

CHAMPAIGN COUNTY ZONING BOARD OF APPEALS NOTICE OF REGULAR MEETING

Date: **October 15, 2009**
Time: **7:00 P.M.**
Place: **Lyle Shields Meeting Room
Brookens Administrative Center
1776 E. Washington Street
Urbana, IL 61802**

**Note: NO ENTRANCE TO BUILDING
FROM WASHINGTON STREET PARKING
LOT AFTER 4:30 PM.
Use Northeast parking lot via Lierman Ave.,
and enter building through Northeast
door.**

*If you require special accommodations please notify the Department of Planning & Zoning at
(217) 384-3708*

EVERYONE MUST SIGN THE ATTENDANCE SHEET – ANYONE GIVING TESTIMONY MUST SIGN THE WITNESS FORM

AGENDA

1. Call to Order
2. Roll Call and Declaration of Quorum
3. Correspondence
4. Approval of Minutes (July 16, 2009; and October 1, 2009)
5. Continued Public Hearings

Case 634-AT-08 Part B. Petitioner: Zoning Administrator

Request: Amend the Champaign County Zoning Ordinance as follows:

1. **Add definitions for “SMALL WIND TURBINE TOWER” and “BIG WIND TURBINE TOWER,” and revise the definition for “WIND FARM.”**
2. **Amend subsection 4.2.1. to allow BIG WIND TURBINE TOWER as a second principal use on lots in the AG-1 and AG-2 Zoning Districts.**
3. **Amend paragraph 4.3.1E. to add new height regulations that apply to “SMALL WIND TURBINE TOWER” and “BIG WIND TURBINE TOWER.”**
4. **In Section 5.2 replace “wind turbine” with “BIG WIND TURBINE TOWER”, and indicate BIG WIND TURBINE TOWER is only authorized as a second principle use on lots in certain Zoning Districts.**

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Case 634-AT-08, Part B. continued:

5. In Section 6.1.3 add new standard conditions for “BIG WIND TURBINE TOWER” that are similar to the standard conditions for a WIND FARM.
6. Add new subsection 7.7 making “SMALL WIND TURBINE TOWER” an authorized accessory use by-right in all zoning districts and add requirements including but not limited to:
 - a. the turbine must be located more than one and one half miles from the nearest municipal zoning jurisdiction; and
 - b. minimum required yards that are the same as for other accessory structures in the district provided that the overall height is not more than 100 feet; and
 - c. an overall height limit of 200 feet provided that the separation from the nearest property line is at least the same as the overall height and authorize private waivers of the separation by adjacent neighbors; and
 - d. a limit of no more than two turbine towers per lot; and
 - e. allowable noise limits; and
 - f. a requirement for engineer certification; and
 - g. a requirement to notify the electrical power provider if interconnected to the electrical grid; and
 - h. a requirement that no interference with neighboring TV, radio, or cell phone reception; and
 - i. a requirement for the removal of inoperable wind turbines.
7. In Section 9.3.1 add fees for SMALL WIND TURBINE TOWER and BIG WIND TURBINE TOWER.
8. In Section 9.3.3 add application fees for BIG WIND TURBINE TOWER Special Use Permit.

6. New Public Hearings

7. Staff Report

8. Other Business

9. Audience Participation with respect to matters other than cases pending before the Board

10. Adjournment

*** Administrative Hearing. Cross Examination allowed.**

2 **MINUTES OF REGULAR MEETING**
3 **CHAMPAIGN COUNTY ZONING BOARD OF APPEALS**
4 1776 E. Washington Street
5 Urbana, IL 61801

7 **DATE:** July 16, 2009 **PLACE:** Lyle Shields Meeting Room
8 **TIME:** 7:00 p.m. **Urbana, IL 61802**

11 **MEMBERS PRESENT:** Doug Bluhm, Catherine Capel, Thomas Courson, Roger Miller, Melvin
12 Schroeder, Eric Thorsland

14 **MEMBERS ABSENT :** Paul Palmgren

16 **STAFF PRESENT :** John Hall, Leroy Holliday, J.R. Knight

18 **OTHERS PRESENT :** Phillip Geil, Herb Schildt, Sherry Schildt, Steve Burdin, Bill Fabian, Mike
19 Miller, Birgit McCall, Ben McCall, Mike Miller

22 **1. Call to Order**

24 The meeting was called to order at 7:03 p.m.

26 **2. Roll Call and Declaration of Quorum**

28 The roll was called and a quorum declared present.

30 **3. Correspondence**

32 None

34 **4. Approval of Minutes (June 11, 2009)**

36 **Mr. Thorsland moved, seconded by Mr. Courson to approve the June 11, 2009, minutes as submitted.**
37 **The motion carried by voice vote.**

39 **5. Continued Public Hearing**

41 **Case 632-AM-08 Petitioner: Mike Trautman Request: Amend the Zoning Map to allow for the**
42 **development of one single family residential lot in the AG-1, Agriculture Zoning District by adding**
43 **the Rural Residential Overlay (RRO) Zoning District. Location: A 1.66 acre tract that is in the East**
44 **Half of the Southwest Quarter of the Southwest Quarter of Section 35 of Newcomb Township and**
45 **commonly known as the land east of Trautman's Section 35 Subdivision approximately at 420 CR**
46 **2425N, Mahomet.**

48 Mr. Hall stated the Supplemental Memorandum dated April 9, 2009, included an e-mail from David Atchley,

DRAFT

1 the Petitioner’s Engineer indicating that the Petitioner has elected to withdraw his case at this time.

2
3 **Case 634-AT-08, Part B. Petitioner: Zoning Administrator Request: Amend the *Champaign County***
4 ***Zoning Ordinance* as follows: 1. Add definitions for “SMALL WIND TURBINE TOWER” and “BIG**
5 **WIND TURBINE TOWER”; and 2. Amend paragraph 4.3.1E. to add new height regulations that**
6 **apply to “SMALL WIND TURBINE TOWER” and “BIG WIND TURBINE TOWER”; and 3. In**
7 **Section 5.2 replace “wind turbine” with “BIGWIND TURBINE TOWER”; and 4. In Section 6.1.3**
8 **add new standard conditions for “BIG WIND TURBINE TOWER” that are similar to the standard**
9 **conditions for WIND FARM; and 5. Add new subsection 7.7 making “SMALL WIND TURBINE**
10 **TOWER”as an authorized accessory use “by-right” in all zoning districts and add requirements**
11 **including but not limited to: (a) the turbine must be located more than one and one-half miles from**
12 **the nearest municipal zoning jurisdiction; and (b) minimum required yards that are the same as for**
13 **other accessory structures in the district provided that the overall height is not more than 100 feet;**
14 **and (c) an overall height limit of 200 feet provided that the separation from the nearest property line**
15 **is at least the same as the overall height and authorize private waivers of the separation by adjacent**
16 **neighbors; and (d) a limit of no more than two turbine towers per lot; and (e) allowable noise limits;**
17 **and (f) a requirement for engineer certification; and (g) a requirement to notify the electrical power**
18 **provider if interconnected to the electrical grid; and (h) a requirement for no interference with**
19 **neighboring TV, radio, or cell phone reception; and (i) a requirement for the removal of inoperable**
20 **wind turbines.**

21
22 Mr. Hall distributed a new handout for the Board’s review. He said that Mr. Knight went to two
23 subdivisions in the County and did an analysis of setback from the nearest principal structure and in the AG-
24 1 Subdivision, with 200 foot wide lots with lot area that is a little larger than one acre, that the 150 foot
25 maximum height appeared to be feasible based on the required separations. He said that the analysis in
26 Penfield, which includes zoning lots consisting of two non-conforming lots with a lot width of 132 feet and
27 lot depth of 130 feet, found that 79 feet would be the maximum height for a wind tower in that area. He said
28 that staff has received comments that the analysis in Penfield may need to be revised due to the potential
29 need for guy wires but at this point, in Penfield, the maximum height may be 80 feet with a maximum rotor
30 diameter of 15 feet. He said that staff has not measured any trees in Penfield but it is assumed that most
31 trees stand between 50 to 60 feet high so this is not uncommon for an area such as this and the height needed
32 to get above the trees generally agrees with the general requirement, which is very common, that the turbine
33 be far enough away from the nearest principal building under separate ownership that it does not pose any
34 problems.

35
36 Mr. Hall stated that staff is not ready for final action for this case at tonight’s public hearing because fees
37 need to be added. He said that if the *Ordinance* stays as it is currently, permitting the small wind turbines
38 will require staff to verify distances to the nearest principal dwelling which is a practice that staff does not
39 perform with any other permit that is issued. He said that the volume of information that is required to
40 permit a small wind turbine tower, as per the current Draft, will require that people submit more information
41 than almost anything else that staff does on a daily basis. He said that as the Board saw in the comparison of
42 other county ordinances, Champaign County is not unique in that situation and almost every county that was
43 reviewed requires this much detail. He said that Macon County is the simplest and in some ways the most

1 restrictive amount of information required in that they do require the minimum separation from the nearest
2 principal dwelling, they do not require engineering certification, and there is no mention of noise limit, they
3 do not require utility company notice, which is legally required, or removal of the wind turbine when it is
4 deemed inoperable. He said that he has not called Macon County to see how their rules are working out but
5 they appear to be getting by with fewer requirements.
6

7 Mr. Hall stated that the changes to the proposed amendment are extensive and therefore the Board may want
8 to walk through those changes. He said that the basic idea was what could be found in the current *Zoning*
9 *Ordinance* to peg the maximum size of a residential wind turbine to and the only thing that was really
10 obvious was the height of accessory buildings. He said that it is not to say that wind turbine rotors and
11 accessory buildings are at all alike in any way but it was a start. He said that he hopes that the Board does
12 not take final action at tonight's public hearing and he would really like to know what they think about the
13 overall limits that have been added to the amendment at this point.
14

15 He said that the limits on rotor diameter and height have been added to the proposed amendment and the
16 allowance of two turbines on one property was bumped up to three acres or more. He said that the more that
17 he thought about the allowance of two turbines on a lot in a subdivision that was less than one acre the more
18 it seemed like a bad idea for neighbors. He said that the requirement of safety balls on guy cables is only
19 necessary on property which is adjacent to farmland and this week he received information as to how many
20 safety balls would be required for a tower. He said that safety balls will also be relevant to met towers. He
21 said that when the Board considers a continuance date he would like to change definition of a wind farm and
22 make it clear that a wind farm is anything that isn't "SMALL WIND" or "BIG WIND." He said that
23 currently the definition has a 10 megawatt cutoff for a wind farm and it is likely that there could be a wind
24 tower that is smaller than 10 megawatts. He said that he regrets adding the 10 megawatt limit earlier and it
25 needs to be eliminated. He said that fees should be included in the advertisement and those fees can be
26 discussed later during the hearing.
27

28 Mr. Hall stated that over one page of text was added regarding what an applicant needs to do in order to
29 identify if there is likely to be electromagnetic interference so that later if someone comes to get a permit for
30 a wind tower there is proof that the applicant has checked into it. He said that almost of the comparison
31 counties have required that any interference be corrected and Ford County went as far as to state in their
32 ordinance that removal will be required if necessary. He said that he is really uncomfortable in have
33 something be "by-right" but subject to required removal if necessary or being concerned about
34 electromagnetic interference in the first place and not giving the applicant any guidance regarding the
35 evaluation. He said that electromagnetic interference can be a problem although he does not know any
36 magic way to identify ahead of time what needs to be done if that is the case and he hasn't found any
37 guidance from any other ordinance in the comparison counties, although they make it an issue, to assist him.
38 He said that he has not had time to check with the comparison counties to see if they have had any
39 complaints about electromagnetic interference from small wind turbines. He said that if staff could find that
40 it is not an issue then, in his opinion, it would be great if it did not need to be included in the *Ordinance*.
41

42 Mr. Hall stated that the State law removes the county regulatory authority for any wind turbine within one
43 and one-half miles of a municipality. He said that Champaign and Urbana are currently trying to draft

1 ordinances for that area outside of their municipal boundary and he is not so naïve to think that we can all
2 three agree on similar standards but to the extent that the Board continues this case staff may have time to sit
3 down with municipal staffs and try, as much as possible, to try to have standards that are as similar as
4 possible because if there is a lot of dissimilarity there will be justification for a variance. He said that it is
5 unusual for all three entities to be working on the same kind of standard at the same time and actually the
6 County is ahead of the municipalities. He said that if the Board would like to slow this case down even more
7 it would give time to allow a more complete cooperation in that regard and he believes that it would be a
8 good thing although just one continuance would allow a little bit of time.
9

10 Mr. Bluhm asked the Board if there were any questions for Mr. Hall.
11

12 Mr. Courson asked Mr. Hall if staff had received any applications for small wind towers within the last six
13 months.
14

15 Mr. Hall stated no. He said that the only application that staff did receive was from Arends Brothers which
16 was received by Urbana.
17

18 Mr. Thorsland asked Mr. Hall if he was aware as to what Urbana gave Arends Brothers.
19

20 Mr. Hall stated that as far as he knows Urbana gave Arends Brothers a permit and they set the turbine back at
21 a minimum distance from the property line, which, with as much land as was available, that was the only
22 issue, therefore that permit was pretty easy.
23

24 Mr. Bluhm asked Mr. Hall if a small wind turbine had been permitted outside of St. Joseph.
25

26 Mr. Hall stated that there have been some agricultural turbines permitted but he does not recall any non-
27 agricultural turbines.
28

29 Mr. Bluhm asked the Board if there were any additional questions for Mr. Hall.
30

31 Mr. Bluhm called Mr. Phillip Geil to testify and Mr. Geil declined to speak at this time.
32

33 Mr. Bluhm called Bill Fabian to testify.
34

35 Mr. Bill Fabian, who resides at 4501 Goldfinch Rd, Champaign stated that he owns Mid-State Renewable
36 Energy Services which contracts solar and small wind energy systems throughout central Illinois. He said
37 that he has been involved in the business since 1998 and established his incorporated business in 2002. He
38 commended the Planning and Zoning staff for proactively addressing a lot of concerns related to residential
39 scale small wind turbines. He said that in his years of working with residential scale unites he has had to
40 address many of the Board's concerns regarding setbacks from property lines, structures and utility
41 easements and clients wanting good standards of construction to bring down the price. He said that he has
42 had to walk away and refuse to initiate several wind energy projects as a result that the project did not meet
43 the standards of many of the items currently being listed in the proposed amendment. He said that as good

1 as the current proposed amendment is he would like to address a few issues.

2
3 Mr. Fabian stated that the requirement of safety balls could cause some hardship and unnecessary expense to
4 some clients. He said that understandably if a wind tower is proposed to be constructed in the area of an
5 airport then they would be necessary within the FAA jurisdictional area but if the tower is to be placed on
6 agricultural farmland where there are adequate setbacks from the property line, as proposed in the
7 amendment, the turbine should be adequately away from any active fly path of a crop duster and the guy
8 wires will be set away from the property line. He said that the possible expense for re-engineering for 9 or
9 12 inch safety balls on a tower does not seem necessary and they will place an added vertical and horizontal
10 load on the guy wires that may not be addressed in the original engineering plans. He said that he would like
11 the Board to amend and fine tune this portion of the proposed amendment. He said that if the Board decides
12 to make the safety balls necessary then please consider the placement because it would nice if the safety balls
13 were only required to be up 50% of the guy wires. He said that if the Board requires such he could explain
14 the added expense and re-engineering of the plans.
15

16 Mr. Fabian stated that he is concerned with the tower fencing and anti-climb devices. He said that the
17 typical monopole and guyed tubular towers cannot be climbed unless they have some sort of climbing rungs
18 on them, which can be removed. He said that for most residential scale wind turbines, typically up to 10
19 kilowatts, do not have climbing rungs and having wrestled around with monopole towers for awhile he can
20 guarantee that they cannot be hung on to. He said that larger monopoles that have climbing rungs on them
21 for the larger than 10 kilowatt turbines can have their climbing rungs removed. He said that lattice towers
22 should have some type of anti-climb device on them and those devices can be readily obtained. He said that
23 it would be good for the Board to differentiate the types of towers when requesting anti-climb devices or any
24 type of fencing that is required. He said that Mr. Hall spoke about the EMI interference and most reputable
25 turbine companies have their turbines and invertors certified under E1 and EEE guidelines and that also
26 includes FCC Part 15 standards for any kind of interference which is typically short range. He said that in
27 the past any interference that has come off of any turbine has been typically confined to larger turbines with
28 metal blades and most residential turbines which are below 10 kilowatts use a carbon fiber or fiberglass
29 blades with low reflectivity as far as any radio signals. He said that with the metal casings surrounding the
30 rotors and the armatures, the induction motors are permanent magnetic induction alternators of the turbines
31 that typically provide the necessary shielding to eliminate any kind of problems. He said that to have a
32 homeowner or the homeowner's contractor contact every radio station, METCAD, Verizon, ATT, or
33 whoever would also create a hardship. He said that normally it would be a liability on an installer to put in a
34 gridline system without obtaining approval from the utility because the utility will pull the meter which will
35 make the homeowner very unhappy. He said that his company will typically contact the utility company to
36 make sure that the homeowner has a contract in place before they start a project. He said that it may be good
37 to have confirmation from the contractor also that there have been arrangements made with the utility. He
38 said that most digital meters will indicate an error if there is any back feeding or it won't even register
39 therefore it is almost a waste of time to try to sneak one in.
40

41 Mr. Bluhm asked the Board if there were any questions for Mr. Fabian.

42
43 Mr. Miller asked Mr. Fabian to clarify if the highest point of the guy wire would still be significantly lower

1 than the tallest point of the tower.
2

3 Mr. Fabian stated that Mr. Miller is correct because it has to actually clear the blade tip.
4

5 Mr. Miller stated that an orange safety ball is not serving any purpose for aerial planes if it is not at its
6 highest point.
7

8 Mr. Fabian stated that the concern that the Board has is with low flying planes. He said that he has seen crop
9 dusters that skim the top of the blades and if there is a 100 foot tower the anchor point will be typically 60 to
10 80 feet from the base of the tower. He said that if the plane is going to be close enough to hit the guy wire
11 they are going to be a good 40 or 50 feet into that resident's yard spraying their trees and flowers. He said
12 that typically pilots will not do that unless there are significant cross winds and most pilots will allow for the
13 drift. He said that if the wind turbine was near an airport where there are airplanes coming in and the turbine
14 is located within the landing pattern then there are FAA guidelines which will limit the height of the tower
15 to, most likely, less than 100 feet.
16

17 Mr. Thorsland asked Mr. Fabian if anyone's wind turbine, that he has installed, caused any type of
18 interference.
19

20 Mr. Fabian stated no.
21

22 Mr. Bluhm asked the Board if there were any additional questions for Mr. Fabian and there were none.
23

24 Mr. Bluhm asked if staff had any questions for Mr. Fabian.
25

26 Mr. Hall stated that he appreciates Mr. Fabian's comments at tonight's hearing. He asked Mr. Fabian if
27 metal blades are used.
28

29 Mr. Fabian stated that metal blades are not used on any commercially produced product. He said that there
30 are home built units which will use metal blades but the industry learned a long time ago that there are
31 fatiguing factors involved. He said that someone does not want a blade snapping off under the forces that
32 are typically seen during a storm which will actually bend and break a blade. He said that the industry has
33 found that it is better to stick with the protruded fiberglass, carbon fiber or foam filled fiberglass blades or
34 even wood blades. He said that the turbine that he currently has at his residence has foam filled fiberglass
35 blades that are very stout and the blades are configured for centrifugal over-speed control to where they will
36 actually pitch and go into a stall mode to regulate the turbine. He said that some units will have a carbon
37 fiber configuration where the blade tips are very thin and run under a high RPM and under high RPM forces
38 they will actually twist which causes the blade to go into a stall environment, which is quite noisy. He said
39 that some of the units have an electromagnetic shut down which will brake the turbine so that the blades are
40 subject to the minimal amount of forces that they will typically see during a storm. He said that most
41 commercial and residential turbines will not put out any kind of product that will put out any kind of EMF
42 and all turbines should come with a UL certificate and in their manual there should a page that states that the
43 unit meets FCC, Part 15 requirements. He said that anyone that has a good unit with that has the proper

1 certification and should be able to provide the proper documentation.

