ryan did he give you that yet?

Troy Morgado
Sr. Estimator
J. Derenzo Co.
338 Howard St., Brockton, MA 02302
O 508-897-8047 | F 508-897-8547 | C 617-212-4519 tmorgado@jderenzo.com<mailto:tmorgado@jderenzo.com>
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LinkedIn<http://www.linkedin.com/company/2549288?trk=tyah&trkInfo=tas%3A%20derenzo> / Twitter<https://twitter.com/JDerenzoCos> /
Flickr<http://www.flickr.com/photos/99548239@N07/>
<image001.png>

From: Callahan, Lynda M. <LCallahan@Gilbaneco.com>
Sent: Thursday, September 30, 2021 2:11 PM
To: Troy Morgado <TMorgado@JDerenzo.com>
Subject: MDS - Geothermal Unit price to add a well?

I see a unit price for casing, what about cost to add 1 well? I do recall we asked for that cost in the event that we need to fill one in with cement.

Lynda Callahan | Sr. Project Manager | Gilbane Building Company

10 Channel Center St | Boston, MA | 02210

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