

TOWNSHIP OF LOWER MAKEFIELD
ZONING HEARING BOARD
MINUTES – MAY 6, 2008

The regular meeting of the Zoning Hearing Board of the Township of Lower Makefield was held in the Municipal Building on May 6, 2008. Chairman Malinowski called the meeting to order at 7:35 p.m.

Those present:

Zoning Hearing Board: David Malinowski, Chairman
 Paul Bamburak, Vice Chairman
 Gregory J. Smith, Secretary
 Jerry Gruen, Member
 Anthony Zamparelli, Member

Others: Robert Habgood, Code Enforcement Officer
 John Koopman, Township Solicitor (Cara Mia matter only)
 James Majewski, Township Engineer
 Allen Toadvine, Zoning Hearing Board Solicitor
 Matt Maloney, Supervisor Liaison

APPEAL #06-1410 – NORMAN P./PATRICIA K. O’ROURKE

Mr. Toadvine stated a letter dated 4/21/08 was received from Mr. Murphy, attorney for the Applicants, requesting that the matter be continued. Mr. Murphy was present this evening and stated after discussions with the Township, they have reached an understanding as to how the Application would need to be revised and the extent of the relief reduced in order to secure lack of opposition from the Township. He stated they plan to submit a revised Application to the Zoning Hearing Board which will require re-advertisement and scheduling of a meeting before the Zoning Hearing Board.

Mr. Smith moved, Mr. Zamparelli seconded and it was unanimously carried to grant an extension pending revised Application acceptable to the Township.

APPEAL #07-1434 – DAN MARRAZZO

Mr. Toadvine stated a letter was received dated 4/25/08 from the attorney for the Applicant. This letter was marked as Exhibit B-7. Mt. Toadvine stated the letter indicates that they have come to some additional agreements and will revise the Stipulation. All Parties concerned have agreed to the Continuance and they are asking that the matter be re-listed for June 3, 2008.

Mr. Gruen stated someone was present before the meeting who asked that the matter be moved to July as he was a Party to the action and would not be available on June 3.

Mr. Toadvine stated there are at least two other attorneys involved who represent various homeowners in the area who indicated that they were in favor of the June 3 date.

Mr. Smith moved, Mr. Bamburak seconded and it was unanimously carried to grant the continuance as requested to June 3, 2008.

APPEAL #08-1466 – SNOWDEN COMMUNITIES

Mr. Edward Murphy, attorney, was present with Mr. John Genovesi, who was sworn in. The Application submitted was marked as Exhibit A-1. Accompanying the Application was a one-page Plan, titled “As-Built Plan for Tax Parcels #20-46-198 and #20-46-198.001” dated 2/7/08, last revised 2/26/08; and this was marked as Exhibit A-2.

Mr. Murphy stated he is present on behalf of the original owner, and the subsequent owner regarding a request for relief to permit an approximately 221 additional square feet of impervious surface on this property which was the subject of an Application before the Zoning Hearing Board in 2004. He stated this property is undersized as compared to its neighbors and has approximately 27,000 square feet. The relief granted in 2004 permitted an increase in impervious surface from the permitted 13% in the R-1 District to 17.5%. The request before the Board this evening is to increase the impervious surface by an additional .8% which is 221 square feet. This increase is distributed over four areas surrounding the home on the property.

Mr. Murphy marked a series of color photographs as Exhibit A-3. These photos show where the overages occur, and Mr. Genovesi showed on the Plan where these overages occur. It was noted that the cross-hatch areas on Exhibit A-1 are the areas which would be removed if no relief were granted and the shaded areas are areas which would be put back and would still allow the Plans to be under 17.5%. He stated while this could be done, it would be difficult to do so without impacting the brick and stone work.

Mr. Toadvine stated at the Hearing in 2004 the Board felt it was more important to save the two large trees and bring the driveway straight in despite the fact that it would add additional impervious surface.

Mr. Murphy stated the current owner purchased the home with the existing condition and had nothing to do with the fact that it is 221 square feet over the permitted impervious surface. Mr. Genovesi stated the 221 additional impervious surface occurred because the builder mistakenly thought the driveway width on the Plan was 10'. He made the driveway 9' wide, and felt he had additional impervious surface to use which he did; but

in fact the Approved Plan had the driveway at 9'. He has discussed with the Township engineer the impact of the additional impervious surface on the functionality of the stormwater system that serves the property. Mr. Genovesi stated at River Road there is a culvert that was existing prior to the construction, and one of the original Conditions of approval was that they not interfere with the culvert. He stated they installed a new culvert beneath the driveway shown on the Plan which was put in so that runoff uphill of the house on the adjacent lots could come around the house and get to the new culvert and the culvert under River Road so that drainage would function as it did prior to construction. The pipe was sized to do this, and this small amount of additional impervious will not have an adverse affect on this. Mr. Majewski agreed with this opinion.

Mr. Malinowski asked what would be the cost to make the required changes if relief were not granted and who would bear this cost. Mr. Genovesi stated he estimates it would cost between \$800 to \$1,200 and he understands that the seller would have to bear the cost.

Mr. Gruen asked the impact if they reduced the turn of the driveway to the garage, and Mr. Genovesi stated it is currently tight and would make it even more difficult. Mr. Murphy stated the new homeowner would state that of all the potential modifications which would have to be made, this would be the greatest hardship as it is already tight and he would prefer the additional widened area for ease of maneuverability.

Mr. Toadvine stated he discussed this Appeal with Mr. Donaghy who indicated that the Township is not taking any position on this matter.

Mr. Richard Nabasny, Rivergate, was sworn in and stated he owns the home to the immediate north of this property and has lived in the home for twenty years. He stated his rear yard abuts the subject property. He stated he is aware of the condition and is pleased that he now has a neighbor. He stated it is a beautiful home, and he has no objection to the request being made.

There was no one present to speak in opposition and the Public Hearing portion was closed.

Mr. Smith moved, Mr. Gruen seconded and it was unanimously carried to grant the relief requested.

APPEAL #08-1471 – JOHN DOHERTY

Mr. John Doherty was present and was sworn in. The Application submitted was marked as Exhibit A-1. Attached to the Application was a one-page Plan dated 2/25/08 which was marked as Exhibit A-2. Mr. Toadvine stated Mr. Doherty applied for an impervious

surface Variance and a Variance from the setback requirements. Mr. Habgood has indicated that based on his calculations, an impervious surface Variance is not necessary.

Mr. Doherty stated he would like to add an addition to his home which he has lived in for eight years. He stated this addition will make the flow of the house work better. He stated the main issue is drainage; and when it rains, he gets a lot of water back toward the edge of his property so that if he were to try to stay within the envelope, he would put himself in harm's way with regard to water which is why he wants to go out the front.

Mr. Malinowski asked the purpose of the addition, and Mr. Doherty stated he is looking for more square footage. He stated there is 1300 square feet of living space which is too small.

Mr. Gruen asked if an engineer has advised him to build it in this way, and Mr. Doherty stated he has not discussed this with an engineer. Mr. Gruen stated he feels a problem will be created proceeding as proposed as the corner will hold the water as he will be trapping the water as opposed to releasing it toward the back. Mr. Gruen stated if he made the house even, he would need less of a setback and drainage could be installed across the front and the water could be diverted away. Mr. Doherty stated the water comes from the rear of the property. Mr. Gruen stated it appears he is requesting a Variance based on feelings and not on facts, and he is asking for a significant Variance.

Mr. Doherty stated the proposed addition is 20' by 25'. The resulting setback would be 20' as opposed to the 40' required. Mr. Zamparelli asked if he would consider putting it 5' further back. Mr. Zamparelli asked if the addition will block the water from flowing off the property; and Mr. Doherty stated the area in the back becomes flooded and then makes its way toward the home. Mr. Bamburak asked if he is considering doing anything about the drainage, and Mr. Doherty stated he is not adding that it subsides after the rain is gone; but he did not want to put the addition into an area where water could enter. He stated if the Board will only allow an addition in this location, he will construct it there and deal with the water. Mr. Toadvine stated he would still need a Variance.

Mr. Toadvine asked if he would like to reconsider this and see if he would like to move the addition back so that it is even with the existing home and make a determination of what that setback would be. Mr. Doherty stated this has already been a long process and if the Board is advising that they would allow him to build the addition provided it goes straight across, he would be willing to do so. The Board asked what this setback would be. Mr. Habgood stated if he kept it the same dimensions of 20' by 25', it comes out even on that side of the house with a 28.5' setback.

Mr. Toadvine stated it appears that Mr. Doherty is requesting an amendment to this Application requesting a 28.5' setback, and Mr. Doherty agreed.

There was no public comment at this time, and the Public Hearing portion of the meeting was closed.

Mr. Bamburak moved, Mr. Smith seconded and it was unanimously carried to grant a Variance allowing relief of 11.5' resulting in a 28.5' front yard setback.

APPEAL #03-1235(A) – CARA MIA, LLC. – REMAND

Mr. John Koopman, attorney, was present on behalf of the Township.

Mr. Malinowski stated the only question that the Board is to hear this evening under the Order is the question of whether the granting of the relief sought by Cara Mia, LLC. will be detrimental to the public welfare.

Mr. Toadvine stated after reviewing the file it appears that the next Exhibit on behalf of the Applicant would be A-17, for an Intervener I-8, an Objector O-2, and for the Township it would be T-2. This was acceptable to those present.

