Borough of Quakertown

Planning Commission Meeting

December 9, 2013

At

7:00pm at Borough Office

BOARD MEMBERS IN ATTENDANCE:

John Roth - Chairman
Fred Tirjan – Vice Chairman
Cathy Gillahan - Secretary
Michael Orzel
William Kee
Michelle Scarborough
Philip Abramson
Ronald Heller
Michael Haywood - Absent from meeting

Also in Attendance: Ken Fretz – Zoning Officer
Cheryleen Strothers- Engineer of Cowan & Associates
August Antol- Engineer of Liberty Engineering
Kris Barndt - Former Recording Secretary
Katherine Renner - New Recording Secretary

PROCEEDINGS:

Meeting called to order at 7:00pm by John Roth, Chairman.

MINUTES:

The approval of August 12, 2013 was needed due to lack of agenda for September, October, and November, 2013. Motion was made by William Kee, and Seconded by Philip Abramson and was unanimously carried to approve the August 12, 2013, minutes as written.

AGENDA:

Site Plan for Quakertown Community High School Football Stadium Improvements.

August Antol, Engineer of Liberty Engineering on by half the Quakertown Community School District, was present to brief the Planning Commission on the proposed plans to convert the football field located at T.M.P. # 035-007-124 to a synthetic turf field.

Mr. Antol: As you may remember from before when we came in to do the addition it was then in that section of plans we proposed to renovate the fields to a synthetic turf field with an underground detention system beneath it. Due to costs associated with that underground that got pulled from the plans but went forward with the other additions while relooking at this. The plans that are before the Board now is still converting the field from grass to the synthetic turf field with now piping the storm water across the street on to the open field next to the Elementary school's paved area and put in a infiltration pond.

Chairman Roth: What will you do with the play ground equipment?

Mr. Antol: The playground equipment will stay but the empty grassy area will become the pond. The play equipment does show up on the plans, and it is the empty open grassy land in the front is where the infiltration pond is to be placed. Liberty Engineering received in the mail today (12-9-13), an E&S sign off we have proof from the Bucks County Conservation District. The NPDES sign off with half of it pending the consistency letter from the Township engineer, once their satisfied with the storm water controls.

Mr. Kee: Did Liberty Engineering address any comments.

Mr. Antol: We took notes pertaining to the comments and have everything done and ready to be resubmitted, we haven't yet because we had this meeting. So I am waiting to talk to everyone before we resend it to the client.

Chairman Roth: I am pleased by the thoroughness of Cowan's comments on the plans here but the one thing I am not sure I missed, is the street being opened or will they be using a boring method. Mr. Antol stated we have it called out for the street to be opened through there to install the piping across and in doing that we also call out for encasing of the water line.

Chairman Roth: That in doing so you will be meeting all the specs. The specs are for the sealing the street, permanently and properly afterwards, not just a rough patch job that will be falling apart.

Ms. Strothers: No, they will be required to do the permanent restoration.

Mike Orzel: Is there any other way you could have done that other than to having the detention pond where you have it there. You said it was too costly to have it underneath the stadium but how about underground across the street.

Mr. Antol: Typically we tell our clients to have it underground is way more costly and the only way to cut cost was to do a standard detention in the ground.

Mr. Heller: What would the cost difference be. Approximately, what is the difference between what it costs now and what would it cost to go completely underground.

Mr. Antol: A quarter of a million.

Mr. Heller: So two hundred fifty thousand apart from going completely underground.

Mr. Orzel: Could there have been anywhere else they could place this, like behind the parking lot fields.

Mr. Antol: We couldn't get the piping all the way back there and we would have to tear up the whole street to bring the piping down to that area.

Sec. Gillahan: It goes from street to street.

Ms. Strothers: It is a large basin, it will reduce sufficiently the storm water runoff to the system in Park Ave and therefore down the street and the creek.

Mr. Heller: What is the size of it, the depth and the length? The depth of it is approximately 6 to 7 feet deep. How long and wide.

Sec. Gillahan and Ms. Scarborough both indicated from the drawings that is goes from street to street. It goes from 7th street to 6th street. A block.

Chairman Roth: How many connections, how many other pipes leading from other areas that will drain in the area that it is going to rectify the flooding?

Ms. Strothers: The field is the only thing that is going in, again the only thing that is going to go into that besides some over land flow.

Again the only thing going into to this is the runoff from the stadium property and some over land flow.

Mr. Kee: What is the elevation of the pipes from one area compared to another area?

