

## SECTION VIII

### REQUIREMENT IMPROVEMENTS FOR AN APPROVED SUBDIVISION

#### A. STREETS AND ROADWAYS

1. All ways shall be constructed and sewers and surface water drains shall be installed in accordance with the standard specifications of the City Engineer of the City of Westfield unless, in a particular case, the Planning Board, after consultation at various stages will be approved a variation in writing. Inspection of road construction at various stages will be required, and will be made as directed by the City Engineer. A forty-eight-(48) hour written notice shall be given to the Engineering Department before excavation, drainage, graveling, sidewalks, paving or curbing installations are made in order that arrangements can be made for proper inspection of these installations.
2. The type, amount, and installation of roadway surfacing, including sub surfacing, as directed by the Engineering Department, will carry the expected traffic for a period of twenty (20) years without excessive maintenance costs.
3. The entire width of each street or way including the proposed traveled way and tree belt areas will be cleared of all stumps, brush, roots, boulders, and like materials, as well as, all trees not intended for preservation.
4. All loam and other materials not required for the construction of streets and ways shall be removed and replaced with suitable material.
5. All trees intended for preservation shall be protected from injury by means of snow fencing shielding at least the perimeter at a distance equal to the circumference of the crown (drip line) of the tree. Trees of a variety approved by the Planning Board shall be provided in the tree belt as specified by the Board.
6. All roadways shall be provided with a foundation consisting of good binding gravel, rolled and compacted to a center line grade two and one-half (2.5) inches below the proposed finished grade as shown on the profile, to be located, centrally within the street right-of-way. Gravel shall be spread in two layers. A sub-base consisting of of a good grade bank run or river gravel and a base consisting of a fine grade of road gravel with no stone having a larger dimension than two (2) inches. Each layer shall be thoroughly watered and rolled true to line and grades. Any depressions that appear during and after rolling shall be filled with gravel and re-rolled until the surface is true and even. All such roadways shall slope uniformly upward from the edges to the center line at the rate of one and one fourth (0.25) inch per foot. In the event that existing soil conditions are unfavorable, an adequate roadbed shall be constructed as designed by a registered professional engineer and approved by the City Engineer.

Prior to any pavement being installed, compaction tests shall be taken on the sub-grade and sub-base materials, at the expense of the developer. (04-16-2002)

7. After the base course in place, castings should be adjusted to line and grade so as to meet the finished surface.
8. A base course of eight (8) inches of good quality clean sharp gravel and a top course of not less than eight (8) inches of good loam to form the tree belt between the edge of the pavement and the property line or sidewalk. It will be fertilized and seeded to ensure a good growth of grass.
9. All grade, surface and engineering aspects shall be approved in writing by the Planning Board after consultation with the City Engineer.
10. All roads serving subdivisions of forty (40) lots or more or extensions to existing subdivision shall provide two direct means of access and egress.

**B. INSTALLATION OF UTILITIES**

1. All subdivisions will provide appropriately sized sanitary sewer laterals, surface water drainage systems, water laterals and fire protection systems. All systems shall be installed therein in accordance with the standard specifications of the Westfield City Engineer. All building lots within the subdivisions shall have the necessary infrastructure to ensure expeditious hookup to all City utilities. The applicant shall consult with the City Engineer pertaining to the depth and location of said laterals prior to submission of the Definitive Plan and shall include such specifications on the Definitive Plan. Where dry-capped water systems are installed, fire hydrants shall be purchased and given to the Westfield Water Department. The Planning Board may approve a waiver of any or all of the above requirements following consultation with the City Council, City Engineer, Board of Public Works, Board of Health and Water Commission.
2. All proposed subdivisions shall be required to tie into existing water, sewer and fire protection systems within a reasonable distance.
3. All sewers, surface water drains, water and gas pipes, electrical and telephone lines, together with their appurtenances, within the limits of the way shall be placed underground and shall be installed after the way has been excavated to subgrade. The location of these utilities shall conform to the standard design of the City of Westfield.
4. The subdivider shall field an agreement with the Board that when the public utilities of the subdivision are taken over by the City of Westfield, either through acceptance of the street, by purchase or by eminent domain, he/she will consider all such utilities as betterment's to the property, the cost of which will be recovered in the sale price of the lots, and he/she will receive no compensation for the same.

