

ZONING BY)LAWS
TOWN OF WINDSOR, MASSACHUSETTS

APRIL 1965
REVISED NOVEMBER 26, 1973
REVISED MAY 31, 1978
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A True Copy Attest:

Madeline W. Scully Town Clerk

September 1, 2016

ZONING BY-LAWS
TOWN OF WINDSOR, MASSACHUSETTS
APRIL, 1965

REVISED NOVEMBER 26, 1973

REVISED MAY 31, 1978

REVISED NOVEMBER 9, 1981

REVISED MAY 4, 1987

REVISED APRIL, 22, 1991

SECTION 1 - Purposes

The purposes of this Zoning By-Law are to promote the health, safety, convenience and general welfare of the inhabitants of the Town of Windsor; to protect and conserve the value of property within the town; to preserve and increase the beauty and amenities of the Town; to conserve, insofar as possible, natural conditions, and to secure safety from fire, congestion or confusion, by encouraging the most appropriate uses of land within the Town, in accord with provisions of Chapter 40A of the General Laws of the Commonwealth of Massachusetts.

SECTION 2 - Districts

- 2.1 - For the purposes of this By-Law, a residential-agricultural zoning district in the Town is hereby established with other uses permitted as set forth in Section 2.2.
- 2.2 - Commercial, industrial and other uses and structures may be permitted by special permit issued by the Zoning Board of Appeals, pursuant to Sections 6 and 14 of this By-Law and Massachusetts General Laws, c. 40A, Section 9.

SECTION 3 - Continuance of Existing Uses

- 3.1 - Any building, structure or use of building, structure or premises existing at the time this By-Law is adopted may be continued, maintained and repaired.
- 3.2 - Any building, structure or use of building, structure or premises existing at the time this By-Law is adopted may be, upon issuance of a building permit, enlarged, provided such enlargement does not unreasonably depart from the purposes of this By-Law.
- 3.3 - The use of a building, structure or premises existing at the time this By-Law is adopted may be changed to any use which is essentially of the same character as the existing use or to a use which does not unreasonably depart from the purposes of this By-Law.

- 3.4 - Any building, structure or premises may be altered, repaired or modified upon order of any governmental authority having appropriate jurisdiction in order to restore or maintain the same in a safe and lawful condition.
- 3.5 - Any building or structure may be rebuilt if damaged or destroyed.
- 3.6 - Non conforming lots of record, or shown on a plan endorsed by the Planning Board are exempt from the provisions of this By-Law to the extent and as provided in General Laws, c. 40A, Section 6.
- 3.7 - A lot on which there existed at the time of the adoption of this By-law two or more buildings used for dwellings may be divided into as many lots as there are such buildings thereon, provided the lot is divided in such a manner that all resulting lots shall conform as nearly as possible to the area and frontage requirements of this By-law.

SECTION 4 - Use Regulations

No buildings, structure or premises shall be used and no buildings, structure or part thereof shall be erected, constructed, moved, extended, enlarged or materially altered, except as provided by this By-law.

SECTION 5 - Permitted Uses

The following uses are permitted under this By-Law:

- 5.1 - Single family residences and usual accessory structures.
- 5.2 - Agricultural uses and structures (including livestock, horticulture, floriculture and silviculture) and including the seasonal sale at wholesale and retail of agricultural products, on premise a portion of which shall be produced on the premises and the sale of Christmas trees.
- 5.3 - Customary home occupations, professions, crafts or arts such as, but not limited to, resident professional insurance agents and offices of physicians, architects, attorneys, therapists and counsellors, realtors, hair stylists' shops, tailor shops, artists' and sculptors' studios and other residential business uses and employing no more than one person outside the household and provided there is adequate off-street parking. There shall be permitted one sign not exceeding four square feet in surface area per side.

- 5.4 - Religious or educational uses on land owned or leased by the Commonwealth or any of its agencies, subdivisions or bodies politic or by a religious sect or denomination, or by a non-profit educational corporation, provided such structure or use otherwise complies with the dimensional requirements of this By-Law.

SECTION 6 - Uses Requiring a Special Permit

- 6.1 - The following uses are permitted only upon issuance of a Special Permit by the Zoning Board of Appeals in accordance with M.G.L.c. 40A, Section 9, upon findings showing consideration of the following criteria: that the proposed use:
- (a) Is in compliance with all provisions and requirements of this By-Law, and in harmony with its general intent and purpose;
 - (b) Is desirable to the public convenience or welfare at the proposed location;
 - (c) Will not be detrimental to adjacent uses or to the established or future character of the neighborhood;
 - (d) Will not create undue traffic congestion, or unduly impair pedestrian safety and that adequate off-street parking is provided on site; and
 - (e) Will not adversely alter drainage patterns or rates of flow on adjacent properties or pose any risk of hazard to the public health, safety or general welfare on adjacent properties or elsewhere in the Town.
- 6.2 - Special permits may be issued subject to such conditions, safeguards or limitations as the Zoning Board of Appeals may impose for the protection of neighboring uses or otherwise serving the purposes of this By-Law. Such conditions, safeguards or limitations may include, but are not limited to, the following:
- (a) Front, side and rear yards greater than the minimum required by this By-Law; screening buffers or planting strips, fences or walls as specified by the Zoning Board of Appeals;
 - (b) Limitations upon the size, number of occupants, method and time of operation, time duration of the permit, or extent of facilities;
 - (c) Regulation of number and location of driveways, or other traffic features; and off-street parking or loading, or other special features beyond the minimum required by this By-Law.

Any conditions, safeguards or limitations shall be imposed in writing and shall be made a part of the building permit.

6.3 - Special Permit Uses

- (a) Gravel, sod, loam, stone or earth removal, processing or storage except such removal and excavation as may be required to construct a permitted structure;
- (b) Commercial saw mills;
- (c) Pallet shops;
- (d) Any retail sales operation or store;
- (e) Construction contractor's office, storage area or machinery yard;
- (f) Motel, hotel, inn or boarding house, or bed and breakfast;
- (g) Structure with more than one dwelling unit; any structure of more than 2-1/2 stories or 35 feet, excepting silos, steeples;
- (h) Commercial dog kennel;
- (i) Airfields, airports, landing strips;
- (j) Mobile home, as regulated in Section 9 of this By-Law.
- (k) Nursing or convalescent home;
- (l) Veterinary hospital;
- (m) Ski tow;
- (n) Private proprietary schools;
- (o) Auto repair shop;
- (p) Light industrial uses;
- (q) Auto salvage yard; and
- (r) A solid waste disposal facility to serve Northern Berkshire Solid Waste Management District only, provided it is designed, constructed and operated in accordance with all applicable statutes, regulations and guidelines.

SECTION 7 - Prohibited Uses

- 7.1 - The following uses are prohibited in the town:
- 7.2 - Junk Yards, Heavy industrial uses that produce noxious or offensive gas, smoke, sewage, refuse, noise, vibration, extreme danger of fire or explosion or excessive vehicle traffic, and do not meet existing state codes and standards.
- 7.3 - Pipe lines 6" or larger for water, gas, oil, steam, sewage, drainage, and similar use laid above existing established grade.
- 7.4 - Signs that make noise, flash, or move. Signs painted directed to exterior surface of a building. The total square footage of all signs on each business shall not exceed 60 square feet. Each individual sign shall not be larger than 30 square feet.

- 7.5 - Collection, treatment, storage, burial, incineration or disposal of radioactive waste within the boundaries of the Town of Windsor. Such wastes shall include, but not be limited to wastes classified as low-level radioactive waste.
- 7.6 - Landfills, except as permitted by Section 6.3(r).

SECTION 8 - Intensity Regulations

- 8.1 - Any building used for dwelling and commercial purposes, and any building or structure housing a principal permitted use, shall be so located on a lot as to meet the following requirements:
- 8.2 - The lot area shall not be less than 3 acres.
- 8.3 - Frontage for any such lot shall be not less than 250 feet on a public way or a way approved under the provisions of the Subdivision Control Law.
- 8.4 - Minimum front setback shall be 35 feet, side yard 50 feet, and rear yard 50 feet. Front setback is to be measured from the street line where a plan of the way is on file with the Registry of Deeds or in the absence of such plan or in the absence of physical evidence showing the established layout of the way, from a line 25 feet from and parallel with the center line of the travelled way.
- 8.5 - No lot, nor the building or structure thereon, shall be changed in size so as to violate lot area, frontage or yard requirements of this section.
- 8.6 - An accessory building or structure shall be situated no closer to a lot line and street line than the minimum distance required for a principal building.
- 8.7 - A building with more than one dwelling unit shall be located on a lot of sufficient size so as to provide a minimum of 3 acres of land for each dwelling unit.

SECTION 9 - Mobile Structures, Homes and Trailers

- 9.1 - No mobile home shall be parked placed or installed within the limit of the town, except as provided by Chapter 40A, Section 3 or with a special permit issued by the Board of Appeals pursuant to Chapter 40A of the General Laws and only upon the following conditions:

- 9.2 - Such permit shall not exceed six months, and may be renewed by the Board of Appeals after a public hearing and issuance of a special permit for additional intervals of up to six months each.
- 9.3 - The Board of Health has approved the sanitary sewer disposal system.
- 9.4 - The Board of Appeals has reasonable assurances from the owner of the land and mobile home that the contemplated use will be terminated upon the happening of some event, as for example, completion or construction of a house or other construction.
- 9.5 - Travel trailers registered for travel on the public way may be parked on property of another within the limits of the Town for period not to exceed 60 days in one calendar year. Said travel trailer, if occupied, must have self-contained sewage storage capacity or adequate sanitary facilities provided.
- 9.6 - A resident of the Town of Windsor may store a travel trailer whether or not registered in his name on his premises when not in use.

SECTION 10 - Administration

- 10.1 - The provisions of this By-Law and any amendments thereto shall be enforced by the Board of Selectmen through the Inspector of Buildings. The Board of Selectmen shall appoint the Inspector of Buildings, who may be a member of the Board of Selectmen, for a period of one year or until a successor is appointed.

The Inspector of Buildings shall approve no application for permits required under this By-Law for building or structure of any kind for which plans and specifications and intended use are not in all ways in conformity with this By-Law. He shall have full authority to prosecute in any court or proper jurisdiction, any action, suit or proceedings for the enforcement of this By-Law.
- 10.2 - No building site preparation or building site work, except a percolation test in accordance with 310 CMR 15.00 (State Sanitary Code), shall be undertaken on any lot until the Inspector of Buildings has determined whether a Request for Determination under 310 CMR 10.00 (Wetlands Regulations) should be filed for the area of the proposed work. No construction on a building or structure shall be commenced, or building or structure moved, altered or changed until a building permit for the proposed construction, moving, alteration or change shall be properly applied for and granted, except that permits shall not be required for repair or alteration which does not alter the exterior shape or dimensions of a building and which does not change the use of a building.

- 10.3 - No building permit shall be granted for the construction, alteration, or relocation of any building or structure or for a new or altered use of land in violation of this By-law. Whenever any building permit is refused the reason therefore shall be clearly stated in writing.
- 10.4 - An application for a building permit shall be made by the landowner or his agent in the name(s) of the landowner in writing, on a form approved by the Board of Selectmen and shall be accompanied by three copies of a site plan, drawn to approximate scale with dimensions shown, showing abutters from the most recent assessors' maps, the size and shape of the lot, the names of the landowners of record, and the location of existing streets and buildings or structures, the location and size of the septic tank and drainage field, and of the proposed buildings, structures or additions thereto. Complete buildings and site plans shall be required for commercial developments, buildings and structures, the cost of which will exceed \$20,000 except buildings and structures designed for a single dwelling unit or for accessory use with a single dwelling unit. The Inspector of Buildings shall send one copy of the plot plan to the Town Assessor.
- 10.5 - A building permit shall become void unless construction, alteration or relocation is commenced within six months of date of issue and completed within three years of the date of issue, unless such time shall have been extended by the Inspector of Buildings in writing. A condition of such extension of the three year period may be by payment of an additional fee where the Inspector of Buildings is of the opinion that additional on site inspections will be required by the Inspector of Buildings or other Town Officials.
- 10.6 - A record of applications herein referred to, and the action taken thereon shall be kept on file in the Town Offices.
- 10.7 - The Inspector of Buildings shall issue the building permit only after he has viewed the premises and determined that the contemplated use, change, construction or alteration would not be in violation of the Windsor By-laws. After issuance of the building permit, the Inspector of Buildings may make inspections while the work is in progress to ascertain that there is no violation of the said By-laws as a result of any change or deviation from that for which their permit was originally granted, and occupancy by the owner, his agents, servants, tenants, leasees or assigns, the Inspector of Buildings may make a final inspection to determine if the completed construction alterations or change in use conforms to the permit and is not in violation of the said By-laws.

