

**62**

**Streets, Sidewalks and  
Other Public Places**

## Chapter 62

### **STREETS, SIDEWALKS, AND OTHER PUBLIC PLACES**

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## Article III. Street Lights

### Sec. 62-47 Street Lights

## STREETS, SIDEWALKS AND OTHER PUBLIC PLACES § 62-32

### ARTICLE I. IN GENERAL

#### Sec. 62-1. *Placement of drainage structure on public right-of-way.*

(a) Definitions. The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

*Drainage structure* means a structure that allows the passage of fluids under a driveway or walkway or any other way, which is placed over any portion of the public right-of-way.

*Driveway apron* means that portion of a route of ingress and egress to and from a street or road to a parcel of property, lying between the sidewalk and street, or if no sidewalk exists, upon any portion lying upon the street or road right-of-way.

(b) Approval required. Prior to placing any drainage structure on any part of the public right-of-way within the village limits, the structure shall be approved as to materials, length and circumference by a representative of the department of public works. In addition, all such structures, prior to being approved, must include a flare or flanged structure added to each end of the drainage structure.

(Ord. No. 85, §§ 1, 2, 11-12-1984; Ord. No. 95, 6-9-1986)

#### Sec. 62-2

##### **I. Intent and Purpose**

This ordinance is designed to define and regulate the use of skateboards, rollerblades and roller skates upon public property and property open to the general public, to protect the health, safety and welfare of citizens of Lexington, and to provide penalties for violations of this ordinance.

#### Sec. 62-3

##### **II. Definitions**

*Skateboard*: means a single platform mounted on wheels which is propelled solely by human power and which has no mechanism or other device with which to steer or control the direction of movement of the platform.

*Rollerblade and/or Roller Skate:* means small wheels on the bottom of or near the toe and the heel of a shoe or frame that would attach to a shoe, which are used for gliding on a hard surface such as a floor, sidewalk, etc., including what are commonly known as roller blades and/or roller skates.

*BMX-Freestyle Bikes:* Smaller bikes with 20 inch wheels used for trick riding and stunts.

## **Sec. 62-4**

### **III. Regulated Activities**

- (a) Use or operation of skateboards, rollerblade, roller skates and bmx-freestyle bikes are not permitted on any bench, table, planter, wall, retaining wall, or other device or structure which is not intended for pedestrian or vehicle traffic. It is further prohibited to jump or step off such devices or structures while in the process of using or operating a skateboard, rollerblades and/or roller skates.
- (b) Use or operation of a skateboard, rollerblades roller skate and bmx-freestyle bikes in a reckless or careless manner that could reasonably cause harm to others or damage to property is prohibited.
- (c) Any person using or operating a skateboard, rollerblades, roller skates and bmx-freestyle bikes on commercial property must first obtain the written permission of the owner of such property and must carry said written permission on his or her person at all times while using or operating a skateboard on such property. It shall be a violation of this section for any person not to produce said written permission, upon the request of any police officer.
- (d) Use or operation of a skateboard, rollerblades, roller skates and bmx-freestyle bikes upon the surface of the tennis courts and basketball courts at Tierney Park and Lester Street Park as well as any surface at the Lexington Municipal Mobile Home Park is prohibited.
- (e) Skateboard, rollerblade, roller skate and bmx-freestyle bikes operators on all sidewalks or roadways shall yield the right-of-way to all vehicular and pedestrian traffic.
- (f) Skateboarding, rollerblading, roller skating and bmx-freestyle biking is not permitted on Huron Avenue or its adjacent sidewalks and public parking lots, between Main Street and Lake Huron

## **Sec. 62-5**

### **IV. Penalty**

Any person who violates this ordinance shall be responsible for a Grade A municipal civil infraction and subject to the fines as determined by the Village of Lexington Council in Resolution.

## **Sec. 62-6**

### **V. Impoundment of Skateboards, Rollerblades, Roller Skates and Bmx-Freestyle bikes**

A police officer may impound the skateboard, rollerblades, roller skates and bmx-freestyle bikes hold the same until the Municipal Civil Infraction is paid or adjudicated.

A law enforcement officer apprehending a person for violating this article may impound the skateboard, rollerblades, roller skates and bmx-freestyle bikes for 7 days. If a person is 18 years of age or older the skateboard, rollerblades and/or roller skates shall be released by the Police Department if the accused appears at the Police Department and provides proper identification. To obtain a release of skateboard, rollerblades, roller skates and bmx-freestyle bikes a person under the age of 18 years of age must appear at the Police Department with a parent or guardian. Law enforcement officers shall also have the right to impound as evidence any skateboard, rollerblades, roller skates and bmx-freestyle bikes that are used contrary to this article, pending prosecution of such alleged violation of this article.

**VILLAGE OF LEXINGTON  
TELECOMMUNICATIONS ORDINANCE  
ORDINANCE NO: #2003-001**

**THE VILLAGE OF LEXINGTON ORDAINS:**

**Sec. 1 *Purpose.***

The purposes of this ordinance are to regulate access to and ongoing use of public rights-of-way by telecommunications providers for their telecommunications facilities while protecting the public health, safety, and welfare and exercising reasonable control of the public rights-of-way in compliance with the Metropolitan Extension Telecommunications Rights-of-Way Oversight Act (Act No. 48 of the Public Acts of 2002) ("Act") and other applicable law, and to ensure that the Village qualifies for distributions under the Act by modifying the fees charged to providers and complying with the Act.

**Sec. 2 *Conflict.***

Nothing in this ordinance shall be construed in such a manner as to conflict with the Act or other applicable law.

**Sec.3 *Terms Defined.***

The terms used in this ordinance shall have the following meanings:

Act means the Metropolitan Extension Telecommunications Rights-of-Way Oversight Act (Act No. 48 of the Public Acts of 2002), as amended from time to time.<sup>1</sup>

*Village* means the Village of Lexington.

*Village Council* means the Village Council of the Village of Lexington or its designee. This Section does not authorize delegation of any decision or function that is required by law to be made by the Village Council.

*Village Manager* means the Village Manager or his or her designee.

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<sup>1</sup> A copy of the Act can be obtained on the internet at  
<http://www.cis.state.mi.us/mpsc!comm!rightofway/ rightofway.htm>.

*Permit* means a non-exclusive permit issued pursuant to the Act and this ordinance to a telecommunications provider to use the public rights-of-way in the Village for its telecommunications facilities.

All other terms used in this ordinance shall have the same meaning as defined or as provided in the Act, including without limitation the following:

*Authority* means the Metropolitan Extension Telecommunications Rights-of-Way Oversight Authority created pursuant to Section 3 of the Act.

*MPSC* means the Michigan Public Service Commission in the Department of Consumer and Industry Services, and shall have the same meaning as the term "Commission" in the Act.

*Person* means an individual, corporation, partnership, association, governmental entity, or any other legal entity.

*Public Right-of-Way* means the area on, below, or above a public roadway, highway, street, alley, easement or waterway. Public right-of-way does not include a federal, state, or private right-of-way.

*Telecommunication Facilities or Facilities* means the equipment or personal property, such as copper and fiber cables, lines, wires, switches, conduits, pipes, and sheaths, which are used to or can generate, receive, transmit, carry, amplify, or provide telecommunication services or signals. Telecommunication facilities or facilities do not include antennas, supporting structures for antennas, equipment shelters or houses, and any ancillary equipment and miscellaneous hardware used to provide federally licensed commercial mobile service as defined in section 332(d) of part I of title III of the communications act of 1934, chapter 652, 48 Stat. 1064, 47 U.S.C. 332 and further defined as commercial mobile radio service in 47 CFR 20.3, and service provided by any wireless, two-way communication device.

*Telecommunications Provider, Provider and Telecommunications Services* mean those terms as defined in Section 102 of the Michigan telecommunications act, 1991 PA 179, MCL 484.2102. Telecommunication provider does not include a person or an affiliate of that person when providing a federally licensed commercial mobile radio service as defined in Section 332(d) of part I of the communications act of 1934, chapter 652, 48 Stat. 1064, 47 U.S.C. 332 and further defined as commercial mobile radio service in 47 CFR 20.3, or service provided by any wireless, two-way communication device. For the purpose of the Act and this ordinance only, a provider also includes all of the following:

- (a) A cable television operator that provides a telecommunications service.
- (b) Except as otherwise provided by the Act, a person who owns telecommunication facilities located within a public right-of-way.
- (c) A person providing broadband internet transport access service.

#### **Sec. 4 Permit Required.**

(a) *Permit Required.* Except as otherwise provided in the Act, a telecommunications provider using or seeking to use public rights-of-way in the Village for its telecommunications facilities shall apply for and obtain a permit pursuant to this ordinance.

(b) *Application.* Telecommunications providers shall apply for a permit on an application form approved by the MPSC in accordance with Section 6(1) of the Act. A telecommunications provider shall file one copy of the application with the Village Clerk. Upon receipt, the Village Clerk shall make copies of the application and distribute a copy to the Village Manager and the Utilities Manager. Applications shall be complete and include all information required by the Act, including without limitation a route map showing the location of the provider's existing and proposed facilities in accordance with Section 6(5) of the Act.<sup>2</sup>

(c) *Confidential Information.* If a telecommunications provider claims that any portion of the route maps submitted by it as part of its application contain trade secret, proprietary, or confidential information, which is exempt from the Freedom of Information Act, 1976 PA.442, MCL 15.231 to 15.246, pursuant to Section 6(5) of the Act, the telecommunications provider shall prominently so indicate on the face of each map.

(d) *Application Fee.* Except as otherwise provided by the Act, the application shall be accompanied by a one-time non-refundable application fee in the amount of \$500.00 .

(e) *Additional Information.* The Village Manager may request an applicant to submit such additional information which the Village Manager deems reasonably necessary or relevant. The applicant shall comply with all such requests in compliance with reasonable deadlines for such additional information established by the Village Manager. If the Village and the applicant cannot agree on the requirement of additional information requested by the Village, the Village or the applicant shall notify the MPSC as provided in Section 6(2) of the Act.

(f) *Previously Issued Permits.* Pursuant to Section 5( 1) of the Act, authorizations or permits previously issued by the Village under Section 251 of the Michigan telecommunications act, 1991 PA 179, MCL 484.2251 and authorizations or permits issued by the Village to telecommunications providers prior to the 1995 enactment of Section 251 of the Michigan telecommunications act but after 1985 shall satisfy the permit requirements of this ordinance.

(g) *Existing Providers.* Pursuant to Section 5(3) of the Act, within 180 days from November 1, 2002, the effective date of the Act, a telecommunications provider with facilities located in a public right-of-way in the Village as of such date, that has not previously obtained authorization or a permit under Section 251 of the Michigan telecommunications act, 1991 PA 179, MCL 484.2251, shall submit to the Village an application for a permit in accordance with the requirements of this ordinance. Pursuant to Section 5(3) of the Act, a telecommunications

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<sup>2</sup> A copy of the application form as approved by the Commission can be obtained on the internet at [http:// www.cis.state.mi.us/mpsc/comm/rightofway/rightofway.htm](http://www.cis.state.mi.us/mpsc/comm/rightofway/rightofway.htm).



provider submitting an application under this subsection is not required to pay the \$500.00 application fee required under subsection (d) above. A provider under this subsection shall be given up to an additional 180 days to submit the pennit application if allowed by the Authority, as provided in Section 5(4) of the Act.

### **Sec. 5 Issuance of Permit.**

(a) *Approval or Denial.* The authority to approve or deny an application for a permit is hereby delegated to the Village Manager. Pursuant to Section 15(3) of the Act, the Village Manager shall approve or deny an application for a permit within forty-five (45) days from the date a telecommunications provider files an application for a permit under Section 4(b) of this ordinance for access to a public right-of-way within the Village. Pursuant to Section 6(6) of the Act, the Village Manager shall notify the MPSC when the Village Manager has granted or denied a permit, including information regarding the date on which the application was filed and the date on which permit was granted or denied. The Village Manager shall not unreasonably deny an application for a permit.

(b) *Form of Permit.* If an application for permit is approved, the Village Manager shall issue the permit in the form approved by the MPSC, with or without additional or different permit terms, in accordance with Sections 6(1), 6(2) and 15 of the Act.<sup>3</sup>

(c) *Conditions.* Pursuant to Section 15(4) of the Act, the Village Manager may impose conditions on the issuance of a permit, which conditions shall be limited to the telecommunications provider's access and usage of the public right-of-way.

(d) *Bond Requirement.* Pursuant to Section 15(3) of the Act, and without limitation on subsection (c) above, the Village Manager may require that a bond be posted by the telecommunications provider as a condition of the permit. If a bond is required, it shall not exceed the reasonable cost to ensure that the public right-of-way is returned to its original condition during and after the telecommunications provider's access and use.

### **Sec. 6 Construction/Engineering Permit.**

A telecommunications provider shall not commence construction upon, over, across, or under the public rights-of-way in the Village without first obtaining a construction or engineering permit as required under chapter 50 of this Code, as amended, for construction within the public rights-of-way. No fee shall be charged for such a construction or engineering permit.

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<sup>3</sup> Copies of the permit forms currently approved by the MPSC can be obtained on the internet at <http://www.cis.state.mi.us/mpsc/commrightofway/rightofway.htm>.

## **Sec. 7 Conduit or Utility Poles.**

Pursuant to Section 4(3) of the Act, obtaining a permit or paying the fees required under the Act or under this ordinance does not give a telecommunications provider a right to use conduit or utility poles.

## **Sec. 8 Route Maps.**

Pursuant to Section 6(7) of the Act, a telecommunications provider shall, within 90 days after the substantial completion of construction of new telecommunications facilities in the Village, submit route maps showing the location of the telecommunications facilities to both the MPSC and to the Village. The route maps should be in paper format unless and until the MPSC determines otherwise, in accordance with Section 6(8) of the Act.

## **Sec. 9 *Repair of Damage.***

Pursuant to Section 15(5) of the Act, a telecommunications provider undertaking an excavation or construction or installing telecommunications facilities within a public right-of-way or temporarily obstructing a public right-of-way in the Village, as authorized by a permit, shall promptly repair all damage done to the street surface and all installations under, over, below, or within the public right-of-way and shall promptly restore the public right-of-way to its preexisting condition.

## **Sec. 10 *Establishment and Payment of Maintenance Fee.***

In addition to the non-refundable application fee paid to the Village set forth in subsection 4( d) above, a telecommunications provider with telecommunications facilities in the Village's public rights-of-way shall pay an annual maintenance fee to the Authority pursuant to Section 8 of the Act.

## **Sec. 11 *Modification of Existing Fees.***

In compliance with the requirements of Section 13(1) of the Act, the Village hereby modifies, to the extent necessary, any fees charged to telecommunications providers after November 1, 2002, the effective date of the Act, relating to access and usage of the public rights-of-way, to an amount not exceeding the amounts of fees and charges required under the Act, which shall be paid to the Authority. In compliance with the requirements of Section 13(4) of the Act, the Village also hereby approves modification of the fees of providers with telecommunication facilities in public rights-of-way within the Village's boundaries, so that those providers pay only those fees required under Section 8 of the Act. The Village shall provide each telecommunications provider affected by the fee with a copy of this ordinance, ill

compliance with the requirement of Section 13(4) of the Act. To the extent any fees are charged telecommunications providers in excess of the amounts permitted under the Act, or which are otherwise inconsistent with the Act, such imposition is hereby declared to be contrary to the Village's policy and intent, and upon application by a provider or discovery by the Village, shall be promptly refunded as having been charged in error .

**Sec. 12 Savings Clause.**

Pursuant to Section 13(5) of the Act, if Section 8 of the Act is found to be invalid or unconstitutional, the modification of fees under Section 11 above shall be void from the date the modification was made.

**Sec. 13 Use of Funds.**

Pursuant to Section 10(4) of the Act, all amounts received by the Village from the Authority shall be used by the Village solely for rights-of-way related purposes. In conformance with that requirement, all funds received by the Village from the Authority shall be deposited into the Major Street Fund and/or the Local Street Fund maintained by the Village under Act No. 51 of the Public Acts of 1951.

**Sec. 14 Annual Report.**

Pursuant to Section 10(5) of the Act, the Village Manager shall file an annual report with the Authority on the use and disposition of funds annually distributed by the Authority.

**Sec. 15 Cable Television Operators.**

Pursuant to Section 13(6) of the Act, the Village shall not hold a cable television operator in default or seek any remedy for its failure to satisfy an obligation, if any, to pay after November 1, 2002, the effective date of this Act, a franchise fee or similar fee on that portion of gross revenues from charges the cable operator received for cable modem services provided through broadband internet transport access services.

**Sec. 16 Existing Rights.**

Pursuant to Section 4(2) of the Act, except as expressly provided herein with respect to fees, this ordinance shall not affect any existing rights that a telecommunications provider or the Village may have under a permit issued by the Village or under a contract between the Village and a telecommunications provider related to the use of the public rights-of-way.

**Sec. 17 Compliance.**

The Village hereby declares that its policy and intent in adopting this ordinance is to fully comply with the requirements of the Act, and the provisions hereof should be construed in such a manner as to achieve that purpose. The Village shall comply in all respects with the requirements of the Act, including but not limited to the following:

(a) Exempting certain route maps from the Freedom of Information Act, 1976 PA: 442, MCL 15.231 to 15.246, as provided in Section 4(c) of this ordinance;

(b) Allowing certain previously issued permits to satisfy the permit requirements hereof, in accordance with Section 4(f) of this ordinance;

(c) Allowing existing providers additional time in which to submit an application for a permit, and excusing such providers from the \$500 application fee, in accordance with Section 4(g) of this ordinance;

(d) Approving or denying an application for a permit within forty-five (45) days from the date a telecommunications provider files an application for a permit for access to and usage of a public right-of-way within the Village, in accordance with Section 5(a) of this ordinance;

(e) Notifying the MPSC when the Village has granted or denied a permit, in accordance with Section 5(a) of this ordinance;

(f) Not unreasonably denying an application for a permit, in accordance with Section 5(a) of this ordinance;

(g)', Issuing a permit in the form approved by the MPSC, with or without additional or different permit terms, as provided in Section 5(b) of this ordinance;

(h) Limiting the conditions imposed on the issuance of a permit to the telecommunications provider's access and usage of the public right-of-way, in accordance with Section 5(c) of this ordinance;

(i) Not requiring a bond of a telecommunications provider which exceeds the reasonable cost to ensure that the public right-of-way is returned to its original condition during and after the telecommunication provider's access and use, in accordance with Section 5(d) of this ordinance;

(j) Not charging any telecommunications providers any additional fees for construction or engineering permits, in accordance with Section 6 of this ordinance;

(k) Providing each telecommunications provider affected by the Village's right-of way fees with a copy of this ordinance, in accordance with Section 11 of this ordinance;

(l) Submitting an annual report to the Authority, in accordance with Section 14 of this ordinance; and

(m) Not holding a cable television operator in default for a failure to pay certain franchise fees., in accordance with Section 15 of this ordinance.

