

**ORDINANCE NO. 23, 2019**

**AN ORDINANCE AMENDING ARTICLES, 2, 5, 11, 18 AND APPENDIX B OF THE UNIFIED DEVELOPMENT ORDINANCE OF THE CITY OF VALPARAISO**

WHEREAS, a petition was presented to amend articles 2, 5, 11, 18 and Appendix B of the Unified Development Ordinance (UDO); and

WHEREAS, the Plan Commission duly advertised and held a public hearing on the proposed hearing according to IC 5-3-1 and;

WHEREAS, the general public was given an opportunity to comment on the proposed changes to the ordinance and;

WHEREAS, the Plan Commission voted to recommend the approval of the proposed amendments by a 7-0 vote on September 10<sup>th</sup>, 2019;

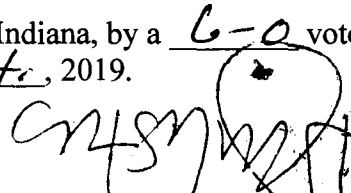
NOW, THEREFORE, BE IT ORDAINED by the Common Council of the City of Valparaiso as follows:

1. That Articles 2, 5, 11, 18 and Appendix B of the Unified Development Ordinance shall be amended as follows:

SEE ATTACHED EXHIBIT A

This ordinance shall be in full force and effect from and after its adoption and approval by the Mayor.

PASSED by the Common Council of the City of Valparaiso, Indiana, by a 6-0 vote of all members present and voting this 14<sup>th</sup> day of Oct., 2019.

  
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Jon Costas, Mayor

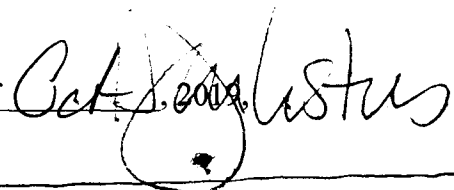
ATTEST:

  
Sharon Swihart, Clerk-Treasurer

Presented by me to the Mayor of the City of Valparaiso, Indiana, this 15<sup>th</sup> day of Oct, 2019, at 9:00 o'clock Am.

  
Sharon Swihart, Clerk-Treasurer

This Ordinance approved and signed by me this 15<sup>th</sup> day of Oct., 2019, at 9:00 o'clock Am.

  
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Jon Costas, Mayor

## **Sec. 2.307 Photovoltaic Arrays**

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**A. Generally.** Photovoltaic arrays panels that convert sunlight into electricity. They are permitted as an accessory use to residential uses. The following standards apply to photovoltaic arrays within residential districts:

**B. Interconnect Agreement.** If a photovoltaic array is to be interconnected to the electric utility, proof of an executed interconnect agreement shall be provided before the system is interconnected.

**C. Photovoltaic Arrays.** Photovoltaic arrays may be roof mounted in all districts. Other installations shall conform to the following standards:

Photovoltaic array may be located on the property, lot or parcel in the listed locations and the following standards apply to photovoltaic arrays in residential districts:

1. The installation shall be in a location and configuration that prevents glare that interferes with the use and enjoyment of adjacent property.
2. If the highest point on the panels is more than six feet above grade, the panels shall be set back as if they were detached accessory buildings. See **Section 2.303, Accessory Buildings and Structures.**
3. **Roof-Mounted.** Photovoltaic arrays may be roof-mounted on a principal and/or accessory structure in all residential zoning districts. Photovoltaic arrays are subject to all applicable height and setback requirements of the zoning district.
  - a. Location. Roof-mounted photovoltaic arrays must be contained within the roof face.
4. **Carports and Covered Walkways.** Carports and covered walkways in multifamily developments may be covered in roof-mounted photovoltaic arrays.
5. All applicable building code requirements apply to photovoltaic arrays.
6. **Removal.** Photovoltaic arrays that are no longer producing energy for consumption, shall be removed no later than six (6) months after final energy production occurs.

## **Sec. 2.404 Photovoltaic Arrays**

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- A. Generally.** Photovoltaic arrays panels that convert sunlight into electricity. They are permitted as an accessory use to nonresidential uses.
- B. Photovoltaic Arrays.** Photovoltaic arrays may be roof-mounted in all districts. All installations shall conform to the following standards:
1. The installation shall be in a location and configuration that prevents glare that interferes with the use and enjoyment of adjacent property. The use of photovoltaic for covered walkways and covered parking areas is encouraged.
  2. If the highest point on the panels is more than six feet above grade, the panels shall be set back as if they were detached accessory buildings. See **Section 2.403, Accessory Buildings or Structures.**
  3. Noise. All photovoltaic arrays noise levels must follow standards set in Section 4.701 Noise.
  4. All applicable building code requirements apply.
- C. Roof-Mounted.** Photovoltaic arrays may be roof-mounted in all nonresidential uses. Roof-mounted photovoltaic arrays must follow the following standards:
1. Lighting. Exterior lighting shall be limited to that required for safety and operation purposes. Lighting shall follow Division 9.500 Exterior Lighting Standards.
  2. Flat Roof: Height. Roof-mounted photovoltaic arrays, on flat roofs, shall be designed so that their average height does not exceed fifteen (15) percent of the height of the supporting wall and/or does not exceed the height of a parapet wall. Roof-mounted photovoltaic arrays must be screened from all ground level views from adjacent property and rights-of-way. Roof-mounted photovoltaic arrays should be screened as if they were mechanical equipment. See Section 11.508 Roof Structure and Materials.
  3. Sloped Roof: Height. Roof-mounted photovoltaic arrays, on sloped roofs, shall be designed so that they are flush to the slope of the roof.
  4. Location. Roof-mounted photovoltaic arrays must be contained within the roof face.

## **Sec. 2.552 Light Automobile Service**

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**A. Pump and Canopy Setbacks.** Gasoline dispensing pumps and service station canopies shall be set back 15 feet from all street frontages.

