

WEST GOSHEN SEWER AUTHORITY
REGULAR MEETING
June 1, 2016

The regular meeting of the West Goshen Sewer Authority was held on Wednesday, June 1, 2016 at the West Goshen Township Administration Building. Those present were:

Authority

Dave Johnson
Ron Rothrock
Dan Tierney
Phil Corvo
Theodore Murphy

Unruh, Turner

Ross Unruh

Administration

Dave Woodward
Mike Moffa

Glace Associates, Inc.

Max Stoner

The regular meeting of the Authority was called to order at 7:30 P.M. by Chairman Dave Johnson.

Ed McAssey from East Goshen was in attendance. Josh Fox from HRG, Inc. was in attendance.

Dave Johnson motioned to approve the May 4, 2016 meeting minutes, seconded by Ron Rothrock, motion approved.

Ron Rothrock motioned to approve the May 13, 2016 meeting minutes, seconded by Phil Corvo, motion approved.

Dan Tierney motioned to approve the Treasurers report, seconded by Ron Rothrock, motion approved.

Ted Murphy made a motion to approve to advertise for bid the 2016 Sanitary Sewer System repair and replacement of manholes and sewer lines, seconded by Ron Rothrock, motion approved.

Ted Murphy motion to award the Clarifier #3 bid to the lowest bidder (M2 Construction) pending attorney review and approval, to include #1 & #2 alternatives plus a change order for aluminum beams, seconded by Dan Tierney, motion approved.

Mike Moffa gave the Wastewater Superintendent report.

Ross Unruh presented the Solicitor's Report for the month. The judge agreed to put the case in civil suspense and signed the order on 1/6/14. At this point all technical details for testing are being handled by Dan Smith, Max Stoner, HRG and Mike Moffa in conjunction with EPA and DEP.

Max Stoner gave the Engineers report dated June 1, 2016: (See report for details)

1. Current Items

a) Goose Creek Stream Study/TMDL Permit Issues

The TMDL issues are continuing on. The next semi-annual report is due to be submitted to EPA by July 6, 2016. The HRG plant model is due to be provided to the Authority and Township by Jun 10, 2016. It is to be used a part of the July Semi-annual report to EPA. DEP is preparing to issue its 2016 integrated Water Quality Report which provides designations to various water bodies in PA every two years.

b) Capital Expenditure Schedule

Meeting was held on 4/6 at the plant with STP staff, Josh Fox and Max. We have received and reviewed the report prepared for West Goshen Township which identified additional potential projects. Glace provided an update on the emergency generators, diesel fuel tanks, transformer, etc. The Township discussed their ideas regarding the generators and other projects.

c) Methane Gas Burner

We received the contract completion documents from the contractor. The only item remaining is for the Chairman and Vice-Chairman of the Authority to sign and seal the officer's certificate of completion. These will then be bound and circulated to the Authority and GEM Mechanical.

d) Structural Review of STP Buildings & Tanks

Primary Clarifier #3, the project was advertised for bid on April 18th and is being bid through the PennBid program. A mandatory pre-bid meeting was held on May 9th. Bid opening was pushed back to May 26th and is anticipated that the bid will be awarded at the WGSa meeting on June 1st barring any bid complications. Five contractors attended the pre-bid meeting. Minutes we sent out and Addendum No. 2 was sent out May 13th and Addendum No. 3 on May 24th. The bid results were circulated on May 26, 2016.

e) Secondary Digester Cover

A budget proposal was received from the manufacturer's rep for the Dystor cover, it was \$500,000 for the supplier to install or \$300,000 for the material plus a contractor installation cost. HRG report suggested switchover to aerobic digestion process, this should be evaluated in further detail. Nothing new this month.

f) Operations Building Roof Replacement

A manufacturer's rep from Firestone visited the site in mid-November to provide recommendations to replace the existing roof. Should be done regardless of the type of digestion process selected. Nothing new this month.

g) Sludge Dewatering Project

Two budgetary prices were received in January. A manufacture rep for GEA Westphalia wants to run a “no cost” pilot demo for their centrifuge in mid-June. The Township staff has opted not to proceed with this demonstration at this time.

h) Emergency Generator & Storage Tanks at WWTP

The Authority at its May 4th meeting opted to proceed with installing two new smaller generators rather than a single large one. The electric design and transformers are also being evaluated.

i.) Downing Avenue (Woodcrest Area) Pumping Station #10

The Township staff is now looking at a land swap with Aqua PA and rerouting piping and installing a new wet well with a submersible pumping arrangement. Due to the lengthy permitting process through DEP, it is unlikely that the upgrade to the station can be constructed this year.