Mr. John VanLuvanee, attorney, was present representing the Applicant.

Mr. Paul Wojciechowski was recalled and sworn in. Mr. VanLuvanee noted the Plan for Lot #37 marked as Exhibit A-16 which was dated 6/7/06, revised 10/2/06 prepared by Mr. Wojciechowski or under his supervision. Mr. VanLuvanee stated this Plan was also reviewed by Judge Heckler. Mr. Wojciechowski stated his firm subsequently prepared a Sedimentation and Erosion Control Plan showing how they would propose to control erosion and sedimentation during the course of the development of the lot in accordance with the lay out shown on Exhibit A-16. This Sedimentation and Erosion Control Plan was marked as Exhibit A-17. Mr. Wojciechowski stated this was prepared for submission to the Bucks County Conservation District to make sure that they were satisfied with the implementation of the sediment controls since they were nearby a drainage area and wetlands. Approval from the Bucks County Conservation District would be necessary prior to construction of the single-family house on this lot.

Mr. VanLuvanee asked if he anticipates that any revisions that would be made before a Building Permit would be issued would require re-approval by the Conservation District, and Mr. Wojciechowski agreed that any modifications to the Plan which will be made in the form of sewer hook ups, infiltration areas, etc. would have to go back to the Conservation District. He stated normal procedure is that once the Township engineer reviews the Plan and makes comments, they would also re-submit for a third time to the Conservation District.

Mr. Wojciechowski stated they filed the Plan with the Conservation District on 2/12/08. Exhibit A-18 was marked which is the letter of transmittal to the Bucks County Conservation District. Exhibit A-19 was marked which is the letter from the Bucks County Conservation District dated 3/3/08 indicating that they have met the minimum standards for sediment and erosion control.

Mr. VanLuvanee asked Mr. Wojciechowski to describe the way the house is proposed to be situated on the Lot as shown on Exhibit A-17. Mr. Wojciechowski stated the first floor at the low point of the ground level outside is approximately 4' below the first floor. He stated the right side of the house slips into the existing grade. There is very little grading on the left side except for creation of some swales to bring water around the house into the back area toward the storm pipe.

Mr. VanLuvanee asked if any other Permits or Approvals are required from any other outside agencies other than the Bucks County Conservation District in order to develop the property with a single-family dwelling in accordance with Exhibit A-17, and Mr. Wojciechowski stated there are no other outside agencies from whom they need approval although they will need letters of commitment for water and sewer. From the Township, in addition to a Building Permit, they will also need a Grading and Sedimentation and Erosion Control Permit. Mr. Wojciechowski stated they will show the same thing to the Township engineer as they have to the Conservation District, and as their comments come in, they revise the Plan and then send them out again.

Mr. VanLuvanee asked what Township Ordinances must be complied with in order to obtain this Permit, and Mr. Wojciechowski stated the most difficult Ordinance to comply with is the Stormwater Management Ordinance for the Delaware River South. This Ordinance indicates that they need to meet several aspects of the Stormwater Management Plan including infiltration, water quality, stream bank protection, and depending on the amount of impervious they are creating, requires volume control. He stated normally they have been doing this in underground systems in the Township where normal volume control has a release and it lowers the release rate to a pre-development condition; however, the volume is still increasing. He stated with the underground facility, the volume does not increase at all because it is all underground and permeates through the soil.

Mr. VanLuvanee asked Mr. Wojciechowski if he has prepared Applications for similar Permits in Lower Makefield, and Mr. Wojciechowski stated he has and in the past, they have been granted. He is familiar with the requirements and purpose of the Ordinance. He stated there has been a lot of flooding in the Township, and the Township is trying to keep water on the lot being built as opposed to allowing water to leave the site. He stated there are also environmental issues and they do anything they can to add to the Best Management Practices (BMP) on the site.

Mr. VanLuvanee asked assuming that the Variances that have been requested are granted, would it be necessary for the Applicant to demonstrate compliance with the requirements of the Stormwater Management Ordinance and Mt. Wojciechowski stated they will.

Mr. VanLuvanee asked Mr. Wojciechowski how many Sedimentation and Erosion Control Plans he has prepared, and he estimated it to be over five hundred and each of these have been submitted to the Bucks Count Conservation District for approval. Mr. VanLuvanee asked how many were in Lower Makefield and Mr. Wojciechowski estimated it to be between thirty and forty and he was able to eventually demonstrate compliance with the requirements.

Mr. VanLuvanee asked Mr. Wojciechowski, based on his experience generally and in Lower Makefield, his opinion as to whether a home could be constructed on the lot at the location shown on Exhibit A-16 in accordance with the Soil and Erosion Sediment Control Plan shown as Exhibit A-17 without an adverse impact on the public welfare.

Mr. Koopman objected noting this witness was qualified initially as a land surveyor and someone who had experience in grading houses and has now testified that he has experience in terms of Sedimentation and Erosion Control Plans submitted to the Conservation District for construction purposes, so he does not feel that this witness is qualified to give an opinion that relates to the matter before the Board as to whether there is an adverse effect upon health, safety, and welfare with respect to a Variance or disturbance of the water course buffer which is what is before the Board.

Mr. Smith stated he agrees that this is a legal conclusion for the Board to come to and not something about which the witness should testify. Mr. Malinowski agreed as well.

Mr. VanLuvanee stated he feels that it is well established that a professional witness may give an opinion on an alternate issue which is not a matter that is within the purview of the average lay person's understanding so he feels he is qualified to offer an opinion on the subject, although the weight of the opinion would be for the Board to determine. Mr. VanLuvanee stated he will attempt to rephrase and if not, he will make an offer of proof for the purposes of the record.

Mr. VanLuvanee asked Mr. Wojciechowski if a new home is built on the lot and a Sedimentation and Erosion Control Plan is implemented in accordance with Exhibit A-17, based on his experience, will the construction of that home result in the discharge of any additional sedimentation into the water course that was shown on Exhibit A-16.

Mr. Koopman objected since he feels this witness is only qualified in terms of grading and laying out a house, but is not qualified in terms of hydrology, geology, or the issues that relate to disturbance of a riparian or stream buffer.

Mr. VanLuvanee stated they are discussing a practical issue which is whether or not if the controls are implemented, whether he feels there will be a likelihood that sediment will result in discharge to the stream. He stated since this is a practical issue, he feels Mr. Wojciechowski is much more capable of answering this question than someone who has no practical experience. He stated he has also prepared hundreds of these plans, supervised construction of hundreds of homes, and has the ability as a land planner and surveyor in the Commonwealth of Pennsylvania to prepare and submit these Plans for approval.

Mr. Malinowski agreed with Mr. Koopman and upheld the objection.

Mr. VanLuvanee stated he will make an offer of proof with respect to the first question where Mr. Wojciechowski would testify that in his expert opinion a home could be constructed in accordance with the Plan marked as Exhibit A-16 without any adverse impact on public health, safety, and welfare. He stated with respect to the second question which was whether or not a home could be constructed on this lot in accordance with Exhibit A-17 without resulting in the discharge of sediment into the water course shown on Exhibit A-16, in Mr. Wojciechowski's expert opinion, there would be no discharge of sediment into the stream if the erosion and sedimentation controls were implemented as described on the Plan.

Mr. VanLuvanee asked Mr. Wojciechowski if he has determined what the grade of the slope of the lot is through the water course to the point where it connects with the existing inlet on the Rosen property as shown on Exhibit A-16, and Mr. Wojciechowski stated it is approximately 4%. He stated this would be equal to half the slope of a handicap ramp. Mr. VanLuvanee stated the water course shown on Exhibit A-16 is in front of the proposed building envelope, and the Mr. Wojciechowski stated it is to the right of the building envelope. Mr. VanLuvanee asked if the grading were implemented in accordance with Exhibit A-17, what would the slope be from the front of the house to the water course, and Mr. Wojciechowski stated it would be the same as it is currently which is approximately 5%.

Mr. VanLuvanee stated at a Hearing, Mr. Goll speculated that in the construction of the house

Mr. Koopman objected to Mr. VanLuvanee's use of the word "speculated," and stated the record speaks for itself.

Mr. VanLuvanee stated the record stated, "he speculated that the house would be elevated and graded down toward the water course." He stated if the house is constructed in accordance with Exhibit A-16, it will not be elevated, which is why he termed his statement the way he did. Mr. VanLuvanee stated he is asking Mr. Wojciechowski if they propose to elevate the grade so as to increase the slope draining down from the front

of the house to the water course. Mr. Wojciechowski stated the house will be 4' in the air in the right rear portion and they are elevating the house higher than a normal house would sit; however, they are just exposing the foundation as opposed to grading up to the foundation.

Mr. VanLuvanee asked what volume controls with respect to stormwater are required to be implemented under Township Ordinances. Mr. Wojciechowski stated they are required to control infiltration, water quality, and volume controls.

Mr. VanLuvanee asked Mr. Wojciechowski if he feels any sediment would result from the development of this lot that would find its way into Silver Lake assuming a house were constructed at the location shown on Exhibit A-16 and the sedimentation and erosion controls as shown on Exhibit A-17 were implemented; and Mr. Wojciechowski stated he does not.

Mr. Koopman objected noting he does not feel this witness has the expertise to testify to this. Mr. VanLuvanee stated the first question is whether there will be any sediment that gets into the stream in the first place, and the second question would be if it did get into the stream, would it get to Silver Lake.