**B. Canopy Design.**

1. Canopies shall use a similar architectural style, materials, and roofing as the principal building.
2. Canopies shall not be used as an extension of signage beyond that which is allowed in **Article 5, Signs**. The colors of the corporate logo (except white or black) shall not be painted on the canopy or trim outside of the area allowed for signage.
3. The trim of the canopy shall not be internally or externally illuminated.

**C. Canopy Removal.** Canopies shall be removed if the property or lot is vacated by the Light Automobile Service use and/or gasoline is no long being dispensed. Canopies shall be removed within sixty (60) Days from the property vacated by the Light Automobile Service Use.

**D. Tank and Pump Removal.** Gasoline dispensing pumps shall be removed if the property or lot is vacated by the Light Automobile Service Use and/or gasoline is no longer being dispensed. Tanks and Pumps shall be removed within sixty (60) Days from the property vacated by the Light Automobile Service Use.

## **2.556 Solar Farm**

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- A. Generally.** Solar Farms are commercial facilities for which the intended principal purpose is to generate electricity to be sold on a wholesale basis.
- B. Maximum Lot Coverage.** A maximum lot coverage of 75 percent.
- C. Setback.** Photovoltaic arrays must be set back a minimum of 80 feet from the property line.
- D. Height.** Photovoltaic arrays may have a maximum height of ten (10) feet as measured from the surrounding average grade.
- E. Visual Buffer.** Photovoltaic arrays shall have, to the extent reasonably practical, a visual buffer of natural vegetation, plantings, and/or berms that provides a reasonable visual screen.
- F. Signage.** Signage shall be weather durable and should include the name and phone number of the owner/operator. Signage shall not exceed eight (8) sq. ft. in size.
- G. Lighting.** Exterior lighting shall be limited to that required for safety and operation purposes. Lighting shall follow Division 9.500 Exterior Lighting Standards.
- H. Glare.** All solar panels shall be located or placed so that concentrated solar glare shall not be directed toward or onto adjacent properties or roadways.
- I. Abandonment/Removal.** Photovoltaic arrays that are no longer producing energy for consumption, shall be removed no later than six (6) months after final energy production occurs. The owner/operator is required to remove all equipment, conduit, structures, fencing, and any equipment or materials below-grade, offsite for disposal or reuse. The property, lot or parcel must be restored to its previous condition prior to operation of the solar energy system.
- J. Prohibited Use.** A solar farm shall be prohibited in the Signature Corridor Overlay District and all Residential Zoning Districts.

## **Sec. 2.601 General Standards for All Temporary Uses**

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**A. Standards.** All temporary uses shall be reviewed against the following criteria:

1. **Traf~ic circulation.** The temporary use shall have adequate sight distances for safe vehicular ingress and egress. It shall have adequate turn lanes or provide for police control to move traf~ic in and out of the use. The adjacent street shall have adequate capacity to handle the anticipated additional ~low of traf~ic.
2. **Public convenience and litter control.** Adequate on-site restroom facilities may be required to handle the expected attendance. Adequate waste containers shall be required and a written guarantee shall be required that all litter generated by the event shall be removed at no expense to the City. This shall include adjoining public rights-of-way.
3. **Signs.** A sign permit is not required; however, the Planning Director shall review and approve all signage. The Planning Director may approve signs up to 50 percent larger than would be permitted in **Article 5, Signs**, and may also approve attention getting devices. The number, type, and size of signs and attention getting devices shall be determined using the following criteria.
  - a. The need for obvious way-finding information, based on the location of the event and its likelihood of attracting visitors who are unfamiliar with the area, who may lose their way or become confused if signs are limited to the sign area otherwise allowed by this Code.
  - b. The type, length, and size of the proposed event or use.
  - c. Sight distances, other signage in the area or on the property, sidewalks, traf~ic volumes, and speed on the road.
  - d. Other lighting in area, type of neighbors, light intensity, and glare potential.
  - e. Logical travel routes to the site.
4. **Parking.** Adequate access and off-street parking shall be provided.
5. **Lighting.** Any ~loodlights or other lighting shall follow the standards of **Article 9, Division 9.500 Exterior Lighting Standards**.
6. **Noise.** Noise Level Restrictions shall follow the standards of **Article 4, Section 4.701 Noise**.

**B. Modi~ication of provisions.** The Planning Department may establish additional conditions deemed necessary to ensure land use compatibility or minimize potential adverse impacts on neighboring properties, public streets, or the City. These may include, but are not limited to, the following:

1. Modification or restrictions on hours of operation or duration of the event.
2. Posting of a performance bond to ensure clean up and removal of signage.
3. Arrangements satisfactory to the City for the provision of special or extraordinary services or equipment, such as traf~ic control or security personnel, or equipment that is needed to ensure safe operation of the use or event. This may also include liability insurance.
4. The Planning Department may refuse to issue a permit if the event is too large to be safe for the site, neighborhood, street, or other infrastructure, or may place limits on attendance to ensure it can be properly managed.

# **ARTICLE 2 PERMITTED USES AND SUPPLEMENTAL STANDARDS**

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## **DIVISION 2.600 TEMPORARY USES**

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### **2.611 Tent Sales**

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A. **Generally.** Tent sales shall only be permitted as a temporary use, requiring a Temporary Use Permit.

B. **Zoning Districts.** Tent sales shall only be permitted in the Commercial General (CG) Zoning District.

C. **Setbacks.** Tents shall not be located within or encroach upon:

1. Any minimum required setback;
2. A fire lane;
3. A maneuvering aisle;
4. Any right-of-way or pathway;
5. A parking space or spaces necessary to meet the minimum parking requirements of the other use(s) of the lot or parcel;
6. Any other applicable building codes.