2. Developments – See Engineers Report

- a) Shadeland Woods (29 & Boot)
- b) Woodlands at Graystone (Jerrehian Large Tract)
- c) Goshen Leisure Development (6 bldgs. N. Hagerty) – waiting on escrow money
- d) Lincoln Independence Park (831 Lincoln Ave)
- e) Arbours at West Goshen (Ward Ave)
- f) Arbours Square West Goshen
- g) Wexford Mews (Wexford/Kirkland)
- h) 825 Goshen Road (Zarelli)
- i) 415 Goshen Road (Gavin)
- j) Liberty Tools (Saunders Ln)
- k) Kirkland Woods (Kirkland/Ashbridge)
- l) Jerrehian (3 lot)
- m) Pica Restaurant (Rt3)
- n) Summit Realty (Rt3 & Five Pts)
- o) Traditions of West Goshen (Boot Rd)
- p) Laurel Ridge (Glen White 1320 Pottstown Pk)
- q) 702 Old Westtown Road
- r) West Chester University
- s) Ice Line/Howell (700 Lawrence)
- t) Goshen Leisure Driving Range
- u) Reserve at West Goshen (1210 West Chester Pike)
- v) Islamic Society

The following invoices were moved for approval by Ron Rothrock, seconded by Dave Johnson and unanimously approved:

ADMINISTRATIVE EXPENSES:

PAYEE	PURPOSE	AMOUNT
Unruh	General Representation	\$ 860.00
Dan Tierney	Treasury Salary – 2 nd Q	\$ 250.00
Lisa Covatta	Recording Secretary Salary – 2 nd Q	\$ 360.00
Tina Charron	Recording Secretary	\$ 270.00
Barbacane Thornton & Co.	Audit Costs thru April 30, 2016	\$ 1,200.00
21 st Century Media	Ad for Special Meeting on May 13, 2016	\$ 81.44

ENGINEER DEVELOPER:

PAYEE	PURPOSE	AMOUNT
Glance Associates	The Court at Bishop's Lodge – Plan Review	\$ 586.00
	Islamic Society of Chester County – Plan Review	645.00
	Reserve at West Goshen – Plan Review	216.75

ATTORNEY DEVELOPERS:

PAYEE	PURPOSE	AMOUNT
Unruh, Turner, Burke & Frees	Goshen Leisure – Plan Review	\$ 80.00
	The Court at Bishop's Lodge – Plan Review	140.00
	Reserve at West Goshen – Plan Review	80.00

On a motion by Ron Rothrock and seconded by Dave Johnson, the following requisitions were approved for payment.

TAPPING FEE FUND:

REQUISITION #	PAYEE	PURPOSE	AMOUNT
1714	Glace & Associates	TMDL P.S. #10 - Woodcrest Coordinate w/ Township Upgrade Authority Drawings Structural Repairs of Tanks @ STP Replacement of Digester Burner	\$ 467.25 409.50 2,031.50 1,768.00 10,467.74 124.50
1715	Unruh, Turner, Burke & Frees	TMDL Clarifier #3 Collection System Bid STP Emergency Generator Replacement	\$ 1,000.00 3,000.00 980.00 1,020.00
1712	Hangley	TMDL	\$ 1806.00
1713	GHD	TMDL	\$ 945.00
1716	HRG	2016 Repairs to Sanitary Sewer System Replacement of WWTP Emergency Generator	\$ 15,362.56 7,741.00

Mike invited all of the Members and Jack from East Goshen to meet on June 13th at 6:00 PM, to the Westtown Way pump station on Falcon Lane.

Ross stated after this month's bills there will only be \$229.00 left in the Zarelli (developments, item h) developer escrow account and anticipate they will need to add more to their escrow.

