AGENDA
ZONING COMMITTEE
OF THE SAINT PAUL PLANNING COMMISSION
Thursday, March 14, 2013 3:30 P.M.
City Council Chambers, Room #300
Third Floor City Hall - Saint Paul, Minnesota

NOTE: The order in which the items appear on this agenda is not necessarily the order in which they will be heard at the meeting. The Zoning Committee will determine the order of the agenda at the beginning of its meeting.

APPROVAL OF FEBRUARY 28, 2013, ZONING COMMITTEE MINUTES

SITE PLAN REVIEW – List of current applications (Tom Beach, 651-266-9086)

NEW BUSINESS

1 **13-149-246 Capitol Lien / Anthony Magnotta**
Extension of existing determination of similar use for vertical wind turbines
1010 Dale St N, between Lawson and Hatch
B3
Kate Reilly 651-266-6618

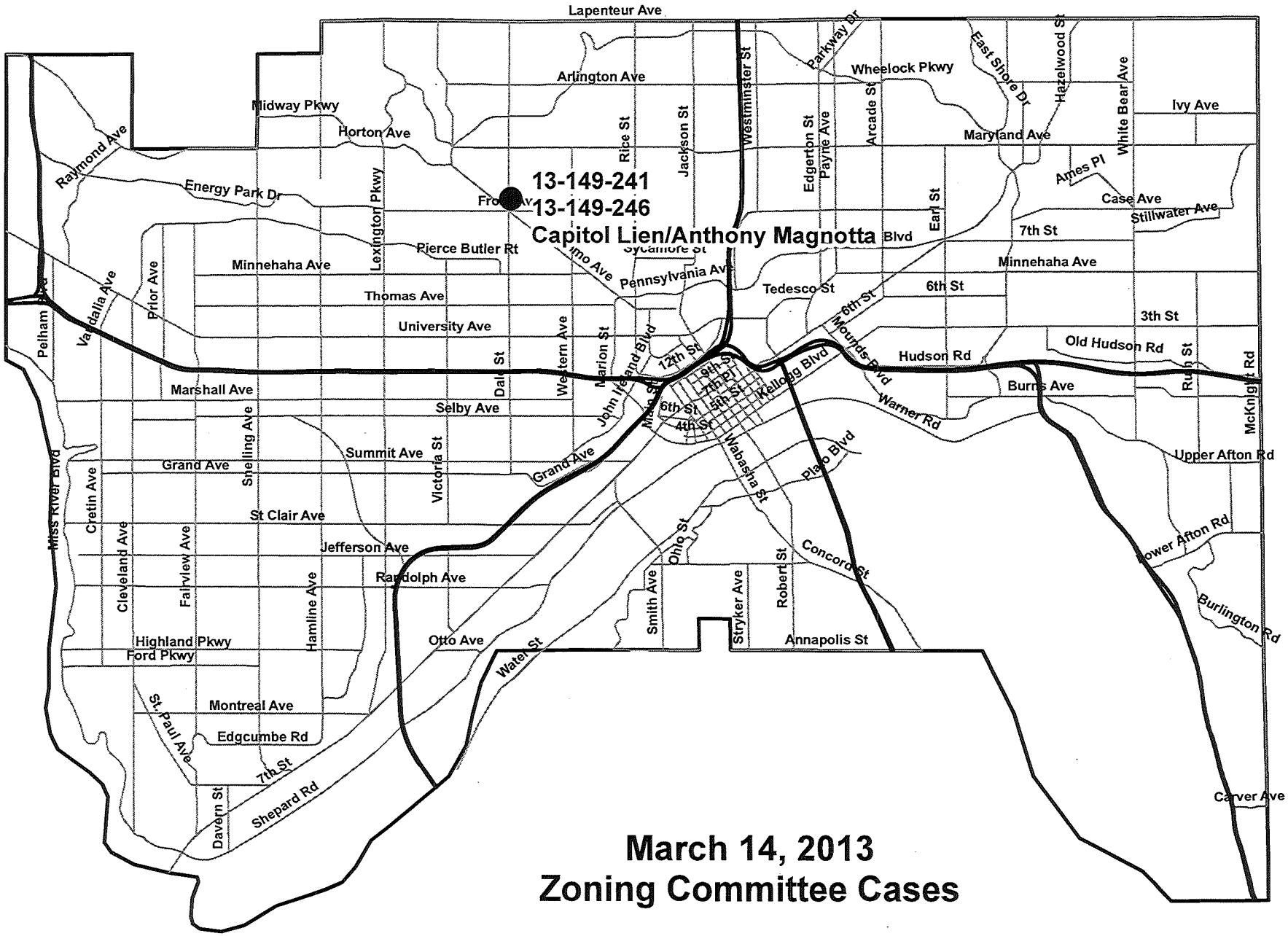
2 **13-149-241 Capitol Lien / Anthony Magnotta**
Determination of similar use for vertical wind turbine with hybrid light (wind and solar powered) on a freestanding pole in the B3 general busniness district
1000 Dale St N, NE of intersection of Hatch and Dale
B3
Kate Reilly 651-266-6618

ADJOURNMENT

Information on agenda items being considered by the Zoning Committee can be found online at www.stpaul.gov/ped, then Planning, then Zoning Committee.

ZONING COMMITTEE MEMBERS: Call Patricia James at 266-6639 or Samantha Langer at 266-6550 if you are unable to attend the meeting.

APPLICANT: You or your designated representative must attend this meeting to answer any questions that the committee may have.



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ZONING COMMITTEE STAFF REPORT

1. **FILE NAME:** Capitol Lien / Anthony Magnotta **FILE #** 13-149-246
2. **APPLICANT:** Anthony Magnotta **HEARING DATE:** March 14, 2013
3. **TYPE OF APPLICATION:** Determination of Similar Use/Conditional Use Permit
4. **LOCATION:** 1010 Dale St N, between Lawson and Hatch
5. **PIN & LEGAL DESCRIPTION:** PID 25-29-23-23-0063 and 0064; Como Prospect Addition, Lots 3-8, Blk 13
6. **PLANNING DISTRICT:** 6 **EXISTING ZONING:** B3
7. **ZONING CODE REFERENCE:** §61.106; §61.107; §61.501; §65.910; §63.121; §65.310
8. **STAFF REPORT DATE:** March 6, 2013 **BY:** Kate Reilly
9. **DATE RECEIVED:** January 30, 2013
   60-DAY DEADLINE FOR ACTION: March 31, 2013; extended to May 29, 2013

A. **PURPOSE:** Extension of Determination of Similar Use/Conditional Use Permit for vertical wind turbines

B. **PARCEL SIZE:** 150 ft. frontage x 126.03 ft = 18,904 sq. ft.

C. **EXISTING LAND USE:** Business

D. **SURROUNDING LAND USE:**

North: B3 - Business

East: RM2 – Single family & Multi-family residential

South: B3 - Business

West: B3 - Business; R4 – Single family residential

E. **ZONING CODE CITATION:** § 61.106 authorizes the planning commission to make similar use determinations when a specific use is not listed in the zoning code. § 61.107 authorizes the planning commission to impose reasonable conditions and limitations in making a similar use determination. § 61.501 lists general conditions that must be met by conditional uses. § 65.910 defines *accessory use* and lists examples of accessory uses. § 63.121 permits and provides standards for antennas as accessory uses in all districts. § 65.310 lists standards for cellular telephone antennas.

F. **HISTORY/DISCUSSION:** On June 24, 2011 (Z.F. 11-129-965) Anthony Magnotta/Capitol Lien and Title applied for and received a determination of similar use (DSU) as a conditional use for four wind turbines at this address for a test period ending on June 24, 2013. A determination of similar use/conditional use permit was granted to Macalester College for a 10 kW, 102 foot high, free-standing wind turbine on the campus for a test period in 2002 (Z.F. # 02-236-646) and permanently in 2005 based on noise monitoring during the test period (Z.F. # 05-085-530). On April 15, 2011, the planning commission initiated a zoning study to consider amendments to the zoning code pertaining to wind turbines that will address issues specific to wind turbines and conditions under which wind turbines would be permitted in various zoning districts.

G. **DISTRICT COUNCIL RECOMMENDATION:** The District 6 Council recommended approval at their January 22, 2013, Land Use Task Force meeting for the extension of the DSU.

H. **FINDINGS:**

1. Pursuant to a determination of similar use approved by the Planning Commission on June 24, 2011, via resolution 11-47, Capitol Lien and Title installed four vertical axis wind turbines: three building-mounted wind turbines and one on a freestanding pole, as an accessory use to provide electricity for the business at 1010 N. Dale Street. The three roof-mounted 1.5 kW turbines are 15.8 ft. above the surface of the roof (a 9.8 ft. tall turbine mounted on a 6 ft. monopole). The freestanding 3 kW turbine itself is 18.4 ft. tall. It is mounted on a 13 ft. monopole, for a total height of 31.4 feet. The permit had eight conditions applied to it. One of the conditions was that the permit would be for a two-year test period, during which the applicant would monitor bird and bat casualties. Those two years are expiring in June and the applicant is requesting a permanent conditional use permit for the four vertical axis wind

turbines.

2. Eight conditions were placed on the determination of similar use approved for 1010 N Dale in 2011. Conditions one through five have been satisfied. The turbines are an accessory use to provide electricity for the business; the lot is at least 18,000 square feet in area and has no more than four wind turbines with no more than three on the roof and one on a freestanding pole; the wind turbines on the roof are no more than 15 feet above the parapet and are at least 20 feet from the edge of the building; the wind turbine on a freestanding pole is not more than 32-feet high; the wind turbines are at least 50 feet from any residentially-zoned property.

   The sixth condition requiring a noise impact study by an acoustical engineer has not been met. The applicant states that this would cause a financial hardship. He states that the quotes he has gotten are in excess of $10,000 and states that staff from at least one firm, Braun Intertec, has stated that the turbines do not make enough noise to hear over the ambient traffic noise from Dale Street, thus a noise impact study would show nothing. The applicant states that Braun Intertec will not provide a letter stating that the ambient noise is too great to analyze the wind turbine-produced noise without payment in full for a noise impact study.

   In 2005, Macalester College was granted approval of permanent installation of the 10 kilowatt wind turbine on the campus. City staff states in finding 2 of Zoning File #05-085-530 that the noise generated by the Macalester 10 kW horizontal axis wind turbine was unable to be measured as it is masked by the ambient noise of traffic on Snelling Avenue. In a 2007 test by McMaster University in Canada, researchers found that vertical axis wind turbines do not exceed 20 dB(A). The city's noise standard for commercial districts is 70 dB(A) and 65 or 55 dB(A) for residential districts. For reference, light auto traffic at 100 feet is 50 dB(A) and a heavy truck is 90 dB(A). A garbage disposal indoors from 2 feet away is 80 dB(A). There have been no complaints about noise from the four wind turbines at 1010 N. Dale.

   The applicant has been monitoring bird and bat activity near the wind turbines and states that no birds or bats have been injured by the vertical axis wind turbines, which was the eighth condition of the conditional use permit.

3. The seventh condition placed on the 2011 DSU for 1010 N. Dale was that it is for a test period after which the applicant may apply for permanent approval under anticipated new zoning code language for wind turbines. On April 15, 2011, the planning commission initiated a zoning study to consider amendments to the zoning code pertaining to wind turbines that will address issues specific to wind turbines and conditions under which wind turbines would be permitted in various zoning districts. Preliminary research finds that small wind turbines designed to provide electricity for the property on which they are located are commonly permitted as accessory uses in other cities, subject to reasonable conditions that may vary depending on the size and location of the turbine. Minneapolis, Duluth, Madison and Chicago all have specific provisions for this.

I. **STAFF RECOMMENDATION:** Based on the above findings, and findings in Zoning File # 11-129-965, staff recommends permanent approval of a determination of similar use and conditional use permit for three 1.5 kW roof-mounted vertical wind turbines (with a height of 15.8 feet above the roof surface) and one 3.0 kW vertical wind turbine on a freestanding pole (with a total height of 31.4 feet) in the parking lot, in the B3 general business district, or a less restrictive district, at 1010 N. Dale Street, subject to the following conditions:

1. The turbines shall be an accessory use to provide electricity for the business on the property.
2. The lot shall be at least 18,000 sq. feet in area, on which there shall be no more than four

turbines, including no more than three on the roof and no more than one on a freestanding pole.

3. Roof-mounted turbines shall be no more than 15 feet above the rooftop or parapet, whichever is greater, and centered at least 20 feet from the edge of the building.
4. The wind turbine on a freestanding pole shall have a total height of no more than 32 feet.
5. The turbines shall be centered at least 50 feet from any residentially zoned property.
6. When the turbines cease to function, they will be removed or replaced within 30 days.