5. The excavation of trenches, all materials of the pipes, fittings and appurtenances (including hydrants), the methods and materials of backfilling and all other matters relating to the installation of water pipes shall conform to the requirements of the Water Department of the City of Westfield. The installation of all water pipes shall be secured before continuing with the road construction. A minimum of eight-(8) inch ductile iron class 52 is required. Hydrants are required every five-hundred (500) feet, standard metropolitan gates are required at every hydrant and immediately after each hydrant, and a bleeder at the end of the line. These installations are to be made at the expense of the developer.
6. Connections for sewer, drain, water, gas or telephone conduit from the main structures in the roadway to the exterior line of the way shall be constructed to each lot.
7. Adequate disposal of surface water shall be provided for at a minimum of ten- (10) inch bell and spigot pipe in sound condition. Tight joints may be required by the Board under certain conditions. Catch basins and manholes shall be built under Massachusetts State Standards on both sides of the roadway at intervals of not more than three hundred (300) feet on contiguous grades, at low points, sags in the roadway and near the corner of the roadway at intersecting streets. Under no conditions will a set of basins be more than six hundred (600) feet apart with a high point between the sets. The grade of drainage pipes shall be designed so that a minimum pitch of four tenths (0.4) of the one (1) foot per one hundred (100) feet is obtained. All backfill shall be clean gravel fill or other approved material and free from large stones. The use of any debris in backfilling is prohibited.

**C. SIDEWALKS AND BICYCLE PATHS**

1. In residential subdivision, sidewalks of not less than four (4) feet in width shall be constructed on both sides of the street within the street right-of-way, abutting the property line, and in conformity with specifications of the Westfield Planning Board. The Board may waive the need for sidewalks on both sides of the street on a case by case basis. Sidewalks are not required in industrial subdivisions. The sidewalk grade shall be parallel to the center line and not more than twelve (12) inches above the roadway center line grade. Sidewalks shall be sloped to the roadways at all street intersections for a distance of not less than thirty (30) inches from the roadway edge. Sidewalks shall be constructed of concrete using wood frames of not less than four (4) inches in depth, placed five (5) feet wide and consist of the following:
  - a. A gravel base upon the sub-grade, wetted and compacted to a depth of eight (8) inches with a self-propelled roller of not less than five (5) tons. Stones larger than one and one-half (1.5) inches shall NOT be used.
  - b. Portland cement of 1-2-3 mixture (4000 psi) shall be poured, monolithic, to a thickness of four (4) inches.

- c. One pound of lamp black shall be added to each cubic yard of concrete to provide a uniform coloring throughout.
  - d. A dummy joint shall be scored every five (5) feet with a three-eighths (3/8) inch bituminous fiber expansion joint provided every twenty (20) feet.
  - e. At all driveways, the concrete shall be of a minimum depth of six (6) inches and reinforced with four (4) inch square wire mesh or equivalent.
2. Bituminous concrete sidewalks may be substituted with specific approval of the Planning Board providing they meet the following specifications:
- a. A gravel base compacted to no less than eight (8) inches, compacted with a five (5) ton roller.
  - b. Bituminous concrete compacted to a depth of at least four (4) inches (not new) consisting of two courses. The base course must be at least three (3) inches, compacted by a five (5) ton roller. The finish course must be at least one (1) compared inch in depth and rolled to a uniform grade and be free from any depressions greater than ¼ inch in depth. Provisions for barrier free access must be provided at regular intervals. The slope of property abutting the highway right-of-way sidewalk shall be maintained at not greater than the ratio of one (1) vertical of five (5) horizontal for a distance of not less than ten (10) feet. The sidewalk base shall be constructed concurrently with the base of the roadway and the bituminous concrete for sidewalks shall be installed at the same item that it is installed in the roadway.

The Planning Board may require bicycle paths from four (4) to eight (8) feet in width within subdivision.