Ron stated that Max will be handling general engineering and developer engineering and that HRG will handle everything else.

Dave Woodward stated that they noticed that while out at the Fernhill pump station for alarms that the roof was in need of repair so he called a roofer. Ron asked why there was a failure at the pump station today. Mike explained that the controls were not working properly which set off the alarms and they are still investigating the problem.

New business:

Dave Johnson announced that after 7 years his is resigning as chairman.

Ted Murphy stated that reorganization will wait until a new Member is decided on.

Max Stoner wrote a letter to Dave Johnson in which Dave requested that the letter and other documents be attached to the meeting minutes.

There being no further business, on a motion by Dan Tierney seconded by Ron Rothrock, the meeting was adjourned at 9:06 PM.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Lisa Covatta".

Lisa Covatta, Recording Secretary

GLACE ASSOCIATES, INC.

CONSULTING ENGINEERS
3705 Trindle Road
Camp Hill, PA 17011

717-731-1579 • FAX 717-731-1348

May 31, 2016

File: 1181512

Mr. David Johnson, Chairman
West Goshen Sewer Authority
848 South Concord Road
West Chester, PA 19382

*RE: Authority Meeting of May 13, 2016
Response to Township Comments*

Dear Dave,

I am sorry that you were unable to attend the hastily called Authority meeting on Friday, May 13, 2016. Giving credence to the suspicious nature of the date, the meeting was reminiscent of a three-ring circus or a "kangaroo court" in a third world dictator run country. There were multiple unsubstantiated and frivolous claims, half-truths, allegations and innuendos from the Township staff.

These claims are refuted and will be addressed herein. After 60 years of working with multiple Authority Boards, Boards of Supervisors, Township Managers and Sewage Treatment Plant Managers, it amazes me that there were no major issues with our consulting services and the treatment plant operations until the recent regime change.

The meeting on the 13th was and is a continuation of the assault on the Authority, initially from the Township staff and later from within by the most recent appointee to the Authority Board. He was the only appointee in the 58 year history of the Authority where the Authority Board was not consulted on an appointment prior to the appointment of a new member to the Authority Board. Previous Boards of Supervisors and Township staff respected and appreciated the work provided by the Authority members. Mike Arnold was not even thanked for his services and was portrayed as an ineffectual chairman by both the Township staff and new Authority member.

Hopefully the actions of the May 13th meeting is the end of the assault and literal takeover of the Authority by the West Goshen Township Board of Supervisors and Township staff. This all started with a dispute over a personnel matter which became politicized to the point that senior management of the sewage treatment plant were shunned at the plant and essentially coerced into retiring earlier than they originally desired.

There was a claim by Casey LaLonde at the October 7, 2015 Authority meeting that there was a hostile work environment at the plant. The sewer plant manager was placed on administrative leave with pay pending the results of an investigation into the "hostile work environment." It was agreed by Casey LaLonde at the October 7, 2015 meeting that the Township would provide the Authority with a copy of the report. No report was ever provided to the Authority and apparently the allegation of a "hostile work environment" was just that and unproven despite the efforts of the Township to fabricate such a work situation. A severance agreement was signed earlier in May, 2016 with the former sewage treatment plant manager. However, none of the details of the agreement were made public and he cannot speak about the agreement or the activities at the sewage treatment plant. From an outside perspective, I would say his silence was bought to protect the current Board of Supervisors and Township staff from any political fallout.

The strategy of how to sway and/or take over the Authority was likely hatched during a Township financed junket to a Snow and Ice Conference in Phoenix, Arizona from September 29 to October 2, 2015.

The first wave of attacks were to attempt to make the previous sewage treatment plant staff look inept, incapable or negligent. Examples of this are as follows, which often were characterized by the Township staff as being of catastrophic nature, impending health and safety issues and needing to be immediately addressed:

1. Structural Issues

As a result of plant tours with HRG, Inc.'s staff, there were allegedly major structural defects at the plant which affected the health and safety of the workers and presented a concern with environmental release of sewage or sludge. This was conveyed to the Authority through the Authority Solicitor via the Township Solicitor. One claim was that methane gas had seeped under the floor tiles and caused them to become loose.