Mr. Malinowski stated he will allow the question.

Mr. Wojciechowski stated the whole basis for the Sediment and Erosion Control Plan is to demonstrate that sediment will not leave the site during construction. Mr. VanLuvanee asked if there are any additional safeguards that could be implemented that are not shown on Exhibit A-17 that he would recommend to insure that this would not happen; and Mr. Wojciechowski stated he met with his experts and asked if there were any additional recommendations for improvements.

Mr. Koopman objected to his testimony based on what his experts told him who are not present this evening.

Mr. VanLuvanee asked Mr. Wojciechowski if he has any recommendations to put additional controls on that may not be shown on the Exhibit A-17 which he feels would lessen any risk of sediment being discharged into the stream and subsequently finding its way through channels into Silver Lake. Mr. Wojciechowski stated he decided with a resubmission that they would remove the 18" silt fence and install the super silt fence that is backed up with actual fencing. He stated he would also like to have a stipulation on the Plan that the super silt fencing would be installed by a company that installs silt fencing and not by the builder so that it is placed correctly.

Mr. Koopman stated Mr. Wojciechowski indicated that the Conservation District approval only applies during construction, and Mr. Wojciechowski stated there is a sequence that takes you beyond the construction until the lot is stabilized which could be six months or more depending on the time of year. Mr. Koopman stated approval from the Conservation District only deals with the period of time when the house is constructed and the period of time thereafter that it takes to stabilize the property, and Mr. Wojciechowski agreed. Mr. Koopman asked if the Conservation District has jurisdiction over or reviews plans with respect to riparian or stream corridor buffers, and Mr. Wojciechowski stated while they do not, they do raise concerns when you are constructing close to a water course. Mr. Koopman stated they do not regulate stream or riparian buffers, and Mr. Wojciechowski agreed. Mr. Koopman asked if they review plans in terms of the long-term effect of disturbance of a riparian or water course buffer, and Mr. Wojciechowski stated they do not.

Mr. Koopman noted Exhibit A-17, the Plan submitted to the Conservation District, and stated Mr. Wojciechowski testified that this would not be the last Plan submitted to the Conservation District, and Mr. Wojciechowski agreed. Mr. Koopman asked if Exhibit A-17 was given to Mr. Majewski to review, and Mr. Wojciechowski stated it was not which is why he stated it would not be the last Plan they prepared.

Mr. Koopman asked when they submit a Plan to the Conservation District do they not normally copy the Township engineer on this, and Mr. Wojciechowski stated they copy the Township; however, this was not going to be a submittal to Lower Makefield and they realized that there would be a lot of additional engineering involved in this if they received approval from the Board. Mr. Koopman stated he assumes the submission was made for the purposes of this litigation, and Mr. Wojciechowski agreed.

Mr. Koopman asked if they submitted to the Township an application under the Township's Stormwater Management Ordinance for Delaware River South, and Mr. Wojciechowski stated they did not as that would be premature. Mr. Koopman asked if this would not be a requirement before a Building Permit could be issued, and Mr. Wojciechowski agreed. Mr. Koopman asked Mr. Wojciechowski if he is familiar with the Stormwater Management Ordinance for Delaware River South, and Mr. Wojciechowski stated he is. Mr. Koopman stated the purpose of the Ordinance is set forth in the Ordinance, and Mr. Wojciechowski agreed. Mr. Koopman asked if stream or riparian buffers are regulated by this Ordinance, and Mr. Wojciechowski stated the buffers themselves are not regulated by the Ordinance, but the Ordinance does have wording that protects streams themselves. Mr. Koopman stated there is no requirement for stream or water course buffers in the Ordinance as these are in the Zoning Ordinance, and Mr. Wojciechowski agreed.

Mr. Koopman stated there was discussion of the Stormwater Ordinance and volume control, and stated the Stormwater Ordinance would allow for increased run off from the property as a result of the construction of the home, and Mr. Wojciechowski stated it would allow for increased volume. Mr. Koopman stated in order to comply with the Stormwater Ordinance, they would not have to keep the total overall volume the same, and Mr. Wojciechowski agreed; but added what they do could be different. Mr. Koopman stated they have not made a submission under the Ordinance yet, and Mr. Wojciechowski agreed.

Mr. Koopman stated the Township Ordinance requires a 100' water course buffer.

Mr. VanLuvanee objected to this line of questioning and stated they are already past these issues, and the only issue is whether or not the construction, with the Variances requested would have an adverse impact on the public welfare.

Mr. Koopman stated the Ordinance would require a 100' water course buffer, and their Plan provides for a 10' water course buffer. Mr. Wojciechowski stated he feels their Plan indicated that they would have a 25' water course buffer and they are encroaching 15' into the buffer. Mr. Koopman stated this would in effect be a 10' buffer, and Mr. Wojciechowski agreed. Mr. Koopman stated outside of the 10 feet, they will be grading and disturbing the existing vegetation, and Mr. Wojciechowski stated on that side they would only dig a footing for a foundation wall.

Mr. Koopman noted Exhibit A-17 and asked if the lay out shown is the same as shown on Exhibit A-16, and Mr. Wojciechowski stated he only recalls a building envelope on Exhibit A-16. After review Mr. Wojciechowski stated Exhibit A-16 shows a building envelope and not a house.

Mr. Koopman stated Exhibit A-17 shows the proposed water course buffer at 10' and then a cross-hatched area between that and the front of the house. He stated he assumes this cross-hatched area will be graded or disturbed in some manner when they construct the house, and Mr. Wojciechowski stated it would probably be disturbed three to four feet in digging the footings. Mr. Koopman stated when they construct the house, driveway, and the other structures, it will disturb the existing vegetation as well, and Mr. Wojciechowski agreed.

Mr. Koopman stated the property slopes toward the water course from the area where they will build the house, and Mr. Wojciechowski agreed. Mr. Koopman stated this is the natural drainage area, and Mr. Wojciechowski agreed. Mr. Koopman stated the natural drainage area after the house is built will continue to take the run off to the water course, and Mr. Wojciechowski stated the yard of the house will on that end but not the house itself.

Mr. Koopman asked Mr. Wojciechowski if he is aware of any developers in the Bucks County area that have been fined for polluting the waters of the Commonwealth.

Mr. VanLuvanee objected, and Mr. Malinowski sustained the objection.

Mr. Koopman stated he assumes that since Mr. Wojciechowski has not submitted anything under the Stormwater Management Ordinance that he has not done any soil logs or soil borings in the area where the house is to be constructed, and Mr. Wojciechowski agreed that he has not. Mr. Koopman asked if he is aware of the depth of the seasonal high water table encountered on the property where the house is to be built, and Mr. Wojciechowski stated he has no idea.

Mr. Koopman asked if the existing channel on the property is spring fed, and Mr. Wojciechowski stated he does not know. Mr. Koopman asked, assuming it is spring fed, would this indicate the presence of a high water table where the property is located.

Mr. VanLuvanee objected due to the assumption unless Mr. Koopman has testimony.

Mr. Koopman stated they will have testimony to that effect, and Mr. Malinowski stated they will consider this at that time, but for the present the objection is sustained.

Mr. Koopman asked if they are proposing a basement, and Mr. Wojciechowski stated he assumes this would depend on the soils reports, water table, bedrock, and anything else that may be encountered; and this would be up to the architect

Mr. Koopman asked if it has been determined where water that is displaced would go if a basement were constructed, and Mr. Wojciechowski stated the plan would be that if the soil cooperates, they would put the roof leaders into dry wells, etc. but until they know the soil conditions, he has no idea.

Mr. Jim Bray asked if the Plan shows the house they plan to construct, and Mr. Wojciechowski stated it is hypothetical; and the only thing they did with the house was to fit it into the building envelope that was established on Exhibit A-16. He stated it was an experiment to see if they could grade the lot properly, and it is not a real Plan.

Mr. Bamburak asked how vehicles will access the property, and Mr. Wojciechowski stated it will be on Terracedale Road. Mr. Bamburak asked if super silt fencing is an actual product, and Mr. Wojciechowski stated it is regular silt fence that is supported with chain link. He would like to specify on the Plan that it be installed by a professional installer since many construction sites he sees the silt fencing is installed by builders and homeowners and it is installed incorrectly and does not function properly. He stated super silt fencing is more difficult to install which is why he would recommend that a professional install it and he would note this on the Plan. Mr. Bamburak asked if this

would require a revision to the Plan, and Mr. Bamburak stated there will be a lot of revisions to the Plan. Mr. Bamburak stated the letter from the Conservation District states that the approval was based solely on the Plan submitted, and Mr. Wojciechowski stated they understand that if they change the Plan, they will have to resubmit to the Bucks County Conservation District.

Mr. Gruen asked if they have any proof they can offer as to the impact to Silver Lake by reducing the lot size since the lot as a whole is a filtration system for Silver Lake and the stream. He asked what effect they will have on the Lake after construction.

Mr. VanLuvanee objected to the form of the question since it presupposes a conclusion with respect to which there is no evidence in the record which is that there will be siltation which will find its way into Silver Lake. Mr. Gruen stated he is not talking about siltation adding that the lot as it currently exists acts as a natural buffer zone and a filtration system for the Lake. Mr. VanLuvanee stated there is no testimony in the record with regard to that conclusion. Mr. Koopman stated there is testimony that this is the low point for the area.