DETERMINATION OF SIMILAR USE APPLICATION

Zoning office use only
File no.
Fee
Tentative hearing date: 3-14-13

Department of Planning and Economic Development
Zoning Section
1400 City Hall Annex
25 West Fourth Street
Saint Paul, MN 55102
(651) 266-6589

PD-6

252923230063

APPLICANT

Name Capitol Lien & Title / Tony Magnotta
Address 1010 North Dale Street
City St. Paul St MN Zip 55117 Daytime phone 651-488-0300
Name of owner (if different) —
Contact person (if different) — Phone —

PROPERTY LOCATION

Address/Location 1010 North Dale Street
Legal description: Lots 3, 4, 5, 6, 7 & 8 of Como-Prospect Add. Current Zoning B-3
(attach additional sheet if necessary)

REQUEST: Application is hereby made under the provisions of Chapter 61, Section 106 of the Zoning Code for a Determination of Similar Use.

Current use Office Building
Proposed use Office Building powered by Windturbines

SUPPORTING INFORMATION: Provide the following information (attach additional sheets if necessary).

☑ Is the use similar in character to one or more of the principal uses permitted in the zoning district?
Yes the proposed uses of small Vertical winds turbines WHAT'S are similar to cell phone towers & light standards.

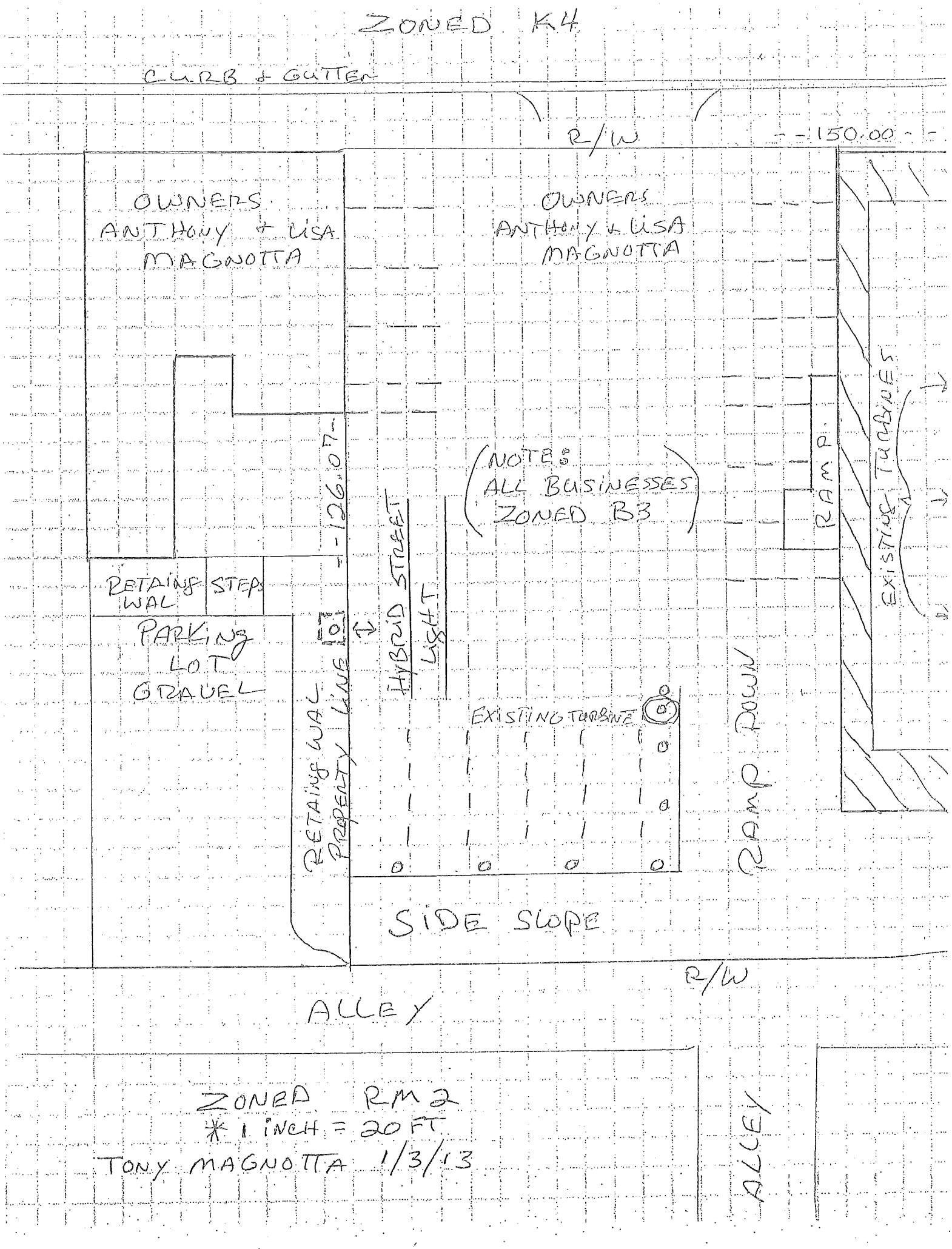
☑ Is the traffic that the use will generate similar to traffic generated by one or more permitted uses?
There may be a slight increase in traffic from interested parties.

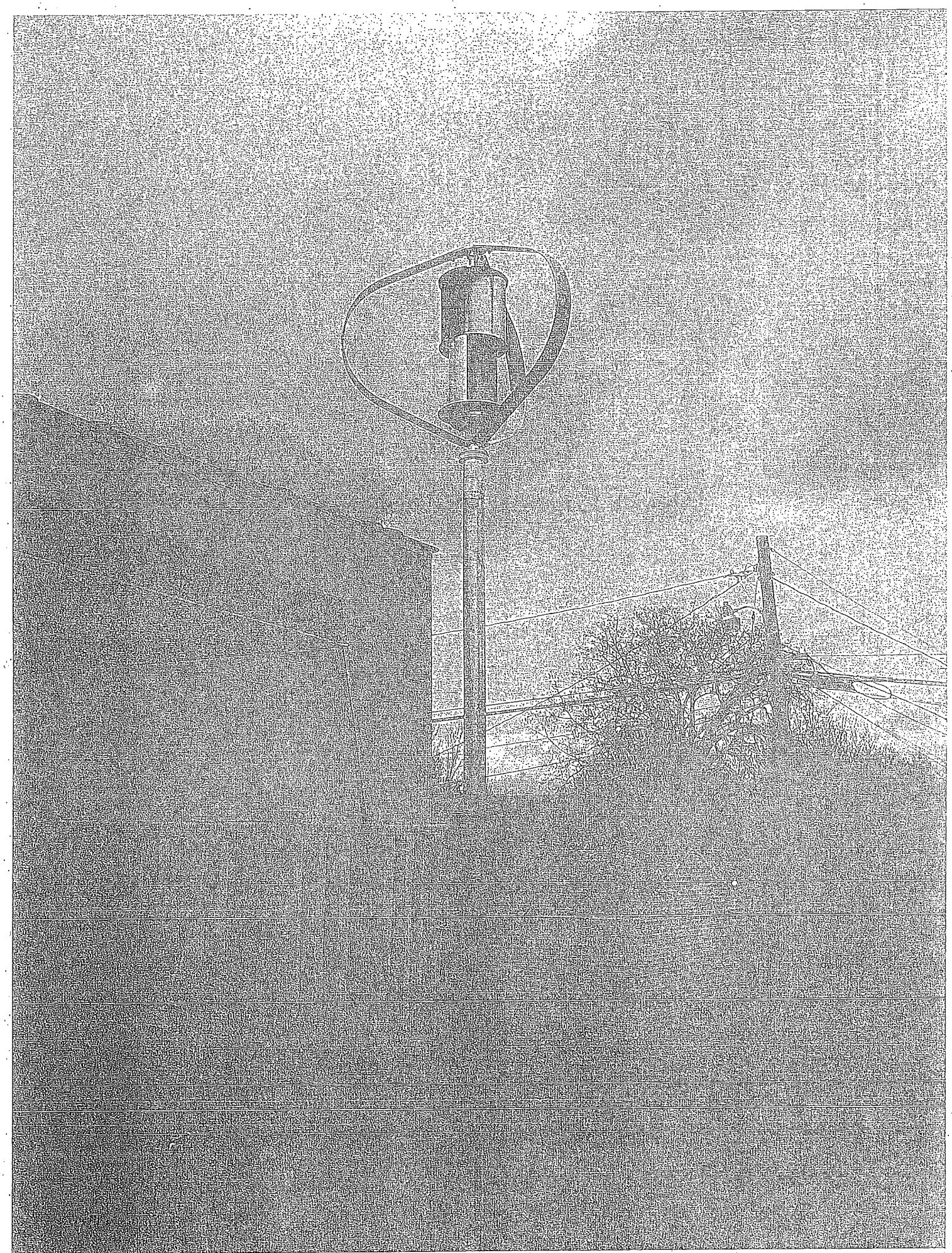
☐ Is the use already permitted in a less restrictive zoning district?
No - St. Paul has no Zoning for Wind Turbines.

Required site plan is attached ☑

Applicant's signature T Magnotta Date 4-12-11 City agent pdd

T Magnotta 1/30/13 4-12-11


ZONED K4
CURB & GUTTER
R/W
150.00
OWNERS
ANTHONY & LISA
MAGNOTTA
OWNERS
ANTHONY & LISA
MAGNOTTA
126.0'
RETAING WAL
STEPS
PARKING
LOT
GRAVEL
RETAING WAL
PROPERTY LINE
HYBRID STREET
LIGHT
(NOTE:
ALL BUSINESSES
ZONED B3)
EXISTING TURBINE
RAMP
EXISTING TURBINES
RAMP DOWN
SIDE SLOPE
R/W
ALLEY
ALLEY
ZONED RM2
* 1 INCH = 20 FT
TONY MAGNOTTA 1/3/13



Small demonstration wind turbine

MINNESOTA WIND

HYBRID STREET LIGHT

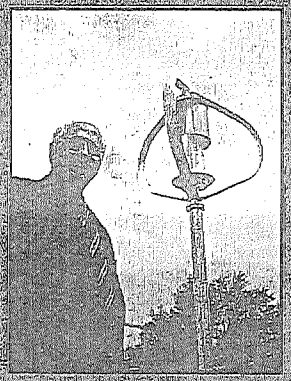
Feature:

The hybrid street light combines the VAWT wind turbine and solar panel. These collect power from wind and sun light for lighting up the LED in the night time. This also makes it so the street light is completely green and does not need pipeline construction from city power. The benefits are not only zero CO_2 emissions but also saving the installation time and costs. It shows the ECO-SKYLINE of a modernized city.

Specification:

Wind power- 300W VASWT (DS300)
Solar power- 120W silicon mono crystalline
Street lamp- 30W high bright LED
Decoration light- 12W LED colorful
Spot light- 1W LED x2 to Light wind rotor
Charger- 400W MPPT charger+200W PV charger
Battery- 12V 46Ah x4 deep-cycle silicon gel battery
Pole- 5.4m assemble stainless/galvanized
Lamp height- 4.5m
Height- 6.5m

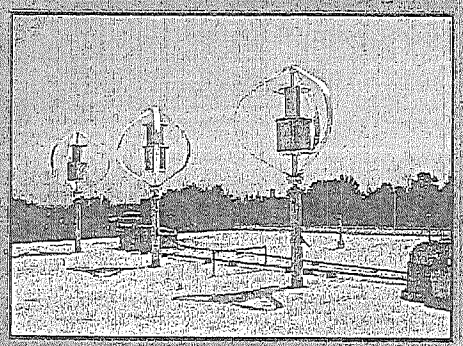
MINNESOTA WIND



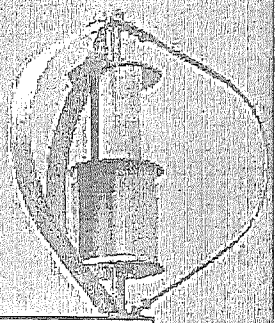
Our CEO, Tony Magnotta, seen above at our headquarters in St. Paul, MN at the first VAWT Urban Wind Farm in America.

