

TOWNSHIP OF LOWER MAKEFIELD
ZONING HEARING BOARD
MINUTES – SEPTEMBER 23, 2008

A meeting of the Zoning Hearing Board of the Township of Lower Makefield was held in the Municipal Building on September 23, 2008. Chairman Malinowski called the meeting to order at 7:10 p.m. noting that the meeting will end at 10:00 p.m.; and if the matter is not concluded by that time, it will be continued to a future meeting.

Those present:

Zoning Hearing Board: David Malinowski, Chairman
 Paul Bamburak, Vice Chairman
 Jerry Gruen, Member
 Anthony Zamparelli, Member
 Paul Kim, Alternate Member

Others: Nancy Frick, Director Zoning, Inspection, and Planning
 Robert Habgood, Code Enforcement Officer
 David Truelove, Township Solicitor
 James Majewski, Township Engineer
 Michael Angelastro, Township Traffic Engineer
 Allen Toadvine, Zoning Hearing Board Solicitor
 Matt Maloney, Supervisor Liaison

Absent: Gregory J. Smith, Zoning Hearing Board Solicitor

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

Mr. Ronald Smolow, attorney, stated he is present to represent the Residents Against Frankford Relocation (RAFR) and he would like the opportunity to participate as a Party. This was acceptable to the Board.

Mr. John Koopman, attorney, stated he is present on behalf of Newtown Township this evening and would like to request Party status on behalf of Newtown Township. This was acceptable to the Board.

Mr. John VanLuvanee, attorney, on behalf of the Applicant stated he has no objection to Newtown Township. He stated at the last meeting they did want to clear up the matter of the organization which Mr. Smolow is representing. He stated one was the nature of the organization, and at the last Hearing it was represented that they are an un-incorporated Association. He stated he would like to know from Mr. Smolow if in fact they are a corporation or if they remain an un-incorporated Association. Mr. Smolow stated they

remain an un-incorporated Association. Mr. VanLuvanee stated according to the Transcript from the last Hearing, Page 19, Line 17 the Chairman stated that he was going to allow Party status for the Residents Against Frankford Relocation, but that they were to provide an updated list of the members by this meeting. Mr. Smolow stated he does have a list of the members, and it has the names and addresses of the residents who are all residents of Lower Makefield Township. There are twenty-one people on the list at the present time. Copies of the list were provided this evening.

Mr. Malinowski stated at the last meeting the Board granted RAFR the ability to cross-examine the Witness who had testified and reserved their right to cross-examine that witness until this evening's meeting assuming they had engaged counsel. He asked if Mr. Smolow would like to cross-examine the witness, Mr. Roy Powell; and Mr. Smolow stated he would like to do so. He stated he had an opportunity to review the transcript late this afternoon and some of the residents had also participated as Parties who had cross examined the witness, and Mr. Malinowski agreed.

Mr. Smolow asked Mr. Roy Powell if he was the CEO of Frankford Healthcare System, and Mr. Powell agreed and stated he has been the CEO for approximately 12 years. In that capacity he approved the Agreement of Sale which was marked as Exhibit A-4. Mr. Smolow asked if he approved this as the prospective purchaser, and Mr. Powell agreed. Mr. Smolow noted the copy of the Agreement he has includes only the first and last page and asked if the Agreement was only for a limited period of time. Mr. Powell stated the Agreement is staged in terms of dollars paid at different periods of time for an ultimate completion of the transaction. He does not recall all the details, although these could be provided. Mr. Smolow asked if there is a renewal period, and Mr. Powell stated he believes the land would ultimately be theirs assuming the dollars are traded in October, but he is not certain. Mr. Smolow stated he would like to know what renewal period they are in.

Mr. VanLuvanee objected stating the only question is whether the Agreement is still in full force and effect and not all the details which are business terms. He stated Standing is established by having an outstanding Agreement of Sale. He stated if the Agreement were to expire, it would be incumbent on them to notify that Standing had lapsed; but at this time it is only incumbent on them to establish that the Agreement is in full force and effect and Mr. Powell testified that it was.

Mr. Malinowski sustained the objection.

Mr. Smolow under direct examination Mr. Powell testified that he "believed" that the Agreement was in full force and effect and he feels he should have the right to cross-examine him on that point. Mr. Toadvine noted the Chairman has sustained the objection.

Mr. Smolow stated the Agreement is with Edward Fleming, and Mr. Powell stated it is with a Mr. Fleming, but he does not recall the first name. Mr. Smolow asked if Mr. Powell knows a Mr. David Fleming, and Mr. Powell stated he was not sure. Mr. Smolow asked if he has ever met or had communication with Mr. David Fleming.

Mr. VanLuvanee objected.

Mr. Malinowski questioned the relevance, and Mr. Smolow stated Mr. David Fleming is one of the owners of the property, and he would like to know if this Witness has had any communication with the owners and whether or not he had authorization from Mr. David Fleming to proceed with the purchase of the property.

Mr. VanLuvanee stated David Fleming is not an owner of this property. He stated the Deed has been recorded from David and Edward Fleming to Edward Fleming approximately two months ago and possibly a current search did not disclose this. He stated they have an update from the Title Company to confirm that the sole owner of the property is Edward Fleming.

Mr. Toadvine noted the Agreement of Sale was marked as Exhibit A-4, and Mr. Smolow stated he does have a copy of this. He stated the Plans submitted with the Application indicated that Mr. David Fleming was an owner. Mr. VanLuvanee stated he would represent that as of today David Fleming is not an owner of the property; and if Mr. Smolow disputes this, he will provide evidence that this is a fact.

Mr. Smolow asked if the Agreement of Sale was approved by the Hospital at a Board meeting, and Mr. Powell stated he believes so but he does not recall the date. Mr. Smolow asked if there are Minutes of that meeting, and Mr. Powell stated he would feel that there are.

Mr. Smolow stated he understands that the proposed building will serve 228 beds, and Mr. Powell stated it is proposed to have 225 beds. Mr. Smolow asked how many beds are in the Falls Township facility, and Mr. Powell stated they are licensed for 184 and they operate at approximately 120 at this time. Mr. Smolow asked if they are licensed at the present time to operate a hospital in Lower Makefield, and Mr. Powell stated they are not. They have no licenses pending at this point to operate a hospital in Lower Makefield.

Mr. Smolow asked about the patients they presently serve at the existing facility and stated he assumes they come from Falls Township, Levittown, Middletown, and Morrisville.

Mr. VanLuvanee objected based on relevance.

Mr. Toadvine stated he feels these questions were already addressed at the prior Hearing. Mr. VanLuvanee stated while they may have, he will continue to object.

Mr. Malinowski asked the relevance.

Mr. Smolow stated he wants to know about the patient base and whether they will continue to be patients of the Hospital and be traveling into Lower Makefield from wherever they live which he feels establishes traffic issues and is relevant to whether or not the Application is in the best interest of the Township.

Mr. Malinowski stated these questions were asked and answered at the last meeting. Mr. Smolow stated even if they were, he still has the opportunity to explore them and is not sure if they were on direct or cross as he did not get a transcript until approximately 4:00 this afternoon. Mr. Malinowski stated the Board does not need to hear this testimony again so he will sustain the objection. Mr. Smolow asked if he will have an opportunity to cross examine the witness on testimony that he had given; and Mr. Malinowski stated while he can cross-examine him on the testimony he has given, the Board has already heard this testimony and does not feel they should have to listen to it again because Mr. Smolow was not at the last meeting. He stated it was made clear at the last meeting to those present from Residents Against Frankford that they had the opportunity at that meeting to cross-examine the witness at that time. He stated the Board does not need to hear the same testimony over again in order to render a Decision. Mr. Smolow stated he is trying to ask questions about the testimony and the only way he can do this is to ask him about what he testified to and then ask him questions about his testimony. Mr. Toadvine stated it is not only that the Board heard the testimony, they also heard extensive cross-examination of that testimony and these questions were addressed already on cross-examination.

Mr. VanLuvanee stated the basis of his objection goes further in that any answer that Mr. Powell would give as to whether or not that individuals who had been patients of the existing facility will become a patient in Lower Makefield would be speculative at best.

Mr. Smolow asked what they intend to do to provide for continuing care for the present patient base in Falls Township.

Mr. VanLuvanee objected and stated what will happen with those patients is not an issue that relates to the Zoning use of this property for a Special Exception.

Mr. Malinowski sustained the objection.