**Sec. 18 *Reservation of Police Powers.***

Pursuant to Section 15(2) of the Act, this ordinance shall not limit the Village's right to review and approve a telecommunication provider's access to and ongoing use of a public right of-way or limit the Village's authority to ensure and protect the health, safety, and welfare of the public.

**Sec. 19 *Severability.***

The various parts, sentences, paragraphs, sections, and clauses of this ordinance are hereby declared to be severable. If any part, sentence, paragraph, section, or clause of this ordinance is adjudged unconstitutional or invalid by a court or administrative agency of competent jurisdiction, the unconstitutionality or invalidity shall not affect the constitutionality or validity of any remaining provisions of this ordinance.

**Sec. 20 *Authorized Village Officials.***

The Village Manager or his or her designee is hereby designated as the authorized Village official to issue municipal civil infraction citations for violations under this ordinance as provided by the Village Code.

**Sec. 21 *Municipal Civil Infraction.***

A person who violates any provision of this ordinance or the terms or conditions of a permit is responsible for a municipal civil infraction and shall be subject to a Grade D Violation. Nothing in this Section 21 shall be construed to limit the remedies available to the Village in the event of a violation by a person of this ordinance or a permit.

**Sec. 22 *Repealer.***

(a) All ordinances and portions of ordinances inconsistent with this ordinance are hereby repealed.

**Secs. 62-2 62-30.** Reserved.

**ARTICLE II. *SIDEWALKS***

It is the intent and purpose of this article to:

- (1) Establish guidelines and standards for sidewalk construction, repairs and replacements;
- (2) Eliminate safety hazards;
- (3) Establish responsibilities and controls; and

- (4) Establish a sidewalk building program for the village.  
(Ord. No. 50, § 1,3-2-1970)

**Sec 62-62** *Council resolution.*

The Village council shall by resolution declare the intention of the village to make sidewalk improvements.

(Ord. No. 50, § 2, 3-2-1970)

**Sec. 62-33.** *Responsibility.*

(a) The village council shall determine the necessity for the construction, replacement, maintenance and repair of any and all sidewalks within the limits of the village, and shall pass the necessary resolutions to effect the same.

(b) The public works department shall supervise all sidewalk construction, replacement and repair and shall be responsible for the scheduling of such work.

(Ord. No. 50, § 3, 3-2-1970)

**Sec. 62-34.** *Initiation by owner.*

Whenever any person whose property abuts or adjoins a sidewalk deems it in need of repair or replacement, or whenever such person desires the construction of a sidewalk adjoining his property that adjoins a public street, a petition may be presented to the village council in person or in writing expressing the desires of the petitioner to have the sidewalk constructed, repaired or replaced.

(Ord. No. 50, § 4, 3-2-1970)

**Sec. 62-35.** *Notice.*

(a) Whenever the village council shall determine that a sidewalk is to be constructed, repaired or replaced, the village clerk shall give notice to the owner of the abutting and adjoining premises.

(b) Wherever notice is to be served, such notice shall be served as follows:

- (1) By delivery of a copy of the notice to the owner or by leaving the notice at his residence;
- (2) By mailing a copy of the notice to the owner at his last known address; or
- (3) If the owner is unknown or cannot be served, by posting a copy of the notice in some conspicuous place on the premises for a period of five days.

(Ord. No. 50, § 5, 3-2-1970)

**Sec. 62·36. *Work performed.***

All sidewalks shall be constructed, rebuilt or repaired in one of the following manners, as shall be determined by the village council:

- (1) By the department of public works by direct employment of labor and purchase of materials.
- (2) By a qualified contractor or sidewalk builder.
- (3) By the owner of property adjacent to a sidewalk that is to be constructed or repaired. Repairs or construction by any property owner or his agent without prior approval and authorization will be at the property owner's own expense, and no portion of the costs will be accepted by the village. (Ord. No. 50, § 6, 3-2-1970)

**Sec. 62·37. *New construction, replacement, repair.***

The cost of sidewalks built new, rebuilt or repaired, except in new subdivisions, shall be borne 50 percent by the landowner and 50 percent by the village.  
(Ord. No. 50, § 7, 3-2-1970)

**Sec. 62·38. *Sidewalk line.***

Sidewalks shall be constructed in the public streets adjacent to and abutting upon lots in the village upon such lines and grades as the council or department of public works shall direct.  
(Ord. No. 50, § 9, 3-2-1970)

**Sec. 62·39. *Damage.***

- (a) No person shall tear up, remove or encumber any sidewalk or crosswalk without first obtaining authorization from the department of public works or the council.
- (b) Should any sidewalk be damaged or destroyed through the acts of any person, or should the construction or alteration of a building necessitate the changing of the grade of any existing sidewalk, the full cost of such repairs, replacement or changing of grade shall be charged to and assessed against the party responsible for the damage or those requesting changes.  
(Ord. No. 50, § 10, 3-2-1970)

**Sec. 62·40. *Protection.***

Whenever any sidewalk is left in such condition as to obstruct or be dangerous to public travel, and shall be permitted to remain in such condition during the whole or any part of the night, the person responsible for the unsafe condition shall place a suitable number of lights on or about the area to indicate the location and extent of the obstruction.  
(Ord. No. 50, § 11, 3-2-1970)

**Sec. 62-41. *Costs.***

All charges under this article will be billed as labor and material. Costs to be considered will be:

- (1) Material.
  - (2) Total labor and associated costs as follows:
    - a. Labor.
    - b. Clerical, supervision, consultants and billing.
    - c. Vehicle, equipment, and tool expense.
- (Ord. No. 50, § 12,3-2-1970)

**Sec. 62-42. *Safety hazards.***

Whenever any sidewalk or portion of a sidewalk becomes dangerous or unsafe to pedestrian traffic, or in such condition as to constitute a hazard to the safety of the public, the public works department shall be authorized to tear up and remove the dangerous and unsafe portions and to replace the portions with earth, gravel or cinders, or to make permanent repairs to the sidewalk so as to render it safe.

**Section 62-43. *Snow and ice removal.***

(a) The owner of property abutting or adjoining a sidewalk shall keep the sidewalk clear of obstructions, dirt, debris, snow and ice. Snow and ice shall be removed from sidewalks as soon as practical, but not later than 24 hours after snowfall or freezing moisture, so that such sidewalk shall be safe for public travel.

(b) All sidewalks... as previously stated.

(c) All sidewalks... as previously stated.

(d) No person shall place or pile snow on a public sidewalk.

(e) All shoveled snow is to be placed in an area that does not impede pedestrian or vehicle traffic flow.

(f) The Village shall designate high profile pedestrian walkways and provide snow removal services for those named sidewalks. The sidewalks subject to designation are located in the Central Business District and along major streets as defined by Public Act 51.

(g) Seasonal residents or persons not able to keep their sidewalks free of ice and snow as stated in subsection (a) of this section shall arrange for said maintenance.

(h) Unless a resident contributes to a hazardous condition or knowingly allows a hazardous situation to continue, a warning for not shoveling a sidewalk as required in subsection (a) will be issued rather than a civil fine.

(i) A violation of this section is a Grade B civil infraction.



**Sec. 62-44. Construction standards.**

(a) Sidewalks shall be no less than four inches in thickness, and sidewalk that crosses existing or proposed driveways or roadways shall be no less than six inches in thickness. Sidewalks shall be four feet in width.

(b) All sidewalks shall be laid on a firm, well-compacted subgrade of cinders or earth free from vegetable matter or refuse.

(c) All sidewalks shall be upon such grade as directed by the public works department or the council, and sidewalks shall be of good quality concrete.

(Ord. No. 50, § 15, 3-2-1970)

**Sec. 62-45. Billing.**

The village clerk will be responsible for billing and collection in each case. On March 1 of each year, the council shall cause all outstanding accounts to be assessed and levied against the adjacent property as a special tax and shall be collected in the same manner as other village taxes.

(Ord. No. 50, § 16, 3-2-1970)

**Sec. 62-46. Funds.**

The village council shall be responsible to provide funds for the implementation of a sidewalk program, and such funds shall be provided in the village budget. The amount budgeted will be determined by the council.

(Ord. No. 50, § 17, 3-2-1970)

**ARTICLE III -Street Lights**

**Sec. 62-47 Street Lights**

I. All village streets shall be illuminated with street lights.

II. The village will use the services of Detroit Edison for street lighting design. New areas of installation will utilize Detroit Edison's Design and Installation Program. Through this program usage expense for the first three years is subtracted from the cost of the fixtures and installation. A shared cost agreement between the developer, residents, and village is required prior to installation. Thereafter, the village will be responsible for lighting and maintenance costs.

III. Mercury vapor lights are the preferred lighting fixture. Any alternative must be approved by the village prior to installation.

IV. Prior to the dedication of a private street to the village, the street shall be illuminated with street lights pursuant to Detroit Edison criteria or enrolled in Detroit Edison's Design and Installation Program.

V. For streets dedicated to the village prior to April 1, 2003, the Village will arrange for street light design and will pay for all lighting and installation costs.

VI. Developers designing new developments may seek Council approval for alternative lighting solutions that produce equivalent results.

**63**

**Land Divisions  
and Subdivisions**

## **Chapter 63**

### **LAND DIVISIONS AND SUBDIVISIONS**

#### **Article I. Division of Unplatted Lands**

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- Sec. 63-2 Definitions
- Sec. 63-3 Prior Approval Requirements
- Sec. 63-4 Application for Approval
- Sec. 63-5 Procedure for Review of Applications
- Sec. 63-6 Standards for Approval
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**VILLAGE OF LEXINGTON  
SANILAC COUNTY, MICHIGAN**

**ORDINANCE # 63:1-8**

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE VILLAGE OF LEXINGTON, TO ADD PROVISIONS REGULATING THE DIVISION OF UNPLATTED LANDS, AND FOR OTHER PURPOSES.

THE VILLAGE OF LEXINGTON ORDAINS:

**ARTICLE 1: PURPOSE**

The purpose of this Ordinance is to amend the Code of Ordinances to include provisions regulating the division of unplatted lands.

**ARTICLE 2: AMENDMENT**

The Code of Ordinances is, hereby, amended by adding the following:

**CHAPTER 63. LAND DIVISIONS AND SUBDIVISIONS**

**ARTICLE I. DIVISION OF UNPLATTED LANDS**

**Sec. 63-1. Purpose.**

The purpose of this chapter is to carry out the provisions of the State land Division Act (Public Act No. 288 of 1967 (MCL 560.101 et seq.) formerly known as the Subdivision Control Act), to prevent the creation of parcels of property which do not comply with applicable ordinances and with the act, to minimize potential boundary disputes, to maintain orderly development of the community, and otherwise provide for the health, safety and welfare of the residents and property owners of the Village by establishing reasonable standards for prior review and approval of land divisions within the Village.

**Sec. 63-2 Definitions.**

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Applicant means a natural person, firm, association, partnership, corporation, or combination of any of them that holds an ownership interest in land, whether recorded or not.

*Divide and division* mean the partitioning or splitting of a parcel or tract of land by the proprietor thereof or by his heirs, executors, administrators, legal representatives, successors or assigns, for the purpose of sale or lease of more than one year, or of building development that results in one or more parcels of less than 40 acres or the equivalent, and that satisfies the requirements of sections 108 and 109 of the State land Division Act. The terms "divide" and "division" do not include a property transfer between two or more adjacent parcels, if the property taken from one parcel is added to an adjacent parcel; and any resulting parcel shall not be considered a building site unless the parcel conforms to the requirements of the State land Division Act, or the requirements of other applicable village ordinances.

*Exempt split and exempt division* mean the partitioning or splitting of a parcel or tract of land by the proprietor thereof, or by his heirs, executors, administrators, legal representatives, successors or assigns, that does not result in one or more parcels of less than 40 acres or the equivalent. For a property transfer between 2 or more adjacent parcels, if the property taken from 1 parcel is added to an adjacent parcel, any resulting parcel shall not be considered a building site unless the parcel conforms to the requirements of the State land Division Act or the requirements of this article.

*Forty acres or the equivalent* means either 40 acres, a quarter-quarter section containing not less than 30 acres, or a government lot containing not less than 30 acres.

*State Land Division Act* means Public Act No. 288 of 1967 (MCL 560.101 et seq.).

**Sec. 63-3. Prior approval requirement.**

Land in the village shall not be divided without the prior review and approval of the Zoning Administrator in accordance with this chapter and the State land Division Act, provided that the following shall be exempted from this requirement:

- (a) A parcel proposed for subdivision through a recorded plat pursuant to the Article II of this Chapter and the State land Division Act.
- (b) A lot in a recorded plat proposed to be divided in accordance with the Article II of this Chapter and the State land Division Act.
- (c) An exempt split as defined in this chapter, or other partitioning or splitting that results in parcels of 20 acres or more if each is not accessible and the parcel was in existence on March 31, 1997, or resulted from exempt splitting under the State land Division Act.

**Sec. 63-4. Application for approval.**

An applicant for land division approval shall file all of the following with the Zoning Administrator for review and approval of a proposed land division before making any division either by deed, land contract, lease for more than one year, or for building development:

*Land Division Ordinance -Adopted 10/31/2009 page 2*

Five (5) copies of the following:

(a) A completed application form provided by the village.

(b) A survey of the proposed division prepared by a registered surveyor in the state, except that, in cases where all of the parcels to be created are greater than ten acres each, a tentative parcel map drawn to scale may be submitted in lieu of a survey. The surveyor tentative parcel map shall contain the following information:

- (1) The name and address of the applicant and surveyor, if applicable.
- (2) The date of the surveyor date that the tentative parcel map was prepared, north arrow and scale.
- (3) Boundary lines and acreage of the parcel to be divided, including boundary lines and acreage of the entire parent parcel.
- (4) Names of all streets, rights-of-way and roadway widths of all existing and proposed streets within and/or adjacent to the parcel proposed to be divided.
- (5) All existing structures (including their distance from existing and proposed property lines sufficient to demonstrate compliance with zoning setback requirements) and physical features which would influence the layout and design of the proposed division.
- (6) The location, width and purpose of any and all easements.
- (7) An accurate legal description of each proposed division.

(c) The Zoning Administrator may waive the survey requirement above in cases where a tentative parcel map is deemed to contain adequate information to approve a proposed land division considering the size, simple nature of the divisions, and the undeveloped character of the territory within which the proposed divisions are located. An accurate and adequate legal description' of all the proposed divisions, however, shall at all times be required.

(d) Proof of fee ownership of the land proposed to be divided.

(e) Proof that all standards of the State Land Division Act and this Article have been met.

(f) The history and specifications of any previous divisions of land of which the proposed division was a part sufficient to establish if the parcel to be divided was lawfully in existence as of March 31, 1997, the effective date of the State Land Division Act.

(g) If transfer of division rights are proposed in the land transfer, detailed information about the terms and availability of the proposed division rights transfer.

(h) A review fee as may from time to time be established by resolution of the Village Council for land division reviews pursuant to this chapter to cover the costs of review of the application and administration of this chapter and the State land Division Act. If review of the application by the Village Planner is deemed necessary as set forth in Section 63-5(b) below, the cost of such review shall be borne by the applicant.

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**Sec. 63-5. Procedure for review of applications.**

(a) Upon receipt of a land division application package, the Zoning Administrator shall forward a copy of the package to the Assessor for the Village. The Zoning Administrator shall approve; approve with reasonable conditions to ensure compliance with applicable ordinances and the protection of public health, safety and general welfare; or disapprove the land division applied for within 45 days.

after receipt of the application package conforming to the requirements of this article, and shall promptly notify the applicant of the decisions and the reasons for denial. If the application package does not conform to this article and the land division act, the Zoning Administrator shall return the package to the applicant for completion and refiling in accordance with this article and the land division act.

(b) Prior to acting on an application for land division approval, the application may be submitted to the Village Planner for review and recommendation.

(c) Any person or entity aggrieved by the Zoning Administrator's decision may, within 30 days of the decision, appeal the decision to the land Division Appeals Board, which is hereby created. The Board shall consist of the following members:

- (1) The Chair of the Village Planning Commission;
- (2) The Village President;
- (3) The Assessor for the Village.

Business shall be conducted at a public meeting with public notice of the time, date, and place of a regular or special meeting as required by Public Act No. 267 of 1976 (MCL 15.261 et seq.). An affirmative vote of not less than two members shall be necessary to reverse a decision of the Zoning Administrator or designee. The Board shall elect a Chairperson, Vice-Chairperson, and Secretary from among its members. The Board shall adopt rules of procedure for the transaction of its business and shall keep a written record of its proceedings, transactions, resolutions, findings and determinations. The land Division Appeals Board shall consider and resolve such appeal at its next regular meeting or session affording sufficient time for a 20-day written notice to the applicant (and appellant where other than the applicant) of the time and date of the meeting and appellant hearing.



(d) The Assessor for the Village shall maintain an official record of all approved and accomplished land divisions or transfers.

(e) Approved land divisions shall be recognized by the Assessor for the Village and placed on the assessment roll in the year immediately following the year of approval except for those land divisions approved on or before the first Monday in March, which, with written request, may be placed on the immediately ensuing assessment roll in the year approved.

(f) Approval of a division is not a determination that the resulting parcels comply with other ordinances and regulations.

(g) The Village and its officers and employees shall not be liable for approving a land division if building permits for construction on the parcels are subsequently denied because of inadequate water supply, sewage disposal facilities or otherwise, and any notice of approval shall include a statement to this effect.

**Sec. 63-6. Standards for approval.**

A proposed land division reviewable by the Zoning Administrator shall be approved if the following criteria are met:

(a) All parcels created by the proposed division have a minimum width as otherwise required by the Village Zoning Ordinance for the applicable zoning district.

(b) All such parcels contain a minimum area as otherwise required by the Village Zoning Ordinance for the applicable zoning district.

(c) All parcels created and remaining have frontage on a public street for the required width of the parcel as set forth in Section 4.3.2.2 of the Village Zoning Ordinance.

(d) All parcels created and remaining have adequate easements for public utilities.

(e) The ratio of depth to width of any parcel created by the division does not exceed a four-to-one ratio, except that this shall not apply to the remainder of the parent parcel or parent tract retained by the proprietor. The depth of a parcel created by the division shall be measured within the boundaries of each parcel from the abutting road right-of-way to the most remote boundary line point of the parcel from the point of commencement of the measurement.

(f) The proposed land division complies with all requirements of this chapter, the Village Zoning Ordinance, and the State Land Division Act.

**Sec. 63-7. *Consequences of noncompliance with approval requirement.***

(a) Any division of land in violation of any provision of this chapter shall not be recognized as a land division on the tax roll and no construction thereon which requires the prior issuance of a construction or building permit shall be allowed. The village shall further have the authority to initiate injunctive or other relief to prevent any violation or continuance of any violation of this chapter.