Product		300W	700W	1.5KW	3KW
Size(m)	A	1.24	1.93	2.8	4.0
	B	1.00	1.56	3.2	4.5
Cut-in Wind speed		< 3 m/s	Cut-out Wind speed	15 m / s	
Rated Wind speed		12 m/s ~ 13.5 m/s	Survival Wind speed	60 m / s	

"Wind That Creates Customers"



MINNESOTA WIND



MNWT-BC300. . . . 400 watts
Output Voltage. . . . . 12,24 volts
Output Current. . . . . 20 amps
Cut-In Wind Speed. . . . 6.7 mph
Rated Wind Speed. . . . . 34 mph
Diameter. . . . . 3.7 ft
Height. . . . . 4.8 ft

MNWT-1500. . . . . 1.5 kW
Output Voltage. . . . . 48 volts
Output Current. . . . . 60 amps
Cut-In Wind Speed. . . 5.5 mph
Rated Wind Speed. . . . 26 mph
Diameter. . . . . 9.2 ft
Height. . . . . 9.8 ft

MNWT-3000. . . . . 3.0 kW
Output Voltage. . . . . 48 volts
Output Current. . . . . 130 amps
Cut-In Wind Speed. . . 5.5 mph
Rated Wind Speed. . . . 33 mph
Diameter. . . . . 13.1 ft
Height. . . . . 18.4 ft

city of saint paul
planning commission resolution
file number 11-47
date June 24, 2011

WHEREAS, Capitol Lien and Title, File # 11-129-965, has applied for a determination of similar use for vertical wind turbines in the B3 general business district under the provisions of § 61.106 of the Saint Paul Legislative Code, on property located at 1010 Dale St. N, Parcel Identification Number (PIN) 25-29-23-23-0063, legally described as Como Prospect Addition, Lots 3-5, Block 13; and

WHEREAS, the Zoning Committee of the Planning Commission, on May 19 and June 16, 2011, held a public hearing at which all persons present were given an opportunity to be heard pursuant to said application in accordance with the requirements of §61.303 of the Saint Paul Legislative Code; and

WHEREAS, the Saint Paul Planning Commission, based on the evidence presented to its Zoning Committee at the public hearing as substantially reflected in the minutes, made the following findings of fact:

1. Capitol Lien and Title proposes installing four vertical wind turbines, three building-mounted wind turbines and one on a freestanding pole, as an accessory use to provide electricity for the business at 1010 N. Dale Street. The three proposed roof-mounted 1.5 kW turbines would extend 15.8 ft. above the surface of the roof (a 9.8 ft. tall turbine mounted on a 6 ft. monopole). The proposed freestanding 3 kW turbine itself is 18.4 ft. tall. It would be mounted on a 13 ft. monopole, for a total height of 31.4 feet.

2. § 61.106 authorizes the planning commission to make similar use determinations when a specific use is not listed in the zoning code. The proposed wind turbines as an accessory use to provide electricity for the business at 1010 N. Dale Street generally meet the definition of *accessory use* in § 65.910, "a building, structure or use which is clearly incidental to, customarily found in connection with, and (except as provided in section 63.300) located on the same zoning lot as, the principal use to which it is related." While § 60.103(k) of the zoning code states that a purpose of the zoning code is "to promote the conservation of energy and the utilization of renewable energy resources," suggesting that the zoning code generally supports permitting wind turbines, § 65.910 does not specifically include wind turbine in a list of examples of what the term accessory use includes but is not limited to. Therefore, § 65.910 also does not include any specific standards for wind turbines in various zoning districts.

   On April 15, 2011, the planning commission initiated a zoning study to consider amendments to the zoning code pertaining to wind turbines that will address issues specific to wind turbines and conditions under which wind turbines would be permitted in various zoning districts. Preliminary research finds that small wind turbines designed to provide electricity for the property on which they are located are commonly permitted as accessory uses in other cities, subject to reasonable conditions that may vary dependent on the size and location of the turbine. Minneapolis, Duluth, Madison and Chicago all have specific provisions for this.

moved by Kramer

seconded by

in favor Unanimous

against

Minneapolis permits administrative approval of accessory building-mounted systems in all zoning districts, up to 15 feet in height above the roof, including on residential buildings at least 4 stories tall. Minneapolis also requires that building-mounted systems "shall be set back at least ten (10) feet from the front, side and rear walls of the structure upon which it would be mounted." Chicago has a similar height standard for building-mounted systems in residential districts, 15 feet above the rooftop or parapet, whichever is greater.

Minneapolis permits freestanding systems as a conditional use, up to 60 feet high on zoning lots between one and five acres in residential and commercial districts, and requires a set back of at least twice the height of the tower from residential structures and overhead utility lines.

Duluth permits wind energy conversion systems both as a principal and as an accessory use. As an accessory use the height can not exceed 50 feet without a special use permit. Duluth exempts wind energy conversion systems for regular zoning district height limits, requires freestanding systems to be set back from property lines at least as far as the tower height, and requires the lowest point of the rotor to be at least 15 feet above the ground.

Finish is also regulated in Duluth: "The turbine and tower shall remain painted or finished in the color that was originally applied by the manufacturer." Minneapolis requires materials and colors that are compatible with the principal structure, prevent communication signal interference, and blend into the surroundings as much as possible.

The Boston, MA, code talks about minimizing glare and flickering shadows, and requires the applicant to show that this would not have significant impact on neighboring uses.

Bat and bird impacts are not specifically mentioned in any codes currently established in the US. However, there have been some studies that suggest that at large wind sites anywhere from 1 to 3 birds are killed per tower per year. Bats experience a kill rate of almost three times that. For most urban applications wind turbines are mounted lower than bird and bat migration paths. "Because of the relatively smaller blades and short tower heights, home-sized wind machines are considered too small and too dispersed to present a threat to birds. Researchers do not consider a study of home-sized wind systems worth funding." (focusonenergy.com) No research was found about birds or bats and vertical wind turbines. An industry representative has stated that vertical wind turbines appear to be solid objects when spinning, which would cause birds and bats to fly around them, rather than try to go through them. There is no evidence to suggest that vertical wind turbines create enough disturbances in the wind to draw birds or bats in to them.

3. § 61.106 states that in making a similar use determination the planning commission shall make the following findings:

(a) That the use is similar in character to one (1) or more of the principal uses permitted.
Antennas permitted in the B3 general business district share some characteristics with a vertical wind turbine: both may be mounted on a building roof or on a freestanding pole. §63.121 permits accessory antennas in all districts, including a television receiving satellite dish 3 meters or less in diameter and short-wave radio antennas, to extend up to 15 feet above the normal height restriction for the district (e.g., 15 feet above the 30 foot height limit in the B3 district). While antennas are static objects and do not create sound, by their nature wind turbines have dynamic, moving elements. Other uses permitted in the B3 district include outdoor elements that move or create sound. Outdoor compressors and chillers accessory to a grocery store or restaurant, for example, create sound. Auto service stations and drive-through sales and services permitted in the B3 district often include outdoor elements that create sound.

(b) *That the traffic generated on such use is similar to one (1) or more of the principal uses permitted.* This finding can be made. The minimal traffic generated by wind turbines is substantially less than most uses permitted in the B3 district.

(c) *That the use is not first permitted in a less restrictive zoning district.* This finding is made. "*Wind turbine*" is not specifically listed as a permitted use in any zoning district.

(d) *The use is consistent with the comprehensive plan.* This finding is made. While the Saint Paul Comprehensive Plan does not contain any policies specifically related to wind turbines, the use is consistent with broad policies in the comprehensive plan for energy conservation and sustainable use of renewable energy resources. The proposed wind turbines are consistent with the intent and purpose of the zoning code "to implement the policies of the comprehensive plan," including the purpose specifically stated in § 60.103(k) of the zoning code "to promote the conservation of energy and the utilization of renewable energy resources."

4. Because vertical wind turbines share some characteristics with cellular telephone antennas, it may be useful to consider the standards for cellular telephone antennas in the B3 district. §65.310 provides for cellular telephone antennas in the B3 general business district as permitted uses if they are building-mounted and as conditional uses if they are freestanding. The standards and conditions listed in § 65.310 for cellular telephone antennas in the B3 general business district that might also be applicable to the proposed wind turbines, and the consistency of the proposed wind turbines with them, are as follows:

(b) *In . . . OS-B3 . . . business districts, the antennas shall not extend more than fifteen (15) feet above the structural height of the structure to which they are attached.* The proposed roof-mounted wind turbines are reasonably consistent with this standard. The applicant proposes to mount the turbines on 6 foot monopoles to protect the turbines and to protect people on the roof from bumping into the turbines. The turbines themselves are 9.8 feet high. Together with a 6 foot pole, the top of the turbines would be 15.8 feet above the roof surface itself, and 14.3 feet above the top of the 18 inch parapet.

(d) *In . . . business districts, cellular telephone antennas to be located on a new freestanding pole are subject to the following standards and conditions:*

(1) *The freestanding pole shall not exceed seventy-five (75) feet in height, unless the applicant demonstrates that the surrounding topography, structures, or vegetation renders a seventy-five-foot pole impractical. Freestanding poles may exceed the above height limit by twenty-five (25) feet if the pole is designed to carry two (2) antennas.* The proposed 31.4 foot tall wind turbine on a free-standing pole is consistent with this standard.

(2) *Antennas shall not be located in a required front or side yard and shall be set back one (1) times the height of the antenna plus ten (10) feet from the nearest residential structure.* The wind turbine is not located in a required front or side yard. The location of the proposed pole is 51 feet from the nearest residential property, and farther from the nearest residential structure, consistent with this standard.

(3) *The antennas shall be designed where possible to blend into the surrounding environment through the use of color and camouflaging architectural treatment.* The proposed wind turbine and pole would have non-reflective subdued finishes to blend into the surrounding environment as much as possible. They would also be located to reduce their visual impact.

(4) *In business districts, the zoning lot on which the pole is located shall be within contiguous property with OS or less restrictive zoning at least one (1) acre in area.* The lot is within a large contiguous area of B3 and industrial zoning consistent with this standard.

(g) *Freestanding poles shall be a monopole design.* The proposed freestanding pole is a monopole design consistent with this standard.

(h) *Transmitting, receiving and switching equipment shall be housed within an existing structure whenever possible. If a new equipment building is necessary, it shall be permitted and regulated as an accessory building, section 63.500, and screened from view by landscaping where appropriate.* The applicant states that all electrical equipment related to the wind turbines will be located in the existing building, and wires from the freestanding turbine to the electrical equipment will be buried.

5. § 65.310 provides for cellular telephone antennas on a freestanding pole in the B3 district as a conditional use. Because the proposed vertical wind turbine on a freestanding pole shares some characteristics with a cellular telephone antenna on a freestanding pole, it may be useful to review the proposed wind turbine on a freestanding pole for conformance with the general standards in § 61.501 that apply to approval of conditional use permits:

(a) *The extent, location and intensity of the use will be in substantial compliance with the Saint Paul Comprehensive Plan and any applicable subarea plans which were approved by the city council.* The wind turbine is consistent with this standard as stated in Finding 3(d).

(b) *The use will provide adequate ingress and egress to minimize traffic congestion in the public streets.* The turbine will generate minimal traffic and is consistent with this standard.

(c) *The use will not be detrimental to the existing character of the development in the immediate neighborhood or endanger the public health, safety and general welfare.* Based on the information provided in the application, the impact of potential sound created by the proposed wind turbines on the character and welfare of the immediate area is unclear.

The impact of sound generated by wind turbines is affected by a number of variables. In order for a sound to be heard over ambient noise it must be at least twice as loud as the ambient noise. Noise monitoring found that the sound generated by the 10 kW turbine at Macalester, for example, was imperceptible because of ambient noise in the area. Sound generated by the turbines increases with wind speed, while increased wind also increases ambient noise. Sound decreases 6 dB(A) for each doubling of distance from the source. Cumulative sound is measured logarithmically. For example, two things making sound at 50 dB(A) would have a cumulative sound level of 53dB(A) and four would generate a sound level of 56 dB(A).

Based on data provided by the applicant, sound from the 3000 watt wind turbine is 55 dB(A) at a wind speed of 11 miles per hour and 65 dB(A) at a wind speed 22 miles per hour. A speed limiter starts at a wind speed of 28 mph, and the turbine shuts down at a wind speed of 33 miles per hour. Based on the data provided, it appears that the turbine would meet the L10 (10% of an hour) city noise limit standard of 70 dB(A) for commercial districts. The city noise standard in residential districts is an L10 of 65dB(A) in the daytime (7:00 a.m. to 10:00 p.m.) and an L10 of 55dB(A) at night (10:00 p.m. to 7:00 a.m.). Also, the Minnesota noise pollution rules for residential areas have an L50 (50% of an hour) standard of 60 dB(A) in the daytime and an L50 of 50 dB(A) at night. These are measured at the point of nearest human activity. Based on the data provided and the distance to residential property, it appears that the turbine may meet the 65 dB(A) daytime city noise standard for residential districts. While

wind generally blows at a lower speed in the night time, the proposed turbines are close enough to the point of nearest human activity on residential property that these standards could be violated, particularly with the cumulative sound of the four proposed turbines.

§ 293.08(b) of the Saint Paul Legislative Code states that any city department or agency may require a noise impact statement in association with any change in zoning classification, in planning of a structure, or in any operation, process, installation or alteration which may be considered as a potential noise source. Such a noise impact analysis performed by an acoustical engineer could suggest changes to the number or location of the proposed wind turbines, or other mitigation measures, as necessary to conform to the city and state noise standards, and thus protect the character and welfare of the area.

(d) *The use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district.* The proposed wind turbine is consistent with this standard.

(e) *The use shall, in all other respects, conform to the applicable regulations of the district in which it is located.* The proposed wind turbine is consistent with this standard.

6. § 61.107 of the zoning code states that "the planning commission . . . may impose such reasonable conditions and limitations in . . . making a similar use determination, as are determined to be necessary to fulfill the spirit and purpose of the zoning code, to ensure compliance, and to protect adjacent properties."