Phil Abramson: When I was on the School Board, we agreed to refurbish the stadium there was some drainage placed underneath the field already, right? That can't be expanded on to handle that.

Mr. Antol: That cannot be expanded to handle that, we need a place to infiltrate. So that is the infiltration area. As Cheryleen said, it's pretty much is dictated by the NPDES of how much surface area we have to have.

Mr. Abramson: So what did we re- do in 2003?

Ms. Strothers: The drainage system that was installed was to handle the storm water infiltration from natural turf.

Mr. Heller: This was very very expensive to do.

Mr. Abramson: This whole thing cost a million dollars to do the whole stadium. Zoning officer added that was with bleachers and bathrooms and field houses.

Mr. Antol: That doesn't come anywhere close to meeting current requirements. I can't begin to tell how many times the storm water regulations have changed since of 2005.

Mr. Kee: I wasn't questioning that so much as if it's not working here under the field, why is it going to work over here in the empty grass area next to the Elementary school..

Ms. Strothers: It is not so much that it is not working Bill; it is the fact that it is not large enough. Bill asks what makes us think that down 6ft below the top of this surface it will infiltrate

Ms. Strothers: I believe he is asking the same thing that I brought up in the comments, How do you know it is going to infiltrate when you dig down 6 or 8 ft. How do you know it is going to infiltrate at that level

Mr. Antol: The concept is if you dig down and we excavate and come back in with a select filled material which allows the drainage /percolate to go through, and hit shale and then retest for infiltration.

Mr. Kee: Have you dug any test holes. And what were your findings

Mr. Antol: Yes they have done some testing and also found some bedrock in there that is how we know we are going to need to bring some selected fill materials.

Ms. Strothers: But you have not done infiltration down at the base yet- No, Mr. Antol stated. Just at the surface.

And part of requirements for the NPDES permit is once we dig down and put this select fill material in, they have to run tests again. One of my comments specifically says what happens if you do not meet the design criteria at that time?

Mr. Antol: We have to pick a different soil medium to retest again.

Zoning officer Fretz: What if nothing works? You have a big hole in the ground that you have to fill back up.

Mr. Antol: We have to do a modification to the NPDES Permit and at that point we would look to do a wet pond. So this would be excavated and testes before the work on the field would start?

Mr. Antol: Yes, this is one of the first things that has to go in since it has to collect the drainage.

Chairman Roth: A question I have about this is of the Elementary schools in the Quakertown School District, this school has the obviously least amount of open space of green space, usable space by the children and then you are going to reduce it down to a gazebo, a playground area with play equipment and a paved parking lot. My concern is now this space that is within the bounds of the streets of that school is going to be consumed by a large storm water basin for a lack of a better term; it's going to have a chain linked fence around it I assume; no landscape and it is going to dominate the block that school is on. I understand what you are saying and understand that it is the least expensive and from your point of view, the most practical but it is big and for those people whose children go to that particular school, that school is going to pay the price for the rest of the school district when only the high school students will be the ones who benefit. What usable space that they have for anything is going to be reduce dramatically and a big suburban looking storm water basin will be in the middle of a town environment and I get it, and understand it but I just am not happy with it.

Ms. Scarborough: But what is the alternative

Chairman Roth: I know and that is why I said I understand.

Mr. Heller: Put it underground.

Sec. Gillahan: But how much is that going to cost.

Mr. Heller: I am not in favor of raising taxes but I think we need to think about down the line a bit, 20 years from now and not just for now and for this thing to go from 6th Street to 7th Street for a detention pond, I am sorry to me it is absolutely ridiculous I just don't see it.

Michael Orzel: I have a couple of questions; there are old oak trees on that lot. Will this affect them?

Mr. Antol: If you go to page 2 on the plans they will show us. Yes two are still there, one is up in the corner of the page and the other big oak tree is over here on the plan, so yes both of them stay.

Michael Orzel: The 2nd question, if I can recall or if my memory serves me right, there use to be a school that stood there called the Central Building? You just might run into some foundation there or something, or am I wrong with the location of the building.

All Members: No it is not there. It was further north.

Mr. Kee: Let me go back to my original complaint, at this time, is there any testing you can do at the present time. You did indicate you have done some, what have you done right now.

Mr. Antol: They have gone out and dug where you see those 3 squares marks are on the plans.

Mr. Kee: What does that data show?

Mr. Antol: It perpetrates and legions of multiplications of bedrock.

Ms. Strothers: Testing was done any place from 6inches to 2ft below the surface.

Mr. Kee: Of the ground.

Ms. Strothers: Yes at the current grade.

