AN ORDINANCE CONCERNING THE CONSTRUCTION AND ACCEPTANCE OF PUBLIC STREETS OR PUBLIC HIGHWAYS IN THE TOWN OF HARWINTON

ORDAINED by the Town Meeting of the Town of Harwinton:

1. General

No land shall be dedicated by any owner of real estate for acceptance as a public street or highway by the Town of Harwinton, nor shall any street or highway be constructed by any owner of real estate for acceptance as a public street or highway, except in accordance with the provisions of this Ordinance. No land shall be accepted as a public street or highway by the proper authority of the Town except in accordance with the provisions of this ordinance .

2. Standards

Each Street or highway dedicated for acceptance by the Town shall conform to the following standards:

2.1 Right-Of-Way

A right-of-way, not less than 50 feet in width, shall be dedicated for high way purposes together with all rights-of-way and easements, not less than 40 feet in width, that may be necessary for the proper drainage thereof.

2.2 Grade and Alignment

The minimum grade for any street or highway shall be 1% and the maximum grade shall not exceed 10%, except where approved by the Town of Harwinton Planning Commission (HPC) in cases where topography warrants and safety will not be adversely affected. The minimum radius of curvature at the centerline of streets shall be 200 feet. Appropriate vertical curves for transition shall be established on any street and at street intersections to ensure adequate sight distance.

2.3 Intersections

a. The centerline of all streets entering an intersection shall:

1) pass through a single point with no more than two intersecting streets meeting the main road at any one point, or

2) shall be spaced a minimum of 800 feet apart on a collector street, and 200 feet apart on local street as measured from the intersection of the centerline.

b. Proposed streets shall intersect other streets at right angles radially, or as approved by the HPC provided that, in no case, shall the angle of intersection between adjoining street lines be less than 60 degrees.

c. Proposed streets shall intersect other streets such that pavement slope on the proposed street averages no more than 3 percent within 200 feet of the intersection. The HPC can increase the average slopes to 4 percent if deemed prudent.

d. Street lines at intersections shall be connected by a curve having a minimum radius of 25 feet.

e. Proposed streets shall intersect other streets such that the horizontal centerline of the proposed street shall be a straight line of at least 100 feet from the intersecting street lines unless otherwise approved by the HPC.

f. Intersections shall have unobstructed vision from a drivers eye (located at a height of 3.5 feet above the surface of the proposed road and a location 20 feet back from the edge of the travel way of the intersected road) along both directions of the intersected road that is in conformance with current CTDOT and AASHTO standards for the 85th percentile speed. The "desirable" sight distance shall be provided whenever possible and no road shall be approved that does not provide for the "minimum" sight distance.

g. Such sight distance shall not be impaired by curvature or grade, except in extreme conditions, in which adequate alternative safety measures shall be designated. At a street intersection, no obstruction to sight over three (3) feet in height from street grade shall be allowed within 25 feet of the lot line intersection.

2.4 Turnarounds

A turnaround shall be provided at the closed end of a dead-end street. The turnaround shall be a cul-de-sac in a teardrop or circular shape with a paved radius of 60 feet, and shall have a center storm drain. The minimum radius for curvature for the right-of-way for turns shall be not less than 100 feet. A sufficient right-of-way for a turnaround on a temporary dead-end street, which may, at some future date, be projected into adjoining property, shall be provided by means of a temporary easement providing for automatic termination of the easement upon extension of the street.

2.5 Pavement and Cross section

Streets shall be designed with the pavement centered in the right-of-way. The right-of-way adjacent to the curb and for a width of six (6) feet shall be graded to the top of the

curb, if any, or to the edge of the pavement at a slope of ½ inch per foot; grading beyond the six (6) foot width shall not exceed one (1) foot of rise or fall for each two (2) feet of horizontal distance, or such lesser slope as is necessary to maintain the stability of the slope. A typical cross section drawing shall be shown on the construction plans and shall indicate a standard location for water mains, storm drains, sanitary sewers, gas mains, and underground electric, telephone and CATV lines. A 24 foot width of pavement inside to inside of curb line shall be provided for all types of streets.

2.6 Traffic Control Devices and Street Name Signs

Traffic control devices and street name signs shall be installed at all street intersections in locations designated by the Town. Such signs shall be in accordance with the latest revision of the Uniform Manual of Traffic Control Devices.