The Authority responded by having a structural engineering firm review the conditions of the exposed buildings and tanks at the plant. The results were that the membrane roof on the digester building needed replaced and that the previous repair to the effluent channel of Primary Clarifier No. 3 needed to be repaired again. Both of those items were listed in the Authority's August 2014 0 to 5 Year Capital Improvements Plan.

2. Methane Gas Detection System

At the joint Township/Authority meeting on November 4, 2015 during HRG's slide presentation, Josh Fox indicated that there was no methane gas detection system in the original Operations Building.

5. Operations Building Roof

This is another example of this being a critical issue and then the Township staff slowing it down as they are looking at installing new air intakes or other protrusions through the roof. We had the existing conditions plans ready and a recommendation from a membrane supplier to proceed with this project. Obviously this is not a time-critical issue either.

Attached are two separate discussions on the Primary Clarifier No. 3 Structural Repairs and P.S. No. 10 (Woodcrest).

It is obvious that every attempt to move any projects forward that we were assigned have been undermined by the Township staff. I have major concerns for the independence of the Authority from undue Township coercion and for the municipal partners and their sewer customers and West Goshen Sewer customers who will bear the financial burden of the staff decisions.

The only fortunate event is that the Authority will repay its debt in 2018 and any borrowings won't be as bad as if the Authority carried additional debt.

I am sorry to hear that you will be resigning from the Board at the end of June. My best wishes to you in your future ventures. It has been a pleasure working with you over the last several years.

Sincerely,

GLACE ASSOCIATES, INC.



Max. E. Stoner, P.E.
President

MES/dmg

cc: Ross A. Unruh, Esquire (with enclosures)

I responded for the Authority that there indeed was a methane gas detection system and that it was operable a month earlier when I was in the building looking at the new methane gas burner. There are eight (8) sensors throughout the original Operations Building. When questioned by Ray Halverson, Township Supervisor, even if it is there and in operating condition, could I guarantee that it was recently calibrated, I had to say I could not without checking with the records of the staff. It was later determined that the calibration is done on an annual basis by Brandywine Electric.

3. Digester Gas Sediment Trap

According to the Township staff, this was a safety issue which had to be addressed immediately. The sediment trap needed to be replaced as the sight glass and associated piping with the sediment trap were badly corroded which happens with digester gas piping. The Township staff immediately had HRG, Inc. draw up a plan and solicit bids for the sediment trap and installation. As of last month, six months later, this sediment trap and associated piping has not been replaced.

The previous sewage treatment plant staff would have just ordered the parts and done the work, not needing the services of a consultant for a routine type of maintenance. At the time of the initial finding that the sediment trap needed replaced, only the one mechanic who was fired and the sewer plant manager who was on administrative leave were not available to do this work. The Chief Operator and Assistant Manager were still on the staff as well as several other qualified employees. They were not consulted on this matter nor were any of them along on any plant tour during the preparation of the HRG report. The vast experience of those involved at the plant for decades would have saved a lot of time and related expenses as well clarifying some of the misstatements found in the draft HRG, Inc. report.

4. Replacement of Influent Meter

The influent meter installed in approximately 2000 was not working properly. The Sewage Treatment Plant staff wanted it replaced but were looking for an inexpensive option. Allied Controls, who has done the meter and controls work and calibration of the meters, tried an inexpensive option. It did not work as expected and after several return trips proposed to install another type of meter on a trial basis at no charge to the Township.

The new regime decided they wanted a different style of meter altogether and one that required repiping at over double the cost offered by Allied Controls. HRG, Inc. was involved in doing a design and soliciting bids for work that a long time trusted vendor could do without bid solicitation or engineering.

P.S. NO. 10 - WOODCREST AREA
PUMPING STATION

This is yet another example of how there was a huge "health and safety" issue which needed to be addressed immediately. The Sewer Department staff allegedly did not want to enter the pump station dry well. Proposed improvements to this pump station were on the Authority's 2014 Capital Improvements schedule. The pumps were original from the onset of the pump station operation in 1977. It is an example of the excellent maintenance that the pump station components received as the equipment lasted more than double the normal life expectancy of twenty (20) years.