(b) An unlawful division or split shall also be voidable at the option of the purchaser and shall subject the seller to the forfeiture of all consideration received or pledged therefore, together with any damages sustained by the purchaser, recoverable in an action at law.

**Sec. 63-8. *Penalty for violation.***

Any person who violates or fails to comply with any provision of this article shall be deemed responsible for committing a municipal civil infraction.

**Secs. 63-9-63-30. *Reserved.***

**ARTICLE 3: *REPEAL***

All ordinances in conflict herewith are hereby repealed.

**SECTION 4: *EFFECTIVE DATE***

Public hearing having been held here on by the Planning Commission on August 4, 2008, this ordinance shall become effective upon publication, pursuant to Chapter VI, Section 1, Act 3 of the Public Acts of 1895, as amended.

**SECTION 5: *INSPECTION OF ORDINANCE***

A copy of this Ordinance may be inspected or purchased at the Village Hall, 7227 Huron Ave., Suite 100, Lexington, MI 48450, during regular posted office hours.

**SECTION 6: *ADOPTION***

Made and passed by the Village Council of the Village of Lexington, Sanilac County, Michigan, on this 25<sup>th</sup> day of August, 2008. A.D.

## **Engineering Design and Construction Standards**

Chapter 64  
**Engineering Design and Construction Standards**

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Sec. 64-65 Catch basin and inlets shall be located, in general  
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#### **Article XI. Storm Water Detention and Retention Facilities**

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#### **Article XII. Soil Erosion and Sedimentation Control**

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#### **Article XIII. Landscaping Establishment and Restoration Standards**

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**VILLAGE OF LEXINGTON  
SANILAC COUNTY, MICHIGAN  
ORDINANCE**

**CHAPTER 64 ARTICLE 1**

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES OF THE VILLAGE OF LEXINGTON TO ESTABLISH MINIMUM ENGINEERING DESIGN AND CONSTRUCTION STANDARDS FOR GRADING AND SURFACE DRAINAGE, ROADS, STREETS AND PAVING, PARKING LOTS AND DRIVEWAYS, BIKE PATHS, WATER SUPPLY SYSTEMS, SANITARY SEWER SYSTEMS, STORM SEWER SYSTEMS, STORM WATER DETENTION/RETENTION BASINS, AND OTHER ENGINEERING IMPROVEMENTS FOR SITE PLAN, SUBDIVISION, AND CONDOMINIUM DEVELOPMENT PLANS.

**THE VILLAGE OF LEXINGTON ORDAINS:**

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**ARTICLE 1: AMENDMENT**

The Code of Ordinances is, hereby, amended by adding the following:

**CHAPTER 64. ENGINEERING AND CONSTRUCTION STANDARDS**

**ARTICLE I. INTRODUCTION**

**Sec. 64-1. Short Title.**

This ordinance shall be known as the "Village of Lexington Engineering and Construction Standards Ordinance" and shall hereinafter be referred to as "Engineering and Construction Standards".

**Sec. 64-2. Purpose.**

The purpose of these Standards shall be to establish the minimum design and construction standards for: streets, paving and grading, surface drainage, parking lots and driveways, bike paths, water supply systems, sanitary sewer systems, storm sewer systems, storm water detention/retention basins and other engineering improvements for site plan, subdivision and condominium development plans and standards for accepting the dedication of pre-existing roads and streets to the village.

**Sec. 64-3. Procedures.**

Procedures shall be in accordance with Chapter 63, Article II, Subdivision Control, of the Village of Lexington Code of Ordinances, the Village of Lexington Village of Lexington Zoning Ordinance, and the State of Michigan Subdivision Control Act, being Act 288 of P.A. of 1967, as amended.

**Sec. 64-4. *Certification.***

All subdivisions, condominiums, site plans, and utility plans submitted to the Village of Lexington for review shall bear the signature and seal of a registered professional civil engineer, according to Public Act 299 of 1980, and currently registered to practice in the State of Michigan under whose supervision the plans were prepared.

**Sec. 64-5. *Exceptions.***

Exceptions to these standards may be permitted provided, in the opinion of the Municipal Engineer, the substitute design is equal to or better than the requirements established by these standards.

**Sec. 64-6. *Conflicts.***

In the event that a difference of opinion shall arise between the Municipal Engineer and/or the developer or the developer's engineer, the Village of Lexington and the Municipal Engineer shall prevail in resolving the conflict.

**Sec. 64-7. *Rules applying to text.***

For the purpose of this Ordinance, the following rules of construction apply:

- (a) Words used in the present tense include the future tense; and in the singular include the plural, unless the context clearly indicates the contrary.
- (b) The term "shall" is mandatory; the term "may" is permissive.
- (c) The word or term not interpreted or defined by this Article shall be used with a meaning of common or standard utilization.

**Section 64-8. *Conformance with applicable standards.***

All items and installation shall be reviewed by the Municipal Engineer and certified as to conformance with the standards of this ordinance and other applicable laws, rules, regulations and adopted standards.

**Sections 64-9 -64-10. *Reserved***



## ARTICLE II. DEFINITIONS

### Section 64-11. *Definitions.*

The following is a list of words and phrases defined for the purpose of their use in interpretation of the Engineering and Construction Standards. These definitions shall apply in the interpretation, administration, and enforcement of the Engineering and Construction Standards. Words and phrases not specifically defined shall rely on their definition in the: Village of Lexington Zoning Ordinance; Chapter 63, Article II, Subdivision Control, of the Village of Lexington Code of Ordinances; and the Village of Lexington Master Plan.

**"AASHTO"** shall mean the **"American Association of State Highway and Transportation Officials"** policy manual.

**"Alley"** shall mean any dedicated public way affording a secondary means of access to abutting property and not intended for general traffic circulation.

**"American Water Works Association" or "AWWA"** shall mean nonprofit scientific and educational society dedicated to the improvement of water quality and supply. AWWA has developed the industry standards that govern the operations of community tap water providers throughout the world.

**"American National Standards Institute" or "ANSI"** shall mean that national standards setting organization.

**"Building Service Storm Sewer (Drainage Water)"** shall mean any drainage water pipe extension from a building foundation drain outlet of a building or dwelling unit to a public storm water drain.

**"Building Service Sanitary Sewer (Wastewater)"** shall mean the sewer extension from a building wastewater outlet of a building or a dwelling unit to the Customer Wastewater Disposal Outlet.

**"Building Service Water Supply"** shall mean any water supply mains, pipes, services, and/or appurtenances, except meters, that extend from a point of connection with the building water pipe of a building or a dwelling unit the Customer Water Supply Outlet.

**"Customer Wastewater Disposal Outlet"** shall mean the point of connection to the public sanitary sewer main.

**"Customer Water Supply Outlet"** shall mean either the outlet on the customer side of a "stop valve (curb stop)" near the public easement or public right of way (in the case of a supply for a single building) or on the customer side of a master water meter where the village has allowed the use of a master water meter to serve special types of customers.

**"Engineering and Construction Standards"** are the applicable standards relevant to the planning, design and construction of infrastructure improvements within the Village, as adopted and contained in the Village's Engineering and Construction Standards.

The Village, as adopted and contained in the Village's Engineering and Construction Standards.

**"Development" or "Developer's Project" or "Project"** shall mean a specifically designated site being developed (or proposed for development) by a developer.

**"Ditch" or "Drainage Swale"** shall mean an open channel used to transport water, groundwater, surface water run-off, or drainage water from any source.

**"Drainage Facilities" or "Drainage Water Facilities"** shall mean any storm sewers, lakes, ponds, streams, rivers, or storm drains, including facilities designated as County Drains, that receive water from lands owned by more than one Owner.

**"Dwelling Unit"** A dwelling unit is any house or building or portion thereof having cooking facilities which is occupied wholly as the home, residence or sleeping place of one (1) family, either permanently or transiently, and placed on a permanent foundation, but in no case shall a travel trailer, automobile chassis, tent or portable building be considered a dwelling. In case of mixed occupancy where a building is occupied in part as a dwelling unit, the part so occupied shall be deemed a dwelling unit for the purpose of this Ordinance and shall comply with the provisions thereof relative to dwellings.

**"Easement"** shall mean a grant by the owner of the use of land by the public, a corporation, or persons, for specific uses and purposes, to be designated as a "public" easement or a "private" easement depending on the nature of the use.

**"Engineer"** is the Village's Engineer or other Village Officer, Employee or Agent acting on behalf of the Village in the administration of the Village's Engineering and Construction Standards.

**"Foundation Drain Service Pipe"** shall mean a conveyance pipe that receives only foundation drain groundwater seepage, exclusive of directly and intentionally introduced surface water runoff.

**"Factory Mutual" or "FM"** shall mean that national standards setting organization in Third-Party Certification of Property Loss Prevention Products and Services.

**"Land Developer" or "Developer"** shall mean a person, firm, association, partnership, corporation, or any other legal entity who intends to develop land by making various improvements to the land as described under "Site Improvements".

**"Land Development" or "The Development of Land"** shall mean the reshaping of the land environment to provide for the elements or amenities associated with community living. Items considered as these elements or amenities include any of the items listed under the definition for **"Site Improvements"**.

**"Lot"** shall mean a parcel of land occupied or intended to be occupied by a main building or a group of such buildings and accessory buildings, or utilized for the principal use and uses accessory thereto, together with such yards and open spaces as are required under the provisions of the Zoning Ordinance. A lot may or may not be specifically designated as such on public records. Each such parcel shall also have its front line abutting a public street or a recorded easement.

**"Mains" or "Water Mains"** as applied to the water supply facilities and connections thereto, shall mean any water supply conveyance pipe eight (8") inches or larger in diameter.

**"Michigan Department of Environmental Quality" or "MDEQ"** shall mean the State Agency that regulates water supply facilities in the State and certain wastewater disposal facilities in the State.

**"Michigan Department of Transportation" or "MDOT"** shall mean the State Agency that operates State roadways and Federal expressways.

**"Village"** shall mean the VILLAGE OF LEXINGTON (Michigan) and its Officers, Employees, and Agents, including, but not limited to, the Village Council, Village Planning Commission, Village staff, Village Attorney, Village Engineer, etc.

**"National Pollution Discharge Elimination System" or "NPDES"** shall mean that system required by the State of Michigan to regulate treatment and discharge of storm water and/or wastewater to the waters of the State.

**"Natural Outlet"** shall mean any outlet into a watercourse, pond, ditch, lake, or other body of surface water or groundwater.

**"National Sanitation Foundation" or "NSF"** shall mean the Public Health and Safety Company™, a not-for-profit, non-governmental organization, is the world leader in standards development, product certification, education, and risk management for public health and safety.

**"Open Drain"** shall mean a large open channel used to transport storm water, groundwater, and surface water runoff or drainage water from any source.

**"Parking Lot Bay"** shall mean a portion of the width of a parking lot that includes a set of parking stalls on either side of a driveway provided for access to such parking stalls.

**"Parking Lot"** shall mean a designated area used primarily for the off-street parking of motor vehicles.

**"Person"** shall mean any individual, firm, company, association, society, corporation, governmental agency (including school district), or other legal entity.

**"Plat"** shall mean a map or chart of a subdivision of land as defined in Act No. 288 of Michigan Public Acts of 1967, as amended.

**"Plot Plan"** shall mean a scaled topographic drawing of existing and proposed modifications to land utilized for or zoned for single and duplex residential dwelling.

**"Preliminary Subdivision Plan"** shall mean a preliminary plat showing the salient features of a proposed subdivision of land submitted to an approving authority for purposes of preliminary consideration, as defined in Act No. 288 of Michigan Public Acts of 1967 as amended.

**"Public Sanitary Sewer"** shall mean a sanitary sewer owned and operated by a governmental agency intended to be located in public easements or public right of way that collect, or is intended to collect wastewater from more than one user or premises and that is required to receive the approval and issuance of a construction permit from the Municipal Wastewater Control Section of the MDEQ.

**"Public Storm Sewer" or "Public Drain"** shall mean a common storm sewer or drain that services more than one user or premises and is controlled by the Village or another governmental agency.

**"Public Utility Company" or "Utility Company"** shall mean a legally constituted firm, corporation or agency (other than the Village or a County Agency acting under a contract with the Village) that operates under a franchise or agreement approved by the Village for the purpose of installing and operating public utilities, including, but not limited to, gas piping, electric or telephone wiring (underground or overhead), oil piping, television cable, water supply, transmission mains, sanitary sewer interceptors, and/or drainage facilities.

**"Public Water Main"** shall mean a water main, existing or proposed, in public easements or public rights of way that is intended to serve more than one user or premises and that is required to receive the approval and issuance of a construction permit from the Municipal Water Supply Section of the Michigan Department of Environmental Quality. The service pipe extending from a public water main to a "Customer Water Supply Outlet" shall also be considered "Public".

**"Right of Way" or "ROW"** shall mean land dedicated, reserved, used or to be used for a street, alley, walkway or other public purposes.

**"Sanilac County Drain Commissioner" or "SCDC"** shall mean that person or agency responsible for drainage improvements under the jurisdiction of the State

- Drain Act, PA 40 of 1956, as amended.

**"Sanilac County Road Commission" or "SCRC"** shall mean that agency responsible for the construction, operation, and maintenance of county highways, roads, and streets.

**"Sanitary Sewer"** shall mean a sewer, together with appurtenances, that carries liquid and water carried wastes from residences, commercial buildings, industrial plants, and institutions, together with minor quantities of ground, storm, and surface waters that are not admitted intentionally.

**"Services, Water"** as applied to the water supply facilities and connections thereto, shall mean any water supply conveyance pipe outside of a building.

**"Sewage Force Main" or "Force Main"** shall mean a wastewater conveyance pipe which carries wastewater under pressure.

**"Sewer"** shall mean a pipe or conduit that carries wastewater or drainage water.

**"Sight Distance"** shall mean the unobstructed straight-line length of view from a driver's eye height to an object height.

**"Site Improvements" or "Improvements"** shall mean such operations, acts of construction or changes affecting land that increases the value, utility or habitability of the site and including, but not limited to, site grading; drainage water sewers, culverts or drains; sanitary sewers; wastewater disposal facilities; water supply piping; water supply facilities; gas piping; oil piping; television cable; electric power supply wiring; telephone wiring; roadway surfacing or paving; parking lot paving; driveways; bridges; lakes, ponds, or lagoons; sidewalks; landscape walls and fences, and/or other appropriate appurtenant items.

**"Site Plan"** shall mean the plan required under the Village's Zoning Ordinance for "Site Plan Review" for all projects other than a land subdivision plat.

**"Sanilac County Department of Construction, Soil Erosion & Sedimentation Control Agency"** shall mean that agency responsible for Soil Erosion and Sedimentation Control Permits.

**"Stop Valve" or "Curb Stop"** shall mean the valve placed on a building service water supply pipe that is located at a "Customer Water Supply Outlet".

**"Storm water Drain" or "Storm Drain" or "Storm Sewer"** shall mean a watercourse or a sewer intended for the conveyance of water, groundwater, surface water runoff, drainage water.

**"Storm water Inlet Structure"** shall mean a structure designed and constructed to intentionally admit surface water runoff, drainage water.

**"Street"** shall mean any street, avenue, place, way, drive, lane, boulevard, highway, road or other right of way that provides for vehicular or pedestrian access to abutting properties by the general public; and includes the land between the street right of way lines whether improved or unimproved. An alley is not a street.

1. **"Street, public"** shall mean a right of way that provides for vehicular and pedestrian access to abutting properties that is deeded or dedicated to the Village or other governmental agency authorized to own road right of way and/or operate vehicular transportation facilities.

2. **"Street, private"** shall mean a right of way or easement that provides for vehicular and pedestrian access to acquiring properties for the general public, but is not deeded or dedicated to a governmental agency for ownership, operation or maintenance. The landowners of the property served by the private street are responsible for its ownership, operation, or maintenance. .

3. **"Street, major" or "Thoroughfare, major"** shall mean streets or thoroughfares meeting one or more of the following:

- a. Streets that provide extensions to State Trunk Lines or County Primary Roads in facilitating through traffic.
- b. Streets that provide an integral network to service the traffic demands created by industrial, commercial, educational, or other traffic generating centers.
- c. Streets that provide for the circulation of traffic and around the central business district.
- d. Streets that are designated truck routes.
- e. Streets that collect traffic from an area served by an extensive network of local streets.
- f. Main traffic arteries designated on the master plan as a major thoroughfare.

4. **"Street, collector"** shall mean streets or highways intended primarily for mutual access between major and minor streets, for entrance to residential "areas and for circulation within such areas.

5. **"Street, minor"** shall mean streets not meeting any of the criteria from major streets or collector streets .

**"Surface Water Runoff" or "Storm water"** shall mean that part of rainfall or melting snowfall that reaches the storm water drain as runoff from natural land surfaces, building roofs or pavements.

**"Trunk Storm Sewer"** shall mean a public storm sewer having a diameter of twenty four (24) Inches or larger.

**"Underdrain Pipe"** shall mean a geotextile wrapped perforated pipe installed underground for the specific purpose of lowering a high groundwater condition or draining a granular sub-base by receiving groundwater seepage and conveying it to a storm water drain. Farm Drain Tile is not Underdrain Pipe.

**"Underwriters Laboratories, Inc." or "UL"** shall mean product safety testing and certification organization, UL is synonymous with safety.

**"Unpolluted Water" or "Drainage Water"** is water of a quality equal to or better than the effluent criteria currently in effect, as specified by the MDEQ, or water that would not cause violation of receiving water quality standards and would not be benefited by discharge to the Village sanitary sewers and wastewater disposal system.

**"User"** shall mean the owner or occupant of any premises connected with and/or using any of the facilities operated by the Department.

**"Utility Company's Contractor"** shall mean a construction contractor engaged by the utility company to install public utilities for the utility company; or, in the case where the utility company has a construction division that installs its own utilities, shall mean the utility company.

**"Wastewater Treatment Works" or "Sewage Treatment Plant"** shall mean facilities for treating wastewater, industrial wastes, and sludge.

**"Wastewater" or "Sewage"** shall mean the spent water of a community, including liquid and water-carried wastes from residences, commercial buildings, and industrial plants.

**"Watercourse"** shall mean a natural or artificial open channel for the passage of water either continuously or intermittently.

### **ARTICLE III. GENERAL REQUIREMENTS AND SUBMITTALS**

#### **Section 64-12. General requirements and submittals; generally.**

The items found in this article contain the general requirements for the submittal of plans to the Village for review, comment, and approval. In addition, specific requirements pertaining to Water Mains, Sanitary Sewers, Storm Drains, Detention, Paving and Grading, Street Names, Street and Easement Widths, all other Street and Easement Survey Information, follow this Section and apply as stated within their respective context.

#### **Section 64-13. Submittal requirements.**

Projects submitted for review shall contain the following items. The Municipal Engineer shall determine whether or not a specific exhibit is not applicable.