D. **Size.** Tent sales shall not exceed 5,000 square feet.

E. **Sales Area.** Tent sales may be located in parking lot/areas, provided it:

1. Does not interfere with pedestrian or vehicular access;
2. Does not create a visibility obstruction to moving vehicles within the parking lot/area
3. Is located on an all-weather dustless paved surface or other surface approved by the Planning Director

F. **Mechandise Display.** Goods or Merchandise displayed shall not exceed six (6) feet in height.

G. **Permissions.** A written letter of permission must be submitted from both the property and business owner allowing the temporary use on the property.

H. **Duration.** Tent sales shall be permitted for a maximum of thirty (30) days per calendar year.

I. **Existing Business Tents.** Tent sales directly related to the existing business on the property are exempt from this section.

## **ARTICLE 2 PERMITTED USES AND SUPPLEMENTAL STANDARDS**

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### **DIVISION 2.600 TEMPORARY USES**

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#### **2.612 Temporary Storage Containers/Tents**

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- A. Location.** Temporary Storage Containers/Tents shall only be located on the parcel, property or lot served by the temporary storage containers/tents.
- B. Nonresidential Parcel, Property, or Lot.** Temporary Storage Containers/Tents shall only be permitted on nonresidential properties if an active remodeling and/or construction project is occurring. On nonresidential parcels, property or lots, the container/tent must be located behind the principal building (s) unless there is not adequate space behind the principal building (s).



## **Sec. 5.202 Prohibited Signs; Special Exemptions with Written Permit**

**A. Signs Prohibited in All Districts.** Subject only to the exemptions set forth in subsection B., below, the following signs are hereby expressly prohibited as to erection, construction, creation, maintenance, repair, alteration, location or relocation within the City:

1. Portable Signs, except as otherwise expressly permitted by **Section 5.308. Temporary Signs**. Specifically, signs of this type shall be prohibited in the US 30 and State Road 49 Signature Corridor Overlay Districts;
2. Animated Signs;
3. Chaser Signs;
4. Flashing Signs;;
5. Wind Signs;
6. Any sign on a motor vehicle or on a semi-trailer with or without tractor that can be seen from the street if circumstances, including the absence of vehicular use and/or the fact that the vehicle or semi-trailer carries no current motor vehicle registration or license plate, demonstrate that the primary use for said vehicle or semi-trailer is the advertisement of a business, product, or service of a business located on the premises where such a vehicle is parked. (Trailers used for construction purposes during the course of construction on site are exempt from this section.) Any such sign advertising a business, product, or service not conducted or available on site is an off-premise sign;
7. **Inlatale Displays. Specifically. \_signs of this type shall be prohibited in the US 30 and State Road 49 Signature Corridor Overlay Districts**
8. Off-Premise Signs, except as expressly permitted in Light Industrial (INL) and Heavy Industrial (INH) districts. Specifically, signs of this type shall be prohibited in the US 30 and State Road 49 Signature Corridor Overlay Districts;
9. Any sign attached to or painted or otherwise rendered on a bench or seat is located outside a building or structure on a public sidewalk or right-of-way. (Such a sign on a bench or seat not on a public sidewalk or right-of-way is not prohibited by this provision but must comply with all other regulations and its surface area shall be included in the total allowable surface area permitted for the building);
10. Signs that advertise a business which has not been conducted within the past 90 days, or a product or service which has not been offered for sale within the past 90 days, on the premise where such sign is located; if otherwise in compliance with this Article, a sign may be located at such location indicating a move of such business to another location for a period of time not exceeding 90 days from the date of discontinuance of the business at the sign's location;
11. Signs that use string lights, **rope lights**, or any unshielded light within public view if used in connection with commerical premises for commerical purposes except that this shall not include:
  - a. Holiday Decorations at Holiday Time; or
  - b. Non-Flashing Neon Window Signs
12. Any sign or sign structure determined by the Building Commissioner to be:
  - a. Structurally unsafe; or
  - b. A hazard to safety or health by reason of inadequate maintenance, dilapidation, or abandonment.
13. Any sign that obstructs the vision of drivers, or unduly distracts the attention of drivers, or obstructs the visibility of any traffic sign or traffic control device by reason of size, location, coloring, or illumination;
14. Any sign that obstructs free ingress and egress from a required door, window, fire escape, or other exitway, and any other sign prohibited by the building code;
15. Signs with a commercial purpose that make use of words such as "Stop," "Look," or "Danger," or other similar words, phrases, symbols, or characters in such a manner as to imply the need of stopping or the existence of danger;
16. Any sign unlawfully installed, erected, or maintained;
17. Any sign or other advertising structure containing any obscene, indecent, or immoral matter;

18. Any sign placed or installed in or on any parkway, alley, public street, easement or right-of-way as established by the official thoroughfare plan except as may be authorized by the Board of Public Works and Safety;
19. Any sign not in compliance with Federal or State law;
20. Any sign that is constructed or installed in such a manner as to overhang a public street, sidewalk, or right-of-way, except as otherwise expressly permitted by this UDO;
21. Snipe Signs;
22. Signs that are accessory to an unlawful

use. **B. Exemptions by Special Permit.**

**1. Exemptions for Grand Openings.** A business or other venture commencing its activities on a site shall be, for a period of one week prior to such opening and for two weeks after such opening, if such business applies to the Building Commissioner for an exemption and pays a fee as set by the City Common Council, granted exemption from the prohibitions in items 1-6 in subsection A., above. The surface area of these signs shall not be counted toward the maximum sign surface area permitted, nor subject to any height regulation. Maximum one (1) sign per building frontage. the sign attributable to each frontage must face such frontage.

**2. Exemptions for Special Promotions.** Upon application to the Building Commissioner and payment of a fee as set by the City Common Council, a business or other venture engaging in special promotions shall be granted exemption from the prohibitions in items 1-6 in subsection A., above for a period or periods totaling up to 10 weeks per calendar year. The application shall indicate the exact period or periods of the special promotion(s). The surface area of these signs shall not be counted toward the maximum sign surface area permitted or subject to any height regulation. Maximum one (1) sign per building frontage. the sign attributable to each frontage must face such frontage.