Glance and HRG were authorized to evaluate the pump station at the Authority's February meeting. We reviewed the proposed upgrade in HRG's feasibility report in the technical meeting prior to the March 2, 2016 Authority meeting. We discussed various issues with the Sewage Treatment Plant staff. The original concern with the existing pump station was the "health and safety" of the operators. The submersible pump option required a deep excavation to install a new wet well as the existing one was not large enough to accommodate the submersible pumps and a comminutor.

It was suggested by our firm that a suction lift pump station arrangement be considered instead of the submersible option. Both Josh Fox and Dennis Michael thought that option was viable and would certainly address the safety concerns.

The Township staff then was concerned about noise emanating from the station and the aesthetics of the small building. They were shown several examples of this type of station. The buildings can be designed to be aesthetically pleasing and not be an eyesore to the neighbors. The building can be constructed with sound dampening materials and designed to reduce off-site noises.

The deepest excavation would have been approximately four foot for the footers for the small building. No influent gravity sewer lines would need to be relocated or tied into. They are approximately eighteen (18) feet deep in an area close to the reservoir.

The Township staff at its May meeting came up with an idea of swapping land with Aqua PA and relocating the pump station. This would still involve excavating 18 to 20 feet deep and redirecting the sewer mains in previously excavated areas. There is no need to waste dollars on soil borings, geotechnical reports, and swapping land when it is not necessary.

At the May 13th meeting, another reason came out from the staff that the Township has problems with pumping stations, which is a likely reference to the Sunoco pipeline pumping station. This is a completely different animal. The Woodcrest Sewage Pumping Station has been operating for 39 years and no issues have been raised.

It appears that the staff does not want to agree with any recommendation we make and will try to make it a bigger issue than it is.

In regards to engineering costs on this, we performed the PNDI, Municipal Notifications and prepared existing site plans. All of these are necessary items to be provided regardless of which type of station is selected.

Since this was such a critical concern of the Township in the fall and winter, we tried to anticipate what environmental issues may be of concern or may cause a delay in issuance of permits or construction.

With three bald eagle nests within the approximately 600 foot radius of the existing station, the construction period is reduced sharply. Due to delays by the Township staff, work on this station cannot be permitted and constructed this season.

PRIMARY CLARIFIER NO. 3 STRUCTURE REPAIRS

TOWNSHIP COMMENTS/GLACE RESPONSE

1. Township:

The current bid is based on one lump sum price to complete the entire project. There are no line items for any materials such as rebar, concrete, or E&S controls as an example. Any changes to the project will be done on a case by case basis with change orders needing approval from the engineer. That is not what we are used to with other projects in the township. We try to minimize the need for a change order during construction. For instance in our annual paving project we always include 2A modified stone as a line item. Some years we need it, some we don't. If we need it we have a relatively small quantity as a line item to have a material cost in place.

Glance:

This type of project does not necessarily represent one suitable for a "unit price" based bid proposal as there is a finite quantity of concrete, rebar, stairs and related materials. There is no need for adjustments, plus or minus, for the items that are involved in this bid.

If there is a change of scope of work, there would be the need for a change order. However, none of the major components to this project will have revised quantities associated with them. This type of project is not similar to a roadway project with its possible varying quantities for many of the materials.

2. Township:

The township and Max agreed to add an alternate unit price for epoxy coated rebar as an option for the current design of plain steel in the addendum. Rick Craig the Township Engineer, would like to see the use of the coated rebar to limit the potential for future corrosion of the bar. It was also found that the engineer did not provide a list of the reinforcing steel, but is relying on the contractor and rebar fabricator to provide a list to the engineer for approval. The main concern with not having the engineer provide a rebar schedule to the contractor is that it will lengthen the review process, potentially putting the project timeline in jeopardy to finish before winter. Max also agreed to include an add/deduct line for doweling the pins so the contractor doesn't waste time trying to save the existing rebar to tie into and get into a lot of detailed time consuming handwork. Rather the contractor can make a clean cut along the tank wall and use dowels to tie the new rebar for the trough into. He is also going to add another line item for 25 or so dowel pins. That way if the contractor is directed to tie into the existing rebar and we have an issue, at least we have a line item cost for the dowels.