- 10.8 - The fee required for a building permit and fee for the extension of time within the construction is to be completed under the terms of the building permit shall be that established by the Selectmen.
- 10.9 - Any person, officer, official or board aggrieved by reason of his inability to obtain a permit, or by any order or decision of the Inspector of Buildings shall file his written appeal with the Town Clerk of Windsor together with an appeal fee as established by the Board of Selectmen not later than 30 days after the order or decision causing the aggrievance or the refusal to issue such permit.

SECTION 11 - Occupancy Permits

- 11.1 - No building or structure hereafter erected, altered or relocated shall be used, and no change shall be made of any buildings or structure or of any premises and not water shall be impounded behind any dam designed to impound more than three million gallons of water unless an occupancy permit has been granted by the Inspector of Buildings to the owner or occupancy of such premises, building or structure. Such permit shall not be granted unless the proposed use of the land or building complies in all respects with this By-Law, and no use shall be made of such land or building or structure except the use or uses authorized by such occupancy permit.

SECTION 12 - Violations and Penalty

- 12.1 - Violation shall be determined by the Inspector of Buildings by an investigation of the fact and inspection of the premises after which he shall give notice thereof in writing to the owner or to his duly authorized agent and to the occupancy of the premises, and shall order that any use of any premises contrary to the provisions of this By-Law shall immediately cease. Each day of violation after such written notice, will be considered a separate offense punishable by a maximum fine of \$20 per day. If, after such notice, the premises continue to be used in a manner contrary to the provisions of this By-Law or if any such owner or occupancy shall fail to obey any lawful order of the Inspector of Buildings in respect to any violation or use contrary to the provisions of this By-Law, the Inspector of Buildings shall institute appropriate legal proceedings to enforce the provisions of this By-Law or to restrain by injunction any violation thereof, or both.

- 12.2 - If the officer or board charged with enforcement of zoning ordinances or by-laws is requested in writing to enforce such ordinances or by-laws against any person allegedly in violation of the same and such officer or board declines to act, he shall notify, in writing, the party requesting such enforcement of any action or refusal to act and the reasons therefor, with fourteen days of receipt of such request.

SECTION 13 - Board of Appeals

- 13.1 - There shall be a Board of Appeals of five (5) members and two (2) associate members who shall be residents of the Town. The Selectmen shall appoint members and associate members as provided in Chapter 40A of the General Laws. The Board of Appeals shall act on all matters within its jurisdiction under this By-Law as provided in Chapter 40A of the General Laws, and shall be subject always to the rule that it shall give due consideration to promoting the public health, safety, convenience, and general welfare to the Town and conserving property values, and that it shall permit no building or use injurious, noxious, offensive or detrimental to a neighborhood, and that it shall prescribe appropriate safeguards and conditions in each case, and in general that it shall act consistently with the purposes set out in Section 1 of this By-Law.

Annually, the Board shall elect a chairman from its number, and a clerk. The Chairman of the Board or Acting Chairman may designate an associate member to sit on the Board in case of absence, inability to act, or conflict of interest on the part of any member including the Chairman, or in the event of a vacancy on the Board, until said vacancy is filled.

- 13.2 - The Board of Appeals shall adopt rules, not inconsistent with the provisions of Chapter 40A of the General Laws or the zoning by-laws of the Town of Windsor for the conduct of the Board's business and for the purposes of Chapter 40A and shall file a copy of the same with the Town Clerk.

SECTION 14 - Special Permits

- 14.1 - An application for a special permit shall be made by the landowner or his agent in the name(s) of the landowner, in writing, on a form approved by the Board of Appeals. The application must be filed with the Board of Appeals and a copy with the Town Clerk and the Inspector of Buildings. The effective date of filing shall be the date the application is filed with the Town Clerk.

- 14.2 - The Inspector of Buildings shall review all applications for a special permit and shall report to the Board of Appeals within 30 days after the effective date of filing of an application. The Board of Appeals may submit an application for a special permit so other municipal boards or commissions for review and comment. If such other boards and commissions do not comment in writing to the Board of Appeals within 30 days after such submission their approval of said application shall be deemed granted.
- 14.3 - Special permits shall be issued only after a public hearing, notice of which shall be given in accordance with General Laws, c.40A, Section 11, which hearing shall be conducted in accordance with General Laws, c. 40A, Section 9.
- 14.4 - The Board of Appeals shall require a site plan or sketch be submitted with any request for a permit under Section 6.0 in a form acceptable to the Board of Appeals.
- The plan shall indicate all property boundaries, use and ownership of adjacent land and location of buildings thereon within 200 feet of the property lines, driveways, driveway openings, parking and loading spaces, service areas, scope of operations, and all facilities for screening, surfacing, lighting, signs, sewage, refuse disposal and other waste disposal, drainage, dust, erosion control and landscaping.
- The Board of Appeals may modify any requirement of this section and may, if the plan complies with the purposes and specifications of this by-law, approve the same with or without conditions or if it does not comply with the purposes and specifications of this by-law, the plan can be disapproved or approved with conditions which will bring about compliance.
- 14.5 - Construction or operations under a special permit shall conform to any subsequent amendment of the Windsor Zoning By-Laws unless the use or construction is commenced within a period of not less than six (6) months after the issuance of the permit and in cases involving construction, unless such construction is continued through to completion as continuously and as expeditiously as reasonable.
- A special permit shall lapse two (2) years from the date the permit is granted if the rights authorized in the permit are not exercised.
- 14.6 - Uses, whether or not on the same parcel as activities permitted by right, accessory to such activities, which are necessary in connection with scientific research, or scientific development

or related production, may be permitted by special permit provided the Board of Appeals finds that the proposed accessory use does not substantially derogate from the public good.

SECTION 15 - Variances

- 15.1 - The Board of Appeals shall have the power to authorize upon appeal, or upon petition in cases where a particular use is not otherwise permitted, with respect to a particular parcel of land or to an existing building thereon, a variance from the terms of this By-law where, owing to circumstances relating to the soil conditions, shape or topography of such land or structures, but not affecting generally the zoning district in which it is located, a literal enforcement of the provisions of this Bylaw would involve substantial hardship, financial or otherwise, to the petitioner or appellant, and that desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of this Bylaw, but not otherwise. The Board may authorize a use or activity variance. In exercising the powers of this paragraph, the Board may impose limitations both of time and of use and a continuation of the use permitted may be conditioned upon compliance with regulations to be made and amended from time to time thereafter.
- 15.2 - An applicant or petitioner filing for a variance shall at the time of his filing an application with the Board of Appeals submit in triplicate a copy of the plot plan together with a sketch of the building or structure or use proposed drawn to scale on a topographical map and showing all relevant data regarding the proposed use, e.g., all existing and proposed buildings, structures, parking areas, driveway openings, driveways, landscape features (walks, planted areas, trees, etc.), and drainage provisions. The Board of Appeals shall transmit one copy to the Windsor Planning Board with a copy of the notice of hearing. The Planning Board shall forward its recommendations to the Board of Appeals no later than the date of the hearing on the applicant's petition.

SECTION 16 - Amendment

- 16.1 - This By-Law may from time to time be amended as provided by Massachusetts General Laws, Chapter 40A as amended.

SECTION 17 - Validity

- 17.1 - Where this by-law imposes a greater restriction upon the use, of a structure or the use of premises than is imposed by other

by-laws, the provisions of this by-law shall control. The invalidity of any section or provision of this by-law shall not invalidate any other section nor provision thereof.

SECTION 18 - Definitions

- 18.1 - For the purpose of this By-Law, the terms and words are defined as follows:
- 18.2 - Accessory Building - a building or structure which is customarily incidental to and located on the same lot with the building to which it is an accessory and which does not alter the character of the premises.
- 18.3 - Accessory Use - A use of a building, structure or land which is customarily incident to and located on the same lot with the use or building to which it is accessory and which does not alter the character of the premises when located not impair the neighborhood.
- 18.4 - Acting Chairman - Member of the Board of Appeals, who in the absence of the Chairman is elected as Chairman for a hearing on a particular matter by the members of the Board of Appeals in attendance.
- 18.5 - An independent structure having a roof supported by columns or walls, resting on its own foundations, and designed for the shelter, housing or enclosure of persons, animals, chattels or property of any kind.
- 18.6 - Auto salvage yard - A business comprising the collection, dismantling, recycling and sale of motor vehicles and automotive parts and the timely removal of unsalvageable and unusable remnants.
- 18.7 - Building, Front of: The wall of a building most nearly parallel with the front of the lot on which it is situated.
- 18.8 - Building Lot: A building lot is that area of land described in an application for a building permit or an application to the Board of Appeals for a permit or a variance or otherwise defined as the area on which a building or structure is to be constructed or a certain use is to be carried on. A building lot shall not include any part of a public way or a private way which is relied upon to qualify the lot as to frontage or area under water more than six months per year.

- 18.9 - Commercial - Business enterprise which manufactures, harvests, sells items, or services, or processes a product.
- 18.10 - Construction Contractor - One who uses and stores heavy equipment and machinery on his premises.
- 18.11 - Dwelling - A building or portion thereof designed exclusively for residential occupancy, including single family, two family and multiple family structures, but not including motels, hotels, boarding houses, or mobile homes whether or not placed on or affixed to a foundation or structures solely for the transient or overnight occupancy.
- 18.12 - Dwelling Unit - One or more rooms providing complete living facilities for one family including equipment for cooking or provisions for same, and including room or rooms for living, sleeping, eating and sanitary facilities.
- 18.13 - Established Grade - The grade of the area surrounding the area of construction.
- 18.14 - Family - One or more persons occupying a single dwelling unit provided that if there be more than five persons, the majority must be related by blood marriage, or adoption, but further provided that domestic servants employed on the premises may be housed on the premises without being counted as a family or families.
- 18.15 - Hotel, Motel, Lodging or Inn - A building or portion thereof, or a group of buildings on a single lot, intended to be used for the temporary occupancy of three or more persons who are lodged, with or without meals.
- 18.16 - Junk Yards - The collection, accumulation and storage of scrap or discarded materials including, without limitation, one or more junked or inoperable motor vehicles or parts thereof unless permitted pursuant to Section 6.3 (g).
- 18.17 - Lot - One or more continuous parcels of land under a single ownership designated by the owner at the time of filing an application for a building permit as a tract to be used, developed or built upon as a unit.
- 18.18 - Lot Line - The line dividing two lots.
- 18.19 - Lot Frontage - The uninterrupted distance between side lot lines at the street line.

- 18.20 - Mobile Home - A movable or portable completely enclosed structure built on a chassis designed for occupancy as a dwelling without necessity of a permanent foundation.
- 18.21 - Set Back Lines - A line parallel to a lot line at a distance equal to the minimum yard requirement.
- 18.22 - Sign - Any structure, part of a structure or device used for the purpose of visual communication which identifies or calls attention to any premises, person, product, activity, business or use on a lot.
- 18.23 - Street - A public way or private way either shown on a plan approved in accordance with the Subdivision Control Law or otherwise qualifying a lot or frontage on a street under the Subdivision Control Law.
- 18.24 - Street Line - Boundary line, as established at Registry of Deeds, or public street and the adjoining property.
- 18.25 - Structure - Anything constructed or erected, including but not limited to underground pipelines and dams at a fixed location to give support, provide shelter or satisfy other purposes.
- 18.26 - Travel Trailers - A movable structure designed and intended for temporary living or recreation.

NOTE: The April 22, 1991 amendments to this by-law were approved by the Massachusetts Attorney General's Office on August 21, 1991.

RE4572

Personal Wireless Service Bylaw
Town of Windsor, MA

Section 19: Personal Wireless Service Facilities and Repeaters

19 Purposes:

19.1 The purpose of the Town of Windsor Personal Wireless Service Facilities, Towers and Repeaters Bylaw are to:

19.1.1 Preserve the character and appearance of the Town while simultaneously allowing Adequate Personal Wireless Services to be developed.

19.1.2 Protect the scenic, historic, environmental, and natural or man-made resources of the community.

19.1.3 Provide standards and requirements for regulation, placement, construction, monitoring, design, modification and removal of Personal Wireless Service Facilities and Repeaters.

19.1.4 Provide a procedural basis for action within a reasonable period of time for requests for authorization to place, construct, operate or modify Personal Wireless Service Facilities and Repeaters.

19.1.5 Preserve property values, locate Towers so as to minimize negative impacts on the general safety, welfare and quality of life in the community, such as, but not limited to, visual blight, attractive nuisance, noise and falling objects.

19.1.6 Require owners of the Personal Wireless Service Facilities, Towers, and Repeaters to configure them so as to minimize and mitigate the adverse visual impact of the Facilities, Towers and Repeaters, including clustering, co-locating, and camouflaging where appropriate.

19.2 Consistency with Federal Law:

These regulations are intended to be consistent with The Telecommunications Act of 1996 - in that a) They do not prohibit or have the effect of prohibiting the provision of Personal Wireless Services. b) They are not intended to be used to unreasonably discriminate among providers of functionally equivalent Services. c) They do not regulate Personal Wireless Services on the basis of the environmental effects of radio frequency emissions to the extent that the regulated Services and Facilities comply with the FCC's regulations concerning such emissions.

