



HARDIN COUNTY SCHOOLS
HELPING CHILDREN SUCCEED



June 2014 Board Update

Hardin County Board of Education

GC Burkhead Elementary School



Overview

Budget:

Original Construction Cost: \$15,817,590.00

Present Construction Cost: \$15,817,590.00

Schedule:

Original Substantial Completion: 06/30/15

Final Completion: 07/30/15

The following notes highlight the activities over the last Thirty (30) days of the project:

Meetings

Progress Meeting took place on May 29, 2014.
(See attached minutes)

Geothermal Pre-Install took place on May 29, 2014 (See attached minutes)

Shop Drawings

Thirty Five (35) Shop Drawings have been received from DW Wilburn and have been reviewed by the Design Team.

RFI'S

Twelve (11) RFI's have been received and responded to by the Design Team

ASI's

One (1) ASI's have been issued to date

Schedule

Construction Last 30 Days: (see attached Field Report)

Access Road and job sign are in place.

Lime Stabilization is complete.

Building Pads Complete (School and Maintenance Building)

15% of exterior foundation in place.

Rough-in Plumbing started.

Job Site Trailer on site.

Earthwork Continues.

Storm Drainage started.

Construction Snapshot next 30 Days:

Continue Exterior Foundations.

Start Masonry Walls on Exterior/ Termite Control.

Underground Utilities (water/electric).

Continue Storm Drainage.

Mobilize for Geothermal Well Drilling.

Start Foundation Stem Walls.

Preparation for slab placement.

Photographs





PROGRESS MEETING MINUTES:

Prepared by:	Chuck Trimble
Company:	Murphy + Graves + Trimble
Project:	GC Burkhead Elementary School
Location:	Hardin County Board of Education Board Room
Arch. Project Number:	1264
Date/Time:	Sat, May 31 2014
Weather:	Sunny approx... 85 deg

<u>Parties Present</u>	<u>Organization</u>	<u>Email Address</u>
Baccus Oliver	Marcum Eng.	boliver@marcumengineering.net
Chuck Trimble	MGT	chuck@murphytrimble.com
David Wyatt	HCS	David.wyatt@hardin.kyschools.us
Maria Gillette	MGT	maria@mgtky.com
Michael Kersey	Philips Brothers	phillipsdirt@yahoo.com
Rusty Taylor	HCS	rusty.taylor@hardin.kyschools.us
Sam Gibson	DWW	sgibson@dwwilburn.com
Shannon Fraley	DWW	sfraley@dwwilburn.com
Steve Gamblin	BFW	sgamblin@bfwengineers.net
Terry Withers	J+B Drilling	tbdrilling@duo-county.com
Joe Heavrin	Heartland Electric	heartlandelectric@windstream.net
Brian	Heartland Electric	heartlandelectric@windstream.net
Daily Clean Up	<ul style="list-style-type: none"> Daily clean up to date is acceptable. Job site was observed today as clean and orderly. Rusty confirmed no problems to date. No reports of mud or dirt on St. John's road at this time. 	
Discussion Item	<ul style="list-style-type: none"> 	
New Business	<ul style="list-style-type: none"> The special inspections report that was received on Wednesday evening 5-28-14 was discussed in depth due to water being added to the truck. Steve Gamblin reviewed the shop drawings where it was noted that no additional water was to be added to the truck once it leaves the plant unless they noted on the ticket all the required water for the mix was not added at the plant therefore it could be added at the site. This item was reviewed in detail with everyone present. Chuck stated if the concrete in this area does not meet the strength requirements of the specification it will be removed and replaced at no additional cost to the owner. Also chuck stated he will notify the special inspector that a photo of the delivery ticket must be provide with each report so everyone can verify how much water was in the batch when it arrived on site. Steve indicated a high range additive can be added to the concrete on site if needed however; a submittal of this product must be submitted for review and approval by the design team. 	
Next Meeting Date, Time and Date	<ul style="list-style-type: none"> Next Progress Meeting is June 26, 2014- 2:00 pm (job site). DW Wilburn to identify within the next two weeks what pre-install meetings are required at this meeting. 	
Old Business	<ul style="list-style-type: none"> No items. 	
Pay Request	<ul style="list-style-type: none"> Pay Request was not submitted today but will be forward to the design team no later than Monday for review and approval. This will then be sent to Hardin County for the June Board meeting. 	
Proposed Changes / Change Orders / ASI's / RFI's	<ul style="list-style-type: none"> No proposal request or change order have been submitted or processed to date. One ASI has been submitted to the contractor from the design team to date. All RFI's are answered to date. 	
Record Drawings	<ul style="list-style-type: none"> Record drawings are up to date based on he his mornings site visit and review. 	