Glance:

The structural engineer's approach to the clarifier repair was forwarded on February 29, 2016 to all Authority members, Township staff, Ross Unruh, Josh Fox and Dennis

Michael from HRG, Inc. The original design put out to bid followed the proposed approach which is attached for referenced. The proposal specifically excluded the submission of structural calculations. HRG, Inc. later requested calculations on behalf of the Township. This was after the Township and HRG Inc. were provided a preliminary set of design drawings at a technical meeting prior to the Authority's April 2016 meeting. The two comments from HRG, Inc. were addressed in Addendum No. 2 and had been responded to in late April.

In regards to the preparation of a rebar schedule by the structural engineer, I have not seen that done on any water or sanitary sewer projects in thirty eight years. Each rebar fabricator does their own takeoffs and fabrication schedule. They would likely redo or double check or modify any rebar schedule prepared by others. Not much time would be saved in having the rebar schedule prepared by the structural engineer. Also providing this was not included in the structural engineer's proposal forwarded to all parties on March 1, 2016. Around the end of April Rick Craig, Township Engineer, became involved and prepared a list of questions received by our office on April 27, 2016. I spoke with the structural engineers and on April 29th we responded to Rick Craig's seven questions. I did not copy the Authority members as it was more technical issues of a minor nature and not an administrative item for involvement by Authority members. See attached response letter.

We added several of the items requested by Rick Craig and some options were added to the bid proposal and plans and specifications. The low bidder results showed that it will cost an additional \$15,700.00 to drill and dowel rebar into the existing tank and the epoxy coated steel rebar an additional \$500.00.

In speaking with the contractors they all stated that they could not cut the effluent channel concrete and rebar from the main clarifier cleanly due to the circular shape of the clarifier and the equipment available to perform the work.

3. Township:

There was some confusion when Max laid out the project. Mike Moffa and I met with Max so he could see the condition of the tank when it was drained. We wanted the tank to be sandblasted and epoxy coated along with the scraper mechanism. This would rehabilitate and maintain the interior of the tank while reconstructing the leaking trough. This work is in the bid specifications listed as to be done by owner or on another bid. The contractor has 45 days to complete the work once the tank is drained and taken out of service. We feel it is better to have the successful bidder coordinate the work on rehabilitating the tank entirely. We are working on a tight schedule and the coatings/concrete work is very temperature sensitive. Plus the trough that is being reconstructed will need to be coated as well. We don't have the technical training or equipment in house to apply epoxy coatings. I would not want to do a separate bid, especially not at this point. As of the last meeting Glace has invoiced \$16,000.00 for work on this contract. It's hard to justify another bid going out at this point, timing wise. If that is how he was going to do this the bid should have been simultaneous due to coordination between two contractors. I am not a huge fan of two prime contractors

working that closely together with both on tight time constraints. Max agreed and will be adding the epoxy coating to the contract in an addendum.

Glance:

There was no confusion on my part. It was understood that the sand blasting and painting was to be completed by a contractor. In the past thirty five plus years the STP staff performed all this type of "maintenance" work in house. The only time this type of work was not done by the STP staff was on new tanks being constructed by outside contractors.

Understanding this and the different type of construction that demolition/concrete construction lends itself to a separate painting contract. Either way works although the single contractor will mark up the painters' costs. The bids reflect a range of approximately \$90,000 to \$153,000 to perform the preparation and painting of the tank and clarifier mechanism.

The painting bid would have been advertised for bid in June with a tentative award at the July meeting. It was added as an addendum to the structural repair contract.

In regards to the invoicing issues, the structural engineer's cost for the design and bid phases was for \$9,800 with Glance preparing the specifications, ad for construction, the construction related drawings, placing the bid on line, a trip to inspect the tank when it was empty, etc.

4. Township:

While we were walking around the site a few more questions came up. The first was the replacement of the sidewalk along/under the tank wall demolition. This sidewalk is in bad shape and needs repair anyway. Our insurance carrier pointed out the broken concrete sidewalk throughout the treatment plant in their 2015 fall inspection. The contractor was originally going to replace only the pieces damaged during their work. The sidewalk is going to have heavy equipment driven on it during the demolition and construction work. It is also going to have chunks of concrete from the tank falling on it. The sidewalk is going to be destroyed and will need to be completely replaced. Max will be adding the sidewalk to the bid in an addendum.