19.3 Definitions:

ACT - The Telecommunications Act of 1996.

ADEQUATE COVERAGE - For traditional cellular service or PCS service, coverage is considered to be "adequate" within that area surrounding a Base Station where the predicted or measured median field strength of the transmitted signal is greater than -90dBm. It is acceptable for there to be holes within the area of Adequate Coverage where the signal is less than -90 dBm, as long as the signal regains its strength to greater than -90 dBm further away from the Base Station. For the limited purpose of determining whether the use of a Repeater is necessary or desirable, there shall be deemed not to be adequate Coverage within said holes. The outer

boundary of the area of Adequate Coverage, however, is that location past which the signal does not regain strength of greater than -90 dBm. For services other than traditional cellular service or PCS service, ZBA will determine what is adequate coverage from time to time based on the evidence presented, which may include but shall not be limited to then-current industry standards and government regulatory standards or materials.

ADEQUATE CAPACITY - Capacity is considered to be "adequate" if the grade of service is p.05 or better for at least 50% of the days in a preceding month, prior to the date of Application, as measured using direct traffic measurement of the telecommunications facility in question, where the call blocking is due to frequency contention at the antenna(s).

ANTENNA - A device which is attached to a Tower, or other structure for transmitting and receiving electromagnetic waves.

BASE STATION - The primary sending and receiving site in a wireless telecommunications network.

CHANNEL - The segment of the radiation spectrum from an Antenna, which carries one signal. An Antenna may radiate on many Channels simultaneously.

COMMUNICATION EQUIPMENT SHELTER - A structure located at a Base Station designed principally to enclose equipment used in connection with Personal Wireless Service transmissions.

COVERAGE AREA - An area extending radially from the base station a distance equal to 75% of the maximum distance that the signal will maintain a strength of -95 dbm.

dbm - Unit of measure of the power level of an electromagnetic signal expressed in decibels referenced by 1 milliwatt.

EMF - Electromagnetic Frequency Radiation.

FACILITY SITE - A property, or any part thereof, which is owned or leased by one or more Personal Wireless Service Providers and upon which one or more Personal Wireless Service Facilities and required landscaping are located.

FACILITY/TOWER SPECIAL PERMIT (F/TSP) - The Special Permit required to be obtained in order to install any Tower or Personal Wireless Service Facility or for any Major Modification of an existing Facility.

FCC - Federal Communications Commission. The federal agency responsible for regulating telecommunications in the United States.

FCC 96-326 - A Report and Order which sets new national standards for emissions of Radio-Frequency emissions from FCC - regulated transmitters. This Report and Order now contained with title 47 Regulations, Section 1 & 1.1307.

GRADE OF SERVICE - A measure of the percentage of calls, which are able to connect to the Base Station, during the busiest hour of the day. Grade of Service is expressed as a number, such as p.05 - which means that 95% of callers will connect on their first try. A lower number (p.04) indicates a better Grade of Service.

MAJOR MODIFICATION OF AN EXISTING FACILITY - Any change or proposed change in power input or output, number of Antenna, change in Antenna type or model, repositioning of Antenna(s), change in number of Channels per Antenna above the maximum number approved under the existing Special Permit. Also any increase, or proposed increase in dimensions of an existing and permitted Tower or other structure designed to support Personal Wireless Service transmission, receiving and/or relaying antennas and/or equipment.

MONITORING - The measurement, by the use of instruments in the field, of the radiation from a Site as a whole, or from individual Personal Wireless Service Facilities, Towers, Antennas or Repeaters.

MAJOR MODIFICATION OF AN EXISTING REPEATER - Any removal of or change in location of any Repeater(s) from the Repeater Site(s) for which a Repeater Special Permit has been received.

MONITORING PROTOCOL - The testing protocol, initially the Cobbs Protocol, which is to be used to monitor the emissions from existing and new Personal Wireless Service Facilities and Repeaters upon the adoption of this Article. The Special Permit Granting Authority (ZBA) may, as the technology changes, require, by written regulation, the use of other testing protocols. A copy of the Monitoring Protocol shall be on file with the Town Clerk.

MONOPOLE - A single self-supporting vertical pole with below grade foundations.

PERSONAL WIRELESS SERVICES - Commercial Mobile Services, unlicensed wireless service, and common carrier wireless exchange access services. These services include cellular services, personal communication services (PCS), Specialized Mobile Radio Services, and Paging Services.

PERSONAL WIRELESS SERVICE FACILITY - All equipment (excluding any Repeaters) with which a Personal Wireless Service Provider broadcasts and receives the radio-frequency waves which carry their services and all locations of said equipment or any part thereof. This Facility may be sited on one or more Towers or structure(s) owned and permitted by another owner or entity.

PERSONAL WIRELESS SERVICES PROVIDER - An entity, licensed by the FCC to provide Personal Wireless Services to individuals or institutions.

RADIATION PROPAGATION STUDIES OR RADIAL PLOTS - Computer-generated estimates of the radiation emanating from Antenna or Repeaters sited on a specific Tower or structure. The height above sea level, power input and output, frequency output, type of antenna, antenna gain, topography of the site and its surroundings are all taken into account to create these simulations.

REPEATER - A small receiver/relay transmitter of not more than 20 watts output designed to provide service to areas which are not able to receive Adequate Coverage directly from the Base Station.

REPEATER SITE - The location within the Town of Windsor leased by one or more Personal Wireless Service Providers and upon which one or more Repeater (s) and required camouflage or screening is located.

REPEATER SPECIAL PERMIT (RSP) - The Special Permit required to be obtained in order to install any Repeater, or for Major Modification Of An Existing Repeater within the Town of Windsor.

TELEPORT - A multi-user commercial facility utilizing satellite dishes of greater than 2.0 meters in diameter designed to uplink to communications satellites for transmission of data.

TOWER - A monopole, lattice, or other structure that is designed to support Personal Wireless Services transmission, receiving and/or relaying antennas and/or equipment.

19.4 Scope

19.4.1 This Article specifically exempts the following wireless telecommunications facilities: police, fire, ambulance and other emergency dispatch; citizen band radio.

Amateur radio towers used in accordance with the terms of any amateur radio service license issued by the FCC, are exempt, provided that (1) the tower is not used for commercial purpose; and (2) the tower shall be removed upon loss or termination of said FCC license. No Personal Wireless Service Facility or Repeater shall be considered exempt from this Article for any reason, whether or not said Facility or Repeater is proposed to share a Tower or other structure with such exempt uses.

19.4.2 There shall be no Teleport(s) or microwave reflector dish Antenna(s) within the Town of Windsor.

19.4.3 Communication relay structures, TV broadcast systems, radio broadcast systems and other similar systems are not permitted under this telecommunications tower bylaw.

19.5 Requirement of Special Permit

19.5.1 No Personal Wireless Service Facility, Tower or Repeater shall be erected, constructed, or installed or undergo Major Modification without first obtaining a Special Permit from the ZBA in accordance with the requirements set forth herein. One or both of two kinds of Special Permits are required a) A Facility/Tower Special Permit (herewith F/TSP) for new facility/Tower construction (or Major Modification Of An Existing Facility); b) A Repeater Special Permit (hereforth RSP) for Repeater(s) to be mounted on an existing, or newly permitted Tower or structure (or Major Modification Of An Existing Repeater).

19.5.2 All Applications to construct a tower must provide space on top of the tower for fire, police, and any and all emergency services to install communication equipment at fair market value. Additionally, space shall be provided within the base station for a shelter for communications equipment suitable to such services, at fair market value. Access to the station shall be provided to fire, police and emergency services to maintain their equipment through the use of a "key safe" installed at the primary point of entry into the Base Station.

19.6 Application Requirements

19.6.1 For Personal Wireless Service Facilities or Towers a F/TSP is required. Applicants must submit all information in 19.6.2. For all Repeaters proposed for installation, a RSP is required. A RSP may be applied for by an Applicant who is currently applying for a F/TSP under this Article, or by an Applicant who has previously received a F/TSP under this Article, or by an entity that is providing Personal Wireless Services to the Town of Windsor from a base station outside the Town. Applicant must submit all information required in 19.6.3. If Applicant is applying for both Permits, they shall be submitted and examined concurrently.

19.6.2 Application Requirements for Facilities or Towers.

19.6.2.1 General - The application shall include the following information:

19.6.2.1.1 The exact legal name address or principal place of business and phone number of the Applicant. If any Applicant is not a natural person, it shall also give the state under which it was created or organized.

19.6.2.1.2 The name, title, address and phone numbers of the person to whom correspondence or communications in regard to the application are to be sent. Notice orders and other papers may be served upon the person so named, and such service shall be deemed to be service upon the Applicant.

19.6.2.1.3 Name, address, phone number and written consent to apply for this permit. From the owner of the property that the proposed Personal Wireless Service Facility and/or Tower shall be located, and the owner(s) of the tower or structure on which the proposed Personal Wireless Service Facility shall be located.

19.6.2.2 Engineering Requirements - Reports prepared by one or more professional engineers, licensed to practice in the State of Massachusetts that shall include the following:

19.6.2.2.1 Copies of all submittals and showings pertaining to: FCC Licensing; Environmental Impact Statements; Federal Aviation Administration Notice of Construction or Alteration; Aeronautical Studies; and all data, assumptions and calculations relating to service coverage and power levels regardless of whether categorical exemption from Routine Environmental Evaluation under the FCC rules is claimed.

19.6.2.2.2. Copies of all information submitted in compliance with requirements of Massachusetts Department of Public Health, 105 CMR 122 fixed facilities that generate electromagnetic fields in the frequency range of 300 kHz to 100 GHz and microwave ovens. Or any revisions thereof as the Department of Public Health may, by written notice, create.

19.6.2.3 Adequate Coverage, Adequate Capacity and Justification of Need for F/TSP.

19.6.2.3.1 Applicant shall provide written documentation of all Facility Site(s) in Windsor, and any sites in abutting towns located within five miles of any boundary of the Town of Windsor, in which it has a legal or equitable interest, whether by ownership, leasehold or otherwise. For each such Facility Site, it shall demonstrate with written documentation that this Facility Site is not already providing, or does not have the potential by adjusting the Site, to provide Adequate Coverage and/or Adequate Capacity to the Town of Windsor. The documentation shall include, for each Facility Site listed:

19.6.2.3.1.1 The exact Tower location (in Longitude and Latitude, to degrees, minutes, seconds), ground elevation above sea level at the Tower location, height of Tower or structure, and height of proposed antennas on tower or structure.

19.6.2.3.1.2 Type, manufacturer and model number of antennas and antenna gain.

19.6.2.3.1.3 Output frequency, number of channels, power input, and maximum Power output per channel.

19.6.2.3.1.4 Potential adjustments to these existing Facility Sites, including changes in Antenna type, orientation, gain, height or power output shall be specified.

19.6.2.3.1.5 Radial Plots form each of these Facility Sites, as they exist, and with adjustments as above, shall be provided as part of the Application.

19.6.2.3.2 Applicant shall demonstrate with written documentation that they have examined all existing Facility Sites located in Windsor and in any sites in abutting towns located within five miles of any boundary of the Town of Windsor in which the Applicant has no legal or equitable interest. Whether by ownership, leasehold, or otherwise to determine whether those existing Facility Sites can be used to provide Adequate Coverage and/or Adequate Capacity to the Town of Windsor. The documentation shall include, for each existing Facility Site examined:

19.6.2.3.2.1 The exact Tower location (in Longitude and Latitude, to degrees, minutes, seconds), ground elevation above sea level at the Tower location, height of Tower or structure, and height of proposed antennas on tower or structure.

19.6.2.3.2.2 Type, manufacturer and model number of antennas and antenna gain.

19.6.2.3.2.3 Output frequency, number of channels, power input, and maximum Power output per channel.

Radial Plots from each of these existing Facility Sites, configured as documented above, shall be provided as part of the Application.

19.6.2.3.3 Applicants shall demonstrate with written documentation that the fee, costs, or contractual provisions required by the owner(s) in order to share an existing wireless communication structure or to adapt an existing structure for use are unreasonable. Unreasonable cost would be equal to twice the cost of building a new structure.

19.6.2.3.4 Applicant shall demonstrate with written documentation that it has analyzed the feasibility of Repeaters in conjunction with all existing Facility Sites listed in compliance with 19.6.2.3.1 and 19.6.2.3.2 (above) to provide Adequate Coverage and/or Adequate Capacity to the Town of Windsor. Radial Plots of all Repeaters considered for use in conjunction with these Facility Sites shall be provided as part of the Application.

19.6.2.3.5 Applicant shall provide documentation from the FAA that the proposed facility is exempt from applicable regulations administered by the FAA.

