

August 19, 2010

Mr. William J. Mueller,
Village President, and
Board of Trustees
Village of Lombard

Subject: PC 10-08: Text Amendments to the Zoning Ordinance

Dear President and Trustees:

Your Plan Commission transmits for your consideration its recommendation regarding the above-referenced petition. The Village of Lombard is proposing text amendments to the Lombard Zoning Ordinance, amending Section 155.200 to establish provisions for geothermal systems, rain barrels, cisterns, Small Scale Wind Energy Systems and solar panels, Section 155.212 to establish geothermal systems, rain barrels, cisterns and solar panels as permitted obstructions in certain required yards and Section 155.800 establishing definitions for Small Scale Energy Systems while amending the definition of “Rooftop Mechanical Equipment”.

After due notice and as required by law, the Plan Commission conducted a public hearing for this petition on June 21, 2010. Michael Toth, Planner I, presented the petition. The Zoning Ordinance does not specifically address alternative energy structures. However, one can place such structures on their property as they are considered “accessory structures” to principal uses and regulated as such. Due to increased energy costs and the demand for alternative energy solutions, the Village wishes to take a proactive stance and update the Zoning Ordinance to allow these structures to be placed in their niche locations. Through text amendments to the Zoning Ordinance, solar panels, wind turbines, rain barrels and cisterns would all been given special consideration in order to encourage residents to utilize their beneficial attributes.

During the April 19, 2010 workshop session, the Plan Commission raised a number of issues relative to the proposed text amendments. While the Plan Commission did not raise any issues with geothermal systems, rain barrels and cisterns, there were a number of issues raised pertaining to solar panels and wind turbines (Small Scale Wind Energy Systems). More specifically, the Plan Commission was concerned of the impact that solar panels and wind turbines

could have on residential neighborhoods. With regard to solar panels, it was the Plan Commission's opinion that ground mounted solar panels could produce excessive bulk on a property and roof mounted solar panels could also become an aesthetic issue - if placed too high above the principal structure. The Plan Commission felt that wind turbines could produce unwanted noise, which could have a detrimental impact on surrounding properties. The Plan Commission also instructed staff to look into placing a cap on the permitted number of these devices.

The Plan Commission also recommended that staff research the topic based upon findings of surrounding communities. The proposed text amendments are a result of the Plan Commission comments and findings from surrounding communities. Those communities include: Oswego, IL; Lincolnshire, IL; and, the Wind Energy Task Force of Lake County Communities. Please note, staff did originally propose text amendments relative to *ground mounted* Small Scale Wind Energy Systems; however, those amendments are no longer being proposed. Text amendments particularly relating to ground mounted Small Scale Wind Energy Systems may come at a later date, when more information is available on the structures and when there is an increased demand for such structures.

Mr. Toth indicated that he prepared a PowerPoint presentation in order to provide a visual image for the proposed amendments.

The first slide shows solar panel application examples. For a single family application a five foot (5') pitch would be allowed to accommodate flat roofs. For commercial, industrial, office and multiple family dwellings, a ten foot (10') pitch would be allowed to accommodate flat roofs.

The second slide shows that solar panels having a five foot (5') maximum pitch would be acceptable for single family, attached and two-family dwellings. This pitch allows for the structure itself to be pitched toward the sun.

The third slide shows a ten foot (10') maximum pitch which would be acceptable for solar panels on commercial, industrial, office and multiple-family dwellings. As these structures are not located in residential neighborhoods, the allowable pitch would not be an aesthetic issue.

The next few slides address small scale wind energy systems or wind turbines as it relates to their allowable location, size, height and sound levels. As previously mentioned, ground mounted structures are not being proposed at this time and possibly could resurrect at a later date when more information is available and there is an increased demand.

The first slide shows a few examples of the technology being used. The horizontal wind turbine type is primarily used on wind farms. The vertical type is popular with residential and business uses and does not have the same impact as the horizontal type.

August 19, 2010

PC 10-08

Page 3

Location - This slide shows the acceptable location for roof mounted small scale wind energy systems which will be permitted in all zoning districts as accessory structures. It shall not project into any requisite yard and would have to stay within the buildable area of the lot.

Size – This slide illustrates the allowable size. The maximum rotor diameter will be capped at ten feet (10’).

Mr. Toth mentioned that the amendments being proposed are a culmination of the different languages found. There wasn’t much language found from adjacent communities so in order to be proactive, we used language from the Village of Oswego for the ten feet (10’).

Height – This language came from Lincolnshire in regard to the allowable height of ten feet (10’) above the maximum building height. To capture the essence of the technology, it is crucial to have the structure project above the tree lines in order for it to operate successfully.

Sound Levels – This was taken from the Village of Lincolnshire. On the left of the slide shows what we are proposing and to the right a sound comparison chart was provided from the City of Naperville’s Zoning Ordinance. It gives an example of what decibel levels are on the property.