Mr. Smolow stated he understands they propose to have approximately 1500 employees at the new facility, and Mr. Powell stated they anticipate 1300 full-time employees, with another approximately 50 doctors in the medical office space and those doctors would

have approximately 200 employees. Mr. Smolow asked about the staffing of the doctors in the medical office space, and Mr. Powell stated this would be the approximately 200 employees he just noted. Mr. Smolow asked the number of nurses they propose to have on staff, but Mr. Powell did not have a specific number for nurses. He stated they looked at the total number of employees they felt they would have on site so that they could consider the traffic. Mr. Smolow asked if he has a ratio of the nurses to physicians, and Mr. Powell stated he does not. Mr. Smolow asked about the number of technical staff, and Mr. Powell stated he does not have these specific numbers only the total number of employees. Mr. Smolow asked about administrative staff, and Mr. Powell stated they are intending to have as little administrative and overhead individuals there as possible and feel by virtue of their other sites, they will be able to have those individuals at the other location so that they can cut down on the traffic and demand for space. Mr. Smolow asked how many administrative staff they would have on the Lower Makefield site, but Mr. Powell stated he does not have these specific numbers. Mr. Smolow asked about maintenance staff, and Mr. Powell again stated he does not have numbers on specific groups only the aggregate. Mr. Smolow asked if they intend to have security on site, and Mr. Powell stated they do. Mr. Smolow asked how many security personnel they will have on site, and Mr. Powell stated he does not know this specific number.

Mr. Smolow asked how they anticipate the employees will get to work, and Mr. Powell stated he assumes they will drive. Mr. Smolow asked if there is public transportation available, and Mr. Powell stated he is not aware of any.

Mr. Smolow asked if there would be daily deliveries, and Mr. Powell stated there will be. Mr. Smolow asked the number of trips per day for linen service, and Mr. Powell stated while he does not have this specific number, they estimate the total deliveries to be twenty to thirty per day at the most. This would include all forms of deliveries including supplies, linens, food, pharmaceuticals, trash removal, etc.

Mr. Smolow stated the Hospital will generate medical waste on site, and Mr. Powell agreed. Mr. Smolow asked the type of medical waste they will generate, and Mr. Powell stated this question was asked at the last meeting and he indicated he could supply this information to the Township and the information is being examined at this time. Mr. Smolow asked Mr. Powell if he has personally looked into this since the last meeting, and Mr. Powell stated he asked his staff to do it, and the information is still being gathered. Mr. Smolow asked if they will store medical waste on site, and Mr. Powell stated he does not know. Mr. Smolow asked if they store medical waste on site at the current location, and Mr. Powell stated he does not know. Mr. Smolow asked if they have a person in charge of medical waste issues, and Mr. Powell stated they have an individual in charge of materials' management and he suspects that individual would be the responsible individual. Mr. Smolow asked his name and title. Mr. Powell stated the individual's name is John Quinn but he is not sure of his title.

Mr. Smolow asked how medical waste will be removed from the site, and Mr. Powell stated as previously stated they are looking into this and will supply the information to the Township. Mr. Smolow asked if Mr. Powel will be available to testify to these questions once he has the information, and Mr. VanLuvanee stated either Mr. Powell or another employee who is more familiar with it could testify to these questions.

Mr. Smolow stated he sees from testimony that they intend to have the employees work twelve hour shifts; and Mr. Powel stated what he had stated was that they have a number of clinical staff that work twelve hour shifts presently and they anticipate this continuing going forward. Mr. Smolow asked who would be considered “clinical staff,” and Mr. Powell stated it would be nurses and other technical staff. Mr. Smolow asked about hours for other staff, and Mr. Powell stated the majority who are non-clinical work on eight hour shifts. Mr. Smolow asked the hours of the twelve hour shift, and Mr. Powell stated generally it is 7 to 7. The non-clinical hours vary by needs of the organization and could be 8 to 5, 5 to 11 or 3 to 11 depending on the needs of the individual Departments.

Mr. Smolow asked if they will have an ER, and Mr. Powell stated they will with approximately 28,000 visits per year. Mr. Smolow stated this would be approximately 75 per day. Mr. Smolow asked how they projected 28,000, and Mr. Powell stated they are currently at 22,000 to 23,000 and with expanded services and space, and the aging population, they anticipate they will likely grow.

Mr. Smolow noted the Plan indicates there will be a helipad, and Mr. Powell agreed, but he was not sure of the size. Mr. Smolow asked if they intend to operate and maintain a helipad on site, and Mr. Powell stated they currently have a helipad, he is not sure of any hospital that does not have a helipad, and they will have one on this site. Mr. Smolow asked if the purpose of the helipad is to transport patients, and Mr. Powell agreed. Mr. Smolow asked if it is also their intention to transport employees and staff, and Mr. Powell stated it is not. Mr. Smolow asked if they have rules and regulations to prohibit the transportation of employees and staff via helicopter, and Mr. Powell stated while there are none that he is aware of, they have never done this since he has been employed there. Mr. Smolow asked if the helipad is close to the property line with the remaining farmland, and Mr. Powell stated he is not sure. Mr. Smolow asked what precautions they intend to take to prevent soil and dust from going into the air from the air currents generated by the helicopter, and Mr. Powell stated they will take whatever steps are necessary but he is not sure what they would be.

Mr. Smolow asked Mr. Powell if they intend to seek tax exemption for the Hospital portion of the property, and Mr. Powell stated this is correct. Mr. Smolow asked if they did not seek tax exemption, what would be the taxes they would pay, but Mr. Powell did not have this information. Mr. Smolow stated he understands that they are not seeking exemption for the two smaller buildings, and Mr. Powell stated they will not seek tax exemption for the majority of the medical office space although some piece of some of

the medical office space in one of the buildings might have some percentage as non-profit. Mr. Smolow asked if he has the calculations as to what tax savings they will benefit from, and Mr. Powell stated he did not have this information.

Mr. Koopman had no questions at this time.

Mr. VanLuvanee asked Mr. Powell if he has had a chance to review the transcript of his previous testimony, and Mr. Powell stated he did. Mr. VanLuvanee asked if there was any aspect of his testimony which he would like to clarify, and Mr. Powell stated one of the questions posed was about the size of the nursing school. He stated he has learned that it has increased quite dramatically and is now roughly twice the size he thought it was so that there are a little over 200 students and 20 faculty; however, at any given time approximately half the students are in an academic portion and half are in the various hospitals so the total number of individuals associated with the site is still the same number which was noted previously which was 1300 full time employees.

Mr. Kenneth O'Brien was sworn in. Mr. O'Brien stated he is employed by McMahon Associates as a Senior Project Manager. McMahon Associates is a transportation engineering firm. Mr. O'Brien reviewed his education and background. He stated he has worked at McMahon Associates since his graduation in 1994 with a degree in Civil Engineering. He is a registered professional engineer in Pennsylvania and New Jersey. Mr. VanLuvanee asked if his experience with McMahon has been solely in the field of traffic planning and transportation, and Mr. McMahon agreed it has. Mr. VanLuvanee asked if he has represented public sector clients, and Mr. McMahon stated he has and has worked as the transportation engineer for different Municipalities. His firm also represents additional Municipalities and has also represented PennDOT in different projects as well, and he personally has done work for PennDOT. He also represents private sector clients and has been the Project Manager on a number of Wal-Mart projects, both new projects and expansions. He has also worked on office and residential developments for Toll Bros. and WB Homes.

Mr. Toadvine marked as Exhibit R-1 the list of members of Residents Against Frankford's Relocation.

Exhibit A-5 was marked which is a copy of Mr. O'Brien's resume. Mr. VanLuvanee stated on the last page of Exhibit A-5, there is a list of Municipalities and in each of these Mr. O'Brien has been qualified as an expert in transportation engineering, and Mr. O'Brien agreed. He stated this testimony was before Zoning Hearing Boards and other governing bodies including Supervisors.

Mr. O'Brien was offered as an expert in transportation engineering.

Mr. Smolow asked if he has any experience with development of a hospital, and Mr. O'Brien stated he worked as Project Manager on the expansion of the Abington Hospital and also was the Project Manager to determine the traffic that was being generated by the Fox Chase Cancer Center and Jeannes Hospital Complex. Mr. Smolow asked if he testified to any of these Hospital projects, and Mr. O'Brien stated he did not. Mr. Smolow asked if he has any Court experience with respect to any Hospital applications, and Mr. O'Brien stated he does not. Mr. Smolow asked if he has any experience with any heliports or air traffic facilities, and Mr. O'Brien stated he has reviewed some projects in Municipalities that have had a heliport component.

