



# LAND DEVELOPMENT REGULATIONS AND PUBLIC WORKS REQUIREMENTS

**As Adopted by the Town Board on**

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**TOWN OF ONTARIO  
LAND DEVELOPMENT REGULATIONS  
AND PUBLIC WORKS REQUIREMENTS  
CHAPTER A-154**

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**ONTARIO CODE****PART I****RULES AND REGULATIONS****ARTICLE I****GENERAL PROVISIONS****A154-1. Citation of Rules and Regulations**

These rules and regulations shall be known and may be cited as "The Town of Ontario Land Development Regulations and Public Works Requirements," as adopted by the Town Board on.

**A154-2. Authority and Requirement of Plat Approval**

In accordance with New York Town Law, Article 16, Section 271, the Planning Board of the Town of Ontario is created by the Town Board. The Planning Board of Ontario is empowered by provisions of New York Town Law, Article 16, and by the Town Board, to grant final approval of any subdivision plat or site plan of lands with or without streets or highways within the corporate limits of the Town of Ontario. Such approval, in accordance with the procedures and regulations set forth below, is intended to follow applicable sections of New York Town Law.

**A154-3. Purpose**

To carry out the purpose of the Town Law and the Planning Board, these rules and regulations are adopted by the Town Board, to provide for the future growth and development of the Town and to afford adequate facilities for the housing, transportation, distribution, comfort, convenience, safety, health and welfare of its population. Consistent with such purposes, these rules and regulations will provide for the orderly development of land use areas, the coordination of existing streets and public utilities with new service, the provisions of open spaces for passive and active recreation and the location of future sites for public buildings and commercial areas, all to the mutual benefit of the Town and its residents.

**A154-4. Definitions**

- A. Words in the singular include the plural and words in the plural include the singular. The word "person" includes a corporation, unincorporated association and a partnership as well as an individual. The word "building" includes "structure" and shall be construed as if followed by the words "or part thereof". The word "street"

includes "road", "highway" and "lane"; "watercourse" includes "drain", "ditch" and "stream". The words "shall" or "will" are mandatory, the word "may" is permissive.

- B. Unless otherwise expressly stated, the following terms shall, for the purpose of these regulations, have the meaning indicated.

**AGRICULTURAL DATA STATEMENT** — An identification of farm operations within an agricultural district located within 500 feet of the boundary of property upon which an action of approval is pending per Town Law 283-a.

**ALLEY (OR SERVICE DRIVE)** — A strip of land over which there is a right-of-way, municipally or privately owned, serving as a secondary means of access to two or more properties.

**BLOCK** — An area bounded by streets.

**BUILDER** — A person who obtains a building permit for construction of a structure on an approved site.

**BUILDING INSPECTOR** — An appointed official nominated by the Town Board to enforce the provisions of the N.Y. State Uniform Fire Prevention and Building Code as adopted by the Town.

**CLEAR SIGHT TRIANGLE** — An area of unobstructed vision at a street intersection defined by lines of sight between points at a given distance from the intersection of street right-of-way lines.

**CODE ENFORCEMENT OFFICER** — An appointed official designated by the Town Board to enforce the Zoning Regulations of the Town of Ontario.

**COMPREHENSIVE PLAN** – Current Comprehensive Plan as adopted by the Town Board.

**CONTRACTOR** — A person acting for the Developer to construct the required improvements of the project. The Contractor is responsible to perform the work in conformance with the approved plans subject to a review by Town officials.

**CROSSWALK** — A right-of-way, municipally or privately owned, at least 10 feet in width, which traverses an area to furnish access for pedestrians.

**CUL-DE-SAC** — A residential street with one end open for public vehicles and pedestrian access and the other end terminating in a vehicular turnaround.

**DEDICATION** — The deliberate appropriation of land by its Owner for any general and public uses, reserving to himself no other rights than such as are

compatible with the full exercise and enjoyment of the public uses to which the land has been devoted.

**DEVELOPER** — A person holding title to a parcel of land to be developed or subdivided. Commitments and/or requirements for development are solely between the Town and the Developer.

**DOUBLE FRONTAGE LOTS** — A lot, having at least two sides fronting on separate streets which do not intersect while adjoining the lot.

**EASEMENT** — A right granted to use certain land for a special purpose not inconsistent with the general property rights of the Owner.

**FINAL SUBDIVISION PLAT** — A drawing prepared by a registered professional which complies with prescribed regulations and statute for recording in the Wayne County Clerk's Office.

**GRADING PLAN** — A plan showing all present and proposed elevations for storm water drainage and disposal.

**HALF OR PARTIAL STREET** — A street generally parallel and adjacent to a property line, having a lesser right-of-way than normally required for satisfactory improvement and use of the street.

**INSPECTOR/OBSERVER** — An agent of the Town empowered to observe the construction progress of the project and its compliance with the approved plans.

**IMPROVEMENTS** — Those physical additions and changes to the land that may be necessary to produce usable and buildable land areas. This may include but is not limited to grading, water supply, sewage disposal, storm water disposal, lighting, landscaping, etc.

**LETTER OF CREDIT** — Financial security required to insure the installation of improvements as shown on the approved plan subject to possible dedication to the Town.

**LOT** — A parcel of land intended for transfer of ownership or site development that is presently occupied or capable of being occupied by a principal building or use and uses accessory to the principal building or use.

**PLAN** — A part of any Comprehensive Study prepared for the Town that addresses future land use considerations.

**OPEN SPACE or OPEN AREA** — Any space or area of undeveloped land characterized by natural scenic beauty, existing openness and natural condition exclusive of undevelopable lands such as wetlands, steep slopes, or other

environmentally sensitive areas. A variety of open space forms is encouraged and may include but is not limited to formal squares and parks, informal natural areas, passive and active recreation areas, treed and open fields, agricultural lands used in agricultural production.

**PLANNING BOARD** — The word Board or the words Planning Board or Town Planning Board shall mean the Town of Ontario Planning Board. When Town Board is meant, it will be stated as Town Board.

**PRELIMINARY PLAT** — A drawing prepared in a manner prescribed by these and other applicable regulations showing the layout of a proposed subdivision including, but not limited to, road and lot layout with approximate dimensions, key plan, topography and drainage, all proposed facilities, including preliminary plans and profiles, at a suitable scale and detail to address the local regulations that are listed in these regulations.

**RIGHT-OF-WAY** — Land opened for use as a street, crosswalk or utility corridor.

**SET BACK OR BUILDING LINE** — The right angle distance within a property defining the required minimum distances between any structure and the street or the side or rear property lines of a parcel right-of-way.

**SIGHT DISTANCE** — The distance of visual sight available for access to a dedicated right-of-way from any parcel of land to be developed.

**SITE PLAN** — A drawing prepared by a registered professional for review by the Planning Board for the development of an existing lot or parcel without any new subdivision of land.

**SEQR** — State Environmental Quality Review - part of the NYS Environmental Conservation Law applicable to land development per 6NYCRR Part 617.

**SKETCH PLAN** — An informal plan in accordance with these specifications indicating existing features of a parcel of land and its surroundings and the general layout of a proposed land improvement.

**SPDES (STATE POLLUTION DISCHARGE ELIMINATION SYSTEM)** — Program authorized by the Environmental Conservation Law issuing permits for stormwater discharges from construction activities.

**SPDES GENERAL PERMIT** — SPDES General Permit for Construction Activities (GP-02-01) issued January 8, 2003 (or latest revision), pursuant to Article 17, Titles 7, 8 and Article 70 of the Environmental Conservation Law, authorizing stormwater discharges from construction activities.

**STORMWATER MANAGEMENT OFFICER (SMO)** — An employee, the Town Engineer or other public official designated by the Town Board to enforce the provisions of Chapter 116 of the Town Code.

**STREET** — A general term used to describe a right-of-way, municipality or privately owned, serving as a means of vehicular and pedestrian travel, and utility services. The streets are classified by function as follows:

1. Commercial/Industrial Road - A road connecting area centers serving a large volume of local and truck traffic serving areas within the B-BT, and I.
2. Residential/Subdivision Road - A new development serving primarily a neighborhood with relatively low volumes of traffic.
3. Private Drive - An area serving a limited number of parcels maintained by Legal agreement of the parcel Owners and not to be dedicated to the Town.

**SUBDIVISION** — Means the division of any parcel of land into a number of lots, blocks or sites subject to these regulations with or without streets or highways, for the purpose of sale, transfer of ownership, or development. The term "subdivision" shall include any alteration of lot lines or dimension of any lots or sites shown on a plat previously approved and filed in the office of the Wayne County Clerk.

**SUPERINTENDENT OF WATER UTILITIES AND SUPERINTENDENT OF HIGHWAYS** — Those Town department heads who are directly in charge of their respective departments and shall assume the operation and maintenance of their respective portions of a development upon dedication to the Town.

**SWPPP (STORM WATER POLLUTION PREVENTION PLAN)** — A plan prepared by a licensed professional in conformance with the requirements of SPDES General Permit, for the control of erosion, sedimentation, water quality and water quantity of stormwater runoff during and after construction activities.

**TOTAL HOLDINGS MAP** — A map of the contiguous parcels, including the land to be developed, owned by a person applying for development approval.

**TOWN ATTORNEY** — A person or firm engaged by the Town to review and prepare necessary documentation as required for districts, easements, letters of credit, dedication, surety or other legal matters.

**TOWN BOARD** — The Board as elected by the residents of the Town who acts on behalf of the residents of the Town of Ontario for the betterment, protection and welfare of the community.

**TOWN ENGINEER** — A person or firm engaged by the Town to review the project plans and to make recommendations to the Town so the best interests of the Town shall be preserved in conformance with the standards herein established.

Throughout these regulations one will find reference to publications of other agencies or testing methods such as:

AASHTO — American Association of State Highway and Transportation Officials.

ANSI — American National Standards Institute, Inc.

ASTM — American Society for Testing and Materials.

AWWA — American Water Works Association.

NYSDEC — New York State Department of Environmental Conservation.

NYSDOH — New York State Department of Health.

NYS DOT — New York State Department of Transportation.

References for these designations are widely accepted and readily available for the specifics and details that may be required for a design situation.