2.7 Street Lighting

Street lighting shall be provided, if deemed necessary by the Town. Such lighting shall be of the type approved by the Town. Power consumption at a fixed rate per luminaire shall be paid in advance to the Town by the applicant for a period not to exceed two (2) years.

2.8 Base Course

A base course not less than 16 inches in depth and for the full width of the pavement and curb bases shall be constructed in two layers. The bottom subbase layer shall consist of ten (10) inches of Granular Fill (Item M.02.01) and a top layer of six (6) inches of Processed Aggregate Base (Item M.05.01) in accordance with latest Connecticut Department of Transportation specifications. Construction methods, tolerances and standards shall be in accordance with Section 2.12 Subbase of the latest Connecticut Department of Transportation specifications. Material Certificates shall be submitted for all subbase and base material in accordance with Section 1.06.07 of the latest Connecticut Department of Transportation specifications.

2.9 Surface Course

The paved surface shall have a total thickness of 3 ½ inches, and shall have a cross slope of ½ inch per foot from the center line and shall be constructed of two (2) courses of bituminous concrete, a two (2) inch Binder Course , and a 1 ½ inch Surface Course (Class 2), after compaction. Construction methods shall conform to the latest Connecticut Department of Transportation specifications. No paving is to take place until all underground utility work within the right of way has been completed.

2.10 Curbing

All streets shall be curbed along their entire length with Bituminous Concrete Lip Curbing conforming to Section 8.15 of latest Connecticut Department of Transportation specifications.

2.11 Shoulders and Embankments

Rough grade to 6 inches below the finished surface elevation and spread topsoil to a 6 inch minimum depth. Fine grade, fertilize, seed and mulch in accordance with Section M.13 of the latest Connecticut Department of Transportation Specifications.

2.12 Cul-de-Sacs:

A permanent cul-de-sac is a street which is not to be extended into adjoining property. A temporary cul-de-sac is a street which may be extended into adjoining property.

a. Permanent Cul-de-Sacs: Unless specifically approved by the Commission, permanent cul-de-sacs shall not exceed a length of 1,200 feet. The paved portion of the street shall be extended a distance sufficient to provide the minimum frontage required for the abutting lots.

b. Temporary Cul-de-Sacs: Temporary cul-de-sacs may exceed a length of 1,200 feet but shall not exceed a reasonable interim length for safe and convenient vehicular access, including emergency vehicles, as determined by the Commission. The paved portion of the street shall be extended a distance sufficient to provide the minimum frontage required for the abutting lots. The section reserved for future access to the adjoining property need not be improved; however, the developer shall rough grade the reserved section and shall prepare and stabilize all slopes made necessary by the extension of the street.

2.13 Street Names:

Streets shall bear names which are appropriate to the character of the Town and which do not duplicate or too closely approximate in spelling or sound existing names in the Town or any adjoining municipality. All street names shall be subject to the approval of the Commission.

2.14 Monuments:

Monuments shall be provided on both sides of the street right-of-way and shall be set at the beginning and termination of each street and at each point of deflection, curvature and tangency. Monuments shall be of stone or reinforced concrete 30 inches in length and four (4) inches square at the top, with a cross or other measuring feature in the top center. Monuments shall be set 28 inches in the ground after all project grading is complete. If

ledge is encountered, a brass plug 1/2 inch by three (3) inches shall be set in the ledge and secured with a portland-type cement mortar.

2.15 Underground Utility Lines:

New electric, communication and other wires shall be installed underground unless the Commission determines, based on a written report submitted by the applicant, that such underground installation is inappropriate or unfeasible for all or part of the subdivision. In making such determination, the Commission shall take into account; the type of service existing in the area adjacent to the subdivision, topographic and construction conditions, and the size of the subdivision. Whenever possible, such underground utilities shall not be located under the street pavement.

3.0 Storm Drainage Planning and Design:

Storm drainage shall be planned and designed in a manner capable of acceptance for public use and maintenance by the Town of Harwinton. Storm drainage shall be designed and constructed in accordance with the ordinances of the Town of Harwinton and the standards set forth in the current Subdivision regulations.

3.1 General:

A storm drainage system is a closed system which conveys storm runoff from the entire area of the subdivision. The design must take into account any land which would normally drain across the subdivision, and the effect upon downstream drainage systems. The design should minimize any adverse effects on adjacent property, and be in compliance with all governmental codes and regulations including the following:

a. Section 404 Army Corps of Engineers, Federal law (33 USCA 404) that requires that all construction activity involving navigable waters be reviewed and approved.

b. Federal Emergency Management Agency (FEMA), which approves all modifications to flood ways and flood plains.