2
3 Mr. Hall asked if the same documentation would be available for the larger units.

4
5 Mr. Fabian stated that he would think so.

6
7 Mr. Bluhm asked if the paint color had been changed in the proposed amendment.

8
9 Mr. Fabian stated that most manufacturers like to have some sort of identifying paint scheme or lettering to
10 identify their brand over someone else's unit. He said that the companies will use a marine gray
11 polyurethane enamel that is baked on and if it has to be re-painted or painted over there is a lot of prep work
12 that must be done. He said that there are some jurisdictions that do require, and are very firm, that units be
13 of a non-reflective gray color and most wind turbine manufacturers will offer that option. He said that he
14 hasn't run into this issue and the unit that he has at his residence is white with a very light blue coloring and
15 it can be seen but does not appear to be offensive. He said that the larger units, 10 kilowatts, have a yellow
16 spinner on the nose cone and yellow coloring on the tail and after a while you get used to it because it is not
17 in anyone's face. He said that some jurisdictions are concerned that people will paint shark's teeth and other
18 coloring and he can understand that concern but most of the units which are from reputable manufacturers
19 have subdued graphics and coloring on them.

20
21 Mr. Hall stated that the proposed amendment was revised to indicate that the coloring shall either be
22 supplied by the manufacturer or painted white or gray or another non-reflective color.

23
24 Mr. Fabian stated that the warranty remains if the turbine is not painted. He said that the wind turbine that
25 was permitted with the County outside of St. Joseph was the first turbine that went on line with Eastern Illini
26 Electric Coop. He submitted his semi-prepared statement as a Document of Record.

27
28 Mr. Bluhm asked if staff had any additional questions for Mr. Fabian and there were none.

29
30 Mr. Bluhm called Mr. Steve Burdin to testify.

31
32 Mr. Steve Burdin, who resides at 2527 N CR 450E, Mahomet stated that the guidelines for electromagnetic
33 interference maybe a little tough. He said that the issues that the Board is concerned about such as radio
34 communications, microwave communications, television communications are probably thousands of times
35 higher frequency than anything that these turbines would generate. He said that it would be pretty difficult
36 for those two different wave forms to interact much less interfere. He said that RPM values are at 100
37 versus microwave communications at hundreds of megahertz to thousands of megahertz. He said that
38 induction motors may generate magnetic fields but the fields tend to fall off very quickly with distance. He
39 said that satellite television is received by microwave signals and placing a turbine in the way of a satellite
40 dish is like putting a toothpick at arms length and not being able to see the toothpick therefore very little
41 interference should be expected.

42
43 Mr. Bluhm asked the Board if there were any questions for Mr. Burdin and there were none.

1
2 Mr. Bluhm asked if staff had any questions for Mr. Burdin and there were none.

3
4 Mr. Bluhm asked the audience if anyone desired to sign the witness register to present testimony regarding
5 Case 634-AT-08, Part B.

6
7 Mr. Bluhm called Mr. Herb Schildt to testify.

8
9 Mr. Herb Schildt, who resides at 398 CR 2500N, Mahomet stated that if a wind turbine did cause a
10 disruption which caused another homeowner harm then it should be up to either the owner of the turbine or
11 the installer's responsibility to correct the disruption. He said that the met tower that is approximately four
12 and one-half miles from his residence is 198 feet high and the orange safety balls do not go to the top and
13 only go approximately half or two-thirds of the way up and there is no light at the top of that same met tower
14 either.

15
16 Mr. Bluhm asked the Board if there were any questions for Mr. Schildt and there were none.

17
18 Mr. Bluhm asked if staff had any questions for Mr. Schildt and there were none.

19
20 Mr. Bluhm called Ben McCall to testify.

21
22 Mr. Ben McCall, who resides at 1085 CR 2200N, Champaign expressed his support for the general concept
23 of small wind because it is a very important thing for our community, country and the world and he
24 encourages people to adopt small wind technology. He said that as a homeowner he is considering adopting
25 small wind energy himself and he appreciates the Board and staff's efforts in establishing very clear
26 guidelines regarding the implementation of small wind in the County. He said that he is not an electrical
27 engineer but there are many devices available on the market that have some sort of specification for
28 regulating the electromagnetic interference that they can produce. He said that when you purchase a
29 telephone, television, refrigerator there are guidelines that they cannot emit enough EMI to cause problems
30 with other applications and he would suggest that if there are comparable specifications for wind turbines
31 that might suffice as opposed as to having separate zoning regulations. He said that small wind is defined as
32 turbines less than 100 kilowatt capacity and the rotor diameter cannot exceed 24 feet. He said that the rotor
33 diameter determines the maximum possible power generation of the turbine because that determines the
34 swept area that turbine intercepts. He said that based on the specification that were presented it appears that
35 all of the available turbines with a rotor diameter of less than 24 feet only output 10 kilowatts. He said that it
36 seems the proposed text intends to limit small wind to 100 kilowatts but main in practice limit it to 10
37 kilowatts because of the rotor diameter restriction.

38
39 Mr. Bluhm asked the Board if there were any questions for Mr. McCall and there were none.

40
41 Mr. Bluhm asked if staff had any questions for Mr. McCall.

42
43 Mr. Hall stated that the intent is that small wind is 100 kilowatts or less and rotor diameter is limited based

7/16/09

DRAFT SUBJECT TO APPROVAL DRAFT

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1 on the land use therefore a residential turbine would be 15 feet on less than one acre and 24 feet is the
2 maximum rotor diameter for anything over one acre. He said that for non-residential land use the rotor
3 diameter starts off at 24 feet but can increase as the separation from the nearest principal dwelling is larger.
4

5 Mr. McCall stated that as written the residential use is effectively limited to 10 kilowatts not 20 kilowatts
6 because a 20 kilowatt wind turbine would have a larger rotor diameter.
7

8 Mr. Bluhm asked staff if there were any additional questions for Mr. McCall and there were none.
9

10 Mr. Bluhm called Mr. Phillip Geil
11

12 Mr. Phillip Geil, who resides at 2060B CR 125E, Mahomet stated the height limit of 150 feet might create a
13 problem because the turbine that he currently has can be mounted on a tower that is 140 feet high and with a
14 12 foot diameter blade perhaps 155 feet might be more accurate. He said that he will not be affected by the
15 requirement of the orange safety balls because his turbine is presumably grandfathered in. He said he
16 noticed that at the corner of I-72 and U.S. 47 there is an approximately 200 foot cell phone tower sitting in
17 the middle of farmland with five or six guy wires without orange safety balls therefore they must not be
18 required on a tower that is relatively close to farmland. He said that he is concerned that the orange safety
19 balls detract from the appearance of the tower more so than having some color on the turbine itself. He said
20 that he is happy with the regulations as written because if he were required to place the safety balls on his
21 turbine he could put them at ground level and it wouldn't make any difference. He said that the regulations
22 do not indicate how high the safety balls have to be located. He said that Item #7.7.E.2 indicates that no
23 more than two small wind turbine towers shall be authorized on a lot that is bigger than three acres but if you
24 are going to put two turbines on it you have to have the second turbine at least 1,200 feet from the nearest
25 residential principal structure or principal building under different ownership. He said that this is going to be
26 a lot more than three acres therefore he wonders what that restriction really means.
27

28 Mr. Hall stated that Item #7.7.E.2 applies to non-residential small wind turbines therefore, for example,
29 when Mr. Geil as a resident could expect to have as many as two 72 foot diameter small wind turbine rotors
30 to look at would only be when that turbine is at least 1,200 feet away.
31

32 Mr. Geil asked Mr. Hall if he could put a second wind turbine on his property without any restriction other
33 than the regular setbacks.
34

35 Mr. Hall stated yes.
36

37 Mr. Bluhm asked the Board if there were any questions for Mr. Geil and there were none.
38

39 Mr. Bluhm asked if staff had any additional questions for Mr. Geil.
40

41 Mr. Hall stated that he anticipated Mr. Geil's testimony regarding the 150 foot height and he could imagine
42 that the Board could increase the maximum height to 160 feet or being prepared for Administrative
43 Variances which would allow a 15 foot increase over 150 foot.

1
2 Mr. Geil stated that 150 feet is what he would have needed if he had gone to the 140 foot actual tower
3 height.

4
5 Mr. Hall stated that the basis of the 150 foot requirement had something to do with using a setting like Mr.
6 Geil's and determining the height that would be needed to get a 24 foot rotor a couple of feet over the
7 existing trees. He said that 150 feet might be accurate but it could be 155 or 160 feet that is required.

8
9 Mr. Geil stated that the 155 foot height would fit the model that he has better.

10
11 Mr. Hall stated that there is a more general reason why the Board could go above 150 feet other than it
12 would be more convenient for Mr. Geil using the model that he current has.

13
14 Mr. Bluhm asked the audience if anyone desired to sign the witness register to present testimony regarding
15 Case 634-AT-08, Part B.

16
17 Mr. Bluhm called Mr. Mike Miller to testify.

18
19 Mr. Mike Miller, representing Arends Brothers, stated that he supports the idea of considering simplifying
20 the tower height requirement. He said that some of his clients have larger residential properties with bigger
21 homes with bigger power requirements and would like to consider towers that are taller than 150 feet. He
22 said that it might be wise to consider when finalizing the *Ordinance* to simplify the tower height requirement
23 in some way that it is just related to the size of the property that each individual has in each residential
24 setting. He said that also with regard to rotor blade length and diameter, he has a residential client in
25 Champaign County that owns a large home with attached shop that is interested in a larger model turbine
26 that has a blade length of 29 feet which would be about a 60 feet diameter for the rotor. He said he would
27 ask that the Board consider this portion of the *Ordinance* carefully and perhaps simplify things so that if the
28 residence is big enough and has enough property to accommodate this big of a tower then just let the 200
29 feet height be the overall limit and let the property boundaries guide the rest of it. He said that there are a lot
30 of other things that go on in residential settings that could be rather noisy such as LP, natural gas or diesel
31 powered stand-by generators. He said that he is not knowledgeable about what the *Zoning Ordinance* states
32 about an accessory like the generators in a residential setting but he can assure the Board that a stand-by
33 generator with the motor running would be substantially louder than anything a wind turbine would produce.
34 He said that it would be advisable to consider the possibility of simplifying that out of the *Ordinance*
35 because he is not sure that it is really fair to place that restriction on wind turbines when there do not seem to
36 be other restrictions on other home accessories.

37
38 Mr. Bluhm asked the Board if there were any questions for Mr. Miller.

39
40 Mr. Bluhm asked Mr. Miller what happened to the tower located at the Arends Brothers Urbana location
41 after the area received a strong storm. He said that he noticed that the turbine did not operate for two weeks.

42
43 Mr. Miller stated that a sensor failure occurred. He said that there has been previous discussion about fail

1 safe modes and he cannot speak for the other manufacturers of turbines but he can speak for the
2 manufacturer of the turbines sold at Arends Brothers and their turbines have numerous fail safe sensors built
3 into the machine and one of those is a rotor speed sensor. He said that when the storm went through and
4 electrically they had a surge back from the grid, not from lightning, and that surge affected one of the
5 sensors. He said that the computerized system detected that it was not getting the signal that it thought it
6 should be receiving from the sensor therefore it locked up tight and would not run until everything is assured
7 to be safe.

8
9 Mr. Bluhm asked if staff had any questions for Mr. Miller.

10
11 Mr. Hall asked Mr. Miller how much property is owned by the client that desires the 60 foot diameter
12 residential rotor.

13
14 Mr. Miller stated that he is not sure but he believes that the client resides on a five acre lot.

15
16 Mr. Hall asked Mr. Miller if the client was surrounded by other five acre lots.

17
18 Mr. Miller stated that the client does have some other lots surrounding his property but he was not sure of
19 their acreage.

20
21 Mr. Hall stated that anything that goes out from the Board is up to the Board and it appears that the goal is
22 for a perfect amendment but that is untrue because the goal is to achieve an amendment that will work in
23 most cases. He said that writing an ordinance that would allow a 60 foot residential rotor when there are
24 other residences near by seems to be extreme, but it is the Board's call.

25
26 Mr. Miller stated that certainly he can understand the very important requirement that regardless the height
27 of the tower or the size of the rotors there must be enough room on the property in case the tower falls down
28 because it should not and cannot fall on someone else's property. He said that to simplify things if the
29 property is large enough to support the tower height and the blade diameter then maybe the size of the
30 property could dictate what could and could not be done with the rotor rather than trying to make the
31 *Ordinance* too complicated and unintentionally restrict someone from doing something that would otherwise
32 be reasonable.

33
34 Ms. Capel asked Mr. Hall if this would be a situation where an Administrative Variance could be requested.

35
36 Mr. Hall stated that such a height would exceed an Administrative Variance and would require a full
37 variance. He said that Mr. Miller has a point because he could imagine such a standard but it is unknown
38 what that secret number would be for such a standard.

39
40 Mr. Bluhm asked the audience if anyone desired to sign the witness register to present testimony regarding
41 Case 634-AT-08, Part B and there was no one.

42
43 Mr. Bluhm closed the witness register.

1
2 Mr. Hall stated that he would like to have this case continued to the maximum allowed date which is
3 October 15, 2009. He said that this continued date would allow staff maximum opportunity to coordinate
4 with Champaign and Urbana. He said that the changes to the amendment that are required would not take
5 very long but the earliest that he would like to see this case return to the Board would be August 27, 2009.
6 He said that Champaign is wrapping up their first in-house draft for review and it is not clear that Urbana has
7 condensed their thinking into a draft form to date.

8
9 Mr. Bluhm stated that if staff re-advertises the amendment for fees staff would need enough time to
10 coordinate with the cities so that the re-advertisement would not need changed. He said that he does not
11 know if the wind retailers are aware if staff will be receiving a lot of permits in the next few months but to
12 date staff has only received two. He said that it is clear that initially this was started with hopes of getting
13 beyond the 100 feet and we have good justification for going beyond 100 feet and he believes that it will be a
14 successful amendment. He said that he would appreciate a continuance to October 15, 2009.

15
16 Mr. Bluhm asked Mr. Miller how tall the tower at Arends Brothers was to the tip of the blade.

17
18 Mr. Miller stated that that the tower is 105 feet and the blade height is nine feet.

19
20 Mr. Hall stated that in the AG and CR district the average tree height is 60 or 70 feet and the maximum
21 height of a building in the AG district is 50 feet therefore just providing for the maximum height that is
22 allowed for a building in the AG-1 district, it would make sense to have a maximum height for the tower to
23 be more than 100 feet.

24
25 Mr. Thorsland asked if the case is continued to October he would like to take time at this public hearing to
26 review some of the changes. He stated that in regard to interference the unit comes with a UL certification
27 sticker or a page in the instructions indicating the UL certification therefore if the unit does not have that
28 certification then the tower should not be allowed. He said that he agrees with the possible changes to the
29 maximum height requirement and 200 foot could be the maximum height dependent upon the lot size. He
30 asked what determines if a turbine is residential or non-residential.

31
32 Mr. Hall stated that the principal use determines the residential or non-residential status.

33
34 Mr. Thorsland asked Mr. Hall if the Board could allow a variance for someone who wants a larger turbine
35 than what is allowed under the residential status.

36
37 Mr. Hall stated that anything in Section 7.7 is subject to a variance.

38
39 Mr. Thorsland stated good because there will be an instance where people will fall into this situation. He
40 said that if a home is destroyed then more than likely the home could be rebuilt without jumping through too
41 many hoops. He said that technology continues to improve therefore if a 10 or 15 year old turbine is
42 destroyed for some reason the turbine should be able to be reconstructed up to 120%.

1 Mr. Hall stated that the property owner could always rebuild to the new standard and take advantage of the
2 greater height. He said that the existing height currently means that if a turbine falls on a neighbor's house
3 the turbine could be rebuilt.

4
5 Mr. Thorsland stated that the biggest concern that people have, whether it is warranted or not, is that it may
6 fall on someone else's house. He said that the Board has, within reason, the ability to say that none of the
7 turbines will fall on someone's house.

8
9 Mr. Hall stated that the property owner's maximum will still be the maximum under the new rules.