Mr. Smolow asked if he testified at any Zoning proceeding or in Court in this regard, and Mr. O'Brien stated he has not.

Mr. Koopman asked Mr. O'Brien about his involvement with Fox Chase and Jeannes Hospital, and Mr. O'Brien stated they were hired to determine how much traffic was generated by the Hospitals. He stated they are a combined complex and a certain amount of traffic goes through the complex to by-pass some congested roadways. They were hired by the Hospital to determine how much of that traffic was cut-through traffic and how much was being generated specifically by the two hospitals. This traffic did have to do with an existing Hospital not a proposed Hospital, although they were looking to expand.

Mr. Truelove stated with respect to the Fox Chase/Jeanes project, he understands that this Application is still pending; and Mr. O'Brien agreed. Mr. Truelove stated he understands that it is held up in the Zoning process in the City of Philadelphia; and Mr. O'Brien stated he believes this is true but added they were only hired in the initial phase to study the traffic. He stated he is not sure what has held up the project.

There was no objection to Mr. O'Brien being qualified as an expert.

Mr. VanLuvanee asked if McMahan Associates was retained by Frankford Hospital to prepare a traffic impact study with respect to the proposed Hospital and medical office facility which Frankford intends to develop on the Fleming Tract on the corner of Stony Hill Road and the Newtown By-Pass, and Mr. O'Brien agreed. Mr. O'Brien stated he is familiar with the Plan that was filed for the project with the Zoning Hearing Board which was marked as Exhibit A-3.

Mr. VanLuvanee asked Mr. O'Brien to describe the proposed means of ingress and egress to the Hospital campus as shown on Exhibit A-3. Mr. O'Brien showed a power point presentation and stated they took the Plan prepared by the engineers and put it on a power point. Mr. O'Brien stated there are two accesses proposed in conjunction with the development. He stated one access is proposed to intersect Stony Hill Road directly

opposite the access for the Lower Makefield Corporate Center. He stated their recommendation was to align that access directly to create one four-legged intersection so that the intersection could be signalized which would benefit both the proposed Hospital as well as the Lower Makefield Corporate Center. He stated they are proposing a full movement access so all movements can enter and exit the Hospital at that location. The signal is subject to PennDOT approval. Stony Hill Road is a highway under PennDOT jurisdiction at this location. Mr. O'Brien stated they are also proposing a direct access to Newtown-Yardley Road and it will provide for right-in and right-out movements only. It was noted this is also known as the Newtown By-Pass/332. Mr. O'Brien stated they have had preliminary discussions with PennDOT on both of these two access points. Mr. O'Brien stated he discussed it with Fran Hanney at PennDOT who is the individual who will review the Plan when it is submitted to PennDOT and they will need his approval before the accesses to the roadways can be built. Mr. O'Brien stated while he has not reviewed detailed information or the traffic study, Mr. Hanney has generally concurred with the proposal.

Mr. Toadvine objected to this as hearsay.

Mr. VanLuvanee asked if there have been any changes to the proposed locations as a result of the meeting with Mr. Hanney, and Mr. O'Brien stated they made some modifications to the access design, and these are shown on Exhibit A-3.

Mr. VanLuvanee asked Mr. O'Brien if his firm prepared a Traffic Impact Study for the proposed Hospital facility, and Mr. O'Brien stated he did supervise the preparation of that study. Copies of this study were provided this evening. The Traffic Study was marked as Exhibit 6. A copy of the power point presentation was marked as Exhibit A-7.

Mr. VanLuvanee asked Mr. O'Brien which intersections and roadways were included within the scope of the traffic study. Mr. O'Brien noted the various intersections which were reviewed as part of their study as shown on page 2 of Exhibit A-7 noted as Figure 14. The Traffic Impact Study which had been marked as Exhibit A-6 also has Figure 14. Mr. VanLuvanee asked Mr. O'Brien if he prepared the Traffic Impact Study, and Mr. O'Brien stated it was prepared under his supervision.

Mr. VanLuvanee asked the methodology utilized in the preparation of the Traffic Impact Study, and Mr. O'Brien stated they first look at existing conditions, then future conditions without the proposed development, and finally future conditions with the proposed development. He stated in December of 2007 they went to each of the noted intersections and counted the total number of vehicles traveling through those intersections during the weekday morning and weekday afternoon peak periods – specifically 7 to 9 in the morning and 4 to 6 in the afternoon. They then looked at this data to determine at each intersection what the single highest peak hour was within that two hour period that they counted. He noted the peak hour could be different at the

different intersections. He stated for each intersection they look at the specific highest peak hour. Mr. O'Brien stated they then utilized software based on the Highway Capacity Manual to give a grade for each movement at each intersection to give an idea as to how traffic currently operates and give it a level of service. He stated they summarized the level of service based on the existing conditions in Figure 14.

Mr. Gruen asked when they did the traffic counts, and Mr. O'Brien stated it was done between December 15 and December 19, 2007. Mr. VanLuvanee stated in the appendices to the Traffic Study, the actual data are included, and on each of the worksheets the actual dates are noted.

Mr. VanLuvanee asked about the Manual used, and Mr. O'Brien stated it is the Highway Capacity Manual which is published by the Transportation Research Board which is generally used by traffic engineers in order to assign levels of service to traffic movements.

Mr. VanLuvanee asked Mr. O'Brien to summarize what he found at each of the intersections with regard to current traffic conditions. Mr. O'Brien stated when they grade movements at each intersection, they assign a letter grade from A to F with A being very little delay, Level of Service D to be generally acceptable operations, Level of Service E meaning at capacity, and Level of Service F being heavy delay. He stated when they ran the analysis based on the traffic volumes throughout the study area, it was clear that there were heavy traffic volumes. He stated the site is adjacent to I-95 so it makes sense that there is heavy traffic volume with a lot of traffic traveling between 332 and I-95 in both peak hours. He stated the Traffic Analysis indicated that there are some movements in the study area, specifically at the Campus Drive and Lindenhurst Road intersection and the Stony Hill intersection with 332, where there are periods of excessive delay. He stated generally operations throughout the rest of the study area were generally considered acceptable with Levels of Service D or better. He stated left turning movements out of the Corporate Center driveway also operate with heavy delay during both peak hours. He stated without the benefit of a traffic light at that intersection and because of the relatively high traffic volumes on Stony Hill Road it is difficult to make a left turn out of the Corporate Center driveway during both peak hours.

Mr. O'Brien stated the next step is to look at future conditions without the development; and they generally look at the opening year of the site, which for this development was assumed to be 2009. He stated they utilized PennDOT information to estimate how much growth will occur on the roadways based on regional traffic growth. They also contacted the Municipality and were directed to the Internet where they have a Website about the status of land developments in the Township. They looked at this information and determined that there was one site in the vicinity of their site which would be expected to have an impact on their study area, and this was the Capstone Terrace Development. He stated they generated traffic volumes for that development and distributed it through the

study area to determine future traffic volumes in 2009 without the proposed Hospital development. Mr. O'Brien stated they again ran the analysis for each of the intersections in the study area to determine a level grade to see how traffic would operate in the future without the Hospital.

Mr. VanLuvanee asked if the PennDOT traffic growth figure is something which is published, and Mr. O'Brien stated it is in their publication known as Pennsylvania Traffic Data which is a compilation of a multitude of traffic information and they provide growth rates for different types of roadways throughout different Counties in the State. The growth rate for Bucks County was 2.4% per year. This methodology of relying on PennDOT's growth rate for the County is standard methodology for traffic engineers. He added it is also standard to attempt to try to find out whether there are any specific projects that might have an impact on the growth rate.

Mr. VanLuvanee asked Mr. O'Brien if it has been his experience that the fact that a project is proposed is always indicative of the fact that the project will be built, and Mr. O'Brien responded that this is not always necessarily true; but they did take into consideration the project identified on the Township Website which they were directed to by the Township staff.

