

MINUTES  
OAK PARK PLAN COMMISSION  
VILLAGE HALL – COUNCIL CHAMBERS  
JANUARY 29, 2009 - 7:00pm

PRESENT: Chairperson Linda Bolte; Commissioners Deborah Fausch, Gail Moran, Michael Quinn, Susan Roberts, Steve Ruszczuk and David Sokol

EXCUSED: Victor Guarino

ALSO PRESENT: Craig Failor, Village Planner, Attorney Dick Martens

**CALL TO ORDER** Meeting called to order AT 7:15 PM. Roll called.

**CONTINUATION OF OPEN PUBLIC HEARING**

**Pc 08-03 Special Use and Zoning Text Amendment (Light Standards)** The applicant seeks approval of a Zoning Ordinance text to Chapter 3, Article 4, to amend Section **4.5.2AA Light Standards** to allow 100 foot tall light standards for athletic fields in the R-2 Single Family District and R-7 Multiple Family District residential districts as a special use, and Article 3 to amend Section **3.1 Summary Use Matrix** to add the aforementioned use to the reference table. Pursuant to the approval and adoption of Section 4.5.2.AA, the Applicant is also requesting Special Use approval from Section **4.5.2AA** to allow two (2) eight foot tall, one (1) 90 foot tall and one (1) 100 foot tall light standards surrounding their athletic field within the R-2 Single Family District and R-7 Multiple Family District. The Applicant is also requesting one allowance from Section **3.6.5.B.4.a** for the corner side yard setback of a light standard proposed in the southwest corner of the athletic field abutting Linden Avenue at a distance of 4.58 feet where 15 Feet is required. The proposed southeastern most light standard is proposed in the west half of the East Avenue right of way proposed for vacation.

The meeting was called to order at 7pm. Chair Bolte stated that Dr. Thunder would be cross-examined at this meeting, and there would be testimony from Steven Alstead.

**Cross-Examination of Dr. Thunder**

Mr. Keller asked several questions relating to Dr. Thunder's credentials. Mr. Keller brought up the Illinois Professional Engineering Act which he stated would prohibit Dr. Thunder from using the title "Acoustics Engineer." Mr. Keller asked whether Dr. Thunder's use of such title was not unethical and illegal. Dr. Thunder concurred that the use of such title would be incongruent with current policy and said he had no problem calling himself an acoustic "specialist," noting that he had held the title "engineer" in his work with two companies. Mr. Sargis objected to the line of question as Mr. Keller continued. Chair Bolte instructed to Mr. Keller to "move along."

Mr. Keller offered Illinois EPA Noise Emissions regulation number 415ILCS5/25 into evidence as Applicant's Exhibit Number 17. He quoted the ruling as stating that no

board standards for monitoring noise ...shall apply to any organized or professional sports activity except as otherwise provided for... Mr. Keller asked Dr. Thunder if he would be surprised to know that the exception is Wrigley Field. Dr. Thunder said this would make sense. Asked whether the state noise standards would apply to OPRF High School, Dr. Thunder said that would call for a legal interpretation.

Mr. Keller questioned Dr. Thunder whether the measurements and grafts he had developed in this case were based upon recordings taken by Mr. Alstead. Dr. Thunder said this was the case and that it was in accordance with protocol. Mr. Keller introduced Applicant Exhibit Number 18, Title 35 Environmental Protection Act – Noise, Part 8 & 10. Regarding equipment used, Dr. Thunder said he would not lend out an \$8,000 instrument, but that the equipment used by Mr. Alstead was superior to a magnetic tape recorder. Dr. Thunder stated the digital tape recorder is newer than the equipment specified in the act. In response to a question about yearly calibration, Dr. Thunder explained the concept of “traceable calibration.”

Mr. Keller asked if a windscreen was used by Mr. Alstead in making the recording. Dr. Thunder said he did not know. Mr. Keller asked about equipment required by INCE and established that Dr. Thunder did not provide Mr. Alstead a thermometer, barometer, windscreen or anometer. Mr. Sargis objected that these are weather measuring instruments. Dr. Thunder stated that to his knowledge, all requirements were met including the use of a tripod. Dr. Thunder did not know the height of the mike but as regards to angling, this would be automatic due to the way the handle is placed.

