Fleet Elementary School

Community Newsletter (March 2018)

This is the March update on the status and progress of construction for the project. All monthly updates will also be posted to the project website and can be accessed via the following link:
https://www.apsva.us/design-and-construction/new-elementary-school-jefferson-site/

Waterproofing of the garage foundation walls is ongoing. The waterproofing material is being attached to the steel & wood structure supporting the excavation, which will remain in place serving as the formwork for the outside wall of the garage foundation when the concrete walls are poured.

An underdrainage system is currently being installed below the concrete floor slab at the lowest level of the garage for purposes of removing any groundwater that gets below the lowest level garage floor slab for the life of the building. The system consists of perforated piping (encased in a porous stone bed with a filter fabric wrap around the stone bed) which will collect any underslab water and convey it to a large sump pit that is also being placed below slab. This sump pit will also collect water from floor drains within the garage. Any water

collected in the sump pit will be filtered and then pumped out into the county storm sewer system.

Footing and foundation installation at the lowest level of the garage excavation is progressing. Concrete construction of the 2-level underground garage will be ongoing for approximately 2 months.

In order to expedite installation of footings and foundations, a mobile crane has been set up within the excavation to transport reinforcing bar, concrete formwork, and the concrete itself to various locations within the building footprint as needed.

It was originally envisioned that a single tower crane would be erected for transportation of materials around the site, but in order to prevent any part of the crane and boom from swinging over adjacent properties, it was decided to move forward with mobile cranes instead. It is likely that another mobile crane will be brought to the site in the near future, as multiple mobile cranes will likely be required in order to serve the entire building footprint since the mobile cranes don't have the reach that a tower crane would.

Geothermal well field construction is complete. Currently all wells in both the well field north of the garage excavation (under the bus loop) and in the well field south of the garage excavation are bored, circulating piping is installed, and wells are grouted.

As a reminder, each well field, north and south, consists of approximately 36 wells (for a total of 72), in 6 circuits of 12 wells each. Each vertical well will be drilled to a depth of approximately 560 feet. The wells are of a closed loop type, meaning that we do not circulate ground water within our geothermal piping. Instead, the circulating fluid within the wells is contained in piping and the piping is encased in grout. Heat exchange between the geothermal fluid contained within the pipe and the surrounding earth is through the grout. The geothermal wells are part of the geothermal heating and cooling system for the school, and will contribute greatly to the project's net-zero energy goals by reducing energy use for heating and cooling.

The ongoing activity related to the geothermal system is installation of the horizontal piping that connects the piping in the wells with the building. This work is substantially complete and at this point we are awaiting completion of the garage so that the horizontal piping can be run into the building.

Although the bus loop had previously been excavated to grade, Installation of the horizontal piping for the north geothermal well field below the bus loop dictated some additional final grading be done. This final grading is complete, as is placement of stone to stabilize the

subgrade, so that the loop can serve as an access road for construction vehicles within the site during construction.

Construction of improvements to the west side sidewalk at S. Old Glebe Rd are ongoing. The goal of the sidewalk improvements is to provide a clear 4-foot-wide path on the west side sidewalk from the 1st Road S. intersection to the northernmost extent of the project. Currently, there are utility poles right in the middle of the sidewalk at several locations. While the project does not have sufficient funds to move the poles out of the sidewalk (which is a very expensive operation) the county has approved installation of sidewalk nubs around the poles that will result in the 4-foot-wide clear access path. This work will require that portions of the sidewalk and parking lane on the west side of the street be closed while the work is taking place. Notice to adjacent neighbors has been provided with details of the work scope and schedule.

Additional work in the South Old Glebe right-of-way has commenced with the installation of a new, upsized water line service pipe. The existing service line is 6" diameter, the new line is 8" diameter to better serve not only the new school, but also the adjacent neighborhood. At this time the new pipe is being set, but we are not tying into the existing county water main nor are we tapping existing neighbor services into the new line. This will occur in the near future and advanced notice will be sent to all impacted adjacent neighbors, as the tie-in work will dictate a water service outage for a certain period of time.