Mr. Toadvine stated Mr. VanLuvanee has noted his objection, but the witness can answer the question as best he can.

Mr. Wojciechowski stated he does not feel it will be a detriment with regard to siltation. He stated part of the property is a filtering system for the wetlands, but they will keep the sediment out.

Mr. Gruen asked whether or not there would be any adverse effect to the Lake. Mr. Toadvine asked Mr. Wojciechowski if he understands the question; adding if he does not he should so state. Mr. Wojciechowski asked if he is asking about an adverse effect on the wetlands or the lake. Mr. Gruen asked if reducing the wetlands will create any adverse effect on the lake, and Mr. Wojciechowski stated they are not reducing the wetlands. Mr. Gruen stated they are reducing it by building a house so that they are taking approximately one third of the lot where there is a 4% slope and putting in a building so that there will be less filtration on that section of the lot. Mr. Toadvine stated there is no encroachment of wetlands. Mr. Gruen stated he recognizes this but just above the wetlands, it is almost a level plateau which creates a buffer zone; and by removing this, the water will now move much faster to the wetlands and the filtration system will be reduced. Mr. Wojciechowski stated he does not know that it will move faster as their roof drainage and the driveway drainage will be in an underground infiltration system so there will be less volume running off the site.

Mr. VanLuvanee asked Mr. Wojciechowski if his client would agree, as a Condition to any Variances granted, to grade the property in accordance with the grading shown on Exhibit A-17, and Mr. Wojciechowski stated they would, and they intend to keep the same grading schematic; however, since the Township needs to approve it, he feels the clients would agree to this Plan or any modifications requested by the Township.

Mr. Koopman stated Mr. Bray is a Party, and he has advised that he would like to testify as to certain factual information, and Mr. Koopman has agreed as an accommodation that he would ask Mr. Bray the questions that he would otherwise have to ask himself. Mr. VanLuvanee stated he has no objection to this.

Mr. James Bray was sworn in and stated he lives at 12 Terracedale Road which is immediately across the street from the subject property. He stated he has lived there for 33 years, and is familiar with the subject property. Mr. Bray stated he is Chairman of the Environmental Advisory Council (EAC), but he is present as an individual adjoining property owner and not as a member of the EAC.

Mr. Koopman stated there was testimony that this lot is one of the few lots in the area that has not been developed. He asked if this property is different from the other properties surrounding it upon which houses have been constructed. Mr. Bray stated he feels it is totally different than all other properties and is the lowest property in the area and has acted as a holding basin for water and contains central wetlands and a water course on the eastern portion. He stated this lot constantly pools and puddles water after rain; and if you look at the proposed location for the house, after a significant rain, it is not uncommon to have a pool of water 6” deep at that location. He stated the proposed location for the house is one of the lowest points on the property and is the major portion where the water pools. He stated sometimes this pond will be there for weeks at a time.

Mr. Koopman noted Exhibit A-16 which Mr. Bray has marked to show the location of the 100’ buffer required by the Township Zoning Ordinance.

Mr. VanLuvanee objected to the relevance noting they have already gone through this.

Mr. Toadvine stated the Remand is specific as to whether there is any detriment to the public welfare. Mr. Koopman stated they are speaking to the extent of the disturbance, but Mr. Toadvine stated they know this already. Mr. VanLuvanee stated the Judge already concluded that these are the minimum Variances that would afford relief on the property. Mr. Toadvine agreed. Mr. VanLuvanee stated the sole question now is whether or not a house is built, will it have an adverse impact on the public welfare. Mr. Toadvine agreed.

Mr. Koopman asked if the area where the house is to be built in accordance with Exhibits A-16 and A-17, is entirely within the 100’ stream buffer.

Mr. VanLuvanee objected noting this has already been determined; and if it has not, it is irrelevant at this point. Mr. Koopman stated it is relevant. Mr. Toadvine stated it is not relevant because the Judge indicated in the Decision “it appears to the undersigned that the establishment of the Appellant’s case as to criteria number one – hardship due to unique physical circumstances and number two – that the property cannot be developed in strict conformity with the Ordinance are not in dispute by the Parties. Criteria number three has been disposed of by this Decision.” Mr. Toadvine stated criteria number three was the minimum variance necessary, and Mr. VanLuvanee stated that this was the last Remand.

Mr. Koopman stated they are not introducing this to show anything having to do with the minimum Variance, but are introducing it to show that the entire riparian buffer which is to be 100’ under the Ordinance is being disturbed with the exception of 10’.

Mr. Toadvine stated they know this, and the Judge knew this and granted the Variances based on it. Mr. Koopman stated the Judge did not grant the Variances but Remanded it. Mr. Toadvine stated he made a Decision that other than the detriment to the public welfare, the other four criteria have been met. Mr. Koopman stated this testimony goes to the issue of the detriment. He stated it may already be on the record that the proposed house disturbs 90’ of the 100’ wetland buffer. Mr. Malinowski stated it is in the record as Mr. Wojciechowski just testified to this. Mr. Toadvine stated it was also on the record because the Variances were based on the disturbance of the buffer areas.

Mr. Smith asked if Mr. Bray has any testimony concerning the siltation to Silver Lake, and Mr. Koopman stated he may have argument on this but does not have testimony to this.

Mr. Koopman stated the Township has three witnesses, two of which are brief and will establish background testimony regarding the creek and the lake and then Mr. Goll, the Township’s expert, will expand on that testimony and will address the specific issue regarding erosion and sedimentation, pollution, and stormwater run off. He stated there needs to be background from people who are familiar with the Lake and the Lake’s history, and the creek.

Mr. Willard G. Bowers was called and sworn in. He stated he lives at 30 Morningside Drive and his property adjoins Silver Lake directly. He has lived there since the 1960s. He stated he is familiar with the area of Makefield Lakes and is Secretary of the Makefield Lakes Preservation Association which is a 501C3 group whose function is to maintain financial records when there are large fund-raising activities to support the Lake excavation. The funding is applied to improvements and restoration of the Lake. They also function as an information center for the community and a teaching center for the value of a healthy Lake eco-system, and they have presentations at public events such as at Harvest Day.

Mr. Koopman asked about the Makefield Lakes Community Association, and Mr. Bowers stated this is a larger association which is busy all year round and is the volunteer community group which charges dues and pays for water testing to make sure that the water is pure. He stated they also organize the on-going, endless cleaning of the Lake. Mr. Koopman asked if the two Associations work together to preserve and maintain the Lake, and Mr. Bowers stated they do.

Mr. Koopman asked about the history of the Lake and geography with respect to Silver Creek, the Canal, and the Delaware River; and Mr. Bowers stated there are actually two Lakes. He stated the main Lake was created to provide water for the railroad steam engines in the 19th Century. He stated this is referred to as Silver Lake, and this is the Lake he lives on. He stated the other Lake is known as the Lower Lake, and is an evenly-managed pond which survives because the sedimentation occurs in the upper Lake. He stated Silver Lake is fed by Silver Creek, and he reviewed the route the Lake takes to the Canal and eventually to the Delaware River. Mr. Koopman asked how far the Lake is from the Delaware River, and Mr. Bowers stated it is approximately one half mile.

Mr. Koopman asked if the Makefield Lakes has a pamphlet which summarizes the history of the Lake, and Mr. Bowers stated they do.

Mr. VanLuvanee questioned the relevance.

Mr. Koopman stated he would like to introduce the brochure from the Makefield Lakes Community Association for background purposes regarding the Lake. Mr. VanLuvanee stated he does not have a problem with the witness's testimony but objects to a pamphlet.

Mr. Toadvine questioned what this has to do with the issue of public welfare, and Mr. Koopman stated it establishes that there is a resource in Lower Makefield Township with extensive history with regard to erosion and sedimentation. Mr. Toadvine stated this is not an argument. Mr. Koopman stated there will be subsequent testimony from Mr. Goll that the disturbance of this water course buffer will adversely affect Silver Lake. He stated the fact that Silver Lake is a unique, important resource for the Township in several respects is important.

Mr. Toadvine asked Mr. VanLuvanee if he agrees that Silver Lake is an important resource for the Township, and Mr. VanLuvanee stated he has no idea but feels the witness has provided the Board enough information to make a conclusion; and he does not feel a hearsay pamphlet will advance the matter.

Mr. Koopman stated the Witness will testify that the statements in the pamphlet are true, correct, and accurate; and he feels it is relevant in terms of giving the Board a background as to the importance of Silver Lake to the Township in terms of serving as an area for stormwater control, and a resource to the Township which has public access.

Mr. Toadvine asked Mr. VanLuvanee if he has an objection to stipulating to this, and Mr. VanLuvanee stated as to the general statement he does not although he objects to the relevance of the Exhibit.

The brochure was marked as Exhibit T-2.

Mr. Koopman asked Mr. Bowers about the current condition of the Lake, and Mr. Bowers stated it is dangerously shallow as a result of siltation. He stated at the upper part it has declined from the 4' depth put in during the 1990s to 1' or less. He stated in the past the Lake has had conditions where it was silted in and was dredged. Mr. Koopman asked if there are wetlands associated with the Lake, and Mr. Bowers stated there are.

Mr. VanLuvanee objected noting this witness has not been qualified as an expert.

Mr. Malinowski stated he feels they are in agreement that there is historical significant and there are wetlands around it, and they should move on.