**A154-5.      Reserved**

**A154-6.      Reserved**

**A154-7.      Reserved**

**A154-8.      Reserved**

**A154-9.      Reserved**

## ARTICLE II

### PROCEDURES

#### **A154-10. Summary of Procedures**

- A. The basic procedures as summarized hereafter are those as outlined in the various aspect of Town Law, specifically but not limited to Town Law 261-b, 271, 274-a, 276, 277, 278, 279, 280, 281, and 283-a. The applicant or designated representatives should be aware of the approval process as outlined in the various sections of the Town Law or as modified herein.
- B. Town approval of any subdivision shall be evidenced by a Final Plat containing all the required signatures, filed in the Wayne County Clerk's Office. This approval shall be prerequisite to the issuance of any building permit or certificate of occupancy for the use of any land. Such approval shall hereafter be initiated and processed in accordance with the following basic procedure.
- C. The Town of Ontario has a two-step approval process which includes, Preliminary and Final Approvals. All plans submitted to the Town shall be clearly marked for the requested action by the Planning Board and failure to submit a complete package of information will be cause for rejection by the Planning Board.
- D. The Developer may, prior to the formal approval process, file a sketch plan with the Planning Board Clerk which shall be discussed by the Planning Board with the Developer at the next available meeting for purposes of classification, initial discussion concerning the layout, availability of utilities, services and responsibilities. No formal action will be taken by the board for a concept discussion and this process is not required by the Town.
- E. An application for all plan approvals shall be submitted to the Planning Board Clerk. The project will be discussed at the next available Planning Board meeting following a minimum of 23 calendar days after submittal of a complete application. With this application the appropriate checklist noted in Article V shall be completed and submitted. Items on the checklist that are not germane to the application should be qualified.
- F. A non-refundable public posting fee shall be provided to the Town of Ontario Building Department at the time any application is submitted to the Town. A Town-hired sign posting company will physically post the property at the road frontage for a minimum of five days prior to the application being heard on any Town agenda.
- G. The Town has established a Planning Review Committee consisting of a Planning Board Member, Code Enforcement Officer, Town Department Heads and an Engineering Consultant to the Planning Board. The purpose of the committee is to provide the Planning Board with a comprehensive overview of a project early in the

review process. This committee meets to review all applications and provides input for the Planning Board's consideration. All Planning Review Committee comments shall be addressed in writing by the applicant and submitted with revised plans.

- H. Concurrent with the preliminary phase of the approval process, the applicant must comply with the Requirements of the New York State Environmental Quality Review Act (SEQR).
- I. All subdivisions and site plans will require Preliminary Overall Approval from the Planning Board prior to the granting of Final Approval for individual phases, if any, for the project. Once an application has received preliminary approval, the applicant may make application for final approval through a complete submittal to the Planning Board Clerk.
- J. A SEQR flow chart has been provided within to assist the applicants in the approval process.

#### **A154-11. Sketch Plan Procedure**

The Developer shall obtain copies of these Land Development Regulations and application forms from the Planning Board Clerk. Complete application packages including necessary fees shall be submitted to the Planning Board Clerk who shall distribute them to the Planning Board, Town Department Heads and Consultants, the Ontario Fire Department or Union Hill Fire Department (depending upon jurisdiction), retaining a copy for the Planning Board file. At the next Planning Board meeting occurring more than 23 calendar days after such application, the Planning Board shall receive comments, questions and recommendations, from the Town's advisory staff. The Planning Board shall discuss with the Developer the classification of the proposed project as well as, questions and comments for further consideration.

The Planning Board Clerk should be contacted prior to any submission to determine the appropriate number of application packages to be submitted.

#### **A154-12. Subdivision Procedure — Preliminary Plan**

The Developer shall prepare and submit a complete application including the proposed Preliminary Plan containing information as outlined in these regulations, to the Planning Board Clerk for distribution.

The Planning Board Clerk shall distribute them to the Planning Board members, Town Department Heads and Consultants and if necessary to the Wayne County Planning Agency pursuant to Section 239-n of the General Municipal Law.

The application shall be scheduled and advertised for a public hearing within 62 calendar days after receipt of the complete application by the Planning Board Clerk.

A notice of the public hearing shall be published at least 5 calendar days prior to the meeting in a newspaper of general circulation in the Town. At the hearing, all interested parties shall be given the opportunity to be heard. If verbatim minutes of the public hearing are requested by the Developer or an aggrieved Property Owner, the cost of such minutes shall be borne by the requester.

The Planning Board shall receive comments, questions and recommendations, on the proposed Preliminary Plan and shall discuss such with the Developer.

The Planning Board shall comply with the provisions of the State Environmental Quality Review Act (SEQR) under Article 8 of the Environmental Conservation Law and its implementing regulations as codified in 6NYCRR 617 before proceeding to preliminary motions of approval. Within 62 calendar days of the close of the public hearing, unless such time limit is extended by mutual consent of the Developer and the Board, the Planning Board may either approve, conditionally approve with or without modifications or disapprove the Preliminary Plan. In the event of disapproval, the grounds of such disapproval shall be specified in the resolution. The Planning Board may waive, when reasonable, any requirements or improvements for the approval, approval with modifications or disapproval of subdivisions submitted for its approval. Any such waiver, which shall be subject to appropriate conditions, may be exercised in the event any such requirements or improvements are found not to be requisite in the interest of the public health, safety, and general welfare or inappropriate because of inadequacy or lack of connecting facilities adjacent or in proximity to the subdivision.

#### **A154-13. Subdivision Procedure — Final Plan**

The applicant shall submit a complete application to the Planning Board Clerk for final approval following preliminary approval. The procedure for final approval is parallel to the process for preliminary approval as outlined in Section A154-12 except the Planning Board may waive the Public Hearing at their discretion.

The Planning Board may, in acting on a Final Plat, make their approval subject to specific conditions set forth by the approval resolution and the plat may not be filed with the Wayne County Clerk, but must await the signature of the Planning Board Chairman which shall be affixed only after the foregoing conditions have been met to the Board's satisfaction. The Developer shall have 180 calendar days to meet the conditions, extendable by the Board up to two additional 90 calendar day periods if in the Board's opinion particular circumstances warrant such extension.

#### **A154-14. Installation of Improvements**

Once the Planning Board has granted final approval and all the required final signatures are placed on the plan, the Developer shall submit an irrevocable Letter of Credit so as to assure the proper and timely completion of the required improvements. The irrevocable Letter of Credit is a financial security in a form

acceptable to the Town and shall be submitted to cover the cost associated with all proposed improvements shown on the plan, such as utility and drainage improvements, construction observation, erosion control, grading, seeding, landscaping and all other areas the Town deems necessary. The final amount of security will be reviewed and approved by the Town Engineer.

**A154-15. Offers of Cession**

The subdivider shall tender offers of cession in a form certified as satisfactory by the Attorney for the Town of all land included in streets, highways or parks, not specifically reserved by him. Approval of a Plan by the Planning Board shall not constitute an acceptance by the Town Board of the dedication of any street, highway, utility, park or other public open space.

**A154-16. Financial Responsibility — Irrevocable Letter of Credit**

- A. A Letter of Credit furnished for the installation of the required improvements shall be in the amount reviewed by the Town Engineer and approved by the Attorney for the Town as to form, sufficiency and manner of execution. The Letter of Credit shall be issued in favor of the Town of Ontario and shall assure the complete installation of the required improvements within such period, not longer than three years. The Letter of Credit shall be issued to the Town for an initial minimum period of one year. Extensions of Letters of Credit shall be provided to the Town in the event that the construction of the project exceeds the timeframe noted in the Letter of Credit.
- B. The following guarantees will be required for the development in the Town.
1. Letter of Credit

An irrevocable Letter of Credit shall be submitted by the Developer to ensure the installation of improvements in an amount estimated by the Developer's Engineer and approved by the Town.

The amount shall include but not be limited to the following items (see Appendix A for typical format):

1. Total estimated construction cost of all utilities, laterals, water services, roads, gutters, earthwork, etc.
2. Minimum 10 percent contingency factor.
3. Engineering and construction observation charges will be a minimum of 5 percent based on the project complexity and construction schedule.
4. Street signs and surveyor's monuments.

5. Maps.
  6. Record drawings of installed facilities.
2. Maintenance Bond

Upon completion of the construction and as a condition of dedication to the Town, a Maintenance Bond shall be provided by the Developer guaranteeing the project against faulty workmanship or materials for a period of two years following the acceptance date by the Town. Maintenance Bonds shall be written by a surety licensed to do business in New York State and shall be in the amount of 10 % of the final construction cost of each dedicated improvement. Bonds shall be approved as to form and content by the Attorney for the Town prior to any dedication procedure. Individual portions of the project, i.e., sanitary system, water system, may be bonded with their individual acceptances by the Attorney for the Town.

A Maintenance Bond for the pavement, gutters and drains, and/or sidewalks will not be accepted until the entire project is ready for dedication.

A Maintenance Bond for final road top pavement will be for two years from the time of topping and acceptance.

**A154-17. Time Limit for Filing**

The approval by the Planning Board of a plat showing lots, blocks or sites, with or without streets or highways, or the approval by the Board of the development of a plat or plats already on file in the office of the Wayne County Clerk or the Certificate of the Ontario Town Clerk as to date of submission for which no hearing was duly held, or the date of the hearing for the approval or disapproval of such plat as the case may be, and the failure of the Planning Board to take action thereon within the time prescribed, shall expire 62 calendar days from the date of the signing of the plan by the Planning Board or of such certificate, unless within such 62 calendar day period such plat or a section thereof shall have been duly filed or recorded by the Owner in the office of the Wayne County Clerk.

If the Owner shall file only a section of an approved plat, within such 62 calendar day period, such section shall encompass at least 10 percent of the total number of lots contained in the approved plat and the approval of the remaining sections of the approved plat shall expire unless said sections are filed before the expiration of the exemption period to which such plat is entitled under the provisions of the Town Law. In the event the Owner shall file only a section of such approved plat in the office of the Wayne County Clerk, the entire approved plat shall be filed within 30 calendar days of the filing of such section with the Ontario Town Clerk.

**A154-18. Formation of Districts**

Between the interval of preliminary and final approvals of the subdivision plat, the Developer shall petition the Town Board for the creation of the districts or extensions as necessary for a given development. They may include:

Districts or extensions could be necessary for sanitary sewers, water mains, stormwater disposal, sidewalks, lighting, or any particular creation for a specific development.

In order to preserve the continuity and format of the application of the districts to the various governing authorities, the Attorney for the Town and Town Engineer shall review the necessary documents and maps and the Town Clerk will be responsible for publication and filing requirements. All costs for the formation of these districts shall be paid for by the Developer to the Town within 30 calendar days of its receipt of a bill therefore.

Required improvement districts must be extended or created by the Town Board before the signature of the official of the Planning Board may be affixed to the approved subdivision plan.

**A154-19. Site Plan Procedures**

All site plans will require Planning Board approval and they must be prepared in accordance with these regulations except that items relating to boundary data may be omitted if the parcel designation has previously been filed with the Wayne County Clerk's Office.

**A154-20. Easement Procedure**

If easements are required on a project, the Town has established a procedure to facilitate the process and has a detailed handout for applicants to follow.

In summary, all proposed easements must be submitted to the Town's Building Department with map, description, easement form, Transfer Gains Affidavit and filing fees. The Town will assign a control number and the complete package will be submitted to the Attorney for the Town for review.

Once approved the easement will be filed in the Wayne County Clerk's Office by the Attorney for the Town and proof of such filed with the Town Clerk.

Proof of easement filing with the Wayne County Clerk's Office must be provided to the Town Clerk prior to Final Planning Board signature of any Site Plan or Subdivision Plat.

**A154-21. Pre-Construction Meeting/Construction Observation**

Before any construction begins on a subdivision or facilities to be dedicated to the Town, a pre-construction meeting must be held to address the Plans and intended improvements. The pre-construction meeting must be coordinated by the applicant and it is the applicant's responsibility to ensure that all necessary parties are in attendance, i.e. all approving agencies and utility companies. Furthermore, it is imperative that a written construction schedule be supplied at the pre-construction meeting. The installation of improvements and development of any land shall be subject to construction observation at all stages by representatives of the Town. For such purposes free access shall be accorded and requested information shall be promptly submitted. All costs of construction observation, including testing of materials, shall be paid for solely by the Developer. A sufficient sum shall be provided by the Developer in either the Letter of Credit or cash for the project observation costs.