3.2 Provisions:

Catch basins, gutter inlets, manholes, collector pipes, and the main trunk line of the storm drainage system must provide for:

a. adequate drainage of proposed streets, accounting also for future extensions thereof into adjoining property, by means of pipes, culverts, catch basins, and appurtenances.

b. interception or management of channeled drainage coming from any adjoining property or street.

c. protection of locations necessary for on-site sewage disposal and water supply facilities and driveways and building sites.

d. prevention of soil erosion, sedimentation, and flooding, by provision of silt basins, storm water detention facilities or other construction and control measures.

e. improvement of existing drainage systems to accommodate additional flowage generated by the subdivision, when completed.

f. drainage facilities shall be located within the street right of way where feasible, or in perpetual unobstructed easements where necessary.

3.3 Storm Drainage Design:

The design of storm drainage facilities shall be based upon the maximum ultimate development of the watershed permitted under the current Zoning Regulations.

a. Drainage shall be designed under the "Rational Formula" whereby Q=CiA

b. Runoff factors must be approved by the town engineer.

c. Design flood frequency shall be:
1) Pipe drainage systems: 10 year flood,
2) Channels and trunk lines: 25 year flood,
3) Culverts: 25 year flood, and
4) Channels and encroachment lines along streams: 50 year flood.

d. The pipe system should flow full for the calculated total flow.

e. The system should operate under pressure with a free outfall. However, a system operating under surcharge with a submerged outflow would be considered.

f. The HGL (Hydraulic Grade Line) should not rise to within 2.0 feet of any manhole cover or top of any inlet at the design discharge.

g. The HGL should not rise to a level that would flood any subdrain outfalling into the storm drain system.

h. Minimum slope of all pipes shall be 0.4%.

i. Energy dissipaters, stilling basins, or other approved devices must be incorporated when design slopes exceed 8.0%

j. The minimum cover over the top of the pipe shall be three (3) feet.

k. Manholes shall be provided at all deflection points and/or the junction of two or more lines.

l. Catch basins should be spaced to the following standards:
   a) 300 feet on a tangent, or closer as required for intersections.
   b) 200-250 feet on the inside of superelevated curves.
   c) 250 feet on highway grades over 6.0%
   d) On the up hill side of intersections
   e) 250 feet from all roadway high points
   f) center of cul-de-sacs

3.2 Discharge:

The discharge of all storm water that has been collected or otherwise artificially channeled shall be into suitable natural streams or into Town or State drainage systems with adequate capacity to carry the discharge. There shall be no discharge onto or over private property within or adjoining the subdivision unless (a) proper easements and discharge rights have been secured by the applicant, (b) such easements and rights are transferable to the Town in the event that the discharge includes storm water from any street, and (c) proper provisions are made to safeguard against soil erosion and flood danger. No storm water shall be diverted from one watershed to another. Discharge shall be made in a manner that protects streams, ponds and swamps from pollution.

3.3 Drainage Construction

a. Pipe Materials Corrugated Metal Pipe (CMP) or Corrugated Polyethylene Pipe (HDPE) (Type S smooth interior surface only) or Reinforced Concrete Pipe (RCP) joint sealants and bedding material shall conform to Article M.08.01 of the latest revision of the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges, and Incidental Construction.

b. Methods Trench excavation and back fill shall conform to Section 2.05 of the latest Connecticut Department of Transportation specifications. Corrugated Metal Pipe (CMP) or Reinforced Concrete Pipe (RCP) or Corrugated Polyethylene Pipe (HDPE), joint sealants and bedding installation shall conform to Section 6.51 of the latest revision of the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges, and Incidental Construction.

c. Appurtenances Catch basins, manholes, drop inlets, end walls, and other appurtenances to the storm drainage system shall be constructed in accordance with Section 5.07 and Article M.08.02 of the latest revision of the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges, and Incidental Construction.

d. Special Structures Bridges, box culverts, and other special structures shall be designed and constructed in accordance with sound engineering practice and the latest revision of the Connecticut Department of Transportation's "Standard Specifications for Roads, Bridges, and Incidental Construction. Bridges shall be designed in accordance with latest revision of the Standard Specifications for Highway Bridges as adopted by the American Association of State Highway and Transportation Officials (AASHTO).

e. Underdrains At the base of uphill shoulder embankments and as elsewhere ordered by the ~~HPC~~ Town, a minimum 6 inch diameter perforated pipe continuous underdrain shall be installed behind the curbing in accordance with Section 7.51 of the latest Connecticut Department of Transportation Specifications, except that the aggregate shall be limited to Broken Stone of Screened Gravel conforming to Article M.01.01 for 3/8 inch stone.