Mr. Koopman asked Mr. Bowers if there are ecosystems with wildlife habitat associated with the Lake.

Mr. VanLuvanee objected. Mr. Malinowski sustained.

Mr. Koopman asked if the Lake has public access, and Mr. Bowers stated it does.

Mr. Smith asked Mr. Bowers if he knows the first time the Lake was dredged, and Mr. Bowers stated he does not. Mr. Koopman stated Mr. Goll will testify to this.

Mr. VanLuvanee asked Mr. Bowers if he knows how deep Silver Lake was when he moved into his home thirty-three years ago, and Mr. Bowers stated there was no island opposite his house and you could boat off his property. He stated now it is pretty shallow. Mr. VanLuvanee asked if he could estimate how deep the Lake was when he moved into his home, and Mr. Bowers stated he understands at that time the middle section was over 10' and possibly 18'. He stated the Lake was dredged in the 1990s, and the depth was an average of 4' and prior to the dredging, the water was even with the silt at some sections. Mr. VanLuvanee stated it appears that the Lake has silted in during that time period during which the lot in question was vacant, and Mr. Bowers agreed that the lot has always been vacant. Mr. VanLuvanee stated that the Lake was dredged to a depth of 4' and subsequently silted in again to an average depth of 1' all during a time period when no house was on the lot in question, and Mr. Bowers agreed. Mr. VanLuvanee asked Mr. Bowers if he would anticipate that if they do not dredge the Lake again, and no house is built on the lot in question, the Lake will need to be de-silted again, and Mr. Bowers agreed.

A short recess was taken at this time. The meeting was reconvened at 9:30 p.m.

Mr. Geoffrey Goll was called and sworn in. Mr. Koopman stated testimony regarding his expertise was put on the record previously, and he was qualified as an expert in hydrologic engineering. Mr. Koopman marked Exhibit T-3 which is an aerial photo taken from a 2005 fly-over of the Township from the Delaware Valley Regional Planning Commission which shows the proximity of the subject property to Silver Lake.

Mr. Koopman stated Mr. Goll has previously described the water course on the property in some detail and indicated it was an open water course until it leaves the property where it goes into an underground pipe. Mr. Goll agreed and stated right at the property boundary it goes into a small flared-end section or widened-out plastic pipe that is then directly connected to a stormwater inlet on Morningside Drive. The inlet is then connected to the storm sewer system on Edgewood Road that discharges down to Silver Creek as noted on Exhibit T-3.

Mr. Koopman stated the water course on the subject property drains directly through piping to Silver Lake, and Mr. Goll agreed that essentially it is a direct connection and as soon as it leaves the swale on the property, it goes into the pipe and directly without filtration into the stream. From Silver Creek it discharges into the upper Lake.

Mr. Koopman noted Exhibit T-3 shows an area Mr. Goll has depicted as “Settlement Delta” which is the same area referred to by Mr. Bowers, and Mr. Goll stated this has formed over many years, and his professional opinion is that it formed in the 1950s and 1960s when there was extensive development occurring in the watershed.

Mr. Koopman stated Mr. Goll has shown where the stormwater from the property enters into the creek to the point where it enters the Lake, and he asked for an estimate of that distance. Mr. Goll stated the distance from the subject property to the creek is 1,073 feet, and the distance from the creek to the intersection of the creek and the upper end of the Lake at the head of the delta on the southern end is 975 feet for a total of approximately 2,000 feet.

Mr. Koopman asked as a result of the direct discharge of Silver Creek into Makefield Lakes, is the hydrology of Silver Creek essential to the wellbeing of Makefield Lakes; and Mr. Goll stated this is correct adding the sedimentation rates are a function of the health of the watershed. Mr. Koopman stated Mr. Bowers testified that this eventually goes to the River, and Mr. Goll agreed.

Mr. Koopman asked about the history of the dredging of Makefield Lakes, and Mr. Goll stated he has been involved with the Makefield Lakes Association since 2000. He was not involved in the dredging project which took place in the mid-1990s but is aware of the details of that project. He stated he witnessed the dredge materials disposal site adjacent to the Lake, and has discussed it with the residents.

Mr. Koopman asked the size of the upper Lake, and Mr. Goll stated it is about ten acres, and the lower Lake is about five acres.

Mr. Koopman stated there was testimony on the history of the Lake as well as testimony from Mr. Bowers as to the original depth of the Lake and that over the years silt deposits have accumulated to a point where the Lake is almost silted in, in certain spots.

Mr. Goll stated he did not witness this in the 1990s but understands this was the case; however, he was involved in a secondary dredging that needed to be done. Mr. Koopman asked for Mr. Goll's understanding of the dredging project which occurred in the mid 1990s.

Mr. VanLuvanee objected noting Mr. Goll indicated he did not know about it other than what he was told.

Mr. Koopman stated an expert is permitted to testify as to what he has been told which has been used to form his opinions. Mr. Koopman asked if what he was told about the first dredging come into play in his company's involvement in the second dredging; and Mr. Goll stated it did. Mr. Koopman asked Mr. Goll what he knows about the dredging that occurred in the 1990.

Mr. VanLuvanee renewed his objection. Mr. Malinowski sustained.

Mr. Koopman noted the dredging which took place in 2000, and Mr. Goll stated his company did a two part watershed restoration Plan to try to protect Silver Lake. His company and the Makefield Lakes Association in partnership with the Township installed ten retro-fitted stormwater inlets to collect sediment from roadway run-off which was paid for through a State Grant through the Growing Greener Program and in-kind services from the Township. It was a \$20,000 project. Mr. Koopman asked if the Makefield Lakes Community Association contribute to this project, and Mr. Goll stated they provided in-kind cash and services, although he does not recall the specific amount.

Mr. Koopman asked if any portion of the Lake was dredged in or around 2003, and Mr. Goll stated in 2003 with Federal Grant money, the upper end of the Lake was dredged to try to create some sediment basins in the upper Lake as well as restore the area adjacent to the existing sediment delta. He stated they were not permitted to remove the existing sediment delta so they focused on the eastern side of the Lake's inlet and dredged 900 cubic yard. The Grant was \$60,000.

Mr. Malinowski asked about the question of whether the granting of the relief will be detrimental to the public welfare.

Mr. Koopman stated the history is relevant and stated the Lake has continued to silt over and needs to be continually dredged in order to maintain its existence.

Mr. Toadvine asked Mr. VanLuvanee if he will stipulate to this, and Mr. VanLuvanee stated based on what he has heard so far, he would.

Mr. Koopman stated there has been significant expense to the taxpayers and the Makefield Lakes Community Association. Mr. VanLuvanee agreed to stipulate to this.

Mr. Koopman stated Mr. Bowers testified that the Lake continues to silt it, and Mr. Goll agreed. Mr. Koopman asked if there are on-going discussions which Princeton Hydro is involved in about additional dredging that will be required for the Lake, and Mr. Goll stated they have had discussions about doing other restoration activities including repair of the dam which could cost up to several hundred thousand dollars, and the infilling of the Lake would be a detriment to the repair of the dam. He stated they have not yet found the funding.

Mr. Koopman stated they also have to dispose of dredge spoils, and Mr. Goll stated in the 1990s, they used a Township site but this site is no longer available; and if it were dredged again, the material would have to be hauled out of the Township. He stated if it is not contaminated, it would be at least five to ten miles to find a disposal site nearby; but if it were contaminated, it might have to go to the landfill. Mr. Koopman stated this would involve costs associated with reversing the sedimentation condition of the Lake that continues to periodically occur, and Mr. Goll agreed.

Mr. Koopman asked if the Lake also contains an extensive ecosystem, and Mr. Goll agreed and stated it is an open water system which contains warm-water fisheries, and at the upper end of the Lake it contains wetlands and floodplains and wooded areas and does contain wildlife and wetland vegetation. If the Lake continues to silt in and is not dredged, it will have a detrimental effect to the ecosystem and the wildlife habitat. He stated he does not feel the sedimentation is currently as extensive as it was. He stated in the 1950s through 1970s the watershed was developed before there were Buffer and Water Resource Protection Ordinances enacted which led to the accelerated infilling of the Lake. He stated while it does need more dredging in the future, he feels the infilling has slowed down. He stated every time there is a construction activity in the watershed, there is usually sedimentation that gets down into the stream system.

Mr. Koopman asked Mr. Goll if he is familiar with the requirements for water course buffers, and Mr. Goll stated he is. Mr. Koopman asked the purposes behind those requirements.

Mr. VanLuvanee objected noting he feels they are past this issue.

Mr. Koopman stated the witness is going to testify as to the purpose of a riparian water course buffer as it is not just sedimentation, and he will then testify as to the impact of disturbance of the buffer on the various aspects that are intended to be preserved by a buffer. He stated the Board needs to understand what are the purposes of the buffer.

Mr. Toadvine stated they understand this already and the Board decided this.

Mr. Koopman stated this needs to go on the record, and Mr. Toadvine stated it is already on the record. Mr. Koopman disagreed. He stated there was some superficial testimony with respect to the purposes of the buffer for preventing and controlling erosion and sedimentation, but there are other purposes behind the stream riparian buffer that are very important and will be impacted which he feels the Board needs to understand.

Mr. Toadvine stated they do not need to know the purpose – they need to know the impact.

Mr. Koopman stated he feels they need to know the purpose so they can know what the impact is.