Glance:

The complete replacement of the sidewalk was not brought up earlier in any discussions with the STP staff. Glance had indicated that the contractor would need to replace any damaged surfaces caused by the execution of his work, including the sidewalk, lawn, paved areas, etc. We weren't made aware of the insurance company's recommendations on sidewalk repairs.

MEMORANDUM

TO: Joshua T. Fox, P.E.
FROM: Michael S. Fegley, P.E. *MSF*
DATE: April 26, 2016
RE: Review of Proposed Repairs to West Goshen WWTP Primary Clarifier No.3

As requested by West Goshen Township, Herbert, Rowland & Grubic, Inc. (HRG) has reviewed the structural plans and calculations submitted on April 25, 2016, by Glace Associates and their subconsultant Evans Engineering, Inc. for the repair of the Primary Clarifier No. 3 effluent channel.

Upon review of the submitted plans, details, calculations and specifications, HRG has the following comments:

1. Waterstops, type and locations as shown in the calculations should be clearly shown on the plans and details to ensure proper placement during construction.
2. Due to the increased thickness in the effluent channel slab, was additional temperature shrinkage steel considered along the bottom of the slab.

If you have any questions concerning the above, please do not hesitate to contact me.

MSF/

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c: D. Long, HRG
D. Michael, HRG
M. Moffa, West Goshen
D. Woodward, West Goshen
C. LaLonde, West Goshen

5. Township:

A few questions came up regarding the construction inspection and concrete testing. The township recommends that Carroll Engineering, the appointed consulting engineer for West Goshen, be hired to provide full time construction inspection. Casey confirmed with Carroll Engineering that they have inspectors qualified for this work. Max was in agreement with this as well. It was also clarified with the bidders that they are to provide at their cost, independent third party testing of the concrete for air entrainment and slump along with strength testing at day 7, 14, and 28, although this testing was not included in the original specifications.

Glance:

The original plans indicated the required inspections and they were to be completed by a third party inspector and payable by the Owner, the Authority. The Township recommended Carroll Engineering who does often work for the Township.

The field tests for concrete were called out in Paragraph 3.06 of The Structural Concrete Section 03300 and includes the procedures to be followed for the testing. This field testing is to be included in the contractor's price. Note 4B on Drawing Sheet 5001 (3 of 7) also called out the requirement for concrete field tests.

An additional note on the plans was included in Addendum No. 2.

6. Township:

While looking at the site with the bidders Rick Craig requested details in the bid to handle erosion and sediment issues. His office normally handles E&S issues associated with construction and what he has suggested with the use of silt fencing and a wash out area for the concrete truck is at minimum a good practice for the environment. The township would require these steps from any other construction project, public or private. Max agreed to add this item to the addendum.

Glance:

The amount of potential disturbed area is minimal below the area requiring a specific E & S Control Plan. Silt fencing was added to the plans under Addendum No. 2. The washout from concrete trucks were brought up by me to see if the Township had any specific areas nearby that could be utilized for that purpose. The specification require that the contractor is responsible for this.

7. Township:

The contract calls for the work to be completed in 45 days. However, currently there is no completion date in the contract. We suggested the work be substantially complete by 10/1. That is a Saturday so Evans Engineering suggested we move to Friday October 7th. That seems to be a good date because we want the concrete work complete before the weather gets cold. The original bid opening date was May 19th, Glance is working on

moving this date to May 26th due to the number of changes/add-ons to the bid to allow the contractors more time to complete their bids. Following the meeting Max will be adding the above referenced items into an addendum to be distributed to the bidders.

Glance:

The contract completion time did need clarification to emphasize that the tank should be out of service for a maximum period of forty five (45) days. Often, the Owner will work with the contractor to have all shop drawings and paperwork done and crucial materials (such as rebar) supplied and on-site prior to the issuance of the Notice To Proceed for the forty five day period for the tank to be out of service. This was clarified in Addendum No. 2.