10
11 Mr. Thorsland stated yes, but due to technology they could put up a bigger unit.

12
13 Mr. Hall stated that, regarding the example for the Tower Height allowed in Penfield, a 100 foot turbine
14 could be placed in Penfield with no problem but under the current rules it is a problem and the turbine could
15 not be rebuilt to the 100 foot height without a variance. He said that the draft would allow the owner to
16 rebuild to the 100 foot height even though the current rules would not.

17
18 Mr. Bluhm stated that if the unit falls down and the owner desires to put up a bigger unit and they fall within
19 the new guidelines they could.

20
21 Mr. Hall stated no. He said that the draft that is currently before the Board would let someone rebuild a 100
22 foot high turbine in areas where the current rules would not allow a new one to be built.

23
24 Mr. Bluhm stated that someone who has plenty of room only puts up an 80 foot tower and wished that they
25 had put up a 100 foot tower and the 80 foot tower falls the current rules indicate that it could be rebuilt to the
26 original dimensions. He said that this same property owner is limited to putting up an 80 foot tower again
27 unless that property owner gets a new permit to raise that tower height.

28
29 Mr. Thorsland stated that if someone loses a unit and they choose to rebuild a larger, improved unit they
30 would not have to request a variance because they would be allowed to build the larger unit. He said that the
31 Administrative Variance would allow an increase up to 15%.

32
33 Mr. Hall asked the Board what they want to do in the cases where the maximum indicates that the turbine
34 cannot be rebuilt to the same height as before. He said that he does not know how much investment remains
35 once the tower crumbles and maybe there is no value to recapture therefore it would not be unreasonable to
36 get a new turbine under the new rules. He said what if someone had a 100 foot turbine which is 20 years old
37 and needs replaced but the height of the old tower is higher than what is allowed under the new rules. He
38 said that he would suggest that this person could go ahead and put a new turbine on top of the old tower. He
39 said the way that the draft is written the new wind turbine could fall on the neighbor's garage and the County
40 is not concerned because the County will only be worried about the house.

41
42 Mr. Bluhm asked Mr. Hall if a new 80 foot turbine was constructed under the new rules and it was destroyed
43 by a tornado could it be rebuilt, if there is adequate area, at a higher height under a new permit.

1
2 Mr. Hall stated yes.

3
4 Mr. Bluhm asked Mr. Hall if the Board discussed a maximum height of 199 feet due to the FAA standards
5 regarding lighting requirements.

6
7 Mr. Hall stated that the FAA standards clearly state a height of more than 200 feet. He asked Mr. Thorsland
8 if he proposed to raise the maximum height requirement for residential up to 200 feet if it meets all other
9 guidelines.

10
11 Mr. Thorsland stated that if a 200 foot turbine is requested then a variance would be available for that
12 request but there could be a lot of variances before this Board for increased height.

13
14 Mr. Courson stated that he does not believe that the average person will want a 200 foot tower.

15
16 Mr. Thorsland stated Mr. Fabian made some good points about the utility notice from the installer rather
17 than the property owner. He said that it was indicated that the safety balls on the guy wire would be a bigger
18 source of noise than the wind tower because they do not oscillate with the wind. He said that testimony was
19 received tonight that there are no safety balls on the cell towers and he is not sure if the Board should require
20 such.

21
22 Mr. Hall stated that at the last meeting when this case was discussed Mr. Rick Reed made it very clear that
23 he does not spray over residential properties although he has no hesitation to fly over them at the end of the
24 field and he added that the orange safety balls were a good idea.

25
26 Mr. Hall stated that today he received the new guidelines for the Illinois Agricultural Aviation Association
27 and many of the wind farm developers have settled on marking the met tower cables which consists of
28 orange safety balls, orange flags and actually painting the top of the met tower.

29
30 Mr. Miller stated that the County has miles and miles of overhead power transmission lines and with the
31 exception of the section of line that is in the path of the landing strip are not marked therefore we will be
32 going over our jurisdiction if we required something that the FAA does not.

33
34 Mr. Hall stated that there are a lot of things at the level of the guy wires that are not marked that are out there
35 where the pilots are flying therefore this is not the only thing that they need to be concerned about.

36
37 Mr. Miller stated that if a trained or untrained pilot misses the ball on the guy wire then there are far greater
38 things that might happen.

39
40 Mr. Bluhm stated that although he understands the purpose of the orange balls for the aerial applicators but
41 the two met towers that are located in his area are eyesores.

42
43 Mr. Bluhm stated that perhaps we should not require the orange safety balls unless they are required by the

1 FAA.
2
3 Mr. Thorsland stated that Mr. Fabian indicated that most residential turbines are constructed on monopoles
4 and the climbing rungs can be removed.
5
6 Mr. Bluhm asked if there should be a special condition regarding such.
7
8 Mr. Bluhm stated that the climbing rungs must be removed up to 12 feet and if a lattice structure exists an
9 anti-climbing device must be installed.
10
11 Mr. Miller asked if the Board is going overboard again since these will be built a private property.
12
13 Mr. Hall stated that this is only in the residential zoning districts and in the agricultural districts there are
14 other things to worry about.
15
16 Mr. Miller asked if a fenced in yard would supersede.
17
18 Mr. Hall stated that a four feet non-climbable fence is all that is required for a pool.
19
20 Mr. Bluhm stated that in a residential area the anti-climbing requirements should apply.
21
22 Mr. Miller stated that he is looking at it as private property.
23
24 Mr. Bluhm stated that if the yard is fenced and there is a climbable structure then perhaps the fence will
25 serve as the barrier. He said that if there are a couple of teenage kids that have access to private property
26 things could happen.
27
28 Mr. Thorsland stated that the Board is focusing so much on the wind turbines that we are leaving out the
29 uninspected, unengineered abandoned grain bins, grain elevator legs, etc. He said that he has been attacked
30 twice by trampolines that fly across onto his lot in a swift wind and there are no safety requirements set by
31 the County for such an instance.
32
33 Mr. Bluhm stated that he is just going by Mr. Fabian's comments.
34
35 Mr. Hall noted that these only apply to the residential zoning districts.
36
37 Mr. Thorsland asked if there are stickers on a wind tower indicating "Don't Climb." He said that there are
38 warnings on everything else. He said that he would like to make this amendment so good that when it goes
39 to ELUC all they can do is recommend approval.
40
41 Mr. Hall stated that Mr. Miller raised the issue of noise therefore asked the Board if the noise regulations
42 should stay in the amendment.
43

- 1 Ms. Capel stated yes.
- 2
- 3 Mr. Thorsland stated that we would just default to the Illinois noise regulations, which is fine.
- 4
- 5 Mr. Hall stated that the Board could take the position that if it is so fine and if it already exists why does it
- 6 need to be in the *Zoning Ordinance*. He said that he plans to discuss with the State’s Attorney how to make
- 7 it clear that if the County has to take down an inoperable wind turbine the County will charge the owner for
- 8 its costs.
- 9
- 10 Mr. Thorsland asked Mr. Hall if the County will step in if a property is sold with a wind turbine on it and the
- 11 new owner decides not to operate the turbine. He said that he does not believe that the County should step in
- 12 unless the wind turbine is a safety hazard because there are many other structures such as an old silo, barn,
- 13 grain bin, etc, that the County does not require to be torn down on a property.
- 14
- 15 Mr. Hall stated that if the wind turbine is inoperable and is a safety hazard then it should be removed from
- 16 the property.
- 17
- 18 Mr. Thorsland stated that when the Board wanted to do something about dead trees property owners had a
- 19 fit. He said that if he wanted to have two windmills that he does not operate, on his property and call it
- 20 “Twin Windmills Farm” then he would not want someone to tell him that he had to remove them.
- 21
- 22 Mr. Hall asked Mr. Thorsland if he would change his opinion if the wind turbine was inoperable for more
- 23 than two years.
- 24
- 25 Mr. Thorsland stated no, because if someone has such a structure for their own private use and is too lazy to
- 26 utilize it then when it falls it will fall on their property. He said that it is no different if the same property
- 27 owner decided to let maple trees grow up around their barn the County should not step in to tell that property
- 28 owner to take those maples down.
- 29
- 30 Mr. Hall requested comments from the Board.
- 31
- 32 Mr. Miller stated that Mr. Thorsland poses a good case.
- 33
- 34 Mr. Thorsland stated that if a wind turbine becomes damaged in a way that it could pose imminent danger
- 35 then the property owner should be notified that the structure must be removed.
- 36
- 37 Mr. Hall stated that staff cannot determine if a 200 foot wind turbine will pose imminent danger.
- 38
- 39 Ms. Capel stated that the County should have the jurisdiction to determine if a wind turbine is derelict.
- 40
- 41 Mr. Hall stated that the determining if a wind turbine is derelict is a lot easier than if it poses imminent
- 42 danger. He asked the Board how long a wind turbine can be derelict before staff can act.
- 43

7/16/09

DRAFT SUBJECT TO APPROVAL DRAFT

ZBA

1 Mr. Thorsland stated that there are old abandoned barns and personal antenna units that are over 100 foot
2 tall, abandoned irrigation windmill units, unused grain bins, etc. that the County does not require
3 decommissioning therefore it appears that we are singling out wind towers.

4
5 Mr. Bluhm stated that agriculture is not regulated by the County.

6
7 Mr. Hall stated that if the Board wanted to update the County's antenna regulations he would propose that if
8 antennas are no longer in use then they must be taken down.

9
10 Mr. Miller stated that a property owner should reserve the right to not operate a wind turbine whether it is
11 because it is too expensive to operate or maintenance is too costly but there is still a value in the wind
12 turbine. He said that if in one, two or six years the owner decides to sell the property he should be able to
13 keep the wind turbine until such time or until it becomes a dangerous structure.

14
15 Mr. Thorsland stated that he does not believe that the County should tell the current owner that he has to take
16 it down if he is not using it because a new owner of the property may find value in the new wind turbine. He
17 asked Mr. Hall to define derelict.

18
19 Mr. Hall stated that if there is an indication from 200 feet off the ground that the wind turbine is broken then
20 it would be determined to be derelict.

21
22 Mr. Thorsland asked how long will the property owner have to rectify the issue.

23
24 Ms. Capel stated six months.

25
26 Mr. Thorsland asked Mr. Hall what the County will do with enforcement of the old 100 foot irrigation
27 windmills that are missing half of their blades.

28
29 Mr. Hall stated no.

30
31 Mr. Bluhm stated that if a wind turbine is derelict because it is missing a blade then the County should not
32 give the property owner six months, unless the owner can indicate just cause for not rectifying the situation
33 immediately.

34
35 Mr. Hall stated that if the Board determines that six months is the cutoff then nothing will happen for at least
36 one year.

37
38 Mr. Bluhm asked Mr. Courson how long his wind turbine was out of commission.

39
40 Mr. Courson stated that his turbine was at the factory for eight months for repairs.

41
42 Mr. Bluhm stated that if a property owner could show just cause as to why the wind turbine has not been
43 repaired then the derelict issue does not apply.

1
2 Mr. Hall stated that Mr. Bluhm is correct.

3
4 Mr. Bluhm stated that the Board previously discussed the UL nameplate requirement. He noted that at-home
5 kits are available to consumers for purchase for personal installation of a wind turbine.

6
7 Mr. Thorsland stated that if the turbine does not have the UL certification then it should not be allowed. He
8 said that very few items are available that do not have the UL certification.

9
10 Mr. Bluhm stated that perhaps the Board could ask Mr. Fabian which parts and pieces have UL certification
11 to assure that the wind turbine meets specifications.

12
13 Mr. Courson stated that roof mount tower kits are also available for purchase. He said that he would not put
14 a wind turbine on a house but he could see someone place one on a barn or silo so that it is up in the air. He
15 asked Mr. Hall if this placement would infringe on the maximum accessory building requirement.

16
17 Mr. Hall stated that the accessory building must meet the accessory building height requirement and the roof
18 mounted turbine could not exceed a height of 15 feet. He said that he is not sure if 15 feet is reasonable
19 because it may not be an adequate height.

20
21 Mr. Courson stated that a vertical tower should have a fence around it because he drove by the vertical tower
22 located at the drive-in at Gibson City and it is only 7 or 8 feet to the ground.

23
24 Mr. Bluhm stated that he agrees that staff should coordinate with Champaign and Urbana so that there are
25 not 30 different ordinances regarding wind towers.

26
27 **Mr. Thorsland moved, seconded by Ms. Capel to continue Case 634-AT-08, Part B to October 15,**
28 **2009. The motion carried by voice vote.**

29
30 **6. New Public Hearings**

31
32 None

33
34 **7. Staff Report**

35
36 Mr. Hall reported that one new case has been added to the docket for a hearing date. He reminded the Board
37 that monitoring of the new cases will have to be done very closely as we get closer to the anticipated
38 submission date in October for the wind farm case. He said that he will place this issue on the ELUC agenda
39 so that they are aware that some petitioners may be delayed so that the Board has sufficient time to deal with
40 the wind farm.

41
42 **8. Other Business**

7/16/09

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SUBJECT TO APPROVAL

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1 None

2

3 **9. Audience Participation with respect to matters other than cases pending before the Board**

4

5 None

6

7 **10. Adjournment**

8

9 **Mr. Miller moved, seconded by Mr. Schroeder to adjourn the July 16, 2009, meeting. The motion**
10 **carried by voice vote.**

11

12 The meeting adjourned at 8:57

13

14

15

16

17 Respectfully submitted

18

19

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21

22 Secretary of Zoning Board of Appeals

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1 **MINUTES OF REGULAR MEETING**

2
3 **CHAMPAIGN COUNTY ZONING BOARD OF APPEALS**

4 1776 E. Washington Street

5 Urbana, IL 61801

6
7 **DATE:** October 1, 2009

PLACE: Lyle Shields Meeting Room
1776 East Washington Street

8
9 **TIME:** 7:00 p.m.

Urbana, IL 61802

10
11 **MEMBERS PRESENT:** Doug Bluhm, Catherine Capel, Thomas Courson, Roger Miller, Eric
12 Thorsland

13
14 **MEMBERS ABSENT :** Paul Palmgren, Melvin Schroeder

15
16 **STAFF PRESENT :** Connie Berry, John Hall, J.R. Knight

17
18 **OTHERS PRESENT :** Mike Tague, Gene Bateman, Lou Wozniak, Kevan Parrett

19
20
21 **1. Call to Order**

22
23 The meeting was called to order at 7:01 p.m.

24
25 **2. Roll Call and Declaration of Quorum**

26
27 The roll was called and a quorum declared present.

28
29 **3. Correspondence**

30
31 None

32
33 **4. Approval of Minutes (September 17, 2009)**

34
35 **Mr. Miller moved, seconded by Mr. Thorsland to approve the September 17, 2009, minutes as**
36 **submitted. The motion carried by voice vote.**

37
38 **5. Continued Public Hearing**

39
40 **Remanded Case 520-AM-05 Petitioner: Gene and Carolyn Bateman Request: Amend the Zoning Map**
41 **to allow for the development of 3 single family residential lots in the AG-1, Agriculture Zoning**
42 **District by adding the Rural Residential Overlay (RRO) Zoning District. Location: Approximately**
43 **12.04 acres of an existing 62.20 acre parcel in the East Half of the Northeast Quarter of Section 29 of**
44 **Newcomb Township that is commonly known as the farm field that borders the south side of CR**
45 **2600N and the west side of CR 200N.**

DRAFT
SUBJECT TO APPROVAL

1
2 Mr. Hall stated that this is the second time that this case has been remanded and distributed a Supplemental
3 Memorandum dated October 1, 2009, to the Board for review. He said that the new memorandum includes
4 new items of evidence which indicates the history of Case 520-AM-05 and clarification of staff's
5 recommended evaluation of certain RRO factors. He read new Item 9.G as follows: Regarding the history
6 of Case 520-AM-05: (1) The petitioner submitted the application for rezoning to the RRO District, for the
7 development of five residential lots, on October 12, 2005; and (2) The public hearing was opened on March
8 30, 2006; and (3) On October 12, 2006, the ZBA voted to Recommend Denial to ELUC and the full County
9 Board; and (4) On November 13, 2006, ELUC voted to remand Case 520-AM-05 so the petitioner could
10 revise the site plan to deal with the ZBA's concerns; and (5) On December 14, 2006, the ZBA voted to
11 Recommend Approval of the revised RRO, two flag lots, to ELUC and the full County Board; and (6) Case
12 520-AM-05 was tabled at ELUC in January and February of 2007. On March 12, 2007, ELUC voted to
13 defer Case 520-AM-05 until the *Zoning Ordinance* was amended to include specific requirements for
14 development near pipelines; and (7) The *Zoning Ordinance* was amended on November 20, 2008, by
15 Ordinance No. 841 (Case 583-AT-07), which added requirements for development near pipelines; and (8)
16 On February 9, 2009, ELUC voted to remand Case 520-AM-05 to the ZBA so the petitioner could revise his
17 plan to better fit the new requirements regarding separations from natural gas pipelines; and (9) The
18 petitioner's representative submitted the current plan on September 18, 2009.

19
20 Mr. Hall stated that the Supplemental Memorandum dated September 25, 2009, includes several attachments
21 which are primarily for the benefit of new Board members who have not been involved in an RRO case. He
22 said that the Preliminary Memorandum dated March 24, 2006, explains the factors which really make an
23 RRO case unlike any other map amendment. He said that there are two specific findings required in RRO
24 requests: 1. Suitability of the proposed site for the development of rural residences; and 2. Impact that the
25 proposed residential development will have on surrounding agriculture. He said that there are a number of
26 items of evidence required for RRO cases therefore staff has provided some location maps for the Board's
27 review as well as the original Natural Resource Report, new IDOT map which updates the transportation
28 data, 2001 Land Use Regulatory Policies, Ordinance No. 841 (Zoning Case 583-AT-07), four tables to
29 equate the RRO conditions to typical Champaign County conditions: (1) Table of Common Conditions
30 Influencing the Suitability of Locations for Rural Residential Development in Champaign County; (2)
31 Comparing the Proposed Site Condition to Common Champaign County Conditions; (3) Summary of Site
32 Comparison for Factors Relevant to Development Suitability; and (4) Summary of Comparison for Factors
33 Relevant to Compatibility with Agriculture. He noted that ratings on the tables are staff recommendations
34 and it is up to the Board to accept or change those recommendations. He said that Item #5 of Table 2: The
35 presence of nearby natural or manmade hazards, has been rated "Much worse than typical" because although
36 the proposed lots meets the *Ordinance* requirements regarding pipeline impact radius each lot still has
37 pipeline impact radius on it which definitively is not a typical condition. He said that the Board could
38 indicate that it is just "Worse than typical" or "Not much worse than typical" but either way the Board must
39 indicate what they see fit.