Mr. Toadvine stated he feels the Board understands the issue and are waiting for Mr. Koopman to get to the point.

Mr. Koopman stated he would like to make an offer of proof that Mr. Goll would testify that the purposes of the water course buffer are to prevent erosion and sedimentation, to prevent nitrates and other pollutants from contaminating water courses and ground water, and to prevent or reduce surface water run off and flooding.

Mr. Koopman asked Mr. Goll how a water course buffer prevents erosion and sedimentation.

Mr. VanLuvanee objected stating they are past this issue.

Mr. Koopman stated it is important for the Board to understand how it works and what happens when it is disturbed. Mr. Malinowski stated the Board understands this. Mr. Koopman stated it is not of record. Mr. Toadvine stated he feels it is of record. Mr. Koopman stated he does not feel Mr. Goll's testimony went into the extent of how a water course buffer works, and he feels the Board and the Court, if this goes up, needs to understand this so they can evaluate properly what effect the disturbance may have on the buffer.

Mr. Koopman stated the witness will testify that disturbance of the water course buffer on the property will have an adverse impact on the creek and Silver Lake and it is essential to have on the record how the water course buffer works and how what will happen on this property will prevent the purpose from being accomplished.

Mr. Smith stated he feels the most important issue is what the impact will be.

Mr. Koopman asked Mr. Goll if a water course buffer is an accepted method of preventing or eliminating the harm which has been referred to as causing degradation of stream buffers, and Mr. Goll agreed. Mr. Koopman asked if he has literature from the Pennsylvania Department of Environmental Protection that refers to buffers and what is an adequate buffer which would be offered as Exhibits.

Mr. VanLuvanee objected based on relevance stating it has already been determined that this lot cannot be built upon unless the Variances are granted. He stated the question is if the lot is built upon as shown, what impact, if any, will it have that is adverse to the public welfare. He stated otherwise, the lot has been taken, and they have a Condemnation action.

Mr. Toadvine stated the Court stated, “It cannot be argued that any intrusion on any wetland or water course buffer will have no adverse environmental impact. The question which must be resolved is whether to the extent of the impact of the proposed intrusion will be such as may be said to constitute a detriment to the public welfare.” He stated even the Court understood the significance of the water course and the wetland buffers.

He stated all they need to know is what extent the impact will have, if any, on the public welfare.

Mr. Koopman stated these Exhibits from the DEP provide that a 10’ water course buffer as proposed by this Application will not be adequate. He stated the Applicant has the burden of proof under the Variance law in Pennsylvania. He stated these documents establish that a buffer less than 35’ (which refers normally to where there is a forested buffer) is not adequate to protect aquatic resources long term. He states this is from the Pennsylvania Stormwater Best Management Practices Manual of the Pennsylvania DEP.

Mr. Toadvine stated this is hearsay and they cannot accept this into testimony.

Mr. Koopman stated Mr. Goll will testify to it since an expert can testify as to the literature in his field.

Mr. Toadvine stated Mr. Koopman has indicated he just wants to introduce it; and Mr. Koopman stated he wants Mr. Goll to testify with respect to this literature.

Mr. Smith asked if Mr. Goll could testify as to how this property will effect Silver Lake. Mr. Goll stated that this project, if allowed to be approved with the reduction in the buffer, will be a detriment to the public health and environment and that specifically the reduction of the buffer to ten feet in accordance with the literature that engineer’s follow will essentially mean there is no buffer. He stated the minimum buffer recommended by the State of Pennsylvania is 35’ for a wooded buffer and also suggests that 35’ is not

sufficient and they would recommend going to a 50' or a 100' buffer because of the potential detriment to downstream water resources, public and safety, flooding and sedimentation. He stated the Township Master Plan specifically outlines in the 2003 Master Plan Update where they have made recommendations for Zoning changes, riparian buffers on page 20: "Riparian buffer requirements protect floodplain soils and woodlands along stream corridors and enhance stormwater management and water quality. Considering amending the Natural Resource Protection Standards in the Zoning Ordinance to strengthen protection of environmentally-sensitive land by expanded riparian buffers." Mr. Goll stated the Township recognized in 2003 that the existing Ordinances were not adequate and that anything less than 25' is inadequate and there needs to be an extended buffer. Mr. Goll stated it is his professional opinion that there is a 100' foot buffer based on the height of the vegetation; so that granting relief from a 25' buffer would essentially eliminate any water protection and allow pollutants and run off to go to the swale, to the pipe, and into Silver Creek and add to the sedimentation of Silver Lake and increase the costs of dredging to the Makefield Lakes community.

Mr. Malinowski stated the matter has come back from the Court that it must be detrimental to the public welfare; and while he agrees putting the building up is probably detrimental to the public welfare, they have testimony that whether or not the house goes up, the Lake will have sediment and will need to be dredged. He feels if the Board turns it down and the matter goes back to Court, the Judge will question how much this house will add to the problem since there is testimony that the Lake will fill up anyway. He agreed he does not want the house to be built, but he does not feel not building the house will correct the problem.

Mr. Koopman asked Mr. Goll if he has an opinion as to whether the elimination of the water course buffer in this particular case will contribute to accelerated or increased erosion and sedimentation; and Mr. Goll stated it will. Mr. Koopman asked if it will contribute to increased pollutants entering the water course, Silver Creek, and Silver Lake, and Mr. Goll stated it would. Mr. Goll stated man-placed vegetation that would require pesticides and herbicides within an area that is normally a buffer, will have a detrimental effect on Silver Lake. Mr. Koopman asked if the elimination of the buffer will also contribute to additional stormwater run off that is not occurring now, and Mr. Goll stated it will. Mr. Koopman stated Mr. Wojciechowski suggested that this is not the case, and Mr. Goll stated he disagrees because there is no design to review describing how they will control the run off. Mr. Goll stated Mr. Wojciechowski also testified that he is not aware of where the ground water table is, and Mr. Goll stated his own opinion is that the ground water is very high in that area. Mr. Goll also stated the BMPs that Mr. Wojciechowski is proposing on his concept plan will not work because it is a wetland area with standing water. He stated high ground water table means the sub-surface infiltration basins will not work.

Mr. Koopman asked Mr. Goll if his opinions are based on his experience and review of certain documentation he has referred to, and Mr. Goll stated it is. Exhibit T-4 was marked which is the Pennsylvania Stormwater Best Management Practice Manual and is Chapter 6 of the Manual which is the Chapter on structural BMPs which discusses riparian buffer restoration dated 12/30/06. Page 194 of 257 was noted which references the inability of buffers less than 35' as being adequate to protect aquatic resources long term and there is a chart showing minimum buffer standards.

Exhibit T-5 was marked which is a document entitled, "Stream Release Pennsylvania Stream Releaf - a Plan for Restoring and Conserving Buffers Along Pennsylvania Streams" dated 6/30/98. Mr. Koopman asked Mr. Goll if he has relied on this during his testimony, and Mr. Goll agreed noting this document was promoted by Governor Ridge and discusses recommended minimum buffer widths of at least 35' and a width of 50' to 100' is strongly encouraged.

Mr. Koopman stated Mr. Malinowski asked about disturbance of this particular water course and asked if there is a cumulative effect where there is disturbance of riparian or stream water courses as it relates to the adverse effect of stormwater run off, erosion, sedimentation, pollution, and flooding.

Mr. VanLuvanee objected stating they are not talking about a cumulative effect and are discussing what will happen if this lot is built upon.

Mr. Koopman stated he does not agree with that.

Mr. Malinowski sustained the objection.

Mr. Koopman stated he will make an offer of proof and stated Mr. Goll would testify that the grant of a Variance in this case and the grant of any additional relief or any additional impairment or interference with the water course or stream buffers would have a cumulative effect all of which would lead to increased erosion and sedimentation, increased nitrates and pollutants, and increased run off and flooding. He stated he would also testify that those increased effects would occur in and of itself from the disturbance of this water course, but the Board should also take into effect the cumulative effect, and Mr. Goll would testify to that cumulative effect.

Mr. Smith stated he would like to hear whether the impact is incremental or exponential, and Mr. Goll stated he feels it is both. He stated he feels the Township is doing what they can at Makefield Lakes to retrofit the existing water shed. He agrees that the entire watershed is relatively developed, but this property if allowed to be developed will off set other improvements that the public has provided funds, effort, expertise and contracting to improve. He stated if they build this house, they will have to build something somewhere else to offset this detrimental impact. He stated Makefield Lakes is trying to

reverse the negative effects of the watershed. He stated if they allow the building within the buffer, it is essentially eliminating the buffer and they will accelerate sedimentation into the stream, and will require not only the Makefield Lakes Association, but other funding sources to offset that negative effect. He stated the Association's primary objective is to retrofit the watershed. He stated the DEP promotes this and provides Growing Greener Funds, and the Federal Government provides 319H funding. He stated to eliminate a natural BMP, which is what this buffer is, will require other and further funding for another manmade BMP to be installed to offset that negative input.

Mr. Bamburak asked if he is stating that the magnitude of this one property is so big that they can actually point to a project that will have to be built, and Mr. Goll stated this is true and there will be a incremental increase in sedimentation which will require the Makefield Lakes Association to pay for additional sedimentation. Mr. Bamburak stated he questions if they will be able to measure the impact from this one property on a Lake of this size. Mr. Goll stated he could measure this impact. Mr. Bamburak stated he would like to see how this is done. Mr. Goll stated he could model it. Mr. Goll stated his testimony as an expert is that there will be a measurable increase. Mr. Bamburak stated he would like to see this.