4.0 Construction:

No owner of real estate to be dedicated for acceptance by the Town of Harwinton as a public street or highway and no other person, firm or corporation, shall construct a street or highway for acceptance by the Town, until the following requirements have been met:

4.1 Maps and Plans

A map of the right-of-way for the street or highway and construction plans for streets, drainage and other improvements shall be presented to, and approved by, the Board of Selectmen.

4.2 Permit

No construction and installation of streets, drainage and other improvements shall be commenced until a Road Construction Permit has been issued by the Board of Selectmen or their authorized agent.

4.3 Inspection

All construction of the street or highway shall be carried out subject to supervision and inspection by the Board of Selectmen or their authorized agent.

5.0 Administration:

The Board of Selectmen shall have the responsibility for administration and enforcement of this Ordinance. In carrying out its duties, the Board of Selectmen is authorized as follows:

5.10 Procedure

To adopt policies, rules and procedures, as well as standards and specifications, necessary to conduct its duties and enforcement of this Ordinance.

5.20 Fees

To establish from time to time reasonable fees for issuance of a Road Construction Permit and for supervision and inspection of construction under an approved Permit.

5.30 Alternate Standards

To approve alternate design and construction standards for streets, drainage and other improvements when :

a. Such standards are prepared by a licensed professional engineer authorized to practice in the state of Connecticut.
b. The Board of Selectmen determines that such standards will be in accord with the purpose and intent of Section 2 of this Ordinance, and
c. Such alternate standards are determined by the Planning Commission to be in accordance with the purpose and intent of the Commission's Subdivision Regulations

6.0 Acceptance

The Town of Harwinton acting by Town Meeting is authorized to accept as a public street or highway land dedicated by an owner of real estate, subject to the following conditions:

6.1 Map

There shall be on file in the Office of the Harwinton Town Clerk a map of the right-of-way of the street or highway, together with all rights-of -way and easements that may be necessary for the proper drainage of the street, and showing the location of permanent monuments. The map shall be prepared by and bear the seal of a land surveyor or professional engineer licensed as such by the State of Connecticut.

6.2 Application

The owner shall make written application to the Board of Selectmen for such acceptance, and the application shall be accompanied by the following:

a. As-Built Plans Construction plans of the street or highway showing the street, drainage, utilities and other improvements as built, together with a licensed surveyor's or professional engineer's certification that all improvements are within the boundaries of the highway or any easement granted.

b. Conveyances A warranty deed free and clear of all encumbrances to the right-of-way being designated as a public street or highway and easement deeds, in suitable and standard form, for drainage or other purposes encompassing land not located in the right-of-way of the public street or highway. The conveyance of title shall be accompanied by an attorney's title certificate and mechanics lien waiver, or an owner's title insurance policy affirmatively insuring against the same, issued to the Town of Harwinton.

c. Maintenance Bond An executed agreement and bond to guarantee maintenance of, and to cover unforseen deficiencies in, the construction of the street, drainage, and other improvements for a period of 18 months after the date of acceptance of the street.

d. Certification The Board of Selectmen shall certify in writing that the street or highway to be accepted has been established and constructed in accordance with Section 2 of this Ordinance or as modified under Section 5.30.

e. Planning Commission Not less than 35 days prior to acceptance of the street or highway, the Board of Selectmen shall refer the application for acceptance to the Harwinton Planning Commission for a report, unless the Planning Commission has approved the road or street as a part of a subdivision.

f. Town Meeting The Board of Selectmen shall call a town meeting for acceptance of the street or highway within a reasonable time after receipt of a completed application. A town meeting shall not be held until such time as the Planning Commission has voted an acceptance of the street or highway pursuant to Connecticut General Statutes, Section 8-24, or until thirty five (35) days after referred to the Commission pursuant to Section 8-24, whichever occurs first.

7.0 Effective Date

This Ordinance repeals the following Ordinances of the Town of Harwinton relating to highways: Nos. 10, 11, 17, 35, and 74, and shall take effect fifteen (15) days after

publication of a summary of its provisions in accordance with Connecticut General Statutes, Section 7-157(b).

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AMENDED BY ORDINANCE 124