

TOWNSHIP OF LOWER MAKEFIELD
ZONING HEARING BOARD
MINUTES – MARCH 20, 2012

The regular meeting of the Zoning Hearing Board of the Township of Lower Makefield was held in the Municipal Building on March 20, 2012. Chairman Bamburak called the meeting to order at 7:15 p.m.

Those present:

Zoning Hearing Board: Paul Bamburak, Chairman
 Jerry Gruen, Secretary
 Keith DosSantos, Member
 Anthony Zamparelli, Member

Others: David Truelove, Township Solicitor
 Mark Eisold, Township Engineer
 Barbara Kirk, Zoning Hearing Board Solicitor
 Jeffrey Benedetto, Supervisor Liaison

Absent: Gregory J. Smith, Zoning Hearing Board Vice Chairman
 James McCartney, Alternate Member

OTHER BUSINESS

Appeal #11-1609 – Dave and Dianne Henn – Approval of Request for Extension

Ms. Kirk stated the Variance will expire on April 6, 2012. She stated the Board had previously granted a Variance to the Applicant to allow a fence to be constructed on the property; however, due to issues with the contractor, they have not been able to submit the appropriate Permits within the six month period of time. She stated they are asking for a six month Extension on the Variance that was approved in September, 2011; and this should be more than ample time for them to submit the Building Permit and begin construction.

Mr. Gruen moved, Mr. DosSantos seconded and it was unanimously carried to grant a six month Extension from the date of the expiration.

APPEAL #08-1481(A) – THE FRANKFORD HOSPITAL OF CITY OF PHILADELPHIA, INC (REMANDED)

Mr. Smolow stated a few weeks ago they received a copy of the Transcript from the 1/17/12 Hearing and on Page 16, Line 24 there was a reference to the number of vehicles, and the number transcribed was 282, and his notes indicate this should have been 962. He stated he did speak to the Court Reporter and shared an e-mail with all counsel, and everyone agrees that the correct number at that point in the transcript should be 962. He stated he understands that the Court Reporter has circulated a corrected page, and this will be substituted in the official Transcript.

Mr. Smolow stated after the last Hearing, he conferred with his Witness, and in RARF-9 the report that Mr. L'Amoreaux prepared, on Page 4 and Tab I there is reference to a traffic count that Mr. L'Amoreaux conducted. Mr. Smolow stated the date of the count should be February 9 and not February 8.

Mr. Truelove stated he just received the Transcript from the last Hearing and on Page 89, Line 14 Mr. Truelove is referred to as Mr. Smolow. Mr. Truelove stated he will circulate an e-mail about this.

Mr. VanLuvanee noted Page 27, Line 2.

Ms. Kirk asked that all Counsel go through the Transcripts and circulate e-mails about any corrections.

Ms. Kirk stated the Board met in Executive Session prior to the matter with respect to this Appeal concerning Case Law that she wished to advise the Board about.

Mr. Bamburak stated at the end of the last meeting they had just made a decision on a question about whether Mr. L'Amoreaux would be able to make a summation; and according to the Minutes, it was agreed that he would not be able to make a summary, but he could give his opinion. Mr. Smolow agreed to re-phrase his question to address the Board's concern. Mr. Bamburak stated everyone has read the Report Mr. Smolow provided and it is very understandable and they would like to avoid having information read to them from various reports. He stated this is taking a lot of time; and if they could avoid having someone read to them, this would help. Mr. Smolow stated he does want to make some points and wants the points to be in the Transcript even though they may also be in the Report. He stated he also wants the Witness to explain and elaborate on his own Report and the DelVal Report. Mr. Bamburak stated he would like to have this matter moved along as it is taking a significant amount of time.

Mr. Smolow stated at the last Hearing he was asking Mr. L'Amoreaux some questions about the 2004 Delaware Valley Regional Planning Commission Report, and he asked Mr. L'Amoreaux if he relied on this Report in part in preparing his own Report; and Mr. L'Amoreaux agreed. Mr. Smolow stated there was a particular Section of the Delaware Valley Report dealing with the concept of traffic demand beginning on Page 32, and he asked Mr. L'Amoreaux to explain the concept of "demand" and the Report involving an increase in demand and how that impacts the traffic volume on the I-95 southbound ramp during the weekday p.m. peak hours.

Mr. L'Amoreaux stated the Delaware Valley Regional Planning Commission Study is intended to analyze the amount of traffic that will come across the Bridge as a result of the Bridge being wider. He stated there is a great amount of demand to cross the Bridge today that you do not see because it is two lanes and is narrower than it should be.

Mr. VanLuvanee Objected. He stated the purpose of the Study is spelled out in the Study, and Mr. L'Amoreaux is attempting to determine what the purpose of the Study was and to tell the Board what it is. He stated if the Board reads it, it will tell the purpose of the Study. Mr. VanLuvanee stated Mr. L'Amoreaux is also testifying about the additional demand that is not using the Bridge, and he has not done an independent study. Mr. VanLuvanee stated whatever he is telling the Board is his interpretation of what he has read. Mr. VanLuvanee stated if he wants to talk about it as a foundation for his opinion, this would be acceptable.

Mr. Smolow stated he felt the Witness was answering the question. He noted Page 32 of the Delaware Valley Regional Planning Commission Report it states, "Adding highway capacity to a given facility tends to reduce the travel time for trips served by that facility which in turn increases the demand for travel on that facility."

Mr. VanLuvanee stated as a general statement, he agrees that this is what it says, but it does not speak specifically to this particular Bridge.

Mr. Smolow stated he is asking Mr. L'Amoreaux to explain the concept.

Mr. Bamburak Overruled Mr. VanLuvanee's Objection as he took Mr. L'Amoreaux' answer as explaining the concept. Mr. VanLuvanee stated he does not have an Objection to Mr. L'Amoreaux explaining the concept.

Mr. L'Amoreaux stated there are quite a few motorists who want to use the Bridge today and do not.

Mr. VanLuvanee Objected, and stated they do not know this. He stated this is a hypothetical. He stated if he wants to say that as a general rule if you increase the capacity of the highway, the highway has the capacity to handle more volume, he would agree with this; but not that there are people who do not use the Scudders Falls Bridge now because he does not know this.

Mr. Bamburak stated he is trying to say “if they build it, they will come;” and Mr. L’Amoreaux agreed. Mr. VanLuvanee stated he would agree if he says “if they build it, they may come.”

Ms. Kirk stated as a general rule if the Bridge is widened, what would be the result upon traffic, and Mr. L’Amoreaux stated there is additional capacity.

Mr. Smolow stated when there is additional capacity, what does this do with respect to traffic volume.

Mr. VanLuvanee Objected and stated unless he has done a study, they do not know the answer to this.

Mr. Bamburak Overruled and asked Mr. L’Amoreaux to answer based on his expert knowledge of what happens to traffic when capacity is added. Mr. L’Amoreaux stated when capacity is added, some of it gets used. He stated in the traffic engineering industry there is a term they use called “latent demand.” He stated this is demand for traffic service that one does not see. He stated motorists elect to either cross the River in this instance at a different time or they may elect not to make the trip at all; however, what the DVRPC Study states and addresses is that latent demand and the fact that when you build three lanes in each direction across the River, people are going to come back to the Bridge and cross it at the time they want for the trips that they want.

Mr. Smolow stated he understands that the Delaware Valley Regional Planning Commission actually did an estimate of the additional traffic that will meet this demand, and Mr. L’Amoreaux agreed. Mr. Smolow asked Mr. L’Amoreaux to tell and interpret what the increase in volume for the right turn movement during the weekday p.m. period is estimated to be as a result of the increase in demand if the Scudders Falls Bridge improvements are completed. Mr. L’Amoreaux stated in the DVRPC Report, they identified that there will be an increase in traffic on the southbound right turn from I-95 ramp onto westbound 332 during the evening weekday peak hour, and this increase will be 70 cars per hour. Mr. L’Amoreaux stated this is shown in his Report on Page 6 of 10.

Mr. VanLuvanee asked if this is in the DVRPC Study itself, and Mr. L’Amoreaux stated in the Study one has to obtain that figure by doing a subtraction. He noted Page 6 of 10 if you compare Figures 8A and 5A in the DVRPC Study it shows the net impact.

Mr. Smolow stated it is his understanding from Mr. L'Amoreaux' Report using the calculation from the Delaware Valley Regional Planning Commission Study that on the ramp there will be an additional 90 vehicles per hour, but on the right turn movement, there will be an additional 70; and Mr. L'Amoreaux agreed and stated that is because the left turn gets the other 20.

Mr. Smolow noted Aria's Study which was done by McMahon. Mr. Smolow asked for the existing conditions at the I-95 ramp southbound during the weekday p.m. peak, what did McMahon report as the hourly volume; and Mr. L'Amoreaux stated they reported the hourly volume as 548 vehicles per hour. Mr. Smolow asked if in his opinion as an expert was that Report accurate; and Mr. L'Amoreaux stated it was not. He stated he conducted two subsequent counts on the 2/9 and 2/15 and he counted 834 vehicles on the 9th and 913 vehicles on the 15th.