NOW, THEREFORE, BE IT RESOLVED, by the Saint Paul Planning Commission, under the authority of the City's Legislative Code, based on findings above, that the application of Capitol Lien and Title for a determination of similar use for three 1.5 kW roof-mounted vertical wind turbines (with a height of 15.8 feet above the roof surface) and one 3.0 kW vertical wind turbine on a freestanding pole (with a total height of 31.4 feet) in the parking lot, in the B3 general business district, or a less restrictive district, at 1010 N. Dale Street is hereby approved subject to the following conditions:

1. The turbines shall be an accessory use to provide electricity for the business on the property.
2. The lot shall be at least 18,000 sq. feet in area, on which there shall be no more than four turbines, including no more than three on the roof and no more than one on a freestanding pole.
3. Roof-mounted turbines shall be no more than 15 feet above the rooftop or parapet, whichever is greater, and centered at least 20 feet from the edge of the building.
4. The wind turbine on a freestanding pole shall have a total height of no more than 32 feet.
5. The turbines shall be centered at least 50 feet from any residentially zoned property.
6. The applicant shall provide a noise impact statement to the Zoning Administrator, completed by an acoustical engineer, showing that when in operation, the sound levels from the wind turbines will be in compliance with all city and state noise standards in Saint Paul Legislative Code 293 and Minnesota Rules 7030.
7. This approval shall be for a test period that shall expire on June 24, 2013, after which the applicant may apply for permanent approval under the specific new zoning code language adopted pursuant to the current study of zoning code amendments to address issues specific to wind turbines and conditions under which wind turbines shall be permitted in various zoning districts; or the turbines shall be removed.
8. The applicant shall monitor bird and bat casualties during the test period and provide the monitoring data to the Planning Commission.

CITY OF SAINT PAUL, MINNESOTA
Determination of Similar Use

ZONING FILE NO:	11-129-965
APPLICANT:	Capitol Lien and Title
PURPOSE:	Determination of similar use for vertical wind turbines in the B3 general business district
LOCATION:	1010 Dale St N
LEGAL DESCRIPTION:	PIN 252923230063, Como Prospect Addition Lots 3 4 And Lot 5 Blk 13
ZONING COMMITTEE ACTION:	Recommended approval with conditions
PLANNING COMMISSION ACTION:	Approved on June 24, 2011

CONDITIONS OF THIS PERMIT:

1. The turbines shall be an accessory use to provide electricity for the business on the property.
2. The lot shall be at least 18,000 sq. feet in area, on which there shall be no more than four turbines, including no more than three on the roof and no more than one on a freestanding pole.
3. Roof-mounted turbines shall be no more than 15 feet above the rooftop or parapet, whichever is greater, and centered at least 20 feet from the edge of the building.
4. The wind turbine on a freestanding pole shall have a total height of no more than 32 feet.
5. The turbines shall be centered at least 50 feet from any residentially zoned property.
6. The applicant shall provide a noise impact statement to the Zoning Administrator, completed by an acoustical engineer, showing that when in operation, the sound levels from the wind turbines will be in compliance with all city and state noise standards in Saint Paul Legislative Code 293 and Minnesota Rules 7030.
7. This approval shall be for a test period that shall expire on June 24, 2013, after which the applicant may apply for permanent approval under the specific new zoning code language adopted pursuant to the current study of zoning code amendments to address issues specific to wind turbines and conditions under which wind turbines shall be permitted in various zoning districts, or the turbines shall be removed.
8. The applicant shall monitor bird and bat casualties during the test period and provide the monitoring data to the Planning Commission.

APPROVED BY: Barb Wencl, Commission Vice-Chairperson

I, the undersigned Secretary to the Zoning Committee of the Planning Commission for City of Saint Paul, Minnesota, do hereby certify that I have compared the foregoing copy with the original record in my office; and find the same to be a true and correct copy of said original and of the whole thereof, as based on minutes of the Saint Paul Planning Commission meeting held on June 24, 2011, and on record in the Saint Paul Planning Office, 25 West Fourth Street, Saint Paul, Minnesota.

This permit will expire two years from the date of approval if the use herein permitted is not established, subject to administrative extension not to exceed one year (Sec. 61.105).

The decision to grant this permit by the Planning Commission is an administrative action subject to appeal to the City Council. Anyone affected by this action may appeal this decision by filing the appropriate application and fee at the Zoning Office, 1400 City Hall Annex, 25 West Fourth Street. **Any such appeal must be filed within 10 calendar days of the date of the Planning Commission's decision.**

Violation of the conditions of this permit may result in its revocation.

Samantha Langer
Secretary to the Saint Paul
Zoning Committee

Copies to:

Applicant	Capitol Lien and Title
File No.	11-129-965
District Council	6

Mailed: June 24, 2011

District 6 Planning Council

171 Front Avenue
Saint Paul, MN 55117
651-488-4485 fax: 651-488-0343
district6ed@dist6pc.org

January 23, 2013

Zoning Committee of the Planning Commission
15 West Kellogg BLVD
Saint Paul, MN 55102

Re: 1000-1010 Dale Street Capital Lien-Extension of Determination of Similar Use for Vertical Wind Turbines/Determination of similar use for vertical wind turbine with a hybrid street light powered by wind and solar

On April 28, 2011 a letter was sent to the Zoning Committee indicating District 6 Planning Council's support for a determination of similar use for vertical wind turbines. At its January 22, 2013 Land Use Task Force meeting the extension on the determination of similar use for vertical wind turbines received a recommendation for approval.

The Land Use Task Force also recommends approval of a determination of similar use for a vertical wind turbine street light powered by wind and solar. The Task Force discussed the new application and concluded that there should be limited impact to the neighborhood since there have been no complaints regarding existing wind turbines and alternative energy sources are welcome. This approval is contingent that the applicants fulfill all application requirements.

Thank-you for your consideration and if you have questions please contact the office.

Regards,

Jeff Martens

Jeff Martens
Land Use Chairman

Cc: Ward 5
Tony Magnotte

Reilly, Kate (CI-StPaul)

From:	Mark Lentsch <marklentschrealty@gmail.com>
Sent:	Wednesday, March 06, 2013 10:12 AM
To:	Reilly, Kate (CI-StPaul)
Subject:	Wind Turbines addition - Dale St property #13-149-246 & 13-149-241

My office is right next door and I object. What happened to having to get approval from your "Arm's length" neighbors?

There are more than enough of the "Whirly Bird's" next door. My clients chuckle and say how silly they look....have heard comments...."only the city would allow this".

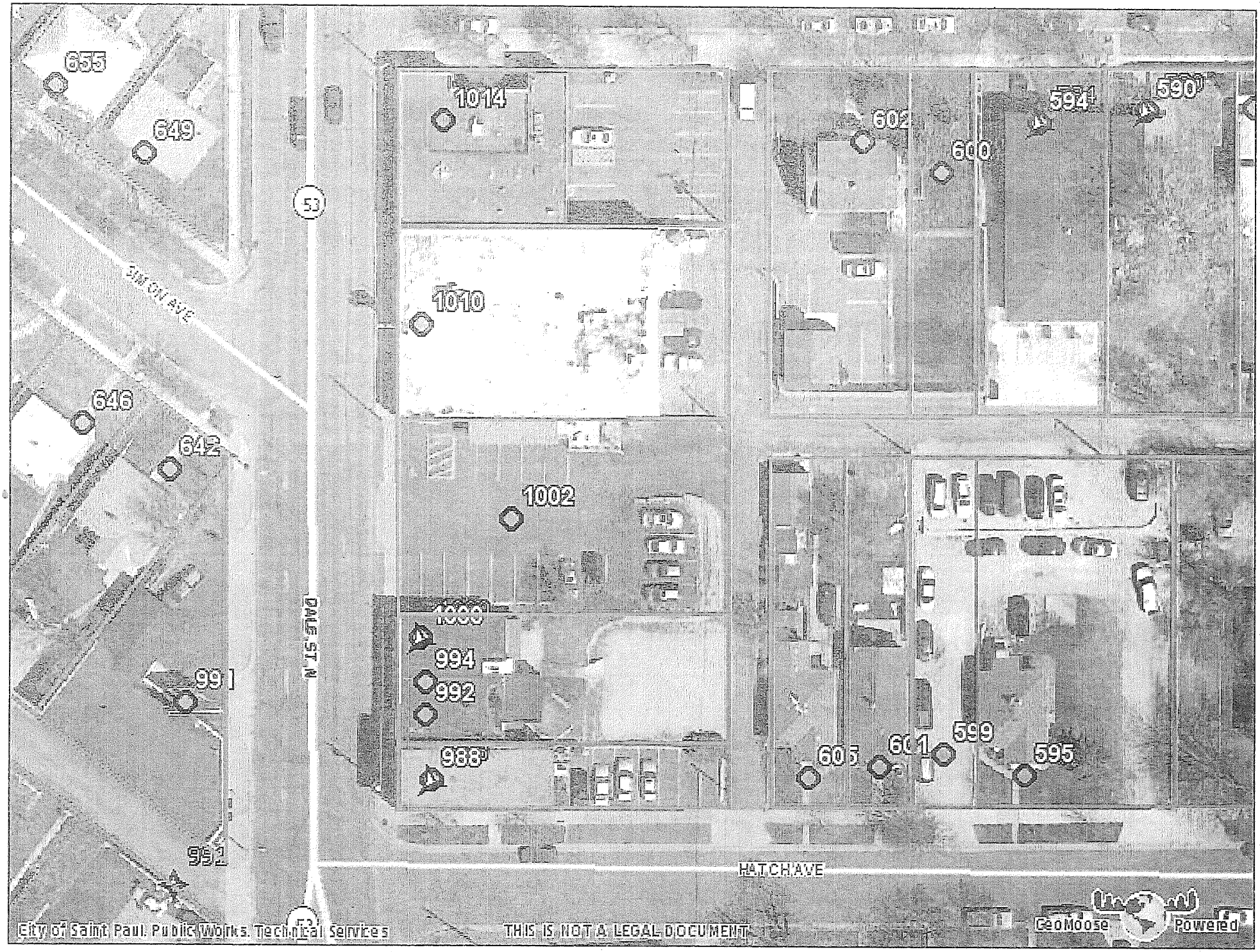
>>>where does this end? What is next....their own "whirly bird" trash compactor, "whirly bird" door openers, etc....Come on,...enough is enough. If every building in St Paul had these....we would be the "laughing stock" of the nation.

Remember when we were all concerned with "TV style" electronic billboards, and those were then regulated....i think these wind turbines could be a safety / distraction hazard for drivers turning their heads to look at the wind turbines spin....or younger kids climbing up on them sometime. What about some kind of hazard energy thrown off if you are in close proximity, have there been tests for that?

Thank you,

Mark Lentsch - 651-335-5464 - lifetime St Paul resident
marklentschrealty@gmail.com

***I am unable to attend March 14th at the proposed time.


655
649
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SIBLEY AVE
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595
HATCH AVE
N.
City of Saint Paul, Public Works, Technical Services
THIS IS NOT A LEGAL DOCUMENT
GeoMoose
Powered

APPLICANT Capitol Lien

PURPOSE Extension DSU

FILE # 13-149246 DATE 1-30-13

PLNG. DIST 6 Land Use Map # 12

~~SCALE 1" = 400'~~ Zoning Map # 9

LEGEND

zoning district boundary

subject property

one family

two family

multiple family

commercial

industrial

V vacant

north

ZONING COMMITTEE STAFF REPORT

1. **FILE NAME:** Capitol Lien / Anthony Magnotta **FILE #** 13-149-241
2. **APPLICANT:** Anthony Magnotta **HEARING DATE:** March 14, 2013
3. **TYPE OF APPLICATION:** Determination of Similar Use
4. **LOCATION:** 1000 Dale St N, NE of intersection of Hatch and Dale
5. **PIN & LEGAL DESCRIPTION:** 252923230065; Como Prospect Addition Lots 9 And Lot 10 Blk 13
6. **PLANNING DISTRICT:** 6 **EXISTING ZONING:** B3
7. **ZONING CODE REFERENCE:** §61.106
8. **STAFF REPORT DATE:** March 4, 2013 **BY:** Kate Reilly
9. **DATE RECEIVED:** January 30, 2013
   60-DAY DEADLINE FOR ACTION: April 1, 2013; extended to May 30, 2013

A. **PURPOSE:** Determination of similar use for vertical wind turbine with hybrid light fixture (wind and solar powered) in the B3 general busniness district

B. **PARCEL SIZE:** 50 ft. (Dale) x 127.5 ft. or 6,375 sq. ft. in area.

C. **EXISTING LAND USE:** Commercial

D. **SURROUNDING LAND USE:**

North: B3 - Business

East: RM2 – Single family & Multi-family residential

South: B3 - Business

West: B3 - Business; R4 – Single family residential

E. **ZONING CODE CITATION:** §61.106 provides for the planning commission to make similar use determinations when a specific use is not listed in the zoning code.