19.6.2.4 The following engineering plans, prepared, stamped and signed by a Professional Engineer licensed to practice in Massachusetts. (Note: survey plans shall also be stamped and signed by a Professional Land Surveyor registered in Massachusetts.) Plans shall be on 24" X 36" sheets, on as many sheets as necessary, and at scales which are no smaller (i.e. no less precise) than listed below and in 19.6.2.4.1. Each plan sheet shall have a title block indicating a project title, sheet title, sheet numbers, date, revision dates, scale(s), and original seal and signature of the P.E. and other professionals who prepared the plan.

19.6.2.4.1 Proposed Site Plans: Proposed Facility Site layout, grading and utilities at a scale no smaller than 1" = 40' (1:480 or metric equivalent 1:500) showing the entire vicinity within 400' radius of the Tower site with topography drawn with a maximum of 2' (0.6 meter) contour interval and including:

19.6.2.4.1.1 Proposed Tower location and appurtenances, if any, and any accessory building (Communication Equipment Shelter or other). Indicate property boundaries and setback distances to the base(s) of the Tower and to the nearest corners of each of the appurtenant structures to those boundaries, and dimensions of all proposed improvements. The site plan shall include the location of all abutting properties within 1500' of the tower property and names of current owners of each.

19.6.2.4.1.2 Limits of areas where vegetation is to be cleared or altered and justification for any such clearing or alteration.

19.6.2.4.1.3 Plans for proposed access driveway or roadway and parking area at the Facility Site. Include grading, drainage and traveled width. Include a cross section of the access drive indicating the width depth of gravel, and paving or surface materials.

19.6.2.4.2 Proposed Tower and Appurtenances:

19.6.2.4.2.1 Plans, elevations, sections and details at appropriate scales but no smaller than 1" = 10'.

19.6.2.4.2.2 Two cross sections through proposed Tower drawn at right angles to each other, and showing the ground profile to at least 200 feet beyond the limit of clearing. Indicate proposed spot elevations at the base of the proposed Tower. Indicate the proposed height of tower above average grade at Tower Base. Indicate the maximum allowable structural height of the tower after addition of any modular sections. Show all proposed antennas, including their location on the tower.

19.6.2.4.2.3 Details of typical Tower foundation, including cross-sections and details. Show all ground attachments, specifications for anchor bolts and other anchoring hardware.

19.6.2.4.2.4 Detail proposed exterior finish and camouflage of the tower.

19.6.2.4.2.5 Indicate height of the Tower relative to the tops of the surrounding trees as they currently exist.

19.6.2.4.3 Proposed Communications Equipment Shelter:

19.6.2.4.3.1 Floor Plans, elevations and cross sections at a scale no less than $1/4" = 1'$ (1:48) of any proposed appurtenant structure.

19.6.2.4.3.2 Representative elevation views, indicating the roof, facades, doors and other exterior appearances and materials.

19.6.2.4.4 Proposed Equipment Plan:

19.6.2.4.4.1 Plans, elevations, sections and details at appropriate scales but no smaller than $1" = 10'$.

19.6.2.4.4.2 Number of Antennas and Repeaters (if any), as well as the exact locations of all Repeaters (if any) located on a map as well as by Degrees, minutes and seconds of Latitude and Longitude.

19.6.2.4.4.3 Mounting locations on Tower or structure, including height above ground.

19.6.2.4.4.4 Antenna type(s), manufacturer(s) and model number(s).

19.6.2.4.4.5 For each Antenna, the Antenna gain and Antenna radiation pattern.

19.6.2.4.4.6 Number of channels per Antenna, projected and maximum.

19.6.2.4.4.7 Power input to the Antenna(s).

19.6.2.4.4.8 Power output, in normal use and at maximum output for each Antenna and all Antennas as an aggregate.

19.6.2.4.4.9 Output frequency of the Transmitter(s).

19.6.2.5 Details of proposed method of financial surety as required in Section 19.13.

19.6.2.6 A written, irrevocable commitment valid for the duration of the existence of the Tower, to rent or lease Available Space for co-location on the Tower at fair-market prices and terms, without discrimination to other Personal Wireless Service Providers.

19.6.2.7 Within thirty days after filing an application for any new tower, or extension in height thereto, the applicant shall arrange to fly a three foot diameter brightly colored balloon at the proposed site, at the maximum height and location of the proposed installation, for four hours on two consecutive weekend days at different times between the hours of 9 AM and 5 PM. The balloon shall be of a red color that can be seen from every direction for a distance of at least one mile. Applicant shall be responsible for posting the date and location of the balloon(s) as a legal advertisement at least 14 days, but not more than 21 days

before the flights in at least two different issues of a newspaper with a general circulation in the Town of Windsor.

19.6.2.8 Written documentation from a provider of landline indicating adequate landline capacity for the proposed installation.

19.6.3 Application Requirements for RSP.

The use of Repeaters to assure Adequate Coverage or to fill holes within areas of otherwise Adequate Coverage, while minimizing the number of required Towers is permitted and encouraged. An Applicant who has received, and is in compliance with a current F/TSP under this Article, or an entity which is providing Personal Wireless Services to the Town of Windsor from a base station outside the Town, May apply for a RSP, Applicants for RSP shall provide the following information:

19.6.3.1 Exact location (in Longitude and Latitude, to degrees, minutes seconds) as well as by street address or pole number (if applicable);

19.6.3.2 ground elevations:

19.6.3.3 type, manufacturer and model number of proposed Repeater:

19.6.3.4 height of proposed Repeater above ground:

19.6.3.5 proposed output frequency:

19.6.3.6 proposed number of channels:

19.6.3.7 proposed power input:

19.6.3.8 proposed maximum power output per channel:

19.6.3.9 Radial Plots from any proposed Repeater(s), configured as documented above shall be provided as part of the Application:

19.6.3.10. Photo or drawing of proposed Repeater:

19.6.3.11 Name, address, phone number, and written consent to apply for this permit, of the owner of the property on which the proposed Repeater shall be located, and of the owner(s) of the Tower or structure on which the proposed Repeater shall be located:

19.6.3.12 Proposed Repeater Site layout, grading and utilities at a scale no smaller than 1" = 40' (1:480 or metric equivalent 1:500) showing the entire vicinity within a 1500' radius of the Repeater site with typography drawn with a minimum of 2" (0.6 meter) contour interval:

19.6.3.13 Proposed Repeater location and appurtenances, if any, and any accessory building (Communication Equipment Shelter or other). The site plan shall include the location of all abutting properties within 1500' of the tower property and names of current owners of each:

19.6.3.14 Limits of areas where vegetation is to be cleared or altered, and justification for any such clearing or alteration;

19.6.3.15 Plans of any proposed access driveway or roadway and parking area at the Repeater site. Include grading, drainage and traveled width. Include a cross section of the access drive indicating the width, depth of gravel and paving or surface materials.

19.6.3.16 Written documentation from a provider of landlines indicating adequate landline capacity for the proposed installation.

19.7 General Requirements for Issuance of F/TSP(s):

19.7.1 Provision of Service - no new facility or tower shall be permitted unless the Board finds that the Applicant cannot provide Adequate Coverage and Adequate Capacity from existing Facility Sites, either controlled by Applicant or on which Applicant could reasonably co-locate.

A Special Permit shall not be granted for a Tower to be built on speculation. If Applicant is not, itself, simultaneously installing a Personal Wireless Service Facility on the Tower, it shall provide a copy of its existing lease/contract with a Personal Wireless Service Provider. Said Provider shall provide all necessary data to comply with the terms of this Article, as part of Applicant's application for a F/TSP, or the Special Permit shall not be granted.

If primary coverage (greater than 50%) from proposed Personal Wireless Service facility were outside Windsor, then the permit may be denied.

Repeaters shall be required in areas deemed not to have Adequate Coverage within the Coverage Area.

19.7.2 Environmental Conditions:

19.7.2.1 In general, Towers and Personal Wireless Service Facilities shall be located so as to provide adequate coverage and Adequate Capacity with the least number of Towers and Antennas, which is technically and economically feasible.

19.7.2.2 In furtherance of the above, the following locations are ranked in order of preference:

- a) the use of Repeaters to provide Adequate Coverage without requiring new Tower(s).
- b) Shared use of existing Personal Wireless Service Facilities.
- c) The use of land distant from higher-density residential properties, where visual impact is minimized.

19.7.2.3 Those Towers that are necessary shall minimize, to the extent feasible, adverse visual impacts on the environment. The ZBA may impose reasonable conditions to ensure this result, including but not limited to, the right to determine the type of construction of a tower (either monopole or lattice), requiring the use of camouflage, painting, lighting, standards and screening or the mimicking of a tree or other appropriate object. Towers shall be sited off ridgelines, and where their visual impact is least detrimental to highly rated scenic areas. (See, for example, Massachusetts Landscape Inventory, MGL ch.131, sec. 39A: conducted by Massachusetts Dept. of Environmental Management, 1982.)

19.7.2.4 A vegetated buffer strip of undisturbed trees of at least 200' in depth (or less if determined by the ZBA to be sufficient). Shall be retained as close to the Tower as possible, but in all cases there shall be no clearing at a distance in excess of 25 feet square from the base of the Tower except where the access drive is located. The access drive shall be winding and well landscaped. The base of the facility shall not be visible from any public roadway. If a Tower is proposed for an area without mature forest growth, it shall be camouflaged as determined by the ZBA. This may include the requirement to plant a sufficient number of mature trees to adequately screen the base of the Tower and equipment shelters.

19.7.2.5 No Tower or Personal Wireless Service Facility with the exception of Repeaters shall be located within any of the following prohibited areas:

19.7.2.5.1 Massachusetts or federally - regulated wetland:

19.7.2.5.2 A Massachusetts Certified Vernal Pool:

19.7.2.5.3 The habitat of any State-listed Rare or Endangered Wildlife or Rare Plant Species:

19.7.2.5.4 Within 100 feet horizontally from any Massachusetts regulated wetland:

Within 200 feet horizontally of the Outer Riparian Zone of any river or perennial stream, as defined in the Wetlands Protection Act and Regulations:

19.7.2.5.6 With 500 feet horizontally from any Historic District or property listed or eligible to be listed on the state or federal Register of Historic Places, or site determined by the Massachusetts Historical Commission to be eligible for such listing:

19.7.2.5.7 Where the Facility would be visible from a Historic Site:

19.7.2.6 In addition to the above, Towers and Personal Wireless Service Facilities shall be located so as to minimize the following potential impacts:

19.7.2.6.1 Diminution of residential property values: Siting shall be in areas of as low population density as possible:

19.7.2.6.2 Unsafe structural conditions and attractive nuisance.

19.7.2.6.3 Excessive electromagnetic radiation: In case the Tower or Personal Wireless Service Facility is found in excess of the FCC guidelines.

19.7.3 Physical Plant

19.7.3.1 Fencing: The area around the Tower and Communication Equipment Shelter(s) shall be completely fenced for security within an area no greater than 25 feet square from the base of the Tower, and to a height of six feet, and gated. Use of razor wire is not permitted. Fencing shall be compatible with the scenic character of the Town and of abutting properties, and shall be approved by the ZBA.

19.7.3.2 Signs: There shall be no signs except the following. A sign no greater than two (2) square feet indicating the name of the Personal Wireless Service Facility's owner(s) and a 24 hour emergency telephone number shall be posted adjacent to the entry gate. In addition, "No Trespassing," or other warning signs, may be posted on the fence. All signs are subject to approval by the ZBA.

19.7.3.3 Communication Equipment Shelters and Accessory Buildings shall be designed to be architecturally similar and compatible with each other and with residential buildings on "The Street" in Windsor, and shall be no more than 12 feet high or more than 500 square feet. The building shall be used only for the housing of equipment related to this particular site.

19.7.3.4 The minimum distance from the base of the wireless communication structure to any property line or road or right-of-way shall be at least 2.0 times the height of the structure plus any attached wireless communication devices, to ensure an adequate fall zone.

19.7.3.5 New Towers shall not exceed the minimum height necessary as determined by the ZBA to provide Adequate Coverage from the Personal Wireless Service Facility(ies) proposed for use on the Tower, and shall in no event exceed 160 feet, or any lesser height which according to FAA regulations would require placement of warning lights for aircraft.

19.7.3.6 Towers shall be located at least two times their maximum structural height from any structure, excluding equipment shelter(s) to provide an adequate fall zone.

19.7.3.7 To the extent feasible, all network interconnections to and from the telecommunications site and all power to the site shall be installed underground. At the initial construction of the access road to the site, sufficient conduit shall be laid to accommodate the maximum possible number of Personal Wireless Service Providers likely to utilize the site to provide services to the Town of Windsor and surrounding areas.

19.7.3.8 Unless required by the Federal Aviation Administration, no night lighting of Towers, or the Personal Wireless Service Facility, is permitted, except for manually operated emergency lights for use only when operating personnel are on site.

19.7.3.9 No Tower or Personal Wireless Service Facility that would be classified as a hazard to air navigation, as defined by the Federal Aviation regulations (Title 14 CFR) is permitted.