Note: The pre-construction meeting may be held prior to obtaining all agency approvals, however, no construction will be permitted until such time that all required approvals are obtained.

**A154-22. Methods of Release of Financial Security****A. Letters of Credit**

The procedure required for the release of funds is as follows:

1. Submission of periodic construction estimates by the Contractor to the Developer and the Design Engineer.
2. The site shall be reviewed by the Town's and Developer's agents to review the comparison of the work complete to the monetary value of the requested release of funds.
3. The Developer's Engineer, Developer, and Town Engineer shall approve in writing up to 90 percent of the total amount of an item. (See Appendix B for typical example of release form.)
4. The Town Engineer shall then submit the proposed estimate to the Town's Fiscal Officer for the final authorization of release of funds from the Letter of Credit. Approval by the Town officials for authorized periodic payments is not to be construed as acceptance of the work completed to date.
5. Partial release from the Letter of Credit may be granted by the Town Fiscal Officer as individual components of the subdivision development are

completed. This shall not be construed as final acceptance of the work by the Town.

If the required improvements are not completely installed within the period fixed or extended, the Town Fiscal Officer may declare the Letter of Credit in default and collect the amount payable there under. Upon receipt of such amount, the Town shall cause to install such improvements as were covered by the Letter of Credit and as commensurate with the extent of building development that has taken place in the subdivision, not exceeding in cost, however, the amount collected upon the Letter of Credit.

B. Release of Retainage

Retainage release shall be considered by the Town Board after the systems have been tested and found acceptable by the Town's representatives.

C. Release of Maintenance Bond

Release of Maintenance Bond shall be authorized in writing by the Town's Fiscal Officer upon final review of the project site by Town authorities. This review will be completed at least one month before the expiration of the Bond.

**A154-23. Applicability of Regulations**

The regulations contained in these specifications for the Design and Construction of land development shall apply to all public works improvements within the Town of Ontario. The Planning Board, with due cause and justification, can waive requirements set forth in these regulations by a majority vote of the Board. Reasons supporting such waiver shall be duly recorded in meeting minutes at such time any waivers are granted.

**A154-24. Reserved**

**A154-25. Reserved**

**A154-26. Reserved**

**A154-27. Reserved**

**A154-28. Reserved**

**A154-29. Reserved**

## ARTICLE III

### DEVELOPMENT REQUIREMENTS

#### **A154-30. General**

Land shall be suited for the purpose for which it is to be developed and the developer's Engineer shall certify to such on the plans submitted for approval.

The Planning Board shall review proposed developments on their individual merit and their contribution to the Town.

The subdivider shall strive to comply with standards of good planning and adhere to the specification codes and ordinances of the Town as well as those rules of agencies having jurisdiction over any particular phase of a development.

#### **A154-31. Flood Land, DEC Wetland and Federal Wetlands**

Land subject to flooding and land deemed by the Planning Board to be uninhabitable shall not be plotted for residential occupancy, nor for such other uses as may involve danger to health, life or property or aggravate the flood hazard, but such land within the area of the Plan shall be set aside for such uses as shall not be endangered by periodic or occasional inundation.

#### **A154-32. Street Layout**

- A. Development plans shall conform to the Town's Comprehensive and/or Area Plan and any other Master Plans for the Town as shall have been prepared and adopted by the Planning Board or Town Board.
- B. Streets in a new development shall be designed to provide connectivity between existing or future neighborhoods/developments. This would include provisions for the extension and/or continuation of streets into and from adjoining properties or areas. The design shall consider techniques to prevent or discourage 'cut thru' vehicular traffic and excessive speeds.
- C. If a portion of the tract is not subdivided, suitable access and street openings for such an eventuality shall be provided.
- D. Streets shall be logically related to the topography and acceptable planning/engineering criteria to produce usable lots and reasonable grades.
- E. Where a subdivision abuts or contains an existing or proposed major traffic street, the Planning Board may require marginal access streets, rear service alleys, reverse-frontage lots or such other treatments as will provide protection for abutting

properties, reduction in the number of intersections with the major street and separation of local and thru traffic.

- F. New half or partial streets will not be permitted except where essential for reasonable subdivision of a tract in conformance with the other requirements and standards contained herein, and where, in addition, satisfactory assurance for dedication of the remaining part of the street can be secured.
- G. Wherever a tract to be subdivided borders on an existing half or partial street, the other part of the street shall be plotted within such tract,
- H. Dead-end streets shall be prohibited, except as stubs to permit future street extension into adjoining tracts or when designed as a cul-de-sac.
- I. Reserve strips which control access to right-of-way or utility easements are prohibited.
- J. Street names shall be submitted by the developer for approval to the Wayne County 911, Wayne County Highway Department, United States Postal Service and others designated by the Town Board to avoid duplications or use of similarly sounding or spelled names. House numbers shall follow the practice established by the Town. A street which is a continuation of an existing one shall retain the same name. Private drives shall have names different from the dedicated road they have access from.

Private street signs, of the same specifications as those of the Town Highway Department, shall be erected at each intersection by the Highway Department and paid for by the developer.

#### **A154-33. Street Intersections**

- A. Streets shall be laid out to intersect as nearly as possible at right angles. No street shall intersect another at an angle of less than 75 degrees.
- B. Multiple intersections involving a junction of more than two streets shall be avoided. Where this proves impossible, such intersections shall be designed with extreme care for both pedestrian and vehicular safety.
- C. Streets entering opposite sides of another street shall be laid out either directly opposite one another or with a minimum off-set of 250 feet between their centerlines.
- D. Where a subdivision abuts or contains an existing street of inadequate right-of-way width, additional right-of-way width will be required.

**A154-34. Cul-de-Sac Streets**

- A. Cul-de-sac streets, permanently designed as such, should not exceed 1,200 feet in length and designated to be generally offset turnarounds per Appendix J to allow for effective snow removal and lot placement.
- B. Hammer head sections may be proposed as per Appendix K to be used at the end of a cul-de-sac in lieu of the circle due to design considerations. If they are temporary they shall be constructed to Town road specifications except for the top course which will not be required.

**A154-35. Blocks**

- A. The length, width and shape of blocks shall be determined with due regard to the following:
  - 1. Provision of adequate building sites
  - 2. Zoning requirements
  - 3. Topography
  - 4. Requirements for safe and convenient vehicular and pedestrian circulation and access
  - 5. Utility service and the operation and maintenance of same
- B. All blocks in a subdivision shall have a minimum length of at least 500 feet with a maximum length of 1,200 feet. Such blocks containing individual lots shall be at least two lot depths in width, except where reverse frontage may be employed along existing roads or highways. Modifications of the above requirements are possible in commercial and industrial developments.
- C. In large blocks, with interior parks, or where access to a school, shopping center, or other community facilities is necessary, a crosswalk with a minimum walk 6 feet in width shall be provided.

**A154-36. Lots**

- A. The minimum lot size and frontage shall be controlled by the provisions of the Zoning Regulations of the Town of Ontario at the time the applicant receives final approval.
- B. All lots shall abut a dedicated street with a minimum fee title parcel width of 25 feet. Multiple lots using a common driveway under legal agreements may require less than 25 feet per lot.
- C. Double frontage lots should be avoided except where employed to prevent vehicular access to major traffic streets or required by other design parameters. A planting

screen easement of at least 20 feet wide which there shall be no right of access through shall be provided between the abutting existing roadways or highways and the homesite.

- D. Corner lots shall be 1-1/2 times the width of the average lot of the subdivision and a depth consistent with that of other lots in the subdivision.
- E. Where either or both water supply and sanitary sewage disposal are provided by individual on-lot facilities and evidence indicates that the requirements of the Zoning Regulations are not adequate, the Planning Board may require tests and designs, in accordance with the rules and regulations of the State Department of Health and/or Department of Environmental Conservation, undertaken at the expense of the Developer, to determine the adequacy of the proposed lot size and existing grade and soil conditions. Such tests and designs shall be subject to the review of the Town's Consultants and Department Heads.
- F. Where commercial subdivisions are proposed to be served by either or both on-lot sanitary sewage disposal and water supply facilities, the lot area and dimensions required to prevent health hazards shall be subject to individual review and determination by the Planning Board and the New York State Department of Health and/or Department of Environmental Conservation.
- G. Depth and width of parcels laid out or reserved for non-residential use shall be sufficient to provide satisfactory space for off-street parking and unloading as required by the provisions of the Zoning Ordinance.
- H. Lots for development shall not be subdivided so that the depth of the lot is greater than three times the lot width at the right-of-way line. For flag lots the lot width shall be that at the proposed building line.
- I. Optimal sight conditions conforming to minimum safe stopping distance per "Geometric Design of Highways and Streets". AASHTO latest edition should be met when developing ingress/egress for a lot or lots.
- J. When applicable, any plot of land 10 acres or more shall be designated so that a 60 foot wide road may be constructed for future subdivision.

**A154-37. Building Lines**

The minimum building set-backs shall be controlled by the provisions set forth in the Zoning Regulations of the Town of Ontario and the Building Code of New York State.

**A154-38. Utilities**

If sewer, water, gas, electrical, street lighting, cable TV or other public utility facilities are proposed, their location and installation shall be coordinated so that they may be operated and maintained at minimum cost.

**A154-39. Easements**

- A. Easements shall be provided for all utilities of a width necessary for installation, repair and/or replacement of said utility. The depth, type, size and location of a utility in addition to soil conditions will be considered when establishing an easement width. All easements shall be appropriately executed and filed prior to the issuance of any building permits.
- B. To the fullest extent possible, easements shall be centered on the utility and located along rear or side lot lines.
- C. No structure shall have its foundation built less than 10 feet from any easement line.
- D. Where a development is traversed by a watercourse, the applicant shall provide to the Town at no cost a drainage easement or right-of-way conforming substantially with the line of such watercourse and of such width as will be adequate to preserve natural drainage and maintain the same based on the Town's Stormwater Drainage Study.

**A154-40. Alleys**

Alleys are prohibited in residential developments. In commercial or industrial districts, alleys shall be a minimum width of 22 feet. Where such alleys dead end, they shall be provided with a turnaround having an outside roadway diameter to allow emergency vehicle access.

**A154-41. Cluster Development**

The approval of any cluster subdivision development by the Planning Board shall be subject to the conditions set forth in Town Law Section 278 and in any other local laws or ordinances within the Town. The purpose of cluster development shall be to enable and encourage flexibility of design and development of land in such a manner as to preserve the natural and scenic qualities of open lands.

**A154-42. Reservation and Dedication of Lands for Public Use**

- A. In reviewing subdivision plans, the Planning Board will consider the adequacy of existing or proposed community facilities to serve the additional dwellings proposed by the subdivision. The layout of the proposed subdivision shall be in general

conformity with the features or developments proposed in the Town's Comprehensive Plan and any other Master Plan in effect at the time of the submission of the proposed plat.