F. **HISTORY/DISCUSSION:** On June 24, 2011 (Z.F. 11-129-965) Anthony Magnotta/Capitol Lien and Title applied for and received a determination of similar use and conditional use permit for four wind turbines at the neighboring property, 1010 N. Dale Street. A determination of similar use/conditional use permit was granted to Macalester College for a 10 kW, 102 foot high, free-standing wind turbine on the campus for a test period in 2002 (Z.F. # 02-236-646) and permanently in 2005 based on noise monitoring during the test period (Z.F. # 05-085-530). On April 15, 2011, the planning commission initiated a zoning study to consider amendments to the zoning code pertaining to wind turbines that will address issues specific to wind turbines and conditions under which wind turbines would be permitted in various zoning districts.

G. **DISTRICT COUNCIL RECOMMENDATION:** The District 6 Council recommended approval of the DSU at the January 22, 2013, Land Use Task Force meeting.

H. **FINDINGS:**

1. The applicant seeks to install a hybrid light fixture powered by both a vertical axis wind turbine and a photovoltaic solar panel in the parking lot to the rear of the building on the property at 1000 N. Dale Street. The light is powered by a 300 Watt vertical axis wind turbine and a 125 Watt solar panel. The light is able to be operated without connection to the electrical grid/traditional utility system. The light's wind turbine and solar panel charge a 12V battery bank. The battery provides enough power to power a 30 Watt LED lamp. The lamp with wind turbine and solar panel is 6.5 meters in height (21.3 feet).

2. § 61.106 authorizes the planning commission to make similar use determinations when a specific use is not listed in the zoning code. The proposed hybrid light fixture, intended to provide light for the parking lot at the business at 1000 N. Dale Street, generally meets the definition of *accessory use* in § 65.910, "a building, structure or use which is clearly incidental to, customarily found in connection with, and (except as provided in section 63.300) located on the same zoning lot as, the principal use to which it is related." While § 60.103(k) of the zoning code states that a purpose of the zoning code is "to promote the conservation of energy and the utilization of renewable energy resources," suggesting that the zoning code generally

supports permitting this application, § 65.910 does not specifically include hybrid light fixture in a list of examples of what the term accessory use includes but is not limited to. Therefore, § 65.910 also does not include any specific standards for hybrid light fixtures in various zoning districts.

On April 15, 2011, the planning commission initiated a zoning study to consider amendments to the zoning code pertaining to wind turbines that will address issues specific to wind turbines and conditions under which wind turbines would be permitted in various zoning districts. The study will also address hybrid light fixtures. Preliminary research finds that small wind turbines designed to provide electricity for the property on which they are located are commonly permitted as accessory uses in other cities, subject to reasonable conditions that may vary dependent on the size and location of the turbine. Minneapolis, Duluth, Madison and Chicago, among other cities, all have specific provisions for this. However, no provisions for light fixtures with a solar and wind power element have been found.

3. §61.106 states: When a specific use is not listed in the zoning code, ... the planning commission shall determine if a use is or is not similar to other uses permitted in each district. The ... planning commission shall make the following findings in determining one use is similar to another:

   (a) *That the use is similar in character to one (1) or more of the principal uses permitted.* This finding is met. Each element of the fixture – the light, the solar panel, and the wind turbine will be addressed separately, as it relates to the zoning code.

   Light Fixture

   The zoning code does not specify lighting as a use, accessory or otherwise. However, it does set standards for lighting in § 63.116 Exterior Lighting and § 63.318 Lighting (for parking facilities) and in § 66.300 Traditional Neighborhood Districts.

   § 63.116 Exterior Lighting of the zoning code addresses standards for exterior lighting. Standard (a) applies.

   (a) *All outdoor lighting in all use districts, including off-street parking facilities, shall be shielded to reduce glare and shall be so arranged as to reflect lights away from all adjacent residential districts or adjacent residences in such a way as not to exceed three (3) footcandles measured at the residence district boundary.* This standard is met. The light fixture will be shielded to reduce glare and face downward. The light will not exceed three (3) footcandles measured at the residence district boundary.

   § 63.318 sets the standard for lighting in parking facilities. It requires that parking facilities *be illuminated to a level to allow safe, secure access to the parking facility and within it*, and states that all lighting shall conform to § 63.116.

   § 66.343 *Traditional neighborhood district design standards*, Standard (20) *Parking lot lighting* states that *pedestrian-scale lighting shall be provided in parking areas. Light standards shall be not more than 25 feet in height in parking lots and 16 feet in height along interior sidewalks and walkways, and have a downcast glow.* This standard is met. The light fixture is 21.3 feet tall, is located in the parking are and has a downcast glow. However, it is not necessary to meet this standard because the light fixture is located in a B3 district, not a T district.

   Solar Energy System

   § 65.921 Solar energy system, addresses standards and conditions that solar energy systems must meet. Standard (b) applies.

   (b)Freestanding systems shall be treated as accessory buildings for the purpose of

maximum height, maximum lot area coverage, and location requirements; provided that freestanding systems in residential districts shall not exceed 15 feet in height within 10 feet of a parkway or an interior property line, except for a property line along an alley, with additional height equal to additional setback from property lines permitted to a maximum height of twenty-five (25) feet. This standard is met. The solar energy system attached to the light fixture pole is located in a B3 business district. The height limitation on accessory buildings for the B3 business district is 30 feet (§ 66.431 Density and dimensional standards table for business districts). The light fixture assembly will be 21.3 feet in height.

Wind Turbine

Antennas permitted in the B3 general business district share some characteristics with a hybrid street lamp: both may be mounted on a freestanding pole. §63.121 permits accessory antennas in all districts, including a television receiving satellite dish 3 meters or less in diameter and short-wave radio antennas, to extend up to 15 feet above the normal height restriction for the district (e.g., 15 feet above the 30 foot height limit in the B3 district). While antennas are static objects and do not create sound, by their nature wind turbines have dynamic, moving elements. Other uses permitted in the B3 district include outdoor elements that move or create sound. Outdoor compressors and chillers accessory to a grocery store or restaurant, for example, create sound. Auto service stations and drive-through sales and services permitted in the B3 district often include outdoor elements that move and create sound.

(b) *That the traffic generated on such use is similar to one (1) or more of the principal uses permitted.* This finding is met. The minimal traffic generated by a hybrid light fixture is substantially less than most uses permitted in the B3 district.

(c) *That the use is not first permitted in a less restrictive zoning district.* This finding is met. "*Hybrid (wind/solar powered) light fixture*" is not specifically listed as a permitted use in any zoning district.

(d) *That the use is consistent with the comprehensive plan.* This finding is made. While the Saint Paul Comprehensive Plan does not contain any policies specifically related to hybrid light fixtures, the use is consistent with broad policies in the comprehensive plan for energy conservation and sustainable use of renewable energy resources. The proposed hybrid light fixture is consistent with the intent and purpose of the zoning code "to implement the policies of the comprehensive plan," including the purpose specifically stated in § 60.103(k) of the zoning code "to promote the conservation of energy and the utilization of renewable energy resources."

4. Because vertical wind turbines share some characteristics with cellular telephone antennas, it may be useful to consider the standards for cellular telephone antennas in the B3 district. §65.310 provides for cellular telephone antennas in the B3 general business district as permitted uses if they are building-mounted and as conditional uses if they are freestanding. The standards and conditions listed in § 65.310 for cellular telephone antennas in the B3 general business district that might also be applicable to the proposed light fixture, and the consistency of the proposed light fixture with them, are as follows:

(d) *In . . . business districts, cellular telephone antennas to be located on a new freestanding pole are subject to the following standards and conditions:*

(1) *The freestanding pole shall not exceed seventy-five (75) feet in height, unless the applicant demonstrates that the surrounding topography, structures, or vegetation renders a seventy-five-foot pole impractical. Freestanding poles may exceed the above height limit by twenty-five (25) feet if the pole is designed to carry two (2) antennas.* The proposed 21.3 foot tall wind turbine on a free-standing pole with light fixture is consistent with this standard.

(2) *Antennas shall not be located in a required front or side yard and shall be set back one*

(1) times the height of the antenna plus ten (10) feet from the nearest residential structure. The hybrid light fixture is located in a B3 district, which does not require a side yard setback. The location of the proposed 21.3 foot tall light fixture assembly is more than 100 feet from the nearest residential property, and farther from the nearest residential structure, consistent with this standard.

(3) The antennas shall be designed where possible to blend into the surrounding environment through the use of color and camouflaging architectural treatment. The proposed hybrid light fixture would have a non-reflective subdued finish to blend into the surrounding environment as much as possible. It would also be located to reduce visual impact.

(4) In business districts, the zoning lot on which the pole is located shall be within contiguous property with OS or less restrictive zoning at least one (1) acre in area. The lot is within a large contiguous area of B3 and industrial zoning consistent with this standard.

(g) Freestanding poles shall be a monopole design. The proposed freestanding pole is a monopole design consistent with this standard.

(h) Transmitting, receiving and switching equipment shall be housed within an existing structure whenever possible. If a new equipment building is necessary, it shall be permitted and regulated as an accessory building, section 63.500, and screened from view by landscaping where appropriate. The applicant states that all electrical equipment related to the light fixture will be located entirely within the light fixture assembly.

5. § 65.310 provides for cellular telephone antennas on a freestanding pole in the B3 district as a conditional use. Because the proposed hybrid light fixture, which is on a freestanding pole, shares some characteristics with a cellular telephone antenna on a freestanding pole, it may be useful to review the proposed light fixture for conformance with the general standards in §61.501 that apply to approval of conditional use permits:

(a) The extent, location and intensity of the use will be in substantial compliance with the Saint Paul Comprehensive Plan and any applicable subarea plans which were approved by the city council. The light fixture is consistent with this standard as stated in Finding 3(d).

(b) The use will provide adequate ingress and egress to minimize traffic congestion in the public streets. The light fixture is consistent with this standard.

(c) The use will not be detrimental to the existing character of the development in the immediate neighborhood or endanger the public health, safety and general welfare. The use is consistent with this standard. In a 2007 test by McMaster University in Canada, researchers found that sound from vertical axis wind turbines does not exceed 20 dB(A). The city's noise standard for commercial districts is 70 dB(A) and 65 or 55 dB(A) for residential districts. For reference, light auto traffic at 100 feet is 50 dB(A), a heavy truck is 90 dB(A). A garbage disposal indoors from 2 feet away is 80 dB(A). The applicant states that staff from Braun Intertec told him the larger 1.5 kW and 3 kW vertical axis wind turbines at 1010 N. Dale don't make enough noise to be heard over the ambient traffic noise from Dale Street. Noise generated by an even larger 10kW horizontal axis wind turbine on the Macalester College campus was unable to be measured because it was masked by ambient noise from Snelling Avenue a block away. There have been no complaints about noise from any of these existing wind turbines.

(d) The use will not impede the normal and orderly development and improvement of the surrounding property for uses permitted in the district. The proposed light fixture is consistent with this standard.

(e) The use shall, in all other respects, conform to the applicable regulations of the district in which it is located. The proposed light fixture is consistent with this standard.

I. **STAFF RECOMMENDATION:** Based on the above findings, staff recommends approval of the determination of similar use for a vertical wind turbine with hybrid light fixture (wind and solar powered) subject to the following condition:

1. The total height of the assembly shall conform to the maximum height standard for the district, and the base of the moving elements of the wind turbine assembly shall be at least 15 feet above grade.
2. The wind turbine portion of the assembly shall not exceed one (1) Kilowatt, five (5) feet in height and four (4) feet in diameter.
3. The solar panel portion of the assembly shall not exceed twelve (12) square feet.
4. When the hybrid light fixture ceases to function, it will be removed or replaced within 30 days.

DETERMINATION OF SIMILAR USE APPLICATION

Department of Planning and Economic Development
Zoning Section
1400 City Hall Annex
25 West Fourth Street
Saint Paul, MN 55102-1634
(651) 266-6589

Zoning office use only
File # 13-143407
Fee: 700.00
PD-6
Tentative Hearing Date: 1-31-13
252923230065

APPLICANT

Name ANTHONY MAGNOTTA CAPITOL LIEN RECORDS & RESEARCH
Address 1010 DALE ST. NORTH
City ST PAUL St. MN Zip 55117 Daytime Phone 651-341-1564
Name of Owner (if different) ANTHONY MAGNOTTA
Contact Person (if different) ANTHONY MAGNOTTA Phone 651-341-1564

PROPERTY LOCATION

Address / Location 1000 DALE ST NORTH ST. PAUL
Legal Description
Current Zoning B3
(attach additional sheet if necessary)

REQUEST: Application is hereby made under provisions of Chapter 64, Section 300, Paragraph (G) of the Zoning Code for a Determination of Similar Use.

Current Use PARKING LIGHT REPLACENT OF BUILDING MONTED LIGHTING WITH STANDALONE FREE MONTED POLE
Proposed Use

SUPPORTING INFORMATION: Provide the following information (attach additional sheets if necessary).