## **Sec. 5.203 Exempt Signs**

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- A. **Generally.** The following signs, if they comply with the limitations as stated in this section, and if they are permitted in the pertinent zoning district as set forth in this UDO, are exempt from the requirement of a sign permit:
1. Construction signs, provided that the contractor or other person placing such sign has made and maintains the deposit set forth in subsection B., below;
  2. Real estate signs, except that if placed by any person or firm in the business of selling or brokering real estate, the exemption shall apply only if such person or firm has made and maintains the deposit set forth in subsection B., below;
  3. Specific decorative displays used for holidays, public demonstrations or promotions of civic affairs or charitable activities, except that such may be situated on public property only if authorized by the Valparaiso Board of Public Works and Safety;
  4. Signs advertising private garage sales;
  5. Posters announcing special programs or events;
  6. Campaign signs as permitted in **Section 5.307, Campaign Signs**, but not including campaign signs on billboards;
  7. Home occupation signs;
  8. Window signs, provided that the sign does not cover more than 25 percent of the upper and lower portions of the window;
  9. House numbers, name plates for residential housing units identifying the occupancy and address of the premise, not to exceed two square feet;
  10. Signs identifying the building name or occupancy and address of the building on fraternity, sorority and professional buildings, not to exceed eight square feet in area;
  11. Integral signs;
  12. Signs painted on or attached to vehicles bearing current license plates unless such signs are within the definition of **Section 5.202, Prohibited Signs; Special Exemptions with Written Permit**, subsection A.7;
  13. Signs on vending machines, gas pumps, or ice containers indicating only the contents of such devices, provided that as to each such device the sign area does not exceed six square feet;
  14. Signs not exceeding six square feet each which contain only noncommercial messages including designation of restrooms, telephone location, restrictions on smoking, door openings, and private traffic control and parking signs;
  15. One sign, not to exceed six square feet in area, per parking lot entrance identifying the business served and providing driving and parking information;
  16. Business signs, not to exceed two square feet in area per sign face, containing information on credit cards and business affiliations;
  17. Wall signs of no greater than ten square feet and installed no higher than the interior ceiling of the first floor level;
  18. Artisan Signs provided that the artisan or other person placing such sign has made and maintains the deposit set forth in subsection B., below.
  19. Financier's Signs provided that the financier or other person placing such sign has made and maintains the deposit set forth in subsection B., below.
  20. Portable Signs.
- B. **Exemption Deposit.** The exemption from the requirement of a written sign permit for construction signs, artisan signs, financier's signs, or real estate signs placed by any person or firm in the business of selling or brokering real estate applies only if the person or firm placing any such sign files a bond in the amount of \$100 with the City Clerk-Treasurer. Such bond shall be available to the Building Commissioner to cover any fines or costs associated with a violation of this ordinance by the filer. In such event, such person shall replenish the amount so taken in order to maintain the exemption. If any such person or firm is found to have violated the

ordinance three or more times in one calendar year, or fails to maintain the bond at \$100, the Building Commissioner shall revoke the exemption as to such person or firm for up to one year thereby requiring such person to obtain a permit for any sign placed thereafter. (See **Section 5.403, Bonding**, on cash deposits in lieu of bond.)

## **Sec. 18.209 Temporary Uses**

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- A. **Commercial Outdoor Sales Event** means outdoor sales of seasonal goods by occupants of a parcel, in an area designated on an approved site plan for outdoor sales.
- B. **Contractors Office** means watchmans' trailers, construction equipment sheds, contractors' trailers, and similar uses incidental to a construction project. Such uses may include sleeping and/or cooking facilities.
- C. **Farm Stand** means a temporary or permanent structure or vehicle used for the sale of agricultural produce in-season, at least 50 percent of which is grown by the seller or farmers within 25 miles of the City limits.
- D. **Garage Sale** means the sale of various used goods that are owned by the occupants of the dwelling unit that is the location of the sale. The phrase does not include commission sales or the retail sale of new merchandise.
- E. **Model Home** means a dwelling unit that is used as a model to display the layout and finishes of other dwelling units that are or will be available for sale within a subdivision or condominium development.
- F. **Public Interest Event or Special Event** means outdoor gatherings, auctions, art sales, and bake sales for the benefit of the community at-large, or community service or non-profit organizations (both faith-based and secular). These events may also include, but are not limited to, outdoor concerts, auctions, carnivals, circuses, outdoor religious meetings, and special entertainment at commercial properties. Such uses are characterized by frequent travel to various communities and high noise levels, regardless of their purpose.
- G. **Sales Office** means:
1. A dwelling unit within a subdivision that is used as a sales office;
  2. A dwelling unit within a condominium that is used as a sales office; or
  3. A modular unit used as a sales office for a subdivision or condominium.
- H. **Sidewalk Sale and Farmer's Market** means sales that are conducted by either the store owner or occupant, outside their store, or by one or more commercial farms, on:
1. A public sidewalk;
  2. A private sidewalk; or
  3. Pedestrian areas adjacent to a sidewalk.
- I. **Temporary Manufactured Structure** means a manufactured home that is used temporarily as a classroom, dwelling unit, or storage unit. The phrase does not include portable on-demand storage units.
- J. **Tent Sales** means the use of a tent or tent-like structure to conduct temporary commercial sales on all-weather dustless paved surface or other surface approved by the Planning Director.
- K. **Truckload Sale** means the sale of various goods outdoors by persons who are not employed by the owners or managers of the parcel on which the sale occurs, or tenants of buildings on the parcel on which the sale occurs.

## **Photovoltaic Array**

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**Photovoltaic Array** means two or more solar panels linked or connected together for the purpose of converting sunlight into electricity.

## **Solar Cell**

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**Solar Cell** means an electrical device that converts sunlight, or other form of visible light, directly into electricity and is a building block of Solar Panels.