**D. FIRE ALARM SYSTEMS – (DELETED 04/2002)**

**E. TREES AND PLANTINGS**

1. Existing Trees

As many existing trees as possible, especially those over twelve (12) inches in diameter, within the right-of-way shall be preserved. A Tree Preservation Plan shall be submitted with, and as a part of, the Definitive Subdivision Plan. The following is a list of recommended measures for the protection of existing trees: (04-16-2002)

- a. There should be no operations of heavy equipment or storage of any materials under said tree within its natural drip line.
- b. Wherever possible, no grading or filling should be done within the drip line.

- c. Supplemental irrigation should be provided to all trees as needed during the summer months to ensure healthy maintenance.
- d. No black top paving or vehicle parking should be located under evergreen trees. No more than twenty (20) percent of the area under any deciduous trees natural drip line may be paved.
- e. All drainage from paved areas should be directed away from root zones.

**2. Street Trees**

- a. The subdivider is required to plant suitable broad-leaved deciduous shade trees along all streets. Said trees shall be located with the street right-of-way unless the Planning Board has approved otherwise. All trees shall be the equivalent of well rooted nursery grown stock, free of injury, harmful insects and diseases. They shall be well branched and the branching structure should be sound and not interfere with traffic visibility. In certain cases, where the developer's Tree Preservation Plan demonstrates, to the satisfaction of the Board, that suitable trees will be retained within the right-of-way, the Board may waive a portion or all of the required street trees. (04-16-2002)
- b. The subdivider shall submit a list of proposed street trees to the Planning Board. The subdivider shall include scientific name, common name, and information regarding whether the trees will be large, medium or small growing. A list of acceptable street trees is provided as Appendix A.
- c. Large growing trees shall be spaced at intervals of 45 to 55 feet, medium growing trees at intervals of 30 to 40 feet and small trees at intervals of 20 to 30 feet. Trees on one side of the street may be set either opposite or diagonally to trees on the opposite side. If overhead wires are present, small growing trees with low branching characteristics should be planted.
- d. Minimum acceptable sizes of trees to be planted shall be as follows:
  - Large growing: 2.5" trunk diameter, caliper at 1' above the ground
  - Medium growing: 2.5" trunk diameter, caliper at 1' above the
  - Small growing: 9' crown height, 5' spread.
- e. Plantings operations shall be conducted as specified in the Tree and Shrub Transplanting Manual printed by the International Society of Arboriculture (ISA).
- f. Requirements for support stakes, guy wire and cable, ground anchors, hose, and wrapping material shall be those contained in the Trees and Shrub Transplanting Manual of the ISA.

- g. The subdivider shall be responsible for maintenance of planted trees and replacement of those which have died or become diseased from the time of planting through one full growing season.

**1. Bank Plantings**

- a. All cut or fill bankings that tend to wash or erode must be planted with suitable, well rooted, low growing plantings. All plants shall be the equivalent of nursery grown stock in good health, free from injury, harmful insects and disease. The subdivider shall include specific name, common name, and information regarding whether the plant is low growing (12" to 30") or very low growing (4" to 14"). A list of acceptable plant, shrub, and ground cover species is provided in Appendix B.
- b. Perennial grass turf installed as sod is an acceptable alternative for planting of banks.
- c. If bank plantings are of a type which are properly spaced at close intervals, 8" to 12" of loam shall be spread over the entire bank. If the plantings are to be widely spaced they may be planted in loam pits.
- d. Mulch (wood chips or equal) shall be spread heavily among plantings for weed and erosion control.
- e. The subdivider shall be responsible for maintenance of bank plantings and replacement of those which have died or become diseased from the time of planting through one full growing season.

**4. Corner Plantings**

- a. Turf may be provided by seeding as well as by planting sod.
- b. Bushy shrubs and herbaceous planting that would tend to obscure visibility are not permitted within one hundred (100) feet of the intersection of the curbs adjacent to the corner lot.

**5. Cul-de-Sac Plantings**

The central portion of a permanent dead-end street should be landscaped. The following options are permitted:

- a. Plantings with ground cover such as those listed in Appendix B, using 8" to 12" base of loam, and spreading mulch between plants for weed control.
- b. Planting perennial grass by either sod or seed.