Mr. VanLuvanee asked what conclusions were reached on future traffic conditions which he would expect to exist without the proposed Hospital and medical office building. Mr. O'Brien noted Figure 15 from the Traffic Impact Study showing 2009 future levels of service without development. He stated this depicts the expected levels of service for each movement at each intersection throughout the study area in 2009 without the proposed Hospital development. He stated conditions are expected to degrade slightly with delays expected to increase slightly throughout the study area, but in general conditions will work similar to how they do today. Mr. O'Brien noted in the morning peak hour at 332 and Stony Hill Road the overall intersection will degrade from a Level of Service D to a Level of Service E. The overall intersection at 332 and Campus Drive/Lindenhurst Road will degrade from a Level of Service E to a Level of Service F.

The third step is to analyze future traffic conditions with the proposed development of the Hospital and medical office buildings. Mr. O'Brien stated in order to estimate how much traffic will be generated by the development, they utilized the Institute of Transportation Engineers' publication – Trip Generation – and this manual is a publication that is a compilation of traffic studies that are conducted at various land uses throughout the Country. They utilized the land use for hospital for the 375,000 square feet of hospital space and the land use for medical office for the remaining 80,000 square feet of space. Mr. O'Brien stated they believe utilizing the hospital information from ITE is appropriate based on studies that McMahan Associates has done at other hospitals in the area. This included the Abington hospital expansion and as part of that process they counted each

of the driveways for the Abington hospital and compared the amount of traffic actually generated based on the counts to ITE projections for a hospital of that size and verified that ITE was similar if not more conservative compared to what they actually counted. He stated the ITE rates were higher than what they actually counted. In addition to Abington Hospital, they also looked at Fox Chase Cancer Hospital and Jeannes Hospital and again the ITE calculation yielded similar results to what they actually counted in the field. He also noted the Pocono Medical Center which was also an expansion project, and they compared the actual counts conducted at the existing facility to the ITE projections for a facility of that size and actual counts were similar to what ITE projected. Mr. O'Brien stated they therefore feel the ITE rates are appropriate for a hospital use. With regard to the medical use, Mr. O'Brien stated he feels they were conservative in breaking out the medical office use as well because the ITE data indicates that a medical office generates traffic at a higher rate than a hospital.

Mr. VanLuvanee asked how they projected which direction traffic is going to go when it leaves a site such as the proposed Hospital. Mr. O'Brien stated they look at existing traffic patterns and utilize that to determine how traffic will come and go to and from the proposed Hospital. Mr. VanLuvanee stated there is no hospital at the site currently, and Mr. O'Brien agreed. He stated what they did was evaluate what percentages of traffic make certain movements currently. He stated this is standard methodology in determine the distribution of traffic from a proposed site.

Mr. VanLuvanee asked the conclusions reached as to future traffic conditions with the development of the site. Mr. O'Brien stated the first step is to take traffic volumes and distribute them throughout the study area. He showed the first table in the power point presentation – Traffic Volume Increases for the Weekday Morning Peak Hour. He stated he has summarized the total volume at various intersections in the study area as well as a few roadway segments in the study area. In the traffic study itself they have figures depicting traffic volumes at each movement at each of the study area intersections.

In the summary he has totaled up all of the traffic volumes from all the movements at specific intersections. He did this for the existing conditions, the opening year conditions without development, and for the opening year conditions with the development. He stated the percentage increase is shown in the last column and it can be seen that the largest increase would be on Stony Hill Road south of 332 and that increase is projected to be approximately 18.5%. He stated the other increases are generally in the vicinity of approximately 5% to 7%. Mr. O'Brien stated the biggest impact will occur on the roadways at the immediate vicinity of the site and as traffic disperses from the site, the traffic volumes will be less.

Mr. O'Brien stated this process was also done for the afternoon peak hour figures which are shown on the sixth page of Exhibit A-7. Mr. O'Brien stated the traffic volume increases are generally about the same as during the weekday morning with the largest increase in the immediate vicinity of the site at Stony Hill Road south of 332 and at the intersection of Stony Hill Road and 332. He stated as you proceed further from the site, the traffic volume increases will be less.

Mr. VanLuvanee asked Mr. O'Brien if there are any traffic improvements which he would recommend in connection with the proposed Hospital and medical office building project proposed. Mr. O'Brien showed a slide which shows what they are recommending including re-striping and widening Route 332 eastbound from the far side of Campus Drive/Lindenhurst Road across the site frontage, and across Stony Hill Road to turn into and become the right-turn on-ramp to I-95 south. He stated there will be three through lanes eastbound from beyond Campus Drive all the way to the I-95 interchange. Currently there are two through lane along this section.

Mr. Malinowski asked who would pay for this, and Mr. O'Brien stated there is an Impact Fee the developer is responsible for. He stated they would recommend that the Impact Fee funds be utilized to do this construction to improve traffic conditions in the area.

Mr. O'Brien stated they are also proposing to provide a second westbound left-turn lane from Route 332 to Stony Hill Road. Currently there is a single left-turn lane there, and it does back up regularly. Traveling westbound there would therefore be two left-turn lanes and two through lanes. He stated the two left-turn lanes would turn into the two receiving lanes that are currently provided on Stony Hill Road. They are also proposing to signalize the access intersection of Stony Hill Road, the proposed Hospital, and the existing Lower Makefield Corporate Center driveway. As part of this, they would have to increase the left-turn lane for vehicles coming south on Stony Hill Road, turning into the Corporate Center. This will require additional widening along Stony Hill Road.

Mr. VanLuvanee stated all the roads on which improvements are proposed are State highways. He stated Mr. O'Brien indicated that Lower Makefield Township has a Traffic Impact Fee and asked if he his familiar with the Traffic Impact Fee Ordinances adopted under the authority of Article 5A of the Municipalities Planning Code; and Mr. O'Brien stated he is. He added that McMahan Associates put together the Traffic Study for Lower Makefield's adoption of the Act 209 Transportation Impact Fee. Mr. VanLuvanee asked Mr. O'Brien the approximate amount that Frankford Hospital will be required to pay as a Traffic Impact Fee pursuant to the Township's Ordinance, and Mr. O'Brien stated they did confirm with CMX that the proposed development in Service Area II in the Township will result in a fee of \$1,752 per peak hour trip. Based on the trips that they are generating during the afternoon peak hour which is 739 trips, the total Impact Fee will be approximately \$1.3 million.

Mr. Kim stated he understands that the fee is generated by their load on the road. He asked the total cost for the road improvements noted by Mr. O'Brien and what would be the Hospital's share of the total cost. Mr. O'Brien stated the \$1.3 million is totally the responsibility of the developer. He stated they have not done a cost estimate for the total roadway improvements. Mr. Kim stated it is possible that the actual costs could be significantly higher than the \$1.3 million. Mr. O'Brien stated it is his understanding that the Applicant has agreed to construct the improvements he has recommended at their cost. He does believe the costs will exceed the \$1.3 million required by the Traffic Impact Fee. He stated the Hospital will pay for the total cost of the road improvements noted.

Mr. VanLuvanee asked if the improvements that have been discussed were made, what would be the resulting traffic conditions. Mr. O'Brien noted Figure 16 – 2009 Future Levels of Service With Development – which summarizes the Levels of Service throughout the study area with the Hospital traffic as well as with the roadway improvements that they are proposing. He stated generally the intersections will operate similar to or better than the conditions without the development due to the additional capacity that is created by the roadway improvements.

Mr. Gruen asked how this will impact the traffic on Stony Hill Road; and Mr. O'Brien stated it will increase delays for vehicles on Stony Hill Road as they will now have to stop for a reasonable period at the new signalized intersection, and the operation of the through traffic on Stony Hill Road will be Level of Service B and C. If the signal is approved, there will be signal timing implemented between the light at the By-Pass, the light at the new intersection, and the light at the intersection of Stony Hill Road and Township Line Road. Mr. Malinowski asked how far apart the lights will be between the proposed signalized intersection and 332, and Mr. O'Brien stated it will be 600', and they would have to have all three lights synchronized. Mr. O'Brien stated currently the lights along 332 are synchronized. Mr. Gruen stated he does not feel they are synchronized and this is part of the problem. Mr. O'Brien stated a project was recently done, although they may not be optimized as much as they should be. Mr. Gruen stated he attended a PennDOT Hearing at the Township and they indicated they are trying to synchronize the lights. He stated they also indicated that the right turn lane going from the By-Pass to Stony Hill Road was supposed to be lengthened. Mr. O'Brien stated they have Plans that show that the signals are interconnected at this point, and their proposed signal would have to be interconnected with the signal on 332 and they would work with PennDOT on interconnections with the other signals in the area.