Mr. Kee: Of the current grade? So that is 5ft above and you hit bedrock?

Ms. Strothers: Well no the six inches is because of high water table wasn't it Mr. Antol?

Mr. Antol: I can't recall but the data should be all the way in the back of the report.

Ms. Strothers: Test Pit #1 they hit bedrock at 42 inches and refusal at 68 inches which mean that they could not dig beyond 68 inches. Test Pit #2 at 42 inches then was a high water table noted. Pit #2, 55inches high water table, weathered rock and rock refusal at 64 inches.

Mr. Kee: Does this sound like it is really going to work?

Ms. Strothers: My letter questioned that. The testing was not done at the base of it and what happens then. I understand what is sequence says, we are going to dig it out to where is has to be, we are going to test it then what happens if it doesn't work?

Mr. Kee: What time of year were the test pits dug that hit the high water table.

Ms. Strothers: It was model conditions which they did not hit water but hit model condition which is evidence of high water table. **Chairman Roth:** In your professional opinion what you're saying is that have questions about whether this will function as proposed

Ms. Strothers: I don't have a comfortable feeling that once they dig down and excavate to the bottom of this that they are going to have the infiltration that is required to the criteria that they have established.

Chairman Roth: Then my question would be if they have to do a major excavation through bedrock to accommodate fill then construction costs would increase.

Ms. Strothers: It will be over excavating into the already encountered rock, then filling it with soil now, if you fill with soil and it infiltrates down through the soil, it's still going to hit that rock layer so then what happens other than the fact that you have a muddy mess at the bottom of your pond. Understand? In other words if you are on solid bedrock and I don't care how much dirt you bring in and put it on top of that bedrock and it rains and collects all this water and gets into it and yeah sure it will infiltrate through the surface but hits the rock and just stays there. So how long is the bottom of that soil you put in there, how long is it to stay wet because there is no place for the water to go.

Chairman Roth: That brings up my next question then, we know that the pond is somewhat of a distance away from the elementary school and its foundation, however we understand we understand that water hydrology and can move in unpredictable and weird ways, if I remember correctly that is a stone foundation, and now we are introducing this pond to that foundation with questionable geology of hydrology paths; underneath there could be potentially something else.

Ms. Strothers: I don't know if that is of a concern or not- water is going to find its easiest path out of it. Its easiest path if it hits bedrock is to come to the surface through the new soil which means that it will go out the outlet and into the storm sewer system. It is not going to move as much laterally as much as vertically unless it is well compacted.

Code Officer Fretz: That seems like it will make a silt mess.

Chairman Roth: And is that a problem with the existing storm water sewer systems if that happens?

Ms. Strothers: No, the out fall its self is designed that there is 1. 7 feet of ponding area before it actually reaches the out fall. So there is some ponding area that will settle any sediment before it discharges. So as far as the amount of storm water leaving the basin it is controlled by the opening. There is only so much water that can go through there so it is stilling going to show the reduction of water. Unless the whole thing fills up to its 8ft depth capacity and goes all over the place and I am sorry but by that time it is at the 8ft depth there is a lot more problems in Quakertown Borough then this particular basin filling up and over flowing. I mean the Quakertown School district property will be completely under water at that point.

Mr. Kee: Just to stay with what you're saying, I got the top of grade here of 500 and bottom at 496 unless the invert and spill ways at 502; so we got 4feet of water above the bottom that is before it falls into this.

Ms. Strothers: No there is an opening ~~of~~ on the side of the structure.

Mr. Kee: There is a 5 feet stone way; is that what you are referring to?

Ms. Strothers: No, on the plans it shows the out fall structure which is where the pipe is coming out of it. Basically there is a hole on the side of the structure itself that allows the water to flow out.

Mr. Abramson: I guess the question I have is then, does anyone want this in town?

Chairman Roth: It is not aesthetically pleasing or suburban like. We are suppose to be focusing on everything in the Borough to make it a walk able, aesthetically, architectural pleasing thing and something this size which I don't know anyone can deny is very large. It is going to dominate that block. It's going to be a chain link fence, no landscaping around it, it is very suburban and it doesn't seem appropriate; and seems like the least expensive way for the district to solve its problem. But it is going to be something that I don't think is fair to the surroundings of that elementary school; it is a beautiful building in itself and everybody points that out. And I don't think its street scape feeling that you have when you walk through the blocks. How many other places in the borough in the main part of the borough here do you see something of that scale, and it really concerns me that it's probably dramatically cheaper unless they run into the problems which I have real questions about.