Mr. Malinowski stated he feels they will have to convince the Judge if this is taken back to Court assuming the Board were to go in this direction. Mr. Malinowski stated if the Lake needs to be dredged every few years, he would like to see how it would shorten this time when they will need to do so, by building this house. Mr. Goll stated by allowing this buffer reduction, it will go against the Township Master Plan update and what the Township recognized which was that the buffers were inadequate as they were not protecting the public good. He stated if they allow the buffer to be reduced, he questions what will stop other less buildable lots to also come in and request a Variance to reduce it, and this will be the exponential impact to the Lake.

Mr. Maloney stated the word "exponential" is out of line. Mr. Goll stated it will have a measurable incremental impact.

Mr. Toadvine stated Mr. Goll indicated that a 35' buffer was the minimum that should ever be maintained, and Mr. Goll stated that is what is recommended by the State. Mr. Toadvine asked what he would recommend, and Mr. Goll stated he is an engineer and he follows recommendations by regulatory agencies; and based on his experience as well anything less than 35' would not be adequate. Mr. Toadvine asked if it is his position that the Zoning Hearing Board has no authority to grant a Variance from a 35' buffer; and Mr. Goll stated if they approve anything less than 35', which does not apply here as it is not technically a wooded area, and really falls under a 100' buffer, so technically they would need a 100' buffer; but anything less than, according to the literature, 35' is essentially no buffer.

Mr. Bamburak noted the special basins which were installed to catch road salts previously discussed and asked for a further description. Mr. Goll stated these basins are essentially standard inlets down to a pipe which is level with the bottom. He stated traditionally water hits the bottom of the basin and runs into a pipe. What the retrofitted basins do is they have a sediment chamber and go deeper than the pipe leaving, so that they fill with water and stormwater can run into them and when they are carrying sediment, the sediment drops out before the water goes on. Mr. Bamburak questioned why this would not work on this property, and Mr. Goll stated those were retrofits and they had to use the best technology they could within the existing condition. The Township and residents were not required by regulation to meet that objective. He stated any new development will have to address more than this – the volume, the peak run off, and the water quality aspects. Mr. Bamburak asked how it would mitigate the condition, if the developer were willing to build that type of chamber with the sedimentation pit built in. Mr. Goll stated in his opinion based on the knowledge of the site, it will not work because, based on his observations of the existing wetlands and USDA soils data, it is very high ground water table so subsurface infiltration or a rain garden will not infiltrate into the ground and will not be able to meet their volume or water quality requirements.

Mr. Bamburak stated he felt the argument was that there will be erosion which will result in sediment leaving the subject property and entering the culvert, down to Silver Creek and Upper Silver Lake. He asked if one of the special basins were constructed at the inlet of the storm sewer line, why would this not work. Mr. Goll stated the inlets do not solve the entire problem and only provide protection from the road salts, etc. and do not protect from nutrients, flooding, or provide storm water run off reduction. He stated this development must meet three objectives – peak flow requirements, volume requirements, and the water quality requirements. He stated water quality would have to do with nutrients and suspended solids.

Mr. Goll stated when dealing with retrofits, they try to do whatever they can to try and help reverse the problem; but on this project, they have a chance to comply with the regulations as this is a new development. He stated the dredging project was an attempt at stemming the tide of the problem. Mr. Bamburak asked if there is a sedimentation-type pit that would work in an application like this, and Mr. Goll stated he does not feel there is room on the property to do this. He stated they are “shoe-horning” a house in and are only providing a small buffer. He stated there is not room enough to provide a basin large enough to correct the problem.

Mr. Koopman asked if the elimination of the buffer would result in increased nitrates and pollutants entering the water course, and Mr. Goll stated it would. Mr. Koopman asked what the adverse effect of this would be upon the creek and the lake which the water course discharges directly into.

Mr. VanLuvanee objected to the form of the question stating he has not given an opinion that it would have an adverse impact.

Mr. Koopman asked Mr. Goll if he has an opinion as to whether the introduction of additional nitrates or pollutants from this water course will have an adverse effect on Silver Lake or Silver Creek; and Mr. Goll stated it would. He stated not only is sedimentation an issue within a lake and stream but it is also the introduction of nutrients such as phosphorus and nitrogen which then allows for the increase in algae blooms which results in a reduction of oxygen levels and reduces the overall diversity of a lake such as Silver Lake. Mr. Koopman asked Mr. Goll if he has an opinion as to whether the disturbance of the water course buffer as proposed by the Applicant would have an adverse effect upon increased stormwater run off and potentially flooding. Mr. Goll stated it would increase the storm water run off from the property and would then require the pipes to carry additional capacity for stormwater as well. Mr. Koopman asked if the pipe would have additional capacity, but Mr. Goll did not know.

Mr. Koopman asked if there is any practical substitute on this particular property for the wetland buffer as required by the Township Ordinance, and Mr. Goll stated there is not. He stated the buffer is both a structural and a non-structural method to attenuate pollutants, flooding, and stormwater run off from the site; and it is a natural-functioning area that does not need to be maintained while an engineered system would have to be maintained. He stated DEP prefers buffers over structural methods.

Mr. VanLuvanee asked if Mr. Goll could quantify the increase in stormwater run off from one house assuming the requirements of the Lower Makefield Township Stormwater Ordinance are satisfied; and Mr. Goll stated he could not at the moment. Mr. VanLuvanee stated Mr. Goll testified what the adverse effect could be on pipe capacity, although he does not know pipe capacity or whether or not they have the ability to carry it; and Mr. Goll stated converting permeable soils with vegetation to a roof will increase the quantity of water running off the site. Mr. VanLuvanee stated this is true with any improvement at any location, and Mr. Goll agreed. Mr. VanLuvanee stated there is nothing unique about this subject property as far as the impact of building a house on an increase in stormwater; and Mr. Goll stated he questions whether the property can be retrofitted or provided with a stormwater device that could reduce the quantity.

Mr. VanLuvanee stated this is a different issue, and the Board is not being asked to grant any Variances or Waivers with respect to compliance with the Township's Stormwater Management Ordinance. He asked Mr. Goll the purpose of Stormwater Management Ordinances under Act 167 and particularly Ordinances with respect to Lower Makefield for properties located in the Delaware River South watershed. Mr. Goll stated the purpose is to protect the watershed from flooding and detrimental impact from non-point source pollution. Mr. VanLuvanee stated if an Applicant applies for a Permit under the Township Ordinance, and the Permit is issued, it would be reasonable to assume that

those potentially detrimental impacts have been mitigated by the implementation of Conditions imposed on the Permit, and Mr. Goll stated this assumes that the ability to put stormwater controls on the property is a reality. Mr. VanLuvanee stated there has been testimony that the Applicant would be required to obtain a Permit under the Township Ordinance. Mr. VanLuvanee stated if a Permit cannot be obtained, this would be an issue; but this is not the problem of the Zoning Hearing Board. Mr. VanLuvanee asked if the Permit is in fact issued and a determination is made that the Applicant can comply with the requirements of the Ordinance, then the Applicant would have, if they implement the Permit conditions, mitigated the adverse impacts, and Mr. Goll stated he does not feel they can meet the Ordinance.

Mr. Toadvine asked that the witness ask the question which has been asked.

Mr. Goll stated he is asking him to speculate on something that has not been approved.

Mr. Toadvine stated he is not asking him to speculate.

Mr. Koopman objected to the question.

Mr. Goll stated he has no idea if a system will work on this site. Mr. Toadvine stated he is only asking that Mr. Goll base his answer on “if the Applicant applies for and obtains a Permit and the Permit is issued,” and not base it on any type of system.

Mr. Koopman objected to the question, and Mr. Toadvine stated Mr. Koopman has waived his right to object. Mr. Koopman stated Mr. Toadvine is asking a different question, and Mr. Toadvine disagreed and stated he is asking the same question.

Mr. Goll stated he cannot answer the question as he has no idea if a stormwater system will work on the site. Mr. Toadvine stated he can answer the question: “If a permit is issued.” Mr. Goll stated he cannot answer that question.

Mr. VanLuvanee asked Mr. Goll if he agrees that the purpose of the Ordinance is to mitigate adverse impacts resulting from the development, and Mr. Goll agreed. Mr. VanLuvanee asked the purpose of the regulations with respect to the requirements of the Chapter with regard to erosion control, and Mr. Goll stated the purpose is to protect downstream water resources from sediment-laden run off. Mr. VanLuvanee stated assuming the Applicant is able to obtain approval of a Plan from the Bucks County Conservation District, and they determine that they are in compliance with Chapter 107, in theory implementation of that Plan would mitigate any adverse impact resulting from the development of the site during the development period, and Mr. Goll stated assuming it was approved in accordance with their regulations, he would agree.