Mr. VanLuvanee stated under the Zoning Ordinance there are a number of other permitted uses in the Zoning District in which the proposed Hospital is located. He asked Mr. O'Brien if he has looked at some other possible uses that might be developed on the site for the purpose of comparing the proposed traffic generated from a Hospital/medical office use to what might otherwise be constructed on the site. Mr. O'Brien stated he did

do this. Mr. VanLuvanee asked how they do this if they do not have a Plan for these other uses. Mr. O'Brien stated they coordinate with an engineer to find out how much square footage could be provided on the site, and Bollard Engineers did generate a Sketch Plan for them to use to develop a comparison.

Mr. Smolow objected to this line of questioning since it is speculative and there are no other developments proposed for the site. Mr. Malinowski agreed to allow the question.

Mr. O'Brien stated an Office park similar to what is currently on the opposite side of Stony Hill Road (Lower Makefield Corporate Center) could be constructed on the subject site of approximately 420,000 square feet. On the last slide of the presentation is a comparison of the potential trip generation of the proposed medical office use which combines the medical office use and the Hospital together into one and compared it to a 420,000 square foot office park. He stated the office park would generate a little bit more traffic in the morning peak hour than the proposed use, and during the afternoon use, the medical use would generate a little bit more traffic than an office park on the same site. Mr. VanLuvanee noted the office park used for the comparison shows fewer square feet than the proposed medical facility, and Mr. O'Brien agreed. Mr. VanLuvanee asked what would happen if the engineer were able to develop 450,000 square feet of office use.

Mr. Smolow objected, but Mr. Malinowski allowed the question.

Mr. O'Brien stated the trip generations numbers for the office park would go up a little higher.

A short recess was taken at this time. The meeting was reconvened at 8:55 p.m.

Mr. Truelove noted Exhibit A-6 which was included in the larger binder which was previously submitted on behalf of the Applicant. Mr. Truelove asked Mr. O'Brien if he is familiar with the contents of both binders which were submitted to the Township, and Mr. O'Brien stated he has seen aspects but not necessarily everything. Mr. Truelove noted Tab 17 which is the fiscal impact, and Mr. O'Brien stated he did not read this and had no input on it. Mr. Truelove asked if he is aware that according to this document, Frankford Healthcare Systems estimates that approximately 900 people will be working at the proposed facility over three daily shifts, and Mr. O'Brien stated he was told that they expect a total of approximately 1,300 people working at the facility. Mr. Truelove asked if the information he presented this evening was based on the number of employees working at the facility, and Mr. O'Brien stated it was based more on the square footage. He stated they did look at how much traffic could be expected to be generated by the Hospital based on the number of employees and it was similar to how much would be expected to be generated by a Hospital of the size proposed. The number of employees he was relying on was 1300.

Mr. Truelove stated the ITE has different methodologies for computing traffic volume – some based on square footage, some based on employees, and some other methods, and Mr. O’Brien agreed. Mr. Truelove stated each of those may possibly yield a different number depending on the circumstances, and Mr. O’Brien agreed. Mr. O’Brien added that for this use they looked at the square footage for the Hospital, the number of employees for the hospital, and also the number of beds for the Hospital. He stated based on the ITE, the information on the number of beds was pretty low so they did not feel this was appropriate. The trip generation numbers for a hospital of 375,000 square feet was similar to the trip generation numbers for a hospital of 1300 employees. Mr. O’Brien also noted they have done traffic counts at other hospitals where the square footage was the only information they were provided, and the square footage calculations from ITE yielded very similar results to what they counted at those facilities so he does believe that the ITE data based on square footage is appropriate.

Mr. Truelove asked about the facilities he is referring to. Mr. O’Brien stated they were Fox Chase, Jeannes, Abington, Pocono Medical Facility, and Doylestown Hospital. He agreed that these were expansions and not new facilities.

Mr. Truelove stated Mr. Powell had testified that there is no public transportation access to the proposed location in Lower Makefield, and Mr. O’Brien agreed that there is none that he is aware of. Mr. Truelove asked if Mr. O’Brien would agree that the Fox Chase/Jeannes and Abington Hospitals have access to public transportation, and Mr. O’Brien agreed. Mr. Truelove asked if he took this into account when calculating the accuracy of the vehicular traffic with the amount of square footage of the facility, and Mr. O’Brien stated they looked at the ITE projections for vehicular traffic based on the number of vehicles they counted going in and out of those sites.

Mr. Truelove stated he used the phrase Level of Service from A through F and these are summarized in the report. He asked if this is from the Highway Capacity Manual, and Mr. O’Brien agreed. Mr. Truelove stated the Manual actually has specific descriptions for each one of those Levels on the amount of traffic, and Mr. O’Brien stated it is more geared toward delay not necessarily traffic. Mr. Truelove stated it indicates “Level D- represents speeds that begin to decline with increased density, ability to maneuver within traffic stream is noticeably limited.” He asked if this sounds familiar and is an accurate rendition of what the Manual says for Level of Service D, and Mr. O’Brien stated it also says “short” traffic delays. Mr. Truelove stated it does not indicate what “short” is, and

Mr. O’Brien stated it does have numbers of seconds. Mr. Truelove asked the number of seconds for D, and Mr. O’Brien stated he felt Mr. Truelove had indicated B, and added that D is “long” traffic delays, and the number of seconds is 25.1 to 35 seconds.

Mr. Truelove noted for Level E it states, “represents operation at its capacity, vehicles are closely spaced within the traffic stream, and there are virtually no usable gaps to maneuver;” and Mr. O’Brien agreed. Mr. Truelove stated for Level F it states, “represents the breakdown of vehicle flow – this condition exists within queues forming behind the breakdown points;” and Mr. O’Brien agreed.

Mr. Truelove stated even with the proposed improvements, the best at any intersection would result in a Level of Service D, which was the first one he had read, and Mr. O’Brien stated at some intersections, the overall Level of Service will be better. He stated under 2009 with development conditions the I-95 northbound intersection with 332 will be an overall Level of Service C, the I-95 southbound intersection with 332 will be Level of Service A, and at Stony Hill Road and Township Line Road during the morning peak hour, the overall delay will be a Level of Service B. In the afternoon peak hour, those overall Levels of Service will be similar and the northbound ramp intersection, it will be overall Level of Service C, at the southbound ramp intersection it will be overall Level of Service A, and at Stony Hill Road and Township Line Road, it will be Level of Service C. Mr. Truelove asked if these are not the most peripheral intersections relative to the proposed development, and Mr. O’Brien agreed. He stated the other two intersections they focused on during testimony are closer to the site, and they would be at a Level of Service D at best.

Mr. Truelove asked Mr. O’Brien if his analysis took into account the types of deliveries to be made to the facility, and Mr. O’Brien stated his analysis accounted for total traffic that could be expected during the peak hours, and it is assumed that a portion of that will be heavy vehicles. Mr. Truelove asked about emergency vehicles, and Mr. O’Brien stated their study was based on the total amount of traffic coming to and from the site during the peak hours and a portion of that is assumed to be heavy vehicles such as fire trucks, larger delivery vehicles, ambulances, visitors, doctors, patients, etc.

Mr. Truelove asked if he did any analysis of the current traffic flows and traffic volume from the current Frankford facility in Falls Township; and Mr. O’Brien stated they looked to see how much traffic was currently generated by that facility, and they did compare it to ITE trip generation, and the existing facility does generate less traffic than projected by ITE based on the size. This information was not included in the report because based on information they received from the Hospital, it was not necessarily appropriate for what is proposed at this site in Lower Makefield because it is unclear exactly what services will be transferred from the existing site to the proposed site.

Mr. Truelove stated it would seem that some of this is still speculative, and Mr. O’Brien stated he would assume so which is why they utilized publications like the trip generation publication.

Mr. Truelove asked Mr. O'Brien if he could supply the information on the current traffic volumes from the current facility following the Hearing, and Mr. VanLuvanee stated he does not see the relevance of that information since the Witness just indicated that in his opinion, they are not comparable facilities, and the traffic generated is less than is projected for the new site. Mr. Truelove stated his concern is that since they still do not know what types of services will be supplied, they heard that the difference in the emergency room visits will go from 22,000 to 28,000, that there are a number of increased services at the new location, and that there may be shared staff, he feels that it would be relevant to look at these figures to see what they are comparing.