- (a) Complete sets of Site Plans including Engineering Plans, bearing the seal of a Registered Professional Civil Engineer, licensed to practice in the State of Michigan according to the Occupational Code, Public Act 299 of 1980, and shall be submitted to the Village for review. The number of sets shall be according to the Village of Lexington requirements as determined by the Zoning Administrator, but in no case shall less than three (3) sets be provided. The Village may elect to send the plans to a consulting firm of their choice for review. Each plan sheet shall contain the project name and the project owner's name and address.

(b) A Certified Boundary Survey of the site or a copy of the complete plat shall be submitted along with the Engineering Construction Plans.

(c) Plans shall be submitted on 24-inch x 36-inch plans having blue or black lines and shall be neatly and accurately prepared.

(d) All plans shall contain the latest version of the applicable Village's standard details .

(e) The cover sheet shall include a location map, showing the location of the proposed project, a symbol legend, and a sheet index.

(f) Existing information, topography, utilities, etc., shall be shown in gray or lighter line weight, while proposed improvements shall be shown in dark and heavy black lines. The legend shall clearly refer to all line symbols used.

(g) For projects having more than one (1) sheet of plans, a general plan having a scale of 1 inch equal to 100 feet (1"=100') shall be provided with bar scale, and showing the overall project, as well as indicating the size and general location of all improvements shown in the detailed plans. Street names, street and easement widths, lot lines, lot dimensions, lot numbers, zoning, and ownership shall be shown on all plans.

(h) Utilities shall be located in accordance with the Village's standards. Utilities shall be parallel to lot lines. Generally, utilities shall be constructed in the road right of way or in easements adjacent to the road right of way and shall not be located under existing or proposed pavement, including paths and sidewalks. Side yard easements are acceptable.

(i) Grading plans are required for all developments.

(j) Engineering plans having a scale of no greater than 1 inch equals 50 feet (1"=50') horizontal and 1 inch equals 5 feet (1"=5') vertical (for profiles) shall be provided with bar scale. Sanitary sewer and water main can be shown on the same sheet. Plan and profile views are required on all gravity sewers. The profile, where possible, shall be shown below the plan view on the same sheet.

(k) Storm sewer and pavement shall be shown on the same sheets. Plan and profile views are required for all storm sewers. A plan view with centerline stationing shown is required on all paving plans. Show the top of curb line on profile.

(l) In the plan and profile views, all crossings of utilities must be shown. When a water main crosses a sewer, an invert or top of pipe elevation (whichever is appropriate) for the water main shall be shown. The minimum vertical clearance between utilities shall be eighteen (18) inches.



(m) Profiles of sewers shall indicate the size, rim elevations of all structures, the length of pipe between structures, the slope of the pipe, numbering of structures, and casting. The profile shall indicate the existing and proposed ground elevations above the route of the sewer. The inverts of all sewers, both existing and proposed, shall be given at manholes. The location of areas requiring compacted sand backfill shall be indicated on the profile.

(n) Elevations shall be on U.S.G.S. Datum. A minimum of two (2) permanent benchmarks for the work shall be indicated on the plans with the datum used clearly labeled.

(o) Any areas that are considered to be "wetlands" as defined by the Michigan Department of Environmental Quality (MDEQ) shall be indicated on the plans. No improvements will be allowed in wetlands unless the MDEQ issues a permit for such improvements.

(p) Finished grade shall be indicated at the corners of all buildings and for all utility structures.

(q) Plans for landscaping or tree planting required by either village ordinance or the Village standard relating to such items as greenbelts, street islands, detention basins, or landscape and open space areas, shall conform to the Village standards and shall be submitted for review and approval prior to final site approval.

(r) All new grass areas that are required in the public right of way and all existing grass areas that are disturbed by construction shall be established or restored in conformance with the standards provided in this ordinance.

(s) Street names shall be approved by the Village.

(t) The Developer's consulting engineer shall forward plans for approval to any public utility (gas, electric, etc.) and any Federal, State or County Agency, whose facilities or right of way may be affected by the proposed construction. Permits for such construction, if required, shall be the responsibility of the Developer. One (1) copy of any such permit shall be provided to the Village prior to construction.

(u) For all developments, one (1) electronic Copy on disk in AutoCAD format, one (1) electronic copy in Acrobat PDF format, and two (2) sets of prints sealed by a Registered Professional licensed to practice in the State of Michigan according to State of Michigan Occupational Code, Public Act 299 of 1980, of all as-built drawings for sanitary sewers, storm sewers, water mains, detention basins, streets and roads, shall be provided by the Developer prior to final approval and acceptance by the Village.

(v) All materials and workmanship shall conform to the latest edition of the Michigan Department of Transportation's (MDOT) "Standard Specifications for Construction", the Sanilac County Road Commission (SCRC) published criteria, and the requirements of this ordinance. In the event of a conflict between standards, the most stringent shall govern, except when the Village agrees that a less stringent interpretation is appropriate for the intended use.

## ARTICLE IV. GRADING

### Sections 64-14. *Requirements for master grading plans.*

A Master Grading Plan is required for all developments. Master Grading Plans shall accompany the set of engineering construction plans and shall include the following:

- (a) Benchmark locations, descriptions, and elevations (USGS) to be used for the development.
- (b) The minimum scale for grading plans is one inch equals fifty feet (1" = 50').
- (c) The grades of existing adjacent house\$, buildings, drainage structures, and streets shall be shown. One (1) foot existing contours shall be shown for the site and one hundred (100) feet past the property line(s). The drainage pattern of all adjacent land shall be indicated. All off site drainage flowing onto the site shall be clearly labeled and identified.
- (d) Match existing grade at the property boundaries.
- (e) Grading plans shall correspond with proposed landscape, soil erosion, and Municipal Separate Storm Sewer Systems (MS4s) requirements. Any revisions in the grading plan may require Planning Commission approval if it directly or indirectly affects the approved landscape.
- (f) The grading plan shall be designed to ensure that if a failure occurs in the storm system, water will drain without flooding structures.
- (g) Show proposed building finish floor grade to hundredths of a foot. For residential developments, place each house grade within the plan view, using foundation plan or outline of a typical house to be built in this development.
- (h) The finish grade shall be compatible with the grades of surrounding buildings and yards.
- (i) For non-residential developments show the proposed sidewalk grades at lot lines, center of driveway crossings and at fifty (50) foot intervals to hundredths of a foot.
- (j) Rear yard storm drainage is required in all residential developments where necessary to prevent storm drainage from running onto adjacent properties.
- (k) All existing and proposed earth grades are to be in tenths of a foot.
- (l) Rear yard swales shall be, in general, no longer than four hundred (400) feet before being intercepted by a catch basin and shall have a minimum grade of 0.5%.
- (m) Rear yard storm drain piping shall be eight (8) inches minimum diameter.
- (n) Show existing and proposed ground grades at lot corners around the perimeter boundaries.

(o) Show the proposed side yard swale elevation between all buildings. This elevation must be a minimum of 0.5 feet below the lower adjacent building grade. The side yard swale must have a minimum slope of 0.5% to the front and rear.

(p) Where topography prevents rear yard drainage from being practical, rear to front or rear to side drainage may be allowed.

(q) The general direction of flow of all yard drainage and all swales must be indicated with arrows.

(r) Additional grades shall be shown under special conditions as required.

(s) The lot number or address shall be shown for each lot.

(t) Any required storm sewer easements shall be a minimum of twenty (20) feet wide. All drainage easements for swales shall be a minimum of ten (10) feet wide. Easements for drainage ditches shall include the ditch plus a minimum of ten (10) feet beyond the top of banks on each side. The Village shall require additional easement width when sewer size or depth and soils or other conditions warrant a wider easement. Easements are required for all public storm drains and private drains serving more than one (1) parcel.

(u) Drainage shall be adequately discharged off site to either the street or a dedicated storm drain. Drainage from adjacent properties "off site drainage" that flows onto project on site, shall be maintained.

(v) Sodded swale or ditch slopes shall be a maximum slope of one (1) foot vertically and three (3) feet horizontally.

(w) No berms shall be placed over any underground public water main, sanitary sewer, storm drain, or within the designated easements for such facilities.

(x) Drainage water runoff from building roofs shall be piped to a point five (5) feet away from the outside walls of any building.

(y) No drainage water runoff shall be allowed on adjacent property.

(z) Drainage water, sump pump water, and/or ground water shall not be discharged to the sanitary sewer system.

(aa) It shall be unlawful for any person to interfere with, modify, or obstruct the flow of drainage water across any property in any manner different from the approved plan.

(bb) During periods of the year when weather conditions make site-grading work impractical, a temporary Permit may be issued, subject to the furnishing of a satisfactory Bond or Letter of Credit in an amount determined by the Village guaranteeing the completion of the work when weather conditions permit.

### **Section 64-15. Retaining walls .**

- (a) Retaining walls should be used when adequate grading cannot be accomplished.
- (b) Retaining walls exceeding forty-two (42) inches in height should include protective fencing on top or as required by State and County codes.
- (c) Retaining walls exceeding thirty-six (36) inches in height shall be designed by a Registered Professional Civil Engineer. Design calculations shall be submitted with the construction plans ..

## **ARTICLE V. ROADS AND PAVING**

### **Section 64-16. Plans and specifications; submittal procedure.**

Plans and specifications shall be submitted as part of a site development package in accordance with Article III of this Chapter, entitled "General Requirements & Submittals".

### **Section 64-17. Plans and specifications; general content.**

Plans and specifications shall provide the following general content:

- (a) All plans are to identify clearly public/private dedication.
- (b) Provide continuous stationing.
- (c) Centerline curve data (radius, deflection angle, degree of curvature and total arc length) for all roads shall be indicated on the plans. All horizontal curves shall be consecutively numbered and indicated in the plan view.
- (d) Finish grade of all structures shall be indicated in the plan view.
- (e) Show a detail of all intersections and cul-de-sacs. The detail shall show layout and detailed grades. Maximum scale of the detail shall be one inch equals thirty feet (1"=30').
- (f) A profile view shall be provided for all roads (public and private) and include the following:
  - (1) Elevations at top of curb or at centerline, if not curbed.
  - (2) Existing ground elevations at the center of the right of way and at other locations, as required for review. Elevations shall be based on USGS Datum .
  - (3) Station and elevations of all high points, low points, grade breaks, curb returns and necessary information at vertical curves.
  - (4) Top of curb (or centerline) elevations at each station. Grade in vertical curves must be indicated at twenty-five (25) foot intervals.

**Section 64-18.** *Paving requirements for public roads and streets within platted subdivisions or within site condominium subdivisions (whether dedicated to the public or owned by condominium project).*

The following requirements shall apply:

(a) Public roads and streets within platted subdivisions and site condominium subdivisions, and private roads and streets within site condominium projects, where permitted, shall be designed and constructed to standards for subdivision streets as set forth in the Village of Lexington Subdivision

Regulations Ordinance and the standards set forth below. Where there is a discrepancy between standards, the more stringent requirements shall govern.

**(b) Street paving width shall conform to the following requirements:**

Street Type	Pavement Width B/C to B/C (feet)	Minimum ROW (feet)
Major Streets/ Thoroughfares	40 (5) See following information from Uniform Criteria for Major Streets from MDOT	(1)
Collector Streets	36	80
Minor Streets	32 (2)(3)	60
Marginal Access	24	50
Boulevards (per lane)	20	80
Industrial Streets	36	80
Cul-de-sacs	(4)	
Residential	45 (outside radius)	60 (radius)
Industrial	58 (outside radius)	75 (radius)

Note 1: As indicated on the master plan or as required by the county road commission for county roads of that functional class, whichever is greater.

Note 2: If an alternate valley-type curb is provided (see illustration), the pavement width may be reduced to 30 feet measured back-to-back of curbs.

Note 3: In cases where a "no parking" local street is approved by the Village Council, upon recommendation of the Planning Commission, the pavement width may be reduced to 26 feet measured back-to-back of curbs (see illustration).

Note 4: Width of street in cul-de-sacs: Minor Residential – 26' (back of curb to back of curb)

Industrial – 36' (back of curb to back of curb)

Note 5: For additional pavement standards for major streets and thoroughfares – See sketches, tables, and information below:

If parking is allowed on the shoulder, there shall be a minimum shoulder width of 8 feet.

If it is determined that a request to change from local to major is valid, but reconstruction is necessary to satisfy Major Street requirements, the Transportation Planning Services Division of the Michigan Department of Transportation will issue approval to finance this reconstruction with Major Street Funds. This reconstruction must meet the minimum criteria outlined in Category No. 3. Certification to the Major Street System mileage will be effective on the July 1 following the completion of construction.

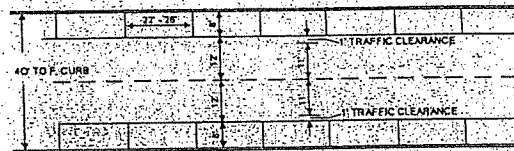
#### Category 3 - Construction of New Major Streets and the Reconstruction of Existing Major Streets

Curbed Streets	Face to Face Width	
	Minimum	Desirable
No parking	26	30
Parallel parking - one side	32	36
Parallel parking - both sides	40	48
Diagonal parking	Not permitted	Not permitted

In the event the 20-year traffic projections indicate the need for a multi-lane facility, a minimum width of 46 feet is applicable.



Typical Lane and Parking Limit Markings to Accommodate Two 11' Traffic Lanes and Parallel Parking One Side



Typical Lane and Parking Limit Markings to Accommodate Two 11' Traffic Lanes and Parallel Parking Two Sides

NOTE: Every attempt should be made to create off street parking facilities to eliminate the need for on-street parking in the development of a Major Street System.

#### Non-Curbed Streets

On streets with flush shoulders, an absolute minimum pavement width of 22 feet will be required. However, a 24-foot pavement width is desirable. Shoulders shall be at least 9 feet wide if shoulder parking is contemplated, and a minimum of 3 feet wide where shoulder parking will be prohibited.

If parking is to be permitted on the pavement, the widths shown for curbed streets shall apply.

### Implementation Plan, Exceptions and Appeals

#### Implementation Plan for Existing Major Streets.

It is recognized that some streets presently classified as Major Streets do not currently meet the minimum criteria because of existing on-street parking, improper stop sign placement, etc. In order to implement the criteria, each city and village is requested to:

(c) The intersection of roads shall be as close to ninety degrees (90°) as possible with a variation of no more than ten degrees (10°). However, intersections with a major street must be at a ninety-degree (90°) angle,

(d) When boulevard sections are used at the entrance, the minimum pavement widths shall be twenty-eight (28) feet (B/C to B/C), and the median shall be offset at least twelve (12) feet from the edge of lane of the intersecting street.

(e) All islands and medians shall be curbed in the same manner and in accordance with the same detail for curb and gutter used elsewhere, Hourglass and other odd shaped medians are not acceptable, Material placed between the curbs shall be seeded earth, crushed limestone, or other materials approved by the Village,

(f) Cul-de-sacs shall be avoided, unless space restraints require such usage. Local residential cul-de-sac streets shall not serve more than 20 dwelling units. The lengths of cul-de-sac streets of other classifications shall be as determined by the Planning Commission in each case. Cul-de-sac turnarounds for local streets shall conform to the detail illustration provided herein, entitled "Turn Around at Road Terminus -Curb & Gutter Design". Cul-de-sac turnarounds for other classifications of streets shall be as set forth in the Subdivision Regulations Ordinance and shall be in accordance with standard engineering practices as determined by the Village Engineer. A reduced pavement section may be submitted for review for a temporary cul-de-sac. "T" and "L" type turnarounds may be permitted in specific cases upon recommendation of the Planning Commission and approval by the Village Council.

(g) Soil borings, five (5) feet below existing grade (minimum), shall be taken by an independent testing laboratory or qualified professional at intervals not to exceed five hundred (500) feet. Additional borings may be required where the USDA Soil Surveyor onsite inspection indicates unstable soil may be present.

(h) The applicant shall remove all unsuitable soil including muck, peat and marl, as well as brush, trees, tree stumps and similar materials from the full-width of the roadway. These areas shall then be backfilled with MDOT Class II Granular Material to provide a stable subgrade for the roadway construction

(i) Street cross-sections shall include curb and gutter and shall meet or exceed the minimum pavement thicknesses shown in the figures. Subsurface soil conditions shall govern exact thickness. An engineering design shall be submitted based on the soil borings above, if required. Pavement cross-sections may have either an aggregate base or full depth asphalt. Concrete cross-sections shall also be allowed. All cross-sections shall be subject to the approval by the Village. Phased development shall use the same cross-section throughout the entire project.

(j) Minimum curb and gutter radii at intersections shall be as follows, unless otherwise approved by the Village:

Minimum Radius (Back of Curb)

Major Streets/Thoroughfares	40 feet
Collector & Minor Streets	30 feet
Industrial Streets	50 feet

Entrances (residential, commercial or industrial) shall be designed to accommodate the larger vehicles anticipated to use the site and stay within their lane.

(k) Maximum allowable pavement grade shall be five percent (5%), however, where essential to reasonable development, seven percent (7%) may be permitted for collector and minor streets. The minimum allowable(s) shall be as follows:

Concrete gutter grades = 0.40%  
Concrete gutter return at intersections = 1.00%  
Pavement surface grade to gutter line = 1.00%  
Typical cross-slope = 2.00%

(l) At the intersection of two (2) roadways, the maximum grade shall be three percent (3%) for a distance of one hundred (100) feet from the point of intersection.

(m) All streets shall be designed for a minimum design speed of thirty (30) mph (posted speed 25 mph). Design criteria (AASHTO and Design Speed) shall be noted on the plans.

(n) The minimum sight distance for all roads shall be three hundred (300) feet for streets with design speeds of thirty (30) mph. Sight distances for roads having higher design speeds shall be designed according to AASHTO (latest edition).

(o) Whenever a change in the vertical centerline grade of one percent (1%) or more occurs, provide a vertical curve. The minimum length of vertical curve shall be one hundred (100) feet and shall be rounded to the nearest fifty (50) feet thereafter. For a thirty (30) mph design speed, the minimum crest "K" value shall be thirty (30) and the minimum sag "K" value shall be forty (40). Higher design speeds shall be designed according to AASHTO (latest edition).

(p) Left turn lanes and bypass lanes should be considered on streets where traffic volumes are high enough or safety considerations are sufficient to warrant them. Such usage shall be determined on a case-by-case basis at the discretion of the Village (or jurisdictional authority).

(q) All curbing shall be cast-in-place concrete meeting the details provided in the figures unless otherwise approved by the Village. The curb detail shall be approved by the Village prior to placing. Valley gutter type curbing may be used for minor residential streets in situations where the exact locations of driveways are not known in advance (see illustration detail). Asphalt and precast concrete curbing shall not be permitted.

(r) All curbing shall drain to catch basins in the curb. Catch basins shall be spaced as specified in the Storm Drainage System Section.