- B. To meet the requirements of A154-3 of the Land Development Regulations, and Town Law, the Planning Board may request the reservation and dedication of at least 10 percent of the area of land to be subdivided for park, playground, recreation, open land or other public purposes. In locating lands to be reserved and dedicated, the Board shall consider preservation of special environmental and geographic features, unsuitability of certain lands for building purposes, future expansion of public use areas, the most appropriate type of public land use for the area and the conditions necessary to preserve access, use and maintenance of such lands for their intended purpose.
- C. Prior to such lands being dedicated to the Town, a Phase I Environmental Site Assessment shall be completed by the applicant at their expense.
- D. In the event that the Planning Board, upon consultation with the Town Board, determines that reservation of land of adequate size and suitable purpose cannot be practically located in a proposed subdivision, or that said reservation would not appropriately serve the locale, the Board may condition its approval of a subdivision upon payment to the Town of a sum as set forth by the Town Board. The amount shall be available for use by the Town for neighborhood, playgrounds or other recreation purposes, including the acquisition of property.

#### **A154-43. Erosion Sediment Control**

##### **A. General**

It is the Town's intent to control soil movement by employing effective erosion and sediment control measures before, during and after site disturbance.

Erosion and sediment control measures, both temporary and permanent, must be designed per the SPDES General Permit and presented for approval to the Planning Board prior to any site development or soil disturbance. A Stormwater Pollution Prevention Plan (SWPPP) shall be prepared as described in Chapter 116 of the Town Code, and approved by the SMO prior to any site development or soil disturbance.

The Planning Board and its designated representatives will evaluate submitted erosion and sediment control design plans against the most current edition of "New York State Standards and Specifications for Erosion and Sediment Control".

## B. Vegetative Controls

To attain the Town's goals, vegetative measures should be used in a site design to control surface water runoff, provide soil stabilization methods and entrap soil sediments generated from the forces of erosion.

1. Site slopes shall be graded to be stable and provide control of any surface or subsurface water prior to vegetative plantings.
2. Site disturbance, especially in sensitive areas, shall be kept at a minimum. Designs shall limit the removal of existing trees, hedge rows and indigenous plant cover.

Physiographic features such as drumlins, wetlands and forested areas shall be retained in their natural form.

3. The Site Developer shall take whatever action is necessary to establish a stabilized vigorous stand of vegetative cover on all disturbed site soils within 30 calendar days of initial soil movement.

If phasing is necessary to meet these conditions, the Developer shall present such in the development plans presented for Town review.

## C. Structural Controls

Some projects may require erosion and sediment controls that will be permanent in nature. If these measures are required to be constructed, they must be fully functional before upland site disturbance begins as determined by the Town. Such structures may include but are not limited to such features as siltation traps, ponds, diversion swales or dikes.

## D. Maintenance Measures

It is imperative that both the vegetative and structural components as constructed be periodically reviewed and maintained for optimum erosion and sediment control.

Facilities must be cleaned, repaired and/or replaced as necessary to meet the original design criteria established in the project approval.

1. Dedicatable Projects:

If the project under consideration involves possible dedication of constructed facilities to the Town, the Developer/Owner must include sufficient funds in the maintenance bond to cover the projected cost of such facilities for a two year period.

2. Private Projects:

If a project is under consideration without dedicatable facilities to the Town, the Site Owner is responsible to make sure the erosion control facilities are constructed and properly maintained. Final acceptance of the erosion control facilities is necessary for the Town to issue a Certificate of Occupancy.

E. Penalty

The Town is empowered to assess reasonable penalties to a Site Owner for failure to properly construct, operate and maintain an approved soil erosion and sedimentation control plan. The penalties shall be as follows:

1. The Site Owner shall be charged for the Town's costs for, but is not limited to, cleaning ditches, swales, drains or streams that require such due to the failure of the Site Owner to properly construct, operate and maintain site erosion and sedimentation control devices.
2. No further reviews of such project shall be conducted by the Town until all payments for the Town charges have been satisfied and/or satisfactory completion of the required erosion and sediment control measures has occurred by the Site Owner.

**A154-44. Reserved**

**A154-45. Reserved**

**A154-46. Reserved**

**A154-47. Reserved**

**A154-48. Reserved**

**A154-49. Reserved**

## ARTICLE IV

### SITE IMPROVEMENTS

#### **A154-50. General**

The Developer of a parcel of land shall make improvements to the parcel in accordance with the approved plans or the minimum standards required in these regulations as applicable to a specific project.

Where certain standards of development are not set forth they shall be established by the Planning Board, following their review of the particular situation.

In many cases, alternate improvement standards may be permitted if the Planning Board deems them equal in performance characteristics for the proposed use intended, with the approval of the Town Board as a deviation from an adopted regulation. Additional or higher design standards of improvements may be required in specific cases where the Planning Board believes it necessary to create conditions essential to the health, safety, morale and general welfare of the citizens of the Town.

#### **A154-51. Road Construction**

- A. The Town of Ontario has established basic guidelines for the classification of roads to be constructed in the Town. The guidelines are listed in these regulations under Article VII.
- B. All streets or roads developed in the Town shall be constructed to at least the minimum standards as set forth in the specifications or as shown on plans approved by the Town for a given project.
- C. Due to the general soil conditions within the Town and normal construction sequences for development, it is deemed to be in the best interests of the Town that following procedures be followed:
  - 1. Binder material shall not be placed prior to the completion and approval of all underground utilities including the private utility services and a review of the road base by the Town.
  - 2. The weather and seasonal limitations as specified under the Standard Specifications of New York State Department of Transportation shall apply for placing of bituminous mixtures.

Restrictions (1) and (2) imply completion of all underground systems well in advance of the Developer's schedule for paving.

3. No Certificates of Occupancy will be issued unless a proper road surface as herein specified has been constructed and accepted by the Superintendent of Highways.
4. Upon completion of the binder pavement and all other items related to the completion of a project, the Town may elect to accept for dedication the completed facilities if (1) an acceptable two year maintenance bond is submitted to the Town; and, (2) the Developer presents a sum of money to complete the top pavement course. The amount of money to be transferred to the Town will be established by the Superintendent of Highways. This sum shall be sufficient to cover the cost of labor and materials to cause the proper installation of the top course.

It is the intent of this option by the Town to allow the Developer to offer the project for dedication before the final pavement is installed. This option will allow the Developer to substantially complete the related construction in the developed area prior to installing the top course. In this manner the area will receive a new pavement top that is less susceptible to marring or patching as a result of normal construction activity.

In general, the final top course must be installed by the developer within one (1) year of the placement of binder course, unless a specific waiver of this time period is obtained (in writing) from the Superintendent of Highways.

Before the expiration of the maintenance bond and before the final top is applied, the Town and the Developer will hold a final site review to assess any damages or repairs that may be necessary by the Developer under the maintenance agreement. Once top course has been installed and a two year maintenance bond posted, final acceptance of all roadway improvements shall be approved by the Superintendent of Highways.

#### D. Driveway Culverts

The installation of driveway culverts requires the approval and a permit for culvert location, size and material from the State, County or Town Highway Department having jurisdiction over a given road. New driveway culvert installation shall be the responsibility of the developer/land owner following the receipt of a permit. All culverts must be a minimum of 12" in diameter, minimum 20' in length and include end sections.

The Town reserves the right to remove and/or install driveway or roadway culverts along any existing road to properly transmit surface drainage as determined by the Town Engineer and the Superintendent of Highways. All driveway culverts shall have a minimum cover of 1 foot.

**A154-52. Sidewalks**

Sidewalks may be installed on one or both sides of the street as the Planning Board may require, depending upon local conditions. The Planning Board will notify the Developer after the sketch plan has been reviewed by the Board if sidewalks are required. A 10' sidewalk easement may be required adjacent to the right of way if sidewalks are not installed.

**A154-53. Storm and Surface Drainage**

All development projects shall be required to conform with Chapter 116 of the Town Code shown in Appendix NN in regards to coverage with the SPDES General Permit.

All storm sewers and drainage facilities such as gutters, catch basins, bridges, culverts and swales shall be designed for the development and be subject to the approval of the Town. Such facilities shall be capable of handling upland flows that may be generated from future land development.

The Town of Ontario Master Drainage Plan and the Town of Ontario Watershed Management Control Law - Local Law #1 - 1993 shown in Appendix LL should be consulted to review the adequacy of existing and/or proposed drainage ways or structures and easement widths for a given development.

The following points should be considered in the design of storm drainage facilities.

- A. Lots shall be laid out and graded to provide positive drainage away from buildings.
- B. Storm sewers, culverts and related installations shall be provided:
  - 1. To permit unimpeded flow of natural watercourses.
  - 2. To insure adequate drainage of all low points.
  - 3. To intercept storm water runoff along streets at intervals reasonably related to the extent and grade of the area drained.
- C. Discharge of sump pumps or roof leaders shall be directed to the storm sewer network and not to roadside gutters or channels.
- D. In the design of storm sewer systems, special consideration shall be given to avoidance of problems which may arise from concentration of storm water runoff over adjacent properties. Surface swales or channels serving multiple lots shall have a catch basin or field inlet to serve every third lot.

- E. The Town requires the completed construction and the design engineer's certification of all surface drainage improvements and erosion control measures on a development before any building permits are issued.

**A154-54. Sewage Disposal Systems**

Where the public sanitary sewer system, in the opinion of the Planning Board, is reasonably accessible, sanitary sewers and appurtenances shall be designed to adequately serve all units with connections to the public system. The design and installation of said sewers shall be subject to the approval of the Planning Board and other appropriate agencies.

Where lots cannot be served by the extension of an existing public sanitary sewer, the Developer shall obtain the approval of individual subsurface disposal systems by the appropriate agencies.

Once the individual disposal systems are installed they shall be inspected by a licensed professional and certified to the Town Building Department as to the installation relative to the approved plans. The Town assumes no liability for the performance of individual disposal systems.

In areas not presently served by public sanitary sewers, the Planning Board may require, in addition to installation of temporary individual on-site sewage disposal facilities, the installation and capping of sanitary sewer mains and house connections if studies of the Board indicate that extension of public sanitary sewer trunks or laterals to service the property subdivided appears probable or necessary to protect the public health.

**A154-55. Water Supply**

The developer shall provide and dedicate to the Town a complete municipal water distribution system. The design and installation of said system shall be subject to the approval of the Planning Board and jurisdictional agencies. Excess size of the facility may be considered by the Town at the time of plan submission for future development consideration or to improve hydraulics within the system, the Town would then consider financial contribution for the upsizing of such facility.

**A154-56. Landscaping**

- A. Adequate site landscaping shall be required of the developer on any lands developed in the Town. A landscape plan will designate type, number, location and height of all plant species with appropriate planting procedures. A one year maintenance bond shall accompany all landscaping. Should there be seasonal limitations on planting, the amount of the landscaping will be held within the Letter of Credit.

- B. One street tree shall be planted on every new residential lot developed on a dedicated street and shall be located outside the Town rights-of-way and easements.
1. Visual impacts shall be considered for planting on sight distances.
  2. The trees are to be a minimum of 15 feet from the edge of any right-of-way and/or easement.
  3. There shall be no underground utilities within 15 feet of any proposed tree.
  4. The trees shall be a minimum of 2” caliper and of a variety that will be medium to small in stature, do not generally have a wide-spreading root system and do not generally have a large-spreading trunk base.

**A154-57. Monuments**

Permanent reference monuments shall be set at final grade at all corners and angle points of the boundaries of any subdivision plan and at all street intersections and such intermediate points as may be required per Appendix L. These markers shall be set by a licensed land surveyor and certified to the Town as true and accurate before a Certificate of Occupancy is issued.