Mr. Smolow asked Mr. L'Amoreaux if he also compared the McMahon Study with the counts that were performed by the Delaware Valley Regional Planning Commission at that same location for the same right turn movement, and Mr. L'Amoreaux stated he did. Mr. L'Amoreaux noted Page 4 of his Report with the table, and the first line of the table shows the right turn as 952 vehicles per hour from the DVRPC Study.

Mr. Smolow asked Mr. L'Amoreaux if he also looked at McMahon's 2010 count of that same location for the same period of time, and Mr. L'Amoreaux stated he did. He noted the same Table and stated their count data represented in their 2010 Study is 928 vehicles per hour. Mr. Smolow asked Mr. L'Amoreaux if he reached an opinion as to whether or not the McMahon Associates count in 2008 was less than a typical traffic volume at that location during the weekday p.m. peak hour, and Mr. L'Amoreaux stated he did. He stated he found that if you average the four higher counts and then take the difference, it comes to about 350 cars per hour so he would say that the McMahon Study undercounted that right turn movement by 350 vehicles per hour. Mr. Smolow asked Mr. L'Amoreaux if he has an opinion as to whether or not that was a significant difference, and Mr. L'Amoreaux stated it is.

Mr. Smolow noted the Level of Service on the I-95 southbound ramp during weekday p.m. peak hour, and stated there was Testimony that McMahon reported that the Level of Service for that location was a Level of Service A; and he asked Mr. L'Amoreaux if he was present when that Testimony was given. Mr. L'Amoreaux stated he was and also saw it in the McMahon 2008 Report. Mr. Smolow asked Mr. L'Amoreaux if he believes that Level of Service A for the right turn movement during the p.m. peak hour during weekday is accurate, and Mr. L'Amoreaux stated he does not. Mr. L'Amoreaux stated there are more than 548 vehicles making that movement today so the Level of Service A is associated with an unrealistic light representation of the volume that is there.

Mr. Smolow asked what other characteristics are there at that location would lead him to believe that the Level of Service is not an A, and Mr. L'Amoreaux it would be from his direct observations from when he did the traffic count. Mr. Smolow asked Mr. L'Amoreaux what he saw there, and Mr. L'Amoreaux stated he saw queuing of 10 to 12 cars and many times past where he could see.

Mr. Smolow asked Mr. L'Amoreaux about the highway improvements McMahon proposes if they are permitted to build the Hospital and Medical Office Building. He asked Mr. L'Amoreaux to summarize the proposed improvements at the I-95 ramp and the 332 segment between Stony Hill and the I-95 ramp. Mr. L'Amoreaux stated the improvements that are the most germane to the items just discussed are the conversion of the single westbound left turn lane on Route 332 turning to Stony Hill Road where they are proposing to convert that to a double left turn. He stated that will necessitate a change in the traffic signal operation at 332 and Stony Hill; and motorists will no longer be able to turn left on gaps, and they will have to wait for the green arrow.

Mr. Smolow asked if Aria proposes to add or change the signal for the right hand turn movement from a yield sign to some other device, and Mr. L'Amoreaux stated he saw no indication of this. Mr. Smolow asked if Aria proposes to increase the capacity of the I-95 southbound ramp, and Mr. L'Amoreaux stated they do not. Mr. Smolow asked if Aria proposes to add a double right hand turn off of the I-95 southbound ramp heading into Newtown, and Mr. L'Amoreaux stated they do not.

Mr. Smolow stated he feels it is stipulated or understood that the McMahon Study did not consider the Scudders Falls Bridge Project in its projections, and Mr. L'Amoreaux agreed.

Mr. Smolow stated without the Scudders Falls Bridge improvements, Aria did project a certain increase in the traffic volume on the southbound ramp during the weekday p.m. peak hour, and Mr. L'Amoreaux agreed that it was an increase of 34 vehicles per hour.

Mr. Smolow asked Mr. L'Amoreaux to summarize for the Board his opinion as to the future traffic volume for the right hand turn movement in the event that Aria is developed and taking the Scudders Falls Bridge Project into consideration. Mr. L'Amoreaux referred the Board to Page 8 of his Report.

Mr. Smolow asked Mr. L'Amoreaux what traffic volume he expects to result in the event that the Hospital and Medical Facility are constructed with the highway improvements that they propose and taking the Scudders Falls Bridge Project into consideration for the right turn movement. Mr. L'Amoreaux stated the traffic volume would be the sum of Aria Health which is 34 vehicles, plus the Scudders Falls Bridge improvements which is 70, and as noted earlier the correction of the undercount which is 350; and if you add those, you get 454 vehicles per hour additional.

Mr. Smolow asked Mr. L'Amoreaux if he studied the impact of the Aria Hospital and Medical Office Building and the highway proposed improvements on the future Level of Service on the I-95 ramp during weekday p.m. peak hours taking the Scudders Falls Bridge Project into consideration, and Mr. L'Amoreaux stated he did. Mr. L'Amoreaux stated the Level of Service on the ramp from the yield sign will be Level of Service F meaning that severe queuing will occur in addition to what is being experienced today.

Mr. Smolow asked Mr. L'Amoreaux if he performed a Synchro Analysis for the right turn movement off of the I-95 ramp during the weekday peak hour, and Mr. L'Amoreaux stated he did.

Mr. Smolow provided RAFR 10. Mr. L'Amoreaux stated RAFR 10 is a summary of a Synchro Capacity Analysis he did for four scenarios. He stated on the front page is a Table that indicates the four scenarios all looking at the 2019 weekday p.m. peak hour. He stated the first one is without construction of Aria, the second is with construction of Aria and the improvements associated with Aria, the third is with Aria and the Scudders Falls Bridge Improvement, and the fourth is Aria, the Scudders Falls Bridge Improvement, and a correction for the undercount which is the 350 cars he spoke of earlier. Mr. Smolow asked if Scenarios 2, 3, and 4 assume that Aria was built with the proposed highway improvements referred to in the McMahon Study; and Mr. L'Amoreaux agreed.

Mr. Smolow asked Mr. L'Amoreaux to explain the findings in the right hand column of RAFR 10. Mr. L'Amoreaux stated the information that is shown in the Table shows five items under each scenario. The first is the vehicles per hour that is significant by VPH, the second is the amount of delay that is going to be experienced by motorists, the third is the Level of Service, and the fourth is the volume to capacity to ratio which is V/C. He stated anytime you have volume over capacity greater than one, it means you are exceeding capacity. He stated the last number is the 95th percentile queue length meaning 95% of the time it will be that volume or less.

Mr. DosSantos asked him to explain the delay figure. Mr. L'Amoreaux stated this is the delay that a random motorist approaching the yield sign would encounter coming off of I-95.

Mr. Smolow stated in RAFR 10, Mr. L'Amoreaux has shown all of the Levels of Service as F, and Mr. L'Amoreaux agreed. Mr. Smolow stated there is an increase in the delay from the without Aria scenario to the scenarios where the Hospital is built and they are looking at taking the Hospital and the Scudders Falls Bridge Project into consideration, and Mr. L'Amoreaux agreed. Mr. Smolow stated he is showing a 481.8 second delay in Scenario 4, and Mr. L'Amoreaux stated this is what the calculations bear out.

Mr. Smolow stated this taking the Scudders Falls Bridge Project and the undercount into consideration, and Mr. L'Amoreaux agreed. Mr. Smolow stated this is still at a Level of Service F; and Mr. L'Amoreaux agreed, and stated it cannot get any worse than F.

Mr. Smolow stated the volume to capacity ratio is shown at 2.02, and Mr. L'Amoreaux agreed. Mr. Smolow asked what this indicates, and Mr. L'Amoreaux stated it indicates that the volume demand is twice the capacity of the movement.

Mr. Smolow noted the figure of 2,110 feet, and asked what this indicates.

Mr. L'Amoreaux stated this indicates that according to the calculation methods of Synchro the 95th percentile queue is 2,110 feet long.

Mr. Smolow asked Mr. L'Amoreaux if he has an opinion as to whether Aria's proposed highway improvements will mitigate the increase in traffic on the I-95 ramp, and Mr. L'Amoreaux stated his opinion is that it does not.

Mr. Smolow asked Mr. L'Amoreaux his opinion as to whether the increase in volume, increase in delays, and increase in queues on the I-95 off ramp during the weekday peak hour will create a hazardous condition; and Mr. L'Amoreaux stated his opinion is that the frequency and severity of the queuing on I-95 will increase. He stated the frequency of back-ups onto the I-95 shoulder will happen more often, and they will be longer in duration and longer in length. Mr. Smolow asked why this is hazardous.

Mr. L'Amoreaux stated the hazard is that the cars in the shoulder of I-95 are stopped.

Mr. Gruen asked why the cars would be on the shoulder and not on the ramp.