Mr. VanLuvanee stated they did not offer the comparison because they are not comparable. He stated they are dealing with a Hospital, and this is the land use under the Ordinance, and the Ordinance does not speak to or differentiate between types of hospitals. He understands that Mr. O'Brien has testified that ITE does not differentiate either, that they use square footage, and in his experience this is a reasonable way to do this. Mr. VanLuvanee stated he has not seen the figures for the existing facility; but he agreed to look at it and consider Mr. Truelove's request.

Mr. Truelove stated he would make a formal request for it and in response to Mr. VanLuvanee, he stated there has been testimony tonight about other studies for other hospitals which are not close to this proposed facility. He stated based on square footage they also have substantially different vehicular traffic, and he feels it is relevant to have figures on a hospital which is closer and has some of the same facilities and staff; and he feels this would be extremely relevant.

Mr. Toadvine stated this is not something that the Board can compel Mr. VanLuvanee to produce. He stated they do not have formal discovery. Mr. VanLuvanee stated he does not know when the study was done or what was studied, and he would like to be sure that there is some relevance before he agrees to produce it. He will let Mr. Truelove know in advance of the next Hearing whether he is willing to produce it.

Mr. Truelove Mr. O'Brien indicated he obtained information from the Township staff about traffic impact from some surrounding developments either existing or proposed; and Mr. O'Brien stated they were directed by the staff to the Status Sheet on the Internet. Mr. Truelove asked if he recalls the different developments he looked at either proposed or existing, and Mr. O'Brien stated the one they specifically included is listed in their report which is Capstone Terrace. He stated he recalls that the other uses were either very small – two to three lot developments – or not located in close proximity to the site. They looked at sites approximately one half mile from the site. Mr. Truelove asked if they considered the Matrix site which is approximately one and a half miles away, and Mr. O'Brien stated there was nothing on the Status Sheet on the Internet about this site. Mr. Truelove asked about 777 Township Line Road Building which is in existence and within one half mile, and Mr. O'Brien stated here was nothing on the Website about this site. Mr. Truelove noted the Floral Vale Development which was approved for

approximately 100,000 square feet of developed space within one half mile, and Mr. O'Brien stated there was no reference to this on the Internet.

Mr. Truelove Mr. O'Brien if he drove the area to make a determination as to what developments were within one half mile, and Mr. O'Brien stated he is familiar with the area. Mr. Truelove noted going west on 332, and asked if Mr. O'Brien would agree that within one half mile from the proposed Hospital is Lockheed Martin, and Mr. O'Brien stated he is not aware of that site. Mr. Truelove asked if he would agree that the ICT Building is located at the intersection of Lindenhurst and 332, but Mr. O'Brien stated he could not recall this. Mr. Truelove stated it does not appear that he is aware from visual inspection or looking at information from Newtown Township about traffic impact going west to east along 332 from any developments in that area.

Mr. VanLuvanee objected noting Mr. O'Brien testified that he considered the proposed developments – not things that are already in place.

Mr. Truelove asked if Mr. O'Brien is aware that there is any potential expansion of Lockheed Martin, and Mr. O'Brien stated he is not aware of this.

Mr. Truelove noted Mr. O'Brien did mention Capstone as the one development he reviewed for impact on traffic in Lower Makefield within one half mile, and Mr. O'Brien agreed. Mr. Truelove stated he believes the report indicates that the square footage of the Capstone Terrace project is 60,000 square feet, and Mr. O'Brien agreed adding that this was based on the information on the Internet. Mr. Truelove asked if he is aware that it is actually 180,000 square feet, and Mr. O'Brien stated he is not. Mr. Truelove asked if this threefold increase would not change his analysis of the potential impact from Capstone Terrace on the traffic flow in the area, and Mr. O'Brien stated he does not believe that it would significantly change. He stated it is clear that there are high traffic volumes in the area, and the overall impact on the roadways in the area is probably going to be relatively small even if they go from a 60,000 square foot building to an 180,000 square foot building. He stated their proposed development will add 700 trips in the afternoon peak hour and generally only increasing the traffic volumes from 5% to 6%. He stated they did do the traffic counts during a very busy time of the year during the middle of December when traffic volumes on the roadways are higher than usual, and they did account for a growth rate which he feels is conservative for the area. He stated he does not believe adjusting the counts from a 60,000 square foot office building to an 180,000 square foot office building will change the results and conclusions of their study.

Mr. Truelove stated Mr. O'Brien indicated in the report a growth percentage of 2.4% based on a County-wide projection; and Mr. O'Brien agreed. Mr. Truelove asked if he had any information or do any projections for the population of the Municipalities within ten miles of the proposed location, and Mr. O'Brien stated they looked specifically at Lower Makefield Township and it was approximately ½% per year and the employment

growth rate was approximately 1% per year. Mr. Truelove noted the proposed development abuts Newtown Township and asked if they looked at growth rates for Newtown Township, and Mr. O'Brien stated they did at the time, but he does not recall those rates specifically. Mr. Truelove asked Mr. O'Brien if he is aware of the number of vehicles that travel westbound to eastbound in the A.M. peak hour that may be generated from other Municipalities beyond Newtown Township, and Mr. O'Brien stated he expects that traffic volumes throughout the study area are going to grow based on regional growth in the area, and this is why they used the 2.5% growth rate.

Mr. Truelove stated in the immediate region there is Newtown Township, Newtown Borough, Wrightstown, Upper Makefield, Northampton, and Middletown and asked if he looked at the growth rates for any of those Municipalities. Mr. O'Brien again stated they looked at the population and employment growth for those areas although Lower Makefield is the only one he can recall specifically. Mr. Truelove asked if he can compare the growth rates of the other Municipalities to Lower Makefield, and Mr. O'Brien stated they used a growth rate this is consistent with how they do traffic studies throughout the area and how other firms do traffic studies which his firm reviews throughout the area. He stated they utilized a County-wide growth rate based on the roadway type and PennDOT growth rate information. Mr. O'Brien stated they used their own traffic count information but information from PennDOT on the growth rate.

Mr. Truelove asked Mr. O'Brien if he was aware of any other traffic studies in the area from other agencies that may provide information, and Mr. O'Brien stated they are aware of the Bucks County Transportation Study done for the DRVPC. Mr. Truelove asked how that information compared with the information he had, and Mr. O'Brien stated he does not recall specific traffic volumes in that report. Mr. Truelove stated the DRVPC is a recognized agency for relying on information with respect to traffic volumes, and Mr. O'Brien agreed. Mr. Truelove asked if he is aware that there is a proposed Bridge widening project for the Scudder's Falls Bridge, and Mr. O'Brien stated he is vaguely aware of this project. Mr. Truelove stated this has been in the planning stages for several years, and Mr. O'Brien agreed. Mr. Truelove asked Mr. O'Brien if he is aware of any of the traffic studies generated by the Joint Toll Bridge Commission for this project, and Mr. O'Brien stated he is not specifically aware of these studies.

Mr. Truelove stated Mr. O'Brien indicated that the different levels of service express levels of delay, and Mr. O'Brien agreed. Mr. Truelove asked if there is a percentage difference between Levels C and D and asked how they distinguish from one level versus another. Mr. O'Brien stated the methodology detailed in the Highway Capacity Manual determines how to calculate the delay for each movement and once you determine the delay you equate that to a Level of Service. Mr. Truelove asked how they make the cut offs and asked the difference from one level to another level. Mr. O'Brien stated for a signalized intersection a Level of Service A is anything with a delay of less than 10 seconds. B would be 10.1 to 20 seconds, C would be between 20.1 and 35 seconds, D is between 35.1 and 55 seconds, E is 55.1 and 80 seconds, and F is greater than 80 seconds.

Mr. Truelove stated he feels this would depend on volume, and Mr. O'Brien stated it is dependent on volume, the number of lanes on each approach, and the amount of time that a movement is provided. He stated he feels the reason for the delay in this specific area is because almost every movement has very high volume and you must wait a fair amount of time for the amount of green time given to turning lanes and through movements.