Regulatory Field Visit Reports	<ul style="list-style-type: none"> Local inspector was on site yesterday and reviewed the work in place with no corrective action required. This was reported by Sam with DW Wilburn.
Review of Previous Minutes	<ul style="list-style-type: none"> The Pre-construction meeting minutes that had been submitted were approved with no modifications required.
Schedule	<ul style="list-style-type: none"> Schedule for the last 30 days: Access /entrance road complete. Project Sign Installed, visible from St. John’s road. Building Pad and Lime Stabilization complete (school pad and maintenance building). 15% of exterior wall foundations are in place. Interior plumbing rough in has started. Proposed schedule for next 30 days: Foundation stem walls to start. First course of masonry to be started. Continue with foundations. Continue with interior plumbing rough in. Prep pad and start placement of thickened slab areas. Prep pad and start placement of concrete slab. Start storm piping in the next two weeks. Storm pipe and structures to arrive within the next one - two weeks. Mobilize for geothermal well-field. Continue to submit shop drawings and color samples for review and approval . Sam indicated no problems with delivery of materials to site at this time. No outages are scheduled for the next 30 days. Sam stated no items were delaying the project at this time. No time extension was requested.
Submittals	<ul style="list-style-type: none"> Total of 75 shop drawings has been submitted and are being processed. Sam stated that shop drawings are up to date.

No other items were discussed if upon review of these minutes you have any questions or comments please contact our office.

Respectfully Submitted,



Chuck Trimble
Principal
Murphy + Graves + Trimble, PLLC

Cc: Gary Milby, Rusty Taylor, David Wyatt, Sherri Dehart, Sam Gibson, Marcum Engineering, BFW Engineers, Maria Gillette, File 1264-C



GEOTHERMAL PRE-INSTALL MEETING NOTES

PROJECT NAME: G.C. Burkhead Elementary School	PROJECT NO: 13519
DATE: May 30, 2014	TIME: NA

A Pre-installation meeting was held May 29, 2014 for the geothermal installation. Attendees were: Shannon Fraley, Sam Gibson, Terry Withers, David Wyatt, Rusty Taylor, Maria Gillette, Chuck Trimble, Steve Gamblin, and Baccus Oliver.

Following are notes/comments made during review of the Agenda.

INTRODUCTIONS:

- Architect Point of Contact: **Maria Gillette**
- Engineer Point of Contact: **Johnny Baucum**
- General Contractor Point of Contact: **Sam Gibson**
- Mechanical Contractor Point of Contact: **NA**
- Geothermal Contractor Point of Contact: **Terry Withers**

1. SCOPE: Centralized geothermal system with in-ground valve vault.
2. ENGINEER: Marcum Engineering – (270) 444-9274
 - a. Project Manager: Baccus L. Oliver – boliver@marcumengineering.net
 - b. Project Engineer: Matt Snow – msnow@marcumengineering.net
 - c. Construction Administrator: Johnny Baucum – jbaucum@marcumengineering.net
 - d. Questions should be directed to Construction Administrator.
3. FOCUS DRAWINGS:
 - a. Drawing U1.1R
 - i. **Contractor indicated he will not deviate from bore layout or circuitry.**
 - ii. **Contractor will not employ other subcontractors. Drilling and piping will all be performed by T&B Drilling.**
 - iii. **Do not install piping beneath Maintenance Building.**
 - b. Drawing U4.1
 - i. **A full 300' shall be installed 48" below finished grade.**
 - ii. **All portions of the entire field must be a minimum of 48" below finished grade.**
 - iii. **Contractor plans to drill 8 ¾" and set 7" casing approximately 100' to 120'. Contractor will then drill 6 ¼" and install uncoil. All casing will be removed upon backfill.**
 - iv. **Contractor will backfill carefully to avoid bridging.**