40
41 Mr. Hall stated that Table 2 is summarized in Attachment V, which indicates that road safety is "Ideal or
42 Nearly Ideal while septic suitability, flood hazard status, LESA score, effects on drainage and environmental
43 concerns are rated at "Much Better than typical." He said that the availability of water and emergency

1 services are rated at “More or less typical” and other hazards are rated at “Much worse than typical.” He
2 said that the effect of farms on Attachment V is indicated as “Worst or Nearly Worst.” He said that
3 Attachment W deals with the second factor for RRO approval which is the impact on surrounding agriculture
4 as compared to the Non-RRO alternative. He said Attachment W indicates that there will be more land
5 converted, more land developed, more road traffic, and more effects on farms due to the additional lots but
6 no change to drainage of land evaluation scores.
7

8 Mr. Hall stated that Item #2 of Page 2 of the Supplemental Memorandum dated October 1, 2009, indicates
9 that Item #17.D of the Summary of Evidence, related to manmade hazards, should be revised to indicate
10 “much worse than typical” instead of “worse than typical.” He said that Item #3 indicates that the two
11 following paragraphs should replace Item #17.D(3): (3) The proposed RRO lots are located in the Manlove
12 Gas Storage Field and the parent tract has high pressure natural gas pipelines on three sides. All three of the
13 proposed RRO lots are located partially within the PIR and without some separation from the PIR the
14 proposed lots should not be considered “typical” for location near man-made hazards; and (4) However, all
15 three lots do include at least an acre of buildable area outside the PIR as required by the *Zoning Ordinance*
16 and are conforming in that regard. He said that Item #4 indicates that Item #21.C, regarding the effects on
17 wetlands, archaeological sites and natural areas, should be revised to indicate “much better than typical”
18 instead of “typical.” He said that Item #22 should be revised to read as follows: Compared to common
19 conditions found at rural sites in Champaign County, the lots in the Bateman Proposed Tracts received on
20 September 18, 2009, are similar to the following: A. “Ideal or Nearly Ideal” conditions for adequacy of
21 roads; and B. “Much Better than Typical” conditions for the following factors: (1) Effects on drainage; (2)
22 Septic suitability; (3) LESA score; (4) Flood Hazard Status; (5) Environmental concerns; and C. “More or
23 Less Typical” conditions for the following four factors: (1) Emergency Services; (2) Availability of water;
24 and D. “Much Worse than Typical” conditions for the following factor: (1) Natural or man-made hazards;
25 and E. “Worst or Nearly Worst than Typical” conditions for the following factor: (1) Effects on farms.
26

27 Mr. Hall stated that there are several attachments to the Supplemental Memorandum dated October 1, 2009,
28 which deal with livestock facilities and there are several livestock facilities in the area. He said that
29 Attachment C. is a Table Summarizing Requirements of the Illinois Livestock Management Facilities Act
30 (510 ILCS 77/et seq.) which, in the case of an RRO, once staff has mapped out the livestock facilities within
31 one-mile of a proposed RRO, staff can identify the impacts that the RRO would have just simply in terms of
32 the Illinois Livestock Management Facilities Act. He said a map has been included indicating the livestock
33 facilities and two appear to be inactive but could be reactivated at any time. He said that a cattle operation is
34 immediately adjacent to the south side of the parent tract but there are no current livestock operations that
35 actually border any of the proposed lots. He said that, in regard to the map of livestock facilities and the
36 table indicating Livestock Management Facilities within one mile of proposed RRO, livestock facilities C
37 and D have a total of 14 non-farm residences within one mile. He said that the table was prepared when
38 there were five RRO lots proposed therefore two lots should be removed indicating two non-farm residences
39 within one mile of the proposed RRO. He said that it is his understanding that an RRO of more than one lot
40 means that C and D have a populated area within one mile which is only relevant in terms of the *Livestock*
41 *Management Facilities Act* and if those livestock facilities wanted to expand to more than 7,000 animal
42 units, which is unlikely. He said that regardless of what the *Livestock Management Facilities Act* states it is
43 highly incompatible when you have houses going next to a livestock facility.

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Mr. Hall stated that attached to the Supplemental Memorandum dated October 1, 2009, is the Finding of Fact for the last time that the Board took action on Case 520-AM-05. He said that at that time the Board recommended approval of Case 520-AM-05 and the finding is only discussing the development of two residences. He said that finding #1 indicated that the proposed site, subject to conditions, was suitable for the development of two residences because: A. the site has more or less typical Champaign County conditions due to manmade hazards and safety concerns; and B. much better than typical and nearly ideal conditions for the other considerations of adequacy of roads; effects on drainage; septic suitability; LESA score; and flood hazard status, and the availability of water is more less typical; and C. the property is between 4 and 5 miles from the Cornbelt Fire Protection District; and despite: D. the fact that there are high pressure gas pipelines in the vicinity; and E. the site has much worse than typical Champaign county conditions because it is bordered on one side by livestock management facilities; and F. emergency services vehicles access is limited by flooding. He said that this is the only finding that the Board determines “because of” and “despite of” and he does not believe that there has been an RRO yet, even though the Board was ready to recommend approval, where the Board did not recognize that there were some things that were not ideal.

Mr. Hall stated that finding #2 indicates that the development of the proposed site under the proposed Rural Residential Overlay development, subject to conditions, will be compatible with surrounding agriculture because: A. surface drainage that is much better than typical; and B. the condition to provide an easement for the drainage district tile; and C. the adequacy of the roads that is nearly ideal Champaign County conditions; and D. traffic generated by the proposed RRO District that will be only 100% more than without the RRO; and despite E. presence of adjacent livestock management facilities on one side and four other livestock management facilities within one-mile radius of the property for a total of three active facilities that are by law allowed to expand up to 1,000 animal units; and F. the presence of a drainage district tile near the proposed RRO District.

Mr. Hall reviewed Item #24 of the Revised Draft Summary of Evidence dated September 25, 2009, which is in regard to possible special conditions of approval. He read the conditions as follows:

24.A(1): Prospective lot purchasers shall be made aware of the presence of the Manlove Gas Storage Facility on the property and the presence of related high pressure gas pipelines on the property and the related gas injection wells on adjacent property to ensure the following: All prospective lot purchasers have a full knowledge as possible of the Manlove Gas Storage Facility prior to purchase of a lot.

24.A(2): Prospective lot purchasers shall be made aware of the presence of easements for Peoples Gas Light and Coke Company as originally granted on November 30, 1965, and recorded at pages 71 and 72 in Book 809 of the Office of the Champaign County Recorder of Deeds; and all said easements shall be specifically mentioned in any deed for

any lot in the Rural Residential Overlay District in Zoning Case 520-AM-05; and all said easements shall be indicated on any Plat of Survey that is prepared for any lot in said Rural Residential Overlay District.

to ensure the following:

All prospective lot purchasers and lot owners have as full knowledge as possible of these easements before and after purchase.

24.A(3): Prospective lot purchasers shall be made aware of the *Zoning Ordinance* requirements that prohibit any construction in the Pipeline Impact Radius (except for driveways) and the resulting amount of buildable area available on each lot.

to ensure the following:

All prospective lot purchasers and lot owners have as full knowledge as possible of the restrictions placed on the lots due to their proximity to high pressure gas lines.

24.B(1): Prior to offering any lots for sale the petitioner shall dedicate a tile access and maintenance easement for the tile in the swale with an easement of width of 80 feet centered on the centerline of the swale and no construction nor earthwork shall occur within the tile easement and no woody vegetation shall be allowed to grow nor shall any connection be made to the drainage district tile without prior written approval of the Newcomb Special Drainage District.

to ensure the following:

The existing agricultural drainage system can be easily maintained in the future; and is not harmed by the proposed Rural Residential Overlay Zoning District; and that said District complies with the requirements of the Champaign County Stormwater Management Policy.

24.B(2): Prior to offering any lots for sale the petitioner shall either replace the underground drainage tile in the swale, with the approval of the Newcomb Special Drainage District being received beforehand, and any lateral drainage tile on the proposed RRO lots that is connected thereto with non-perforated conduit as required by the Champaign County Stormwater Management Policy unless something less is authorized by variance by the Champaign County Zoning Board of Appeals.

To ensure the following:

the existing agriculture drainage system is not harmed by the proposed Rural Residential Overlay Zoning District and that said District complies

with the requirements of the Champaign County Stormwater Management Policy.

Mr. Hall stated that after reading this condition, he wonders if this is what the Board truly intended. He said that this condition may merit some special consideration prior to the final determination. He said that there was some testimony indicating that old, large tile should not be disturbed unless absolutely necessary.

Mr. Bluhm stated that it was his understanding that any tile that was on the lot that was uncovered would need to be replaced although Item #24.B(3) discusses tile on the lots.

Mr. Hall stated that he is confused about Item #24.B(2) and he would like to revisit this condition. He continued to Item #24.B(3).

24.B(3): Any underground drainage tile that must be relocated to accommodate any construction in the proposed Rural Residential Overlay Zoning District shall be replaced and relocated in conformance with the Champaign County Stormwater Management Policy.

To ensure the following:

the existing agricultural drainage system is not harmed by the proposed Rural Residential Overlay Zoning District and that said District complies with the requirements of the Champaign County Stormwater Management Policy.

24.C(1): Tracts 2 and 3 of the Bateman Proposed Tracts received on September 18, 2009, shall have centralized driveways and shall also have grouped mail boxes located as far off the roadway as permitted by the United States Postal Service and evidence of the mail box installation and location shall be submitted to the Zoning Administrator prior to the issuance of any Zoning Compliance Certificate.

to ensure the following:

driveway entrances and mail boxes do not unnecessarily impede Agricultural traffic.

24.C(2): All driveway entrances shall be 30 feet wide with a radius as approved by both the Newcomb Township Highway Commissioner and the Cornbelt Fire Protection District and evidence of both approvals shall be submitted to the Zoning Administrator prior to the issuance of any Zoning Compliance Certificate.

to ensure the following:

emergency services vehicles have adequate access to all properties.

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24.D(1): All homes shall be served by driveways that have a paved surface consisting of at least six inches of rock that is at least 20 feet wide and a corner radius approved by the Cornbelt FPD and the Zoning Administrator shall verify the pavement prior to the issuance of any Zoning Compliance Certificate.
to ensure the following:
all homes are accessible by emergency vehicles.

Mr. Hall stated that this is the standard of the Cornbelt Fire Protection District.

24.D(2): Each driveway shall be provided with a means of turnaround of adequate dimension to accommodate fire protection and emergency service vehicles that at a minimum shall consist of a hammerhead (or three-point) turnaround with a paved surface consisting of at least six inches of rock that is at least 20 feet wide with a minimum length of 40 feet and the Zoning Administrator shall verify the pavement prior to the issuance of any Zoning Compliance Certificate.
to ensure the following:
All homes are accessible by emergency vehicles.

24.E. Prior to advertising any lots for sale the petitioner shall file a Miscellaneous Document with the Champaign County Recorder of Deeds stating that the Rural Residential Overlay District was authorized on the subject property subject to specific conditions and said Document shall contain all the conditions of approval for Case 520-AM-05.
to ensure the following:
Prospective lot purchasers are aware of all of the conditions relevant to approval of the Rural Residential Overlay District on the subject property.

Mr. Hall stated that if the prospective purchaser has a title search prepared they will immediately become aware of all of the conditions on the limited use of these lots and hopefully, if they read the title search, they will not find out about these conditions when they apply for their Zoning Use Permit, after they have already purchased the lot.

Mr. Bluhm stated that the top heading of the Revised Draft Summary of Evidence should be corrected to indicate Case 520-AM-05 instead of Case 573-AM-06.

Mr. Bluhm asked the Board if there were any questions for Mr. Hall.

Ms. Capel asked Mr. Hall if the number of conditions for this case was unusual for an RRO.

Mr. Hall stated no. He said that the only thing that is unusual is the pipeline radius impact conditions. He

1 said that this is the first RRO proposed with high pressure gas pipelines but the driveway and drainage tile
2 conditions, when there is a drainage district tile on the property, conditions are very standard.
3

4 Mr. Bluhm asked Mr. Hall if Tract 1, 2 and 3, as indicated on the map included in the Supplemental
5 Memorandum dated September 25, 2009, were the lots that the Board is currently addressing.
6

7 Mr. Hall stated yes. He said that Tracts 1 and 3 are not best prime farmland overall therefore they are five
8 acre lots and they comply with the *Plat Act* and no subdivision plat is necessary. He said that Tract 2 is best
9 prime farmland overall consisting of 1.99 acres because there is a two acre maximum for best prime
10 farmland lots in an RRO therefore Tract 2 complies and Mr. Bateman has a *Plat Act* exemption for one lot
11 less than five acres. He said that if the County Board approves the rezoning that will be the last public action
12 necessary and no subdivision approval is required after that. He said that the last plan that was
13 recommended for approval by the Board had flag lots and that was the approach that Petitioner took to get
14 the buildable areas out of the pipeline impact radius. He said that Tract 2 is technically a flag lot but Tract 1
15 and 3 are not flag lots and obviously the practical affect is the same because the houses need to be setback a
16 far distance from the road in order to be compliant with the pipeline impact radius. He said that technically
17 the Board is not dealing with flag lots but the bad thing about flag lots is a long driveway that could create
18 problems for emergency vehicle access and the same condition applies here therefore the special conditions
19 are imposed to deal with that.
20

21 Mr. Bluhm stated that the map describes the potential impact zone setback line by a dotted line and the
22 property owner is required to build outside of that radius.
23

24 Mr. Hall stated that a lot of people would criticize staff's approach about best prime farmland. He said that
25 the map indicates dark areas that are the soil mapping units from the *Soil Survey of Champaign County,*
26 *Illinois* and it should never be assumed that the soil survey is accurate at this scale. He said that the way that
27 the *Zoning Ordinance* is written best prime farmland has to be dealt with and it is known that the soil survey
28 is not that accurate but the *Ordinance* does not require Mr. Bateman to hire a soil scientist to go out and map
29 the soils on his property so that staff could have map units with a higher degree of confidence. He said that
30 this is what staff does even though, to a certain extent, it is misapplying the soil survey, and it is the only
31 alternative that staff has. He said that if someone wanted to criticize this practice they would be accurate but
32 it is the only way that staff has to deal with soils. He said that this is not meant to be a criticism of the plan
33 that has been presented by Mr. Bateman and the only way that we can proceed to deal with soils is by taking
34 the soil survey at face value even though it shouldn't be applied that way.
35

36 Mr. Bluhm clarified that Item #15.A indicates that the subject property is located between 5.3 road miles
37 from the Cornbelt Fire Protection District station in Mahomet but Item #15.C indicates that the RRO District
38 is between 4 and 5 road miles from the Cornbelt Fire Protection District station in Mahomet.
39

40 Mr. Knight stated that Item #15.C should indicate that the RRO District is between 5 and 6 road miles from
41 the Cornbelt Fire Protection District station in Mahomet.
42

43 Mr. Hall agreed. He said that Item #15.C could indicate that the RRO District is about 5.3 road miles from

1 the Cornbelt Fire Protection District station in Mahomet.

2
3 Mr. Bluhm stated that Item #15.C could indicate between 5 and 6 miles and changes the comparable to
4 “more or less typical.” He said that this issue can be finalized when the Board reviews the Finding.

5
6 Mr. Bluhm asked the Board if there were any additional clarifications or questions for Mr. Hall and there
7 were none.

8
9 Mr. Bluhm called Mr. Mike Tague to testify.

10
11 Mr. Mike Tague, attorney for Mr. Bateman, stated that he reviewed all of the documentation for this hearing.
12 He said that while it is true that this is the seventh meeting and that is because he and Mr. Bateman have
13 worked very hard to struggle with some concepts that were not clarified until the pipeline radius impact
14 ordinance was adopted. He said that the ZBA voted on this project twice and the first time it was denied
15 based upon concerns of the pipeline impact radius and the second time it was approved due to the relocation
16 of the buildable areas outside of the pipeline impact radius. He said that after several meetings and two
17 remands the County Board gave them the policy that is to be applied with the impact radius. He said that he
18 essentially had no issues with most of the information included in the Supplemental Memorandum dated
19 September 25, 2009, although Item #17.D of the Revised Draft Summary of Evidence dated September 25,
20 2009, discusses the impact radius and whether the RRO is comparable to “much worse than typical,” “worse
21 than typical” or “typical.” He said that initially the draft would indicate that the RRO is “much worse than
22 typical” because of three items which were delineated in the memorandum. He said that he called staff to
23 question if “worse than typical” made sense with those three findings and staff pointed out that the RRO
24 complies with the ordinance in question and it appears that their recommendation that the RRO falls on the
25 worse side of typical is based upon the pipeline proximity. He said that this must be because this particular
26 part of the County houses the pipelines and most of the areas in the County do not however this takes a giant
27 step back from what the County Board has directed with their enactment of the ordinance. He said that the
28 enactment of the ordinance was meant to make this a typical application if a home was built outside of the
29 pipeline radius and had the adequate buildable area in compliance with the ordinance. He said that he
30 suggested that rather than striking out “much worse” that “much worse than” should be stricken and
31 “typical” should be indicated. He said that not only did staff not adopt his suggestion but added “much
32 worse” back into Item #17.D and given the enactment of the pipeline impact radius ordinance that is an
33 erroneous finding and if that were the basis for a denial of a recommendation he would think that all of the
34 hard work and attempt to stay out of court is lost. He said that he believes that “worse than typical” was bad
35 enough but “much worse than typical” is not justified under the factors that are involved. He said that the
36 fact that the pipelines are not located on Mr. Bateman’s property as it relates to Tracts 2 and 3 and the impact
37 radius has been mitigated with the special conditions and the overlying ordinance from the County Board.