**A154-58. Street Signs**

Permanent street signs (on either dedicated Town roads or private roads), of the same specifications as those of the Town Highway Department, shall be erected at each intersection by the Highway Department and paid for by the developer.

Private drives shall have names different from the dedicated road they have access from.

**A154-59. Street and Site Lighting**

The Planning Board may require adequate street, sidewalk or site lighting to be installed. Such a system shall be coordinated with the electrical utility corporation and designed to keep light from illuminating areas outside of the developed site. Such design shall utilize cut-off “shoe box” fixtures with luminaries appropriate for the use of the given area or site. Within a residential development the Board may consider a low wattage decorative fixture such as a colonial style type lamp.

Intersection street lights will be required at the Developer’s expense with all new subdivision entrance roads at the main road or thoroughfare.

**A154-60. Electric, Telephone, Cable TV or Other Buried Cable Utility**

In every development, provisions shall be made for service from the private utility supply systems. All utilities serving a subdivision including street lighting system, shall be underground, rather than on poles, standard or towers. Underground conduit and cables shall be installed per the regulations of the Public Service Commission and a minimum of 2 feet below any drainage way.

**A154-61. General Site Consideration**

General site conditions including pedestrian and vehicular access and circulation, provision and location for handicapped access; location, arrangement, size, architectural features and design of buildings including to scale color renderings of all non-residential facilities; lighting; signage and the protection of adjacent properties and general public against noise (per Noise Ordinance in Appendix MM), glare and unsightliness, or other objectionable features will also be considered by the Board.

**A154-62. Parking Areas & Surface Requirements**

All parking areas, passageways and driveways, except when provided in connection with one-and two-family residential uses, shall be surfaced with a dustless, durable, all-weather pavement such as asphalt or Portland cement. Parking areas shall be so graded and drained as to dispose of all surface water accumulation. The Planning Board may alter this requirement at the time of site plan approval when surface water drainage or other special requirements exist. Appropriate screening and landscaping including landscaped islands as deemed appropriate by the Planning Board will also be required. All non-residential facilities shall provide the required number of handicapped parking spaces and layout in compliance with the NYS Building Code and the outlines set forth by the American with Disabilities Act.

**A154-63. Parking Space Guidelines**

In applying the requirements for adequate off-street parking, required by the provisions of Section 150-47 of the Ontario Town Code, the following guideline standards shall be taken into consideration, as appropriate:

- A. Residential – Residential and agricultural uses listed in Schedule I Part A of the Town of Ontario Zoning Code, except as specifically designated below: two (2) spaces per dwelling unit.
  - 1. Cemetery: one (1) space per employee, plus one (1) space per four (4) visitors to the maximum capacity.
  - 2. Church: one (1) space per four (4) seats of maximum occupancy.
  - 3. Community and recreation center: one (1) space per two hundred fifty (250) square feet of gross floor area, or one (1) space per four (4) patrons to the maximum capacity, plus one (1) space per employee on the largest shift.

4. Day care or nursery school: one (1) space per teacher/employee on the largest shift, plus one (1) off-street loading space per six (6) students.
5. Farm market: one (1) space per employee on the largest shift, plus (1) space per two hundred (200) square feet of gross floor area provided for customer sales and service operations.
6. Golf courses: Forty (40) spaces per nine (9) holes, plus (1) space per employee on the largest shift, plus fifty (50) percent of spaces otherwise required for any accessory uses (e.g., restaurants and bars)
7. Home occupation: three (3) spaces per dwelling unit.
8. Libraries and museums: one (1) space per two hundred and fifty (250) square feet of floor area or one (1) space per four (4) seats to the maximum capacity, whichever is greater, plus one (1) space per employee on the largest shift.
9. Kennel: one (1) space per three (3) pens, plus one (1) space per employee on the largest shift.
10. Nursing homes/Assisted Living: one (1) space per four (4) patient beds, plus one (1) space per employee on the largest shift.
11. Recreational vehicle park: one and one-half (1.5) spaces per each recreational vehicle site, plus one (1) space per employee on the largest shift.
12. Residential, multi-family (e.g., apartment complexes, townhomes, manufactured homes park): three (3) spaces per dwelling unit, plus one (1) space per employee on the largest shift.
13. School, Private Elementary and Junior High: one (1) space per teacher and staff member, plus one (1) space per two (2) classrooms.
14. School, Private Senior High: one (1) space per teacher and staff member on the largest shift, plus one (1) space per five (5) nonbused students.
15. Stable: one (1) space per two (2) stalls, plus one (1) space per employee on the largest shift.

B. Commercial – Retail and personal service uses listed in Schedule I Part B of the Town of Ontario Zoning Code, except as specifically designated below: one (1) space per one hundred fifty (150) square feet of gross floor area of customer sales and service, plus one (1) space per four hundred (400) square feet of storage and/or office gross floor area, or, if the use has at least one hundred thousand (100,000) square feet of gross floor area, five and one-half (5.5) spaces per one (1,000) square feet of gross floor area. Drive through lanes must have a minimum stacking length of four (4) vehicles behind the service window per lane.

1. Banks: one (1) space per two hundred (200) square feet gross floor area, plus one (1) space per employee on the largest work shift. Drive through lanes must have a minimum stacking length of four (4) vehicles behind the service window per lane.

2. Beauty and barber shops: three (3) spaces per operator or one (1) space per one hundred (100) square feet of gross floor area, whichever is larger, plus one (1) space per employee on the largest shift.
3. Bowling alley: five (5) spaces per lane, plus one (1) space per employee on the largest work shift.
4. Convenience store: one (1) space per one hundred (100) square feet of gross floor area.
5. Driving range: one (1) space per tee, plus one (1) space per employee on the largest work shift.
6. Funeral home: one (1) space per four (4) patron seats or twenty-five (25) spaces per chapel unit, whichever is greater.
7. Grocery store: one (1) space per one hundred (100) square feet of gross floor area of customer sales and service, plus one (1) space per two hundred (200) square feet of gross floor area of storage.
8. Hospital: two (2) spaces per three (3) patient beds, plus one (1) space per employee on the largest work shift.
9. Hotel or motel: one (1) space per room or suite, plus one (1) space per every three (3) employees on the largest work shift, plus one (1) space per three (3) persons to the maximum capacity of each public meeting and/or banquet room, plus fifty (50) percent of the spaces otherwise required for accessory uses (e.g., restaurants and bars).
10. Mini-storage: one (1) space per ten (10) storage units, plus one (1) space per employee on the largest shift.
11. Office, Medical/Dental/Veterinary: four (4) spaces per doctor, plus one (1) space per employee on the largest work shift.
12. Office, Professional: one (1) space per two hundred fifty (250) square feet of gross floor area.
13. Outdoor amusement establishment: one (1) space per four (4) expected patrons at capacity.
14. Private clubs: one (1) space per three (3) persons to the maximum capacity of the facility.
15. Repair services: one (1) space per three hundred (300) square feet of gross floor area, plus one (1) space per employee on the largest work shift.
16. Restaurant, Fast-food: one (1) space per fifty (50) square feet of gross floor area, plus one (1) space per employee in the largest work shift. Drive through lanes must have a minimum stacking length of ten (10) vehicles behind the service window.
17. Restaurant: one (1) space per three (3) seats or one (1) space per one hundred (100) square feet of gross floor area, whichever is greater, plus one (1) space per employee on the largest work shift.
18. Shopping center, regional: five (5) space per one thousand (1,000) square feet of gross floor area.
19. Taverns, dance halls, night clubs, and lounges: one (1) space per fifty (50) square feet of gross floor area, plus one (1) space per employee on the largest shift.

20. Theaters and auditoriums: one (1) space per three (3) patrons based on maximum capacity.
21. Vehicle repair and maintenance services: one (1) space per four hundred (400) square feet of gross floor area, plus one (1) space per employee on the largest work shift.
22. Vehicle sales and service: one (1) space per twelve hundred (1,200) square feet of gross floor area, plus one (1) space per employee on the largest work shift for customers and employees only.

- C. Industrial – Manufacturing, processing, heavy commercial, and storage uses listed in Schedule I Part C of the Town of Ontario Zoning Code, except as specifically designated below: one (1) space per employee on the largest shift, plus one (1) space per company vehicle regularly stored on premises.

**A154-64. Open Space**

At least 30 percent of the lot area to be developed shall remain open and unused. This open area may include areas for landscaping, stormwater retention or detention, in-ground septic systems, underground utilities, screening and fencing. The open area shall not be paved or used for parking, storage, buildings or accessory buildings nor shall it include wetlands, steep slopes or other environmentally sensitive areas.

**A154-65. Reserved**

**A154-66. Reserved**

**A154-67. Reserved**

**A154-68. Reserved**

**A154-69. Reserved**

## ARTICLE V

### PLAN REQUIREMENTS

#### **A154-70. General Provisions**

All submittals requiring Planning Board action shall be submitted to the Planning Board Clerk at least 23 calendar days prior to a scheduled Planning Board meeting. The package shall include the plans, reports, sketches and exhibits that are required for review by the Board.

Before plans are submitted to the Planning Board for review they shall be checked by the designer according to the following lists for the various phases of plan development.

Incomplete submittals shall be cause for rejection by the Planning Board until they comply with the listed items.

The Planning Review Committee (PRC) shall review all plans prior to presentation to the Planning Board. The PRC will provide a written report with recommendations to the Board and the applicant/design professional within five days prior to the Planning Board meeting. A written response to all PRC comments by the applicant/design professional shall be required for each report submitted to the Board.

#### **A154-71. Sketch Plan**

The sketch plan shall be a schematic representation of existing conditions and proposed improvements including:

- a. Scale (no smaller than 1" = 100')
- b. Title ('Sketch') and name of development
- c. North point, scale and date
- d. Name(s) of the record Owner(s), Developer(s) and their addresses
- e. Name of Design Professional responsible for preparation of plan
- f. Zoning District and limitations
- g. Property boundary dimensions
- h. General location plan (1" = +2,000')
- i. Names of adjacent Owners
- j. Area and tax account number of property(ies) involved
- k. Total Holdings Map - where the sketch plan covers a portion of the applicant's holdings, at a minimum a tax map shall be submitted showing the proposed development on the overall parcel and its effect on future development.
- l. General topography (5' contour intervals) on U. S. C. and G. S. datum

- \_\_\_ m. Indication of any significant existing natural features (i.e., streams, ridges, treelines)
- \_\_\_ n. Indication of all existing utilities, roads, houses, etc.
- \_\_\_ o. Schematic indication of development, utilities, roads, etc.
- \_\_\_ p. Agricultural data statement

**A154-72. Preliminary Plan**

In addition to the requirements for a sketch plan, the following will be required:

- \_\_\_ a. Scale (no smaller than 1" = 50'), title ('Preliminary') and name of development
- \_\_\_ b. Property boundaries with bearings and distances on NYS Plane Coordinate System, Central NAD 83 Zone
- \_\_\_ c. Existing and proposed topography (2' contour intervals maximum) shall be shown to properly evaluate and plan the development
- \_\_\_ d. Zoning setbacks and restriction lines
- \_\_\_ e. Topography datum NAVD 1988
- \_\_\_ f. Bench mark based on NAVD 1988 datum
- \_\_\_ g. All existing natural features: watercourses, tree masses, wetlands, floodplains, etc.
- \_\_\_ h. All existing buildings, culverts, utilities with dimensions, sizes and inverts with other significant man made features
- \_\_\_ i. All existing property lines, easements or other encumbrances on the property, certified by a licensed land surveyor per a recent survey and the purpose for which the easements or right-of-way were established
- \_\_\_ j. Percolation and deep test holes and locations with results (if applicable)
- \_\_\_ k. Special information as requested by the Planning Board at sketch plan stage
- \_\_\_ l. Where the Preliminary Plan covers only a part of the applicant's entire holdings, a concept shall be submitted of a prospective street and utility layout for the remainder of the property
- \_\_\_ m. Sight distances for access to the parcel or proposed streets (required and provided)
- \_\_\_ n. Design reports for multi-lot subdivisions
- \_\_\_ o. Location and approximate dimensions and sizes of development improvements
- \_\_\_ p. Preliminary designs of stormwater facilities, culverts, pump stations, bridges, sewers, road sections, etc.
- \_\_\_ q. Proposed location, size and width of easements, parks, right-of-way, public areas or parcels of land to be dedicated or reserved for public use

**A154-73. Final Plan**

In addition to the requirements for the Preliminary Plan, the following will be required:

- \_\_\_ a. Size of the plan shall be acceptable for filing in the Wayne County Clerk's Office
- \_\_\_ b. Scale (no smaller than 1" = 50'), title ('Final') and name of development
- \_\_\_ c. Name, seal and signature of the registered professional(s) responsible for the plan.
- \_\_\_ d. Street lines, lot lines, right-of-way, easements and areas dedicated or proposed to be dedicated for public use
- \_\_\_ e. Sufficient data to determine readily the location, bearing and length of every street, lot and boundary line shown on the plan
- \_\_\_ f. All dimensions shall be shown in feet and in hundredths of a foot
- \_\_\_ g. The length of all straight lines, radii, lengths of curves and tangent bearings for each street
- \_\_\_ h. The proposed setback line from each street or property line
- \_\_\_ i. Names of streets within and adjacent to development as approved by Wayne County 911, County Highway Department, Postal Service, and others designated by the Town Board
- \_\_\_ j. Location of permanent reference monuments
- \_\_\_ k. Lot numbers and area of each lot to the right-of-way
- \_\_\_ l. Existing contours (2' maximum depending on topography):
- \_\_\_ m. Proposed finish garage floor elevations
- \_\_\_ n. Lowest architectural opening elevations in designated flood zone areas
- \_\_\_ o. Spot elevations of swales, etc.
- \_\_\_ p. Note on all final plans: "Placement and arrangement of building, waste disposal system, driveway, utilities and drainage will not be changed without prior approval of the Town of Ontario Building Department."
- \_\_\_ q. Location, size, invert elevations, type and class of pipe on all sanitary and storm sewer systems
- \_\_\_ r. Location, sizes and types of pipe for all water mains, location of all valves, hydrants, blowoffs, etc.
- \_\_\_ s. Profiles with detailed information of all streets, storm sewers, sanitary sewers and water main crossings
- \_\_\_ t. Design and plan details of all special construction (culverts, bridges, headwalls, etc.)
- \_\_\_ u. Engineering calculations required to substantiate proposed designs
- \_\_\_ v. Landscaping plan with planting schedule if required by the Planning Board
- \_\_\_ w. Details required to specify special conditions, materials or methods of construction
- \_\_\_ x. Indication of approval from any jurisdictional agencies
- \_\_\_ y. On all subdivisions and site plans, signature lines must appear for project approval by the Superintendent of Highways, Water Utilities Superintendent,

Stormwater Management Officer, and Town Engineer. The Planning Board Chairman shall also sign every plan once all approval criteria are met

- \_\_\_ z. An affidavit that the applicant is the Owner or equitable Owner of the land proposed to be developed
- \_\_\_ aa. A statement signed by the Owner to the effect that the subdivision as shown on the final plan is made with his full consent and that it is desired to record the same
- \_\_\_ bb. An affidavit stating that the applicant will install all improvements shown on the final plan at his own expense
- \_\_\_ cc. Easements Descriptions, Legal Covenants, etc.
- \_\_\_ dd. The final map shall contain on its face a certification that the developer will comply with all Federal and State laws, rules and regulations for the development of the subject property
- \_\_\_ ee. Stormwater Pollution Prevention Plan.

**A154-74. Reserved**

**A154-75. Reserved**

**A154-76. Reserved**

**A154-77. Reserved**

**A154-78. Reserved**

**A154-79. Reserved**

## ARTICLE VI

### ADMINISTRATION

#### **A154-80. General Provisions**

For the purpose of enabling and encouraging flexibility of design and development of land in such a manner as to promote the most appropriate use of land, to facilitate the adequate and economical layout of streets and utilities and to preserve the natural and scenic qualities of open lands, the Planning Board, simultaneously with the approval of a Plan, may in appropriate cases modify applicable provisions of the zoning ordinance in accordance with Town Law 278 providing:

- A. The Town Board authorizes the Planning Board to act on a specific application.
- B. The Owner makes written application for such modification.
- C. The Planning Board adopts rules and regulations setting forth the criteria of an application.
- D. The modifications would not result in greater number of dwelling units or building plots than are permitted if the land were subdivided into lots conforming to the minimum lot size and density requirements of the zoning ordinance applicable to such land. Two plans will be required for the Planning Board to review:
  - 1. Conventional layout meeting all zoning regulations of the Town, and other development regulations,
  - 2. Modified plan meeting applicant's intent of development.
- E. No modifications granted by the Planning Board may change the permitted uses of such lands as set forth in the Town's Zoning Regulations.
- F. The Planning Board shall record in its minutes the grounds for granting any modification and note the date of such modification and the nature thereof on the final subdivision plan to be recorded in the Office of the County Clerk. The Town Clerk shall make appropriate notations and references of such modification on the official Zoning Map of the Town.

#### **A154-81. Hardships**

Where the Planning Board finds that because of unusual circumstances of shape, topography or other physical features of a proposed development - extraordinary hardship may result from strict compliance with these regulations, The Planning Board may specifically waive portions of these regulations with Town Board approval so that substantial justice may be done and the public interest secured;

provided that no such waiver shall be granted which will have the effect of nullifying the intent and purpose of these regulations or any other pertinent rules, regulations or ordinances of the Town of Ontario.

**A154-82. Large Scale Development**

The standards and requirements of these regulations may be modified by the Planning Board with Town Board approval in the case of a plan and program for a new community or a neighborhood unit, which in the judgment of the Planning Board provides adequate public spaces and improvements for the circulation, recreation, light, air and service needs of the tract when fully developed and populated and which also provides such covenants or other legal provisions as will assure conformity to the achievement of the plan.

**A154-83. Conditions**

The Planning Board may permit modifications to the requirements herein provided such conditions as will, in its judgment, secure substantially the objectives of the standards or requirements so modified.

**A154-84. Amendments**

The rules and regulations as set forth above may be amended, altered or revised by the Planning Board from time to time, after public hearing and subject to the approval of the Town Board per Section 271 of the Town Law.

**A154-85. Validity**

Should any section or provision of these rules and regulations be declared by a court of competent jurisdiction to be invalid, such decision shall not affect the validity of the rules and regulations as a whole or any other part thereof.

**A154-86. Charge Schedule**

The Town of Ontario has a Fee Schedule on file at the Town Clerk's Office. Copies of this Schedule are available and any fees due the Town must be paid in full before approvals are considered.

**A154-87. Reserved**

**A154-88. Reserved**

**A154-89. Reserved**

**PART 2****CRITERIA FOR DESIGN AND CONSTRUCTION****ARTICLE VII****GENERAL PROVISIONS****A154-90. Purpose**

The purpose of these Specifications is to provide minimum criteria for the design and construction of improvements within the Town which, upon the satisfactory completion thereof, may be offered for dedication to the Town of Ontario for perpetual operation and maintenance. The information contained in Part 2 is to be used in conjunction with Part 1 of these Regulations.

The criteria established is intended to provide minimum standards which may be upgraded to serve the best interests of the Town. The information in this booklet is provided to aid in the submission of material in a uniform manner and attempt to expedite the various review and approval procedures.

This criteria shall govern in all areas of private, public, industrial and commercial development and/or areas that will involve the connections to existing municipal systems in the Town.

**A154-91. Responsibility**

It is the responsibility of the Developer to insure preparation of Plans sufficient to meet the standards and requirements herein incorporated. Said Plans shall be prepared by a design professional, licensed in the State of New York, who shall have experience in design of land development.

The Town and/or its representatives shall review the proposed Plans as to their compliance with the standards and conditions encountered while meeting the best interests of the Town.

It is the responsibility of the Contractor, acting for the Developer, to construct the facilities in conformance with the approved Plans and the Town standards.

Construction observation shall be provided by the Town or its designated representative to review construction as it is being performed.

The final results of the project remain the prime responsibility of the Developer and until the development is satisfactorily approved by the Town and/or its representatives, said development shall not be accepted for dedication.

**A154-92. Building Permits**

Building permits shall not be granted until:

1. An approved subdivision plan is filed in the office of the Wayne County Clerk.
2. Drainage improvements are completed as shown on such plan and certified by the design engineer to the Town Building Department.
3. All utilities and improvements are dedicated to and accepted by the Town Board.
4. Easements effecting the development of a parcel are filed in the office of the Wayne County Clerk and notification, of such received by the Town.
5. A site plan has received final approval of the Planning Board and Items 2 and 3 above are addressed.

**A154-93. Reserved**

**A154-94. Reserved**

**A154-95. Reserved**

**A154-96. Reserved**

**A154-97. Reserved**

**A154-98. Reserved**

**A154-99. Reserved**

## ARTICLE VIII

### DESIGN CRITERIA

#### A154-100. Sewage Disposal Systems

##### A. Private Disposal Systems

Private disposal systems must conform to the minimum requirements established by the New York State Department of Health per Individual Residential Wastewater Treatment Systems Design Handbook - 1996 the latest revisions thereof and/or the Department of Environmental Conservation Design Standards for Wastewater Treatment Works (1988) and as expanded herein:

1. Percolation and deep hole tests must be certified by the design professional to the Town using a predetermined certificate as follows:

I, \_\_\_\_\_, certify to the Town of Ontario that the soil percolation and deep hole tests data shown hereon was obtained by a qualified representative of our firm who has been properly trained to perform and record these tests in accordance with the methodology outline in NYS Department of Health Individual Residential Wastewater Treatment Systems Design Handbook – 1996. The tests accurately represent the soil conditions on the proposed site.

The proposed subsurface sewage disposal system(s) has (have) been designed based on the field test data and is in strict compliance with New York State Department of Health Design Handbook referenced above.

\_\_\_\_\_  
signature/date

2. All private sewage disposal systems shall be designed for individual homes containing a minimum of three bedrooms.
3. The minimum length of leach line shall be 200 L.F.
4. Installation of individual subsurface disposal systems must be certified to the Town of Ontario by a licensed professional as compared to the approved plans before a Certificate of Occupancy will be issued.
5. Any installed system must be completely backfilled and graded within 24 hours of inspection and acceptability by a Design Professional.