- v. **All piping shall be bedded in crushed stone.**
- vi. **Backfill must be compacted stone beneath the improved surfaces (parking lot, etc.). "Clean" spoils may be used for backfill in lawn areas.**

4. FOCUS SPECIFICATION(S):

- a. Section 230500 – Common Work Results for Mechanical
- b. Section 230553 – Identification for Mechanical Piping and Equipment
 - i. **Tracer wire is required to be buried with each horizontal piping.**
 - ii. **Non-detectable warning tape shall be printed "geothermal" and be located 12" below grade.**
- c. Section 232113.33 – Ground-Loop Heat-Pump Piping
 - i. **Unicoils shall have inscribed or printed lengths.**
 - ii. **15 and 50 year warranties.**
 - iii. **Owner may pay for a K test if Engineer is concerned about installation of work. Installer will be required to pay for additional tests if K test is excessively different than those tests performed during testing in 2013.**
- d. Section 232113.33A – Geothermal Drill Logs
- e. Section 232113.33B – Formation Thermal Conductivity Test Well #1
- f. Section 232113.33C – Formation Thermal Conductivity Test Well #2

5. MINIMUM SHOP DRAWINGS REQUIRED:

- a. Pipe Material
- b. Components (fittings, valves, etc.)
- c. Geothermal valve vault
- d. Identification
- e. Antifreeze
- f. Installer qualifications
- g. Proposed Drill Logs
- h. Proposed Pressure Test Logs
- i. Proposed Flush/Cleaning Logs

6. CONSTRUCTION:

- a. Sequence/Schedule: Prior to parking lot development.
- b. Maintain Drill Logs, Pre/Post Pressure Test Logs, and Pre/Post Flush Logs (see examples below)
- c. Miscellaneous Items:
 - i. 176 bores; reuse 2 test bores.
 - ii. Casing as required to load uncoils.
 - iii. 1" uncoils.
 - iv. Must be 300' of loaded, vertical uncoil.
 - v. Backfill with #9 crushed limestone.
 - vi. 48" minimum burial.
 - vii. Continuous tracer wire installed at pipe.
 - viii. Utility warning tape 12" below subgrade.

- ix. Water Run-Off Control shall be maintained at all times and in compliance with local authorities.
- d. Testing/Inspection: Provide advance notice. Inspection prior to concealment.
 - i. Engineer: Marcum Engineering – Johnny Baucum; 270-444-9274
 - ii. Code Enforcement: HVAC Inspector
 - iii. Pressure tests must be witnessed and logged.
- e. As-Builts: Maintain as progress is made. Referenced from on-site features. Clarity for turnover at end of project.

7. CONTRACTOR QUESTIONS/COMMENTS:

- a. **Installer plans to install as shown on drawings. There will not be a proposed, alternate bore field layout.**
- b. **How should the warranty apply to the vault? Engineer stated that beyond the 1 year warranty, the plumbing within the vault shall have the additional warranty as stated in the specifications.**
- c. **Lid for vault shall be traffic rated.**

8. OWNER ADDITIONAL COMMENTS:

- a. **None.**

9. ARCHITECT ADDITIONAL COMMENTS:

- a. **Bond is forthcoming and should be provided before work begins.**
- b. **Planned start is July 1.**
- c. **Contractor indicated 84 days to drill and install unicoils. Then an additional 63 days to install horizontal piping for a total of 147 calendar days.**
- d. **Contractor indicated he will use 2 drilling rigs.**

10. EXAMPLE LOGS:

- o **Geothermal Drill Logs-** Shall be provided to note the following at a minimum:
 - Project Name.
 - Bore #.
 - Drilling Date.
 - Driller's Name and IGSHPA License Number.
 - Drilling Method.
 - Bore Diameter.
 - Drilling Depth.
 - Casing Set Depth.
 - Drilling Start Time.
 - Drilling Complete Time.
 - Drilling Cutting Removal Volume.
 - Drilling Log Including all Encountered Depths and Ranges of Sub-Surface Strata and Water Flow Rates Noting any Relevant Results of Drilling Activities.
 - Loop Type, Diameter and Overall Length.
 - Loop Loaded Depth.