Mr. L'Amoreaux stated in Case 2 with Aria, the Scudders Falls improvements are not constructed so what will happen is the length of cars will exceed the deceleration lane and it will back out onto the shoulder. He stated even if they are in the deceleration lane, they will still have stopped traffic.

Mr. Smolow noted Scenario 4 where the Hospital is developed with the improvements and taking the Scudders Falls Bridge into consideration, and he asked if this creates a hazardous condition. Mr. L'Amoreaux stated the hazard is stopped traffic next to a live lane on I-95.

Mr. DosSantos asked how long is the ramp from I-95 to 332. Mr. L'Amoreaux stated the ramp is in excess of 735'. Mr. DosSantos stated he was talking about Scenario 2 without the Scudders Falls Bridge, and he stated without the Bridge Project built on I-95 there is no extended turning lane; and Mr. L'Amoreaux agreed. Mr. DosSantos stated he has indicated that in Scenario 2 it creates a hazard because traffic is going to back up onto I-95, and Mr. L'Amoreaux agreed. Mr. DosSantos stated the length of the ramp is greater than 785'; and Mr. L'Amoreaux agreed but stated when they are working with

volume capacity over 1 the queuing calculation that Synchro puts out is just a calculation. He stated the queuing is theoretically infinite when you get to a case where volume/capacity is over 1 because you will have more cars arriving than can be serviced.

Mr. Gruen stated there is a similar situation on 332 today going toward Stony Hill Road where the right turn lane is very short and people are riding down the shoulder to get to the right turn lane, and he asked if this is what Mr. L'Amoreaux is telling the Board is going to happen. Mr. L'Amoreaux stated if what Mr. Gruen is describing is that they have stopped traffic for the double left and then people are going down the right hand side on the shoulder, this will be the same sort of situation and now they are on an Interstate where the speeds are much higher.

Mr. DosSantos asked the length of the ramp, and Mr. L'Amoreaux stated it is approximately 1,000 feet.

Mr. Smolow stated in Scenario 4 he wants to take the Scudders Falls Bridge Project into consideration, and according to Mr. L'Amoreaux' calculation there would be a queue of 2,110' which would be approximately 1,000' longer than the ramp; and Mr. L'Amoreaux agreed. Mr. Smolow asked why this is a hazardous condition, and Mr. L'Amoreaux stated you will have traffic stacked and stopped adjacent to a live lane on I-95 which is a free-flowing through lane. Mr. Smolow asked if this is recognized by traffic engineers as a hazardous condition; and Mr. L'Amoreaux stated it is, and it is something that they try to avoid at all costs. He stated some motorists wind up getting trapped in that lane when they did not intend to exit, but they wind up in the lane because they do not anticipate a line of cars extending back from 332. He stated they then have to get out. He stated there are also motorists who wish to exit at Newtown, but they are surprised when they get past the end of the line; and they then have to cut in which creates a cross movement that is very dangerous.

Mr. Smolow asked Mr. L'Amoreaux his opinion as to what will happen if the Hospital is built when people want to make a right turn off the ramp with the Hospital improvements and taking the Scudders Falls Bridge Project into consideration. Mr. L'Amoreaux stated what he feels will happen is motorists will start to feel more impatient because they have waited longer to get to that point; and based on what he saw when he did the counts, motorists will have to weave across to go to Stony Hill Road in a shorter distance. Mr. Smolow noted Page 8 of RAFR 9. Mr. L'Amoreaux stated at I-95 and 332 today the inset of #4 shows that motorists will tend to sit and wait and cross both lanes of westbound 332 at one time, and sometimes you will see a motorist waiting to make that move at one time and someone who wants to go to Newtown only will pull up along side and they will then go because they only have to cross one lane. He stated this is a very complicated operation and makes it very difficult for motorists who are new to the area.

Mr. DosSantos stated they are making it a double lane, and Mr. L'Amoreaux agreed and stated this is part of the reason why it backs up onto I-95 because you have to wait for one of these special gaps to come along so you can make your move. Mr. DosSantos asked Mr. L'Amoreaux if this was his personal observation the two times he was out there, and Mr. L'Amoreaux agreed.

Mr. Smolow noted further down 332 and its intersection with Stony Hill Road. Mr. Smolow stated that Mr. L'Amoreaux earlier testified that Aria's proposed improvements include adding a second turn lane at that intersection, and Mr. L'Amoreaux agreed. Mr. Smolow asked him his opinion as to the impact of the additional traffic making this right hand turn movement during the weekday p.m. peak hour and what the impact will be on the operation of the Stony Hill and 332 intersection westbound traffic. Mr. L'Amoreaux stated according to McMahon's Report, the capacity of the double left turn lane will be exceeded as well. He stated on the Figure on Page 8 of his Report under #1 the proposed double left turn lane to Stony Hill Road will back up into the through lane because the capacity will be exceeded.

Mr. DosSantos asked if this is based on McMahon's numbers, and Mr. L'Amoreaux agreed.

Mr. Smolow asked what happens when that occurs, and Mr. L'Amoreaux stated the through traffic will be forced to go around the double left to get back into the through lane. Mr. Smolow asked his opinion as to whether or not this is a hazardous condition, and Mr. L'Amoreaux stated it is a hazardous conditions.

Mr. Smolow asked Mr. L'Amoreaux if he prepared an animation showing the impact of the Aria Hospital and its improvements taking the Scudders Falls Bridge Project into consideration for the I-95 ramp, and Mr. L'Amoreaux stated he did. Mr. Smolow asked if he used the data he discussed in his Synchro Analysis to prepare this animation, and Mr. L'Amoreaux stated he did. Mr. Smolow asked if the animation accurately depicts the results of his Study, and Mr. L'Amoreaux stated he believes it does. Mr. Smolow asked if he feels this animation would help the Board understand the operation, and Mr. L'Amoreaux stated he does.

Mr. DosSantos stated when he talking about the McMahon numbers backing up on westbound 332 is he talking about the McMahon numbers as given at 548 cars or with the additional 350 cars; and Mr. L'Amoreaux stated he is using the 548 cars which is the undercounted volume.

Mr. Smolow asked Mr. L'Amoreaux to show the animation of the I-95 ramp during weekday p.m. peak hour without the Aria Hospital showing how it operates today without any improvements, Aria, or the Scudders Falls Bridge Improvements.

Mr. VanLuvanee asked how this will be put in the Record. Mr. Truelove asked if there will be a DVD of this. Mr. Smolow stated it will be converted to a DVD. Ms. Kirk stated this will be identified as RAFR 11 with the understanding that a DVD of the animation will be submitted. Mr. Smolow stated there are actually four animated clips, and Ms. Kirk suggested that these be labeled A, B, C, and D. Mr. Smolow stated it will all be on one DVD. Ms. Kirk stated she assumes the DVD will be cut in such a way so that it refers to A, B, C, and D; and Mr. Smolow stated it will have the title of the scenario. Mr. Smolow stated the first scenario would correspond to scenario #1 on RAFR 10 and this would be the weekday p.m. without Aria. Mr. VanLuvanee asked for what year, and Mr. L'Amoreaux stated it would be for 2019. Mr. Smolow stated they are not A, B, C, and D but are scenario #1, scenario #2, scenario #4, and there is another scenario showing the 332 intersection at Stony Hill Road that is not on the Table. Ms. Kirk stated scenario #1 is 2019 weekday p.m. without Aria, and Mr. Smolow agreed.

Mr. L'Amoreaux showed the animation on the monitor and stated this is the output from a program that is a twin to Synchro and is called Sim Traffic which is a simulation model that is used to show how traffic will flow in 2019 without Aria and without the Scudders Falls Bridge. He showed on the animation that the queue for the right turn clears out periodically. Mr. Truelove stated he is showing the ramp off of I-95 onto 332 westbound, and Mr. L'Amoreaux.

A short recess was taken at this time to work on lighting in the room in order for the Board to be able to see the animation being shown.

When the meeting was reconvened, Mr. Smolow stated this evening they will only show Scenarios #1 and #4 which will be RAFR A and B. Ms. Kirk asked if this is what will be on the DVD, and Mr. Smolow agreed.

Mr. VanLuvanee stated he is Objecting to the admission of this information based on lack of a foundation, lack of any description of the program, and lack of any evidence of any calibration of the program.

Ms. Kirk asked Mr. Smolow to clarify what RAFR 11 will consist of, and Mr. Smolow stated RAFR 11 will consist of two video clips. He stated the first will depict visually in an animated format Scenario #1 on RAFR 10 which is the 2019 weekday p.m. right turn traffic movement without Aria and the Scudders Falls Bridge project. Mr. Smolow stated the second video clip will correspond to Scenario #4 on RAFR 10 which is the 2019 weekday p.m. with Aria, the Scudders Falls Bridge Project, and correction of the undercount for additional volume they say McMahon did not pick up in their Report.

Mr. Bamburak stated it appears that they are going to show the best case in their opinion without the Hospital and the worst case with the Hospital, Scudders Falls, and the undercount; and Mr. Smolow agreed.