19.7.3.10 Tower(s) must be of a type, which will maximize potential sharing. Applicant must demonstrate the future utility of such structure for expansion of service to Applicant and to other future Applicants.

19.7.3.11 Commercial advertising shall not be allowed on any Antenna, Tower, or Accessory Building or Communication Equipment Shelter.

19.7.3.12 All towers shall be self-supporting. There shall be no guide wires.

19.7.3.13 All Network inter-connections shall be via landline. Applicant shall demonstrate availability of adequate landline capacity as part of their application.

19.7.3.14 Ground-mounted equipment for personal wireless service facilities shall not generate noise in excess of 50db at the property line.

19.7.3.15 Roof-mounted or side mounted equipment for personal wireless service facilities shall not generate noise in excess of 50 db at ground level at the base of the building closest to the antenna.

19.8 General Requirements for Repeater Special Permits:

19.8.1 No Repeater shall be located closer than 100 feet to an existing Dwelling Unit or less than 25 feet above ground.

19.8.2 The ZBA may require the use of screening, painting, or camouflage to reduce the visual impact of Repeaters.

19.8.3 Repeaters shall be located so as to have the least impact on the views of the residents of the Town of Windsor.

19.9 Evaluation by Independent Consultants:

19.9.1 Upon submission of an Application for any Special Permit under this Article, the Applicant shall pay a review fee determined by the ZBA, and submit an affidavit stating that the Applicant will pay all costs incurred in excess of this review fee. The fee plus additional costs shall consist of all reasonable costs to be incurred by the ZBA for the employment of independent consultants. The ZBA shall select the Independent Consultant(s) to assist in the review of the Application. These Consultants shall each be qualified professionals with a record of service to municipalities in one of the following fields, as appropriate: 1) telecommunications engineering, 2) structural engineering, 3) monitoring of electromagnetic fields, and 4) other relevant fields of experience as determined by the ZBA.

19.9.2 Upon submission of a complete Application for any Special Permit(s) under this Article, the ZBA shall provide its Independent Consultant(s) with the full Application(s) for their analysis and review.

19.9.3 Applicants for any Special Permit(s) under this Article shall grant permission for the Town's Independent Consultant(s), to conduct any necessary site visit(s), or obtain permission from the owner(s) of the proposed site(s) for any site visit(s).

19.10 Approval Criteria:

19.10.1 In acting on any Special Permit Application, the ZBA shall proceed in accordance with the procedures and time lines established for Special Permits in state law, this by-law and other applicable law.

19.10.2 In addition to the findings required by the Zoning Bylaw for special permits generally, the ZBA shall make the following findings before granting the Special Permit:

19.10.2.1 Applicant is not already providing Adequate Coverage and/or Adequate Capacity within the Coverage Area.

19.10.2.2 An applicant already providing service in the Town of Windsor must be in full compliance with the terms of their existing F/TSP(s) or RSP(s).

19.10.2.3 Applicant has agreed to rent or lease Available Space on the Tower, under the terms of a fair-market lease, without discrimination to other Personal Wireless Service Providers.

19.10.2.4 Applicant is not able to use Existing Tower/Facility Sites in or around the Town of Windsor, either with or without the use of Repeaters, to provide Adequate Coverage and/or Adequate Capacity within the Coverage Area.

19.10.2.5 Proposed Personal Wireless Service Facility/Tower or Repeater will not be likely to have an undue adverse impact on historic resources, scenic views, residential property values, natural or man-made resources.

19.10.2.6 Applicant has agreed to implement all reasonable measures to mitigate the potential adverse impacts of the towers and Facilities.

19.10.2.7 Emergency access to the site via the planned drive or roadway is adequate; the ZBA shall request and consider input from the Chiefs (or the designees) of Fire, Police and other Emergency services regarding this issue.

19.10.2.8 The proposal shall comply with FCC 96-326 and any and all other applicable FCC regulations, regarding emissions of electromagnetic radiation and that the required Monitoring program is in place and shall be paid for by the Applicant.

19.10.2.9 The General Requirements (Section 19.7 and/or 19.8) have been met.

19.10.2.10 No access road can be within 100 feet of any property line.

19.10.3 Any decision by the ZBA to deny an Application for a Special Permit under this Article shall be in conformance with Sec. 332 [47 U.S.C. 332] (7)(B)(ii)(iii) of the Act. In that it shall be in writing and supported by substantial evidence contained in a written record.

19.11 Monitoring and Evaluation of Compliance:

19.11.1 Initial Monitoring: It shall be a condition of any Special Permit granted under this Bylaw that, in order to determine the Tower and Facility's or Repeater's radio frequency emissions and their compliance with FCC regulations, the Applicant shall, after the granting of a Special Permit and within 30 days of the

date that Applicant's Personal Wireless Service Facility(ies) or Repeater(s) begin(s) transmission, pay for an Independent Consultant, hired by the Town, to Monitor the levels of EMF radiation, around the proposed Facility and/or Repeater site(s). The Independent Consultant shall use the Monitoring Protocol. A report of the Monitoring results shall be prepared by the Independent Consultant and submitted to the Planning Board, Board of Selectman, the Board of Health, the Zoning Board of Appeals, and the Town Clerk.

19.11.2 Ongoing Monitoring: It shall be a condition of any Special Permit granted under this Bylaw that. In order to determine ongoing compliance with FCC regulation, after transmission begins the owner(s) of any Personal Wireless Service Facility(s) or Repeater(s) located on any Facility or Repeater Site. Shall pay for an Independent Consultant hired by the Town to conduct annual testing and Monitoring of EMF radiation emitted from said Site, and to report results of said Monitoring as follows:

19.11.2.1 There shall be annual Monitoring of emissions by the Independent Consultant using actual field measurement of radiation, utilizing the Monitoring Protocol. This Monitoring shall measure levels of EMF radiation from the Facility Site's primary Antennas as well as from Repeater Site(s) (if any). A report of the Monitoring results shall be prepared by the Independent Consultant and submitted to the Planning Board, the Board of Selectmen, the Board of Health, The Zoning Board of Appeals and the Town Clerk.

19.11.2.2 Any Major Modification of Existing Facility, or the Activation of any additional permitted channels, or the re-activation of any facility which has been idle for six months shall be cause for new Initial Monitoring in accordance with 19.11.1.

19.11.2.3 Excessive Emissions: Should the Monitoring of the Facility or Repeater Site reveal that the Site exceeds the FCC 96-326 standard, or any other applicable FCC standard, then the owner(s) of all Facilities utilizing that Site shall be so notified. The owner(s) shall submit to the ZBA, Board of Selectman, Board of Health and the Town Clerk a plan for the reduction of emissions to a level that complies with the FCC 96-326 standard and any and all other applicable FCC regulations within 10 business days of notification of noncompliance. That plan shall reduce emissions to the applicable FCC standard within 15 days of initial notification of non-compliance. Failure to accomplish this reduction of emission within 15 days of initial notification of non-compliance shall be a violation of the Special Permit and subject to penalties and fines. Such fines shall be payable by the owner(s) of the Personal Wireless Service Facilities with Antennas on the Facility Site until compliance is achieved.

19.11.2.4 Structural Inspection: It shall be a condition of the Special Permit that Tower owner(s) shall pay for an Independent Consultant (a licensed professional structural engineer), hired by the Town, to conduct inspections of the Tower's structural integrity and safety. Towers shall be inspected every five years. The Independent Consultant shall prepare a report of the inspection results.

The Consultant's report shall be submitted to the Board of Selectmen, the Planning Board, the Board of Health, the Building Inspector, the Zoning Board Of Appeals, and the Town Clerk. Any Major Modification of Existing Facility that includes changes to Tower dimensions or antenna numbers or type shall require new structural inspection.

19.11.2.5 Unsafe Structure: Should the inspection of any tower reveal any structural defect(s) which, in the opinion of the Independent Consultant render(s) that Tower unsafe, the following actions must be taken. Within 10 business days of notification of unsafe structure, the owner(s) of the Tower shall submit a plan to remedial the structural defect(s). This plan shall be initiated within 10 days of the submission of the remediation plan, and completed as soon as reasonably possible. Failure to accomplish this redemption of structural defect(s) within 10 business days of initial notification shall be a violation of the Special Permit and subject it penalties and fines as a zoning violation. Such fines shall be payable by the owner(s) of the Tower and the leased property, until compliance is achieved.

19.12 Removal Requirements

Any Personal Wireless Service Facility or Repeater that ceases to operate for a period of one year shall be removed. Cease to operate is defined as not performing the normal functions associated with the Personal Wireless Facility or Repeater and its equipment on a continuous and ongoing basis for a period of one year. At the time of removal, the Facility or Repeater Site shall be remedied such that all Personal Wireless Service Facility or Repeater improvements, which have ceased to operate, are removed. If all Facilities on a Tower have ceased to operate, the Tower shall also be removed, and the Facility or Repeater Site, including any access road(s) which lead to that Facility or Repeater Site from the main access road, shall be revegetated. Existing trees shall only be removed with the written permission of the ZBA, and only if the ZBA determines such removal of trees to be necessary to complete the required removal of Personal Wireless Service Facility(s) or Repeaters(s). Police, fire and emergency services are specifically exempted from the above requirements.

19.13 Performance Guarantees:

19.13.1 Applicant shall, as a condition of the Special Permit:

19.13.1.1 Post a term insurance bond in a reasonable amount determined and approved by the ZBA. This bond shall be in force to cover the costs of the remediation of any damage to the landscape that occurs during the clearing of the Site. Also to cover the cost of the removal of the Tower or Facility or Repeater from the site, and remediation of the landscape, should the Facility or Repeater cease to operate.

19.13.1.2 Post a maintenance bond for the access road(s), site(s) and Tower(s) in amounts approved by the ZBA.

19.14 Fees and Insurance:

19.14.1 Towers, Personal Wireless Service Facilities and Repeaters shall be insured by the owner(s) against damage to persons or property. The owner(s) shall provide a Certificate of Insurance to the ZBA and the Selectmen's Office on an annual basis. For Towers, Facilities and Repeaters located on property owned by the Town of Windsor and the Town of Windsor shall be an additional named insured.

19.14.2 A schedule of fees for Personal Wireless Service Facility, Tower, or Repeater permitting and renewal, any Monitoring of emissions and inspection of structures and any other fees shall be established by the ZBA pursuant to M.G.L. c. 40A, 9. This schedule may be amended from time to time.

19.15 Permit Expiration and Renewal:

19.15.1 Any Special Permit granted under this section shall lapse if the Applicant fails to begin construction on the Facility or Tower or Repeater within an eighteen-month period of said grant.

19.15.2 All Special Permits granted under this section shall be granted for five years. The ZBA shall upon application filed prior to the expiration of any five year period renew said Special Permit for an additional five year period. If the ZBA determines that the Tower and/or Facility and/or Repeater so permitted shall have been and shall remain in compliance with all terms and conditions of this Bylaw, and of any conditions placed upon the original Special Permit at the time of granting.

19.16 Severability Clause:

The invalidity of any section or provision of this Bylaw shall not invalidate any other section or provision hereof.

Windsor Wind Facility Bylaw

20.1 Definitions for Wind Facilities

- (a) **WIND FACILITY** — All equipment, machinery and structures when intended to be used in connection with commercial wind-generated energy production, including related transmission, distribution, collection, storage or supply systems whether underground, on the surface or overhead, and other equipment or byproducts in connection therewith and the sale of the energy produced thereby, including but not limited to, wind turbine (rotor, electrical alternator/generator and tower), anemometers (wind measuring equipment), transformers, substation, power lines, control and maintenance facilities, site access and service roads. For purposes of this definition, the term "commercial" shall mean those facilities which have less than fifty percent (50%) of their electrical output used on site.
- (b) **WIND TURBINE** — Equipment used in wind-generated energy production. Wind turbines capture the kinetic energy of the wind and convert it into electricity. Primary components are the rotor (blade assembly), electrical alternator/generator, and tower.

20.2 Purposes.

The purposes of this Wind Facility Bylaw is to:

- (a) Preserve the character and appearance of the town while simultaneously allowing alternative energy technologies to be developed.
- (b) Protect the scenic, historic, environmental and natural or man-made resources of the community.
- (c) Provide standards and requirements for design, construction, regulation, placement, monitoring, modification and removal of Wind Facilities.
- (d) Provide a procedural basis for action within a reasonable period of time from the request for authorization to place, construct, operate or modify Wind Facilities.
- (e) Preserve property values.
- (f) Locate Wind Facilities so that they do not have negative impacts on the general safety, welfare and quality of life in the community such as, but not limited to, attractive nuisance, noise and falling objects.
- (g) Require owners of Wind Facilities to configure them so as to minimize and mitigate the potential adverse impact of the Wind Facilities.