**Solar Farm**

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**Solar Farm** means a commercial facility constructed for which the principal purpose is to generate electricity to be sold on a wholesale basis.



## **Solar Panel**

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**Solar Panel** means a bank of interconnected solar cells combined into the form of a panel normally contained by a metal or plastic perimeter frame.

## APPENDIX B PLANT LISTS

### CORRIDOR PLANTS:

#### Deciduous Trees

Common Name	Latin Name	Mature Tree Height
Tulip Tree	<i>Liriodendron tulipeifera</i>	Mature height 90 feet
Chinquapin Oak	<i>Quercus muehlenbergii</i>	Mature height 80 feet
Burr Oak	<i>Quercus macrocarpa</i>	Mature height 80 feet
American Elm (resistant selections)	<i>Ulmus Americana</i>	Mature height 70 feet
Sweetgum	<i>Liquidambar styraciflua</i>	Mature Height 75 feet
Hackberry	<i>Celtis occidentalis</i>	Mature Height 60 feet
Kentucky Coffee Tree	<i>Gymnocladus dioica</i>	Mature Height 60 feet
American Linden	<i>Tilia Americana</i>	Mature Height 60 feet
Shingle Oak	<i>Quercus imbarcaria</i>	Mature Height 50 feet
Hills Oak	<i>Quercus ellipsoidalis</i>	Mature Height 50 feet
Scarlet Oak	<i>Quercus coccinea</i>	Mature Height 50 feet
Sugar Maple	<i>Acer Saccharum</i>	Mature Height 50 feet
Swamp White Oak	<i>Quercus bicolor</i>	Mature Height 50 feet
Ginkgo (male)	<i>Ginkgo biloba</i>	Mature Height 50 feet
Honey Locust	<i>Gleditua triacanthos</i>	Mature Height 40 feet
Sour Gum (Black Gum)	<i>Nyssa sylvatica</i>	Mature Height 40 feet
Bald Cypress	<i>Taxodium distichum</i>	Mature Height 40 feet
Littleleaf Linden	<i>Tilia cordata</i>	Mature Height 30 feet
Ironwood	<i>Ostrya virginiana</i>	Mature Height 30 feet

#### Evergreen Trees

Common Name	Latin Name	Mature Tree Height
Norway Spruce	<i>Picea abies</i>	Mature Height 90 feet
White Pine	<i>Pinus Strobus</i>	Mature Height 70 feet
Eastern Hemlock	<i>Tsuga Canadensis</i>	Mature Height 60 feet
Jack Pine	<i>Pinus banksiana</i>	Mature Height 45 feet
Eastern Red Cedar	<i>Juniperus virginiana</i>	Mature Height 50 feet
Colorado Spruce	<i>Picea pungens</i>	Mature Height 60 feet

#### Ornamental Trees

Common Name	Latin Name	Mature Tree Height
Sassafrass	<i>Sassafrass albidum</i>	Mature Height 30 feet
Ohio Buckeye	<i>Aesculus glabra</i>	Mature Height 30 feet
Flowering Dogwood	<i>Cornus florida</i>	Mature Height 25 feet
Blue Beech/American Hornbeam	<i>Carpinus caroliniana</i>	Mature Height 20 feet
Hawthorn species	<i>Crataegus sp.</i>	Mature Height 20 feet
Serviceberry	<i>Amelanchier sp.</i>	Mature Height 20 feet
Paw Paw	<i>Asimina triloba</i>	Mature Height 20 feet
Flowering Crabapples	<i>Malus sp.</i>	Mature Height 20 feet
Tree Lilac	<i>Syringa reticulate</i>	Mature Height 20 feet
Red Buckeye	<i>Aesculus pavia</i>	Mature Height 20 feet
Speckled Alder	<i>Alnus rugosa</i>	Mature Height 20 feet
Nannyberry Viburnum	<i>Viburnum lentago</i>	Mature Height 18 feet
Redbud	<i>Cercis Canadensis</i>	Mature Height 15 feet
Fringe Tree	<i>Chionanthus virginicus</i>	Mature Height 15 feet
Pagoda Dogwood	<i>Cornus alternifolia</i>	Mature Height 15 feet
Magnolia varieties	<i>Magnolias var.</i>	Mature Height 15 feet

Common Name	Latin Name	Mature Tree Height
Wafer Ash	<i>Ptelea trifoliata</i>	Mature Height 15 feet
Common Witch Hazel	<i>Hamamelis Virginiana</i>	Mature Height 15 feet

Shrubs:

Common Name	Latin Name	Flowering Season/Month	Flowering Color	Size
Bottlebrush Buckeye	<i>Aesculus parviflora</i>	July	White	8'
Indigo Bush	<i>Amorpha fruticosa</i>	June	Purple/Blue	6'
Chokeberry	<i>Aronia sp.</i>	May	White	5'
Caryopteris	<i>Aryopteris sp.</i>	---	Blue	3'
Clethera	<i>Stethera alnifolia</i>	July/August	Pink	4'
Duetzia	<i>Duetzia gracalis</i>	May	White	3'
New Jersey Tea	<i>Ceanothus americanus</i>	July	White	2'
Dwarf Honeysuckle	<i>Diervilla lonicera</i>	June	Yellow	2.5'
Vernal Witch Hazel	<i>Hammelis vernalis</i>	March	Orange/Red	12'
Common Witch Hazel	<i>Hamamelis vernalis</i>	October	Yellow	10'
Smooth Hydrangea	<i>Hydrangea arborescens</i>	June/July	White	3'
Oak Leaf Hydrangea	<i>Hydrangea quercifolia</i>	June/July	White	5'
St. John's Wort	<i>Hypericum sp.</i>	July-August	Yellow	3'
Winter berry	<i>Ilex verticillata</i>	Spring/Summer	White	10'
Junipers various	<i>Juniperus sp.</i>	Hardy Evergreen	---	---
Northern Bayberry	<i>Myrica pennsylvanica</i>	Spring	Yellow	4'
Ninebark	<i>Phocarpus opulifolius</i>	June	Pink	8'
Gro-low Sumac	<i>Rhus aromatic</i>	Fall	Orange/Red	2'
Elderberry varieties	<i>Sambucus sp.</i>	June	White	---
Stephanandra	<i>Stephanandra incisa</i>	May/June	Yellow/White	3'
Lilacs various	<i>Syringa var.</i>	May/June	---	4-12'
Blueberry Ornamental	<i>Vaccinium corymbosum</i>	Fall	Red	---
Viburnums various	<i>Viburnum</i>	Several Flowering Shrubs	---	---