Mr. L'Amoreaux stated the program is called Sim Traffic, and it is a simulation program. He showed the first clip which is a simulation of I-95 and 332 in the 2019 evening peak hour without Aria or the Scudders Falls Bridge. He showed east/west 332, I-95 (but it is not part of the simulation so the cars are not moving), and he showed the I-95 southbound ramp from the top side of the screen, and the departing traffic onto the I-95 on ramp. He showed the traffic coming from the north. He stated what they are seeing is that the queue clears and it is not a continuous flow, and then it will build up again; but periodically it will clear.

Mr. Zamparelli stated it clears because the traffic light on 332 westbound turns red which gives the traffic a chance to clear, and Mr. L'Amoreaux agreed.

Mr. DosSantos asked what factors he used to input into the program to generate the analysis, and Mr. L'Amoreaux stated in the McMahan Report they modeled it as one intersection and that the right turn was a free-flowing right turn which is how they came up with a Level of Service A. He stated it is not a free flow, because it is a yield so they had to break it up into two intersections, and RAFR 11 bears this out as they have one that is signalized and one that is unsignalized with a yield next to it. Mr. DosSantos stated he based the flows on the McMahan 2008 Study, and Mr. L'Amoreaux agreed. He stated they used the Aria projections, the Scudders Falls Bridge, and the undercount correction. Mr. Bamburak stated what is being shown in Scenario #1 however, is the existing conditions expanded out to 2019, and Mr. L'Amoreaux agreed.

Mr. L'Amoreaux stated the second scenario is 2019 projection with Aria, the Scudders Falls Bridge, and the 350 vehicle per hour undercount. He stated at no time during this clip does the queue clear.

Mr. Gruen asked what is the significance of 2019, and Mr. L'Amoreaux stated there was no sanctity to 2019, but they felt it was a good target year because they believed that everything would be completed by then.

Mr. L'Amoreaux stated they are unable to stretch the screen to I-95 to show that the queue does go all the way up there. Mr. Smolow asked if he were able to stretch the screen, what would it show at the ramp. Mr. L'Amoreaux stated it would show stopped traffic in the right hand lane; and if you put the I-95 traffic in there, you would see I-95 traffic going by the stopped lanes, and he stated this is what he is worried about.

Mr. DosSantos asked if this includes the McMahan mitigation. Mr. L'Amoreaux stated the first scenario had three lanes, and part of the McMahan mitigation is to have three lanes going eastbound from Stony Hill and the right lane going to I-95 south so they did include the improvements. Mr. VanLuvanee stated what they are showing does not have the McMahan improvements, and Mr. L'Amoreaux agreed. Mr. VanLuvanee

asked if they are showing the first clip or the second clip, but Mr. L'Amoreaux did not know. Mr. DosSantos stated the queuing is all backed up so he assumes it would be the second clip. Mr. VanLuvanee stated the second clip therefore does not have the McMahon improvements. Mr. DosSantos stated it is therefore a segued clip because they are saying that in the second clip it has Aria being built, but they are not showing the Aria improvements. Mr. Smolow stated the Aria improvements are off screen to the left. Mr. Smolow stated the two left-hand turn lanes are not shown on the animation. Mr. DosSantos asked if this is because they are not in the view or because they have not included them.

After some conferencing with Mr. Smolow, Mr. L'Amoreaux asked for clarification from Mr. DosSantos as he felt he misunderstood the question. Mr. L'Amoreaux asked if he wants to see the two double left turn lanes into Stony Hill; and Mr. DosSantos stated he does not necessarily have to see them, but would like to know if they factored this into Scenario B. He stated they indicated that Scenario B includes the Hospital and if they have the Hospital, they should have the mitigation lanes. Mr. L'Amoreaux stated they are, and he does have another simulation to show this.

Ms. Kirk stated Animation B which was just shown was the projection out to 2019 weekday p.m. with Aria Hospital built, the Scudders Falls Bridge Project improvements completed and adds the undercount correction. Mr. L'Amoreaux has indicated that one of the factors used in the simulation program included the two left turn mitigation lanes proposed by Aria, but you could not see them visually on the screen, and Mr. L'Amoreaux stated he believes that is an accurate statement.

Mr. Smolow noted that the 2019 number was the number that appeared in the McMahon Study for 2008, and Mr. L'Amoreaux agreed.

Mr. Smolow noted the McMahon Report and stated Mr. L'Amoreaux testified that in his opinion McMahon undercounted the existing traffic during the p.m. weekday peak hour on a typical day by approximately 350 vehicles per hour for the right-turn movement, and Mr. L'Amoreaux agreed. Mr. Smolow asked Mr. L'Amoreaux his opinion to a reasonable degree of professional certainty as to the validity of the McMahon Report concerning future traffic volumes west of the I-95/332 Interchange taking the Scudders Falls Bridge Project into consideration. Ms. Kirk asked if he is asking this with regard to the 2008 Report; and Mr. Smolow stated he is talking about the 2008 Report – McMahon's projections and asked Mr. L'Amoreaux' opinion as to the accuracy and the validity of those projections and the ability of the proposed improvements to deal with the added volume and the impact on Level of Service. Mr. L'Amoreaux stated when you have a 350 vehicle undercount at the major upstream intersection, the lack of the 350 vehicles carries through the whole study area. He stated what happens is you have a 350 vehicle deficit at Stony Hill, and another 350 vehicle deficit or part of the deficit because

it may have split at Stony Hill, but some of it is going to show up at Lindenhurst. He stated the conclusion from that is that all the conclusions in the Report are off because the data is low. He stated if you look at the mitigation analysis that they are required to do, he would recommend that it would have to be re-done because they are 350 cars off; and they are basing all the roadway improvements on future volumes that are low.

Mr. Zamparelli asked if any of the volumes could be mitigated by synchronizing the lights better. Mr. L'Amoreaux stated he does not know if it would make a difference in his Report or not. He stated there is a synchronization system today which has been installed, but he is not sure if it has been updated since the ten years it was installed. Mr. L'Amoreaux stated it could make a difference.

Ms. Kirk asked what discount could he provide in the difference in numbers on the basis that the McMahan Report used numbers from 2004 or 2007 and the fact that Mr. L'Amoreaux did actual counts in 2012 which almost a four to five year spread. Mr. L'Amoreaux stated referred to Page 4 of his Report, the Table at the top shows the 2004 DVRPC count which was probably done in 2003 was the highest they had. He stated it is a legitimate question to ask if traffic increased that much, but he does not feel it has in fact increased; and it actually shows that there is a leveling off or even a decrease.

Mr. DosSantos stated Mr. L'Amoreaux' numbers are less compared to the 2010 McMahan Study. Mr. L'Amoreaux stated it is not 548 either.

Mr. Smolow stated Page 9 of Mr. L'Amoreaux' Report discusses numbers matching up exactly in terms of the westbound traffic at the I-95 ramp and there is an exact same traffic count five days later at a different hour at the next intersection. Mr. Smolow asked Mr. L'Amoreaux has an opinion as to whether that is unusual; and Mr. L'Amoreaux stated it is unusual for count data to match up to the exact vehicle when you take the counts a week apart and the peak hours do not coincide. He stated this was something that he picked up when he did the review of the count data.

Mr. Smolow asked Mr. L'Amoreaux if he has an opinion to a reasonable degree of professional certainty as to whether McMahan should have considered the Scudders Fall Bridge improvements in its traffic projections.

Mr. VanLuvanee Objected and stated he could give his professional opinion but it could not be to professional certainty. Mr. Bamburak asked Mr. Smolow to rephrase the question.

Mr. Smolow asked Mr. L'Amoreaux if he has an opinion as to whether or not McMahon should have considered the Scudders Falls Bridge improvements in its Report; and Mr. L'Amoreaux stated he believes that McMahon should have included the Scudders Falls Bridge traffic in its Report because during the evening peak hour the additional volume from the Bridge is twice the impact of Aria on the southbound right turn lane. He stated Aria's impact is 34, and the Scudders Falls Bridge is 70 so it is twice the size. Mr. Gruen stated this is regardless of whether they widen the Bridge or not; and Mr. L'Amoreaux stated the only way to include it would be if they widened the Bridge. He stated when the Bridge is widened, they will see this additional 70 cars. Mr. L'Amoreaux stated he believes that the Bridge is going to be constructed from looking at the Bridge's Website and the Press Releases, and this has to be taken into account.

Mr. Smolow stated one of the questions in this case is whether or not the Applicant meets the Township's requirements for a Special Exception. Mr. Smolow read Section 200-98 3b of the Zoning Ordinance which requires, "that the proposed location of a public, industrial, or commercial use is suitable with respect to probable effects on highway traffic and that it is suitable with respect to adequate access arrangements in order to protect major streets and highways from undue congestion and hazard." Mr. Smolow asked Mr. L'Amoreaux whether Aria's proposed use with its proposed improvements taking the Scudders Falls into consideration, complies with the Zoning Ordinance requirements he just read.