6. No subsurface disposal system will be installed under adverse weather conditions.
7. There will be no driving or parking over the area of the subsurface disposal system.
8. The area of the leach field system will be final graded and seeded as soon as possible after construction to shed surface water.

B. Alternate Systems

Alternate systems must be submitted for review by the New York State Department of Health with the following additional restrictions by the Town of Ontario:

1. Fill limits shall include a future expansion area.
2. Evapo-transpiration areas are not acceptable for new construction.
3. Fill systems require professional certification of percolation tests in the in-situ fill and placed fill after it has been in place for at least six months and over at least one winter season.

C. Public Sanitary Sewers

Minimum requirements shall be as established by the New York State Department of Environmental Conservation and Chapter 114 of the Code of the Town of Ontario.

**Gravity Sewers - Expanded Information**

1. Sewer mains shall be a minimum of 8 inch diameter except in those areas where the sewer shall be of the diameter outlined in a Master Plan.
2. Manhole spacing shall be a maximum of 300 L.F.
3. The sewer shall be designed at such a depth to provide basement drainage. If site conditions are such that basement drainage cannot be provided to all units, a specific note to that effect shall be placed on the plan.
4. All necessary mains and laterals required to connect to the public sewage system as shown on the final approved plan shall be installed by the Developer.

5. Elevations - Where other utilities parallel or cross the sanitary system, vertical clearance between the systems shall be provided to permit the satisfactory installation of all services.
6. Laterals for each individual lot shall be:
  - a) Minimum of 4 inches in diameter.
  - b) Minimum of slope 1/4" L.F. (2%).
  - c) Cleanouts shall be provided at a maximum distance of 85 feet and one shall be located on the right-of-way or easement line. All cleanouts shall include a cast iron vent cover per Appendix C.

### **Pressure Sewers**

1. Pressure sewer systems shall be laid out in a configuration that is hydraulically efficient.
2. Access shall be provided at the upstream end of each forcemain branch.
3. All appurtenances and fittings shall be compatible with the piping system designed and shall be full bore with smooth interior surfaces.
4. Building service connections shall have a minimum diameter of 1-1/4 inches and shall tap into the forcemain with a corporation stop. A check valve shall be provided near the service pump.

### **Sewage Lift Station**

In all cases, the use of gravity systems are encouraged over pump stations. Specific geographic and/or topographic areas may require the use of sewage lift stations to transmit contributory flows to the trunk sewer system.

1. Pumps shall be a factory built, self-priming, solids handling, horizontal, centrifugal motor driven sewage duplex pump system. Acceptable manufacturers are Gorman-Rupp, T-series pumps or Smith & Loveless vacuum primed non-clog series (selection to be determined by the Town). Pump station system, building enclosure and wetwell shall meet all the requirements of the latest edition of the Recommended Standards for Wastewater Facilities (Ten State Standards). Building shall also conform to the latest NYS Building Code and NFPA requirements.
2. Pump system shall be enclosed in a split-face masonry block building, with wooden truss roof and asphalt shingles, siding at eaves, soffits, etc. and double swing steel doors. Minimum building size for a duplex pump station system shall be 10' x 16' (final size and orientation to be determined by the Town). Pump station design shall be of similar components, layout as the

Town pump station located at Roder Parkway and Ontario Drive. Materials and colors to be approved by the Town.

3. Building shall include an exterior security wall-pak type light as well as a red trouble light in the event of an alarm condition at the pump station.
4. Unit heaters and fresh air ventilation system shall be provided for this station.

### **Exterior Piping / Wetwell**

1. Drain line shall be provided from the pump station building to the wetwell for floor drain and air release discharge.
2. Provide water service to the pump station building with RPZ/meter and hose bibb connection.
3. Wetwell suction piping shall be stainless steel or Class 53 ductile iron pipe with stainless steel pipe supports at 48" on center. 90 degree increaser elbow shall be installed where suction piping meets bottom of the wet well.
4. If bubbler line is used in the wet well, bubbler line shall be run within a pvc carrier pipe, anchored to the wetwell walls.
5. All piping between the pump station and wetwell shall consist of air-tight seals and traps for drain lines.
6. Wetwell shall be accessed by a Bilco style hatch, constructed for H-20 loading.

### **Site**

1. Pump station shall include paved parking area for Town maintenance vehicles, measuring a minimum of 15' x 20'.
2. Concrete sidewalk shall be provided outside the entrance doors to this station.

### **Valving and Piping**

1. Each pump shall be equipped with a full flow type check valve, capable of passing a 3" spherical solid, with flanged ends and be fitted with an external lever and spring.

2. The discharge header shall include a 3-way plug valve to permit either or both pumps to be isolated from the common discharge header. The valves shall be capable of passing a 3” spherical solid. Plug valve shall be non-lubricated, tapered type with 125-pound standard flanges.
3. Emergency bypass piping shall be provided and shall include a 2-way plug valve and quick connect fitting.
4. Each pump shall be equipped with a minimum 4” diameter glycerin filled compound suction gauge and a 4” diameter glycerin filled pressure gauge. They both shall be calibrated in feet of water column. They shall be mounted on a resilient panel and provided with flexible hoses and shut-off valves.
5. The pump station shall be equipped with automatic air release valves. Valves shall close upon completion of a priming or re-priming cycle and prevent re-circulation. Valves shall provide visual indication of valve closure and operate solely on pump discharge pressure not the presence of liquid. The valve shall be constructed of cast iron and stainless steel, include a 3” clean-out port, and be field adjustable for varying discharge heads.
6. The pump shall be provided with a drain kits which consist of 10' length of plastic hose with a quick connect female KAMLOCK fitting at one end of the hose and two sets of fittings for pump drains. Each set of fittings for the pump drain shall include a pump nipple, bushing, bronze gate valve, and quick connect male KAMLOCK fitting.

### **Auxiliary Power**

1. Pump station shall operate on utility power when such power is available, except for exercise periods. When operating on utility power, operation of pumps and motors shall be controlled by the AC level control system as specified. During a failure of utility power, and during exercise periods, operation of the pump shall be provided by either: (a) a standby engine controlled by the standby level control system and engine control system OR (b) natural gas fueled standby generator with an automatic transfer switch.

### **Control Panel**

1. The control panel shall be NEMA I, fabricated of 14 gauge steel with continuous welds, interior and exterior painted with white enamel, be provided with a removable back panel, continuous steel hinge.

2. Each pump shall have an open frame, across-the-line, NEMA rated magnetic motor starter. All motor starters shall be equipped to provide under voltage release and overload protection on all three phases.
3. Overload relays shall be block type, and shall be manual reset only. Trip setting shall be determined by heater element only and not by adjustable settings.
4. A properly size heavy-duty air circuit breaker shall be furnished for each pump motor. All circuit breakers shall be sealed by the manufacturer after calibration to prevent tampering. A pad locking operating mechanism shall be installed on each motor circuit breaker. Operator handles for the mechanism shall be located on the exterior of the control compartment door, with interlocks which permit the door to be opened only when the circuit breakers are on the off position.
5. A duplex ground fault indicating utility receptacle providing 115 volt, 60 Hz, single-phase current shall be mounted on the side of the control enclosure. Receptacle circuit shall be protected by a 15-ampere thermal magnetic circuit breaker.
6. The control panel shall be equipped with circuitry to override the level control system and shut down the pump motor when required to protect the pump from damage caused by excessive temperature. A thermostat shall be mounted on each pump to detect its temperature and a magnetic switch shall be supplied for each thermostat. An indicator, visible on the front of the control panel shall indicate the pump motor has been stopped because of high temperature conditions. Pump shall remain locked out until it has cooled and the circuit has been manually reset.
7. The control panel shall also be supplied with HOA switches, alternator relay, pump run indicators, elapsed time indicators, and sequence selector switch.
8. The control panel shall be equipped with a surge arrester to minimize damage to the pump motors and control from transient voltage surges. The arrester shall utilize metal-oxide varistors encapsulated in a non-conductive housing. The arrester shall be rated 650 volts RMS nominal with a discharge capability of 20,000 amps.
9. Indicating lights shall be oil tight type and equipped with integral step-down transformers and indicate pump #1 and pump #2 high pump temperature shut-down, high wet well level, loss of power and alarm silenced.
10. Switch controls shall be oil tight type contacts rated NEMA a-300 minimum switches shall be provided to disconnect the control circuit, select the mode of operation for each pump, select the sequence of pump operation, operate

the level control system as described below, override all controls except motor overload relays, silence one of the 115 volt ac alarm circuits and reset the high water alarm circuit.

11. All wiring, workmanship, and schematic wiring diagrams shall be in compliance with applicable standards and specifications for industrial controls set forth by the Joint Industrial Council (JIC), National Machine Tool Builders Association (NMTBA), and the National Electric Code (NEC). Wires shall be color-coded, with identification numbers on both ends.
12. Dry contacts will be provided for high water alarm, high pump temperature shut down for pumps #1 and pump #2, and loss of power.
13. All conduits and fittings shall be UL Listed. Liquid tight flexible metal conduit to be constructed of smooth, flexible galvanized steel core with smooth abrasion-resistant, liquid tight poly vinyl chloride cover.
14. Control components shall be permanently mounted using the same identification keys shown on the electrical diagram. Labels must be mounted adjacent to device being identified. Switches, indicators, and instruments mounted through the control panel door shall be labeled to indicate function, position, etc. Labels shall be mounted adjacent to or above the device.
15. To meet UL requirements and to meet the NEC bend space requirements the main terminal block shall include separate termination points for each wire connection.

### **Level Control**

1. The level control system shall start and stop the pump motors in response to changes in wet well level, as set forth herein.
2. The level control system shall be capable of operating as either an air bubbler type level control system, submersible transducer type system, or ultrasonic transmitter type system (Town to determine type of level control system desired for the station).
3. The level control system shall utilize the alternator relay to select first one pump, then the second pump, to run as lead pump for a pumping cycle. Alternation shall occur at the end of a pumping cycle.

## **Telemetry**

1. A telephone dialer shall be mounted within the pump station and wired to the pump control panel to monitor all alarm conditions. It shall be a RACO verbatim dialer, or approved equal OR an Omni Site wireless monitoring system, with all features to make it acceptable to the Town. Future capability for SCADA connections shall be incorporated into the telemetry system design and construction.
  
2. Alarming and Monitoring:  
The device shall monitor connected alarms and analyze and report the following information with alarm notifications sent immediately, or at user selectable time delays, and daily time scheduled reports of the following:
  - a. High water alarm (From level controller)
  - b. Power failure alarm
  - c. Pump flow rate, Pump #1 and Pump #2, GPM
  - d. Combined pump flow rate, GPM
  - e. Wet Well Inflow Rate
  - f. Total station daily flow, Gallons
  - g. Pump 1,2 Amp Draw
  - h. Pump 1,2 On/Off Cycles
  - i. Pump 1,2 Runtimes
  - j. Combined pump runtime
  - k. High pump temperature alarm, Pump #1 & #2
  - l. Daily time stamps when minimum and maximum inflow occurred
  - m. Average daily inflow
  - n. Cellular signal strength (if applicable)
  - o. Historical log showing alarm history
  - p. Historical data exportable to approved data collection software (i.e., Microsoft Word, Excel or Access)
  - q. Crew on-site notification alert
  - r. Low battery back-up alarm
  - s. Station enclosure low temperature
  - t. Independent high water float switch
  - u. Six additional alarm inputs
  - v. Two additional relay outputs
  - w. Alarm notification: Operator programmable using voice call, pager or email.
  - x. Contact List: Operator programmable, upon alarm activation, the system shall selectively contact the configured recipient list according to the current alarm(s).