20.3 Special Permit Required. No Wind Facility or part thereof (or major modification to any of the foregoing), shall be erected, constructed or installed without first obtaining a special permit from the Board of Appeals. For purposes of this subsection, "major modification" shall be defined as any change that would alter the criteria on which the original permit was granted such as modification of wind turbine height, size or number of blades, noise levels or visual impact.

20.4 Application. The applicant shall provide the Board of Appeals with the following:

- (a) Five copies of duly executed application form.
- (b) Five copies of the following plans and maps prepared, stamped and signed by a structural engineer and land surveyor each licensed to practice in Massachusetts:
 - (1) Location map: copy of a portion of the most recent USGS Quadrangle Map, at a scale of 1:25,000 showing location of the proposed facility, and the area within at least two miles from the proposed Wind Facility.
 - (2) Vicinity map at a scale not less than one inch equals 200 feet (1:2,400) with contour intervals no greater than 10 feet showing the entire vicinity within a two thousand-foot radius of the Wind Facility site, and including the topography, public and private roads, buildings and structures, bodies of water, landscape features, historic sites. Indicate the property lines of the proposed Wind Facility site parcel and of all abutters within 300 feet of the site parcel (from Assessors' maps or available surveys). Indicate any access easement or right-of-way needed for access from a public way to the Wind Facility, and the names of all abutters or property owners along the access easement or who have deeded rights to the easement.
 - (3) Existing conditions plan: a recent survey of the site at a scale no smaller than one inch equals 40 feet (1:480) with topography drawn with a minimum of five-foot contour intervals, showing existing utilities, property lines, stone walls or fence lines, wooded areas, individual trees with diameters greater than 12 inches within a three hundred foot radius from the base of the proposed Wind Facility (labeled with their current heights) and existing buildings or structures within a one-thousand-foot radius from the base of the proposed Wind Facility. Show the boundary of any wetlands, floodplains, watercourses, and River Protection Areas within 200 feet from the Wind Facility or any related facilities or access ways or appurtenances and identify the presence of any rare species habitat, migration pathway and avian flyways. The survey plan must have been completed, on the ground, by a professional land surveyor within five years prior to the application date, unless there has been substantial change since such date in which case, a more recent survey showing such changes shall be provided.
 - (4) Site plans showing proposed Wind Facility site layout, grading and utilities at the same scale as the existing conditions plan, including:

- (i) Proposed Wind Facility location, and any appurtenant structures, and equipment, including without limitation, power lines and transformers. Indicate property boundaries and distances to the base(s) of the wind turbine(s) and to the nearest corners of each of the appurtenant structures and equipment to those boundaries and dimensions of all proposed improvements. Indicate distances from the base(s) of the wind turbines and the nearest corners of each of the appurtenant improvements to all buildings, roads, skiing facilities, trails (walking/snowmobile), public and private airports and airstrips and areas used by migratory mammals and birds within a one-thousand-foot radius from the base of each wind turbine.
 - (ii) Indicate proposed spot elevations at the base of the proposed wind turbine and the base of any guy wires, and the corners of all appurtenant structures. Guy wires are to be employed only on temporary structures.
 - (iii) Proposed utilities, including distance from source of power, sizes of service available and required, locations of any proposed utility or communication lines, and whether underground or above ground.
 - (iv) Limits of areas where vegetation is to be cleared or altered and justification for any such clearing or alteration.
 - (v) Detailed plans for drainage of surface and/or subsurface water, plans to control erosion and sedimentation both during construction and as a permanent measure. Plans must demonstrate compliance with the Massachusetts Stormway Policy.
 - (vi) Plans indicating locations and specifics of proposed screening, landscaping, ground cover, fencing, exterior lighting or signs.
 - (vii) Plans of proposed access driveway or roadway and parking area at the Wind Facility whether temporary or permanent; include grading, drainage, and traveled width. Include a cross section of the access drive indicating the width, depth of gravel, paving or surface material.
- (5) Detail Plans for Proposed Wind Facility:
- (i) Plans, elevations, section and details at appropriate scales but no smaller than one inch equals 10 feet. Applicant shall also provide representative elevation views, indicating the roof, facades, doors and other exterior appearance and materials.
 - (ii) Two cross sections through the proposed wind turbine drawn at right angles to each other and showing the ground profile to at least 100 feet beyond the limit of clearing, and showing any guy wires or supports.

Dimension the proposed height of wind turbine above average grade at wind turbine base.

(iii) Detail of proposed exterior finish of the wind turbine and any above-ground appurtenant structures.

(iv) Indicate relative height of the wind turbine to the tops of surrounding trees as they presently exist, and the height to which they are expected to grow in 10 years.

(6) Proposed pad-mounted transformers, operations control facility and maintenance facility: Floor plans, elevations and cross sections at a scale of no smaller than 1/4 inch = 1 foot (1:48) of any proposed appurtenant structure.

(c) Applicant shall submit computer generated modeling or other form of documentation acceptable to the Board of Appeals to show the following:

(1) Pre-construction simulated view:

(i) A minimum of six view lines in zero to two mile radius from the site, shown beginning at true North and continuing clockwise at 45 degree intervals.

(ii) A plan map of a circle of two miles radius of the Wind Facility site on which any visibility of the proposed wind turbines from a public way shall be indicated.

(iii) Applicant shall utilize the U.S.G.S. Quadrangle maps (Windsor is depicted in 4 maps) at a scale of 1:25,000, and submit profile drawings on a horizontal scale of 1 inch = 400 feet, with a vertical scale of 1 inch = 40 feet.

(iv) Trees shall be shown at existing heights and at projected heights in ten (10) years.

(2) Post-construction simulated views. Applicant shall provide projected post construction simulated views of the Wind Facility from up to six (6) view lines with locations as determined by the Board of Appeals (ZBA) in consultation with the Planning Board, in a one (1) to three (3) mile radius of the project site.

(d) Balloon Test. Within 35 days of submitting an application, applicant shall arrange to fly, or raise upon a temporary mast, at least three foot diameter, nine and one half foot long brightly colored balloons at the maximum blade tip height of the proposed Wind Facility and at each end of the array of the Wind Facility and one in the middle. The dates (including a second date, in case of poor

visibility on the initial date in the reasonable opinion of the Board of Appeals), times and location of this balloon test shall be advertised, by the applicant, at seven and fourteen days in advance of the first test date (and the second date, if applicable) in a newspaper with a general circulation in the Town of Windsor. The applicant shall inform the Board of Appeals, in writing, of the dates and times of the test, at least fourteen days in advance. The balloon shall be flown for at least four consecutive hours sometime between 9:00 am and 5:00 p.m. of the dates chosen.

- (e) A regrading and revegetation program for temporary roads and construction sites required in connection with development of the Wind Facility but no longer required after project completion.
- (f) An avian and bat risk assessment evaluating the potential impact of the proposed facility on avian life including, without limitation, resident and migratory bird habitats and migratory paths in and adjacent to the Wind Facility site.
- (g) Wildlife risk assessment evaluating the potential impact of the proposed facility on resident and migratory wildlife habitats in and adjacent to the Wind Facility site.
- (h) An operation and maintenance plan for maintenance of access road/driveway, storm-water controls, and measures to minimize impact of invasive plant species.

20.5 Independent Consultants.

- (a) Upon submission of a complete application for a special permit under this article, the Board of Appeals may, in its discretion, hire independent consultants whose services shall be paid for by the applicant(s).
- (b) Applicants for any special permit under this Section shall provide written permission from the owner(s) of the proposed property(s) or Wind Facility site(s) for the town's independent consultant(s) to conduct any necessary site visit(s).

20.6 General Requirements for Special Permit.

In acting on the Special Permit application, the Board of Appeals shall make the following findings and impose appropriate conditions to assure the following:

- (a) Height:
 - (1) The height of any wind turbine as measured from average grade shall be less than two hundred (200) feet and have a minimum blade clearance from the ground immediately below each wind turbine of twenty (20) feet.
 - (2) Height calculation. For purposes of calculating the overall height of a wind turbine, the total height shall be measured from average grade to the

uppermost extension of any blade or the maximum height reached by any part of the wind turbine.

- (b) Setbacks:
- (1) Setbacks from adjacent parcels. A minimum setback for each Wind Facility shall be maintained equal to two (2) times the overall wind turbine height, or three hundred (300) feet, whichever is greater, from all boundaries of the site on which the Wind Facility is located.
 - (2) Setbacks for residences. Notwithstanding the provisions of subsection (1) above, a minimum setback for each wind turbine of at least six hundred (600) feet shall be maintained from any building occupied by humans whether on site or on adjacent parcels.
- (c) All electrical wires associated with the Wind Facility shall be located underground between the wind turbine and the project substation.
- (d) If the Wind Facility site is in a wooded area, a vegetated buffer strip of undisturbed trees shall be retained for at least fifty (50) feet in width around the entire perimeter of the Wind Facility site except where the access drive is located. Applicant shall obtain a financial surety in form and amounts reasonably acceptable to the Board of Appeals to cover the cost of the remediation and revegetation of any damage to the landscape that occurs during the clearing of the site.
- (e) Fencing and signs: The area around each wind turbine and any appurtenant structure (other than an access road) shall be completely fenced for security to a height of six (6) feet and gated. Use of razor wire is not permitted. One (1) sign no greater than one (1) square foot indicating the name of the Wind Facility owner(s) and a 24-hour emergency telephone number shall be posted adjacent to the entry gate. Signs warning of high voltage electricity shall be posted on stationary portions of each wind turbine, transformers and the operations control facility. In addition, "No Trespassing" or other warning signs may be posted on the fence.
- (f) All appurtenant structures shall be designed to be architecturally similar and compatible with each other, and shall be no more than 35 feet high. The structures shall be used only for the housing of equipment related to this particular site. As a condition to granting a special permit, the Board of Appeals may require the structures to be joined or clustered so as to appear as one building.
- (g) Wind turbine finish. Wind turbines shall be of a nonreflective, unobtrusive color with a nonreflective finish.
- (h) Commercial advertising shall not be allowed on any part of the Wind Facility.

- (i) Unless required by the Federal Aviation Administration ("FAA"), no lighting of wind turbines, or any appurtenant building(s), is permitted, except for manually operated emergency lights for use only when operating personnel are on site. Applicant shall provide the Board of Appeals with an official determination by the FAA as to its lighting requirements and/or markings prior to approval of the special permit by the Board of Appeals.
- (j) No wind turbine that would be classified as a hazard to air navigation, as defined by the Federal Aviation regulations (Title 14 CFR) may be permitted.
- (k) Guidelines for appropriate siting:
 - (1) Wind facilities shall be located so as to minimize the following potential impacts:
 - (i) Visual Aesthetic: Wind facilities shall, when possible, be sited off ridge lines, and where their visual impact is least detrimental to highly rated scenic areas.
 - (ii) Diminution of residential property values.
 - (iii) Safety hazards resulting from structural failure, "blade throw", falling ice, or attractive nuisance.
 - (iv) Safety hazard from excessive electromagnetic radiation in the event the Wind Facility is found to exceed the established guidelines.
 - (2) The following locations are ranked in order of preference:
 - (i) The use of land which has already been developed for another similar purpose is preferred, such as path of high-power electric lines.
 - (ii) The use of municipal lands which comply with other requirements of this Section, and where visual impact can be minimized and mitigated, shall be encouraged.
 - (iii) The use of land, distant from higher density residential properties, and where visual impact can be minimized shall be encouraged.
 - (iv) Location can be accessed from existing developed roads in order to avoid creation of new roads and disruption of vegetation.
- (l) The Board of Appeals shall request input from the Chiefs (or their designees) of Fire, Police and other Emergency services regarding the adequacy for emergency access of the planned drive or roadway to the site.

- (m) The project operator shall be required to keep a monthly log of all dead birds and bats found within five hundred (500) feet of a Wind Facility and make such log available to the Board of Appeals upon request.
- (n) The Board of Appeals may impose such conditions as it deems reasonably necessary to minimize or mitigate detrimental effects to the environment, including, but not limited to glare caused by construction and/or operation of the Wind Facility.
- (o) Construction of on-site roads for the installation and operation of a Wind Facility shall be minimized. Temporary roads used for initial installation shall be regraded and revegetated to a natural condition upon completion of construction.
- (p) The applicant must prove to the satisfaction of the Board of Appeals of that the proposal is beneficial and complies with requirements of this bylaw.
- (q) The proposal shall comply with FCC Reg.96-326 regarding emissions of electromagnetic radiation and that the required monitoring program is in place and shall be paid for by the applicant.
- (r) Monitoring and evaluation of compliance. Excessive emissions: Should the monitoring of a Wind Facility site reveal that the site exceeds the FCC 96-326 standard with respect to EMI radiation or violates noise levels, then the owner shall be notified and is required to bring the Wind Facility into compliance with the regulations.
- (s) If review under the Massachusetts Environmental Policy Act ("MEPA") is required, the Board of Appeals will not issue the special permit until the MEPA review process is complete.

