

Dear Friends,

In some ways this article will be a conclusion to a very important project. In all of the other ways that are really significant, this article is the celebration of a new beginning for our Akrampa School and its students. Before moving forward to share new information, it's important to us to pause and acknowledge with gratitude all who made this possible. The *Ghana School Roof Project of 2025* happened because of YOU! Many of you have been praying for this project over the course of almost a year. And so many of you donated generously; the congregation of First Lutheran Church Lorain, Bethesda on the Bay Lutheran, and many independent donations from those individual people, across Ohio & the entire USA, who we call our "Friends of the Mission". **Thank you so much** to every single person who helped our Akrampa students through your prayers, donations and love!

The time has come to bring you the concluding article on the topic of our *2025 Ghana School Roof Project*. We understand that photos of school buildings and construction may Not be the most interesting thing to everyone ... and that is why there are as many photos as possible of our students in both this article, and past articles, about the project. Articles from January 2025 through this article (July) have been designed as a photo journal of the incredible power of change that **you** have been able to give to our students.

Every day since January, in Akrampa, as our students have watched their school buildings being changed; new roofs, gutters, painting, etc., and the creation of two new sources of water - our students are seeing Your Love for them, and the Love of Jesus, in a tangible way. Sending detailed photos of the changes that are happening at our Akrampa School is our way of sharing with you the *perspective of what our students are seeing*.

Take a moment to put yourself in their shoes, and look at the photos (maybe again) from January through now, and try to see these photos as if through their eyes, with the wide-eyed JOY and Wonder of a CHILD. The children are seeing the school that they love being changed into something beautiful, and Fresh Water being brought to the doorstep of their school. The students have been able to help with the project, as you will see in this article, and the students have been part of celebrations, as you saw in my April article. It is powerful!

#### **The Akrampa Cistern:**

The final piece of the Ghana School Roof Project, and the focus of this article, is the **Cistern & Rain Catchment System**. (The Cistern is a *completely different* water source than the Borehole, which was featured in my March & April articles).

The new roofs and the new gutters that were installed on the school buildings early this year are what make the **Cistern & Rain Catchment System** possible. The Cistern is located directly next to the end of the 6<sup>th</sup> Grade Classroom, so that rainwater can be piped from the gutters on **both** the Upper Primary (4<sup>th</sup>-6<sup>th</sup> Grade) and the Lower Primary (1<sup>st</sup>-3<sup>rd</sup> Grade) Blocks of the School, into the Cistern.

### The Structure of the Cistern:

The Cistern is essentially a very large brick & cement lined rectangular hole that will capture and hold all of the rainwater coming down from the PVC pipes that are attached to the school's gutters. The Cistern is divided into two chambers with *each* chamber measuring approximately **8ft deep/high X 8ft wide X 10ft long**. This measurement approximates to **640 cubic ft.** per each chamber, which means *each* of the two Cistern chambers have the ability to hold about **4,788 gallons** of water. If both chambers of the Cistern were full, that would give it the ability to hold approximately **9,576 gallons of water** total for our school and students.

The Cistern was constructed using cement blocks and mortar. The cement content of the blocks is such that it is almost impervious to water. The walls thus created from the blocks are then overlaid with a smooth waterproof cement mortar enhancing the impervious nature of the walls. *(A visual example for you might be to picture the inside of an inground swimming pool in the US, cement lined, and waterproof.)* The entire Cistern, as a unit, is capped with a **concrete slab which is 6 inches thick**. This essentially creates a top/lid for the Cistern which prevents evaporation and also keeps the inside clean and free from debris. Then the pipes that are attached to the gutters are fed into the top of the Cistern to allow the rainwater to flow freely into the Cistern. Masons, carpenters, and plumbers were the contractors on the Cistern project.

### Use of the Cistern for our Akrampa School:

Basically, the purpose of providing a **Cistern / Rain Catchment System** for the school is to serve as a **backup** to meet the water needs of the school. In March/April of 2025 the **Borehole water system** was created for the Akrampa School, which has removed the pressure of the perennial water shortage for our school and now provides the main source of fresh water for the students. Please check out my March & April articles to read about the Borehole.

The water pipe line that serves the entire community (think of it as your 'city water') also reaches the school; but for many years now, water has almost stopped flowing in the line, causing severe water shortages. The children of the school had been walking long distances to fetch water for the needs of the school, especially for the cooking of the Breakfast Meals for the teeming population of the school.