Mr. VanLuvanee asked the size of the watershed that contributes to Makefield Lake, and Mr. Goll stated he does not recall. Mr. VanLuvanee asked the number of houses that flow generally into either Silver Creek or the Lakes themselves, and Mr. Goll stated he does not recall. Mr. VanLuvanee noted Exhibit T-3 and asked if this is the entire watershed or just the immediate vicinity, and Mr. Goll stated it is the immediate vicinity of the property and the Lake. Mr. VanLuvanee asked Mr. Goll if he would agree that the watershed is larger than what is shown on T-3, and Mr. Goll agreed. Mr. VanLuvanee stated if they counted what is shown on T-3, there would be substantially more than 100 houses, and Mr. Goll stated he would have to count them. Mr. VanLuvanee noted the number of houses shown on Exhibit T-3 which are close to Silver Lake and asked if they could be built today under the current regulations without a Variance from buffer requirements, and Mr. Goll stated they could not. Mr. VanLuvanee stated there is evidence that there are lawns of developed houses that come right up to the Lake, and Mr. Goll agreed. Mr. VanLuvanee stated he assumes that people who live in those houses put fertilizers on their lawns; and Mr. Goll stated he could not testify to that, although he is aware that the Makefield Lakes Association has issued recommendations not to put down phosphorous-based fertilizers. Mr. VanLuvanee stated the homes that directly surround the Lake will have a more direct impact on the quality of the Lake than a house built on the subject property, and Mr. Goll stated this is incorrect.

Mr. VanLuvanee stated if there was a vacant lot next to Upper Silver Lake, upon which a house was built would not that development have more direct impact on Upper Silver Lake than would construction of a house on the subject property; and Mr. Goll stated this would depend on the distance of the buffer required and also by having a sewer pipe that is connected directly to the subject property, there is no filtering mechanism and no ability to settle out suspended solids so it would have just as much of a detrimental impact as any other house.

Mr. VanLuvanee asked Mr. Goll if he is concerned with what occurs during construction or with after construction, and Mr. Goll stated he is concerned with both. Mr. VanLuvanee stated with regard to what occurs after construction, the testimony has been that the grade of the property is not going to change, and he questions what would increase the risk of erosion or deposition of silt into the stream from this small water course on the property. Mr. Goll stated he assumes the roof will be pitched, but even if it were flat, they will be channeling water from the roof down through gutters and downspouts. He does not feel the underground system will work, so they will have to somehow discharge it to the ground surface. He stated there will be a concentrated flow where currently there is an overland sheet flow and spread out flow going to the area, so it will increase erosion by providing concentrated flow. Mr. VanLuvanee stated if they comply with the Township Stormwater Ordinance, they will have to mitigate this impact. Mr. Goll stated this is assuming they can comply with the Ordinance. Mr. VanLuvanee stated if they cannot comply with the Ordinance, they will not get a Permit, and Mr. Goll agreed.

Mr. VanLuvanee stated Mr. Goll testified on 9/19/06 according to page 35 of the transcript “I recognize you all talk about how urbanized it is, this is a drop in the bucket, but the house adds up to the problem; and this is the issue we are looking at right now. One more house is not going to help it, it’s going to hurt the situation.” Mr. VanLuvanee asked if this was his testimony, and Mr. Goll stated according to the transcript it is. Mr. VanLuvanee asked if this is still his testimony tonight, and Mr. Goll agreed. Mr. VanLuvanee stated it is essentially that the development of any lot that is not currently developed in this basin that drains to Upper Silver Lake is going to have some impact on the Lakes; and Mr. Goll stated if the site is not so significantly constrained to allow for an appropriate stormwater control and out of a buffer, he agrees. Mr. VanLuvanee stated if it is not one of the functions of the Township Ordinance to insure that adequate steps are taken to mitigate the impact, and Mr. Goll agreed and added that within the Zoning Ordinance they have a buffer that also protects the water courses as well.

Mr. Koopman stated Mr. VanLuvanee asked about the Stormwater Ordinance, and Mr. Koopman stated the Stormwater Ordinance would control the rate of run off, but not the volume, and Mr. Goll stated the Delaware South does control volumes, rate, and water quality. Mr. Koopman asked if one of the purposes of the buffer is to help groundwater recharge, and Mr. Goll stated it is a contributing factor. Mr. Koopman asked if this is a BMP that is recognized as important in the literature today, and Mr. Goll agreed. Mr. Koopman asked if the construction of a home on the property within the buffer will serve to reduce groundwater recharge compared to the situation if the buffer were left intact, and Mr. Goll stated it would reduce recharge. Mr. Koopman stated Mr. Goll testified, based on Mr. VanLuvanee’s questioning, that many of the houses around the Lake are located in an area that would otherwise be a buffer, and Mr. Goll agreed. Mr. Koopman stated the purpose of the buffer is to prevent the adverse effect of what is currently occurring on Makefield Lake by requiring that the Buffer Ordinance be complied with and that a buffer is provided so that you do not construct houses and other structures within the buffer area, and Mr. Goll agreed. Mr. Koopman asked if buffer encroachments are permitted in the area of Makefield Lakes, will this result in continuing of the situation and it will continue to sediment in.

Mr. VanLuvanee objected.

Mr. Koopman stated the purpose of the buffer is to prevent what has been happening because of the location of structures and houses within the buffer, and Mr. Goll agreed.

Mr. VanLuvanee stated Mr. Goll testified that by reducing a portion of the buffer, they would reduce recharge on the property, and he felt that previously Mr. Goll indicated that due to the soil conditions, they would not get recharge. Mr. Goll stated this is a relative condition. He stated when water run off from the surface over a large area it is able to slowly infiltrate. He stated there is probably groundwater a few feet below and it

may go there and then slowly seep out; but if they are asked to install a BMP that would be required to extend below the water table, they will not get any infiltration.

Mr. Richard Myers was sworn in. He stated he is currently employed as the Zoning Officer in Buckingham Township and is the Township watershed specialist. He stated he has also worked part-time for ten years as the Citizen Action Coordinator for the Delaware River keeper Network. Mr. Koopman asked if in these ten years, he has observed what happens to homes which are built adjacent to water courses without adequate buffers.

Mr. VanLuvanee objected based on relevance.

Mr. Koopman stated he feels this it is relevant and he can testify to what he has observed when homes are built next to water courses without adequate buffers.

Mr. Malinowski stated he feels they have heard this already, and the objection was sustained.

Mr. Koopman asked Mr. Myers where water course buffer requirements are not complied with, has he observed detrimental impact on rivers and streams in Bucks County such as Silver Creek and the water course that is on the subject property.

Mr. VanLuvanee objected, and Mr. Malinowski sustained.

Mr. Koopman made an offer of proof that Mr. Myers would testify that where homes are built next to water courses without adequate buffers, you find that the purpose behind the water course buffer is not used and people put grass clippings, swings sets, and other materials and use the area right up to the water course as a lawn area; and this adversely effects the water course. He stated he would further testify that he has observed similar detrimental effects on rivers and streams in terms of pollution, accelerated sedimentation and erosion, and accelerated stormwater run off where homes have been built where water course buffers have not been required or complied with.

Mr. Koopman asked Mr. Myers, based on what he has observed, is there a cumulative effect that results in encroachment into water course buffers by projects such as this.

Mr. VanLuvanee objected. Mr. Malinowski allowed the question.

Mr. Myers stated what is found in such a situation like this both during and after construction is that when you eliminate the buffer, which effectively a ten foot buffer is eliminating the buffer ...

Mr. VanLuvanee objected as he does not feel Mr. Myers has the expertise.

Mr. Malinowski overruled and stated this is already in the record. Mr. Toadvine stated Mr. VanLuvanee is objecting for the record.

Mr. Myers stated in that matter he does have some expertise as part of his job responsibilities he does administer the Township's MS4 Permit and is responsible for all aspects of that Permit for the Township.

Mr. Toadvine stated the objection was overruled, and he can answer the question.

Mr. Myers stated there is a cumulative effect because what happens is this sets up a situation where one neighbor encroaches into the buffer, the next one continues to encroach; and it is basically impossible to enforce the regulation when there is a buffer that is such a small size alongside the stream. He stated during the construction process, while the contractor is required to install the erosion and sedimentation controls, in his experience and in his position as someone who deals with this daily in his employment, what happens is the erosion and sedimentation controls are installed but are not properly maintained.

Mr. VanLuvanee objected and stated he cannot make an assumption and he moved to strike the testimony as non-responsive adding the witness may not speculate that someone will violate the law.

Mr. Koopman stated a witness can testify as to what he has observed.

Mr. Malinowski sustained the objection.

Mr. Koopman moved the admission of Exhibits T-4 and T-5.

Mr. Bamburak asked Mr. Myers if he lives near the subject property, and Mr. Myers stated he lives in the central part of the County.

Mr. VanLuvanee moved the admission of his Exhibits.

Mr. VanLuvanee stated he would also like to provide to the Zoning Hearing Board a case which he feels is instructive. Mr. Koopman stated the Township would like to have the opportunity to review this and have the opportunity to rebut it with a short memorandum which was acceptable to the Board.

A short recess was taken at this time. The meeting was reconvened at 10:45 p.m.

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Mr. Toadvine stated the Board has requested briefs and Mr. VanLuvanee agreed to submit within two weeks, and Mr. Koopman ten days thereafter. Mr. Bray was also given the opportunity to submit a brief within the same time period as the Township. Mr. Toadvine stated the Board should be in a position to make a decision at the meeting of the Board to be held on June 3, 2008.

There being no further business, Mr. Gruen moved, Mr. Bamburak seconded and it was unanimously carried to adjourn the meeting at 10:55 p.m.

Respectfully Submitted,

Gregory J. Smith, Secretary