☒ Is the use similar in character to one or more of the principal uses permitted in the zoning district?
SIMILAR TO STREET LIGHT & EXISTING TURBINES ON A SMALLER SCALE.

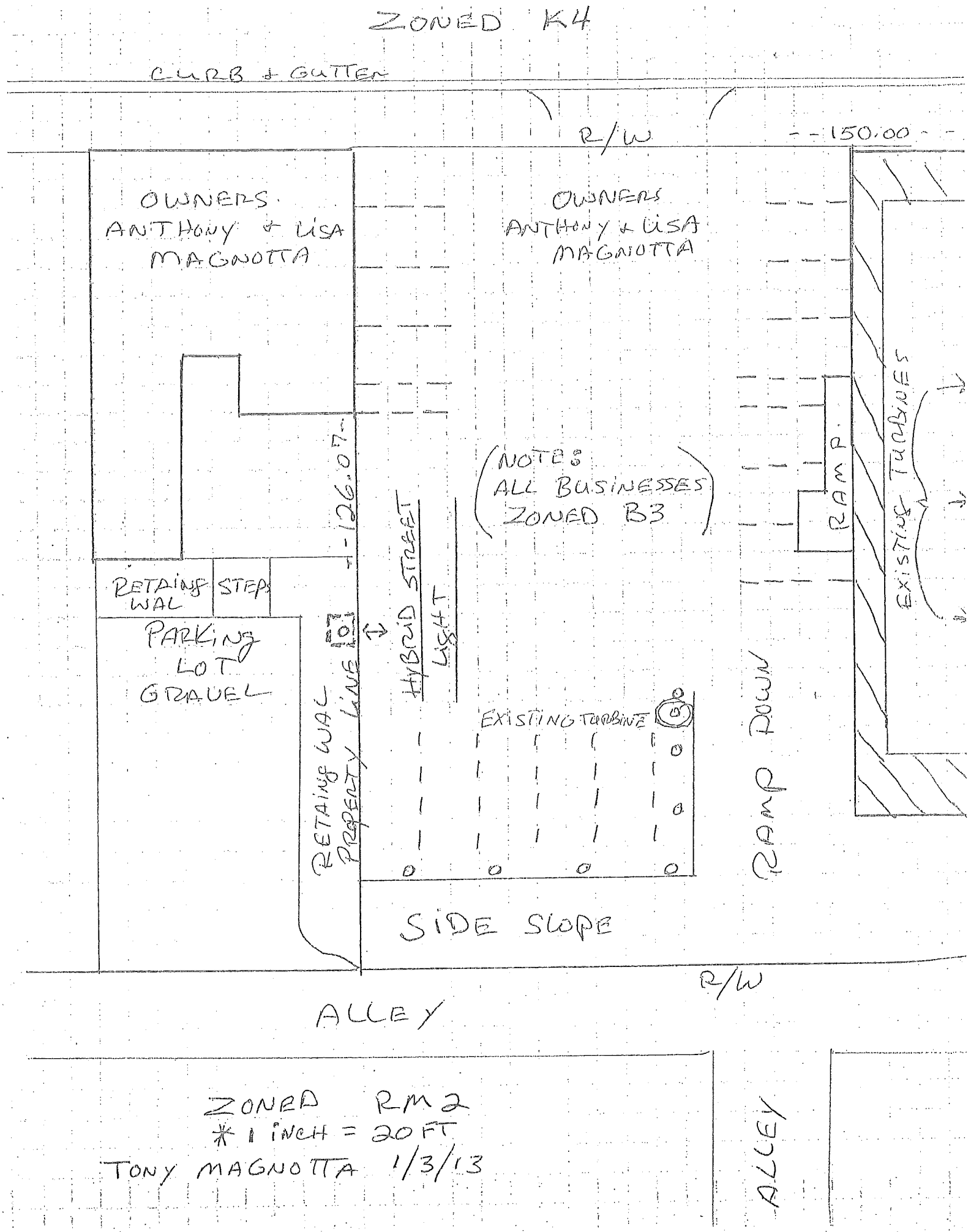
☐ Is the traffic that the use will generate similar to traffic generated by one or more permitted uses?

☐ Is the use already permitted in a less restrictive zoning district?

CK 83744
700.00

☐ Required site plan is attached.

Applicant's Signature Magnotta Date 1/7/2013 City Agent pdd 1-7-13
Magnotta 1/30/2013.


ZONED K4
CURB + GUTTER
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ANTHONY & LISA
MAGNOTTA
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MAGNOTTA
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ALL BUSINESSES
ZONED B3
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PARKING
LOT
GRAVEL
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HYBRID STREET
LIGHT
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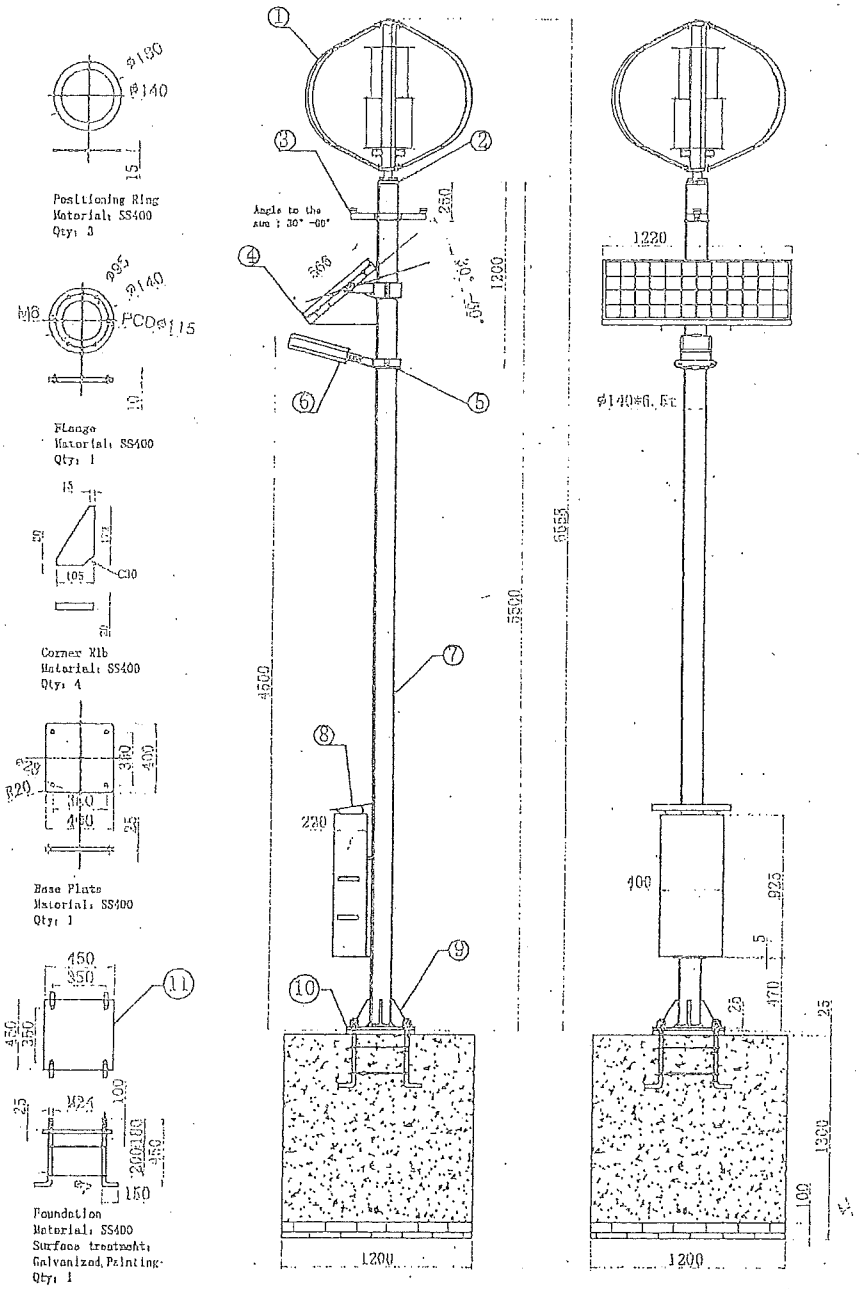
PROPERTY LINE
EXISTING TURBINE
RAMP DOWN
SIDE SLOPE
R/W
ALLEY
ZONED RM2
* 1 INCH = 20 FT
TONY MAGNOTTA 1/3/13
ALLEY

Model No. SLSP-K85-01-4500; Drawing No.: F101000-8



Item	Description	Qty
1	Wind Turbine Φ1240x1060	1
2	Flange	1
3	Spot Lights	2
4	Solar Panel 85W	1
5	Positioning Ring	3
6	Main Lamp (24w)	1
7	Pole to wind turbine Φ140x1250x5t	1
8	Control Box	1
9	Corner Rib	4
10	Base plate 400x400x25t	1
11	Foundation 350x350	1

Strength (IEC61400-2, Class III)
Based on ASCE-7 Code for gust wind 53.57 m/s for 3 sec

Dead Load : 1676.03N
Shear Load : 3603.54N
Moment : 13313.41N.M

SYM.	DATE	DESCRIPTION OF REVISIONS	DRAWN	APPROVED
A				
B				
C				
D				
E				

FINISHING			
MATERIAL	Q235 A3		
APPROVED			
CHECKED			
DESIGNED			
DRAWN	V F C	10.07.15	

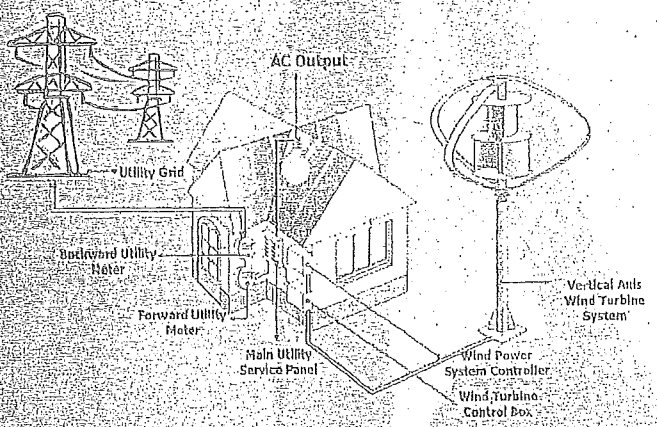
PART NO.	A3-BOX-4500-S85*1
TITLE	SLSP-K85-01-4500-A3
DRAWING NO	F-101000-8

TOLERANCES OTHERWISE SPECIFIED LENGTH ±0.1M/M ANGULAR ±

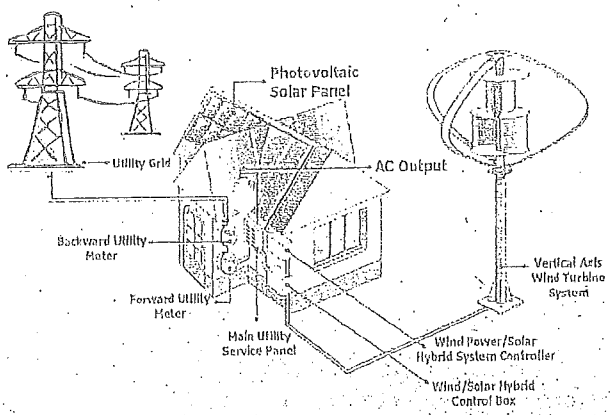
m / cm A4 SCALE 1:1

Different Application Match Your Requirements

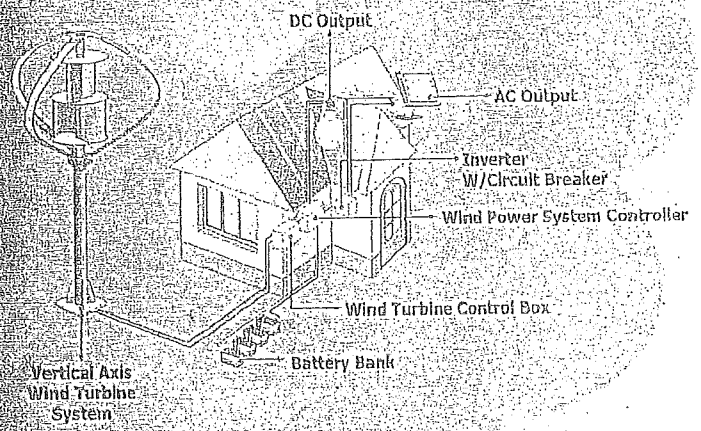
Grid-Tied Application Illustration



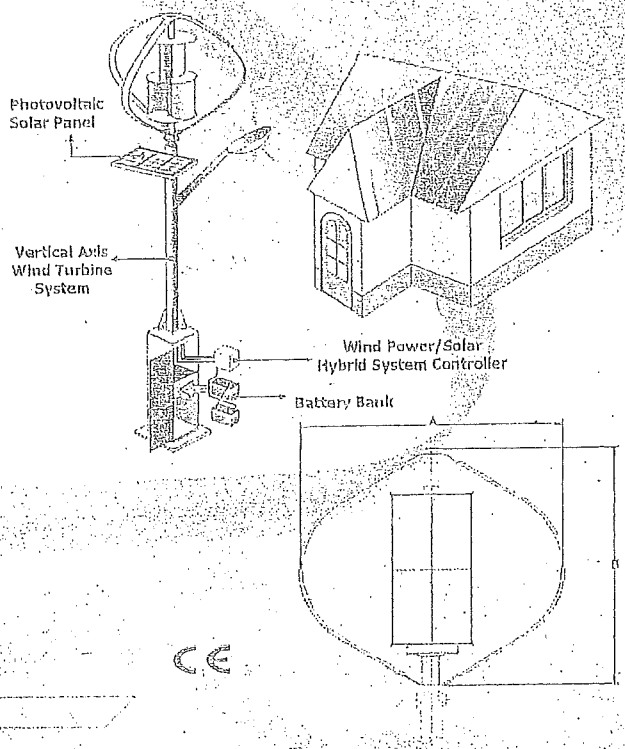
Hybrid Grid-Tied Application Illustration