Perennials and Groundcover:

Common Name	Latin Name
<b>PERENNIALS:</b>	
Allium	<i>Allium abramsii</i>
Milkweed var.	<i>Asclepias L.</i>
False Goat's Beard	<i>Astilbe</i>
Columbine	<i>Aquilegia L.</i>
Penstemon Var.	<i>Penstemon</i>
---	<i>Echinacea</i>
Aster	<i>Eurybia x herveyi</i>
Coneflower/Blackeye Susan	<i>Rudbeckia var.</i>
Blue Wild Indigo	<i>Baptisia australis</i>
Blazing Star	<i>Liatis var.</i>
Lavender	<i>Lavandula L.</i>
Hardy Salvias	<i>Salvia var.</i>
Iris	<i>Iris L.</i>
Lupine	<i>Lupinus L.</i>
Creeping Liriope	<i>Liriope spicata</i>
Stonecrop	<i>Sedum var.</i>
Tickseed	<i>Coreopsis L.</i>
Pink	<i>Dianthus L.</i>

Blanketflower	<i>Gaillardia var.</i>
Hibiscus	<i>Hibiscus lunariifolius</i>
Beebalm	<i>Monarda L.</i>
Phlox	<i>Phlox L.</i>
Platycodon	<i>Platycodon A. DC.</i>
Russian Sage	<i>Perovskia atriplicifolia</i>
Golden Rod	<i>Solidago L.</i>
Tulips	<i>Tulipa var.</i>
Daffodils	<i>Narcissus L.</i>
Lilies (True Hardy Lilies rather than daylilies)	<i>Lilium</i>
Spiderwort	<i>Tradescantia L.</i>
Vervain	<i>Verbena L.</i>
Virginia Creeper	<i>Parthenocissus quinquefolia</i>
<b>LANDSCAPE GRASSES (FOR SUN) :</b>	
Switchgrass	<i>Panicum virgatum</i>
Little Bluestem	<i>Schizachyrium scoparium</i>
Big Bluestem	<i>Andropogon gerardii</i>
Northern Dropseed	<i>Sporobolus heterolepsis</i>
June Grass	<i>Koeleria cristata</i>
Calamagrostis	<i>Calamagrostis canadensi</i>

Native Prairie and Wetland Plants:

Common Name	Latin Name
<b>HERBACEOUS PLANTS FOR WET TO MESIC GROUND:</b>	
Swamp Milkweed	<i>Asclepias incarnata</i>
Virginia Iris	<i>Iris virginica</i>
White Turtlehead	<i>Chelone glabra</i>
Joe Pye Weed	<i>Eupatorium maculatum</i>
Cardinal Flower	<i>Lobelia cardinalis</i>
Great Blue Lobelia	<i>Lobelia siphilitica</i>
Ohio Spiderwort	<i>Tradescantia ohioensis</i>
Culver's Root	<i>Veronicastrum virginicum</i>
Sweet Coneflower	<i>Rudbeckia submentosa</i>
Prairie Blazing Star	<i>Liatris pycnostachya</i>
Prairie Rosinweed	<i>Silphium terebinthinaccum</i>
Golden Zizia	<i>Zizia aurea</i>
Michigan Lily	<i>Lilium michiganese</i>
Obedient Plant	<i>Physostegia virginica</i>
---	<i>Carex stipata</i>
Bottlebrush Sedge	<i>Carex hystericina</i>
Virginia Wildrye	<i>Elymus virginicus</i>
Switchgrass	<i>Panicum virgatum</i>
Common Rush	<i>Juncus effusus</i>
Bluejoint	<i>Calamagrostis Canadensis</i>
Prairie Cordgrass	<i>Spartina pectinata</i>
Palm Sedge	<i>Carex Muskingumensis</i>
<b>HERBACEOUS PLANTS FOR MESIC TO DRY GROUND:</b>	
Nodding Onion	<i>Allium cernuum</i>
Smooth Blue Aster	<i>Aster laevis</i>
New England Aster	<i>Aster nova anglicae</i>

Largeleaf Wild Indigo	<i>Baptisia leucantha</i>
Purple Coneflower	<i>Echinacea purpurea</i>
Blackeyed Susan	<i>Rudbeckia hirta</i>
Foxglove Beardtongue	<i>Penstemon digitalis</i>
Wild Quinine	<i>Parthenium integrifolium</i>
Pinnate Prairie Coneflower	<i>Ratibida pinnata</i>
Devil's Bite	<i>Liatris scariosa</i>
Cup Plant	<i>Silphium perfoliatum</i>
Red Columbine	<i>Aquilegia Canadensis</i>
Little Bluestem	<i>Schizachyrium scoparium</i>
Prairie Dropseed	<i>Sporobolus heterolepis</i>
Bicknell's Sedge	<i>Carex bicknellii</i>
Big Bluestem	<i>Andropogon gerardii</i>
Indian Grass	<i>Sorghastrum nutans</i>