38
39 Mr. Tague stated that there are livestock management facilities of which only one is active. He said that one
40 of the inactive livestock management facilities is across the road to the east of the proposed RRO and is
41 separated by the road. He said that in the dialogue as to why this is not good for RRO lots there is a
42 suggestion that if an RRO lot was next to a fence the cattle might come up to the fence and if they got
43 through the fence they would come upon an RRO lot. He said that if the inactive livestock facility across the

1 road became active the bigger problem with the cattle getting out of the fence would be that they would get
2 into the road traffic rather than into the RRO lots and traversing another 371 feet in the non-buildable area
3 into the occupied area. He said that with only one active facility the owner's created a residential lot
4 amongst the cattle lot. He said that "much worse than typical" or "worse than typical" is not supported by
5 the fact that there is only one active livestock management facility that is not contiguous to the RRO lots
6 therefore "typical" is more appropriate.
7

8 Mr. Tague stated that new Item #22.C(2) included in the Supplemental Memorandum dated October 1, 2009,
9 refers to availability of water. He said that the proposed RRO is on the Mahomet-Teays Aquifer therefore
10 water availability is "ideal." He said that emergency services being five miles away is "typical" for a rural
11 area. He said that if we are looking at site specificity, which is apparently being done with pipelines under
12 this proposal, it has been determined that it is "much worse than typical" which is because the pipelines are
13 only in this area. He said that water is readily available in the area of the proposed RRO, due to the
14 Mahomet-Teays Aquifer, and it is not in other areas of the County.
15

16 Mr. Tague stated that the flag lots that were proposed in the version that was passed by the ZBA would have
17 been more troublesome to a general impact on farming relative to the parent tract itself. He noted that Mr.
18 Bateman is a farmer and would prefer to not sell any lots but his wife is in extended care and it may be
19 necessary for him to sell these lots to provide revenue for her care. Mr. Tague stated one of the flag lots had
20 an extremely long lane and irregular shape to meet the best prime farmland requirements although it was
21 removed from the current proposal. He said that with the pipeline impact radius ordinance passed they were
22 able to essentially prepare rectangular lots that had the same frontage as the rear where the buildable area
23 would be and the only reason why Tract 2 is a flag lot is to deal with the soil type category, which is
24 imprecise, to get to the two acre criteria. He said that essentially they believe that the current configuration
25 is much improved from the one that the Board previously approved and should be acceptable.
26

27 Mr. Bluhm asked the Board if there were any questions for Mr. Tague.
28

29 Mr. Courson asked Mr. Tague, if Mr. Bateman is considering the RRO for revenue for his wife's care, has
30 Mr. Bateman considered selling the entire farm rather than breaking it up into pieces.
31

32 Mr. Tague stated that Mr. Bateman has considered such and his preference would be to not sell any of his
33 property but if he had to he would only sell one lot at a time to see what is required.
34

35 Mr. Bluhm asked Mr. Tague if Tract 2 will only be close to the easement for the drainage district tile and not
36 within the easement.
37

38 Mr. Tague stated that Tract 2 will be close to the easement but it will not impact the easement.
39

40 Mr. Bluhm asked Mr. Tague if Tract 1 would be similar.
41

42 Mr. Tague stated correct, he does not believe that Tract 1 or Tract 2 will impact the drainage district
43 easement. He said that if they do anything relative to the tile located within that easement they would repair

1 the tile as required.

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3 Mr. Bluhm stated that previously the drainage district was not aware of the exact location of the tile within
4 the easement.

5
6 Mr. Hall stated that the engineer located the drainage district tile and indicated it on the map.

7
8 Mr. Tague stated that he does not remember the details of how they located the drainage district tile but to
9 his knowledge the location was satisfactory to the drainage district.

10
11 Mr. Bateman concurred that the drainage district tile was located.

12
13 Mr. Bluhm asked Mr. Hall if there were any additional questions for Mr. Tague.

14
15 Mr. Hall stated that he agrees with Mr. Tague's comments regarding water availability. He said that the
16 Table of Common Conditions, which was included in the Supplemental Memorandum dated September 25,
17 2009, indicates the availability of water supply and an "Ideal" condition is the virtual certainty of water
18 availability (i.e., located above the Mahomet-Teays Aquifer) or anywhere that investigations indicate
19 availability with no significant impact on existing wells. He said that based on this information it would be
20 consistent with staff's approach in other RRO's to call this an "Ideal" condition in regard to water
21 availability.

22
23 Mr. Tague stated that when water availability and emergency services are combined arguably there would
24 not be an "Ideal" situation but it would be a "Better than typical."

25
26 Mr. Thorsland stated that there was previous testimony regarding access to the lots due to flood waters.

27
28 Mr. Bluhm stated that he understands Mr. Tague's comments about the cattle getting out of the fence but
29 odor would be a bigger factor. He said that the Board cannot control the winds and that is what helped
30 influence the factor of "Worse than typical" because there are not a lot of livestock management facilities in
31 the County.

32
33 Mr. Tague stated that prevailing winds are a big factor although it would be very rare to have an easterly
34 wind flow from the livestock facility across the road.

35
36 Mr. Bluhm asked the Board if there were additional questions for Mr. Tague and there were none.

37
38 Mr. Bluhm asked if staff had additional questions for Mr. Tague and there were none.

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40 Mr. Bluhm called Mr. Bateman to testify.

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42 Mr. Bateman declined to testify at this time although he would be available to answer any questions that the
43 Board may have.

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2 Mr. Bluhm asked the Board if there were any questions for Mr. Bateman.

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4 Mr. Thorsland asked Mr. Bateman if he had reviewed the special conditions included in the memorandums.

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6 Mr. Bateman stated yes.

7
8 Mr. Bluhm called Mr. Kevan Parrett to testify.

9
10 Mr. Kevan Parrett, who resides at 180 CR 2400N, Mahomet stated that he is present at tonight's public
11 hearing to represent the Newcomb Special Drainage District. He said that he wanted to make sure that
12 everything that they had discussed and agreed to with Mr. Bateman were included in the proposal and it
13 appears that it is. He said that the drainage district and Mr. Bateman located the drainage district tile on the
14 northeast corner and then found it on the southeast side where it crosses the road. He said that the new lots
15 seem to infringe less on the drainage district therefore the drainage district is satisfied with the proposal and
16 the special conditions that have been imposed.

17
18 Mr. Bluhm asked Mr. Parrett if he remembers the special condition requiring replacing the drainage tile in
19 the swale with non-perforated tile.

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21 Mr. Parrett stated no and it doesn't make sense.

22
23 Mr. Hall asked Mr. Parrett if the drainage district would prefer that the drainage district tile not be disturbed
24 unless it requires repair.

25
26 Mr. Parrett stated that if someone wants to connect to the drainage district tile they have to obtain permission
27 from the Newcomb Special Drainage District. He said that the only thing that he can assume that the special
28 condition would pertain to is if someone is building their house and they cut a private tile, not a drainage
29 district tile, they would be required to replace and repair that tile with non-perforated tile. He said that the
30 Newcomb Special Drainage District 24-inch tile is located within the swale although Mr. Bateman does have
31 several private tiles which connect to the 24-inch tile but their tile is their only concern.

32
33 Mr. Hall stated that the way that the *Stormwater Policy* is written it calls for the replacement of all tiles
34 through the developed areas and technically the drainage district tile does not go through any developed area.

35
36 Mr. Parrett stated that the drainage district tile easement may infringe on Tract 1 a little bit but the main tile
37 does not go through any of the proposed lots.

38
39 Mr. Hall stated that he does not see a need for Condition #24.B(2), certainly not in the way that it is currently
40 worded, and Condition #24.B(3) takes care of any disturbance to any tile that may happen.

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42 Mr. Bluhm asked Mr. Parrett if the Newcomb Special Drainage District would object to the elimination of
43 Condition #24.B(2).

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Mr. Parrett stated no.

Mr. Bluhm asked the Board if there were any additional questions for Mr. Parrett and there were none.

Mr. Bluhm asked if staff had any additional questions for Mr. Parrett and there were none.

Mr. Bluhm asked the audience if anyone desired to sign the witness register to present testimony regarding Case 520-AM-05.

Mr. Bluhm called Mr. Louis Wozniak to testify.

Mr. Louis Wozniak, who resides at 401 CR 2425N, Mahomet stated that he owns property on Route 47 which is directly east of Mr. Bateman's property. He said that he disagrees with Mr. Tague's comment that the proposed RRO is "Ideal" for water availability because one needs to compare it to the rest of the County where water is hard to access. He said that it would appear that because of the aquifer it is "Ideal" under all conditions and not because of the comparison of someone else who does not have it. He said that he is taken aback that the proposed RRO was rated "Worse than typical" due to the pipelines. He said that he understands that staff must select one of the points that are listed but it must be noted that the pipeline ordinance was passed and the RRO does meet those requirements therefore the rating should be mitigated to reflect that point.

Mr. Bluhm asked the Board if there were any questions for Mr. Wozniak and there were none.

Mr. Bluhm asked if staff had any questions for Mr. Wozniak.

Mr. Hall stated that when the ratings are discussed we are talking about typical conditions not whether it is suitable or not and it would be nice if we had a table that indicated what is suitable and what is not, but such a table is not possible. He said that we are discussing common conditions and there are pipelines all over Champaign County but if Mr. Wozniak had to find out what the average condition is, it would not be to have a property with a pipeline on it.

Mr. Wozniak stated that he is objecting to the way it is characterized because it is negatively impacting the request for the RRO and it should not because the RRO does meet the codes.

Mr. Hall stated that he is suggesting that this is more relative to the issue about suitability rather than typical conditions.

Mr. Wozniak stated that they can agree to disagree.

Mr. Bluhm asked the audience if anyone desired to sign the witness register to present testimony regarding Case 520-AM-05 and there was no one.

- 1 Mr. Bluhm closed the witness register.
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- 3 Ms. Capel stated that Item #22.C should be revised to indicate (2) water availability as “Ideal or Nearly
4 Ideal” in Item 22.A.
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- 6 Mr. Bluhm asked the Board to comment on emergency services.
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- 8 Mr. Wozniak stated that it should be noted in the finding that the RRO meets the codes for the pipeline
9 impact radius ordinance.
10
- 11 Mr. Hall stated that the finding should always indicate that the RRO does conform to the *Ordinance*
12 requirements.
13
- 14 Ms. Capel stated that emergency services appear to be “typical” and it should remain under Item #22.C(1).
15
- 16 Mr. Thorsland and Mr. Bluhm agreed.
17
- 18 Mr. Bluhm stated that Mr. Tague discussed the effect of farms, livestock management facilities, which is
19 listed under Item #22.E.
20
- 21 Ms. Capel asked Mr. Hall if the entirety of the remaining farmland is equitable and in crop production.
22
- 23 Mr. Bluhm stated yes.
24
- 25 Ms. Capel stated that the lots are virtually surrounded by agriculture which entails spraying, chemicals, etc.
26
- 27 Mr. Bluhm stated that it is not just the livestock management facilities that were taken into consideration.
28
- 29 Mr. Thorsland stated that there is a presumption that as more houses come in they won’t sway over what
30 they smell or hear regardless of the duration of the livestock operation. He said that there will be an impact
31 regardless of an existing facility. He said that Item #21.C was previously revised to indicate “much better
32 than typical.” He said that the Item #22 of the Revised Summary of Evidence dated September 25, 2009,
33 will be supplemented by the text included in the Supplemental Memorandum dated October 1, 2009, with
34 the revision to Items #22.A and 22.C(2) which moves availability of water to “Ideal.”
35
- 36 Mr. Bluhm stated that Mr. Tague argued that the pipeline impact radius ordinance was passed and the RRO
37 meets those requirements therefore it should not receive a rating of “Worst or Nearly Worst than Typical”
38 but “Much Worse than Typical.”
39
- 40 Mr. Thorsland stated that Mr. Hall explained the difference between typical conditions and suitability. He
41 said that some of the existing lots in the area are entirely within the PIR.
42
- 43 Mr. Hall stated that it occurred to him that there is a legal question here and he is fairly confident that the

1 State’s Attorney would say that if meeting the *Ordinance* requirement is not suitable for approval then the
 2 *Ordinance* needs to be revised. He stressed to the Board not to confuse typical conditions with what is
 3 suitable. He said that the County Board determined that as long as someone is not building within the PIR
 4 then it is a suitable place to build which does not mean that it is a typical condition at all. He said that
 5 Attachment V should be revised to indicate that the availability of water is “Ideal or Nearly Ideal Condition.”
 6 He said that the revised Attachment V will indicate two factors which are “Ideal or Nearly Ideal” and five
 7 factors which are “Much Better than Typical” and one at “Much Worse than Typical” and one at “More or
 8 Less Typical.”

9 He said that the written text indicates that the effect of farms is “Much Worse than Typical” and the Table of
 10 Common Conditions indicates that the RRO is bordered by row crop agriculture on three sides but also close
 11 to and downwind of an existing livestock and /or stable operation and the cattle facility is south and west of
 12 the proposed RRO. He said that the effects of farms should be “Much Worse than Typical” as stated in the
 13 Summary of Evidence therefore new Item #22.E “Worst or Nearly Worst than Typical” should be stricken
 14 and Item 22.D “Much Worse than Typical” should be revised with the addition of (2) effects of farms.

15
 16 Mr. Bluhm requested the Board’s comments regarding the proposed Special Conditions.

17
 18 Mr. Hall stated that Special Condition #24.A(2) dates from the plan that had the large lot on the south side
 19 that did include some pipeline easements but none of the current lots contain any easements for pipelines
 20 therefore he questions the need for Special Condition included in #24.A(2).

21
 22 Mr. Bluhm asked about Tract 2 because the plat indicates that there is an easement for the access road into
 23 the centerline of the driveway for Tract 2. He said that he would maintain the Special Condition included in
 24 #24.A(2).

25
 26 Mr. Courson asked Mr. Hall if there is adequate buildable area for Tract 2.

27
 28 Mr. Hall stated yes. He said that the Board could request more information for Tract 2.

29
 30 Mr. Knight stated that there will be 1.01 acres left for buildable area.

31
 32 Mr. Bluhm asked the Board if there were any questions or comments regarding Special Conditions included
 33 in Items # 24.A(1); 24.A(2); and 24.A(3) and there were none.

34
 35 Mr. Thorsland stated that the following text should be added to Item #24.B(1): Prior to offering any lots for
 36 sale the petitioner shall dedicate a tile access and maintenance easement for the tile in the swale with an
 37 easement of width of 80 feet centered on the centerline of the swale and no construction nor earthwork shall
 38 occur within the tile easement and no woody vegetation shall be allowed to grow nor shall any connection be
 39 made to the drainage district tile without prior written approval of the Newcomb Special Drainage District.

40
 41 Mr. Bluhm requested the Board’s comments or questions regarding the Special Condition included in Item
 42 #24.B(2). He said that there should not be any disturbance of the drainage district tile.

1 Ms. Capel stated that it doesn't seem right to make Mr. Bateman responsible for replacement of the drainage
2 district tile when there will be no impact upon that tile.

3
4 Mr. Hall stated that the original version of the RRO indicated that over half of the drainage district tile
5 would be completely on lots and the Stormwater Management Policy would require that it be replaced at that
6 point but since the RRO has been revised there is no part of the drainage district tile located on any of the
7 RRO lots. He said that the Special Condition included in Item #24.B(2) can be stricken.

8
9 Mr. Bluhm asked if the Board had any questions or comments regarding the Special Condition included in
10 Item #24.B(3) and there were none.

11
12 Mr. Bluhm read the Special Conditions included in Items #24.C(1) and 24.C(2).

13
14 Mr. Thorsland asked Mr. Hall if he was aware of the location of the driveway on the existing lot.

15
16 Mr. Hall stated that he believed the driveway was located in the middle of the lot therefore it could not share
17 a drive with Tract 1.

18
19 Mr. Bluhm read the Special Conditions included in Items #24.D(1); #24.D(2); and #24.E. He asked the
20 Board if there were any questions or comments regarding these special conditions and there were none.

21
22 Mr. Bluhm asked Mr. Tague and Mr. Bateman if they were agreeable to the special conditions as revised.

23
24 Mr. Tague and Mr. Bateman stated yes.

25
26 **Mr. Courson moved, seconded by Mr. Miller to approve the special conditions as amended. The**
27 **motion carried by voice vote.**

28
29 Mr. Hall stated that a new Item #18 should be added to the Documents of Record indicating the following:
30 Supplemental Memorandum for Case 520-AM-05, dated October 1, 2009, with attachments.

31
32 Mr. Bluhm stated as a useful guide the Finding of Fact was included for Case 520-AM-05, as it was
33 recommended for approval on December 14, 2006.

34
35 Mr. Hall stated that Well Suited applies to RRO's with best prime farmland and if all of the soils were
36 averaged it would be determined that the RRO is non-best prime farmland on average.

37
38 Mr. Knight stated that the soil rating is 84 therefore Well Suited would not apply and the Board only needs
39 to determine if the RRO is suited overall.

40
41 **Finding of Fact for Case 520-AM-05:**

42
43 From the Documents of Record and the testimony and exhibits received at the public hearing conducted on

1 March 30, 2006, April 13, 2006, July 13, 2006, August 31, 2006, October 12, 2006, December 14, 2006, and
2 October 1, 2009, the Zoning Board of Appeals of Champaign County finds that:

3
4 **1. The Proposed Site SUBJECT TO CONDITIONS, IS SUITED overall for the**
5 **development of THREE residences.**

6 Mr. Hall recommended that the Board construct their findings consistent with the overall determination
7 and would recommend to not have a negative finding if the Board’s intent is to have an overall
8 recommendation for approval. He said that he would treat the two findings like the Board treats the two
9 findings for a variance in that they both have to be affirmative in order to approve the RRO.