Appearance and lighting standards were taken from the Oswego model. This allows our building department to have access to these devices for maintenance.

The permitted structures remain the same from the workshop itself as it relates to geothermal systems, rain barrels and cisterns, and solar panels.

We added a definition for small scale energy systems and had to amend the definition for rooftop mechanical equipment to exclude these energy systems.

Concluding, Mr. Toth stated that staff finds that the proposed text amendments meet the standards for text amendments and is recommending approval.

Chairperson Ryan asked if anyone was present to speak in favor or against the petition. There was no one to speak in favor or against the petition.

Chairperson Ryan then opened the meeting for comments among the Commissioners.

Commissioner Olbrysh asked staff to repeat the numbers associated with the amount of sound that comes from air conditioner units versus the wind turbines. Mr. Toth stated that the example gave 60 decibels at 10 feet away. It would be comparable to the number used for setbacks. These structures cannot be placed in interior yards but set back just like an air condenser can.

Commissioner Olbrysh commented that he did not have a problem with solar panels but was concerned about wind turbines. His research indicates that roof mounted wind turbines would have to be a 100’ high tower to do its job; otherwise, with these types of home units it is like prepaying your electric bill for 20 years. On average the cost is \$7,000 - \$10,000 and it would take a long time in order to recoup your investment. He questioned whether any one in Lombard had one. Mr. Toth answered that he wasn’t aware of any residential applications but there are

industrial applications. The height regulation goes back to 30-40' tall so there is clearance from the ground for them to be effective.

Commissioner Olbrysh stated that his research indicates that to be effective they need to be at least 30' above the tree line. He stated that it is good to be proactive but questioned if this type of energy is useful or just for show. He was also concerned about vibration and noise as most of lot widths in Lombard average 60' whereas most of the western communities have larger lots. Mr. Toth answered that was why we excluded ground mounted types. We found that the information pertained to larger lots with different characteristics than Lombard's. We found that what they allowed didn't work here. The technology might evolve in the future to where it can accommodate the smaller lot areas.

Commissioner Olbrysh asked what happens if someone wants to mount one today. Mr. Toth answered that it would be considered an accessory structure and would follow those regulations. Mr. Stilling noted that staff is taking a baby step as we do not know where the technology is going. We would rather take our research and make it available should inquiries arise. As time goes by, we can assess this and if we need to change our code, we can take it into consideration.

Commissioner Olbrysh asked if it was staff's opinion that it was better to do this as a text amendment rather than on a case-by-case basis. Mr. Stilling stated that right now we are being proactive with building provisions and are comfortable with what we have come up with by meeting the intent of the Zoning Ordinance. If someone wants to go beyond that, for instance, have two units instead of one, they would have to get a variation. Mr. Toth added that this would be similar to a pilot program and staff will see where the market takes us. If we find that we have a lot of variations coming through, we can evolve (along with the market) and allow something above and beyond classifying it as an accessory structure.

Commissioner Sweetser stated that this is a great first step and is in favor of it as there is no definitive information about height and cost effectiveness. She suggested that when staff begins to get requests for this technology, that there be as much information available to inform people about statistics and background information. Mr. Toth referenced the green building handbook that was introduced earlier. He added that some municipalities are being reactionary and scrambling to incorporate these elements into their code. He is hoping to see more commitment between the municipalities to share this information with each other. CMAP is currently working to get communities to cull information, but topography will ultimately be the determining factor of what is in demand and what is not.

Commissioner Cooper referred to the table in the staff report, page 3 Section 155.212, water collection, about rain barrels and cisterns. She asked for clarification in that they are not permitted in the front and corner side yards. Mr. Toth answered that it is true, that in the yard itself a rain barrel or cistern could be put on the side of your house. The more buildable area you have the larger the barrel you can have. He explained that the structure cannot encroach more than two feet into the side yard. In the front and corner side yards we do not list it as a permitted encroachment due to aesthetics but there is no specification in the rear yard. Mrs. Stilling added that it depends on the setback of your house – you are allowed a 2' encroachment.

August 19, 2010

PC 10-08

Page 5

Commissioner Cooper stated that she did not see a problem in having them located within the 30' front yard setback because now you are minimizing and prohibiting water collection points around the home.

Commissioner Olbrysh commented that it is good that the Village is taking a proactive approach. He is hoping that everyone will do research to determine if a roof mounted wind turbine is right for them. His research does show that for this area, size does matter. The bigger it is, the better chance of recouping your investment in a shorter period of time.

On a motion by Commissioner Sweetser and a second by Commissioner Flint, the Plan Commission voted 5 to 0 that the Village Board **approve** the text amendments associated with PC 10-08.

Respectfully,

VILLAGE OF LOMBARD

Donald Ryan, Chairperson
Lombard Plan Commission

c. Petitioner
Lombard Plan Commission

H:\CD\WORDUSER\PCCASES\2010\PC 10-08\Referral Letter