(s) Edgedrain shall be used at the low points in the road. Edgedrain shall be placed for a minimum distance of twenty-five (25) feet in both directions from the catch basin. Additional or continuous edgedrain may be required, as directed. Edgedrain shall be a minimum of four (4) inch diameter pipe wrapped with a geotextile fabric and backfilled with a granular material or clean crushed stone. Edgedrain shall be connected to catch basin.



(t) The Village shall require street lighting at street intersections or other locations to serve purposes of safety and/or security. When required, the intensity and type of illumination, location, and types of poles, bases, etc. shall be coordinated with the existing and future street lighting within the area.

(u) The Owner/Developer/Proprietor shall provide and properly maintain, until accepted by the Village, all traffic and pavement markings, which the Village may determine necessary for the proper operation of the roadway/driveway/curb cut. Only those traffic signs and pavement markings specified by the Village (or jurisdictional authority) may be used within the road right of way. All signs and pavement markings shall conform to the current Michigan Manual of Uniform Traffic Control Devices (MMUTCD). The Developer will be responsible for constructing all required signs and pavement markings.

**Section 64-19.** *Paving requirements for public roads and streets not located within platted subdivisions or site condominium subdivisions.*

The following requirements shall apply:

(a) Public roads and streets not located within platted subdivisions and site condominium subdivisions, and/or not intended to serve the same, shall be designed and constructed to meet or exceed the minimum published standards for paved privately built roads of the Sanilac County Road Commission, as amended. Except as modified by the cross-section illustration provided herein, entitled "Typical Cross Section".

(b) Enclosed drainage and curbing shall not be required for roads and streets developed pursuant to this Section.

(c) Rights-of-way for such roads and streets shall not be less than sixty-six (66) feet. An exception may be granted by the Village Council in a specific case upon receipt of a written report and recommendation from the village engineer where it can be clearly demonstrated that all applicable requirements, including adequate area for future sidewalks and planting strips, can be met within a lesser right-of-way. However, in no instance shall the right-of-way be less than sixty (60) feet.

(d) The travel surface shall be not less than twenty-two (22) feet in width with a three (3) foot gravel shoulder on each side.

(e) Dead-end road and streets shall not be permitted.

(f) Cul-de-sac road and streets shall be provided with a paved circular turnaround conforming to that is designed and constructed to meet or exceed the minimum published standards for paved roads of the Sanilac County Road Commission, as amended, except as modified by the detail illustration provided herein, entitled "Turn Around at Road Terminus -Standard Design." A reduced pavement section may be submitted for review for a temporary cul-de-sac. "T" and "L" type turnarounds meeting the minimum requirements of Sanilac County Road Commission may be permitted in specific cases upon recommendation of the Planning Commission and approval by the Village Council and the Municipal Engineer.

(g) All such streets and roads shall be dedicated to the Village of Lexington. Private streets or roads are not permitted under this Section. This section is not meant to apply to internal access drives within multiple-family housing developments. However, in those multiple-family housing developments where internal roadways are provided to serve attached or detached dwelling units which have individual driveways leading to garages, or serving as the parking area for each adjacent dwelling unit, said roadways shall be designed and constructed to meet the standards set forth in the Village Code for subdivisions and in Section 64-18 of this ordinance.

**Section 64-20.** *Paving requirements for existing private roads for the purpose of dedication to the public.*

It is the policy of the Village that minimum road standards must be maintained so that any private road accepted by the Village does not pose a threat to the health, safety, and welfare of Village residents or others who may utilize said road. Therefore, the following minimum standards and specifications must be met in order for the Village to consider acceptance of dedication of an existing private road:

- (a) Must have been in existence prior to the adoption of this ordinance and must have been developed and constructed lawfully at the time of its inception.
- (b) Must allow access to more than one parcel, lot, residence, or place of business, which is normally open to the public and upon which persons other than the owners located thereon, may also travel.
- (c) Must have a minimum road right-of-way or easement width of sixty-six (66) feet. An exception may be granted by the Village Council in a specific case upon receipt of a written report and recommendation from the village engineer where it can be clearly demonstrated that all applicable requirements, including adequate area for future sidewalks and planting strips, can be met within a lesser right-of-way. However, in no instance shall the right-of-way be less than fifty (50) feet.
- (d) A dead-end private road must terminate in a circular turn-around having a right-of-way radius of sixty-six (66) feet and a pavement radius at the outside edge of fifty (50) feet. However, "T" and "L" type turnarounds, meeting the minimum requirements of Sanilac County Road Commission, may be permitted in specific cases upon recommendation of the Planning Commission and the Municipal Engineer and approval by the Village Council.

(e) Soil borings and core samples of existing road, five (5) feet below existing grade (minimum), shall be taken by an independent testing laboratory or qualified professional at intervals not to exceed five hundred (500) feet. Additional borings may be required where the USOA Soil Surveyor onsite inspection indicates unstable soil may be present. Borings may be required, to verify cross-sections and existing sub-base.

(f) Must conform to the following minimum design and Construction Cross-Section Standards:

(1) Concrete Roads

- i. Sub-base 6" of MOOT Class II granular material
- ii. Base 6" reinforced Portland cement concrete\*

Note: concrete pavement depth for residential roads serving more than 50 dwelling units shall be increased to seven (7) inches.

(2) Asphalt Roads (see attached sketch)

- i. Sub-base 6" min. MOOT Class" granular material
- ii. Aggregate base 8" min. 22A crushed limestone
- iii. Surface 165#/S.Y. MOOT Mix No. 3C Leveling  
165#/S.Y. MDOT Mix No. 4C Surface

If an existing private road conforms to all of the requirements herein and the minimum design standards set forth in this section, the Village Council, in its sole discretion, may consider accepting dedication of said private road. However, the Village is under no obligation to accept the dedication of a private road merely because it meets the minimum standards set forth in this ordinance.

## **ARTICLE VI. PARKING LOTS**

### **Section 64-21. Plans and Specifications -Submittal procedure.**

Plans and specifications shall be submitted as part of a site development package in accordance with "General Requirements & Submittals" .

### **Section 64-22. Plans and Specifications -Design criteria .**

(a) Parking lots shall be grouped as follows:

(1) Class "I" -Light duty driveways, schoolyards, playgrounds, and small parking lots with less than forty (40) stalls. This cross-section is not suitable for heavy refuse truck pick-ups or delivery services. In areas where these services are used, the commercial/industrial cross-section should be used for routing to and from the service area.

(2) Class "II" -Parking lots containing more than forty (40) stalls, medium to heavy truck traffic, some commercial lots.

(3) Class "III" -Industrial lots, heavy truck uses, some commercial lots, bus routes.

Note: Cross-section for the above can be found in the figures at the end of this section.

(b) Alternate cross-sections designed by a qualified, licensed Professional Engineer and accompanied by supporting data will be considered.

(c) Service drives shall utilize the Class "II" cross-section. Class "III" or design alternatives should be considered where extremely high volumes of truck traffic would be encountered.

(d) Concrete curb shall be placed on drive entrances for the paved parking area. Concrete curbing shall be required in all locations where it needs to protect landscaping areas or sidewalk. Concrete curb shall be MDOT C-4, unless approved otherwise. Bituminous curbing will not be permitted. Thickened edge sidewalks are acceptable when the pavement is sloped away from the sidewalk.

(e) When sidewalks are provided adjacent to the parking area curbs where car overhangs occur, such walks shall be a minimum width of seven and one half (7.5) feet, as measured from the face of the curb.

(f) Parking bays shall be sixty-four (64) feet wide (20-foot stalls and 24-foot aisle plus 20-foot stall). However, for a single bay, a car overhang of two (2) feet can be assumed and the width between face of curbs may be reduced to sixty (60) feet. Moreover, on the curb-side of a multiple bay parking area, the two (2) foot overhang may be assumed for the purposes of reducing the pavement width of the outside bay to sixty-two (62) feet. Where the parking area is adjacent to the project boundary line, the face of curb shall be located at least two (2) feet from such boundary line and must meet the current Zoning Ordinance.

(g) Individual parking spaces shall be marked by painted on yellow stripes a minimum of four (4) inches wide. The stripe shall extend from the front of the parking stall space to the end of the space.

(h) Barrier free parking spaces shall be striped in blue and signed meeting the latest ADA (Americans with Disabilities Act) requirements.

#### **Section 64-23. *Parking lot lighting***

(a) All parking lots shall be illuminated. lighting intensities shall average one (1) foot candle measured at the surface for parking areas. Service drives shall have a lower intensity averaging 0.5 foot candles. All outdoor lighting shall be shielded to reduce glare and be arranged to reflect light away from all residential districts, adjacent residences and public right of ways. At the property line, 0.1 foot candles shall be the maximum amount of light.

(b) A photometric plan (lighting grid) may be required to determine the appropriateness of the proposed lighting layout and intensity.

(c) light poles shall have a maximum height as required by Zoning Ordinance, unless approved by the Village.

(d) All fixtures shall be high-pressure sodium lamps, metal halide, or as required by Zoning Ordinance. Photocells or other approved equipment is required on all fixtures.

(e) All wiring shall be UL listed for wet locations. No wiring shall be exposed.

## **ARTICLE VII. DRIVEWAYS, SIDEWALKS, AND BIKE PATHS**

### **Section 64-24. Plans and Specifications -Submittal procedure.**

Plans and specifications shall be submitted as part of a site development package in accordance with "General Requirements & Submittals".

### **Section 64-25. Plans and Specifications -Design criteria for driveways.**

(a) Residential -All residential driveways within the road right of way shall be concrete with a minimum thickness of six (6) inches. Residential driveways shall have a minimum width of ten (10) feet or match the existing drive. No residential driveway shall be wider than thirty (30) feet (measured at the edge of the street), unless approved in writing by the Village.

(b) Commercial - All commercial driveways within the road right of way shall be concrete with a minimum thickness of eight (8) inches and reinforced with 6"x6"x #6 steel mesh. Commercial drives shall be of a width approved by the Village.

(c) Industrial-Heavily traveled industrial drives shall be designed by a qualified Professional Engineer and approved by the Village. Industrial drive widths shall be approved by the Village.

(d) Residential approaches shall have adequate flares to provide a safe turning radius. Minimum flaring shall be six (6) feet on the right side and four (4) feet on the left. Flaring length shall be a minimum of ten (10) feet. If a residential driveway is wider than twenty (20) feet, the flaring widths shall be adjusted to provide a maximum drive opening of thirty (30) feet.

(e) Commercial and industrial approaches shall be MDOT Type "M" openings

(f) Driveways shall be sloped to direct drainage to the street.

(g) For residential approaches constructed on an existing curbed street, the curb and gutter shall be entirely removed or cut horizontally when approved in advance by the Village. When an MDOT Type "M" approach is constructed on any existing curbed street, the curb and gutter must be entirely removed. The extent of the removal shall extend to the nearest joint past the spring line of the new curb.

**Section 64-26. Plans and Specifications -Design criteria for sidewalks.**

- (a) Sidewalks shall generally be located one (1) foot inside of the right of way line and parallel to such line and shall be required on both sides of a new street. For commercial site plans, continuous sidewalk shall be provided across the parcels frontage.
- (b) Sidewalks shall be five (5) feet wide (except where a greater width is required) with control joints one (1) inch deep at five (5) foot intervals.
- (c) Sidewalks shall meet latest ADA (Americans with Disabilities Act) requirements.
- d) Sidewalks shall have smooth transitions and gentle curves. No sharp edges or abrupt changes in alignment are allowed. Sidewalks shall "jog" around natural features (Le. trees, etc.) where feasible.
- (e) Plans for sidewalks shall include existing contours at a minimum of one (1) foot intervals. Proposed grades along the centerline of the sidewalk shall be at fifty (50) foot intervals.
- (f) In general, sidewalks shall be at a higher elevation than the street and slope transversely toward the street at two percent (2%) minimum.
- (g) Where sidewalks meet driveways, they shall run continuously through the drives. The slope of the drives shall be designed to meet the sidewalk.
- (h) At street intersections, sidewalk ramps shall be used to meet the existing street grade. If existing curb is involved, the curb shall be removed and the sidewalk ramped to meet the pavement. No horizontal curb cuts shall be used unless approved in advance by the Village.
- (i) Integrated curb and sidewalk shall not be used, except for commercial site plans.
- (j) Sidewalks shall have the following thicknesses:

Thru commercial drives*	8" w/6" x 6" x #6 steel mesh
Thru residential drives*	6"
Sidewalk ramps	6"
All others **	4"

\*Plus one (1) flag each side of driveway

\*\*In any emergency access areas, sidewalks must be 6" or as required

**Section 64-27. Materials.**

- (a) Sidewalks and driveways shall be air-entrained concrete with a minimum compressive strength of 4000 psi. Sidewalk shall be treated with one (1) coat of a curing compound membrane.

(b) Sidewalk and driveway base shall be four (4) inches of Class" Sand, compacted to ninety-five percent (95%) maximum density.

(c) Shoulders shall be graded gently away from the sidewalk and be either seeded and mulched, or sod.

#### **ARTICLE VIII. WATER DISTRIBUTION SYSTEM**

##### **Section 64-28. Plans and Specifications -Submittal procedure.**

(a) The plans and specifications shall be submitted in accordance with "General Requirements & Submittals"

(b) The Applicant may proceed with water main permitting once the Village has conducted an initial review of the entire construction plan submittal and all revisions pertaining to the water main have been completed.

(c) The Applicant must submit the four (4) sets of final plans with the MDEQ permit application for signature, along with prepaid envelopes, or packages for mailing to MDEQ. Once the Village approves the application with the prints, the Village will sign the application and submit to the MDEQ in the prepaid envelopes .

##### **Section 64-29. Plans and Specifications -General design considerations.**

(a) All water systems shall be designed conforming to the current edition of the "Recommended Standards for Water Works", published by Health Education Services, also known as the "Ten State Standards" and the MDEQ requirements.

(b) Plans shall consist of a cover sheet showing plan and profile views of the complete project.

(c) Prior to starting any water system design, the applicant is encouraged to make use of maps and information available at the Village offices. It shall be the responsibility of the applicant to field check and verify utility locations provided by the Village.

(d) The cover sheet shall contain a total quantity listing of the proposed water main improvements, indicating the lengths of pipe, type of pipe and their respective sizes.

(e) Provide continuous stationing. Identify all existing and proposed tees, valves, bends, hydrants, etc.

(f) Soil borings, two (2) feet below design grade (minimum), shall be taken by an independent testing laboratory or qualified professional at intervals not to exceed five hundred (500) feet, when required. Additional borings may be required where the USDA Soil Surveyor onsite inspection indicates unstable soil may be present.

**Section 64-30. *Benchmarks and Elevations.***

- (a) Elevations shall be on U.S.G.S. Datum. There shall be a minimum of two (2) benchmarks with one (1) benchmark at least every 1,200 feet.
- (b) Proposed finish grade elevations at hydrants and gate valves shall be shown on the plans.

**Section 64-31. *Soil Conditions***

Water main design, relative to pipe bedding and location, shall reflect the proper selection of materials and construction method compatible with the field conditions. Areas that show unsatisfactory ground material for pipe bearing or possible chemical deterioration due to soils shall be avoided or the pipe shall be suitably installed on adequately designed bedding and/or enclosed in protective wrap or coating.

**Section 64-32. *Location and layout.***

- (a) The distribution system in all developments requiring more than six hundred (600) feet of water main shall have a minimum of two (2) connections to a source of supply and shall be a "looped" system, whenever possible.
- (b) Generally, water mains shall be installed in a public street right of way or in easements exclusively reserved for such use on the opposite side of the street from sanitary sewers. Whenever possible, water main shall be located on the NORTH side of an east-West Street and on the west side of a north-south street.
- (c) Water main shall be installed parallel to the property lines or building lines, with clearance distances to allow for a twenty (20) foot width dedication of easement centered on the water main. Water mains shall be kept on one side of the street
- (d) Water main shall be constructed outside of paved parking areas, streets and drives, unless approved by the Village. The Village shall not be liable to repair improved areas within an easement.
- (e) In new developments, water mains shall be installed from boundary to boundary in abutting roads, interior streets, and at other locations, as may be deemed necessary by the Village for future extensions.



(f) When connecting to an existing water main, a cut in tee with gate valve or a tapping sleeve and valve will be required. A full body sleeve is required for all taps made to ductile iron, cast iron, or PVC water main, or as directed by the Village. Same size tapping sleeves will be allowed.

(g) The plans shall indicate the finish grades of all hydrants, valve boxes, and gate wells.

(h) All water mains shall be located so as to provide a minimum of ten (10) feet horizontal clearance between the nearest edge of the water main and the nearest edge of any sanitary or storm sewer.

(i) Where conditions require tunneling or boring, consult the Village for specific requirements. These conditions may include road crossings or conflicts with trees, shrubs, structures or other utilities. Where water mains cross improved roads of any type, the pipe shall be installed by directional boring or bore and jack (placed in a steel casing pipe), or as approved by the Village. All boring work shall be in accordance with the current MDOT standards and as approved by the Village.

#### **Section 64-33. *Directional boring or bore & jack.***

Where conditions require directional boring or bore & jack, consult the Village for specific requirements. Where watermain or water service leads cross improved roads of any type, the pipe shall be installed by directional boring or bore & jack (placed in a steel casing pipe), unless approved otherwise by the Village. All boring work shall be in accordance with the current MDOT standards and as approved by the Village.

#### **Section 64-34. *Easements.***

(a) Easements for possible extensions or looped connections shall be extended to the property line at locations designated by the Village. All easements shall be a minimum of twenty (20) feet wide and shall be dedicated to the Village.

(b) The easement descriptions shall include the hydrant leads and shall extend a minimum of ten (10) feet beyond the hydrant on any lead. The easement documents shall contain a provision prohibiting the construction of or locating of any above ground structures within the limits of such easements.

#### **Section 64-35. *Pipe sizes.***

(a) Eight (8) inch diameter water mains are the minimum size to be installed in single-family residential areas.

(b) Twelve (12) inch water mains are considered to be the minimum size in commercial, office, industrial and multiple family residential areas, except in a looped system of 1,500 feet or less where eight (8) inch mains may be permitted, if approved by the Village.

(c) Water main shall be sized to provide the volumes required by the proposed developments. Design shall include ample research to verify that the required volumes and pressures are available.

(d) Water mains shall be designed to provide adequate volumes for the fire fighting purposes. Insurance Services Office (ISO) Standards shall be used, as a minimum guideline, to provide 1000 gallons per minute (GPM) for emergency use.

(e) All single hydrant leads longer than seventy-five (75) feet must be a minimum of eight (8) inches in diameter.

#### **Section 64-36. *Pipe materials.***

(a) Water mains sixteen (16) inches in diameter or less shall be PVC C900, Ductile Iron Class 54, or other acceptable type approved by the Village Engineer.