Ms. Strothers: I agree you don't know what the soil amendments are going to cost; you don't know how much rock excavation you are going to run into. Hopefully they have done some borings out there and you know where the rock refusal is. Have they actually bored further than that? Did you do any core boring?

Mr. Antol: No, nothing yet.

Ms. Strothers: We really don't know other than the rock refusal which means the back hoe wasn't big enough, and I will be honest with you, depending on what size back hoe they took in there- if they took in a little John Deere you know you will hit stuff that doesn't want to move. You take something bigger and they may be able to or get through shale content to be able to pull it out or rip it

Chairman Roth: There are two tracks of concern that I think I am hearing, #1 the aesthetically and appropriateness of it for that site and #2 we don't know what we don't quite know yet for what's under there as far as exploring it. So we would be asked to approve something before its time almost in an essence because we don't know what the technicalities of that site under there truly are. Again this isn't me saying I don't get that there is issues for the Quakertown School District that the water needs to go somewhere and the current field does not work well. I mean I do understand that but I still have questions if this is the most appropriate way to go about it or at least have more data exploring the geology / hydrology or whatever, is that your professional opinion?

Ms. Strothers: No, as far as the storm water management basin; the storm water management calculation work; pre and post. The development to the reduce the run off that is necessary. They are not including an infiltration grade assuming that the water is going to infiltrate for the storm water management calculations. The issue that does come into play is that if it doesn't infiltrate then we're going to have water ponding there and do we still have the levels for the storm water management issues if it doesn't infiltrate. I believe we do but my concern is that you are saying design criteria for this thing to infiltrate and not fill up with water and maintain the water and water it is not a retention basin. It is not designed to be a retention basin. It is designed to detain water. So what happens when it starts retaining water, then what happens to your volume calculations for pre & post?

Mr. Antol: If I can clarify, off hand when we ran it as a basin, for storm water only with no infiltration. We ran it with the calculations and assumed it was already filled; assuming it has already seen two years' worth of storms with yet another on the way. So if it didn't perk at all….They built it, it met specs and a year later the basin fills up, it's not perking but it will still do its job from a Boroughs concern of storm water. And with regards to infiltration; what would happen is we would dig down and see the bed rock, if being shale and the odds of it not perking at all is very rare just because it's shale and how it will allow water to go through. That is why we are not concern about our proposal of giving the bowl effect; of something you might call it, of digging down and hitting something completely 100% impervious. However, in that rare case, we dug down and don't dig to that depth, we would still have to come back to you, Quakertown Borough and also modify an NPDES permit and it will become a wet basin. This means, it will have 4 bays in it and will purposely hold water and have cattails and plants like that in it.

Ms. Strothers: And if that is the case and then we turn it into basically a not a wet bottom but more of a wet land basin verse a wet bottom basin then the plantings and so on are designed to thrive in that type of environment and do the water up-take or in other words absorbs the water. In my opinion, I think it would be a good thing to put some wet tolerant bottom plants in there to start with, which I think you (August Antol) have the Ernst seed mixture already, which basically is a wet bottom tolerant plant mixture that allows a lot more up take of some of the water in there.

Mr. Kee: Probably look better than the infiltration basin.

Ms. Strothers: actually the bottom line it would reduce the maintenance at the bottom of the basin because you don't have to mow it. Even with the Ernst mixture and depending on how it grows. If it gets carried away with growth then will have to be mowed once in a while.

Mr. Kee: Let's go back up to what you started out with; what's your alternative to this?

Mr. Antol: Do you mean if the shale doesn't perk at all?

Mr. Kee: Yes, but if the committee decides they don't want this, what is your alternative?

Mr. Antol: Oh you mean to the pond in general? At this time no, the only other thing is the underground detention and school district said no to that.

Chairman Roth: I just know when this gets going and the bulldozers start moving on this, I don't think it is going to be a very positive from our community, as far as us planning for the aesthetically and layout in our community, is my concern.

Sec. Gillahan: But if they plant all those plants like cattails and other stuff, aren't they supposed to do that?

Ms. Strothers: Would the school district be willing to do some landscaping around the perimeter of the basin to soften it up a bit?

Chairman Roth: It is a chain linked fence, how much can you soften it up?

Mr. Heller: One of the big things here is that we are taking a lot of recreation ground away from the there. I think you're really limiting the area for recreation for that elementary school.

Chairman Roth: You don't see this with the other elementary schools. Quakertown elementary is going to pay the price. The elementary school that has the least amount of green space is going to be asked to give up the most.

Sec. Gillahan: I go back to, what is the alternative?