20.7 Operational Noise.

- (a) Prior to the issuance of a building permit, the wind turbine manufacturer shall provide sufficient data and documentation to establish that the wind turbine will not produce noise levels in excess of those set forth below, when measured at the property line and at the nearest inhabited residence (in Decibels) — dBA:

Ambient	Operating
45	55.0
50	56.2
55	61.0
60	61.2
65	65.4

Ambient is defined as the average night time background sound level when the Wind Facility is not in operation.

- (b) (1) Pre-testing. After the granting of a special permit and before the applicant's Wind Facility begins operation, the applicant shall pay for an independent consultant, hired by the town, to monitor the background levels of Electrical Magnetic Interference ("EMI") radiation and operational noise around the facility site. A report of the monitoring results shall be prepared by the independent consultant and submitted to the Inspector of Buildings.
- (2) After the Wind Facility has been approved and installed, the applicant shall pay for an independent consultant, designated by the Board of Appeals, to complete sound measurements to determine ambient and operating decibel levels. The sound level shall be measured on a sound level meter using the A-weighting network.
- (3) Upon complaint of an abutter, ambient and maximum permitted decibel measurements shall be performed by a consultant designated by the Board of Appeals. The consultant shall submit recorded sound measurements to the Board of Appeals for review and evaluation. A fee for the service shall be established by the Board of Appeals. The fee shall be paid for by the complainant unless maximum permitted decibel readings have been exceeded, in which case the Wind Facility owner shall pay the fee.
- (4) If maximum readings are exceeded, the installation shall be considered a public nuisance. The violation shall be corrected within ninety (90) days from the date of the notification, and if the noise violation cannot be remedied the turbine shall be removed or relocated.

20.8 Removal Requirements. Any Wind Facility which has reached the end of its useful life or has been abandoned shall be removed. Abandoned is defined as the failure to operate the facility on a continuous and ongoing basis for a period of one (1) year. At the time of removal, the Wind Facility site shall be reclaimed. All wind turbines and appurtenant structures shall also be removed and the Wind Facility site shall be revegetated. Existing trees shall only be removed if necessary to complete the required removal. Applicant, upon obtaining a special permit, shall deliver to the Board of Appeals a financial surety, in form and amounts reasonably acceptable to the Board of Appeals, to cover the cost of removal and disposal of the Wind Facility and the remediation of the landscape in accordance with this subsection. Such financial surety shall be renewed and updated as necessary throughout the life of the Wind Facility so as to continue to cover the removal, disposal and remediation costs as set forth above. The foregoing notwithstanding, the applicant shall be entitled to apply for a special permit to leave the foundation of the Wind Facility intact in order to minimize disruption to existing vegetation and minimize erosion problems.

20.9 Maintenance of Access. The project proponent shall be liable for the cost of maintaining the access road (unless accepted as a public way), the project sites and the facility,

and for restoration of any damage occurring during construction of as a result of operation of the facility.

20.10 Severability Clause. The invalidity of any section or provision of this Section shall not invalidate any other section or provision hereof.

20.11 Additional Concerns. There is at the present time, 2004, concern relative to low frequency noise as well as low frequency vibrations produced by wind turbines. There have been no standards established nor recommendations made as to limits in these areas. The project operator shall comply with regulations subsequently adopted by the state or federal government with regard to low frequency noise and/or vibration produced by Wind Facilities within 90 days of adoption of such regulations/policies.

Town of Windsor Zoning Bylaw
Adopted at the May 4, 2015 Annual Town Meeting, by warrant article 18

Section 21 - As-of-Right Zoning Bylaw: Allowing Use of Large-Scale Ground-Mounted Solar Photovoltaic Installations

Prepared by:

Department of Energy Resources

Massachusetts Executive Office of Environmental Affairs

December 2014

21.1.0 Purpose

The purpose of this bylaw is to promote the creation of new large-scale ground-mounted solar photovoltaic installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, minimize impacts on scenic, natural and historic resources and to provide adequate financial assurance for the eventual decommissioning of such installations. The provisions set forth in this section shall apply to the construction, operation, and/or repair of large-scale ground-mounted solar photovoltaic installations.

21.1.1 Applicability

This section applies to large-scale ground-mounted solar photovoltaic installations proposed to be constructed after the effective date of this section. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equity.

21.2.0 Definitions

As-of-Right Siting: As-of-Right Siting shall mean that development may proceed without the need for a special permit, variance, amendment, waiver, or other discretionary approval. As-of-right development may be subject to site plan review to determine conformance with local zoning ordinances or bylaws. Projects cannot be prohibited, but can be reasonably regulated by the inspector of buildings, building commissioner or local inspector, or if there is none in a town, the board of selectmen, or person or board designated by local ordinance or bylaw.

Building Inspector: The inspector of buildings, building commissioner, or local inspector, or person or board designated by local ordinance or bylaw charged with the enforcement of the zoning ordinance.

Building Permit: A construction permit issued by an authorized building inspector; the building permit evidences that the project is consistent with the state and federal building codes as well as local zoning bylaws, including those governing ground-mounted large-scale solar photovoltaic installations.

Designated Location: The location designated by the Windsor Select Board, in accordance with Massachusetts General Laws Chapter 40A, section 5, where ground-mounted large scale solar photovoltaic installations may be sited as-of right. Said location, is lot #___105___on map___11___pursuant to Massachusetts General

Laws Chapter 40A Section 4. This map is hereby made a part of this Zoning Bylaw and is on file in the Office of the Town Clerk.

Large-Scale Ground-Mounted Solar Photovoltaic Installation: A solar photovoltaic system that is structurally mounted on the ground and is not roof-mounted, and has a minimum nameplate capacity of 250 kW DC.

On-Site Solar Photovoltaic Installation: A solar photovoltaic installation that is constructed at a location where other uses of the underlying property occur.

Rated Nameplate Capacity: The maximum rated output of electric power production of the Photovoltaic system in Direct Current (DC).

Site Plan Review: review by the Site Plan Review Authority to determine conformance with local zoning ordinances or bylaws.

Site Plan Review Authority: For purposes of this bylaw, Site Plan Review Authority refers to the body of local government designated as such by the municipality

Solar Photovoltaic Array: an arrangement of solar photovoltaic panels.

Zoning Enforcement Authority: The person or board charged with enforcing the zoning ordinances or bylaws.

21.3.0 General Requirements for all Large Scale Solar Power Generation Installations

The following requirements are common to all solar photovoltaic installations to be sited in designated locations.

21.3.1 Compliance with Laws, Ordinances and Regulations

The construction and operation of all large scale solar photovoltaic installations shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of a solar photovoltaic installation shall be constructed in accordance with the State Building Code.

21.3.2 Building Permit and Building Inspection

No large scale solar photovoltaic installation shall be constructed, installed or modified as provided in this section without first obtaining a building permit.

21.3.3 Fees

The application for a building permit for a large scale solar photovoltaic installation must be accompanied by the fee required for a building permit.

21.3.4 Site Plan Review

Ground-mounted large scale solar photovoltaic installations with 250 kW or larger of rated nameplate capacity shall undergo site plan review by the Site Plan Review Authority prior to construction, installation or modification as provided in this section.

21.3.4.1 General

All plans and maps shall be prepared, stamped and signed by a Professional Engineer licensed to practice in Massachusetts.

21.3.4.2 Required Documents

Pursuant to the site plan review process, the project proponent shall provide the following documents:

(a) A site plan showing:

- i.** Property lines and physical features, including roads, for the project site;
- ii.** Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures;

iii. Blueprints or drawings of the solar photovoltaic installation signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system and any potential shading from nearby structures

iv. One or three line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;

v. Documentation of the major system components to be used, including the PV panels, mounting system, and inverter;

vi. Name, address, and contact information for proposed system installer;

vii. Name, address, phone number and signature of the project proponent, as well as all co-proponents or property owners, if any;

viii. The name, contact information and signature of any agents representing the project proponent; and

(b) Documentation of actual or prospective access and control of the project site (see also Section 3.5);

(c) An operation and maintenance plan (see also Section 3.6);

(d) Zoning district designation for the parcel(s) of land comprising the project site (submission of a copy of a zoning map with the parcel(s) identified is suitable for this purpose);

(e) Proof of liability insurance; and

(f) A public outreach plan, including a project development timeline, which indicates how the project proponent will meet the required site plan review notification procedures and otherwise inform abutters and the community

The Site Plan Review Authority may waive documentary requirements as it deems appropriate.

21.3.5 Site Control

The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed solar photovoltaic installation.

21.3.6 Operation & Maintenance Plan

The project proponent shall submit a plan for the operation and maintenance of the large-scale ground-mounted solar photovoltaic installation, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.

21.3.7 Utility Notification

No large- scale ground –mounted solar photovoltaic installation shall be constructed until evidence has been given to the Site Plan Review Authority that the utility company that operates the electrical grid where the installation is to be located has been informed of the solar photovoltaic installation owner or operator’s intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

21.3.8 Dimension and Density Requirements

21.3.8.1 Setbacks

For large - scale ground-mounted solar photovoltaic installations, front, side and rear setbacks shall be as follows:

(a) Front yard: The front yard depth shall be at least 10 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the front yard shall not be less than 50 feet.

(b) Side yard. Each side yard shall have a depth at least 15 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the side yard shall not be less than 50 feet.

(c) Rear yard. The rear yard depth shall be at least 25 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the rear yard shall not be less than 50 feet.

3.8.2 Appurtenant Structures

All appurtenant structures to large-scale ground-mounted solar photovoltaic installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be shaded from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

21.3.9 Design Standards

21.3.9.1 Lighting

Lighting of solar photovoltaic installations shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting of the solar

photovoltaic installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

21.3.9.2 Signage

Signs on large- scale ground-mounted solar photovoltaic installations shall comply with a municipality's sign bylaw. A sign consistent with a municipality's sign bylaw shall be required to identify the owner and provide a 24-hour emergency contact phone number. Solar photovoltaic installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar photovoltaic installation.

21.3.9.3 Utility Connections

Reasonable efforts, as determined by the Site Plan Review Authority, shall be made to place all utility connections from the solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

21.3.10 Safety and Environmental Standards

21.3.10.1 Emergency Services

The large scale solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the local fire chief. Upon request the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.

21.3.10.2 Land Clearing, Soil Erosion and Habitat Impacts

Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the large – scale ground-mounted solar photovoltaic installation or otherwise prescribed by applicable laws, regulations, and bylaws.

21.3.11 Monitoring and Maintenance

21.3.11.1 Solar Photovoltaic Installation Conditions

The large - scale ground-mounted solar photovoltaic installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access road(s), unless accepted as a public way.

21.3.11.2 Modifications

All material modifications to a solar photovoltaic installation made after issuance of the required building permit shall require approval by the Site Plan Review Authority.

21.3.12 Abandonment or Decommissioning

21.3.12.1 Removal Requirements

Any large- scale ground-mounted solar photovoltaic installation which has reached the end of its useful life or has been abandoned consistent with Section 3.12.2 of this bylaw shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Site Plan Review Authority by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

- (a) Physical removal of all large- scale ground-mounted solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site.
- (b) Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
- (c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Site Plan Review Authority may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

A True Copy

ATTEST: _____
Madeline W. Scully
Town Clerk
May 4, 2015

**TOWN OF WINDSOR
POSTING NEW BYLAWS**

June 16, 2016

On the date above written, I have posted copies of the new Zoning Bylaw passed at the May 2, 2016 Annual Town Meeting and approved by the Attorney General of Massachusetts on June 15, 2016, at the following public places in the town:

Sangar's store, Friendly Fred's, Town Hall, Town Offices.

The Solar Generation Zoning Bylaw takes effect May 2, 2016.



A handwritten signature in black ink, reading "Madeline W. Scully". The signature is fluid and cursive, with a large loop at the end of the last name.

Madeline W. Scully

Windsor Town Clerk

Windsor Solar Generation Zoning Bylaw

Why we need this bylaw: without this bylaw, such installations are not a permitted use of land in Windsor. Having the bylaw encourages the development of these projects in Windsor and creates a potentially lucrative use of acreage for landowners.

The Permitting Structure:

- Small Installations
 - Less than 2,000 square feet of panel surface area
⇒ *Allowed as of right, Building Permit is required*
- Medium-Scale Ground-Mounted Solar Photovoltaic Installation
[MSGMSPI]
 - Between 2,000 and 40,000 square feet of panel surface area
 - Less than two [2] acres
⇒ *Allowed as of right, Building Permit and Site Plan Review are required*
- Large-Scale Ground-Mounted Solar Photovoltaic Installation
[LSGMSPI]
 - 40,000 or more square feet of panel surface area
 - Two [2] acres or larger
 - If the installation is larger than 7.5 acres, it must not occupy more than 30% of the tax parcel on which will be built.
⇒ *Building Permit, Site Plan Review AND Special Permit are required*

Details of General Interest:

- Setbacks required: 50 feet
- Maximum Height of Panels or other Structures: 20 feet
- No herbicides are permitted to control vegetation.
- No lighting is allowed.
- Landscaped buffer to block view from abutting residences is required.
- Installations shall be located so as to minimize the potential impacts on the following:
 - Visual/aesthetic: Installations shall, when possible, be sited off ridgelines to locations where their visual impact, including glare or reflection, is least detrimental to valuable historic and scenic areas, and established residential areas;
 - General health, safety, and welfare of residents;
 - Diminution of residential property values; and
 - Safety, as in cases of attractive nuisance.
- Applicants shall provide a form of surety, either through escrow account, bond, or other form of surety, to cover the cost of removal in the event the town must remove the installation and remediate the landscape.