(b) Ninety (90) degree bends are not permitted, except as detailed for hydrant assemblies.

#### **Section 64-37. *Gate Valves -location.***

(a) A valve shall be provided at every connection to existing mains, unless otherwise approved by the Village.

(b) In general, valves on cross connecting mains shall be arranged so that no single line failure will require more than eight hundred (800) feet of main to be out of service. Also, sufficient valves shall be placed such that not more than twenty-four (24) homes, thirty (30) multiple family units, or two (2) hydrants shall be out of service within such section of water main, which can be isolated. On transmission mains, valves shall be spaced not more than one-quarter (1/4) mile apart. Valves shall be so arranged that any section can be isolated by closing not more than four (4) valves.

(c) A valve shall be provided on every dead-end line where required for future extension, at a location approved by the Village. All dead-end mains must have valves at the tee.

(d) Valves shall be as specified within the Village-approved detail sheets.

(e) Valves should not be located under roadway pavement, bike paths, sidewalks or driveway approaches, unless approved by the Village.

**Section 64-38. Gate Valves.**

All valves and tapping sleeves should be placed outside of hard surfaces whenever possible. Valves shall utilize a valve box. Approval from the Village is required for all valves to be located within a hard surface area. Gate valves shall be resilient wedge.

**Section 64-39. Fire hydrants**

- (a) In general, no residential dwelling shall be more than three hundred (300) feet from a fire hydrant, as measured along the street right of way line. Hydrants should be positioned as close to lot lines as possible. Locations shall be approved by the Village.
- (b) Commercial building sites shall be serviced by a minimum of two (2) hydrants.
- (c) Spacing of hydrants around commercial and/or manufacturing establishments shall be considered on an individual case and shall be determined by consultation with the Village and the Fire Department.
- (d) A hydrant shall be installed at the end of every dead-end main.
- (e) In general, hydrants shall be located in the road right of way nine (9) feet from the right of way line, but not closer than six (6) feet to the back of curb. The location of hydrants with respect to the right of way line shall be indicated on the plans. Hydrant valves shall face the road and hydrants shall be plumb and set to grade prior to final acceptance.
- (g) Hydrants and valves shall be as shown on the Village standard detail sheet.

**Section 64-40. Pipe restraints.**

- (a) Thrust blocks shall be installed at all bends, dead-ends, tees, reducers and hydrants as shown on Village standard detail sheet.
- (b) Restrained joints of a type acceptable to the Village may be used in lieu of thrust blocks with the number of restrained joints determined by the manufacturer and approved by the Village.

**Section 64-41. Services.**

- (a) Service lines are to be shown to all buildings other than single family detached dwellings.
- (b) Service lines shall be installed using Type "K" soft copper or 200 psi. HOPE for services two inches or less. Services over two (2) inches, shall be same material as main as shown on the Village standard detail sheet.

(c) A curb stop for each service line shall be provided and located at the right of way or edge of easement. Curb stops in drives and sidewalk will not be allowed.

(d) The internal diameter shall be shown for each service and the minimum size shall be as shown on the Village standard detail sheet.

(e) There shall be one (1) service lead per building. No shared service leads will be permitted.

**Section 64-42. Fire protection lines.**

(a) Fire protection lines, where applicable, are to be shown to all buildings.

(b) A valve and a back flow device for each fire protection line shall be provided by the developer as shown on the Village standard detail sheet.

(c) The domestic supply lead shall be a separate lead from the fire protection line.

**Section 64-43. Acceptance of utilities.**

(a) Preliminary Acceptance

(1) The installed mains must pass all required pressure tests and bacteriological tests, as required by the current Village Standards, prior to the final connections.

(2) Prior to acceptance, water mains shall be flushed in accordance with the Standards and all current AWWA standards.

(3) All structures and valve boxes must be clean and free of construction debris.

(4) The Developer shall submit record drawings, which must include rim elevations, pipe size and tie downs to all water main appurtenances.

(5) Mark all bends using an iron bar as shown on the Village standard detail sheet.

(b) Final Acceptance Approved record drawings, one (1) electronic Copy on disk in AutoCAD format" one (1) electronic copy in Acrobat PDF format, and two (2) sets of prints sealed by a Registered Professional Civil Engineer licensed to practice in the State of Michigan according to State of Michigan Occupational Code, Public Act 299 of 1980, shall be submitted to the Village prior to final acceptance of the water mains. If the Village determines the watermain has deficiencies, they shall be corrected to the Village's satisfaction prior to the Village accepting the watermain.

## **ARTICLE IX. SANITARY SEWERS SYSTEM**

### **Section 64-44. Plans and Specifications -Submittal procedure.**

- (a) The plans and specifications shall be submitted in accordance with "General Requirements & Submittals".
- (b) The Applicant may proceed with sanitary sewer permitting once the Village has conducted an initial review of the entire construction plan submittal and all revisions pertaining to the sanitary sewer have been completed.
- (c) The Applicant must submit the four (4) sets of final plans with the MDEQ permit application for signature, along with prepaid envelopes, or packages for mailing to MDEQ. Once the Village approves the application with the prints, the Village will sign the application and submit to the MDEQ in the prepaid envelopes.

### **Section 64-45. Plans and Specifications -Design considerations: general.**

- (a) All sanitary sewer designs shall be developed conforming to the current edition of "Recommended Standards for Waste Water Facilities", published by Health Education Services, also known as the "Ten State Standards" and the MDEQ requirements.
- (b) Prior to starting any sanitary sewer design, the applicant is encouraged to make use of maps and information available at the Village offices. It shall be the responsibility of the applicant to field check and verify utility locations provided by the Village.
- (c) The Developer shall research to determine if the sewer has adequate capacity to handle the anticipated volumes. Such research shall be provided to the Village for review and may be required for the MDEQ permit.
- (d) A cover sheet shall show, in addition to those items required in the General Requirements & Submittals; the following:
  - (1) Overall layout of the sewer system with manhole numbers and direction of flow arrows shall be shown. Existing and proposed sewers shall be shown with different symbols and line types.
  - (2) A flow calculation for the service area and any future service area that may be ultimately served by the proposed sewers shall be submitted.
- (e) In general, construction of all sanitary sewers eight (8) inch in diameter and larger, or if a sewer services more than one dwelling unit, shall be considered a public sanitary sewer and will require a permit from the MDEQ. If the Developer determines that it is not possible to service their development with a gravity flow sewer, then the Developer shall discuss the alternatives with the Village.
- (g) Lift stations, grinder pumps, and low-pressure sewers will require specific approval from the Village. Design of such will be required to provide for future growth in the design parameters.

(h) Soil borings, two (2) feet below design grade (minimum), shall be taken by an independent testing laboratory or qualified professional at intervals not to exceed five hundred (500) feet. Additional borings may be required where the USDA Soil Surveyor onsite inspection indicates unstable soil may be present.

**Section 64-46. Plan and profile sheets.**

- (a) The plan portion of the sheet shall include, at a minimum, the following:
- (1) Existing topography and all existing or planned surface or underground improvements in streets or easements in which sewer construction is proposed or in contiguous areas, if pertinent to design and construction.
  - (2) Location, length, size and direction of flow of each section of the proposed sewer between manholes.
  - (3) Locations of all manholes and other sewer appurtenances and special structures.
  - (4) Building sewers or wye branches are to be constructed or installed concurrently with sewer construction with locations at easement and/or property lines .
- (b) The profile portion of the sheet shall appear below the plan portion, generally projected vertically, and shall show, at a minimum, the following:
- (1) Size, slope, type, class of pipe and class of bedding material and controlling invert elevations for each section of proposed sewer between manholes.
  - (2) Limits of special backfill requirements.
  - (3) Location of existing or proposed utilities crossing the line of the sewer or otherwise affecting sewer construction.
  - (4) Location by station, of every proposed manhole with manhole number, invert elevation of all inlet or outlet pipes, top of casting elevation and manhole size.
  - (5) Length of run between manholes.
  - (6) Location by station, from downstream manhole of all building sewers or Y branches to be constructed or installed concurrently with the proposed sewer construction.
  - (7) Existing and proposed ground elevation above the route of the sewer.
  - (8) Invert elevation at property line for building sewers to be included with sewer construction.
  - (9) Manholes shall be identified by numbers assigned consecutively and increasing in direction opposite to direction of flow in each sewer,
  - (10) All elevations shall be on U.S.G.S. datum.
  - (11) There shall be a minimum of two (2) benchmarks with one (1) benchmark at least every 1,200 feet.

**Section 64-47. Location of sanitary sewers.**

- (a) Sanitary sewers shall generally be located on opposite sides of streets from water mains and shall, whenever possible, be installed on the SOUTH side of an east-west street and on the east side of a north-south street.

(b) Generally, sanitary sewers shall be installed in a public street right of way or in easements exclusively reserved for such use.

(c) Sewers shall be constructed outside of paved parking areas, streets, and drives, whenever possible. The Village shall not be liable to repair improved areas within an easement.

(d) Sewers shall be installed parallel to the property lines or building lines.

(e) Sanitary sewers shall maintain ten (10) feet of horizontal separation from all parallel utilities.

(f) Sanitary sewer crossings of other utilities shall have a minimum vertical clearance of eighteen (18) inches, with the sanitary sewer placed below the other utility.

**Section 64-48. Easements.**

(a) Easements for possible extensions or looped connections shall be extended to the property line at locations designated by the Village.

(b) Any required sanitary sewer easements shall be a minimum of twenty (20) feet wide. The Village shall require additional easement width when sewer size or depth and soils or other conditions warrant a wider easement. Easements are required for all public sanitary sewers serving more than one (1) parcel.

(c) The easement descriptions shall extend a minimum of twenty (20) feet beyond the last structure. The easement documents shall contain a provision prohibiting the construction of or locating of any above ground structures within the limits of such easements.

**Section 64-49. Drop Connection.**

(a) Internal drop connections are required at manholes where the invert of the outlet pipe is twenty-four (24) inches or more below the invert of the inlet pipe. This condition should generally be avoided and such connection shall only be permitted upon specific approval of the Village Engineer.

(b) External drop connections are not allowed, unless specifically approved by the Village Engineer.

**Section 64-50. Directional boring or bore & jack.**

Where conditions require directional boring or bore & jack, consult the Village for specific requirements. Where sanitary sewers or sanitary sewer leads cross improved roads of any type, the pipe shall be installed by directional boring or bore & jack (placed in a steel casing pipe), unless approved otherwise by the Village. All boring work shall be in accordance with the current MDOT standards and as approved by the Village.

**Section 64-51. *Extensions and future connections.***

Where the sanitary sewer must be extended from off-site, sanitary sewer leads extending two (2) feet beyond the property line of all adjacent property (after approval of temporary construction easements on the properties) on both sides of the right of way, the entire length of the off-site sanitary sewer installation shall be provided. Such extensions shall be the responsibility of the developer.

**Section 64-52. *Manhole locations.***

(a) Manholes shall be constructed at every change in sewer grade, alignment, and pipe size and at the end of each sewer line. Maximum distance between manholes shall not exceed four hundred (400) feet.

(b) Where future connections to a manhole are anticipated, stubs with watertight bulkheads shall be provided.

**Section 64-53. *Hydraulic Calculations.***

(a) Calculations shall be provided.

(b) Minimum and Maximum Velocities:

Minimum design velocities for gravity and low pressure sanitary sewers shall be two (2) feet per second and a maximum design velocity shall be ten (10) feet per second with pipe flowing full.

**Section 64-54. *Allowances for changes in pipe size***

(a) Maximum flow velocity for full pipe flow shall be maintained by continuity of the 0.80 diameter depth above invert for pipe size increases and also with intersecting sewer grade raised to compensate for head loss due to direction change.

(b) Provide a drop of 0.05 feet in the downstream sewer invert for all manholes to compensate for velocity head loss of the incoming flow and 0.10 for any change in direction.

**Section 64-55. *Building sewers.***

(a) Unless otherwise approved by the Village, construction of building sewers shall be included with the construction of each sanitary sewer from the public sewer to the easement and/or property line for each fronting parcel that the sewer is designed to serve

(b) Where construction of building sewers to the property line is not required concurrently with sanitary sewer construction, a Y branch with riser, if required, and a watertight stopper or plug with type of joint used for the sewer pipe shall be installed for every lot or building site that the sewer is designed to serve.



- (c) Minimum size for building sewers shall be based on proposed flow and slope. Each structure shall have a separate individual sanitary service lead connected to a public sanitary sewer.
- (d) For service leads beyond the right of way, cleanouts shall be provided, where necessary for approval.

**Section 64-56. Sewer capacity design.**

(a) Tributary Area

- (1) Sanitary sewers shall be designed to serve all tributary areas, with due consideration given to topography, the master sanitary sewer plan, established zoning and the adopted Master Land Use Plan.

(b) Population

- (1) For design purposes, population shall be based on a minimum of 3.5 persons per detached single-family home site (or equivalent single family unit), and 2.5 persons for each multiple-family dwelling unit.
- (2) Submissions for review shall include a tabulation of occupancy (usage) types and the conversion of these into terms of equivalent single-family units. The areas of the site, in acres, may be used to calculate dwelling units based on density allowed in the Zoning Ordinance.

(c) Sewage Quantities for Pipe Design

- (1) For all service areas, sewer design flows shall be in accordance with the "Ten State Standards".

**Section 64-57. Acceptance of utilities**

(a) Preliminary Acceptance

- (1) Prior to acceptance, all sanitary sewers shall be flushed and cleaned in accordance with Village Standards.
- (2) Air Test or Infiltration Test shall be completed in accordance with the "Ten State Standards" with test results submitted.
- (3) Televising shall be completed in accordance with the requirements established by the Village Engineer.
- (4) The Developer shall submit record drawings, which must include rim elevations, inverts, pipe size, pipe material, and slopes.

(b) Final Acceptance

-Approved record drawings, one (1) electronic Copy on disk in AutoCAD format" one (1) electronic copy in Acrobat PDF format, and two (2) sets of prints sealed by a Registered Professional Civil Engineer licensed to practice in the State of Michigan according to State of Michigan Occupational Code, Public Act 299 of 1980, shall be submitted to the Village prior to final acceptance of the sanitary sewer. The Village will review the record drawings and video tapes to determine if the sewer is acceptable. If the Village determines the sewer has deficiencies, they shall be corrected to the Village's satisfaction prior to the Village accepting the sewer.

## ARTICLE IX. STORM WATER DRAINAGE SYSTEMS

### Section 64-58. Plans and Specifications -Submittal procedure.

The plans and specifications shall be submitted in accordance with Requirements & Submittals.

### Section 64-59. Plans and Specifications -Design considerations: general.

(a) All storm sewer designs shall be developed conforming to the current Municipal Separate Storm Sewer Systems (MS4s) and any Phase 1\ of the Storm Water Regulations requirements .

(b) Storm sewer systems for roadways and individual parcels less than thirty (30) acres (not including off site drainage areas) shall be designed for a ten (10) year storm by means of the rational method formula:  $Q=CIA$ ; where Q is the peak rate of runoff in cubic feet per second, A is the area in acres, C is the co-efficient of runoff for the drainage area and I is the average rainfall intensity in inches per hour for a certain time of concentration. The rainfall intensity shall be determined by the formula:  $I=175/(T+25)$ ; where T is the time of concentration equal to the time required for a drop of water to run from the remote point of the watershed to the point for which runoff is being estimated. In most instances, an initial T equal to twenty (20) minutes for residential areas can be used. Use T equal to fifteen (15) minutes in other land use areas.

Larger drainage areas shall be designed by a method approved by the Village. The calculations submitted shall indicate the following information for each pipe: Drainage District Number, Structure Number of Receiving and Collecting Structures, Area, "C" Factor, Intensity, "Q", Length, Size and Slope of Pipe Run, Velocity, Pipe Capacity, Rim Elevation and Elevation of the Hydraulic Gradient.

(c) The Developer's engineer shall use judgment in arriving at proper imperviousness factors, but in general, the following "c" factors are acceptable minimums. The applicant shall submit calculations to justify the "c" factors used.

- |  |      |
|--|------|
| (1) Lawn areas                                   | 0.2  |
| (2) Pavement and roof areas                      | 0.9  |
| (3) Overall area of single-family subdivision.   | 0.35 |
| (4) Overall area of multiple housing development | 0.55 |
| (5) Overall area of commercial development       | 0.80 |
| (6) Overall area of industrial development       | 0.80 |

(d) The plans shall include a hydraulic design calculation for each run of pipe and open channel. Flow velocities shall be calculated using Manning's equation.

(e) The 10-year storm hydraulic gradient for non-submerged drain systems shall be maintained below the top of the sewer pipe.

(f) A drainage area map showing all watershed areas, runoff coefficients, acreage of each area and proposed drainage system in plan view, shall be included with the plans.

(g) All off-site drainage flowing onto the site shall be included in the drainage area map and such flows provided for in the design calculations.

(h) Storm water detention or retention is required for all developments in the Village.

(i) Storm water shall discharge to a natural watercourse, established drainage system, or drainage area where a dedicated easement exists for the purpose of drainage. In no case shall the storm system discharge onto adjacent property without an easement.

**Section 64-60. Plan and Profile -general.**

(a) All storm sewers shall be shown in Plan and Profile, with the profile generally shown below the plan view. All structures and end sections shall be sequentially labeled in both plan and profile views.

(b) Scale of plan portion of sheet shall be no smaller than 1 inch = 50 feet, with scale of profile portion of sheet, 1 inch = 50 feet horizontal, and 1 inch = 5 feet vertical.

(c) All elevations shall be on U.S.G.S. datum.

**Section 64-61. Plan View.**

(a) Plan portion of sheet shall include, at a minimum:

(1) Existing topography and all existing and planned surface and underground improvements in streets and easements in which sewer construction is proposed, and in contiguous areas if pertinent to design and construction.

(2) Location and direction of flow of each section of proposed sewer between manholes.

(3) Locations of all manholes and other sewer appurtenances and special structures, with proposed rim elevations for all inlets and catch basins.

(4) Elevations shall be on U.S.G.S. Datum. There shall be a minimum of two (2) benchmarks and one (1) benchmark at least every 1,200 feet.

**Section 64-62. Profile View.**

(a) Profile portion of sheet shall appear below companion plan portion, generally projected vertically and, as a minimum, show the following:

(1) Size, slope, length, type, and class of pipe, and controlling invert elevations for each section of proposed sewer between manholes.

(2) Limits of special backfill requirements.

(3) Profile (over centerline of proposed sewer) of existing and proposed finished ground and pavement surfaces.

(4) If the hydraulic grade is provided in the calculations, then it does not have to be shown on the profile.

(5) Location of existing and proposed utilities crossing the line of the sewer or otherwise affecting sewer construction.

(6) Location, by station, of every proposed manhole with manhole number, invert elevation of all inlet and outlet pipes, and top of casting elevation.

(b) Manholes shall be identified by numbers assigned consecutively and increasing in magnitude in the direction opposite to the direction of flow.