Mr. VanLuvanee Objected and stated this is a question for the Board to determine based on the evidence the Board hears.

Mr. Bamburak Overruled, and stated they want to hear Mr. L'Amoreaux' opinion.

Mr. L'Amoreaux stated he does not feel it meets the requirements of the Zoning Code of Lower Makefield Township.

Mr. Smolow asked Mr. L'Amoreaux if all the opinions he expressed tonight were to a reasonable degree of professional certainty, and Mr. L'Amoreaux agreed. Mr. Smolow asked if all the opinions in his Report identified as Exhibit RAFR 9 were to a reasonable degree of professional certainty, and Mr. L'Amoreaux agreed.

Mr. Zamparelli stated this opinion is based on PennDOT not coming in and adjusting the lights for a better flow of traffic. Mr. L'Amoreaux stated his opinion is based on no changes being made by PennDOT. Mr. Zamparelli stated this could make a huge difference, and Mr. L'Amoreaux agreed. Mr. Zamparelli stated if the lights are coordinated properly in areas where they cannot widen lanes or add lanes, they are able to do this fairly successfully; and Mr. L'Amoreaux agreed.

Mr. Smolow offered into Evidence RAFR 9, 10, and the two clips that are part of RAFR 11.

Mr. VanLuvanee stated he has already Objected to the two clips. He stated if they are clips are going to be admitted, he asked that the Board ask Mr. Smolow and Mr. L'Amoreaux to provide copies to counsels so that they can be evaluated between now and the next Hearing. He stated if he finishes his cross examination of Mr. L'Amoreaux today, he may call a rebuttal Witness.

Ms. Kirk asked that Mr. Smolow provide the DVDs at least one week before the next scheduled Hearing to all counsel, and she requested two copies for herself as she suspects this matter may go back up to Appeal. Mr. Smolow agreed to do so.

It was agreed to admit Mr. Smolow's Exhibits at this time.

Neither Mr. Koopman nor Mr. Truelove had any questions for Mr. L'Amoreaux at this time.

Mr. VanLuvanee stated Mr. L'Amoreaux referred to the McMahan Traffic Impact Study of 2008 which is Exhibit A-6. Mr. VanLuvanee stated he believes that at some point in his Testimony this evening, Mr. L'Amoreaux stated that the Scudders Falls Bridge Improvement Project would probably add twice the traffic to the southbound I-95 ramp as the Hospital would add, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated he looked at the McMahan Study while Mr. L'Amoreaux was testifying, and if he compared Figure 6 on Page 14 with Figure 11 on Page 20, Figure 6 being the 2009 future weekday afternoon peak hour traffic volume without development and Figure 11 being the 2009 future weekday afternoon peak hour traffic volume with development, and looking at the southbound ramp, the difference between the numbers is 34 vehicles; and Mr. L'Amoreaux agreed.

Mr. VanLuvanee stated Mr. L'Amoreaux sat through most of the traffic Testimony during the Remand, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated Mr. L'Amoreaux heard a lot of discussion about what additional developments should or should not have been included in McMahan's counts, and Mr. L'Amoreaux agreed. Mr. VanLuvanee asked Mr. L'Amoreaux if he feels that the Scudders Falls Bridge Improvement Project is somewhat similar to another development and does he agree that in his opinion he should add any additional trips that will impact the southbound ramp resulting from the Scudders Falls Bridge into the Study count, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated he understands that Mr. L'Amoreaux feels that McMahan should have considered that project just like Mr. Wursta indicated McMahan should have considered some of the Newtown Township projects, and Mr. L'Amoreaux agreed that he feels they should have considered the Scudders Falls Bridge Project.

Mr. VanLuvanee asked Mr. L'Amoreaux if he was doing a Traffic Study, and he was following the guidelines of the Subdivision and Land Development Ordinance for Lower Makefield Township and assuming that the Scudders Falls Bridge Improvement Project was within a half mile of the 332/I-95 Interchange, when he did his analysis of the traffic in 2019, he would have added the Scudders Falls Bridge traffic to the analysis of the 2019 traffic without development, and Mr. L'Amoreaux stated he would.

Mr. VanLuvanee stated to compare the impact of the Aria Hospital project, since that Scudders Falls Bridge Project would have been in his background assumption, the difference then would have been to add 34 trips at the ramp to evaluate the difference between what the Aria Hospital project would make on the southbound interchange.

Mr. Smolow Objected and stated the preceding question did not ask the Witness to assume the Scudders Falls Bridge Improvements require the background increase in traffic volume.

Mr. VanLuvanee stated within the traffic that would be at that interchange without development scenario in 2019, because he would have assumed that the Scudders Falls Bridge Improvement Project was built. Mr. L'Amoreaux stated he would agree that he believes that the Scudders Falls Bridge will be constructed in 2019. Mr. VanLuvanee stated this was his question.

Mr. VanLuvanee stated one of the differences between 2009 and 2019 is that Mr. L'Amoreaux would have assumed that the Scudders Falls Bridge improvements were in place, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated any additional traffic that results from or any decrease in traffic that may result from those improvements would have been factored into his numbers, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated Mr. L'Amoreaux would then add the Aria Hospital traffic in order to do the analysis. Mr. L'Amoreaux asked for clarification, and Mr. VanLuvanee stated if he did what McMahan did and did a future weekday afternoon traffic volume with the development, the development being Aria Hospital, he would take the Aria Hospital traffic and add it to what he had already projected to be there in 2019, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated that would mean that there is a difference of 34 vehicles at the Interchange generated by the Hospital on the southbound exit ramp, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated this is the only traffic movement he studied, and Mr. L'Amoreaux stated this was the only movement that they have gone over this evening.

Mr. VanLuvanee noted page 112, Line 13 of the Transcript of 2/28 meeting,

Mr. Smolow asked Mr. L'Amoreaux a question as follows:

Mr. Smolow: And did you focus your project on the I-95 southbound ramp at the 332 By-Pass:

Mr. L'Amoreaux: (Line 15) Most exclusively. Yes I did.

Mr. Smolow: (Line 16) And did you also focus your Study on the weekday p.m. peak hour traffic.

Mr. L'Amoreaux: (Line 18) Yes.

Mr. L'Amoreaux agreed that this was his Testimony.

Mr. VanLuvanee stated Mr. L'Amoreaux would have used a higher traffic count probably based on the average since he assumed McMahan's number is 350 too low, and he would have added Scudders Falls traffic, plus some factor for background growth to get to the 2019 volume without development, and then added the 34 cars that the Hospital project is going to add to the southbound lane, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated then he would have done an analysis to determine what is the difference between the condition without Aria and the condition with Aria as this is the normal technique to follow, and Mr. L'Amoreaux agreed that this is the normal technique. Mr. VanLuvanee stated Mr. L'Amoreaux did not do this, and Mr. L'Amoreaux stated he did not. He stated he analyzed the difference because of the Scudders Falls Bridge traffic and the undercount. Mr. VanLuvanee stated the undercount is a constant the way you would do it in a traffic study, and the number is the number. Mr. VanLuvanee stated he would not argue that it may effect mitigation, but as far as the Hospital, the Hospital is adding thirty-four vehicles, and Mr. L'Amoreaux stated this is apparently true. Mr. VanLuvanee stated Mr. L'Amoreaux did not dispute McMahan's conclusions about the how many additional trips would be distributed onto the southbound I-95 ramp, and Mr. L'Amoreaux stated he did not. Mr. VanLuvanee stated in fact, he stated it was correct per his analysis, and Mr. L'Amoreaux agreed.

Mr. VanLuvanee stated it seems that the relevant analysis would be if there was no Aria development, the change in conditions, background traffic growth, plus the Scudders Falls Improvement on the southbound ramp, what traffic conditions would have been seen and what would have been the Levels of Service without improvements; and Mr. L'Amoreaux did not tell this. Mr. L'Amoreaux asked for further clarification. Mr. VanLuvanee stated they are hypothetically considering 2019, and they have projected the increase between 2009 and 2019 based on his counts rather than

McMahon's. He asked Mr. L'Amoreaux if he evaluated the conditions that would exist without the Hospital traffic assuming the 350 additional cars and assuming the additional traffic from the Scudders Falls Bridge; and he asked Mr. L'Amoreaux to tell the Board what the conditions would be at the southbound ramp going west onto 332 assuming no development of the Hospital by 2019 but assuming the Scudders Falls Bridge Project has been constructed. Mr. L'Amoreaux stated he did not do the specific analysis just described by Mr. VanLuvanee.