**This is why the installation of the Borehole Well for fresh water, and the Cistern for rainwater catchment are absolutely vital and life saving for our school and for our students!**

Water from the **Borehole Well** is available to the students directly at the school's Kitchen Building, both indoors from the sinks, and outside of the Kitchen Building with the Poly-Tank that has two faucets for easy access for the children. -Photos of this are in my April 2025 article-

Rainwater harvested from the school's gutters and piped into the **Cistern** will be collected by the students & teachers with a bucket attached to a rope, being lowered into the Cistern, when it is needed. This water will serve many purposes for our students and school. And due to the fact that the Cistern is located on the school grounds, next to the 6<sup>th</sup> Grade Classroom, the children will no longer have to endure long walks when they need to fetch additional water. The Cistern is going to serve as a secondary storage of water supply for the school. So, whether or not water flows from the now almost dry 'city pipeline', the Akrampa School will have the water it needs. Because of the scarcity of water, there is a **plan** being put in place for the restricted use of the Cistern & Borehole by the community overall, to reserve the water for the school's needs.

Before moving on to show you the wonderful **photos of the Cistern**, I'd like to acknowledge a special person who has been instrumental in helping me to share Ghana Mission News with you for the last 15 years. In 2010, Kristen Anthony, who is now the Chair of the Ghana Committee, had the idea that I should start writing articles to the congregation(s) to keep you informed of the progress of the mission. Since then, Kristen has been my editor, co-creator, helper and a major source of encouragement. During the last 7 months of the Ghana School Roof Project, I have sent all of the photos to Kristen and she is the one who has organized and added all of the photos to the articles, and written the photo captions inside each article. She has also created the 'slides' that are shown at FLC and posted on Bethesda's Facebook. I could not have sent 178 articles to you, over all of these years, without her help. From myself, Julie, and the Akrampa students; *"Thank you Kristen for your dedication to spreading the news of the Ghana Mission to everyone".*

At the beginning of this article, I mentioned that this July article will be the concluding article about the 2025 Ghana School Roof Project. **While that may be true, don't worry, we still have some more VIDEOS to share with you - please watch for those in the upcoming weeks.**

If you are part of the First Lutheran congregation, or would like to visit, **The Ghana Committee** is hosting a potluck directly after FLC's morning church services on Sunday August 31, 2025. The Ghana Committee will be celebrating, with you, the success of the *Ghana School Roof Project*. Julie and I cannot fly back to Ohio to be with you, but we hope that you will attend the potluck to show support for the Mission and to celebrate with the congregation.

- Next month, in my article, I'll have some important news to share with you about how our Ghana Mission Family is expanding in Vermilion, Ohio .... Stay tuned for that.

**~~ Please keep reading here, (scroll down) -- to see 30 New Photos of the students & Cistern.**

## The Cistern & Rain Catchment System - PHOTOS - from the Ghana School Roof Project 2025:



1



2

**Photo 1** - shows the backhoe making a stop at the gas station on the way to Akrampa.

**Photo 2** - shows the backhoe in place, at the edge of the 6<sup>th</sup> Grade classroom, preparing to dig the hole for the Cistern. The building that you see in profile, is the 4<sup>th</sup>-6<sup>th</sup> Grade Block. The building at the back of the photo, that is 'facing' you in the photo, is a portion of the 1<sup>st</sup>-3<sup>rd</sup> Grade Block of Classrooms.



3



4

**Photo 3** - shows the beginnings of the mason work (block work) to create the Cistern, one worker takes a break. At the back of the photo is the Junior High School (yellow building).

**Photo 4** - also shows the masons at work, as you can see the walls of the Cistern are growing taller. The blue and white building to the right, is the side of the 6<sup>th</sup> Grade Classroom (see Photo 2). The yellow building at the back of the photo is the Junior High School ... 7<sup>th</sup>-9<sup>th</sup> Grade Classrooms.





5



6

**Photos 5 & 6** - show some of the older Akrampa female students helping the masons with their work. The girls are fetching water in buckets to help the masons mix and make the cement and mortar for building the Cistern. As in any group, there is always one student who would rather wave and make funny faces at the camera than help her peers.



7



8

**Photo 7** - this photo is looking down into the Cistern. The cement blocks are being laid to form the center dividing wall between the two chambers of the Cistern.

**Photo 8** - shows the view of the Cistern while standing to the side of it. A teacher takes a break on the ledge of the 6<sup>th</sup> Grade classroom and watches as the mason works diligently at his craft. We see now that the Cistern is tall enough that it is above the ground, but there is still more mortar needed.



**Students Getting Involved to Help the Project:**



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10



11



12

**Photos 9 & 10** - show the older Akrampa male students helping to fill the wheelbarrow, to backfill dirt into the trench around the Cistern.

**Photos 11 & 12** - the older boys smile and laugh with each other as they work together to help the project.





13



14

**Photo 13** - shows the large wooden forms/supports that are propped up into the corners of the Cistern to hold the newly formed concrete corners into place while the concrete is allowed to dry. Students mill around and look on between their classes. The Junior High is seen behind - yellow building.