Mr. Heller: To go underground!

Ms. Strothers: They did consider it, having it underground but deemed it to be too expensive.

The first set of plans when they showed underground storage underneath the turf field. When it did go out to bid, it was deemed basically put it out of range of the feasibility of doing the turf field. That is why they went in this direction because it was unfeasible for the underground. At least by the numbers that came in with their budget.

Mr. Abramson: Do we have to vote on this tonight?

Sec. Gillahan: So they want to go to artificial turf, right, that is the whole reason for this?

Ms. Strothers: Yes.

Sec. Gillahan: But if they stay with natural then it will stay the same?

Ms. Strothers: It will stay the way it is. The NPDES permit states if you re-grade it or do anything, you still will have the NPDES issues but it would stay exactly the way it is. Like I said the New NPDES regulations don't only make you mitigate impervious surface increase but as soon as you disturb it you have to mitigate it because they say your changing the ground cover there for you are disturbing it and you have to mitigate anyway. I can't say I agree with it but that's the state regulation. I have had to deal with it at other places also.

Look at the new park, yes we are putting in impervious surface up there but because we are disturbing 11 acres there, we have to compensate for the NPDES regulations for that entire 11 acres, even though that entire 11 acres is not impervious. So as soon as you start moving dirt around then you have to infiltrate something. Now we didn't really have any infiltration up there that is why we had so many plantings and other things around to mitigate in other ways that we could.

Mr. Heller: Phil, when they did the field the last time, they did bring in soil and turtle backed it, did they not?

Mr. Abramson: I am pretty sure they did, they did raise the field.

Ms. Strothers: In an under drain system that goes into this, the unfortunate thing is that underneath that , the whole concept of the Synthetic turf field makes it so much different because the water has no opportunity any longer to infiltrate into the ground. It runs through the turf down directly to the underground system and out. It is like a direct conduit.

Mr. Abramson: I am going to play devil's advocate here because when I was on the school board I voted no to the turf field originally. That was just my decision back then. But you are affecting, by not having turf, the athletic conditions of about 200 athletes. That is just not the foot ball team but boys & girls soccer, lacrosse, field hockey, and the school band for practice. And we can all see by Thanksgiving Day what the field looks like after a full schedule of activities on the field. So I do understand the need for turf. Do I like the options; I don't know if I like the option to be honest.

Mr. Heller: You mean the option of the pond?

Mr. Abramson: Yes, so if I would see it being put underground; I would be 100% behind it. I have to admit being little old fashion when it came to the turf because I liked to see the mud, blood and stuff like that. But having kids and seeing how the wear and tear goes on the field and on the kids, I just don't know if I like the design of this.

Ms. Strothers: With an underground storage you have to still be very cautious, you still need infiltration in that underground storage area. You can put an underground system in place of this basin in that location or whatever, but you still need to have it infiltrate you can't put the closed piping system. You use to be able to for storm management because that doesn't meet the infiltration requirements of the NPDES. It may meet the storm water management for the Tohicken Creek Act 167 plan and everywhere else. But you still have to infiltrate for the NPDES Permit. We still may run into the same situation.

Mr. Antol: Having it above ground can be nicer from that perspective because if at some point say, they dug it, it perked correctly, they put the grasses in, and 5 to 10 years down the road it stops perking. You will be able to see that it isn't working, you will know it. But with an underground system is not as visible. You could have an issue there and not see it right away and know it is even occurring.

Chairman Roth: So you would have to bring in professionals that would have to check and inspect the system and that are an additional cost. But we are here to represent the interest of the community as well as the tax payers of Quakertown school district.

Sec. Gillahan: So what is the next step for us to then?

Chairman Roth: We had a request to take this for a vote, if there are no more valued points or questions to bring up.

Mr. Heller: I make a motion to disapprove of this plan.

Mr. Abramson: I second.

Chairman Roth: We have a motion a long with a second on that motion to disapprove current infiltration basin plan in the Quakertown Elementary school property in-conjunction with the football field project to turn into a Synthetic turf field.

We have a roll call vote here:

Mr. Abramson: Yes
Sec. Gillahan: Yes
Michael H.: *ABSENT*
Mr. Heller: Yes
Mr. Kee: Yes
Mr. Orzel: Yes
John Roth: Yes
Ms. Scarborough: Yes
Mr. Tirjan: Yes

A motion was made by Mr. Ronald Heller, seconded by Mr. Phillip Abramson and was unanimously carried to adjourn the meeting.

The next regular meeting will be held on January 13, 2014.

Recording Secretary: *Katherine Renner*