Stand-Alone Application Illustration



Hybrid Street Lamp Application



Commercial Products

(1) Stand alone for remote area: 300W,700W,1.5KW,3KW
(2) Grid connected system: 1.5KW,3KW
(3) 5KW & 10KW are under developing

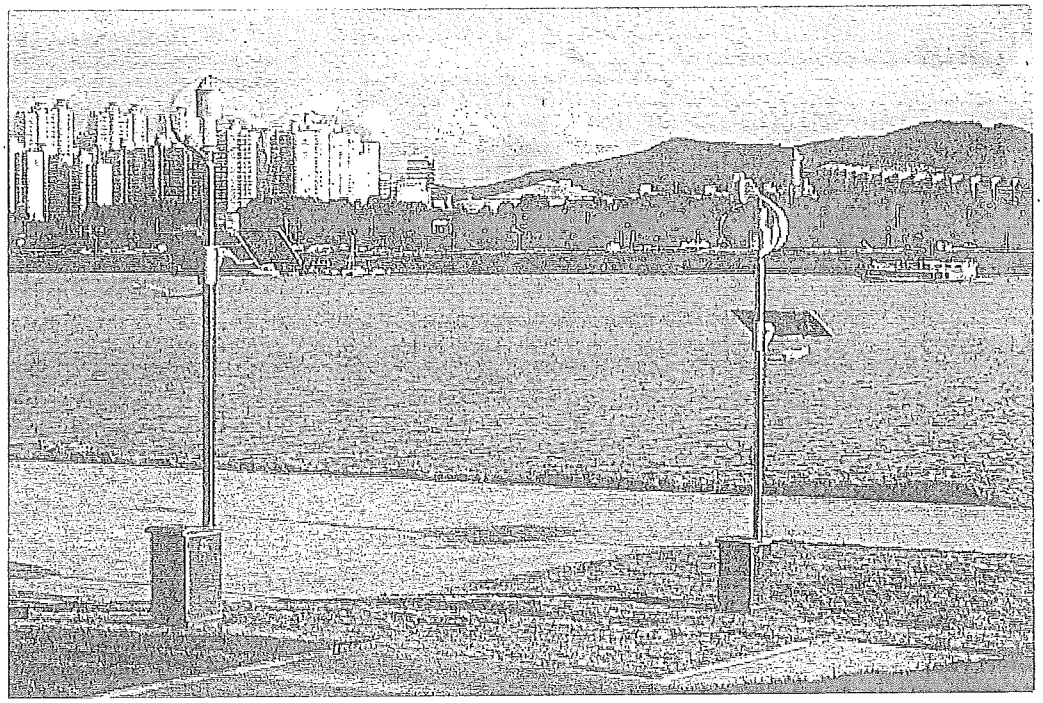
CE

General Product Specifications

Product		300W	700W	1.5KW	3KW
Size(m)	A	1.24	1.93	2.8	4.0
	B	1.00	1.56	3.2	4.5
Cut-in Wind speed		< 3 m/s	Cut-out Wind speed	15 m / s	
Rated Wind speed		12 m/s ~ 13.5 m/s	Survival Wind speed	60 m / s	

MINNESOTA WIND TECHNOLOGY

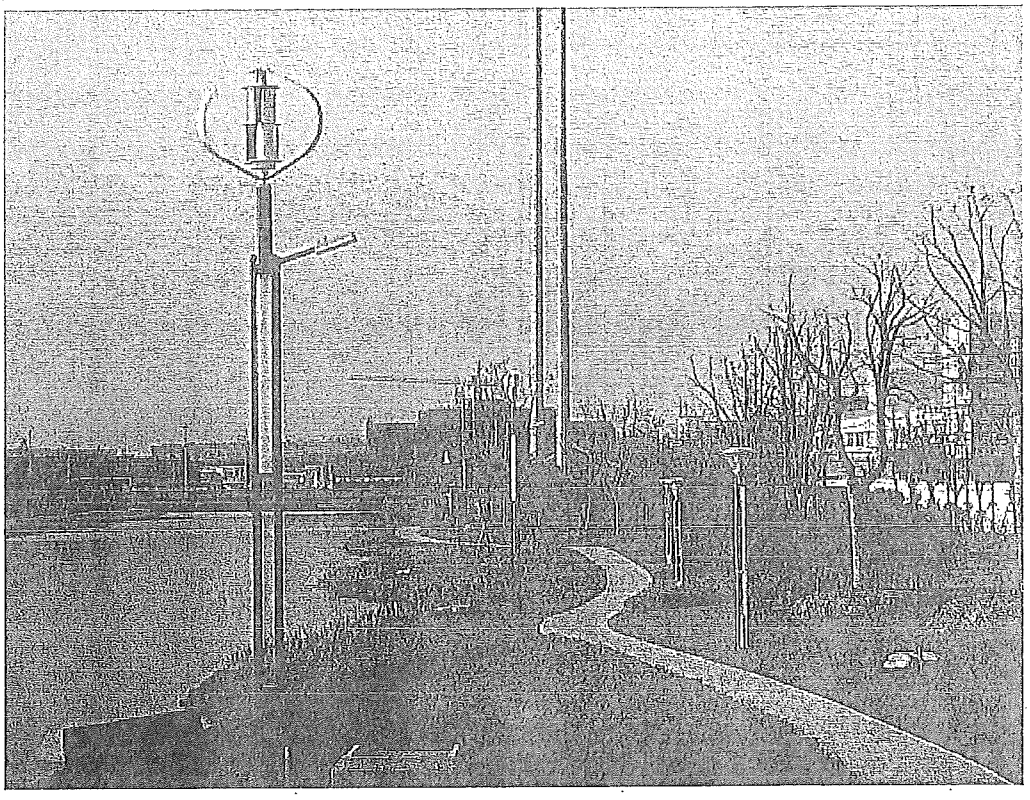
1010 Dale Street North, Saint Paul, MN 55117 Phone: 651-341-1564 www.mnwind.us



Hybrid Street Lighting Systems

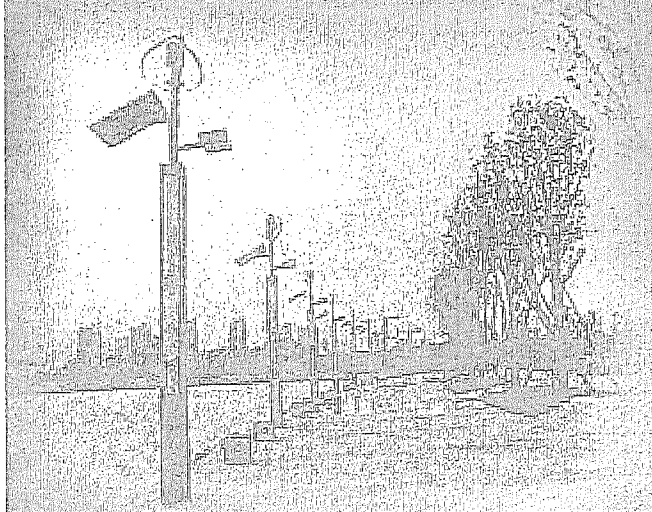
Our standard hybrid street lighting system is integrated with DS-300W Vertical Axis Wind Turbine and 85W Solar Panel together with modern design of lamp pole. The design concept is to provide an independent (off-grid), self-sufficient lighting application or other usages if applicable.

The controller of the hybrid street lighting system is integrated with wind power controller (WG0400) and solar power charger (RC10-II), both are paralleled for battery bank (12V/24V) charging. The battery bank provides load of a power-saving 24W LED Lamp.



MINNESOTA WIND

HYBRID STREET LIGHT



Feature:

The hybrid street light combines the VAWT wind turbine and solar panel. These collect power from wind and sun light for lighting up the LED in the night time. This also makes it so the street light is completely green and does not need pipeline construction from city power. The benefits are not only zero CO2 emissions but also saving the installation time and costs. It shows the ECO-SKYLINE of a modernized city.

Specification:

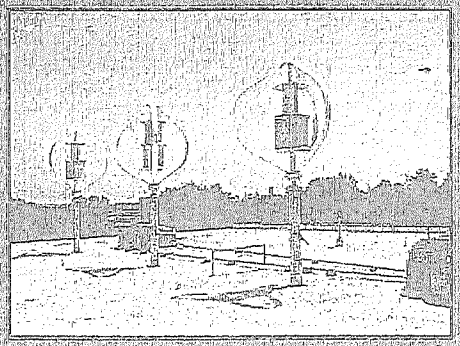
Wind power-	300W VASWT (DS300)
Solar power-	120W silicon mono crystalline
Street lamp-	30W high bright LED
Decoration light-	12W LED colorful
Spot light-	1W LED x2 to Light wind rotor
Charger-	400W MPPT charger+200W PV charger
Battery-	12V 46Ah x4 deep-cycle silicon gel battery
Pole-	5.4m assemble stainless/galvanized
Lamp height-	4.5m
Height-	6.5m

MINNESOTA WIND

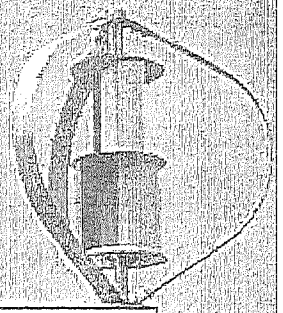
Our CEO, Tony Magnotta, seen above at our headquarters in St. Paul, MN at the first VAWT Urban Wind Farm in America.

Product		300W	700W	1.5KW	3KW
Size(m)	A	1.24	1.93	2.8	4.0
	B	1.00	1.56	3.2	4.5
Cut-in Wind speed		< 3 m/s	Cut-out Wind speed	15 m / s	
Rated Wind speed		12 m/s ~ 13.5 m/s	Survival Wind speed	60 m / s	

"Wind That Creates Customers"



MINNESOTA WIND



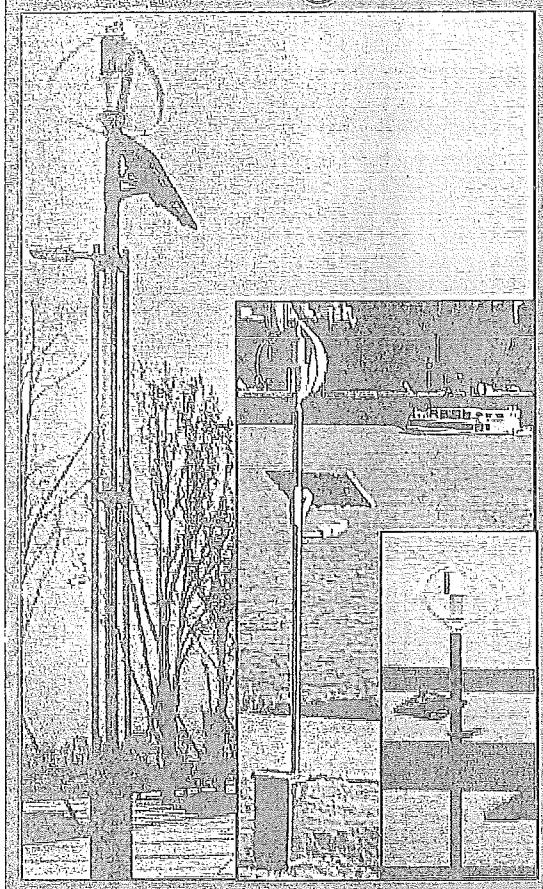
MNWT-BC300. . . . 400 watts
Output Voltage. . . . . 12,24 volts
Output Current. . . . . 20 amps
Cut-In Wind Speed. . . . 6.7 mph
Rated Wind Speed. . . . . 34 mph
Diameter. . . . . 3.7 ft
Height. . . . . 4.8 ft