10 Mr. Courson stated that the proposed site, subject to conditions, IS SUITED overall for the development
11 of three residences because of the following:

- 12 A. the site has more or less typical Champaign County conditions due to manmade hazards
13 and safety concerns; and
- 14 B. much better than typical and nearly ideal conditions for the other consideration of
15 adequacy of roads; effects on drainage; septic suitability; LESA score; and flood hazard
16 status, and the availability of water is ideal; and
- 17 C. the property is 5.3 miles from the Combelt Fire Protection District; and
18 and despite:
- 19 D. the fact that there are high pressure gas pipelines in the vicinity; and
- 20 E. the site has much worse than typical Champaign County conditions because it is bordered
21 on one side by livestock management facilities

22 Mr. Thorsland stated that perhaps Item A should be under the despite because “Much Worse than
23 Typical” conditions due to manmade hazards and safety concerns due to the buildable area being outside
24 the PIR.

25 Mr. Hall stated that he would be concerned that the evidence does not suggest that it is more or less
26 typical for manmade hazards but he would recommend that the Board include some statement that the
27 RRO conforms to the pipeline impact radius ordinance.

28 Ms. Capel stated that the Item A should not be in the despite but should be revised to indicate that the
29 site meets the pipeline impact radius ordinance to mitigate the manmade hazards and safety concerns.
30 She said that Item E should be revised to indicate the following: the site has much worse than typical
31 Champaign County conditions because it is bordered on one side by livestock management facilities and
32 land surrounding the lots is actively farmed.

33 Mr. Bluhm stated that a new Item D should be added, and subsequent items renumbered, to indicate that

1 with the proposed special condition the property will meet the Cornbelt Fire Protection District's
2 standards for access and turn-around.

3 **2. Development of the Proposed Site under the proposed Rural Residential Overlay**
4 **development SUBJECT TO CONDITIONS, WILL BE COMPATIBLE with**
5 **surrounding agriculture because:**

6 Mr. Thorsland stated that the development of the Proposed Site under the proposed Rural Residential
7 Overlay development SUBJECT TO CONDITIONS, WILL BE COMPATIBLE with surrounding
8 agriculture because of the following:

- 9 A. surface drainage that is much better than typical; and
- 10 B. the condition to provide an easement for the drainage district tile;
- 11 C. the adequacy of the roads that is nearly ideal Champaign County conditions; and
- 12 D. traffic generated by the proposed RRO District that will be only 200% more than without
13 the RRO

14 Ms. Capel stated that a new Item E should be added, and subsequent items renumbered, indicating the
15 following:

- 16 E. the condition to require centralized driveways and grouped mailboxes as to not impede
17 agricultural traffic.
- 18 and despite:

19 Mr. Bluhm asked the Board to indicate their comments regarding despite.

20 Mr. Thorsland stated that the development of the Proposed Site under the proposed Rural Residential
21 Overlay development SUBJECT TO CONDITIONS, WILL BE COMPATIBLE with surrounding
22 agriculture despite the following:

- 23 F. presence of adjacent livestock management facilities on one side and four other livestock
24 management facilities within a one-mile radius of the property for a total of three active
25 facilities that are by law allowed to expand up to 1,000 animal units; and
- 26 G. the presence of a drainage district tile near the proposed RRO district

27 Mr. Thorsland stated that a new Item H should be added as follows:

- 28 H. the proposed RRO will have an impact on farm compatibility.

29 Mr. Bluhm asked if text should be included in Item F indicating the presence of one active livestock

1 management facility.

2 Mr. Hall stated no, because there are a total of three active facilities within a one-mile radius of the
3 RRO.

4 Mr. Bluhm asked the Board if there were any additional comments regarding the finding and there were
5 none.

6 **Ms. Capel moved, seconded by Mr. Courson to adopt the Summary of Evidence, Documents of**
7 **Record and Finding of Fact as amended. The motion carried by voice vote.**

8 **Mr. Thorsland moved, seconded by Ms. Capel to close the public hearing for Case 520-AM-05,**
9 **Gene Bateman. The motion carried by voice vote.**

10 Mr. Bluhm informed Mr. Tague and Mr. Bateman Mr. Bluhm that two Board members are absent from
11 tonight’s meeting therefore it is at their discretion to either continue Case 520-AM-05 until a full Board is
12 present or request that the present Board move forward to the Final Determination.

13
14 Mr. Tague and Mr. Bateman requested that the present Board proceed to the Final Determination.

15
16 **Final Determination for Case 520-AM-05:**

17
18 **Mr. Courson moved, seconded by Ms. Capel that pursuant to the authority granted by Section 9.2 of**
19 **the *Champaign County Zoning Ordinance*, the Zoning Board of Appeals of Champaign County**
20 **determines that the Map Amendment requested in Case 520-AM-05 should BE ENACTED,**
21 **SUBJECT TO THE FOLLOWING SPECIAL CONDITIONS:**

- 22 1. **Prospective lot purchasers shall be made aware of the presence of the Manlove Gas**
23 **Storage Facility on the property and the presence of related high pressure gas**
24 **pipelines on the property and the related gas injection wells on adjacent property.**

25 The above stated condition is necessary to ensure the following:

26 **All prospective lot purchasers have as full knowledge as possible of the Manlove Gas**
27 **Storage Facility prior to purchase of a lot.**

- 28 2. **Prospective lot purchasers shall be made aware of the presence of easements for**
29 **Peoples Gas Light and Coke Company as originally granted on November 30, 1965,**
30 **and recorded at pages 71 and 72 in Book 809 of the Office of the Champaign County**
31 **Recorder of Deeds; and all said easements shall be specifically mentioned in any**
32 **deed for any lot in the Rural Residential Overlay District in Zoning Case 520-AM-**
33 **05; and all said easements shall be indicated on any Plat of Survey that is prepared**
34 **for any lot in said Rural Residential Overlay District.**

35 The above condition is necessary to ensure the following:

1 All prospective lot purchasers and lot owners have as full knowledge as possible of
2 these easements before and after purchase.

3 3. Prospective lot purchasers shall be made aware of the *Zoning Ordinance*
4 requirements that prohibit any construction in the Pipeline Impact Radius (except
5 for driveways) and the resulting amount of buildable area available on each lot.

6 The above condition is necessary to ensure the following:

7 All prospective lot purchasers and lot owners have as full knowledge as possible of
8 the restrictions placed on the lots due to their proximity to high pressure gas
9 pipelines.

10 4. Prior to offering any lots for sale the petitioner shall dedicate a tile access and
11 maintenance easement for the tile in the swale with an easement of width of 80 feet
12 centered on the centerline of the swale and no construction nor earthwork shall
13 occur within the tile easement and no woody vegetation shall be allowed to grow nor
14 shall any connection be made to the drainage district tile without prior written
15 approval of the Newcomb Special Drainage District.

16 The above condition is necessary to ensure the following:

17 The existing agricultural drainage system can be easily maintained in the future;
18 and is not harmed by the proposed Rural Residential Overlay Zoning District; and
19 that said District complies with the requirements of the Champaign County
20 Stormwater Management Policy.

21 5. Any underground drainage tile that must be relocated to accommodate any
22 construction in the proposed Rural Residential Overlay Zoning District shall be
23 replaced and relocated in conformance with the Champaign County Stormwater
24 Management Policy.

25 The above condition is necessary to ensure the following:

26 The existing agricultural drainage system is not harmed by the proposed Rural
27 Residential Overlay Zoning District and that said District complies with the
28 requirements of the Champaign County Stormwater Management Policy.

29 6. Tracts 2 and 3 of the Bateman Proposed Tracts received on September 18, 2009,
30 shall have centralized driveways and shall also have grouped mail boxes located as
31 far off the roadway as permitted by the United States Postal Service and evidence of
32 the mail box installation and location shall be submitted to the Zoning
33 Administrator prior to the issuance of any Zoning Compliance Certificate.

1 The above condition is necessary to ensure the following:

2 **Driveway entrances and mail boxes do not unnecessarily impede agricultural traffic.**

3 7. **All driveway entrances shall be 30 feet wide with a radius as approved by both the**
4 **Newcomb Township Highway Commissioner and the Cornbelt Fire Protection**
5 **District and evidence of both approvals shall be submitted to the Zoning**
6 **Administrator prior to the issuance of any Zoning Compliance Certificate.**

7 The above condition is necessary to ensure the following:

8 **Emergency services vehicles have adequate access to all properties.**

9 8. **All homes shall be served by driveways that have a paved surface consisting of at**
10 **least six inches of rock that is at least 20 feet wide and a corner radius approved by**
11 **the Cornbelt FPD and the Zoning Administrator shall verify the pavement prior to**
12 **the issuance of any Zoning Compliance Certificate.**

13 The above condition is necessary to ensure the following:

14 **All homes are accessible by emergency vehicles.**

15 9. **Each driveway shall be provided with a means of turnaround of adequate**
16 **dimension to accommodate fire protection and emergency service vehicles that at a**
17 **minimum shall consist of a hammerhead (or three-point) turnaround with a paved**
18 **surface consisting of at least six inches of rock that is at least 20 feet wide with a**
19 **minimum backup length of 40 feet and the Zoning Administrator shall verify the**
20 **pavement prior to the issuance of any Zoning Compliance Certificate.**

21 The above condition is necessary to ensure the following:

22 **All homes are accessible by emergency vehicles.**

23 10. **Prior to advertising any lots for sale the petitioner shall file a Miscellaneous**
24 **Document with the Champaign County Recorder of Deeds stating that the Rural**
25 **Residential Overlay Zoning District was authorized on the subject property subject**
26 **to specific conditions and said Document shall contain all of the conditions of**
27 **approval for Case 520-AM-05.**

28 The above condition is necessary to ensure the following:

29 **Prospective lot purchasers are aware of all of the conditions relevant to approval of**
30 **the Rural Residential Overlay District on the subject property.**

31

1 The roll was called:

2	Miller-yes	Palmgren-absent	Schroeder-absent
3	Thorsland-yes	Capel-yes	Courson-yes
4	Bluhm-yes		

5 Mr. Hall informed Mr. Bateman that the Board has determined a recommendation for approval therefore
6 this case will be forwarded to the Environment and Land Use Committee in October and he will receive
7 notice of that meeting.

8 **6. New Public Hearings**

9
10 None

11
12 **7. Staff Report**

13
14 None

15
16 **8. Other Business**

17 A. Possible cancellation of October 29th ZBA Meeting.

18
19 Mr. Hall stated that Board should determine if it should cancel the October 29, 2009, public hearing or keep
20 it on the docket and see if a quorum will be present at that time. He said that there was one case that was
21 suppose to be on the October 15th agenda but the new material for that case was not received on time
22 therefore it has been placed on the agenda for October 29th. He said that if the Board believes that there will
23 be a quorum on October 29th then the meeting should not be cancelled but there is no obligation to maintain
24 it because after the October 15th meeting the Board will have held its two required meetings for the month.
25 He said that the legal add for the case which has been placed on October 29th meeting will be sent in next
26 week therefore a decision is needed as to the fate of this meeting.

27
28 Mr. Bluhm stated that if the weather is cooperative it is very possible that many of the Board members, who
29 farm, could be absent from the October 29th meeting therefore a quorum could be endangered.

30
31 Mr. Hall stated that even if staff runs the legal for the case on October 29th the meeting can still be cancelled.

32
33 Mr. Thorsland stated that he plans to attend the October 29th meeting.

34
35 Mr. Bluhm stated that Mr. Schroeder previously indicated that he should be in attendance on October 29th.

36
37 Mr. Hall stated that he would not recommend a case regarding a kennel proceed to final action without a full
38 Board present.

1 The consensus of the Board was to maintain the October 29th meeting at this time.

2
3 Mr. Bluhm requested that the Board call staff if they will be absent from the October 29th meeting.

4
5 **9. Audience Participation with respect to matters other than cases pending before the Board**

6
7 None

8
9 **10. Adjournment**

10
11 **Ms. Capel moved, seconded by Mr. Thorsland to adjourn the October 1, 2009, meeting. The motion**
12 **carried by voice vote.**

13
14 The meeting adjourned at 8:50 p.m.

15
16
17
18 Respectfully submitted

19
20
21
22
23 Secretary of Zoning Board of Appeals

CASE NO. 634-AT-08 Part B

SUPPLEMENTAL MEMORANDUM

Champaign County
Department of
October 9, 2009

PLANNING &
ZONING

Petitioner: **Zoning Administrator**

Prepared by: **John Hall**

Zoning Administrator

Request: **Amend the Champaign County Zoning Ordinance as follows:**

1. **Add definitions for "SMALL WIND TURBINE TOWER" and "BIG WIND TURBINE TOWER", and revise the definition for "WIND FARM."**
2. **Amend subsection 4.2.1. to allow BIG WIND TURBINE TOWER as a second principal use on lots in the AG-1 and AG-2 Zoning Districts.**
3. **Amend paragraph 4.3.1E. to add new height regulations that apply to "SMALL WIND TURBINE TOWER" and "BIG WIND TURBINE TOWER".**
4. **In Section 5.2 replace "wind turbine" with "BIG WIND TURBINE TOWER".**
5. **In Section 6.1.3 add new standard conditions for "BIG WIND TURBINE TOWER" that are similar to the standard conditions for WIND FARM.**
6. **Add new subsection 7.7 making "SMALL WIND TURBINE TOWER" an authorized accessory use by-right in all zoning districts and add requirements including but not limited to:**
 - a. **the turbine must be located more than one and one half miles from the nearest municipal zoning jurisdiction; and**
 - b. **minimum required yards that are the same as for other accessory structures in the district provided that the overall height is not more than 100 feet; and**
 - c. **an overall height limit of 200 feet provided that the separation from the nearest property line is at least the same as the overall height and authorize private waivers of the separation by adjacent neighbors; and**
 - d. **a limit of no more than two turbine towers per lot; and**
 - e. **allowable noise limits; and**
 - f. **a requirement for engineer certification; and**
 - g. **a requirement to notify the electrical power provider if interconnected to the electrical grid; and**
 - h. **a requirement for no interference with neighboring TV, radio, or cell phone reception; and**
 - i. **a requirement for the removal of inoperable wind turbines.**
7. **In Section 9.3.1 add fees for SMALL WIND TURBINE TOWER and BIG WIND TURBINE TOWER.**
8. **In Section 9.3.3 add application fees for BIG WIND TURBINE TOWER Special Use Permit.**

STATUS

This case was continued from the July 16, 2009, meeting. Those minutes are included separately for approval.

The case was readvertised. New items are indicated with underlining above in the Request block.

Many changes have been made to the proposed amendment but due to time constraints staff is unable to review the changes in this memo. See attachments A through E.

A Draft Finding of Fact will be available at the meeting.

Attachments are listed on the next page.

ATTACHMENTS

- A Revised Changes To Section 3
- B Proposed Changes to Par. 4.2.1 C.
- C Proposed Changes To Subpar. 4.3.1 E
- D Revised Changes To Subsection 5.2
- E Revised Addition to Subsection 6.1.3
- F Revised New Subsection 7.7
- G Proposed Changes to Par. 9.3.1 D.
- H Proposed Changes to Par. 9.3.3 B.
- I Excerpt regarding “non issues” from *In the Public Interest How and Why to Permit for Small Wind Systems A guide for State and Local Governments*. American Wind Energy Association. September 2008.
- J Community Wind overview from www.windustry.org
- K EcoEnergy Met Tower Visibility Markings
- L Draft Minutes of July 16, 2009 (included separately)

Attachment A. Case 634-AT-08 Part B REVISED Draft Proposed Changes To Section 3
OCTOBER 9, 2009

1. Revise the following in Section 3.0 Definitions:

WIND FARM: A unified development of WIND FARM TOWERS and all other necessary components including cabling, transformers, a common switching station, and maintenance and management facilities which are intended to produce electricity by conversion of wind energy and to deliver the electricity to the power grid ~~and having a name plate capacity of more than 10 megawatts (MW)~~. A WIND FARM is under a common ownership and operating control even though the individual WIND FARM TOWERS may be located on land that is leased from many different landowners. A WIND TURBINE TOWER or WIND TURBINE TOWERS that do not conform to the definitions of either a SMALL WIND TURBINE TOWER or a BIG WIND TURBINE TOWER shall by definition be considered a WIND FARM and may only be authorized as a WIND FARM.

WIND FARM TOWER: A wind turbine nacelle and rotor and the supporting tower structure that are part of a WIND FARM development and intended to produce electricity for the power grid or any WIND TURBINE TOWER that does not conform to the definitions of either a SMALL WIND TURBINE TOWER or a BIG WIND TURBINE TOWER.

2. Add the following in Section 3.0 Definitions (revisions from last memo are indicated):

WIND TURBINE TOWER, BIG: A wind turbine nacelle and rotor and the supporting tower structure and associated control or conversion electronics that is owned (or leased to be owned) by ~~a private~~ the landowner of land on which it is located for the purpose of producing electrical energy that may shall primarily be used onsite by another principal use on the same property or that may also, to a much lesser extent, be sold to a utility and that has a rated capacity of more than 100 kilowatts (kW) and which is more than 200 feet in overall height measured to the tip of the highest blade and that is not connected to or part of a system of more than two other BIG WIND TURBINE TOWERS ~~that share a common transformer and or substation.~~

WIND TURBINE TOWER, SMALL: A wind turbine nacelle and rotor and the supporting tower structure and associated control or conversion electronics that is owned (or leased to be owned) by ~~a private~~ the landowner of land on which it is located and which produces electrical energy primarily to be used onsite by the principal use on the same property or that may also, to a much lesser extent, be ~~but that may also be~~ sold to a utility ~~and which has a rated capacity of not more than 100 kilowatts (kW).~~ and which is not more than 200 feet in overall height measured to the tip of the highest blade.

Attachment B. Case 634-AT-08 Part B Draft Proposed Changes To Subpar. 4.2.1 C.
OCTOBER 9, 2009

1. Revise subparagraph 4.2.1 C. as follows:

- C. It shall be unlawful to erect or establish more than one MAIN or PRINCIPAL STRUCTURE or BUILDING per LOT or more than one PRINCIPAL USE per lot in the AG-1 Agriculture, AG-2 Agriculture, CR Conservation Recreation, R-1 Single Family Residence, R-2 Single Family Residence, R-3 Two Family Residence DISTRICTS other than in PLANNED UNIT DEVELOPMENTS except as follows:
2. Up to three BIG WIND TURBINE TOWERS may be authorized as a second PRINCIPAL USE on a LOT as a Special Use Permit in the AG-1 Agriculture and AG-2 Agriculture DISTRICTS.