(c) All catch basin and inlet leads shall have a minimum slope of one percent (1 %).

**Section 64-63. *Location of sewers.***

(a) Storm sewers shall generally be located on the same sides of streets as water mains, and generally within the street right of way .

(b) For subdivisions, storm sewers shall be located in the public road right of way or in easements adjacent to the public road right of way. Storm sewers shall not be located in rear yards, except to pick up rear yard drainage or in unusual circumstances, or for sump pump discharge lines.

(c) The horizontal alignment of sewers, which are not proposed to generally follow street, drive, or parking area pavements, shall parallel property lines or building lines with clearance distances sufficient to accommodate the full width of any proposed easement.

(d) Where possible, provide a minimum of two and one-half (2 1/2) feet of cover from the top of finish road or earth grade to the top of any storm sewer.

(e) In parking areas, catch basins should be located in the gutter or parking stall areas. Catch basins in the driving areas should be avoided when possible.

**Section 64-64. *Catch basins and inlets shall be located, in general:***

(a) The flows do not exceed the intake capacity of the structure casting .

(b) At all low points in gutters and in swales and ditches, where applicable.

(c) At the upstream, curb return, if more than two hundred (200) feet downstream of a high point in the gutter, or as required preventing water from crossing an intersection.

(d) Catch basins shall be spaced no more than three hundred and fifty (350) feet from the crest of the road. Subsequent catch basins shall be spaced a maximum of four hundred (400) feet apart.

(e) Yard catch basins shall be provided at all low points in drainage swales. Provide intercepting yard catch basins such that not more than four hundred (400) feet of swale drainage runs into anyone (1) catch basin, other than a low point catch basin where six hundred (600) feet of drainage is allowed.

**Section 64-65. Catch basins and inlets shall be located, in general:**

- (a) Manholes shall be located at:
- (1) All changes in alignment.
  - (2) Points where the size of the sewer changes.
  - (3) Points where the grade of the sewer changes.
  - (4) The junction of sewer lines.
  - (5) Street intersections or other points where catch basins or inlets are to be connected.

(b) Manhole spacing for storm sewers shall be as follows:

Diameter of Sewer	Maximum Manhole Spacing
12" to 42"	400 feet
48" to 60"	500 feet
66" and larger	600 feet

(c) Where future connections to a manhole are anticipated, stubs with watertight bulkheads shall be provided.

**Section 64-66. Covers for manholes, catch basins, and inlets.**

Catch basins and inlets shall be located, in general:

Description	Grate	E.J.I.W. #or Equal*
Solid Cover	A	1040
Flat Grate (Round)	M1	1040
Low Curb Inlet	M1, Dump No Waste	7066
Flat Grate (Square)	M1 -Dump No Waste & Fish Image (5105)	5100
Low Beehive Inlet	Dump No Waste	6517
High Beehive Inlet	Dump No Waste	6508
High Curb Inlet	M1, Dump No Waste	7045

\*East Jordan Iron Works (EJIW)

**Section 64-67. *Hydraulics.***

(a) Minimum pipe size for sewers, catch basin leads, and inlet leads shall be twelve (12) inch nominal internal diameter. Rear yard storm sewers may be a reduced size, if approved by the Village Engineer.

(b) Minimum design velocity shall be two and one-half (2.5) feet per second and maximum design velocity shall be ten (10) feet per second, with pipe flowing full.

(c) Design life of enclosed storm sewers and bridges shall be fifty (50) years or more, except for driveway culverts in open ditch areas, which shall have a design life of twenty (20) years or more.

**Section 64-68. *Open drains***

(a) Where proposed, open drains shall be designed to convey the upstream design flow. A one (1) foot freeboard shall be provided.

(b) Side slopes of open drains shall have a maximum slope of one (1) foot vertical to six (6) feet horizontal, except that a low flow channel (roadside ditches, rear yard swales, etc.) may have side slopes of one (1) foot vertical to three (3) feet horizontal. Open drain side slopes shall have an established sod surfacing or be seeded, fertilized and mulched as soon as possible after construction.

(c) Open drains must have slope protection (i.e. riprap, gabion baskets, etc.) at bends, under bridges and at other critical points required by the Village.

(d) The Village will not accept the work until all turf is established.

(e) Hydraulic calculations for open channel flow shall be provided to assure the channel has adequate conveyance. Velocities shall be kept to a minimum, less than four (4) cfs, to prevent scour.

**Section 64-69. *End section and bar screens.***

An end section with prefabricated bar screen shall be installed on the end of all storm sewers fifteen (15) inches in diameter and larger. Openings of the bar screen shall be no more than six (6) inches on centers and shall be designed to be sturdy, permanent, easily maintained, and non-clogging.

## **Section 64-70. *Acceptance of Utilities***

### **(a) Preliminary Acceptance**

(1) Prior to acceptance, all sewers shall be flushed and cleaned in accordance with Village Standards.

(2) The Developer shall submit record drawings, which must include rim elevations, inverts, pipe size, and slopes.

### **(b) Final Acceptance**

(1) Approved record drawings, one (1) electronic Copy on disk in AutoCAD format" one (1) electronic copy in Acrobat PDF format, and two (2) sets of prints sealed by a Registered Professional Civil Engineer licensed to practice in the State of Michigan according to State of Michigan Occupational Code, Public Act 299 of 1980, shall be submitted to the Village prior to final acceptance of the sewer. The Village will review the record drawings to determine if the sewer is acceptable. If the Village determines the sewer has deficiencies, they shall be corrected to the Village's satisfaction prior to the Village accepting the sewer.

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## **ARTICLE X. STORM WATER DETENTION AND RETENTION FACILITIES**

### **Section 64-71. *Plans and Specifications -Submittal Procedure.***

(a) All plans, specifications, and calculations for detention basins and storm water storage shall be submitted, in accordance with Article III-General Requirements &Submittals.

(b) Detention or Retention Basin plans are required to be submitted along with all new storm drainage system plans.

### **Section 64-72. *Design Criteria:***

(a) Detention basins shall be designed to detain the volume of runoff from the entire site, resulting from a ten (10) year frequency storm. Detention is not required for flows originating offsite that flow through the site, unless the receiving storm facilities cannot handle the offsite flow.

(b) Detention basins shall drain by gravity. Pumped basins shall be considered, in extreme cases, and approved by the Village.

(c) Detention basins shall discharge to a natural watercourse, established drainage system, or drainage area where a dedicated easement exists for the purpose of drainage. In no case shall a basin or system discharge onto adjacent property without an easement.

(d) In general, the Oakland County "A Simple Method of Detention Basin Design" method shall be used for detention. Basin sizing discharge of detention basins shall be limited to 0.2 cfs per acre of the site, but in no case shall exceed the capacity of the receiving stream or body of water. In the event that the receiving stream cannot properly convey the 0.2 cfs per acre design discharge, the discharge shall be limited to the existing capacity of the receiving system and must have the outlet pipe invert above the normal water level. Hydraulic calculations may be required by the Village showing the existing capacity of the receiving stream for their review.

(e) All basins must have a minimum of twelve (12) inches of freeboard above the design high water elevation.

(f) All basins must be designed with an overflow to control flooding. The overflow shall discharge to an existing drainage system or storm drain. If a weir overflow is used, sufficient erosion protection must be incorporated into the design. Calculations for the overflow design must accompany the plans.

(g) Where orifice restrictors are used, multiple orifices are to be used with a minimum size of 1" and maximum of 4" rounded to the nearest sizes. If multiple numbers of smaller holes is a better representative of the flow, provide multiple holes. The standpipe shall have stone around it to filter the water. The standpipe shall have a sump for cleaning.

(h) Erosion control protection such as riprap, placed on filter fabric, shall be used at all entrances and exists to the basin. Riprap may be natural stone or clean broken concrete, a minimum of four (4) inches in diameter.

(i) Exterior side slopes of basins shall not be steeper than four (4) horizontal to one (1) vertical or 4:1. Interior side slopes shall not exceed six (6) horizontal to one (1) vertical or 6:1, unless approved by the Village. All basins must be fenced, if the maximum side slopes specified herein are exceeded. The Village may waive fencing when the design is an integral part of the landscaping and the variance from these Engineering Design Standards does not present a potential hazard. Fences shall be a minimum of six (6) feet high, vinyl clad chain link, with a locking access gate, eight (8) feet wide. Alternate types of fencing may be permitted for aesthetic purposes, subject to approval by the Village.

(j) The bottom of the basin shall have a minimum grade of one percent (1.0%) from the perimeter toward the flow line. The slope of the flow line to the outlet shall have a minimum grade of one-half percent (0.5%). All inlet and outlet pipes twelve (12) inches in diameter and larger shall have a bar screen, a flared end section and riprap.

(k) The entire detention basin area must be seeded (MOOT Class A seed) or sodded (MDOT Class B sod) and the turf shall be fully established before the Village approves the detention basin for operation and maintenance. Straw mats or mulch blankets may be required for steeper banks or when storm water enters via sheet flow.



(l) Retention basins (basins with no outlet) must be sized to accommodate two (2) consecutive one hundred (100) year storms (as calculated by the Oakland County method for retention). Documentation by a licensed Professional Engineer must be submitted to support that the basin will percolate into the soils naturally, with an estimate of the time to accomplish this, based on hydraulic calculations. The Village will determine the acceptance of the design.

(m) Parking lot storage is not allowed, unless there is no other feasible alternative. Maximum depth of storage is six (6) inches. No storage is allowed near the entry and exit ways of the building or designated handicapped parking spaces.

(n) In commercial areas, such as gas stations, where the entire site is paved and the site area is extremely limited, detention may be accomplished via underground storage tanks or oversized storm pipes. Large diameter pipe and cover material shall be designed to comply with the requirements of the Village Engineer.

(o) Minimum isolation (setback from property lines) of all basins shall be no less than twenty (20) feet.

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#### **Section 64-73. *Maintenance agreement.***

An agreement for operation and/or maintenance of the detention basin system must be executed by the developer and submitted to and accepted by the Village. The agreement, as to both form and content, shall be subject to the approval of the Village legal counsel.

#### **Section 64-74. *Easements and access.***

(a) For all new residential development, the property in which the detention basin is located upon must be contained in an easement deeded for detention purposes only.

(b) A minimum twenty (20) foot wide access easement shall be provided.

(c) At a minimum, twelve (12) foot wide gravel or grass pavers access drive shall be located within the above easement for maintenance purposes.

#### **Section 64-75. *Acceptance of utilities.***

(a) Preliminary Acceptance

(1) Prior to acceptance, all detention areas cleaned in accordance with Village Standards.

(2) The Developer shall submit record drawings, which must include rim elevations, inverts, pipe size, and slopes.

(b) Final Acceptance

Approved record drawings, one (1) electronic Copy on disk in AutoCAD format" one (1) electronic copy in Acrobat PDF format, and two (2) sets of prints sealed by a Registered Professional Civil Engineer licensed to practice in the State of Michigan according to State of

Michigan Occupational Code, Public Act 299 of 1980, shall be submitted to the Village prior to final acceptance of the detention or retention facility. The Village will review the record drawings to determine if the detention or retention facility is acceptable. If the Village determines the detention or retention facility has deficiencies, they shall be corrected to the Village's satisfaction prior to the Village's acceptance.

## **ARTICLE XI. SOIL EROSION AND SEDIMENTATION CONTROL**

### **Section 64-76. Submittal procedure.**

Soil Erosion and Sedimentation Control Plans shall be incorporated into any plans submitted. A Sanilac County Soil Erosion Control Permit is required.

### **Section 64-77. Plan requirements.**

The Soil Erosion and Sedimentation Control Plans shall contain the following data and other information as required by the county or other agencies on sheets twenty-four inch by thirty-six inch (24" x 36"), using the USGS Vertical Datum.

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(a) Public and private roads in the area and all adjacent properties and the extent of site grading, all to at least one hundred (100) feet outside site boundaries.

(b) Topographic plan scale, one inch equals fifty feet (1" = 50') to one hundred (100) feet beyond site boundaries showing:

- (1) Existing ground elevations, with either two (2) foot contour intervals or spot elevations on a fifty (50) foot grid.
- (2) Existing structures and significant features including trees six (6) inches in diameter or larger, existing ground cover, extent and condition.
- (3) Existing drainage and soil information.

(c) Site Grading and Development Plans as required under other sections of the Village of Lexington Engineering Design Standards for all proposed utilities on the site.

(d) The Soil Erosion and Sedimentation Control Plan shall include the following:

- (1) Description and location of the limits for all proposed earth changes.
- (2) Description and location of all soil erosion measures.
- (3) The timing and sequence of all proposed earth changes.
- (4) Information as to how excavated material will be handled and stored to prevent erosion.
- (5) Information on trench backfill restoration including schedule of placement.
- (6) Information concerning the existing drainage system including a provision for maintenance.

**Section 64-78. Notes.**

The following notes shall appear on the plans:

- (a) Daily inspections shall be made by the Contractor for effectiveness of erosion and sedimentation control measures and any necessary repairs shall be performed without delay.
  - (b) Any sedimentation from work on this site shall be contained on the site and not allowed to collect on any off site areas or in waterways.
  - (c) Contractor shall apply temporary erosion and sedimentation control measures when required and as directed on these plans. The Contractor shall remove temporary measures as soon as permanent stabilization of slopes, ditches and other earth changes have been accomplished. This would include temporary sedimentation ponds.
  - (d) Staging the work will be done by the Contractor as directed in these plans and as required to ensure progressive stabilization of disturbed earth.
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- (e) . Soil erosion control practices shall be established in the early stages of construction by the Contractor. Sediment control practices will be applied as a perimeter defense against any transporting of silt off the site.

**Section 64-79. Principles of erosion and sediment control.**

- (a) Plan the development to fit the topography, soils, waterways, and natural vegetation at a site with the least necessary earth disturbance or change.
- (b) Expose the smallest practical area of land for the shortest practical time through staging the work and early application of temporary or permanent erosion control measures.
- (c) Apply soil erosion control measures as a first line of defense against on site damage, to prevent sediment from being produced. These measures included special grading methods, run-off control structures, temporary and permanent vegetation.
- (d) Apply sedimentation control measures as a perimeter protection to prevent off site damage. These measures include diversion ditches, sediment traps, vegetative filters, and sediment basins.
- (e) Apply follow up and periodic maintenance for continued effectiveness of control measures.

**Section 64-80. Engineering design standards.**

- (a) Riprap is required at all locations where storm water velocities may be erosive to soils. Riprap shall be placed at all storm water inlets, outlets, and basin outlets. Riprap shall be a nominal four (4) inch to six (6) inch minimum diameter and be clean of any foreign material.

(b) Newly constructed storm water facilities shall be constructed to control flow velocities to limit erosion.

(c) The plans shall, based on the nature of the proposed development, contain a time schedule for the installation of permanent soil erosion control measures.

(d) If specific details are required for soil erosion control measures, they shall be shown on the plans.

(e) Soil erosion controls shall be used to prevent silt from entering public roadways and storm sewers at all times.

(f) All disturbed areas shall be restored in accordance with the landscaping standards provided in this Ordinance.

(g) Crushed aggregate mud mats 100 feet long by 26 feet (100' x 26') wide, at a minimum, shall be used at the entrance of construction sites.

(h) On larger projects or when phasing is involved, the developer may be required to provide alternate construction drives to the site to avoid damage to newly constructed streets. A crushed aggregate mud mat should be used any time the new approach is used for construction traffic. All construction drives shall be approved by the Village .

## **ARTICLE XII. LANDSCAPING ESTABLISHMENT AND RESTORATION STANDARDS**

### **Section 64-81. Plans and Specifications -Submittal procedure.**

The plans and specifications shall be submitted in accordance with "General Requirements & Submittals".

### **Section 64-82. Plans and Specifications -Design considerations: general.**

All Landscaping designs shall be developed conforming to the current Zoning Ordinance'

### **Section 64-83. QUALITY ASSURANCE:**

A. Testing of supplied and/or stockpiled topsoil shall be performed by a qualified independent testing laboratory normally engaged in agronomic soil testing. Each soil sample tested shall be a composite of five to seven subsamples taken the full depth of proposed source. Discard upper 6 inches of stockpiled topsoil before collecting samples. All costs for collecting and testing of topsoil shall be borne by the Contractor.

B. Required Topsoil Tests:

1. Chemical analysis indicating:

- a. fertility: pH, nitrate nitrogen, ammonia nitrogen, phosphate, phosphorous, potassium, calcium, magnesium.
- b. suitability: total salinity, boron, sodium, potassium, calcium, magnesium, chloride, sulfate.

2. Physical properties including:

- a. organic content
- b. particle size distribution

C. Plant names indicated, comply with "Standardized Plant Names" as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties not listed conform generally with names accepted by the nursery trade. Provide stock true to botanical name and legibly tagged.

D. Comply with sizing and grading standards of the latest edition of "American Standard for Nursery Stock". A plant shall be dimensioned as it stands in its natural position.

E. All plants shall be nursery grown under climatic conditions similar to those in the locality of the project for a minimum of 2 years .

F. Stock furnished shall be at least the minimum size indicated. Larger stock is acceptable, at no additional charge. Larger plants shall not be cut back to size indicated.

G. Provide "specimen" plants with a special height, shape or character of growth. Landscape Contractor to tag specimen trees or shrubs at the source of supply. The VILLAGE will inspect specimen selections at the source of supply for suitability and adaptability to selected location. When specimen plants cannot be purchased locally, provide sufficient photographs of the proposed specimen plants for approval. The Landscape Contractor shall inspect all plant material at source prior to VILLAGE's approval. Landscape Contractor shall accompany VILLAGE on final selection trip.

H. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work.

I. Provide percolation testing by filling plant pits with water and monitoring length of time for water to completely percolate into soil. Submit test results to VILLAGE prior to starting work .

**Section 64-84. DELIVERY, STORAGE AND HANDLING:**

A. Deliver seed and fertilizer materials in original unopened containers, showing weight, analysis and name of manufacturer. Store in a manner to prevent wetting and deterioration.

B. The irrigation system will be installed prior to seeding. Locate, protect and maintain the irrigation system during seeding operations. Repair irrigation. Deliver fertilizer materials in original, unopened and undamaged containers showing weight, analysis and name of manufacturer. Store in manner to prevent wetting and deterioration.

C. Take all precautions customary in good trade practice in preparing plants for moving. Workmanship that fails to meet the highest standards will be rejected. Spray deciduous plants in foliage with an approved "Anti-Desiccant" immediately after digging to prevent dehydration. Dig, pack, transport and handle plants with care to ensure protection against injury. Inspection certificates required by law shall accompany each shipment invoice or order to stock and on arrival. A copy of certificate shall be filed with the VILLAGE. Protect all plants from drying out. If plants cannot be planted immediately upon delivery, properly protect them with soil, wet peat moss or in a manner acceptable to the VILLAGE. Water heeled-in plantings as required to keep root system moist until planting. No plant shall be bound with rope or wire in a manner that could damage or break the branches.