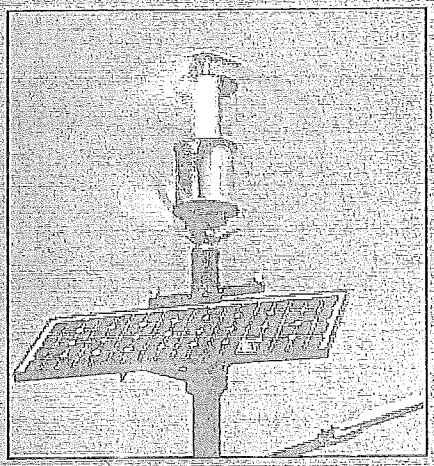
MNWT-1500. . . . . 1.5 kW
Output Voltage. . . . . 48 volts
Output Current. . . . . 60 amps
Cut-In Wind Speed. . . 5.5 mph
Rated Wind Speed. . . . 26 mph
Diameter. . . . . 9.2 ft
Height. . . . . 9.8 ft

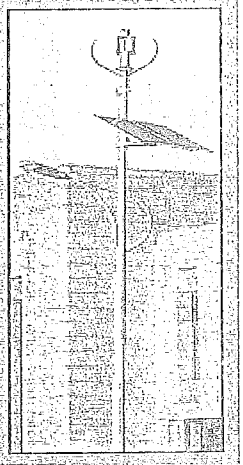
MNWT-3000. . . . . 3.0 kW
Output Voltage. . . . . 48 volts
Output Current. . . . . 130 amps
Cut-In Wind Speed. . . 5.5 mph
Rated Wind Speed. . . . 33 mph
Diameter. . . . . 13.1 ft
Height. . . . . 18.4 ft

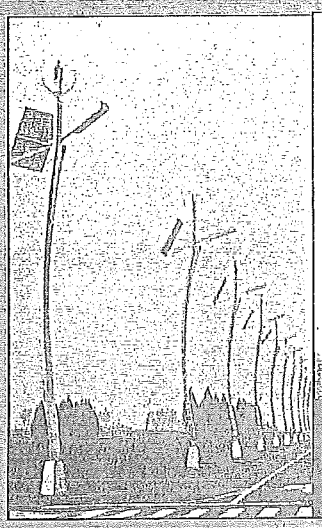
MINNESOTA WIND

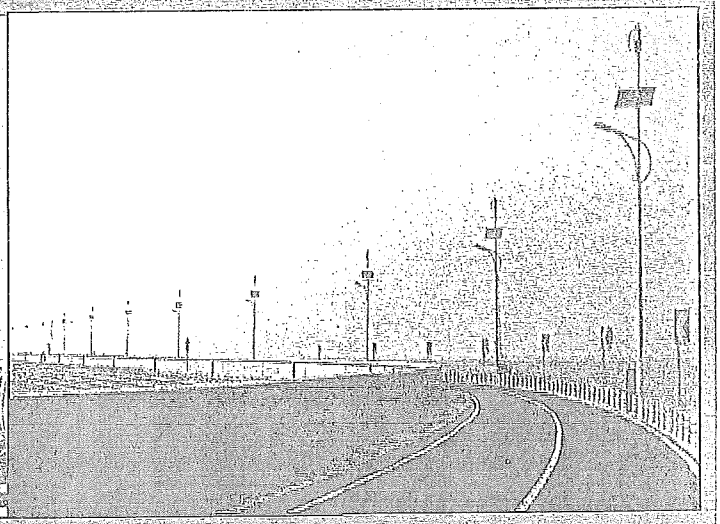
Hybrid Street Lighting System

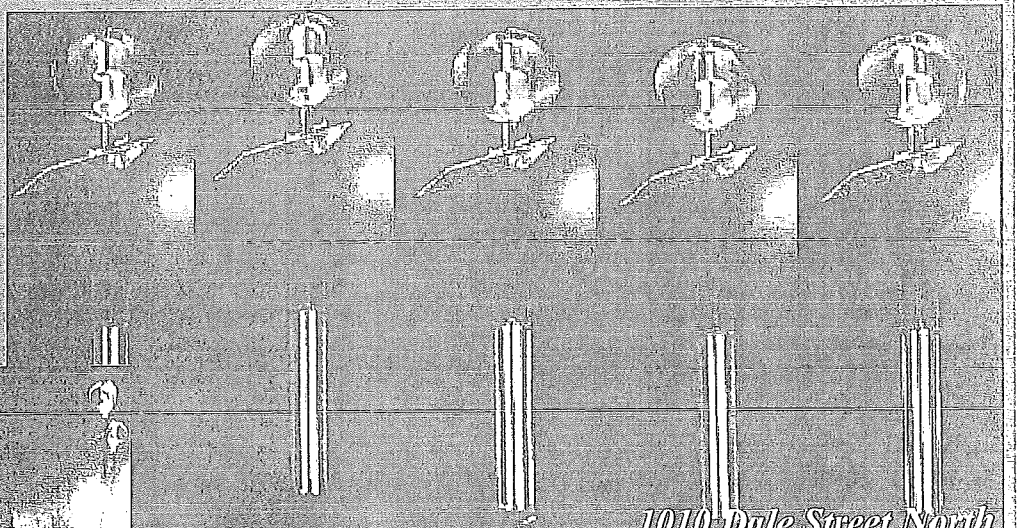


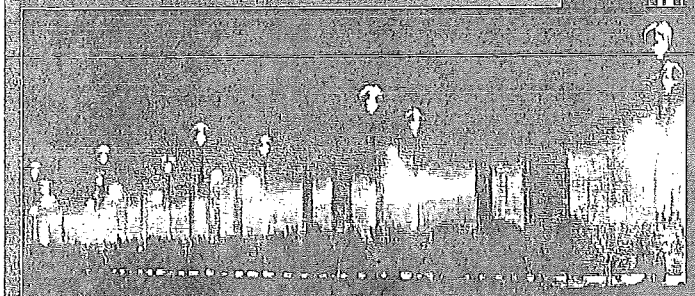












1010 Dale Street North
Saint Paul, MN 55117
(651) 341-1564
www.mnwind.us

District 6 Planning Council

171 Front Avenue
Saint Paul, MN 55117
651-488-4485 fax: 651-488-0343
district6ed@dist6pc.org

January 23, 2013

Zoning Committee of the Planning Commission
15 West Kellogg BLVD
Saint Paul, MN 55102

Re: 1000-1010 Dale Street Capital Lien-Extension of Determination of Similar Use for Vertical Wind Turbines/Determination of similar use for vertical wind turbine with a hybrid street light powered by wind and solar

On April 28, 2011 a letter was sent to the Zoning Committee indicating District 6 Planning Council's support for a determination of similar use for vertical wind turbines. At its January 22, 2013 Land Use Task Force meeting the extension on the determination of similar use for vertical wind turbines received a recommendation for approval.

The Land Use Task Force also recommends approval of a determination of similar use for a vertical wind turbine street light powered by wind and solar. The Task Force discussed the new application and concluded that there should be limited impact to the neighborhood since there have been no complaints regarding existing wind turbines and alternative energy sources are welcome. This approval is contingent that the applicants fulfill all application requirements.

Thank-you for your consideration and if you have questions please contact the office.

Regards,

Jeff Martens

Jeff Martens
Land Use Chairman

Cc: Ward 5
Tony Magnotte

Reilly, Kate (CI-StPaul)

From: Mark Lentsch <marklentschrealty@gmail.com>
Sent: Wednesday, March 06, 2013 10:12 AM
To: Reilly, Kate (CI-StPaul)
Subject: Wind Turbines addition - Dale St property #13-149-246 & 13-149-241

My office is right next door and I object. What happened to having to get approval from your "Arm's length" neighbors?

There are more than enough of the "Whirly Bird's" next door. My clients chuckle and say how silly they look....have heard comments...."only the city would allow this".

>>>where does this end? What is next....their own "whirly bird" trash compactor, "whirly bird" door openers, etc....Come on,...enough is enough. If every building in St Paul had these....we would be the "laughing stock" of the nation.

Remember when we were all concerned with "TV style" electronic billboards, and those were then regulated....i think these wind turbines could be a safety / distraction hazard for drivers turning their heads to look at the wind turbines spin....or younger kids climbing up on them sometime. What about some kind of hazard energy thrown off if you are in close proximity, have there been tests for that?

Thank you,

Mark Lentsch - 651-335-5464 - lifetime St Paul resident
marklentschrealty@gmail.com

***I am unable to attend March 14th at the proposed time.

APPLICANT Capitol Lien (et al)

PURPOSE DSU

FILE # 13-149241 DATE 12/31/13

PLNG. DIST. 6 Land Use Map # 12

SCALE 1" = 400' Zoning Map # 9

LEGEND

zoning district boundary

subject property

north

one family

two family

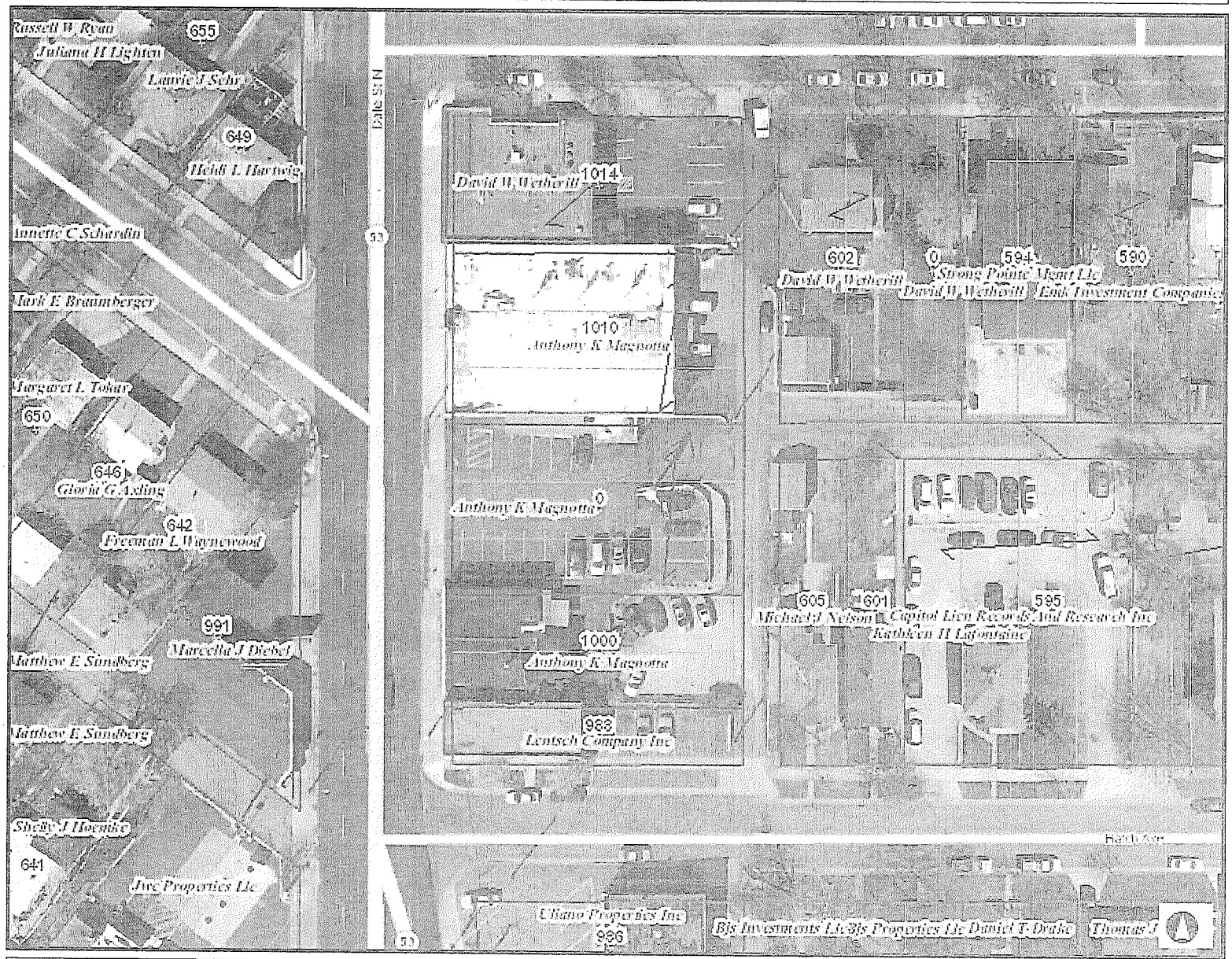
multiple family

commercial

industrial

V vacant

MapRamsey



126.9 0 63.43 126.9 Feet

NAD_1983_HARN_Adj_MN_Ramsey_Feet

Legend

- County Offices
- City Halls
- Schools
- Hospitals
- Fire Stations
- Police Stations
- Recreational Centers
- Parcel Points
- Parcels
- Primary Owner
- Parcel Lines and Land Ties
  - Parcel Lines
  - Land Ties

Notes

Enter Map Description