**SUITABLE TREES FOR DIFFICULT SITES:**

Common Name	Latin Name	Mature Height	Tolerance
Chinquapin Oak	<i>Quercus muehlenbergii</i>	Mature Height 80 feet	FS/very tolerant
Hackberry	<i>Celtis occidentalis</i>	Mature Height 60 feet	FS/elm substitute
Kentucky Coffee Tree	<i>Gymnocladus dioica</i>	Mature Height 60 feet	FS
Shingle Oak	<i>Quercus imbarcaria</i>	Mature Height 50 feet	FS/tolerates poor soils
Swamp White Oak	<i>Quercus bicolor</i>	Mature Height 50 feet	FS/variable soils
Ginkgo (Male)	<i>Ginkgo biloba</i>	Mature Height 50 feet	FS/tolerates poor soils
Honey Locust	<i>Gleditsia triacanthos</i>	Mature Height 40 feet	FS/D/tolerates poor soils
River Birch	<i>Betula nigra</i>	Mature Height 40 feet	SW/low pH soil
Ironwood	<i>Ostrya virginiana</i>	Mature Height 30 feet	S/PS
Blue Beech/American Hornbeam	<i>Carpinus caroliniana</i>	Mature Height 20 feet	S/PS
Speckled Alder	<i>Alnus rugosa</i>	Mature Height 20 feet	W/FS
Wafer Ash	<i>Ptelea trifoliata</i>	Mature Height 15 feet	FS/PS/poor soils

S = Shade; PS = Partial Shade; FS = Full Sun; W = Wet Areas; PW = Partial Wet; D = Dry

**Areas RAIN GARDEN PLANT LIST:**

Herbaceous Plants For Wet to Mesic Ground		Herbaceous Plants for Mesic to Dry Ground	
FORBS:		FORBS:	
Swamp Milkweed	<i>Asclepias incarnate</i>	Nodding Onion	<i>Allium cernuum</i>
White Turtlehead	<i>Chelone glabra</i>	Leadplant	<i>Amorpha canescens</i>
Joe Pye Weed	<i>Eupatorium maculatum</i>	Smooth Blue Aster	<i>Aster laevis</i>
Halberdleaf Rosemallow	<i>Hibiscus laevis</i>	White Wild Indigo	<i>Baptisia leucantha</i>
Crimsoneyed Rosemallow	<i>Hibiscus moscheutos</i>	Bicknell's Sedge	<i>Carex bicknellii</i>
Virginia Iris	<i>Iris virginica</i>	—	<i>Coreopsis palmatum</i>
Prairie Blazing Star	<i>Liatris pycnostachyia</i>	Purple Coneflower	<i>Echinacea purpurea</i>
Dense Blazing Star	<i>Liatris spicata</i>	Rattlesnake Master	<i>Eryngium yuccafolium</i>
Michigan Lily	<i>Lilium michiganese</i>	Devil's Bite	<i>Liatris scariosa</i>
Cardinalis Flower	<i>Lobelia cardinalis</i>	Wild Quinine	<i>Parthenium integrifolium</i>
Great Blue Lobelia	<i>Lobelia siphilitca</i>	Foxglove Beardtongue	<i>Penstemon digitalis</i>
Allegheny Monkey Flower	<i>Mimulus ringens</i>	Dalea Purpurea	<i>Petalostemum purpureum</i>
Obedient Plant/False Dragonhead	<i>Physostegia virginica</i>	Blackeyed Susan	<i>Rudbeckia hirta</i>
Mountain Mint	<i>Pycnanthemum virginicum</i>	Little Bluestem	<i>Schizachyrium scoparium</i>
Sweet Coneflower	<i>Rudbeckia submentosa</i>	Prairie Dropseed	<i>Sporobolus heterolepis</i>
Goldenrod	<i>Solidago riddellii</i>		
Ohio Spiderwort	<i>Tradescantia ohiensis</i>		SHRUBS:

Herbaceous Plants For Wet to Mesic Ground		Herbaceous Plants for Mesic to Dry Ground	
Common Ironweed	<i>Veronia fasciculata</i>	Swamp Rose	<i>Rosa palustris</i>
Culver's Root	<i>Veronicastrum virginicum</i>	Hardhack	<i>Spirea tomentosa</i>
Golden Zizia	<i>Zizia aurea</i>	Elderberry	<i>Sambucus</i>
<b>GRASSES/SEDGES:</b>		Salix Discolor	<i>Salix discolor</i>
Porcupine Sedge	<i>Carex hystericina</i>	Black Willow	<i>Salix nigra</i>
Awlfruit Sedge	<i>Carex stipata</i>	<b>TREES:</b>	
Virginia Wildrye	<i>Elymus virginicus</i>	Sycamore	<i>Platanus occidentalis</i>
Switchgrass	<i>Panicum virgatum</i>	River Birch	<i>Betula nigra</i>
Soft Rush	<i>Juncus effusus</i>	Bald Cypress	<i>Taxodium distichum</i>
Club-rush	<i>Scripus var.</i>	Winter Berry	<i>Ilex verticillata</i>

### SALT TOLERANT RAIN GARDEN PLANTS:

Common Name	Latin Name
Wild Blue Indigo	<i>Baptisia australis</i>
Sneezeweed	<i>Helenium autumnale</i>
Swamp Rose Mallow	<i>Hibiscus palustris</i>
Golden Alexanders	<i>Zizia aurea</i>
Swamp Aster	<i>Aster puniceus</i>
Blue Flag Iris	<i>Iris virginica shrevei</i>
Great Bulrush	<i>Scripus validus</i>
Northern Dropseed	<i>Sporobolus heterolepis</i>
Butterfly Weed	<i>Asclepias tuberosa</i>
Hairy Rose Mallow	<i>Hibiscus lasiocarpis</i>
Mist Flower	<i>Eupatorium coelestinum</i>