Mr. VanLuvanee stated Mr. L'Amoreaux cannot tell the Zoning Hearing Board what difference, if any, it makes when you add 34 vehicle trips from the Hospital project to those numbers and cannot tell whether it makes any difference. Mr. L'Amoreaux stated he can tell them that it will make a difference. Mr. VanLuvanee asked if 34 trips will make a difference in what would be required to mitigate, and Mr. L'Amoreaux stated it does. Mr. VanLuvanee asked him how he knows this; and Mr. L'Amoreaux stated when you get to the level of saturation with traffic, the delays and extents of queuing both in terms of time and length are very "touchy" so when you add as little as 34 vehicles, it can have a profound effect. Mr. L'Amoreaux stated it has an "acetic" effect where just a little bit of additional traffic will increase delay. He stated you can see on the Exhibit RAFR 10 how the delay goes up with only a modest amount of traffic.

Mr. VanLuvanee stated the analysis Mr. L'Amoreaux would have done for 2019 traffic without the Aria Health Project would also have assumed no changes to the intersection and no changes on the By-Pass, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated if you add 34 vehicles but do not make any improvements, then the issue of whether or not the 34 cars do or do not make a significant difference is the question he has just answered. Mr. VanLuvanee stated the Hospital came in and stated they will add a second left turn lane at Stony Hill Road and re-time the signal for the northbound traffic on I-95 exiting onto the By-Pass/332 to increase the gap which is what the Hospital proposed in the McMahon Report. Mr. VanLuvanee asked Mr. L'Amoreaux if he can tell the Board that those improvements that are proposed including adding the second left turn lane will not mitigate the impact of 34 additional vehicle trips on an intersection where he has projected somewhere between 1,000 and 1,100 vehicle trips. Mr. L'Amoreaux stated he wants to make sure he understands the question. Mr. L'Amoreaux stated Mr. VanLuvanee is talking about the double left turn westbound on Stony Hill Road, and Mr. VanLuvanee agreed. Mr. VanLuvanee stated his question is, assuming they do not even factor signal timing in, is Mr. L'Amoreaux testifying that the second left turn lane will not at least mitigate the impact of adding 34 cars to that turning movement from the southbound ramp onto 332.

Mr. Smolow Objected and asked if this is with or without the Scudders Fall Bridge Project. Mr. VanLuvanee stated the only traffic that Mr. L'Amoreaux said he would factor in for 2019 counts assumes the Scudders Falls Bridge improvements were constructed and assumed that they were his counts either McMahon plus 350 or some other number, plus whatever background growth he assumed was correct.

Mr. VanLuvanee stated Mr. L'Amoreaux just indicated that his projection would be based on no improvements because it is without development. Mr. VanLuvanee stated Mr. L'Amoreaux also agreed that the proposed Hospital development will add 34 vehicles trips to the southbound ramp; and he is asking him whether the addition of the second left turn lane does not in fact mitigate or more than mitigate the 34 car increase for that turning movement during the peak hour.

Mr. Smolow Objected and stated the question is too compound.

Ms. Kirk stated she feels that what Mr. VanLuvanee is asking is assuming all the numbers and based on whatever counts Mr. L'Amoreaux comes up with, will the second turn lane from Route 332 to Stony Hill be enough to mitigate an additional 34 cars from Aria Hospital. Mr. L'Amoreaux stated he does not believe he can tell. He stated in the capacity analysis sheets supplied with the McMahon 2008 Report, referring to the Sheet entitled, "Frankford Hospital 2019 with Development," the Intersection #3 Newtown By-Pass and Stony Hill Road P.M. Peak" it talks about the 95th percentile queue length and says, "The 95th percentile volume exceeds the capacity and the queue may be longer." Mr. L'Amoreaux stated you get into the issue of whether or not something is mitigated. He stated from a Level of Service standpoint, it may be mitigated; but from the queuing standpoint and the fact that the V/C ratio or volume to capacity ratio is exceeding one, in his opinion this throws the Level of Service analysis "out the window," because Synchro is saying it will calculate a number but the volume to capacity ratio exceeds one and it cannot calculate delay. Mr. L'Amoreaux stated on this basis, he cannot make the conclusion to the Board on whether or not they mitigate because McMahon has not supplied anything for him to come to a reasonable conclusion on in their Report.

Mr. VanLuvanee stated queuing and Level of Service are two separate things, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated Mr. L'Amoreaux just gave an opinion which he said was to "a reasonable degree of professional certainty" that Aria did not meet what he considered to be the requirements of Section 200-98A3c that "the proposed location of the commercial use is suitable with respect to probable effects on highway traffic and suitable with respect to access arrangements." Mr. VanLuvanee stated Mr. L'Amoreaux stated that in his opinion, it was not suitable; and yet he cannot answer a simple question as to whether or not adding 34 cars to the movement, and he only studied one traffic movement out of all the traffic movements that impact this project, he cannot tell whether or not what McMahon proposes does or does not mitigate the impact of those 34 cars. Mr. L'Amoreaux agreed that this is his testimony.

Mr. VanLuvanee stated in Mr. L'Amoreaux' report he indicated on Page 9, Section IX on the toll, and there he recited that "According to the Delaware River Joint Toll Bridge Commission's Traffic Diversion Study of 2011 the most likely toll scenario will be low toll fee structure charging \$1," and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated he also indicated, "Assuming a low toll scenario the Study concludes that there will be minimal impact to adjacent roadway and bridge crossings within the region for both peak and non-peak periods," and he indicated he had no reason to disagree with this conclusion. Mr. L'Amoreaux agreed that this is what his Report says. Mr. VanLuvanee stated he assumes that this was Mr. L'Amoreaux' opinion was when he wrote it, and Mr. L'Amoreaux agreed.

Mr. VanLuvanee noted Page 5 Mr. L'Amoreaux referenced the fact that he looked at the Bridge Commission's Website and looked at the Environmental Assessment and the Addendum to the Environmental Assessment, and Mr. L'Amoreaux stated he did do this.

Mr. VanLuvanee marked Exhibit A-25 which are excerpts from the Addendum to the Environmental Impact Assessment for the I-95/Scudders Falls Bridge Improvement Project dated 11/2011. Mr. VanLuvanee asked Mr. L'Amoreaux if this is the document that he reviewed, and Mr. L'Amoreaux agreed it is.

Mr. VanLuvanee stated he has no Objection to offering the whole Report, but does not feel they need it.

Mr. Smolow Objected and stated Mr. VanLuvanee did Object to offering the entire Environmental Assessment Report; and Mr. VanLuvanee stated it was because there was lack of foundation as to relevance, but now Mr. L'Amoreaux has it in his Report, and he has to cross examine about it now.

Mr. Bamburak Overruled Mr. Smolow's Objection.

Mr. VanLuvanee stated Mr. L'Amoreaux included in his Report that he concluded that it would be inequitable not to put a toll on the Bridge; however, Mr. L'Amoreaux was able to comment on this. Mr. VanLuvanee asked Mr. L'Amoreaux if it is his understanding at the present time that there will be a toll imposed on the Bridge, and Mr. L'Amoreaux stated he does not know if there will be a toll on the Bridge. Mr. VanLuvanee asked Mr. L'Amoreaux the last time he looked at the Website, and Mr. L'Amoreaux stated he looked at it just prior to the last Hearing which would have been about one month ago.

Mr. VanLuvanee noted Exhibit A-25, the fourth page where they discuss tolls. Mr. VanLuvanee stated in the first paragraph, he has highlighted conclusions about "Implementing tolls on the I-95 Scudders Falls Bridge Replacement Bridge was considered." And on the next page, page 13 of the Report, IXA under Traffic, half way

down there is a sentence that reads, “However, as stated in Chapter 3, a no-toll scenario is not financially equitable or feasible.” Mr. L’Amoreaux agreed that he saw both of these statements. Mr. VanLuvanee asked Mr. L’Amoreaux is it fair to say that in his Report he did not consider the impact of tolling on the Scudders Falls Bridge Improvement Projects when he considered the impact of the project itself, and Mr. L’Amoreaux agreed. Mr. VanLuvanee stated Mr. L’Amoreaux used the 2004 Report as the basis for his conclusions, and Mr. L’Amoreaux agreed.

Mr. VanLuvanee noted Page 25 of Exhibit A-25 indicates, “Levels of Service on PA Route 332 Interchange ramps which are adjacent to, but outside of the limits under the proposed action, will operate at Level of Service D in the design year with or without the proposed improvements and under both high toll and low toll scenarios.” Mr. L’Amoreaux stated he did see this. Mr. VanLuvanee asked Mr. L’Amoreaux if he actually considered this section of the Environmental Impact Assessment when he considered the impact of the Bridge in his testimony this evening or in the preparation of his Report. Mr. L’Amoreaux stated he did. Mr. VanLuvanee asked Mr. L’Amoreaux if he agreed with the Conclusion reached in the Report that the PA 332 Interchange ramps would operate at a Level of Service D in the design year with or without the proposed Bridge improvements and under either the high or low toll scenarios, and Mr. L’Amoreaux stated he does not agree with this.

Mr. Smolow Objected and asked what period of time – week day, average, evening peak hour, a.m. peak hour.

Mr. VanLuvanee stated he is asking Mr. L’Amoreaux if he agrees with the statement adding he cannot change the Report because this is what the Report says.