Dr. Thunder stated it would not be necessary to stabilize the type of equipment used. Dr. Thunder stated he listened to ambient noise, and that he did not know the wind velocity at the time the measurement was taken. Asked about the geographical data of the area, Dr. Thunder said this data is contained on the first slide of his report. The recording is currently contained on a CD at Dr. Thunder’s office. Mr. Keller asked if correction factors were made. Dr. Thunder said they were not necessary. Mr. Keller again asked Dr. Thunder if he is an acoustic “engineer.” Mr. Sargis objected.

Dr. Thunder stated that small block, continuous data collection was not used. Sampling was done more frequently than ten minute intervals. Dr, Thunder stated that the formula 106 E,F and G are inherent in the computer. Ambient noise measurements were taken on Saturday 9/22 at 6:10 pm; and another late weekend evening at 9:45 pm. These were times without the noise source. Dr. Thunder stated that there are various options given for such measurements in protocols.

Mr. Keller asked if on a sound level graph slide, three Friday night football games in 265 days, would not “hardly be a blip on the graph.” Dr. Thunder agreed. Mr. Keller referred to a question from Commissioner Fausch at a previous meeting, as to whether the peak noise levels at about every twelve minutes, as shown on the chart, might related to el trains. Dr. Thunder did not recall this question but said that momentary peaks will not affect the average noise level.

Mr. Keller brought up a memo written by Dr. Thunder regarding reflection of noise off a school structure, and cautioned that he was not waiving his objection to the admission of this exhibit (Objectors' Number 20.) Dr. Thunder did not recall if the memo was written in response to a phone call from Dr. Abel. Dr. Thunder stated that he did not do measurements on this, but the conclusions are based on acoustic principle. Dr. Thunder agreed that sound moves in waves like ripples in a pond and once the noise bounces off a building, it moves in another direction. In answer to a question from Mr. Keller, Dr. Thunder said that reflected noise would not be masked by direct noise.

Mr. Keller said this concluded his cross examination, but renewed his objection to the admission of Objectors' Exhibit Number 20. Mr. Sargis replied that the exhibit was the opinion of an expert witness. Chair Bolte said the Exhibit would be admitted into evidence.

**Cross Examination Concluded.**

**Break 8:45-8:55pm**

**Redirect Examination of Dr. Thunder**

In response to questions from Mr. Sargis, Dr. Thunder stated that he previously worked at Sargent & Lundy a power plant engineering firm. Regarding the Professional Engineering Licensing Act referred to by Mr. Keller, Dr. Thunder said he did not know if it would apply to forensic engineering as opposed to just design engineering. Dr. Thunder agreed that he was not asked to design a system but to analyze a situation and that in his opinion this would not require an engineering license. Dr. Thunder said he has been doing acoustical work since 1981 or 1982 and that his qualifications had never been challenged. He said he had testified in courts of law as well as before the Illinois Pollution Control Board and his testimony was accepted. M. Keller objected to that question as well as the next one, whether Dr. Thunder has testified before the ZBA (he had) and was over-ruled.

Mr. Sargis asked about Dr. Thunder's testimony to the ZBA regarding numerical standards and sports activities. Mr. Keller's objection was overruled. Dr. Thunder said that noise from organized sporting events is exempt from the standards, but this does not preclude measuring for nuisance. Dr. Thunder stated that the fact that there is no standard does not mean there is no nuisance. Dr. Thunder continued that if there are no standards, then protocol is not applicable.

In response to further questions from Mr. Sargis, Dr. Thunder stated that the equipment he uses does not match up with the technical requirements previously referred to by Mr. Keller. Dr. Thunder stated he uses digital recordings, and that this equipment is simple to use and therefore can be used by non-professionals. Dr. Thunder said he has had dialog with the state regarding the standards being geared to magnetic recorders. According to Dr. Thunder, the state regulations are behind the times.

Mr. Keller objected to a question from Mr. Sargis asking Dr. Thunder about a conversation with an INCE official about the use of the title “engineer.” The objection was sustained on the basis of hearsay.

Dr. Thunder stated that his son, a graduate of Purdue in Acoustics Engineering, gave Mr. Alstead instruction on the use of the equipment. Dr. Thunder said he checked with Mr. Alstead to make sure those instructions were followed, and said that Mr. Alstead recorded a statement of conditions. Dr. Thunder said he supervised the analysis of the recording, taking samples and plotting out a graph. Mr. Keller objected to Mr. Sargis’ question whether Dr. Thunder was operating on a limited budget. The objection was sustained.