Attachment C. Case 634-AT-08 Part B Draft Proposed Changes To Subpar. 4.3.1 E
OCTOBER 9, 2009

1. Revise subparagraph 4.3.1 E. as follows:

- E. Any tower (including antenna) over 100 feet in HEIGHT shall be subject to the SPECIAL USE requirements in the DISTRICT in which it is located except for the following:
- (1) any tower that meets the requirements of Section 4.3.1 C.; or
 - (2) any TEST WIND TOWER that does not exceed 200 feet in HEIGHT; or
 - (3) any WIND FARM TOWER except as HEIGHT regulations are required as a standard condition in Section 6.1.4. ; or
 - (4) a SMALL WIND TURBINE TOWER that is no more than 200 feet in HEIGHT (measured to the tip of the highest blade) provided that it meets the following:
 - (a) the required YARD and separations ~~from property lines~~ based on HEIGHT in paragraph 7.7 B.; and
 - (b) provided that it complies with Footnote 11 in Section 5.3.

Attachment D. Case 634-AT-08 Part B REVISED Draft Proposed Changes To Section 5.2
OCTOBER 9, 2009

- 1. In Section 5.2 replace “Wind Turbine (1-3 wind turbines)” with “BIG WIND TURBINE TOWER (1-3 BIG WIND TURBINE TOWERS)”.**
- 2. Add footnote 17 to the indication for special use permit in all Districts where BIG WIND TURBINE TOWER (1-3 BIG WIND TURBINE TOWERS) is authorized (AG-1, AG-2, I-1, and I-2).**
- 3. Add the following footnote 17 in Section 5.2**
 17. A BIG WIND TURBINE TOWER ~~is any non-WIND FARM TOWER with a turbine that has a nameplate rating greater than 100 kilowatts (kW).~~ must be located on the same property as another principal use for the purpose of producing electrical energy that shall primarily be used onsite by that other principal use.

Attachment E. REVISED Draft Proposed Addition to Subsection 6.1.3
OCTOBER 9, 2009

1. Add “BIG WIND TURBINE TOWER” to Subsection 6.1.3 and indicate the following standard conditions:

1. No minimum fencing is required.
2. The Minimum lot size is the same as applicable in the zoning DISTRICT.
3. The Maximum HEIGHT is the same as par. 6.1.4 D. 6.
4. The minimum required YARDS are the following:
 - (a) The front setback is the same as par. 6.1.4 C.5.
 - (b) The SIDE and REAR YARDS are the same as par. 6.1.4 C.6.
5. Add the following explanatory provisions:
 - (a) No BIG WIND TURBINE shall be located in the following areas:
 - (1) Less than one-and-one-half miles from an incorporated municipality that has a zoning ordinance.
 - (2) In any area leased for underground gas storage or under easement for same, unless the lease or easement requires that gas injection wells and other above-ground appurtenances be located in conformance with paragraph 6.1.4 C.9.
 - (3) Less than one mile from the CR Conservation Recreation Zoning District.
 - (b) The special use permit for a BIG WIND TURBINE TOWER shall include all land area within 1,320 feet of a public STREET right of way that is also within 1,000 feet from the base of each BIG WIND TURBINE TOWER except that in the case of BIG WIND TURBINE TOWER in compliance with the minimum STREET separation required by paragraph 6.1.4 C. 5. in which case land on the other side of the public STREET right of way does not have to be included in the SPECIAL USE Permit.
 - (c) The requirements of paragraphs 6.1.4 C. through 6.1.4 S. with the exception of paragraphs 6.1.4 E., L., and Q. shall apply.

1. Add the following new subsection 7.7:

7.7 SMALL WIND TURBINE TOWER

A SMALL WIND TURBINE TOWER shall be allowed as an ACCESSORY USE by Zoning Use Permit in all DISTRICTS as follows:

- A. No SMALL WIND TURBINE TOWER shall be located less than one-and-one-half miles from an incorporated municipality that has a zoning ordinance.
- B. The maximum allowable HEIGHT of a SMALL WIND TURBINE TOWER (measured to the tip of the highest rotor blade) shall be the smaller of the following dimensions:
 1. A dimension equal to 90% of the minimum distance from the base of the proposed SMALL WIND TURBINE TOWER to the nearest DWELLING, PRINCIPAL STRUCTURE, or PRINCIPAL BUILDING under different ownership; or
 2. ~~There shall be a minimum separation distance equal to 1.10 times the total SMALL WIND TURBINE TOWER height (measured to the tip of the highest rotor blade) from the exterior above-ground base of a~~ A dimension equal to 90% of the minimum distance from the base of the proposed SMALL WIND TURBINE TOWER to the nearest third party electrical transmission lines, communication towers, railroad right of way, or public street right of way. This limit on height separation may be reduced upon submission of a PRIVATE WAIVER signed by the owner of said electrical transmission line or communication tower or the relevant railroad or public street maintenance jurisdiction. The PRIVATE WAIVER must specify the agreed minimum separation and maximum height.
 23. A dimension that for any SMALL WIND TURBINE TOWER that must be assembled on the ground and tilted vertically into final position, is no greater than the maximum length that can fit within the LOT LINES prior to being tilted into final position, as measured from the actual point of tilt up; or
 4. 150 feet with less than three acres of LOT AREA; or
 35. 150 200 feet; for a residential ACCESSORY SMALL WIND TURBINE TOWER; or
 4. ~~200 feet for a non-residential ACCESSORY SMALL WIND TURBINE TOWER.~~

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6. The above limits on maximum allowable height notwithstanding, the maximum HEIGHT of a SMALL WIND TURBINE TOWER on a LOT in a subdivision shall not exceed 75% of the minimum required AVERAGE LOT WIDTH when any adjacent and bordering LOT is vacant.

(Note: Discussion by the Board at the July 16, 2009, meeting indicated that the Board was inclined to allow the 200 feet maximum height for any turbine. Note that the minimum required separation to power lines and other third-party facilities has been relocated to this section to reduce the risk of error in height determinations. Paragraph has been added to limit heights greater than 150 feet to properties that are a minimum of five acres in area. Paragraph 6 has been added to minimize conflict between wind turbines and home construction in new subdivisions.)

- C. The maximum allowable rotor diameter for a SMALL WIND TURBINE TOWER shall be as follows:
1. ~~For a residential ACCESSORY SMALL WIND TURBINE TOWER the maximum allowable rotor diameter shall be as follows:~~
 - a~~1~~. 15 feet on a LOT with less than one acre LOT AREA.
 - b~~2~~. 24 feet on a LOT with one acre or more of LOT AREA.

(Note: These heights are the same height limits that apply to residential accessory structures that are found in Footnote 4 of Section 5.3 of the Zoning Ordinance)

3. Rotor diameter greater than 24 feet may be authorized as follows:
 - (a) when the separation distance from the SMALL WIND TURBINE TOWER to the nearest DWELLING under other ownership is a minimum of 8.3 times the rotor diameter, up to a maximum diameter of 75 feet; and
 - (b) when the LOT AREA is three acres or larger
2. ~~For a non-residential ACCESSORY SMALL WIND TURBINE TOWER the maximum allowable rotor diameter shall be as follows:~~
 - a. ~~24 feet; provided however that~~
 - b. ~~the maximum rotor diameter is increased in direct proportion to the separation distance to the nearest residential PRINCIPAL STRUCTURE or residential PRINCIPAL BUILDING under different ownership, up to a maximum of 72 feet at 666 feet of separation.~~

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(Note: The height limits for non-residential accessory structures are the same as for principal structures and varies by district between 35 feet and 150 feet and is 75 feet for the Light Industrial District. This revision no longer distinguishes between residential and non-residential turbines and requires a greater separation distance for any rotor larger than 24 feet in diameter and requires at least five acres of lot area. The requirement that rotors larger than 24 feet require a separation distance to the nearest dwelling (under other ownership) that is 8.3 times the rotor diameter is intended to minimize nuisance effects (including shadow flicker) from the larger rotors. A 200 feet separation is 8.3 times as long as a 24 feet diameter rotor. The American Wind Energy Association asserts that smaller rotors spin much faster than wind farm rotors and thus the flicker effect is less noticeable. However, even with no shadow flicker there is reason enough to require a greater separation from neighboring dwellings for larger rotors. With this revision even a residential turbine could have a rotor diameter of 75 feet if there is no other dwelling closer than 622.5 feet. Wind farm turbines generally have rotors that are not over 330 feet in diameter. The 1,200 feet separation required by the Zoning Ordinance is only about 3.6 times the diameter of 330 feet rotor but wind farms also have to mitigate shadow flicker if there will be more than 30 hours annually.)

- D. A SMALL WIND TURBINE TOWER (including any guy cables and anchors) shall be allowed within any YARD in all DISTRICTS subject to the following:
1. The provisions of Section 7.2 that establish the minimum YARD requirements for ACCESSORY STRUCTURES; and
 2. A required separation distance to the nearest PRINCIPAL STRUCTURE or PRINCIPAL BUILDING under different ownership that is equal to at least a distance of 1.11 times the overall HEIGHT (measured to the tip of the highest rotor blade) of the SMALL WIND TURBINE TOWER.
 3. The blades of the SMALL WIND TURBINE TOWER shall not cross the property line.
- E. The number of SMALL WIND TURBINE TOWERS that shall be allowed per LOT is as follows:
1. Only one SMALL WIND TURBINE TOWER shall be authorized on a lot with less than three acres of LOT AREA.
 2. No more than two SMALL WIND TURBINE TOWERS shall be authorized on a lot with three acres or more LOT AREA provided however that no more than one non-residential ACCESSORY SMALL WIND TURBINE TOWER shall be authorized less than 1,200 feet from the nearest ~~residential PRINCIPAL STRUCTURE or PRINCIPAL BUILDING DWELLING~~ that is under different ownership and conforming to USE.
 3. One roof-mounted or wall-mounted wind turbine shall be authorized in addition to the above limits. The roof-mounted or wall-mounted wind turbine shall not be more than 15 feet higher than any other portion of the

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STRUCTURE on which it is mounted. Roof and wall-mounted wind turbines are not required to meet the requirements of paragraphs 7.7 A. through F. but shall meet the requirements of paragraphs 7.7 P. through 7.7 Q.

- ~~F. There shall be a minimum separation distance equal to 1.10 times the total SMALL WIND TURBINE TOWER height (measured to the tip of the highest rotor blade) from the exterior above ground base of a SMALL WIND TURBINE TOWER to the nearest third party electrical transmission lines, communication towers, railroad right of way, or public street right of way. This separation may be reduced upon submission of a PRIVATE WAIVER signed by the owner of said electrical transmission line or communication tower or the relevant railroad or public street maintenance jurisdiction. The PRIVATE WAIVER must specify the agreed minimum separation.~~

(Note: The required separation to third party electrical transmission lines, communication towers, railroad right of way, or public street right of way has been relocated to be part of the maximum overall height limit. See paragraph B.2.)

- G. The noise level from the SMALL WIND TURBINE TOWER shall not exceed the regulatory standards set by the Illinois Pollution Control Board. The SMALL WIND TURBINE TOWER shall be considered a Class C land use for the purposes of the Illinois Pollution Control Board regulations. This maximum noise level shall apply at the property line regardless of the number of SMALL WIND TURBINE TOWERS.
- H. The SMALL WIND TURBINE TOWER shall have an automatic over speed control to render the system inoperable when winds are blowing in excess of the speeds for which the system is designed and a manually operable method to render the system inoperable in the event of a structural or mechanical failure of any part of the system.
- I. On properties that are adjacent to farmland, orange safety balls shall be installed on each side of the SMALL WIND TURBINE TOWER where guy cables are used for SMALL WIND TURBINE TOWERS more than 100 feet in HEIGHT.

(Note: This paragraph has not yet been revised. See the recommended markings for met (meteorological) towers using orange safety balls, flags, and sleeves)

- J. SMALL WIND TURBINE TOWERS shall comply with all applicable regulations of the FAA. Evidence of FAA approval shall be required for any SMALL WIND TURBINE TOWER within four miles of an airport.
- K. No illumination of the SMALL WIND TURBINE TOWER shall be allowed unless required by the Federal Aviation Administration.
- L. The SMALL WIND TURBINE TOWER shall either be the color supplied by the manufacturer or else painted white or gray or another non-reflective, unobtrusive color that shall be specified in the Zoning Use Permit application.

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- M. There shall be a minimum clearance of 15 feet between the ground and the lowest arc of the rotor blades for a SMALL WIND TURBINE TOWER.
- N. Any SMALL WIND TURBINE TOWER in a Residential Zoning District must be protected from unauthorized climbing by any of the following means:
1. removal of climbing rungs, if possible, to a height of 12 feet, provided that the SMALL WIND TURBINE TOWER is unclimbable without the rungs;
or
 2. Devices such as fences at least six feet high with locking portals or anti-climbing devices 12 feet vertically from the base of the SMALL WIND TURBINE TOWER.
- O. The Zoning Use Permit application for the SMALL WIND TURBINE TOWER shall include the following:
1. A copy of the manufacturers standard drawings of the wind turbine structure and stamped engineering drawings of the tower, base, footings, and/ or foundations as provided by the manufacturer sufficient to prove that the wind turbine tower is safe for the use intended. Wet stamps shall not be required.
 2. Evidence must be given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
 3. Such evidence and documentation as required to verify that the SMALL WIND TURBINE TOWER meets all other Zoning Ordinance requirements.
- P. If a wind turbine is ~~inoperable and or not in operation~~ derelict for six consecutive months the owner shall be notified that they must, within six months of receiving the notice, restore their system to operating condition. If the owner(s) fails to restore their system to operating condition within the six-month time frame, then the owner shall be required, at his expense, to remove the wind turbine from the tower and also remove the tower if it has guy cables, for safety reasons. If the owner fails to remove the wind turbine within one month the Zoning Administrator shall send a notice that the wind turbine is in violation of the Zoning Ordinance and subject to a daily fine as provided for in Section 10.
- Q. The SMALL WIND TURBINE TOWER shall not cause any significant electromagnetic interference with any radio, television, microwave communication, or satellite navigation on other properties.

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1. All wind turbines shall comply with the Federal Communication Commission (FCC) requirements for electromagnetic interference including FCC Part 15. The applicant shall provide a copy of the wind turbine manufacturer's certification of compliance with FCC requirements with the Zoning Use Permit Application.
2. Metal blades shall not be used.
1. ~~Prior to application for a Zoning Use Permit, the owner of the SMALL WIND TURBINE TOWER shall make all reasonable effort to ensure that neither the location of the SMALL WIND TURBINE TOWER nor the physical size of the SMALL WIND TURBINE TOWER shall cause significant electromagnetic interference, including the following:~~
 - a. ~~The owner shall contact neighbors and neighbor's service providers; and the SMALL WIND TURBINE TOWER manufacturer's representative; and METCAD to determine the likelihood of probable interference.~~
 - b. ~~The owner shall document any responses regarding the likelihood of probable interference including the manufacturer's recommendations regarding any necessary changes to the proposed location of the SMALL WIND TURBINE TOWER or to any physical dimension of the SMALL WIND TURBINE TOWER in order to eliminate the likelihood of probable interference.~~
2. ~~The owner shall provide copies of the documentation regarding the likelihood of probably interference with the Zoning Use Permit Application so that the Zoning Administrator may verify that the location has been adequately evaluated for probable interference.~~
3. ~~After installation of the SMALL WIND TURBINE TOWER, the owner of the SMALL WIND TURBINE TOWER shall do the following when notified by the Zoning Administrator that there is evidence that the SMALL WIND TURBINE TOWER may be causing significant electromagnetic interference on neighboring properties:~~
 - a. ~~The owner shall cooperate with the Zoning Administrator and adjacent landowners to determine if the SMALL WIND TURBINE TOWER is the cause of the identified interference.~~
 - b. ~~The owner shall provide the services of an authorized manufacturers representative whenever there is reasonable evidence of significant interference.~~

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~~e. The owner shall make any necessary and reasonable changes to the SMALL WIND TURBINE TOWER within 90 days of notice from the Zoning Administrator, including removal or relocation of the SMALL WIND TURBINE TOWER in extreme cases.~~

- R. In the event of destruction by any means, wind turbine towers and wind turbines located more than one-and-one-half miles from an incorporated municipality that has a zoning ordinance and that were duly authorized by an approved Zoning Use Permit prior to *{effective date}* shall be allowed to be reconstructed to the original dimensions and in the original location pursuant to a new Zoning Use Permit provided that the reconstruction complies with all manufacturer's safety recommendations and requirements.

(Note: This change is intended to ensure that before a new turbine is mounted to an existing pole, the applicant must be able to prove that the pole is adequate for the turbine just as would be necessary for any wholly new assembly.)

**Attachment G. Case 634-AT-08 Part B Draft Proposed Changes To Subpar. 9.3.1 D.
OCTOBER 9, 2009**

1. Revise subparagraph 9.3.1 D. H. as follows:

H. WIND FARM TOWER or BIG WIND TURBINE TOWER \$4500

2. Add new subparagraph 9.3.1 D. I. as follows:

I. SMALL WIND TURBINE TOWER
1. Not over 50 feet in HEIGHT.....\$100
2. greater than 50 feet in HEIGHT.....\$100 plus \$80 for each
20 feet in excess of 50 feet in height

(Note: The proposed fees are essentially a doubling of the current fees for towers. Under the current fee structure, tower fees begin at \$33 for up to 50 feet in height and \$40 is added per each 20 feet in excess of 50 feet in height so that the following heights would require the following fees (the fees in parentheses are the proposed fees for small wind turbine towers of the same height):

<i>Not over 50 feet in HEIGHT</i>	<i>\$ 33 (\$100)</i>
<i>100 feet in HEIGHT</i>	<i>\$133 (\$300)</i>
<i>150 feet in HEIGHT</i>	<i>\$233 (\$500)</i>
<i>200 feet in HEIGHT</i>	<i>\$333 (\$700)</i>

The U.S. Department of Energy handout Small Wind Electric Systems (undated) that was included with the July 10, 1999, Supplemental Memorandum stated that small turbines cost anywhere from \$3,000 to \$50,000 installed depending upon size and other considerations and that a typical 10kW home wind system costs approximately \$32,000. Thus, the erected cost of a wind turbine and tower will generally far exceed the cost of a two-car garage and, in terms of the work required for the Department in permitting a turbine, will take much more time than a simple garage. Fees that are double the current fees for towers are clearly justified.)