- Backfill Type.
 - Grout Type.
 - Backfill Volume.
 - Grout Volume.
 - Field Observations and Comments.
 - Drilling Witnessed By.
- o **Pre/Post Installation Pressure Test Logs-** Shall be provided to note the following at a minimum:
- Project Name.
 - Test Date.
 - Circuit #
 - Test Pressure and Duration.
 - Test Start Time.
 - Test Complete Time.
 - Field Observations and Comments.
 - “Pass” or “Fail” Indication.
 - Pressure Test Performed By.
 - Pressure Test Witnessed By.
- o **Pre/Post Installation Flush Logs-** Shall be provided to note the following at a minimum:
- Project Name.
 - Test Date.
 - Circuit #
 - Flush Pressure and Duration.
 - Flush Flow Rate and Velocity.
 - Flush Start Time.
 - Flush Complete Time.
 - Field Observations and Comments.
 - Flushing Performed By.
 - Flushing Witnessed By.

FIELD REPORT: Architect's Observation Report # 01

Prepared by:	Chuck Trimble
Company:	Murphy + Graves + Trimble
Project:	GC Burkhead Elementary School
Location:	GC Burkhead Project Site
Arch. Project Number:	1264
Date/Time:	Thu, May 29 2014
Weather:	Sunny approximately 85 deg

Parties Present	Organization	Email Address
Baccus Oliver	Marcum Engineering	boliver@marcumengineering.net
Chuck Trimble	M+G+T	chuck@mgtky.com
Maria Gillette	M+G+T	maria@mgtky.com
Sam Gibson	DW Wilburn	sgibson@dwwilburn.com
Action Items:	Due Date: (none) Responsible Party: Baccus Oliver Verify the slope of the plumbing line to clean out in rear corridor. This was discussed and reviewed at the progress meeting following this site visit.	
General Observation	<ul style="list-style-type: none"> • Special Inspector was on site today during the placement of concrete. Test conducted while Maria and I were on site were found to be within the acceptable tolerance as outlined in our Contract Documents. • Building Pad for the maintenance facility was in place. Line stabilization had been completed for this pad also. • Topsoil is being stockpiled at the rear parking lot area. 	
Work in Progress	<ul style="list-style-type: none"> • Earthwork is progressing on site. Building Pad is in place and lime stabilization complete • Exterior foundations are approximately 10% +_ complete. • Exterior foundation were observed today to be clean and rebar setting on concrete chairs prior to placement of concrete. • Rough in for the Interior sanitary sewer has been started • Sheep foot is being used to compact the earthwork that is ongoing today in the bus loop area. 	



Photo # 1 - Site Grading



Photo # 2- Site Grading



Photo # 3 - Exterior Wall Foundation



Photo # 4 - Exterior Wall Foundation



Photo # 5 - Rebar Extended



Photo # 6 - Foundation prior to placement of Concrete



Photo # 7 - Foundation prior to placement of Concrete



Photo # 8 - Rough In Plumbing



Photo # 9 - Rough In Plumbing



Photo # 10 - Rough In Plumbing



Photo # 11



Photo # 12 - Ditch for Plumbing



Photo # 12 - Building Pad



Photo # 13 - Building Pad



Photo # 14 - Building Pad



Photo # 15 - Building pad



Photo # 16 - Rear Parking Lot



Photo # 17 - Rear Parking Lot



Photo # 18 - Rear Parking Lot



Photo # 19 - Rear Parking Lot



Photo # 20



Photo # 21 – Geothermal Test Well # 1



Photo # 22 - Maintance Building Pad



Photo # 23 - Geothermal Test Well #2



Photo # 24 - Rear Exterior Foundation



Photo # 25



Photo # 26 - Exterior Wall Foundation adjacent to Bus Loop



Photo # 27 - Concrete Pour



Photo # 28 - Concrete Pour



Photo # 29 - Special Inspection Testing



Photo # 30 - Main Entrance



Photo # 31 - Job Signage