Asked about previous experience, Dr. Thunder said he had appeared before other zoning boards and had been employed (and paid) by other municipalities including Hoffman Estates, Gurnee and Palatine.

Dr. Thunder referred to a USEPA document, involving noise assessment. The document, which is still followed, penalizes night noise by ten decibels, according to Dr. Thunder, and is now interpreted by looking as sensitive time zones, when people are at home and want to relax. Dr. Thunder spoke about expectations vs. sporadic sounds and stated that sporadic sounds are more annoying. Dr. Thunder said longer time periods are factored in and there is a weighted average, stating further that a steady sound is different than a sound that varies quite a bit between loud and soft. Mr. Sargis asked Dr. Thunder if the reflection of the sound off the school building would be stronger than direct sound. Dr. Thunder replied this was true.

Mr. Keller objected to a question from Mr. Sargis about conversational decibel levels. Mr. Sargis said this was in relation to a question previously asked by a commissioner. The objection was overruled. A second objection based on scope was overruled. Dr. Thunder stated that a typical conversation distance is 3’ – the issue is how far that noise travels. Reference points for human vocal sound given by Dr. Thunder were 67 decibels (higher level); 70 decibels (loud) and 80 decibels (shouting.)

### **Redirect concluded**

### **Re-cross of Dr. Thunder**

In response to questioning from Mr. Keller, Dr. Thunder said he had made suggestions to someone from the EPA about updating protocols to correspond with new technology and that some changes were made. Asked whether INCE had changed its policy on the title of engineer in response to his concerns, Dr. Thunder said it had not

Commissioner Ruszczyk asked Dr. Thunder about the red bars on the chart and whether they reflect more the crowd noise or the speaker noise. Dr. Thunder said the red bars reflect the speakers and while it might be possible to tell whether it is the crowd noise or the speaker noise that is the loudest; this would be a painstaking process. Commissioner Ruszczyk asked whether a redesign of the sound system could result in the decibel level going down. Dr. Thunder said this would go back to how much of the noise is from the

p.a. and how much from the crowd and said there could be a reduction but it would be hard to say how much. Commissioner Sokol asked whether there are any other industry tools that could be used to mitigate noise. Dr. Thunder said the key is practicality and what can be done to the source, the source here being the fans. To block the path of the sound, a 20' barrier would be needed, according to Dr. Thunder. Dr. Thunder stated that the receiver (of the noise) could be told to keep windows closed, and that a speaker rearrangement would not help significantly. Commissioner Roberts asked where the standards Dr. Thunder referred to came from. Dr. Thunder cited the Illinois Pollution Control Board.

Chair Bolte asked about absorption walls. Dr. Thunder said this would be impractical in an outdoor environment. In response to a question from Commissioner Ruszcyk about directing sound upward, Dr. Thunder stated that speech goes in all directions. Commissioner Roberts stated that her experience was that she was more annoyed by the loudspeakers than by the crowd, and asked if lowering the speakers would not help. Dr. Thunder said that crowd noise contributes most to the loudness.

Commissioner Fausch referred to the graph, showing the ambient noise of a vacuum cleaner at 10' away being the same as that of 3,000 fans, and felt it seemed counter-intuitive. Dr. Thunder spoke about expectations and said that one expects the noise of the vacuum cleaner. Commissioner Fausch noted that expectations can change. Dr. Thunder said that gradual change is easier to adjust to than sudden change.

Commissioner Fausch spoke about the 1300 fans based on estimates from the traffic engineer. Dr. Thunder said that if that number were cut in half, the noise would drop about three decibels. Commissioner Fausch questioned why the 55 decibel limit imposed by the EPA does not apply to organized sports. Dr. Thunder replied that government bodies have to deal with political realities.

Commissioner Moran said the 55 decibels does not apply to Class C property (warehouse, commercial, industrial) which has a 61 decibel limit. (Class A property refers to where people live and Class B refers to where people do business.) Commissioner Moran raised the question about absorbing barriers, like those along highways. Dr. Thunder said those are not sound absorbing, but rather reflect the noise back. Sound absorption involves soft, fluffy materials.) As far as the mitigation of reflected sound, Dr. Thunder said the reflected sound is secondary; the primary noise is direct.