1. Revise subparagraph 9.3.3 as follows:

9.3.3 Zoning Case Filing Fees

A. General Provisions

1. No zoning case filing shall be accepted until the filing fee has been paid.
2. No zoning case filing fee shall be waived unless the Zoning Administrator determines that the petition is the only means reasonably available to bring a property into compliance with the provisions of this ordinance and the non-compliance is due solely to staff error.
3. No zoning case filing fee shall be refunded after required legal notice has been made by mail or publication unless the Zoning Administrator determines such filing to have been based solely upon staff error.
4. No amendment to any petition which requires new legal notice shall be considered until an amended petition fee has been received unless the Zoning Administrator determines such amendment to be required due solely to staff error.
5. The fee for SPECIAL USE permits shall be determined based on the larger of the following (except for County Board WIND FARM Special Use Permits):
 - a. the area of farmland taken out of production as a result of the SPECIAL USE; or
 - b. when farmland will not be taken out of production as a result of the SPECIAL USE, the land area taken up by the existing STRUCTURES and all proposed CONSTRUCTION proposed in the SPECIAL USE application.
6. When some combination of VARIANCE, SPECIAL USE and Map Amendment cases is required simultaneously for the same property, the total filing fee shall include the following (except for County Board WIND FARM Special Use Permits):
 - a. The standard fee for the most expensive individual zoning case; and
 - b. one-half of the standard fee for any other required VARIANCE, SPECIAL USE, or Map Amendment provided that
 - c. no additional fees shall be included for multiple zoning cases of the same type that can be advertised in the same legal advertisement.

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- B. Fees
 - 1. VARIANCES.
 - a. ADMINISTRATIVE VARIANCES \$100
 - b. Minor or Major VARIANCES \$200
 - 2. SPECIAL USE permits and Map Amendments (except for County Board WIND FARM Special Use Permit and a map amendment to the WIND FARM Overlay Zoning District)
 - a. Two acres or less and Base Fee for larger areas \$400
 - b. More than two acres but no more than 12 acres add \$40 per acre to Base Fee for each acre over two acres
 - c. More than 12 acres add \$10 per acre for each acre over 12 acres and add to fees in a. and b. above
 - 3. Appeals and Interpretations\$200
 - 4. Change of Nonconforming Use\$100
 - 5. Amendment to Petitions (requiring new legal notice) \$100
 - 6. County Board WIND FARM Special Use Permit.....
\$20,000 or \$440 per WIND FARM
TURBINE TOWER, whichever is greater.
 - 7. BIG WIND TURBINE TOWER Special Use Permit.....
\$3,300 per BIG WIND TURBINE TOWER

NON-ISSUES / "RED HERRINGS"

The following are common misconceptions about small wind:

- i. Shadow "Flicker"
- ii. Fences/Attractive Nuisance
- iii. Birds
- iv. "Icing"
- v. Electrical Signal Interference
- vi. Lightning Strikes
- vii. Stray Voltage

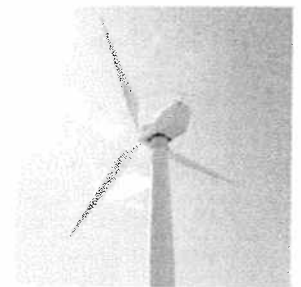
i. Shadow "Flicker":

Under very specific circumstances, low sunlight passing through the moving rotor of a turbine can cast visible shadows on the ground or on structures. This issue pertains almost exclusively (and similarly rarely) to large, utility-scale turbines because of their slower-moving blades. Shadows also depend on the time of day, day of year, and latitude of the site's location.

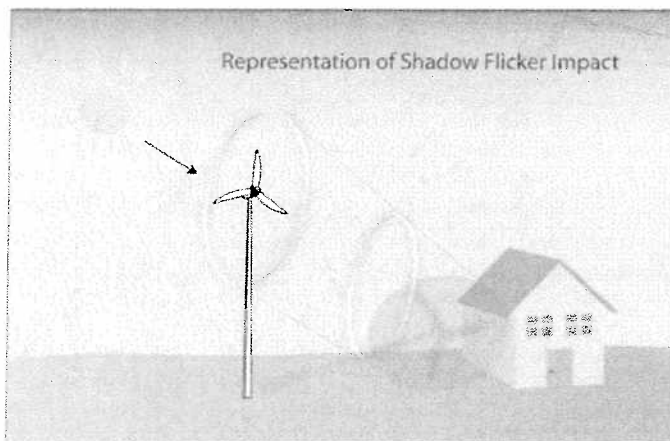
Small turbines are shorter, have narrower blade profiles, and spin much faster than utility-scale turbines

so that any shadows become essentially invisible at operating speeds. Turbines of all sizes are designed to start spinning only after a minimum wind speed has been attained, so chances are very slim that a small turbine will spin slowly enough to make shadow flicker a concern.

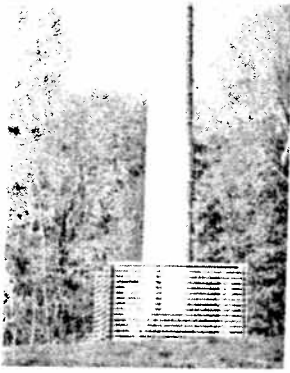
Furthermore, normal setback distances dictated by property lines or sound requirements mitigates, if not entirely eliminates, this potential nuisance, especially at U.S. latitudes.



Northern Power
100kW turbine
in Golden, Colorado



The possibility of shadow flicker affecting a given site can be calculated very precisely. See <http://www.nipower.org/en/tour/enw/shadow-flicker.htm> for a shadow flicker calculator.



Bergey WindPower
10kW XLS
monopole turbine
with fence in Erie, PA

ii. Fences/Attractive Nuisance:

Some voice concern that a turbine could pose a temptation to unauthorized climbers and should be fenced off to prevent potential climbing-related injuries. However, decades of experience and tens of thousands of installations have shown that unauthorized climbing is exceedingly rare. A fence, which is itself climbable, can impose its own attractive and aesthetic nuisance and in the process do little more than create false, negative impressions about renewable energy.

Furthermore, for a turbine tower to be an "attractive nuisance" to the public, in most cases a potential climber would first have to trespass on private property - a much more prevalent issue and one that should be dealt with separately. Requiring fencing also places a burden on turbine owners unlike any imposed on flagpoles, utility towers, or other common, climbable structures.

Perhaps most detrimental of all, fences prevent access to the turbine in emergencies. Sometimes a turbine must be shut down manually during storms or electrical problems, and

emergency shut-off switches are most often located at the base of the turbine tower. Utilities also require that the turbine be readily accessible to workers performing routine or emergency maintenance on power lines.

Instead, to prevent unauthorized climbing:

- Remove climbing foot rungs on the lower 10 or 12 feet of a freestanding tower.
- For lattice or guyed towers, fasten sheets of metal or wood to the lower part of the tower to cover all hand - and foot-holds.
- Display "Danger-High Voltage" or "Caution-Electrical Shock Hazard" signs to the sides of the tower. Of the thousands of freestanding utility high-line towers across the country, few, if any, are policed or fenced, but they all are posted with such signs.

Utilities, tower manufacturers, and the small wind industry have successfully employed these techniques for decades and are more effective deterrents than any fence.

iii. Birds:

The most common - and most exaggerated - misconception about both large and small turbines is that they are disproportionately harmful to bird and bat populations. Even the vastly larger, utility-scale wind farms that are grouped closely in large arrays account for less than 0.003% of all human-caused bird deaths. House cats and glass windows, by comparison, cause 10,000 times more bird deaths than do wind turbines. No study has been performed specifically to address avian effects of small wind turbines, but because of their dispersed nature and small size, it can be inferred that

they have an even smaller impact than their larger counterparts.

Environmental impact or avian migration studies should not be required for individual small wind turbine installations. Are environmental impact studies required for every plate glass window or pet license? Small wind turbines in fact offer a net benefit to local and global environments: they emit no air pollutants, require no mining for fuel nor water for cooling, and have land use "footprints" of only a few square feet.

iv. "Icing":

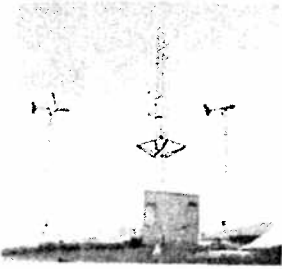
Like trees, street lamps, or other structures, turbines in cold climates can become covered in ice, which falls to the ground as it melts. But just as an airplane's wing must be de-iced in order for it to fly, a turbine's blade must be free of ice in order to rotate at any significant speed. The weight and aerodynamic interference of ice buildup slows the blades' rotation to a near

stand-still, making any melting ice fall straight downward rather than being thrown from the blade.

To put this in further perspective, a 1998 study calculated that the risk of personal or property damage from ice falling from a (large) turbine is lower than the risk of being struck by lightning.



Small wind turbines are commonly used to power communications equipment. They will not cause signal interference.



Bergey WindPower
1kW turbine
on telecommunications
station
in Bristol Bay, Alaska



Proven Energy 6kW turbine
powering
telecommunications
equipment

v. Electrical Signal Interference:

Small wind turbine blades are made from materials that are "invisible" to radio frequency transmissions and cannot cause interference problems. In fact, small wind turbines are used by the U.S. Navy to power military communications equipment.

In the past, wind turbine blades were sometimes made of metal which did create unwanted radio or television interference, but the industry has long

since abandoned the use of metal blades.

Any structure under 200 feet high - that is to say, any small wind turbine - is also too short to interfere with civilian or military radar. Radar usually does not even scan for objects this close to the ground because common land features at this height, like trees, would normally cause distorted, cluttered, or misleading radar images.

vi. Lightning Strikes:

Wind turbines do not attract lightning, so pose no threat to neighboring properties.

Lightning is essentially the release of pent-up static electricity that moves from a turbulent atmosphere to the ground. Small wind turbines are "grounded," meaning that any static electricity on the tower or generator is dispersed into the ground, preventing a build-up that could invite lightning strikes. As a result, even though small wind turbine towers are made of metal (a conductor of electricity), by virtue of their grounding they are less susceptible to lightning strikes than trees, which cannot shed built-up static electricity. To a lightning bolt, a turbine is therefore

no more "appealing" than the ground itself.

However, lightning strikes are still possible, which is why small wind turbines incorporate back-up technologies like surge and lightning arrestors (also known as silicon oxide varistors) and metal oxide varistors, which are also used to protect home computers from electrical surges. Lightning strikes are never completely preventable, but these industry-standard measures offer the best protection available to the owner of the wind system. Good practice in the wind industry includes grounding of all towers and guy wires, which significantly reduces the chance of a lightning strike.

vii. Stray Voltage:

This unusual phenomenon, primarily affecting farm livestock, is the result of faulty wiring on any number of electrical systems (not just wind turbines) and easily prevented by industry-standard practices. It is also a strictly localized issue that will not affect off-site parties or properties.

For safety reasons, including to minimize lightning strikes (see above), nearly all types of electrical systems in the U.S. are, at some point in the system, connected to the earth or "grounded." Electric current flowing in the ground dissipates quickly as it moves away from its source (much like sound from a wind turbine). Grounding also allows power systems to detect equipment malfunctions and automatically shut down before harming people or equipment.

If a system is not properly wired, the point(s) at which a system is grounded can develop a small voltage (electrical pressure, essentially) that can push current through the earth and end up contacting unintended objects. Hence the name, "stray" voltage. This phenomenon is rare and primarily affects cattle, whose legs are far enough apart to stand on two points where different voltage levels in the ground

exist. The cow may or may not feel this voltage difference, depending on the level and duration of the exposure.

While the design of electrical system makes stray voltage possible, its actual occurrence is the result of poor grounding practices, improper or inadequate wiring, or deteriorated wire insulation. Most small wind turbine inverters - those that are IEEE 1547 or UL1741 compliant - can detect faulty grounding and automatically shut down current flow. Like solar photovoltaic installations that require "ground-fault circuit interrupter" (GFCI) devices to protect consumers from any stray voltage, small wind turbines are also equipped with GFCI measures.

In other words, stray voltage is caused by problems on a particular customer's side of the utility billing meter so is not a problem beyond the electrical system of a particular home or farm. Nor can stray voltage move or be transferred from one property to another, since it is an "on-site" problem stemming from electricity distribution or wiring, not the generation of electricity. The issue therefore does not fall under the jurisdiction of zoning rules, which are designed to protect that which exists outside a property line.

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Community Wind Resources:

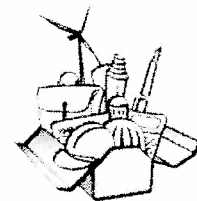
- **Wind Basics Series** - Want to go back to the basics? Visit our Wind Basics series to learn the general "know how" of wind energy and wind energy development prior to developing your wind resource.
- **Community Wind Toolbox** - Learn the A-Z of a community wind project through our toolbox! The Toolbox contains high-quality practical information for groups looking to develop a commercial-scale community wind project.
- **Community Wind Projects** - Although community wind projects are all rooted in local ownership, each project is unique based on circumstances and available resources. You will find other community wind projects to compare and help frame your project in this section.
- **Community Wind Project Resources** - Find a comprehensive listing of resources for community wind projects through this resource library section.
- **Benefits of Community Wind** - Not convinced that community wind is the way to go, or want to learn more about why it is an important piece of the renewable energy puzzle? Visit this section to learn more about the benefits of community wind.
- **Wind Project Calculator** - The calculator, which is part of the Community Wind Toolbox, provides cash flow modeling for community wind projects. Type in your numbers and see the results!

Community Wind: An Overview

Work in Wind

Interested in working in the wind energy field?

Check out our **Work in Wind** pages.



[Click here to go directly to the](#)

Community Wind **Toolbox**

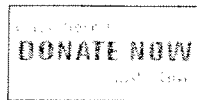
What is community wind?



[FAQ's Community Owned](#)
[Read more](#)

Windustry Glossary

[See a word you don't know? Find it in Windustry's Glossary](#)



WINDUSTRY BLOG
NEWS & UPDATES



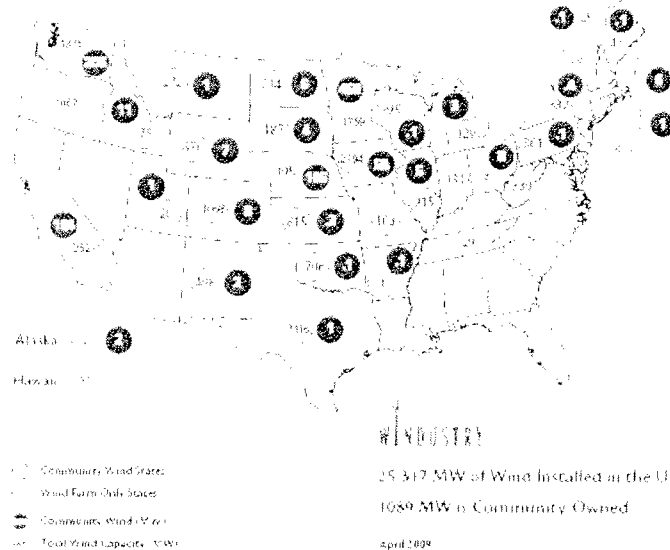
Community Wind

- Net Metering Profile- State by State
- Wind Project Calculator
- Reaching Community Wind's Potential
- Webinar: The New Federal Tax Exempt Bonding Bill for Community Energy
- What is community wind?
- Wind Energy Companies
- Community Wind Listserv
- Community vs. Corporate Wind: Does it Matter Who Develops the Wind in Big Stone County, MN?
- Small Packages, Big Benefits: Economic Advantages of Local Wind Projects
- Renewable Energy: Wind Power's Contribution to Electric Power Generation and Impact on Farms and Rural Communities

Rural landowners who possess windy land currently benefit from the wind resource primarily by leasing their land to large wind developers who sell the wind energy. Others have installed their own wind turbines, individually or through local small businesses including farms, and local organizations such as schools, universities, Native American Tribes, rural electric cooperatives, municipal utilities, and even religious institutions. These projects keep more dollars in local communities, preserve local energy independence and protect the environment. This is the growing field of community wind.

The key feature of community wind is that local community members own and have a significant financial stake in the project beyond just land lease payments and tax revenue. Community wind projects can be any size, ranging from a single turbine to more than one hundred, yet typically serve local communities or consumers. Community wind projects have been installed throughout the country and are in the planning stages in virtually every state with wind power development underway. The map below shows where and how much community wind is operating today.

Installed Community Wind and Wind Capacity in the U.S.



If you would like to learn more about policy surrounding community wind, please visit our [Policy and Research](#) section. There you can find helpful resources on local, state, and federal wind policy as well as learn more about Community-Based Energy Development (C-BED).

[Commercial \(Large\) Scale Community Wind Projects](#) [Community Owned](#) [Benefits of Community Wind](#)

Community vs. Corporate Wind: Does it Matter Who Develops the Wind in Big Stone County, MN?

Ownership Matters: Community-Based Wind Development in Colorado

This publication goes through a broad overview of community-wind development. It includes some helpful resources and addresses the many different areas that community-wind development entails. The content is based on a series of presentations from 2008 by the same title.

Reaching Community Wind's Potential

Reaching Community Wind's Potential is a report written by

Community Wind
Electric Cooperative
Municipal Utility
("Muni")

Windustry thanks our Partners for Wind Energy Center 2009 at the Minnesota State Fair



Consulting Engineers Group
Jeffrey C. Paulson & Associates, Ltd
HDR, Inc
Own Energy
3M

Windustry as a supplement to the Farmers' Legal Action Group report, *Community Wind: A Review of Select State and Policy Incentives*.



WIND FOR ILLINOIS

Safety Practice:

Mark MET Towers for Visibility

An effective safety marking system should include:

- High-visibility orange sleeves at each anchor, above the crop level
- High-visibility flags (or balls) at different levels on guy wires
- Orange and white banding at the top ten meters of each tower
- Non-planted area around the tower base and at each anchor

Possibly the single-most effective safety measure a developer can implement

(reduces liability, also)