Mr. Bamburak asked Mr. L’Amoreaux to answer the question, and Mr. L’Amoreaux stated he does not agree with it based on what he saw when he did his counts.

Mr. VanLuvanee asked Mr. L’Amoreaux what he saw when he did his counts, and Mr. L’Amoreaux stated he repeatedly saw cars that were stopped in excess of fifty seconds which is the Level for unsignalized Level of Service F. Mr. VanLuvanee stated this is not really what the statement says; and what it says is whether or not the project is built and whether or not it is tolled at a high toll rate or a low toll rate, it is not going to change the traffic conditions on the ramps. He asked Mr. L’Amoreaux if agreed with that statement.

Mr. Smolow Objected and stated the Addendum says what is says.

Mr. VanLuvanee stated he is asking Mr. L’Amoreaux to read the words and then tell whether he agrees with them or not, and Mr. Smolow stated he just said that he did not.

Mr. VanLuvanee stated Mr. L'Amoreaux stated he did not agree that the ramps would operate at Level of Service D, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated he then asked a second question which was leaving the question of Level of Service aside, does he agree with the statement that the southbound I-95 Interchange ramp onto 332 will operate at the same Level of Service with out without the proposed Scudders Falls Bridge improvements under either a high toll or low toll scenario; and Mr. L'Amoreaux stated he does not agree with that statement. Mr. L'Amoreaux stated in his professional opinion a high toll may cause people to stay away from the Bridge, and he does not believe a low toll would cause people to stay away from the Bridge if it were only \$1.

Mr. VanLuvanee stated his opinion is that a high toll may actually reduce the amount of traffic, and Mr. L'Amoreaux stated, "perhaps." Mr. VanLuvanee stated if he read the entire Report, the Report states that the toll would be for southbound traffic and not for northbound traffic; and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated Mr. L'Amoreaux is saying is that if there was a high toll on the Bridge that had to be paid for persons traveling south on I-95, this may reduce the volume of traffic using the Bridge whereas a low toll, which they assumed would be \$1, might not have that impact; and Mr. L'Amoreaux agreed.

Mr. VanLuvanee noted Page 4 of Mr. L'Amoreaux' Report, in Section B it reads, "McMahon Associates 2008 Traffic Impact Study Future Conditions" the sixth line down has an Ordinance citation which states, "This is contrary to the requirements of Section 200-A3A" and he asked if he intended to say, "Section 200-98A3A" or was it some other Section; and Mr. L'Amoreaux reviewed the Zoning Ordinance, and stated he meant Section 200-98A3A.

Mr. VanLuvanee stated in the last sentence of the same paragraph, it states, "SALDO 178 Attachment 5 Section D2 and D5 require the Applicant to consider traffic impact on the proposed highway improvements within a one mile radius of the development," and Mr. VanLuvanee stated when he looked at Tab C it seemed to say one half mile; and he asked Mr. L'Amoreaux if he would agree. Mr. VanLuvanee stated under Study Area under C, it says "one half mile," and Mr. L'Amoreaux agreed that it does. Mr. L'Amoreaux stated it says on the next two pages back, "All existing and proposed public transportation services and facilities within a one mile radius of the site shall also be documented." Mr. VanLuvanee asked Mr. L'Amoreaux how far the Scudders Falls Bridge is from the Aria site, and Mr. L'Amoreaux stated the Bridge itself is over two miles away, but the extent of the improvements is less than one mile. Mr. VanLuvanee stated the Bridge widening itself is more than two miles away, and Mr. L'Amoreaux agreed that this is a fair characterization.

Mr. VanLuvanee asked that they show the two film clips again. The first one was shown. Mr. VanLuvanee stated there is a traffic signal for westbound 332, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated the first signal shows traffic stopping at the signal and then being released and this creates some gaps for southbound traffic exiting onto 332 going west, and Mr. L'Amoreaux agreed. Mr. VanLuvanee asked that the second clip be shown, and Mr. VanLuvanee stated this does not show the traffic being stopped by the traffic signal like the first clip did. Mr. VanLuvanee stated the previous one changed three to four times when they watched it, and he asked why the second clip does not have this. It was noted that the second clip did not have the traffic stopped by the light until about two thirds of the clip had been seen. Mr. VanLuvanee asked why it was stopped three to four times during the first clip but only stopped once two thirds of the way through during the same time frame. Mr. L'Amoreaux stated the reason is the Synchro Program is used to develop the timings you see in Sim Traffic; and when you increase the traffic volume, the length of the cycle will increase because the Synchro Program tries to optimize the signal timing.

Mr. VanLuvanee stated in this case they have minimized the number of gaps so they have minimized the amount of time that the traffic has to exit onto 332 from the southbound I-95 ramp.

Ms. Kirk stated it appears that Mr. L'Amoreaux has indicated that the Program itself automatically makes adjustments for the increased amount of traffic and Mr. L'Amoreaux agreed. Mr. DosSantos asked why it would make adjustments at the light because there is no increased traffic at the light since that traffic flow is a constant at 332 and is not effected by the Hospital project or Scudders Falls Bridge so that should be a constant through both of the clips. Mr. L'Amoreaux stated there is a difference in traffic as Hospital traffic does head westbound across the Bridge to go to the Hospital and some does come from Yardley. He stated there is some additional traffic because of the Scudders Falls Bridge in accordance with the DVRPC Study although it is not a lot. He stated you would see a change in timing of the signal presumably. Mr. Zamparelli stated it does seem like there should be more stops at the southbound ramp to get the queue out. Mr. Zamparelli stated it appears that the Program is flawed. Mr. L'Amoreaux stated he does not believe that the Program is flawed, but he believes the Program represents what actually happens out there and the detector that changes the traffic signal is on the left turn coming out of the I-95 ramp. He stated if there is traffic there, they you will see the light change and people can make the right out of the yield. He stated there is no sensor on the yield. He stated he feels it is representative of what will actually happen.

Mr. VanLuvanee asked Mr. L'Amoreaux if he fed the data into the Program that generated the two clips, and Mr. L'Amoreaux stated he did. Mr. VanLuvanee asked if he has sheets to show the Board exactly what that data was, and Mr. L'Amoreaux stated it is RAFR 10. Mr. VanLuvanee stated the two clips were Scenarios 1 and 4 of RAFR 10, and Mr. L'Amoreaux agreed. Mr. VanLuvanee asked which page has the data they can

look at to see what was fed into the Program, and Mr. L'Amoreaux stated these are just the unsignalized intersection capacity analyses and it does not include the signal.

Mr. VanLuvanee asked Mr. L'Amoreaux if it would not make sense to include the signal since it is an existing condition that clearly impacts the ability of traffic exiting onto westbound 332 from southbound I-95 to get out onto that highway.

Mr. L'Amoreaux stated while it does, he is saying that these are not the sheets that show this, and these are the sheets that show the yield. Mr. VanLuvanee stated the question he asked Mr. L'Amoreaux was where are the sheets that show what he physically put into the Program that generated the clips they have seen tonight, and Mr. L'Amoreaux stated he does not have them at his disposal right now and he would have to furnish this.

Ms. Kirk stated she now understands that RAFR 10 was not the data Mr. L'Amoreaux used for the Program, and Mr. L'Amoreaux stated it was the data that he was using for the right turn for the yield sign.

Mr. VanLuvanee asked Mr. L'Amoreaux if he have to put additional data into the Program in order to generate the two clips seen this evening, and Mr. L'Amoreaux stated he did. Mr. VanLuvanee asked Mr. L'Amoreaux to give an example of what kind of data he had to feed in, in addition to what he has in RAFR 10. Mr. L'Amoreaux stated he has to put in volumes, and Mr. VanLuvanee asked if this would be all the volumes at the whole intersection; and Mr. L'Amoreaux agreed. Mr. VanLuvanee asked Mr. L'Amoreaux if he had to put in the volumes of northbound I-95 traffic exiting onto 332, and Mr. L'Amoreaux stated it did not. Mr. VanLuvanee asked Mr. L'Amoreaux what volumes had to go into the Program, and Mr. L'Amoreaux stated it would be the projected volumes that are anticipated to show up at the intersection. He stated this would be just like the "stick figures" in McMahan's Report. Mr. VanLuvanee asked Mr. L'Amoreaux if he has to tell the software whether or not there are any traffic signals that impact the intersection, and Mr. L'Amoreaux stated you do. Mr. VanLuvanee asked Mr. L'Amoreaux if he told that there was a signal there, and Mr. L'Amoreaux stated he did. Mr. VanLuvanee asked if you have to tell the timing of the signal, and Mr. L'Amoreaux stated you have to tell it the phasing, which is the order of the greens; for example, there is a left turn arrow, and then the through movements. Mr. VanLuvanee asked where he got that information; and Mr. L'Amoreaux stated he got it from direct observation of the signal's operation. Mr. VanLuvanee asked if there were any other signals that had to be input into the software to generate the clips shown; and Mr. L'Amoreaux stated there was not, and it was just this one signal.