Commissioner Ruszcyk again raised the question of changing expectations over time. Dr. Thunder said there are many considerations in measuring noise, including psychological corrections. Mr. Sargis asked whether a 20 decibel difference would be one people could get used to over time. Mr. Keller's objection to the question as speculation was overruled. Dr. Thunder said he could not speculate, but this would be a very significant change and would have a major impact. As for the impact on children vs. adults, Dr. Thunder said he could not answer that.

**Re-Cross of Dr. Thunder concluded**

Mr. Keller moved for admission of Exhibits 15 through 18. Mr. Sargis objected to admission of the Professional Engineers' Act. The objection was overruled.

**Direct Examination of Steven Alstead**

Mr. Keller noted his standing objection stating that this is the third time this witness would testify.

In response to questions from Mr. Sargis, Mr. Alstead stated that he lives in a town home; that the south field lights were installed in 2002, that the lights usually go one hour or one and a half hours before sunset, routinely during the school year in the fall and spring; that the lights go on earlier if it is cloudy and that they project onto his property. Objectors' exhibit number 25, illumination survey of the south field by Musco was offered into evidence. Chair Bolte questioned the relevance of such exhibit, to which Mr. Sargis replied that it was for comparison to the illumination summary for the proposed lights. Mr. Keller objected that the light design for the south field is totally different. Mr. Martens said the witness can not testify to the veracity of the exhibit. Chair Bolte sustained the objection.

Mr. Alstead stated he took light meter reading on his property and that he has a photo showing what the light from the south field looks like in his bedroom. Mr. Keller objected that the witness stated that the light meter used was not a professional one. Chair Bolte overruled the objection. The photo was entered as Objectors' Exhibit Number 27, and was shown on power point. Mr. Alstead said the photo was taken at 7:21 pm on Marsh 21, 2003, without a flash. He stated the photo was not touched up in any way.

Mr. Keller objected to this testimony on the basis that the appearance if the south field lights is not applicable to this case. Commissioner Fausch asked for clarification on the footcandles reading. Mr. Alstead said the reading is on the bed, and does not pertain to the light itself, but rather the light level on a horizontal surface. He spoke about the vista at the window. Mr. Keller objected this was not pertinent. Chair Bolte overruled the objection. Commissioner Fausch asked whether the direction of the light design proposed is different than that of the south field. Mr. Alstead said it was not, that both point down. Mr. Alstead spoke about what is seen at .25 foot candles. Mr. Keller objected on the lack of basis. The objection was sustained.

Mr. Alstead spoke about going to Evanston to check out the lights, having heard this would be most comparable to the proposed application. He took photos. Mr. Sargis referred to Applicant Exhibit Number 5, the MUSCO Illumination survey. Mr. Alstead said he laid that over a google area map, to show how the light would appear in residents' homes. This was offered as exhibit #27.

Commissioner Fausch questioned the accuracy of the overlay. It was noted that the MUSCO depiction of Lake Street did not match up with that of the Google map. Mr. Alstead said the MUCSCO background map was wrong. Mr. Keller objected. Commissioner Fausch noted that the google map has distortions also. Mr. Keller

objected that the overlay was not accurate. The objection was overruled. Chair Bolte said the commission would take into consideration the noted inaccuracies.

Mr. Alstead noted errors in the MUSCO street plan, including the angle of Lake Street. There was some discussion of foot candle numbers. Commissioner Fausch noted a discrepancy on the overlay regarding bleacher placement and again stated that it looked as if the google map was distorted, not the MUSCO one.

Mr. Alstead submitted photos of the Evanston lights taken last week. These were offered as Objectors' Exhibits 28 and 29. The pictures were displayed on power point. The pictures were taken between 6 and 7 pm on January 22<sup>nd</sup>. He stood on the south end of the football field for the photo of the lit field.

Commissioner Moran said she had also gone to see the lights and asked for clarification. Mr. Alstead said he photographed the unlit field without a flash, and he stated the exposure used. He said Eric Brightfield was with him. Two photos, Objectors Exhibits 30 A & B were entered into evidence, a picture of Linden looking north, and a photoshopped pictures of Linden with the Evanston Field lights superimposed. Objectors' exhibit 31 was introduced, showing the proximity of houses to the Evanston field. (This was taken from the south/southeast corner) Objectors' Exhibit Number 32 showed the Evanston Field Illumination survey superimposed on the Google Oak Park map.