Mr. Truelove stated with regard to the existing traffic conditions, Mr. O'Brien indicated that the earliest peak hour was 7 a.m., and Mr. O'Brien stated he was describing going from the peak period to a peak hour and was not specifically referring to the peak hour for the site. He stated at Lindenhurst and 332 the morning peak hour began at 7:45 a.m. and the afternoon peak hour began at 5:00 p.m. He stated at 332 and Stony Hill Road, the morning peak hour began at 8:00 a.m. and the afternoon peak hour began at 4:30 p.m. At Stony Hill and Township Line Road, the morning peak hour began at 8:00 a.m. and the afternoon peak hour began at 4:30 a.m. At I-95 northbound ramps, the morning peak hour began at 7:30 a.m. and the afternoon peak hour began at 5:00 p.m. At the southbound ramps, the morning peak hour began at 7:15 a.m. and the afternoon peak hour began at 5:00 p.m. At Stony Hill Road and the Office Park access, the morning peak hour began at 8:00 a.m. and the afternoon hour began at 4:45 p.m.

Mr. Truelove stated Mr. Powell testified about the proposed shifts that the Hospital and medial office might employ, and the proposed twelve hour shifts would be 7 a.m. to 7 p.m. and the 8 hour shifts would perhaps vary. Mr. Truelove asked based on this information, is it fair to say that the traffic volume would be increased at different hours from what he has described. Mr. O'Brien stated depending on the number of employees that do operate at those other peak times such that if the shift were to occur between 2 and 3 as compared to 4 and 5 he feels the peak volumes during the commuter peaks that would be generated by the site during the peak commuter hours will be less; but they would be higher during other hours of the day. Mr. Truelove stated the facility is a 24/7 365 day facility, and Mr. O'Brien agreed. Mr. Truelove stated it would operate Saturdays and Sundays as well, and Mr. O'Brien agreed.

Mr. Truelove asked about the possibility of shared staff if the existing facility were to continue to operate so that staff would be traveling between the proposed facility and the existing facility on Oxford Valley Road. Mr. O'Brien stated their volumes were based on how much total traffic would be expected to be generated by the proposed site.

Mr. Truelove noted the figures provided for 2009 without the development, and asked if this information was based on 2.4% a year growth, and Mr. O'Brien agreed.

Mr. Truelove asked Mr. O'Brien if he looked at the Lower Makefield Township Comprehensive Plan, and Mr. O'Brien stated he did not. Mr. Truelove noted Figure 15 of the slides and stated without the development the intersection at 332 and Stony Hill Road would degrade from a Level of Service D to Level of Service E in the morning, and

Mr. O'Brien agreed. Mr. Truelove noted 332 and Campus Road will degrade from Level of Service E to Level of Service F, and Mr. O'Brien stated this would be during the morning peak hour.

Mr. Truelove stated Mr. O'Brien discussed traffic volume leaving the facility and going in different directions, and Mr. O'Brien agreed that they did look at how traffic from the site will disperse. Mr. Truelove asked if they considered that many of the employees would be coming from the existing facility in Falls Township, and Mr. O'Brien stated it was not clear at this point which services were going to transfer so it was not clear which employees would be at the new site. Mr. Truelove asked if they had information about the residences of the current employees and how they would travel, would this make a difference in how he would evaluate the traffic flow, and Mr. O'Brien stated if they knew specifically which employees were going to transfer from one facility to the other, it would be helpful; but in this instance it is not clear which employees would transfer. He agreed that this could impact some of his conclusions.

Mr. Truelove stated Mr. O'Brien indicated that he relied on software to do some of the calculations; and Mr. O'Brien agreed adding that it is called Synchro and it calculates delay and Level of Service in accordance with the Highway Capacity Manual methodology. Mr. Truelove asked the definition of vehicle queue length, and Mr. O'Brien stated it is the stacking length of vehicles at the approach to an intersection. Mr. Truelove asked if the software used, Synchro, reflects the existing vehicle queue length; and Mr. O'Brien stated it does calculate how long the queue lengths are based on the volume of vehicles, percentage of heavy vehicles, number of lanes and lane widths, and the amount of green time compared to the total cycle time of the intersection.

Mr. Truelove stated they used 2009 as the year when the traffic comparisons were made, and he asked Mr. O'Brien if it is his understanding that the Hospital, if approved, would be built in 2009; and Mr. O'Brien stated that this was his understanding although he is not sure that this will occur. He stated in the Traffic Study they also has 2019 information which is in accordance with PennDOT requirements. Mr. Truelove asked if he is aware that the PennDOT information in any way relies on any of the other traffic studies he mentioned previously such as the DVRPC or the Joint Toll Bridge Commission; and Mr. O'Brien stated his study was not based on those studies but was based on their own counts and the growth rate percentage they got from PennDOT.

Mr. Truelove asked what the terms "approaches and movements" mean; and Mr. O'Brien stated if you look at the intersection of 332 /Campus Drive/Lindhurst Road, there are four approaches to that intersection – the Campus Drive approach which is the northbound approach, the Lindhurst Road approach which is the opposite side of the street, and two 332 approaches. He stated at 332 and Stony Hill Road there are only three approaches to that intersection. He stated when you look at specific movements, you look at the approaches and how many lanes are provided for a vehicle going in a

separate direction. He stated at the Campus Drive approach, there are three movements – a left-turn lane, a through lane, and a right-turn lane. He stated the eastbound 332 approach has three movements – a single left-turn lane, two through lanes, and a separate right-turn lane. The opposing westbound approach has three movements – a double left-turn lane, two through lanes, and a separate right-turn lane.

Mr. Truelove stated one of the proposed improvements listed was 332 westbound coming from the Campus Drive/Lindenhurst Road intersection, where they have proposed a third through lane. He asked Mr. O'Brien if he was aware that along the whole stretch of road between Campus Drive to Stony Hill westbound, there is an access lane from Lockheed Martin that comes out and merges into the westbound 332 traffic and there is another turn lane that begins shortly after that that goes in the same direction, and Mr. O'Brien stated he is aware of this. Mr. Truelove stated there is another lane that is being used there already, and Mr. O'Brien agreed and added this is why he discussed that they would be re-striping it in some areas and widening it in others. Mr. Smolow stated the drawing they have shows a highlighted improvement of an eastbound lane on 332 and Mr. Truelove agreed that it is eastbound and not westbound. Mr. Truelove asked Mr. O'Brien if he agrees that there is currently traffic that uses that lane along the corridor as it exists, and Mr. O'Brien agreed but added that the traffic volume on the right turn lane is relatively small at this time as during the morning peak hour there are about sixty vehicles making the right turn movement compared to the 1,900 that are in the through lanes and there are 30 vehicles in the right-turn lane in the afternoon peak hour compared to the 1,700 that are in the two through lanes. He stated he is aware after review of the Bucks County Regional Study that the Township did recommend that the right-turn lane be kept in even if a third through lane is constructed; and this is something they would discuss with the Township during the Land Development process. He stated at this point, based on the current volumes, he does not believe the right-turn lane is needed; but they would discuss this with the Township if this is something they would like to see accomplished.

Mr. Truelove asked Mr. O'Brien if he has visually looked at the area from Lockheed Martin where Campus Drive is going eastbound between 4 p.m. and 6 p.m.; and Mr. O'Brien stated they did look at this; but it is not in the report. Mr. Truelove asked Mr. O'Brien if he knows how many employees Lockheed Martin has at that facility, but Mr. O'Brien stated he does not.

Mr. Truelove asked Mr. O'Brien if he looked at any potential traffic impact coming down Lindenhurst Road that may change in the next two years. Mr. O'Brien stated they looked at the total traffic volume at 332. Mr. Truelove asked if he looked at any proposed developments along the Lindenhurst Road corridor that might further impact traffic, and Mr. O'Brien stated he is not aware of any.

Mr. Truelove asked the speed limit on Stony Hill Road along the area between Township Line Road and 332, and Mr. O'Brien stated he believes it is 30 miles per hour.

Mr. Truelove asked about Lindenhurst Road approaching 332, and Mr. O'Brien stated he believes this is also 30 miles per hour.

Mr. Truelove asked if the term "congested" is a technical term, and Mr. O'Brien stated he is not aware of a technical definition of the term "congested." Mr. Truelove asked Mr. O'Brien if he would agree that this is a term that laymen use to describe heavy traffic and slow traffic, and Mr. O'Brien agreed. Mr. Truelove asked Mr. O'Brien if he would consider Level of Service E to be congested, and Mr. O'Brien stated not necessarily. He stated "congested" would be when you get to an area where you have to wait through multiple green lights before you can go through an intersection. He does not believe Level of Service E represents this.