The bid opening was pushed back and held on May 27th.

8. *Township:*

The many issues that have come up so far with this project could have been avoided if the township staff was included in the design and bidding stages of this project. When we did meet to inspect the empty tank our request was dismissed without further consultation from Max. Because of this, he will need to add the additional work to the bid as an addendum. This extra work will increase the engineering costs for this project. Treatment Plant staff and I have been looking at engineering costs and we would like to discuss our findings with you at a future meeting. Working together we could have addressed most if not all of these issues prior to the bid going out on the street. Having the number of issues arise at a pre-bid meeting that we did yesterday does not reflect the high level of professional standards that West Goshen strives to attain. Having a high number of issues arise during the pre-bid meeting so close to the bid due date even with the due date extended by one week may not provide bidders enough time to properly prepare the bids.

Glance:

The bid process was being accelerated due to time constraints with fall construction. The addendums issued covered all the staff's concerns that were raised. The changes were not significant and with the week extension to the bid opening, the contractors had sufficient time to prepare their bids. What Rick Craig wanted in regards to drill and dowel and epoxy coated rebar resulted in a second design which was still able to be completed in time for the second addendum. Additional design effort for this alternate design would have been reflected in the associated cost for the structural engineers' original design and bid proposal. The March 1, 2016 structural engineering proposal and the bid schedule found in the April 6, 2016 meeting minutes are clearly communicated.

9. *Other Items Raised at May 13, 2016 Meeting*

a. *Epoxy Coated Steel Bars*

There are no epoxy coated bars in any tanks or buildings on the West Goshen STP site. There are no other areas where the rebar has deteriorated even from tanks from the original plant construction in 1962. Having epoxy coated bars is not the standard for this type of construction especially if the concrete is sulfate resistant and the tanks are properly coated and maintained. The environment at the sewage treatment plant is not that corrosive to warrant epoxy coated steel.

b. Quality of Plan

This is Rick Craig's opinion which were it not for the alternates he wanted had minimal revisions to the original design in any of the addendums issued. The bid documents include both the drawings and specifications and not all the information is shown on the drawings. Some of the addendum just clarified items already included in the bid documents such as concrete field tests, construction joints, concrete truck washout, etc.

c. Deteriorated Rebar in Email to Casey

The rebar referred to was specific to the damaged area that had previously been repaired by the plant staff. As stated earlier there is no physical evidence that the bars protruding from the main clarifier wall into the effluent channel slab are deteriorated.

d. Pre-bid Meeting

No mention was made by the STP or Township staff about having a mandatory or non-mandatory pre-bid meeting for this relatively small project. As the effluent channel, stairs and platform are all easily observable from the surface and no hidden features except for the clarifier mechanism and tank that need painted, typically a pre-bid would not be held. It was not a difficult or time consuming task to place a single paragraphed addendum requiring a mandatory pre-bid meeting. It did contribute to additional engineering costs to prepare for, attend and provide minutes for the pre-bid meeting. This would have added to the engineering costs whether included initially or when it happened.

e. Construction Timeline Concerns

This was the primary reason expediting the project bid and having the bid opening prior to the June meeting. The project was advertised for bid as agreed upon at the April 6th meeting, April 20th, the bid opening was originally scheduled for May 19th. The Board, if everything was in order, was going to award the bid on June 1st. This would give sufficient time to have the concrete channel poured and back into service by the end of September. There was not an issue with a final date of completion but we included that in an addendum anyway.

f. Possible Temporary Repairs.

This should not be necessary. All three bidders are qualified to do this type of work and the price from the low bidder is within the original range of approximate construction cost.

g. Communication

The Township had in its possession since February 29, 2016 the proposed approach to addressing the problem with the effluent channel. No issues were raised with the approach to the project until the end of April. Fortunately there was ample time to address the requested changes. HRG's comments were addressed quickly and had merit. The other comments appeared to be raised to "confuse" the Authority members. We responded within days to the comments raised by HRG, Inc., Rick Craig and the Township staff. We held off with the second addendum until after the May 9th mandatory pre-bid meeting to make sure all the issues to that date were covered in Addendum No. 2.