D. Cover plants transported on open vehicles with a protective covering to prevent windburn.

E. Frozen or muddy topsoil is not acceptable. Fix irrigation system components damaged during seeding operations at this Contractor's expense.

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**Section 64-85. *PROJECT CONDITIONS:***

A. Protect existing utilities, paving and other facilities from damage caused by seeding operations. Protect existing trees, plants, lawns and other features designated to remain as part of the landscaping work.

B. Perform seeding work only after planting and other work affecting ground surface has been completed.

C. Provide hose and lawn watering equipment as required.

D. Promptly repair damage to adjacent facilities caused by topsoil operations. Cost of repair at Contractor's expense.

E. Promptly notify the VILLAGE of unexpected sub-surface conditions.

F. A complete list of plants, including a schedule of sizes, quantities and other requirements is shown on the proposal form. In the event that quantity discrepancies or material omissions occur in the proposal form, Contractor shall notify the VILLAGE during the proposal bidding process.

**Section 64-86. *SEEDING AND TOPSOIL***

A. Provide topsoil as required to complete job. Topsoil must meet testing criteria results specified. All processing, cleaning and preparation of this topsoil to render it acceptable for use is the responsibility of this contractor.

B. Supplied and/or stockpiled topsoil, shall be fertile, sandy loam soil without admixture of subsoil and free of stones, stumps, root, trash, debris, and other materials deleterious to plant growth. Topsoil shall not be frozen or muddy. Ph of existing or supplied soil to range between 6.3 and not more than 7.0. Topsoil that does not meet this pH range shall be amended with approved pH adjusters. Topsoil shall contain not less than 3% and not greater than 10% organic matter determined by loss through ignition.

C. Seed: Fresh, clean and new crop seed mixture. Mixed by approved methods.

D. Composed of the following varieties, mixed to the specified proportions by weight and tested to minimum percentages of purity and germination.

E. Seed Mixture: Proportioned by weight as indicated below:

Creeping Red Fescue 60%

Baron Ken. Bluegrass 30%

Perennial Rye 20%

Spread at a rate of 8 lbs./1000 sf., No noxious weed seeds permitted.

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F. Fertilizer: 13-25-12. Granular, non-burning product composed of not less than 50% organic slow acting, guaranteed analysis, professional fertilizer.

G. Ground limestone: Used if required by soil test report. Containing not less than 85% of total carbonates and ground to such fineness that 50% will pass through a 100 mesh sieve and 90% will pass through a 20% mesh sieve.

H. Granulated sulfur 0-0-0-90 to lower PH. Use if determined by soil tests to be necessary. Apply per soil test recommendations at specified rate .

I. Straw mulch: Used in crimping process only. Clean oat or wheat straw well seasoned before bailing, free from mature seed-bearing stalks or roots of prohibited or noxious weeds.

J. Water: Free of substance harmful to seed growth. Hoses or other methods of transportation furnished by Contractor. Test for excess Alkalinity, if necessary.

K. Wood Cellulose Fiber Mulch: Degradable green dyed wood cellulose fiber or 100% recycled long fiber pulp, free from weeds or other foreign matter toxic to seed germination and suitable to hydro mulching.

L. Paper Mulch: Degradable paper mulch, free of foreign debris. Do not use on slopes over 30%.

M. Tackifier: Liquid concentrate diluted with water forming a transparent 3dimensional film like crust permeable to water and air and containing not agents toxic to seed germination.

## **Section 64-87. TREES AND SHRUBS**

A. *Plants:* Provide plants typical of their species or variety; with normal, densely developed branches and vigorous, fibrous root systems. Provide only sound, healthy, vigorous plants free from defects, disfiguring knots, sunscald injuries, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers and all forms of infestation. All plants shall have a fully developed form without voids and open spaces.

1. Dig balled and bur lapped plants with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock". Cracked or mushroomed balls are not acceptable.

2. Provide tree species that mature at heights over 25'-0" with a single, main trunk. Trees that have the main trunk forming a "Y" shape are not acceptable.

3. Trees to have clay or clay loam balls; sandy loam or sand balls are not acceptable.

4. Plants planted in rows shall be matched in form.

5. Plants larger than those specified in the plant list may be used when acceptable to the VILLAGE.

6. If the use of larger plants is acceptable, increase the spread of roots or root ball in proportion to the size of the plant.

7. The height of the trees, specified by height, measured from the crown of the roots to the top of the top branch, shall not be less than the minimum size designated in the proposal form.

8. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges.

9. Evergreen trees shall be unsheared and branched to the ground.

10. Shrubs and small plants shall meet the requirements for spread and height indicated on the proposal form.

B. *Container-grown Stock:* Grown in a container for sufficient length of time for the root system to have developed to hold its soil together, firm and whole.

1. No plants shall be loose in the container.

2. Container stock shall not be root bound.

3. The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.

4. Single stemmed or thin plants will not be accepted.

5. Side branches shall be generous, well twigged and the plant as a whole well bushed to the ground.

6. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

C. *Specimen Stock:* All specimen designated plantings are to be nursery grown, fully developed, excellent quality and typical example of the species. Plants designated to be planted in rows must be matched, symmetrical and uniform in height, spread, caliper and branching density. Matched plantings should be obtained from same nursery and, preferably, from same row or line. All specimen material will be approved by VILLAGE at nursery.



D. *Peat Moss*: Brown to black in color, weed and seed free granulated raw peat. Provide ASTM D 2607 sphagnum peat moss with a PH below 6.0 for ericaceous plants.

E. Planting Mixture Type A: Standard planting backfill shall be a mixture of 1/3 topsoil, 1/3 sand and 1/3 peat per cubic yard of mixture. Add fertilizer Type "A" to planting mixture per manufacturer's requirements. Follow planting details.

F. Planting Mixture Type B (for Flowers, Ground Cover Beds, Ericaceous Plants and Ornamental Grasses): Planting backfill shall be a mixture of 1/3 topsoil, 1/3 sand and 1/3 peat. Adding fertilizer type "B" to mixture per. Follow planting details.

G. Plant Fertilizer Type A: "Scotts Pro Grow 18-3-6 landscape fertilizer plus minors, applied per manufacturer's recommendations.

H. Plant Fertilizer Type B: Approved acid-base fertilizer; "Espoma Holly-Tone". 4-6-4 applied per manufacturer's instructions.

I. "MyCor" Tree Saver Soil Conditioner manufactured by Plant Health Care, Inc., 1-800-421-9051. Use for all tree and shrub species except Rhododendrons, Azaleas and Laurels.

J. Superphosphate: Composed of finely ground phosphate rock as commonly used for agricultural purposes containing not less than eighteen (18%) percent available phosphoric acid. Apply as required based upon soil test report.

K. Lime: Ground dolomitic limestone, ninety-five (95%) percent passing through #100 mesh screen. Use to adjust soil pH only, under direction of VILLAGE or based upon soil test report.

L. Sand: Clean, coarse, ungraded conforming to ASTM C 3 for fine aggregates.

M. Anti-Desiccant: Protective film emulsion providing a protective film over plant surfaces; permeable to permit transpiration. Mixed and applied in accordance with manufacturer's instructions.

N. Shredded Bark Mulch: Clean, free of debris and sticks, and well aerated. Materials shall be uniform in size, shape and texture. Submit samples to owner for approval prior to installation.

O. Water: Free of substances harmful to plant growth. Hoses or other methods of transportation furnished by Contractor.

P. Stakes for Staking: Hardwood, 2" x 2" x 6'-0" minimum length.

Q. Stakes for Guying: Hardwood, 2" x 2" x 36" long.

R. Guying/Staking Wire: No. 11 gauge galvanized wire, or approved substitute.

S. Turnbuckles: Galvanized steel of size and gauge required to provide tensile strength equal to that of the wire. Turnbuckle opening shall be at least 3".

T. Staking and Guying Hose: Two-ply, reinforced garden hose not less than 1/2" inside diameter.

U. Tree Wrap: Standard waterproofed tree wrapping paper, 2-1/2" wide, made of 2 layers of crepe kraft paper weighing not less than 30 lbs. per ream, cemented together with asphalt.

V. Twine: Two-ply jute material.

#### **Section 64-89. FINISH GRADING:**

A. Perform top soiling within limits of disturbance, including adjacent transition areas, to new elevations, levels, profiles, and contours indicated. Provide uniform levels and slopes between new elevations and existing grades.

B. Grade surfaces to assure areas drain away from building structures and to prevent ponding and pockets of surface drainage.

C. Lawn Areas: Supply and spread topsoil to a minimum uniform depth of 4" or as noted. Remove clumps larger than 1" in diameter.

D. Grade lawn areas to a smooth, free draining even surface with a loose, moderately coarse texture ready to accept seed or sod.

E. Provide earth crowning where indicated on drawings.

F. Crowning/mounding to be free flowing in shape and design, as indicated and to blend into existing grades gradually so that toe of slope is not readily visible. VILLAGE to verify final contouring before planting.

G. Regardless of finish grading elevations indicated, it is intended that grading be such that proper drainage of surface water will occur and that no low areas are created to allow ponding. Contractor to consult with Owner or VILLAGE regarding minor variations in grade elevations before rough grading is completed.

#### **Section 64-90. PREPARATION OF SEEDED LAWN AREAS:**

A. Limit preparation to areas, which will be immediately seeded.

B. Treat lawn areas if required with "Round Up", by Monsanto, per label directions to kill existing vegetation prior to seeding.

C. Loosen topsoil of lawn areas to minimum depth of 4". Remove stones over 1" in any dimension and sticks, roots, rubbish and extraneous matter.

D. Grade lawn areas to a smooth, free draining even surface with a loose, moderately coarse texture.

Roll and rake, remove ridges and fill depressions as required to drain.

E. Apply amendments to supplied or existing topsoil, if required by soil test report, at rate determined by the soil test. Distribute evenly by machine and incorporate thoroughly into topsoil.

F. Apply fertilizer to indicated turf areas at a rate equal to 1 lb. of actual nitrogen per 1,000 sq. ft. (43 lbs/acre). Omit this process if applied with hydroseeding process.

G. Apply fertilizers by mechanical rotary or drop type distributor, thoroughly and evenly incorporated with soil to a depth of 1" by discing or other approved method. Fertilize areas inaccessible to power equipment with hand tools and incorporate into soil.

H. Restore prepared areas to specified condition if eroded, settled or otherwise disturbed after fine grading and prior to seeding.

**Section 64-91 PREPARATION:**

**A. Time of planting:**

1. Evergreen material: Plant evergreen materials between August 15 and October 1 or in spring before new growth begins. If project requirements require planting at other times, plants shall be sprayed with anti-dessicant prior to planting operations.

2. Deciduous material: Plant deciduous materials in a dormant condition. If deciduous trees are planted in-leaf, they shall be sprayed with an antidessicant prior to planting operation.

3. Planting times other than those indicated shall be acceptable to the VILLAGE.

B. Planting shall be performed only by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.

C. Individual plant locations shall be staked on the project site by the Contractor and approved by the VILLAGE before any planting pits are dug. The VILLAGE reserves the right to adjust plant material locations to meet field conditions, without additional cost to the Owner.

D. Planting pits shall be round, with vertical sides and flat bottoms and sized in accordance with outlines and dimensions shown on the planting details.

E. Accurately stake plant material according to the drawings. Stakes shall be above grade and painted a bright color to be clearly visible for inspection.

F. If obstructions are encountered that are not indicated, do not proceed with planting operations until alternative plant locations have been selected and approved in writing by the VILLAGE. Where location or spacing dimensions are not clearly shown, request clarification by the VILLAGE.

**H. Vegetation Removal:**

1. Strip existing grass and weeds, including roots, from all bed areas, till and fine grade existing topsoil, leaving the soil surface one inch below finished grade (in areas shown on plan).

2. Herbicide: Use Round Up (Monsanto Co.) as required to prepare areas for new planting, applied to all ground cover, evergreen and shrubbery beds and all mulch areas before application of pre-emergence herbicide, per manufacturer's recommendations. Clean area of all dead material after five (5) days.

3. Pre-Emergence Herbicide: DACTHAL W-75 (Diamond Shamrock Agricultural Chemicals) applied to one (1) ounce per 100 square feet to same area where "Herbicide" has been applied and after area is cleared of dead vegetation.

4. Herbicides to be applied by licensed applicator as required by the state.

**Section 64-92. *CLEANING:***

A Upon completion of top soiling operations, clean areas within contract limits, remove tools and equipment. Site shall be clear, clean, free of debris and suitable for site work operations.

B. Perform cleaning during installation of the work and upon completion of the work to the approval of the VILLAGE. Remove from site all excess materials, *debris and* equipment. Repair damage resulting from seeding operations. Clean all areas where overspray has occurred from hydroseeding operations.

**Section 64-93. *INSTALLATION:***

A. Seed lawns only between April 1 and June 1 and fall seeding between August 15 and October 15 or at such other times acceptable to VILLAGE:

B. Seed immediately after preparation of bed. Seed indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.

C. Perform seeding operations when the soil is dry and when winds do not exceed 5 miles per hour velocity.

D. Apply seed with a rotary or drop type distributor. Install seed evenly by sowing equal quantities in 2 directions, at right angles to each other.

E. Sow seed at a rate of 8 lbs/1000 sf. (350 lbs/acres).

F. After seeding, rake or drag surface of soil lightly to incorporate seed into top 1/8" of soil. Roll with light lawn roller.

**Section 64-94. *MULCHING OR HYDROSEEDING:***

A. Place straw mulch on seeded areas within 24 hours after seeding.

B. Place straw mulch uniformly in a continuous blanket at a rate of 2-1/2 tons per acre or (2) 50 lb. bales per 1,000 sq. ft. of area. A mechanical blower may be used for straw mulch application when acceptable to the Architect.

C. Crimp straw into soil by use of a "crimper". Two passes in opposite direction required.

D. Use a hydromulcher (sprayer) and apply mixture(s) at the following rate. Mix in accordance with manufacturer's recommendations.

E. Apply hydroseed slurry to indicated areas. Use tackifier only on erosion prone areas. Apply fertilizer with hydro mix.

Seed: 350 pounds per acre  
Fertilizer: 400 pounds per acre  
Tackifier: 60 gallons per acre  
Wood Cellulose Fiber Mulch: 2000 pounds per acre

F. Care must be taken not to get hydroseed materials on buildings, walks, roadways, plant beds etc.

**Section 64-95. LAWN ESTABLISHMENT:**

A. Establish dense lawn of permanent grasses, free from lumps and depressions. Any area failing to show uniform germination to be reseeded; continue until dense lawn established. Damage to seeded area resulting from erosion to be repaired by Contractor. Scattered bare spots over 5 percent not allowed.

B. In event contractor does not establish dense lawn during germination period, return to project to refertilize and reseed to establish dense lawn.

C. Should the seeded lawn become largely weeds after germination, Contractor responsible to kill the weeds and reseed the proposed lawn areas to produce a dense turf, as specified.

**Section 64-96. INSTALLATION:**

A. Excavate circular plant pits with vertical sides, except for plants specifically indicated to be planted in beds. Provide plant pits per planting details. Depth of pit shall accommodate the root system. Scarify the bottom of the pit to a depth of 4".

B. Provide pre-mixed planting mixture Type "A" for use around the balls and roots of all deciduous and evergreen tree plantings.

C. Beds for Ground Cover, Flowers, Ericaceous Plants and Ornamental Grasses: Excavate existing soil to 12" depth over entire bed area and remove soil from site. Set plants according to drawings and backfill entire bed with pre-mixed planting mixture Type "B".

D. Mass Shrub Beds/Hedge Beds: Excavate existing soil to 18" depth over entire bed area and remove soil from site. Scarify bottom of the bed to a 4" depth. Set plants according to drawings and specs. in addition, backfill entire bed with (pre-mixed) specified planting mixture Type "A".

#### E. Planting:

1. Set plant material in the planting pit to proper grade and alignment. Set plants upright, plumb and faced to give the best appearance or relationship to each other or adjacent structure. Set plant material 2"-3" above the finish grade. No filling will be permitted around trunks or stems. Backfill the pit with planting mixture. Do not use frozen or muddy mixtures for backfilling. Form a ring of soil around the edge of each planting pit to retain water in non-irrigated areas.

2. After balled and bur lapped plants are set, muddle planting soil mixture around bases of balls and fill all voids. Sufficiently compact to prevent settlement.

3. Add "MyCor" Tree Saver to mix per manufacturer's directions.

4. Remove all burlap, ropes and wires from the tops of balls.

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5. Space ground cover plants in accordance with indicated dimensions. Adjust spacing as necessary to evenly fill planting bed with indicated quantity of plants. Plant to within 12" of the trunks of trees and shrubs within planting bed and to within 6" of edge of bed.

6. Spread and arrange roots of bare-rooted plants in their natural position. Work-in planting mixture. Do not mat roots together. Cut all broken and frayed roots before installing planting mixture.

7. Water immediately after planting.

#### F. Mulching:

1. Mulch tree and shrub planting pits and shrub beds with required mulching material 3" deep immediately after planting. Thoroughly water mulched areas. After watering, rake mulch to provide a uniform finished surface

#### G. Wrapping, Guying, Staking:

1. Inspect trees for injury to trunks, evidence of insect infestation and improper pruning before wrapping.

2. Wrap trunks of all trees spirally from bottom to top with specified tree wrap and secure in place.

3. Stake/guy all trees immediately after lawn seeding or sodding operations and prior to acceptance. When high winds or other conditions which may effect tree survival or appearance occur, the Architect shall require immediate staking/guying.

4. Stake deciduous trees under 4" caliper. Stake evergreen trees under 12'-0" tall with 2 x 2 cedar stakes, 2 per tree.

5. Guy deciduous trees 4" caliper and over. Guy evergreen trees 12'-0" tall and over with metal fence post, 3 per tree.

H. Pruning:

1. *Prune branches of deciduous stock, after planting, to balance the loss of roots and preserve the natural character appropriate to the particular plant requirements. Remove or cut back broken, damaged and unsymmetrical growth of new wood.*

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2. Multiple leader plants: Preserve the leader, which will best promote the symmetry of the plant. Cut branches flush with the branch collar. Make cut on an angle.

3. Prune evergreen trees only to remove broken or damaged branches.

**ARTICLE XIII. VIOLATIONS AND PENALTIES**

**Section 64-97. *Violations and penalties.***

Any person, persons, firm or corporation who violates any of the provisions of this ordinance shall be guilty of a misdemeanor and, upon conviction thereof, may be punished by a fine not exceeding five hundred (\$500.00) dollars or imprisonment in the County Jail for a period not to exceed ninety (90) days, or both such fine and imprisonment in the discretion of the court. Each day that a violation is permitted to exist shall constitute a separate violation.