Mr. VanLuvanee stated then he pushed a button and the clips were generated, and Mr. L'Amoreaux stated this is correct "more or less." Mr. VanLuvanee stated he did not tell it to make the westbound green on the traffic light longer on Clip 4 than it was on Clip 1, and Mr. L'Amoreaux stated he did not specifically tell it to do that.

Mr. VanLuvanee asked Mr. L'Amoreaux that the longer the green is for westbound traffic on 332, the more it will back up the traffic on the southbound exit ramp from I-95 onto 332, and Mr. L'Amoreaux stated he believes it would be a contributing factor although he does not believe that it would be the sole reason. Mr. VanLuvanee stated additional traffic would back it up too, but when he looked at the clip it looked as if there was almost a continuous green for westbound traffic on 332; and if there had been no light there, that is certainly going to exacerbate the condition of traffic trying to enter onto the By-Pass from the southbound I-95 exit ramp; and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated it would eliminate the gaps, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated the longer the gaps the more cars are going to be able to get onto the road, and Mr. L'Amoreaux stated this was his observation.

A short recess was taken at this time.

When the meeting was reconvened, Mr. VanLuvanee stated there was some question as to whether or not the second of the two video clips did or did not show the second left turning lane that was proposed in the McMahon Report. Mr. VanLuvanee stated in the McMahon Report they proposed extending that lane all the way from Stony Hill Road back to the I-95 Interchange.

Mr. VanLuvanee asked that the second clip be shown again to see whether or not that additional lane is or is not shown. After review of the clip Mr. VanLuvanee stated it appears that they only have two lanes, and Mr. L'Amoreaux agreed.

Mr. VanLuvanee stated Mr. L'Amoreaux talked about "weaving," and Mr. L'Amoreaux agreed. Mr. VanLuvanee asked him what he means by "weaving" as he used the term in his Report and in his testimony. Mr. L'Amoreaux stated weaving means motorists having to traverse one or more lanes side to side within a short distance through other traffic.

Mr. VanLuvanee noted Page 2 of Mr. L'Amoreaux' report, the last full paragraph before I, "Of grave concern is the effect additional traffic will have on weaving traffic movements, that is, traffic that must change one or more lanes in a short distance," and Mr. L'Amoreaux stated this was in his Report. Mr. VanLuvanee asked Mr. L'Amoreaux if he is talking about the additional traffic from the proposed Aria Hospital and Medical Office Building, and Mr. L'Amoreaux stated he is. Mr. VanLuvanee stated the additional traffic they just agreed according to the McMahon Report was 34 vehicles during the p.m. peak hour, and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated Mr. L'Amoreaux testified that will "significantly" effect existing traffic conditions on Interstate 95 southbound ramp and the PA 332 corridor; and Mr. L'Amoreaux stated this is his testimony and he believes this. Mr. VanLuvanee asked if he believes this to a reasonable degree of professional certainty that those 34 cars will do this, and Mr. L'Amoreaux

agreed that this is his testimony. Mr. VanLuvanee stated the total volumes that he projects for the Scudders Falls Bridge traffic and the existing conditions were something over 1,000 vehicles using the southbound ramp during the peak hour, and Mr. L'Amoreaux agreed.

Mr. VanLuvanee stated the Report states, "Of great concern is the effect additional traffic will have on weaving traffic movements," and Mr. VanLuvanee again asked if he is talking about the additional traffic generated by the Aria Hospital and the Medical Office Building; and Mr. L'Amoreaux agreed.

Mr. VanLuvanee asked Mr. L'Amoreaux if he considered the fact that Aria proposes to put in the second left turn lane, and Mr. L'Amoreaux stated he did. Mr. VanLuvanee stated the second left turn lane will shorten the queue of traffic backed up waiting to make a left turn onto Stony Hill Road, and Mr. L'Amoreaux stated this is inclusive since the volume to capacity ratio exceeds one. Mr. VanLuvanee stated while he is not a traffic engineer if there are fifty cars backed up on one lane ready to make a left turn, and he provides two left turn lanes, he would make the assumption that the drivers would disperse equally; and each of those lanes would be cut in half fifty percent of the length that it was before with traffic conditions remaining the same; and Mr. L'Amoreaux agreed. Mr. VanLuvanee stated if he took the queues that would otherwise exist and reduce them by 50%, it makes it easier for someone to cross two lanes of traffic because they are no longer blocked and they can get in the lane earlier and do not have to try to wait for a hole in the existing queue. Mr. L'Amoreaux asked Mr. VanLuvanee if he is saying that the end of the queue is closer to the intersection, and Mr. VanLuvanee agreed. Mr. L'Amoreaux stated he does not feel it would necessarily be easier because the operation of the signal is different. He stated today you are allowed to make a left turn on gaps there; but with the double left turn, you are not allowed to do a double left on gaps since it has been tried and it has failed. He stated they will have to hold them back so you will not get twice the capacity when you go to a double left turn lane from a permissive single left.

Mr. VanLuvanee stated you do not get twice the capacity, but you certainly get more capacity; and Mr. L'Amoreaux stated it would depend on how the signal is timed. Mr. VanLuvanee stated when you put in a second left turn lane, the signal timing is going to have to be looked at, and Mr. L'Amoreaux stated it would have to be set at something. Mr. VanLuvanee stated it would take all the movements into consideration, and one of the things it would look at would be cleaning out the queues to the best that could be done without adversely impacting the other traffic movements; and Mr. L'Amoreaux this would be the case if it were constructed.

Mr. VanLuvanee asked Mr. L'Amoreaux if he would agree that PennDOT is not going to allow someone to construct a second left turn lane if it does not improve the existing conditions.

Mr. Smolow Objected as it is hypothetical.

Mr. VanLuvanee stated it is not hypothetical as it is a simple question based on his professional experience.

Mr. Bamburak asked Mr. L'Amoreaux to answer the questions, and Mr. L'Amoreaux stated he did not know what PennDOT was or was not going to allow. Mr. VanLuvanee stated the question was whether in his experience, PennDOT would allow an improvement to be constructed if it was not going to have a positive impact on the traffic movement.

Mr. Truelove Objected and stated there are other factors that mitigate against this which include the other intersections that have not been considered as part of the entire synchronization.

Mr. VanLuvanee stated Mr. Truelove was not the one to whom the question was asked, and if this is Mr. L'Amoreaux' opinion, he could state this.

Mr. Truelove stated he is stating an Objection.

Mr. VanLuvanee stated this is not an Objection, it is an answer to the question.

Mr. Bamburak Overruled the Objection and asked Mr. L'Amoreaux to answer the question based on his experience.

Mr. L'Amoreaux stated based on his experience, PennDOT will ultimately allow an improvement to be made if it benefits the roadway system.

Mr. VanLuvanee stated he had no further questions.

Mr. Truelove stated with regard to the roadway system, how many intersections would it include as far as PennDOT's evaluation, and Mr. L'Amoreaux stated there would be at least as many as are in the McMahan Report. Mr. Truelove stated this would include Lindenhurst Road to the west, I-95 to the east, down to Township Line Road, south on Stony Hill, and perhaps even farther down Stony Hill and even west on 332 beyond Lindenhurst Road, and east of I-95; and Mr. L'Amoreaux stated in his experience, PennDOT will go further into Newtown Township, but that is just an opinion.

Mr. Truelove stated in the Lower Makefield Ordinance the one Sub Section Mr. L'Amoreaux has been asked about a couple times discusses "undue congestion and hazard," and Mr. L'Amoreaux stated he does recall that phrase. Mr. Truelove asked if both volume and queuing contribute to congestion, and Mr. L'Amoreaux stated they do.

Mr. DosSantos stated Mr. L'Amoreaux referred a few times to Section 178 of the Subdivision and Land Development Ordinance and had it tabbed at C. Mr. DosSantos stated part of this talks about the fact that the traffic engineer should consider "future improvements and proposed traffic construction signalization and the information obtained from the 12 Year Highway Capital Program for the Delaware Valley that PennDOT provides," and he asked whether Mr. L'Amoreaux knows whether or not the Scudders Falls Project is provided for in the 12 Year Capital Study; and Mr. L'Amoreaux stated it is typically not because it is not a PennDOT-funded project.

Ms. Kirk stated generally the next Hearing for this matter would be Tuesday, April 17; however, Mr. VanLuvanee has indicated that he is not in the area on that date. She stated he has circulated an e-mail among Counsel to see if anyone objected to the Hearing being held on Tuesday, April 24; and there was no opposition.

Mr. DosSantos moved, Mr. Gruen seconded and it was unanimously carried to Continue the matter to April 24, 2012 at 7:00 p.m.

There being no further business, Mr. DosSantos moved, Mr. Gruen seconded and it was unanimously carried to adjourn the meeting at 10:00 p.m.

Respectfully Submitted,

Jerry Gruen, Secretary