### RAIN GARDENS FOR FLOWER DISPLAYS:

Common Name	Latin Name	Location	Flowering Season
Swamp Milkweed	<i>Asclepias incarnate</i>	Wet Areas	Summer/Fall Flowers
Butterfly Weed	<i>Asclepias tuberosa</i>	Edges	Summer Flowers
Wild Blue Indigo	<i>Baptisia australis</i>	Edges	Spring Flowers
Wild Hyacinth	<i>Camassia</i>	Wet Areas	Spring Flowers
Palm Sedge	<i>Carex muskingumensis</i>	Wet Areas	Green Background
Mist Flower	<i>Eupatorium coelestinum</i>	Edges	Fall Flowers
Sneezeweed	<i>Helenium autumnale</i>	Edges	Summer /Fall Flowers
Hibiscus varieties: Fantasia Kopper King Old Yella Peppermint Schnapps Plumb Crazy Disco Belle Luna series	<i>Hairy Rose Mallow</i>	Wet Areas	Summer/Fall Flowers
Blue Flag Iris	<i>Iris virginica</i>	Wet Areas	Summer Flowers
Cardinal Flower	<i>Lobelia cardinalis</i>	Wet Areas	Summer/Fall Flowers
Swamp Rose	<i>Rosa palustris</i>	Wet Areas	Summer/Fall Flowers
Northern Dropseed	<i>Sporobolus heterolepis</i>	Edges	Short Grass Clumps
Golden Alexanders	<i>Zizia aurea</i>	Edges/Wet	Spring Flowers

### INVASIVE SPECIES TO BE AVOIDED:

Common Name	Latin Name	Tree or Plant Type
Tree of Heaven	<i>Ailanthus altissima</i>	Tree
Norway Maple	<i>Acer platanoides</i>	Tree
Japanese Chaff Flower	<i>Achyranthes japonica</i>	Forb/Herb
Garlic Mustard	<i>Alliaria petiolata</i>	Forb/Herb
Black Alder	<i>Alnus glutinosa</i>	Tree

Mugwort	<i>Artemisia vulgaris</i>	Forb/Herb
Small Carpetgrass	<i>Arthraxon hispidus</i>	Grass
Japanese Barberry	<i>Berberis thunbergii</i>	Shrub
Spiny Plumeless Thistle	<i>Carduus acanthoides</i>	Forb/Herb
Musk Thistle	<i>Carduus nutans</i>	Forb/Herb
Asian Bittersweet	<i>Celastrus orbiculatus</i>	Vine
Spotted Knapweed	<i>Centaurea stoebe</i>	Forb/Herb
Bull Thistle	<i>Cirsium vulgare</i>	Forb/Herb
Poison Hemlock	<i>Conium maculatum</i>	Forb/Herb
Field Bindweed	<i>Convolvulus arvensis</i>	Forb/Herb/Vine
Crown Vetch	<i>Coronilla varia</i>	Forb/Herb/Vine
Chinese Yam	<i>Dioscorea polystachya (oppositifolia)</i>	Forb/Herb/Vine
Common/Fuller's Teasel	<i>Dipsacus fullonum</i>	Forb/Herb
Cut-Leaved Teasel	<i>Dipsacus laciniatus</i>	Forb/Herb
Autumn Olive	<i>Elaeagnus umbellata</i>	Shrub
Burning Bush	<i>Euonymus alatus</i>	Shrub
Winter Creeper	<i>Euonymus fortunei</i>	Shrub
Leafy Spurge	<i>Euphorbia esula</i>	Forb/Herb
Glossy Buckthorn	<i>Frangula alnus</i>	Shrub/Tree
English Ivy	<i>Hedera helix</i>	Vine
Dame's Rocket	<i>Hesperis matronalis</i>	Forb/Herb
Rose of Sharon	<i>Hibiscus syriacus</i>	Shrub/Tree
Japanese Hops	<i>Humulus japonicus</i>	Forb/Herb/Vine
Broadleaved Pepperweed	<i>Lepidium latifolium</i>	Forb/Herb
Sericea Lespedeza	<i>Lespedeza cuneata</i>	Forb/Herb/Subshrub
Blunt-Leaved Privet	<i>Ligustrum obtusifolium</i>	Shrub
Japanese Honeysuckle	<i>Lonicera japonica</i>	Vine
Amur Honeysuckle	<i>Lonicera maackii</i>	Shrub
Morrow's Honeysuckle	<i>Lonicera morrowii</i>	Shrub
Tatarian Honeysuckle	<i>Lonicera tatarica</i>	Shrub
Bell's Honeysuckle	<i>Lonicera x bella</i>	Shrub
Japanese Stiltgrass/Nepalese Browntop	<i>Microstegium vimineum</i>	Grass
Silvergrass	<i>Miscanthus sinensis</i>	Grass
White Mulberry	<i>Morus alba</i>	Shrub/Tree
Reed Canarygrass	<i>Phalaris arundinacea</i>	Grass
Amur Cork Tree	<i>Phellodendron amurense</i>	Tree
Common Reed	<i>Phragmites australis subspecies australis</i>	Grass
Fountain Grass	<i>Pennisetum sp.</i>	Grass
Mile-a-minute Vine	<i>Polygonum perfoliatum</i>	Forb/Herb/Vine
Callery/Bradford Pear	<i>Pyrus calleryana</i>	Tree
Sawtooth Oak	<i>Quercus acutissima</i>	Tree
Japanese Knotweed	<i>Reynoutria japonica</i>	Forb/Herb/Subshrub
Giant Knotweed	<i>Reynoutria sachalinensis</i>	Forb/Herb
Bohemian Knotweed	<i>Reynoutria x bohemica</i>	Forb/Herb
Common Buckthorn	<i>Rhamnus cathartica</i>	Shrub/Tree
Black Locust	<i>Robinia pseudoacacia</i>	Tree
Japanese Spirea	<i>Spirea japonica</i>	Shrub
Siberian Elm	<i>Ulmus pumila</i>	Shrub/Tree
Black Swallow-Wort	<i>Vincetoxicum nigrum</i>	Forb/Herb/Vine
Pale Swallow-Wort	<i>Vincetoxicum rossicum</i>	Forb/Herb/Vine