- c. Planting ornamental shrubs as those listed in Appendix B.
- d. Retaining existing vegetation, with the approval of the Board.
- e. The subdivider shall submit a list of proposed cul-de-sac plantings to the Planning Board. The subdivider shall include scientific name, common name, and information regarding the plants growing height. A list of acceptable plant, shrubs, and ground covers is provided as Appendix B.

**F. MONUMENTS**

Monuments of reinforced concrete not less than four (4) feet in length and not less than six (6) inches square at the base and four (4) inches square at the top section shall be installed in the ground on both sides of the street, at all intersection so streets, where there is a change in direction of curvature of streets and at other points where, in the opinion of the Board, permanent monuments are necessary. All such monuments shall be installed before the final bond is released. An Engineer's or Surveyor's certificate (See Appendix) shall be filed with the Board stating that the concrete monuments have been set accurately in the ground according to the approved Definitive Plan.

**G. CURBING**

All intersection shall have granite curbing, or an acceptable alternative, for a twenty-five (25) foot radius. Bituminous concrete curbing shall also be installed on all streets unless specifically waived by the Planning Board.

**H. STREET SIGNS**

Street signs shall be installed by the subdivider and erected as specified by the Board of Public Works. See Appendix C.

**I. STREET NAMES**

Proposed streets which are obviously in alignment with other streets already existing and named shall bear the names of such existing streets. All proposed street names shall be approved by the Planning Board. The developer shall also consult with the Westfield City Council, Fire Department, Police Department and Engineering Department regarding acceptable street names.

**J. AS-BUILT PLANS**

The developer shall also submit a written statement from the project's registered civil engineer, with his seal/stamp affixed, certifying that all work has been done in accordance with the Westfield Subdivision regulations and the approved and endorsed plans, and that all systems are functioning as designed.

All As-Built Plan information shall also be submitted on a 3 ½” DOS compatible computer disk, using drawing interchange files (AutoCAD compatible DXF files), in either ASCII or binary format. Horizontal and vertical control shall have at least two (2) points tied (in feet) into the Massachusetts State Plane Coordinate System (NAD 1983) using municipal GIS monuments stationed throughout the City. Horizontal control shall have a closure of 1:12,000 or better. Vertical control must be of second order D Class 2 accuracy or better and be tied to USGS datum. All records of control shall be delivered to and reviewed by the City. (04-16-2002)

As-built plans showing the location, grades, easements and other significant information regarding utilities and roads shall be prepared by the applicant, following the final approval for the improvements hereinafter provided; however, prior to acceptance as a City Street. This shall be done by submitting revised Definitive Subdivision mylars of the original submittal showing the actual existing “as-built” conditions. The developer will provide one recordable mylar, one mylar copy of the Engineering Department and two blue print copies.

**K. LEGAL DESCRIPTION**

The record “as-built” plan shall be accompanied by a legal description of the actual subdivision way which describes the layout and bound location of the way and all associated easements.

**L. CLEANUP**

Temporary structures, debris, and excess materials shall be removed from the site and the site shall be left “broom clean” or equivalent before release of the performance guarantee. All catch basins shall be properly cleaned out before release of the performance guarantee.

**M. APPROVED/ENDORSED DEFINITIVE PLANS**

Once the Planning Board has approved and endorsed the Definitive Plan (one original and one mylar copy) all Definitive Subdivision Plan information pertaining to the creation of the lots (including annotation of frontage, dimensions, acreage, etc.) shall also be submitted, by the applicant, on a 3 ½” DOS compatible computer disk, using drawing interchange files (AutoCAD compatible DXF files), in either ASCII or binary format. Horizontal and vertical control shall have at least two (2) points tied (in feet) into the Massachusetts State Plane Coordinate System (NAD 1983) using municipal GIS monuments stationed throughout the City. Horizontal control shall have a closure of 1:12,000 or better. Vertical control must be of second order D Class 2 accuracy or better and be tied to USGS datum. All records of control shall be delivered to and reviewed by the City.” (04-16-2002)