**Photo 14** - the wooden forms/supports can still be seen, as a young boy stands at the edge of the Cistern and looks over it - interested and curious as to what is happening. Other students mill about and roughhouse on the ledge of the 6<sup>th</sup> Grade classroom (to the right).



15



16

**Photo 15** - shows a couple of the boys continuing to fill the dirt back in around the Cistern, as one of their older peers supervises them. The Kitchen Building can be seen behind them. This photo is taken facing the opposite direction as photos 13 & 14. Meaning the Cistern can be seen from the Kitchen Building or from the Junior High School (JHS), depending on which way you are facing.

**Photo 16** - the kids take a break from class for the Breakfast Meal and smile at the camera. This is taken at the edge of the 6<sup>th</sup> Grade Classroom, with the Cistern to the left of the kids.





17



18

**Photo 17 & 18** - are both taken facing the Junior High School building, which is still the original yellow color, because it was Not included in this 2025 School Roof Project. The Ghana Committee is planning to make the Junior High School (JHS) repairs a new project for 2026.

--Notice in **both Photos 17 & 18** that the Cistern is now overlaid with a smooth **waterproof cement** mortar both inside and out. In photo 18 you see the dividing wall between the two chambers of the Cistern has four square open cut-outs that will allow water to flow between both chambers, and to balance the distribution of rainwater as it flows into the Cistern.

### **Rain Catchment System: Piping install - to feed into the Cistern**



19



20

**Photos 19 & 20** - both show the plumbers installing the PVC piping along the length of both of the school buildings; parallel & attached to the new gutters, so that the piping will capture rainwater.





21



22

**Photo 21** - is a close-up photo of the underside of the gutters, showing how the PVC piping is attached to the gutters. As you can see the rain will come *directly down from the gutters into the PVC pipes*. The pipes are then attached to the Cistern, therein creating the **Rain Catchment System**.

**Photo 22** - shows the piping running the length of the Lower Primary Block (1<sup>st</sup>-3<sup>rd</sup> Grade) and then crossing the pathway between the buildings and attaching to the gutters on the corner of the Upper Primary Block, this would be the corner where the 4<sup>th</sup> Grade class is located. Then the piping will run all the way down the front of the Upper Primary Block and meet up with the Cistern at the end, by the 6<sup>th</sup> Grade Class.



23



24

**Photos 23 & 24** - both show the masons creating the 6-inch-thick cement slab (cap/lid) for the Cistern. Notice there are two large square openings, this is how water will be accessed by students and teachers. In **Photo 23** you can see two pipes standing straight up out of the cement; this is where the PVC piping from the gutters will feed into the Cistern. This cement slab took over 21 days to cure/dry.



25

**Photo 25** - the children gather at the edge of the 6<sup>th</sup> Grade Classroom and watch with wonder, curiosity, and interest as the plumber begins to attach the PVC piping (that has come down from the gutters), into the concrete cap/lid of the Cistern. Remember, the school buildings have never had gutters on them until this year. And gutters are Not common on most buildings in Ghana - another unique thing for Akrampa !!

**Photo 26**- shows both pipes coming down into the Cistern, from the gutter line, installed by the plumber.



26





27



28

**Photo 27** - shows both of the PVC pipes as they come down from the gutters into the Cistern. This photo shows the pipes and Cistern looking in the direction toward the Kitchen Building. The children gather at the corner of the 6<sup>th</sup> Grade Classroom and in the courtyard to play and talk.

**Photo 28** - this photo shows one of the hatches, or openings, at the top of the Cistern.

(See Photos 23 & 24) Both openings are fitted with metal covers that will be locked. These hatches will be used by students and teachers to access the water in the Cistern, as needed, during school hours.



29

**Photo 29** - shows the completed Cistern! The Rain Catchment pipes are attached, cement done, locking metal hatches (Photo 28) in place... The 4 pipes that you see on the side are outlet pipes to let water OUT of the Cistern as overflow, IF the Cistern were ever to get too full of rainwater.



On behalf of myself, my wife Julie, the children and families of Akrampa, and The Ghana Committee - we would all just like to extend our deepest gratitude for the amazing support and love that you have continued to show to our Akrampa Students!

The Ghana Mission would not exist without the divine guidance of **Jesus**, and the love and support of all of our friends in the United States.

If you have missed any of my previous articles and photos about the School Roof Project, or if you would just like to catch up on all of my articles, you can read them online at this exact website: [www.bethesdaonthebay.org/ghana](http://www.bethesdaonthebay.org/ghana)

-Blessings, Pastor Ben Wilson

--with assistance from Kristen Anthony, Ghana Committee Chair