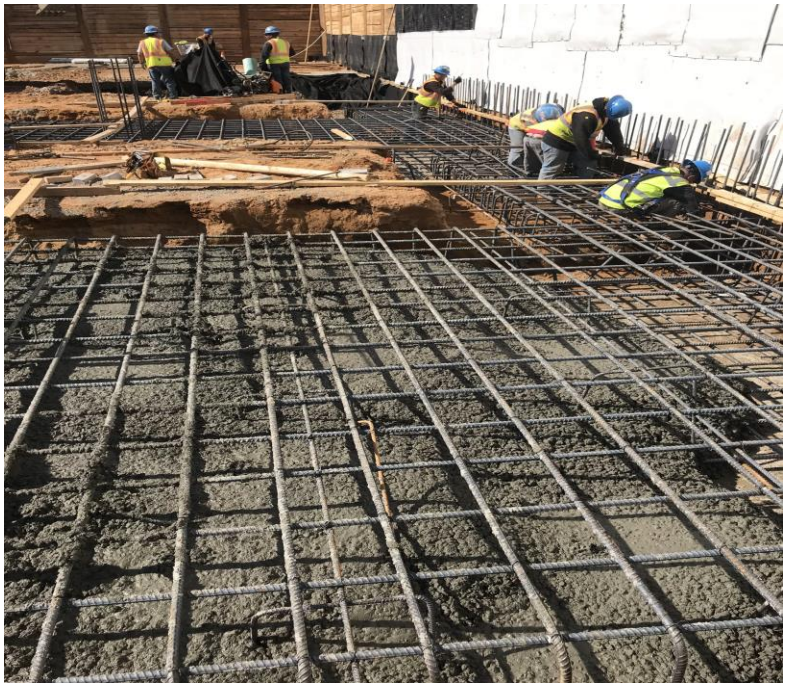
INSTALLED WATERPROOFING AT GARAGE FOUNDATION WALLS

INSTALLATION OF SLAB UNDERDRAIN PIPING AT LOWEST GARAGE LEVEL

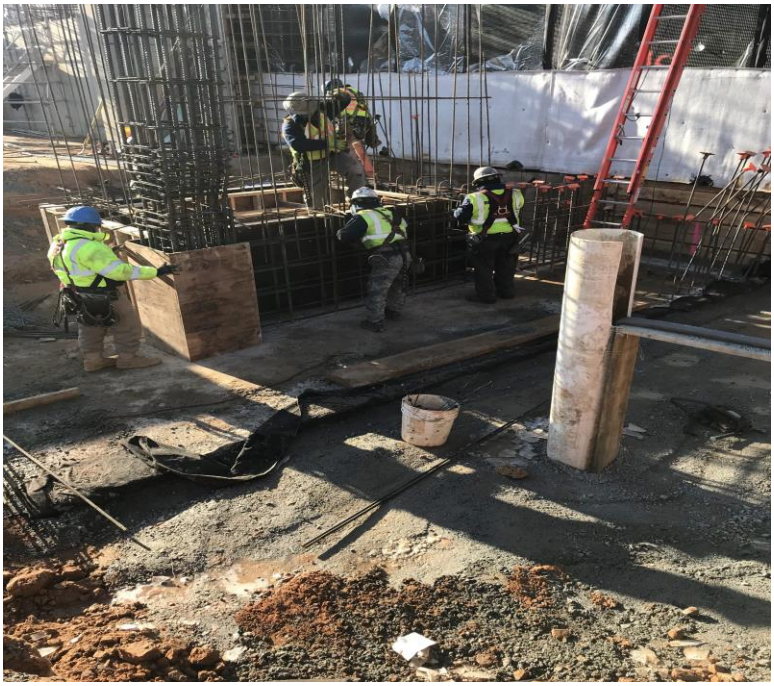
DETAIL OF SLAB UNDERDRAIN PIPING INSTALLATION

PREPPING FOR PLACEMENT OF PRE-FABRICATED SUMP PIT STRUCTURE AT LOWER LEVEL OF GARAGE

MOBILE CRANE MOVING MATERIALS FOR INSTALLATION OF FOOTINGS AND FOUNDATIONS AT LOWER GARAGE LEVEL



INSTALLATION OF REINFORCING STEEL BAR (REBAR) FOR GARAGE FOOTINGS



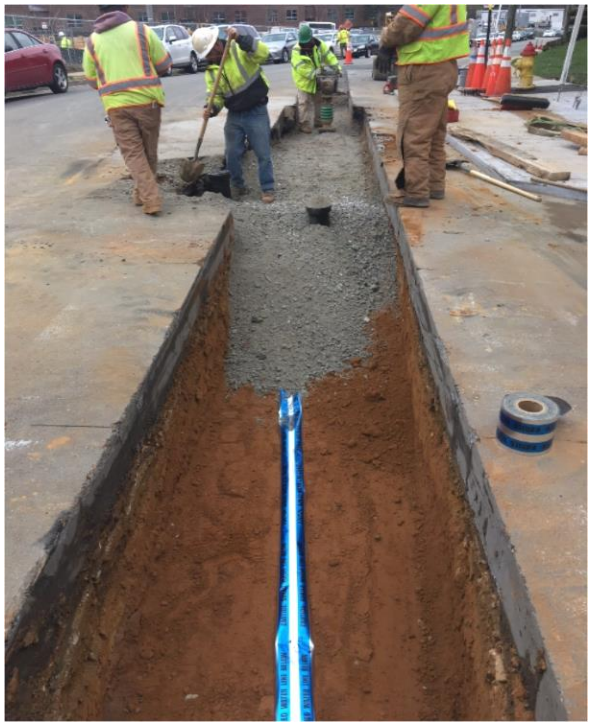
INSTALLATION OF REBAR AT FOUNDATION WALLS AND COLUMNS PRIOR TO PLACEMENT OF FORMWORK

POURING OF CONCRETE FOR GARAGE LOWER LEVEL WALLS WITH CONCRETE PUMPER

MOBILE CRANE WITHIN GARAGE EXCAVATION AND STABILIZED BUS LOOP ROAD ABOVE

GEOTHERMAL HORIZONTAL PIPING INSTALLATION

NEW CURB NUB AT SOUTH OLD GLEBE ROAD WEST SIDEWALK



WATERLINE REPLACEMENT IN SOUTH OLD GLEBE ROAD

Please contact me with any questions you may have regarding this update.

Steve Stricker
Senior Project Manager
Arlington Public Schools
Design & Construction Services
O 703-228-7749
C 571-220-0048
steven.stricker@apsva.us