Mr. Truelove stated Mr. O'Brien had discussed synchronizing the different lights at the different intersections, and Mr. O'Brien agreed. Mr. Truelove stated he did not mention the I-95 exit and entrance ramp areas, and Mr. O'Brien stated he understands that the interconnection extends from the I-95 Interchange further to the west into Newtown Township. Mr. Truelove stated if the Township accepts the proposed development as designed, there could be as many as seven signalized areas that would have to be synchronized, and Mr. O'Brien stated based on the information they were given from PennDOT, he believes there are six intersections that are interconnected – the two at the I-95 Interchange, Stony Hill Road, Lindenhurst Road and Campus Drive, Newtown-Yardley Road, and Woodbourne Road. Mr. Truelove asked how far away is the Woodbourne Road intersection from the proposed Hospital location, and Mr. O'Brien stated it is well over a mile. The Newtown-Yardley Road intersection is almost one mile as well. Mr. Truelove stated he understood that Mr. O'Brien did not look more than one half mile away for any of the traffic impact. Mr. O'Brien stated while this is correct, if the project were to move forward, as part of the Highway Occupancy Permit process and the approval for the Signal Permits, they would have to look at the coordination and make sure that the offsets between each of the intersections is set appropriately.

Mr. Truelove stated he understands that the purpose of the synchronization is to assist traffic flow in an area where each intersection is effected by the other in some way, and Mr. O'Brien agreed adding that the purpose is to try to make sure that you do not necessarily stop at each intersection as you drive on the road. Mr. Truelove stated those intersections, according to PennDOT, that are as much as a mile away are affected now. Mr. O'Brien stated these intersections are currently coordinated by PennDOT to try to insure that traffic is flowing as efficiently as possibly through that section of roadway.

Mr. Truelove stated PennDOT's current light synchronization includes intersections that are a mile or more away from this proposed location, and Mr. O'Brien agreed.

Mr. Truelove stated he feels that this indicates that PennDOT recognizes that there is a traffic impact from intersections that are as much as a mile apart from one another.

Mr. O'Brien stated he does not feel this is necessarily true, and he feels they are trying to time the signals as efficiently as possible to get traffic through that corridor as efficiently as possible. Mr. Truelove stated he feels that the reason for synchronization is because you want to make sure that the traffic does not back up somewhere which is affected by one intersection compared to another. Mr. O'Brien stated he feels the point of interconnection is to try to get traffic to move as efficiently through a roadway segment as possible.

Mr. Truelove asked for a definition of "roadway segment," and Mr. O'Brien stated it is a section of a roadway. Mr. Truelove stated PennDOT is looking at a section of a roadway as much as one mile away as having to be synchronized with this area now, and Mr. O'Brien agreed.

Mr. Truelove noted the term "stacking," which he assumes means traffic backing up, and Mr. O'Brien stated it is how long traffic will extend while waiting for a light to turn green at an intersection. Mr. Truelove asked if lights are synchronized for purposes of avoiding stacking if possible, and Mr. O'Brien stated lights are synchronized in order to move traffic through a roadway segment as efficiently as possible. Mr. Truelove asked if this would include avoiding stacking, and Mr. O'Brien stated avoiding stacking into adjacent intersections to the extent possible.

Mr. Malinowski stated he feels these questions have been asked and answered.

Mr. Truelove asked Mr. O'Brien if he would agree that sometimes signals being in close proximity to one another will exacerbate stacking, and Mr. O'Brien stated it could. Mr. Truelove stated Mr. O'Brien indicated that the proposed signal at Lower Makefield Corporate Center and the ingress/egress on Stony Hill Road is about 600' from the intersection of 332 and Stony Hill Road, and Mr. O'Brien agreed. He stated this was an area that they were concerned about early on, and they knew based on the trip generation of the site, that signalization would be warranted in this location. He added that ideally a signal would be further away from 332 and 600' is pretty close; however, they were trying to look at a more global view and realized that if they put the signal directly opposite the Corporate Center Drive, it will benefit that situation as well and this is why they recommended that it be at the proposed location. He stated they coordinated this with PennDOT beforehand, and it will be subject to Township and PennDOT review.

Mr. Truelove stated Mr. Kim asked about the Impact Fee, and Mr. O'Brien calculated that the Impact Fee would be \$1.3 million, but then also indicated that the Hospital would pay for the entire road improvements proposed. Mr. O'Brien stated it is his understanding that Frankford has agreed to pay for the improvements that he has recommended. Mr. Truelove asked if there is an estimate as to how much these improvements will cost, and Mr. O'Brien stated he does not at this time.

Mr. Kim asked what would happen if it was found that they need these improvements, but the Hospital did not proceed. He asked what the Level of Service would be if they made the improvements without the Hospital and asked if it would go to a Level of Service B. Mr. O'Brien stated he had not done this analysis, but he would question who would pay for these improvements if the Hospital did not proceed. He stated it is possible that they could move up one letter grade. Mr. Kim stated if they could go up one letter grade possibly they could achieve an average traffic delay, but questioned if the Township wants to be "average." Mr. O'Brien stated he would not anticipate that conditions would go from a Level of Service D to a B, and would anticipate that it could go up one letter grade based on the existing volumes even with the proposed improvements.

Mr. Malinowski questioned the relevance of these questions since if there is no Hospital, he does not feel these improvements will be done. Mr. VanLuvanee stated the Township would have to condemn the property to make sure that it did not generate any traffic.

Mr. Truelove noted the ITE which was relied on and asked if there is a difference between making calculations based on rates versus equations, and Mr. O'Brien stated the trip generation publication is based on compilation of traffic studies which were done at different land uses throughout the Country where firms such as his go out to hospitals, offices, shopping centers and count the amount of traffic that goes into and out of those sites during the peak hours and they submit that information to ITE and they compile all this information. He stated ITE first looks at all the different data points, and they calculate an average rate which you can utilize to calculate trip generation based on the size, number of beds, units, etc. for the development. If the data points are closer together, they can calculate an equation that can be utilized which is more specific than the rates. Mr. Truelove stated it would appear that an equation would be more specific than a rate, and Mr. O'Brien agreed but noted there are guidelines in the ITE handbook as to when you should use the rates compared to the equations. Mr. Truelove stated Mr. O'Brien indicated that McMahan has participated in supplying some of the information to ITE, and he assumes other professional organizations do as well; and Mr. O'Brien agreed. Mr. Truelove asked if he recalls if McMahan has actually done studies of hospitals for that purpose; and Mr. O'Brien stated they have done studies of hospitals, but he is not specifically aware that they have submitted anything to ITE. Mr. Truelove asked how long ago it would have been done, if McMahan had done this, and Mr. O'Brien stated he does not believe that they submitted to ITE for a hospital.

Mr. Truelove stated Mr. O'Brien discussed the development of an office park for comparison and on Table I on the last slide there is a Note 1 by Office Park, and he asked the significance of this. Mr. O'Brien stated this refers to the specific land use they utilized which was Office Park, Land Use Code 750. Mr. O'Brien read the description of this Office Park Land Use Code. Mr. Truelove stated this assumes ancillary functions such as service stations, banks, etc., and Mr. O'Brien agreed and stated they believe that

this is appropriate based on the existing Center across the street which has a Dunkin' Donuts, an H & R Block, and a bank.

Mr. Truelove asked if he looked at any of the other permitted uses in the Zoning Code for the O/R District to do an analysis of what traffic may be generated by those uses, and Mr. O'Brien stated they looked at just office itself. Mr. Truelove stated there are several other permitted uses including agriculture, cemetery, day-care center, group day-care facility, nursery school/Kindergarten, emergency services, financial services, golf course health of fitness club, nursery/horticulture/greenhouse, or nursing home; and he asked if Mr. O'Brien looked at any of these other uses, and Mr. O'Brien stated he did not.

Mr. Truelove stated he would like the opportunity to continue to question this Witness at a future meeting as he recognizes that they plan to adjourn the meeting at 10:00 p.m.

Mr. Malinowski stated it has been agreed to continue this matter to October 21 at 7:00 p.m. It was noted that the regularly-scheduled time for the Zoning Hearing Board meeting is 7:30 p.m, and Mr. Toadvine stated he feels they are able to start the meeting at 7:00 p.m. since this is the only matter to be considered on that date. He stated it is not necessary to re-advertise this time change. Mr. Toadvine stated those present at that next meeting should be prepared to consider future dates for this matter.

Mr. Smolow asked the procedure for subpoenaing witnesses and the introduction of documents, and Mr. Smolow was advised that he would have to deal with the Solicitor on this.

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

Respectfully Submitted,

David Malinowski, Chairman