#### **End of direct questioning of Mr. Alstead**

#### **Cross Examination of Ryan Marsh**

Mr. Marsh agreed that APRIL had offered a confidentiality agreement in exchange for the IES data requested, Mr. Marsh stated that the photo he had shown last time of the Evanston field was taken with a flash. Asked whether the photos shown today by Mr. Alstead seem accurate, Mr. Marsh said the accuracy would probably be somewhere between the photos taken by Mr. Alstead and himself. Mr. Marsh stated that Objectors Exhibit 30a seems to show too much glare. Mr. Marsh agreed that the lights proposed would be higher than those for the south field, but that with the use of Light Green, less energy would be used. As for the exact percentage of wattage difference, Mr. Marsh said this was proprietary information, but about 30% less energy would be used compared to the south field. Mr. Marsh agreed that the illumination survey did not take into account ambient light or south field lights. Mr. Marsh said that lights can be programmed to go on at sunset, but that MUSCO does not offer recommendations on timing. Mr. Keller objected to Mr. Sargis' question whether Mr. Marsh would recommend turning on lights after the start of a game, based on being beyond the expertise of the witness.

Mr. Marsh agreed that the software used by MUSCO is proprietary and stated that when doing a design, what he sees on the computer is numbers. Mr. Marsh went on to express confidence in the numbers and said he did not need to look at a rendering of how a field would appear. Mr. Marsh believed that the rendering shown used Google. Asked why the site plan for Oak Park shows Linden going south, Mr. Marsh stated that this was an

auto cad drawing received from either the Village of the high school in 2002. Mr. Marsh stated that the Evanston light standards are 70' and 80'; the Oak Lawn lights are 70' and the Oak Park lights proposed are 80' and 90'.

**End of Cross Examination of Mr. Marsh**

**Re-direct of Mr. Marsh**

Mr. Keller referred to Objector Photo Exhibit Number 28 of the Evanston field and asked the witness whether there was snow on the ground in the photo. Mr. Marsh said there was. Mr. Keller asked how this would affect the accuracy of the lights' appearance. . Mr. Sargis objected on the basis of lack of foundation. The objection was overruled. Mr. Marsh stated that snow reflects a lot of light and causes light to reflect up and out, in this case light would extend higher beyond the field. Mr. Keller asked about range of magnitudes. Mr. Sargis objected on the lack of foundation. The objection was overruled. Mr. Marsh spoke about a 10 to 20% higher light level.

In regard to accuracy of Objectors' Exhibit 30b (depiction of Evanston lights superimposed on Linden), Mr. Marsh stated that the scoreboard is not kept in shadow. Mr. Keller asked whether there would be any way to alter the photograph to accurately depict vertical foot candles. Mr. Sargis objected that the witness is not a photographer. The objection was overruled. Mr. Marsh said he is not familiar with Photoshop and is not sure it can show light values. Mr. Marsh stated that the light reflecting off the snow in the front yards would increase the light.

**Re-cross if Mr. Marsh**

In response to questions from Mr. Sargis, Mr. Marsh again stated that snow could result in a 10 to 20% higher level of light, and this percentage is the same as the range of error in an illumination survey. Mr. Marsh said he did not measure the Evanston field when he took pictures and that he was not aware of any post-installation survey for the south field. He said that the increase of light due to rain reflection is less than that of snow. Asked again about Photoshop's ability to render an accurate depiction of his design, Mr. Marsh said he does not work with it.

**End of Cross Examination of Mr. Marsh**

**Next meeting**

The next meeting is scheduled for February 5<sup>th</sup> at Brooks Middle School. Attendees can enter at 6:45 pm and the meeting must conclude at 9:30 pm. There will be cross-examination of the superintendent and of Mr. Alstead. There was discussion about using the high school instead. Mr. Failor will notify all concerned regarding any change. Since, another matter is scheduled for the commission at the February 19<sup>th</sup> meeting, if there is a need for another meeting on this issue, it will need to schedule for another date.

The meeting adjourned at 12:20 pm.

Liz Melara

Recording Secretary