Windsor Solar Generation Zoning Bylaw

22.01. Purpose and Applicability

The purpose of this By-law is to promote the creation of new large-scale and medium-scale ground-mounted solar photovoltaic installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, minimize impacts on scenic, natural and historic resources and to provide adequate financial assurance for the eventual decommissioning of such installations. This Section 22 applies to solar photovoltaic systems not located on Lot 105, Map 11. Solar photovoltaic systems located in Lot 105, Map 11 are subject to the provisions of Section 21 of these Zoning Bylaws.

The provisions set forth in this Section 22 shall apply to the construction, operation, modification, and/or repair of Large-Scale Ground-Mounted Solar Photovoltaic Installations [LSGMSPIs] with a total photovoltaic module (panel) area of more than 40,000 square feet and/or occupying two [2] or more acres, proposed to be constructed after the effective date of this section.

Medium-Scale Ground-Mounted Solar Photovoltaic Installation [MSGMSPI]: with more than 2,000 but less than 40,000 square feet of panel surface area and occupying up to two [2] acres. Together LSGMSPI and MSGMSPI are referenced in this Section 22 as GMSPI.

All proposed LSGMSPIs require a Special Permit and Site Plan Review in accordance with this By-law. All proposed MSGMSPI require only Site Plan Review.

22.02 Definitions

- A. Appurtenant Structures: All structures, belonging to and normally associated with the use of which is appurtenant to a GMSPI, including, but not limited to, equipment shelters, storage facilities, transformers, and substations.
- B. Building Permit: A construction permit issued by the Building Inspector; the building permit evidences that the project is compliant with the state and federal building codes as well as this By-law.
- C. Medium-Scale Ground-Mounted Solar Photovoltaic Installation [LSGMSPI]: A solar photovoltaic system that is structurally mounted on the ground and is not building-mounted, and has a total photovoltaic module (panel) area of more than 2,000 but less than 40,000 square feet and/or occupying less than two [2] or more acres, and proposed to be constructed after the effective date of this section.

D. Large-Scale Ground-Mounted Solar Photovoltaic Installation [MSGMSPI]: A solar photovoltaic system that is structurally mounted on the ground and is not building-mounted, and has a total photovoltaic module (panel) area of more than 40,000 square feet and/or occupying two [2] or more acres (whether or not separated by a roadway), and proposed to be constructed after the effective date of this section.

E. Site Plan Review: Review by the Windsor Zoning Board of Appeals in accordance with Section 22.06 below.

F. Solar Photovoltaic Array: An arrangement of solar photovoltaic panels.

G. Special Permit: Issued in compliance with this Section and Section 14 of the Zoning Bylaws by the Zoning Board of Appeals.

22.03 General Requirements for all GMSPIs

The following requirements are common to all GMSPIs to be sited in the Town of Windsor.

A. Compliance with Laws, Ordinances and Regulations. The construction and operation of all LSGMSPIs shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of a solar photovoltaic installation shall be constructed in accordance with the Massachusetts State Building Code.

B. Building Permit. No LSGMSPI shall be constructed, installed or modified as provided in this section without first obtaining a building permit.

C. Siting Criteria.

(1) GMSPIs shall be located so as to minimize the potential impacts on the following:

- a. Visual/aesthetic: GMSPIs shall, when possible, be sited off ridgelines to locations where their visual impact, including glare or reflection, is least detrimental to valuable historic and scenic areas, and established residential areas;
- b. General health, safety, and welfare of residents;
- c. Diminution of residential property values; and
- d. Safety, as in cases of attractive nuisance.

(2) The following siting criteria for GMSPIs are ranked in order of preference:

- a. The use of municipal land and industrial-zoned lands, which comply with other requirements of this section and where visual impact can be minimized and mitigated, shall be encouraged.
- b. The use of land distant from higher density residential properties and where visual impact can be minimized and mitigated shall be encouraged.
- c. Use of land, other than that which results in significant loss of land and natural resources, including farm and forest land.

22.04 Special Requirements for LSGMSPI

A. Percentage Cover Limitations. No LSGMSPI greater than 7.5 acres in size shall be permitted which would cover more than 30% of the area of the tax parcel on which it is proposed to be built.

B. All LSGMSPI shall apply for and obtain a Special Permit from the Zoning Board of Appeals in compliance with Section 14 of the Zoning Bylaws. Site Plan Review for LSGMSPI shall be conducted by the Zoning Board of Appeals.

22.05 Fees

The application for a building permit for a MSGMSPI must be accompanied by the application fees required for a building permit and Site Plan Review. The application for a building permit for a LSGMSPI must be accompanied by the application fee for a building permit, Site Plan Review, and a Special Permit.

22.06 Site Plan Review for All GMSPI

A. GMSPIs shall undergo Site Plan Review by the Zoning Board of Appeals in accordance with this Section prior to construction, installation, or modification. The Site Plan Review process shall take into consideration the ranked order of siting preferences listed in Paragraph 22.03 C.2.

(1) General - All plans and maps shall be prepared, stamped and signed by a Professional Engineer licensed to practice in Massachusetts.

(2) Required Documents - Pursuant to the Site Plan Review process, the project proponent shall provide the following documents:

(a) A site plan showing:

i. Property lines and physical features, including roads, for the project site;
ii. Landscaping Plan. For large-scale projects, the Applicant shall submit a landscaping plan as part of site plan approval. The landscaping plan shall detail the following:

a. All proposed changes to the landscape of the site, including temporary and permanent roads and/or driveways, grading, area of vegetative clearing, all proposed vegetative planting and screening, and/or fencing.

b. Planting design shall include details of the types and size of plant materials. Landscaping shall be designed in an environmentally sensitive manner with non-invasive drought tolerant native plants, so as to reduce irrigation needs and
c. All landscaping and required buffer areas shall be properly maintained. Landscape plants shall be monitored for at least two growing seasons.

iii. Locations of wetlands and Priority Habitat Areas defined by the Natural

Heritage & Endangered Species Program (NHESP);

iv. Locations of Floodplains or inundation areas for moderate or high hazard dams;

v. Locations of Priority Heritage landscapes and local or National Historic districts;

vi. A list of hazardous materials proposed to be located on the site in excess of household quantities and a plan to prevent their release to the environment as appropriate;

vii. Blueprints or drawings of the solar photovoltaic installation signed and stamped by both a Professional Engineer and a Professional Surveyor, each licensed to practice in the Commonwealth of Massachusetts, showing the boundary lines, the proposed layout of the system, and any potential shading from nearby structures.

viii. One or three line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;

ix. Documentation of the major system components to be used, including the PV panels, mounting system, and inverter;

x. Name, address, and contact information for proposed system installer;

xi. Name, address, phone number and signature of the project proponent, as well as all co-proponents or property owners, if any;

xii. The name, contact information and signature of any agents representing the project proponent;

(b) **Site Control.** The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed solar photovoltaic installation.

(c) **Operation & Maintenance Plan.** The project proponent shall submit a plan for the operation and maintenance of the GMSPI, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.

(d) **Utility Notification.** No GMSPI shall be constructed until evidence has been given to the Zoning Board of Appeals that the utility company that operates the electrical grid where the installation is to be located has been informed of the solar photovoltaic installation owner or operator's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

(e) **Zoning District Designation.** The project proponent shall submit a zoning district designation for the parcel(s) of land comprising the project site

(submission of a copy of a zoning map with the parcel(s) identified is suitable for this purpose).

(f) **Proof of Liability Insurance.** The project proponent shall submit to the Zoning Board of Appeals proof of liability insurance for the project.

(g) **Financial Surety.** The project proponent shall submit a description of financial surety that satisfies Section 22.08. The Zoning Board of Appeals may waive documentary requirements as it deems appropriate.

(3) **Setback and Height Requirements** - All GMSPIs, including Appurtenant Structures and parking areas, setbacks shall be at least fifty [50] feet from any property boundary. The height of a GMSPI or any Appurtenant Structure, shall not exceed twenty [20] feet.

(4) **Appurtenant Structures** - All such Appurtenant Structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be shaded from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

(5) **Design and Performance Standards**

(a) **Lighting.** Lighting of solar photovoltaic installations shall be consistent with local, state and federal law. There shall be no lighting of any parts of the installation other than as mandated under such laws. Appurtenant structures that may require illumination, shall be limited to that required for safety and intrusion purposes and shall be directed downward and shall incorporate full cut-off fixtures and triggered by motion sensors.

(b) **Landscaping/Buffer Requirements.** Appropriate landscaping and vegetative buffer shall be installed adequate to visually screen the solar energy system from the boundary of any abutting residential properties that would have a direct view of the proposed installation. The landscaped buffer must be sufficiently dense to block the view of the project from all dwellings abutting the property. The applicant shall submit a Landscape Plan as required in Subsection 21.06(2) ("Required Documents") as part of the special permit and/or site plan approval application. The Zoning Board of Appeals may waive the landscaping and buffer requirements applying to the project site where it deems advisable.

(c) **Signage.** A sign consistent with the By-law shall be required to identify the owner of GMSPIs and provide a 24-hour emergency contact phone number. No signage is otherwise permitted.

(d) **Utility Connections.** Reasonable efforts, as determined by the Zoning Board of Appeals, shall be made to place all utility connections from the solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

(e) Roads. Access roads shall be constructed to minimize grading, removal of stone walls or street trees, and minimize impacts to environmental or historical resources.

(f) Control of Vegetation. Herbicides may not be used to control vegetation at the solar electric installation. Mowing or the use of pervious pavers or geotextile materials underneath the solar array are possible alternatives.

(g) Hazardous Materials. Hazardous materials stored, used, or generated on site shall not exceed the amount for a Very Small Quantity Generator of Hazardous Waste as defined by the DEP pursuant to MassDEP regulations 310 CMR 30.000 and shall meet all requirements of the DEP including storage of hazardous materials in a building with an impervious floor that is not adjacent to any floor drains to prevent discharge to the outside environment. If hazardous materials are utilized within the solar electric equipment, then impervious containment areas capable of controlling any release to the environment and to prevent potential contamination of groundwater are required.

(h) Noise. Sound or noise levels may not exceed 50 dB at the boundary of the property.

(6) Safety and Environmental Standards

(a) Emergency Services. The GMSPI owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the Windsor Fire Chief. Upon request the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.

(b) Land Clearing, Soil Erosion and Habitat Impacts. Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the GMSPI or otherwise prescribed by applicable laws, regulations, and this By-law.

22.07 Monitoring and Maintenance

A. Solar Photovoltaic Installation Conditions. The applicant for Site Plan Review shall propose that either the GMSPI owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the solar electric installation and any access road(s), unless accepted as a public way. At the time of approval of the Site Plan Review, the permit/approval granting board shall specify one party, either the owner or operator, who shall have the responsibility for compliance with this Section.

B. Modifications. All material modifications to a GMSPI made after issuance of the required building permit shall require approval by the Zoning Board of Appeals.

22.08 Abandonment or Decommissioning

A. Removal Requirements. Any GMSPI which has reached the end of its useful life or has been abandoned as set forth below shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Planning Board by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

- (a) Physical removal of all GMSPI structures, equipment, security barriers and transmission lines from the site.
- (b) Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
- (c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Zoning Board of Appeals may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

B. Abandonment. Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the GMSPI shall be considered abandoned when it fails to operate for more than one year without the written consent of the Zoning Board of Appeals. If the owner or operator of the GMSPI fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the Town retains the right, after the receipt of an appropriate court order, to enter and remove an abandoned, hazardous, or decommissioned GMSPI. As a condition of Site Plan approval, an applicant shall agree to allow entry to remove an abandoned or decommissioned installation. The costs for the removal will be charged to the property owner in accordance with the provisions of M.G.L. 139, Section 3A as a tax lien on the property.

22.09 Financial Surety

Applicants for GMSPIs shall provide a form of surety, either through escrow account, bond, or other form of surety approved by the Zoning Board of Appeals, to cover the cost of removal in the event the town must remove the installation and remediate the landscape, in an amount and form determined to be reasonable by the Zoning Board of Appeals, but in no event to exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein, as determined by the project Applicant. Such surety will not be required for municipally- or state-owned facilities. The Applicant shall submit a fully inclusive estimate of the costs associated

with removal, prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal costs due to inflation.