### **Operational Test**

1. A single pump manufacturer shall design and manufacture the entire pumping system. The pumps, motors, piping, valves, and controls shall be totally factory assembled and be given an operational test as an assembled system with all supplied equipment. The test shall substantiate the correct performance of the equipment at the design head, capacity, suction lift, speed and HP as herein specified.

### **Station Finish**

1. Pumps, piping, and exposed steel framework shall be cleaned prior to painting using industrial cleaner or abrasive process. Exposed surfaces to be coated with a low VOC, alkyd based, high solids, semi-gloss enamel incorporating rust inhibitive additives. Both the primer coat and the finish coat shall be 1.0-1.25 MIL dry film thickness (minimum). The finish coat shall be resistant to oil mist exposure, solvent contact, and salt spray. The factory finish shall allow for over coating and touch up after final installation.

### **Warranty**

1. The pump station manufacturer shall warrant all equipment to be of quality construction, free of defects in material and workmanship. A written warranty shall include specific details described below.
  - a. The equipment, apparatus, and parts furnished shall be warranted for a period of five (5) years, excepting only those items that are normally consumed in service, such as light bulbs, oils grease, packing, gaskets, O-rings, etc. The pump station manufacturer shall be solely responsible for the warranty of the station and all components.
  - b. The warranty shall become effective upon the acceptance by the purchaser or the purchaser's authorized agent, or sixty (60) days after installation.

## **A154-101. Storm Drainage Systems**

All development projects shall be required to provide for the adequate conveyance of storm drainage through the development. The natural drainage patterns are to be followed as much as possible. Storm sewer systems shall be sized to accommodate the future potential runoff based on the probable land use and the ultimate

development of the upland watershed area based on the Town's Comprehensive Plan.

All development projects shall be required to obtain coverage with the SPDES General Permit. Where conditions imposed by the SPDES General Permit are more restrictive than comparable restrictions imposed by these regulations, or any other Town ordinances, the provisions which are more restrictive shall govern.

### **Stormwater Sizing Criteria**

All stormwater sizing shall be in conformance with methods outlined in the "New York State Stormwater Management Design Manual".

### **Stormwater Management Practices – Watershed Control Law**

The "New York State Stormwater Management Design Manual" outlines acceptable stormwater management practices (SMPs) to meet water quantity and water quality treatment goals. The Planning Board shall, upon recommendation from the Town Engineer, approve the SMP(s) implemented on a particular development. Where conditions warrant, the Planning Board may require specific or additional SMP(s) to be implemented.

### **Storm Sewer System**

1. Inlets
  - a. Catch Basins
    - (1) Catch basins shall be placed at all low points and intersections with maximum spacing of 300 feet. Catch basin leads shall only be connected to the storm sewers at manholes.
  - b. Storm Sewer Manholes
    - (1) Storm sewer manholes shall be designed to accommodate the pipes entering and exiting the structures.
    - (2) A schedule of manhole diameters shall be provided on the final plan.
2. Conveyance
  - a. Natural Channels and Open Swales
    - (1) Natural channels are generally preferred alignments for major components of a residential drainage system. However, the

utilization of open channels shall be evaluated as to the ease and cost of maintenance, safety hazards and aesthetics. The channels may require special invert or side design to properly convey water while keeping the maintenance cost minimal.

- (2) Backyard swales shall be designed with minimum side slopes of 1 on 4 and a minimum longitudinal slope of 1.0 percent. Field inlets shall be generally provided every third lot or a maximum of 300 lineal feet at all low points and where swales intersect.

b. Storm Sewers

- (1) Minimum pipe size - 12 inch diameter
- (2) Minimum velocity when flowing full - 3 fps
- (3) Maximum manhole and catch basin spacing - 300 lineal feet.
- (4) In general, street drainage shall be in closed conduit. When gradient and tributary runoff require conduit greater than 36 inches in diameter, then open channel design may be considered.
- (5) Culverts shall be designed to accommodate the design storm for the drainage area but shall be checked for the next highest increment of storm return interval to evaluate the possible complications. Headwater and/or tailwater calculations will be required to determine ponding that may occur. In general, the use of multiple culverts is discouraged because of maintenance problems. Inlets and outlets of culverts shall be protected from erosion or turbulence problems by the use of riprap, headwalls, energy dissipaters, etc.

c. Storm Laterals

- (1) Gravity laterals shall be a minimum of six (6) inches in diameter. Sump pumps with check valves and roof leaders shall discharge to storm laterals or, in the absence of storm sewers, to splash pads directed to side or rear yard drainage swales.

3. Outfalls

- a. Points of discharge shall be recognized U.S.G.S. drainage courses, which may require the Developer to acquire downstream easements for dedication to the Town.

4. Stormwater Management Facilities

- a. All facilities shall be designed in accordance the “New York State Stormwater Management Design Manual” and the Phase II SPDES General Permit requirements.

5. Drainage Easements

The minimum easement width shall be 20 feet, but the actual width acceptable to the Town will consider all those factors previously listed.

**A154-102. Water Mains**

All work performed and materials furnished for the purpose of supplying a development with potable water shall comply with Chapter 146, Code of the Town of Ontario and Recommended Standards for Water Works (1987).

A. Design

Water supply system shall be designed to provide adequate domestic usage and fire protection. Where public water supply is not accessible, an alternate private supply shall be furnished, which conforms to the New York State Health Department regulations.

All main and service sizing shall be substantiated by the Design Engineer using updated flow data provided by the Water Utilities Department.

All water mains shall be a minimum of 8 inches except:

1. Where mains are part of a major transmission distribution network, the Town may require a larger size main.
2. Where project demands allow a smaller main while still providing adequate fire and domestic flows. In no case will the Town accept for dedication a main smaller than 4 inches in diameter.

B. Hydrants

Hydrants shall be spaced to comply with ISO requirements but at a maximum 500 foot intervals in subdivisions and 600 foot intervals in open spaces.

C. Valves

Valves shall be located such that no more than 30 dwelling units and no more than two hydrants need be out of service for repair of a water main. Valves shall generally be provided at intersections and shall be no more than 800 feet apart along the water main.

Additional valves may be required at creek and/or railroad crossings depending on network configuration and permit requirements.

D. Dead End Mains

Provide 2 inch blow-off units at the end of all "dead end" mains.

E. Water Services

Provide minimum of 3/4 inch water service to the right-of-way line of all individual lots or where an easement is provided(the service shall extend to the easement line). All services under dedicated roads shall be Type K copper without line couplings.

F. Meter Pits (for individual services)

Meter pits shall be installed when the water service length is greater than 250 feet from the center line of a given road.

**A154-103. Grading**

A. General

The finished grading on developed lands shall provide for the effective removal of stormwater runoff to a drainage system.

In general, the Design Engineer shall try to establish a finished grade at the structure line to permit a minimum of 2.0 percent grade away from the structure to the drainage system.

Drainage shall generally be to side or rear lot swales provided:

1. Swales are of a proper cross-section to permit ease of maintenance by the individual Owner.

2. Easements are provided for access and/or maintenance where necessary.
3. Finish grade at right-of-way line shall be not more than 2 feet above finish grade at centerline and the driveway slope within the lot shall not be greater than 12 percent. A leveling area of 3 percent maximum grade adjacent to the right-of-way shall be provided which is a minimum of 30 feet in length from the edge of the street pavement.
4. Where multi-lot grading is proposed, all swales required for positive drainage will be installed prior to the issuance of a building permit.

**B. Grading Plan**

A Grading Plan shall be submitted, with the final plan for any development, showing at a minimum the following items:

1. Existing contours.
2. Proposed finish contours.
3. Spot elevations of proposed finish grades at key locations.
4. Garage floor elevations.
5. Minimum elevations of any architectural opening where flood hazard areas exist.
6. Culvert invert elevations.
7. All elevations shall be established from USC&GS datum and the plan shall show a site bench mark.

**A154-104. Roads**

The following designations will be used by the Town to classify roads and their respective design criteria:

- A. Commercial/Industrial
- B. Residential/Subdivision
- C. Private (1 lot)
- D. Private (2 or more lots)

The basic considerations of each road classification are as follows:

A. Commercial/Industrial

1. Provides access to established commercial and industrial areas.
2. Provides access to local roads.
3. High volume car/truck/tractor trailer traffic.

B. Residential/Subdivision

1. Densities as permitted by the zoning ordinance
2. Design speeds of 30 MPH or less
3. Individual driveways at regular intervals
4. Usually no effect on overall Town traffic pattern

C. Private (non-dedicated and one user)

1. Has fee ownership on a dedicated street.
2. Has no effect on overall Town traffic pattern.
3. Design speed of 30 MPH or less.
4. Maintenance by homeowner.

D. Private (non-dedicated and two or more users)

1. Has fee ownership on a dedicated street.
2. Low volume of traffic.
3. Has no effect on overall Town traffic pattern.
4. Design speed of 30 MPH or less.
5. Maintenance covered by deed agreement or Homeowner's Association depending on number of units.

Each of these roads has basic characteristics which may be varied to be consistent with unique proposals of development and construction. The individual variations of the conditions will not be permitted if they sacrifice design safety or maintenance of a proposed road type. Standard roads shall comply with the typical cross sections shown on Appendices H, HA and I.

**A154-105. General Road Design Considerations**

A. Right-of-Way

1. Minimum width 60 feet for dedicated roads.
2. Private drive width depends on design constraints.
3. Private underground utilities to be located on easements beyond right-of-way limit.

## B. Horizontal Alignment

The following factors shall be incorporated into the design of each road type:

1. Sight distance must conform to minimum safe stopping sight distance per "Geometric Design of Highways and Streets". AASHTO Latest Edition.
2. Clear sight at intersections
3. No centerline intersection angles less than 75 degrees.
4. Minimum centerline radius of 150 feet.
5. Road pavement intersections shall have a minimum of 35 foot radius.
6. Cul-de-sacs should not exceed 1,200 feet in length and end with a turnaround (see Appendices J and K).
7. Access to future developments will be provided to property lines.
8. Tangent sections shall be used between curves to maintain the proper flow of traffic at design speeds.

## C. Vertical Alignment

1. The minimum length of vertical curves shall be based upon current AASHTO policy covering selection of vertical curve length based upon stopping sight distance, passing sight distance, riding comfort, and headlight sight distance. Vertical curves are required whenever changes in grade exceed 1 percent.

## D. Road Grades (dedicated)

1. Minimum - 0.7 percent with shoulders; 0.5 percent with gutters.
2. Maximum - 8 percent - Maximum grade may exceed 8 percent for short distances with engineering justification and Town approval.

## E. Leveling Areas

Leveling areas shall be incorporated at all intersections for a minimum distance of 100 feet from the edge of the pavement and the grade shall not exceed 3 percent.

F. Road Widths

<b>Class</b>	<b>Pavement Width</b>	<b>Edge Treatment</b>	<b>Drainage</b>
Commercial/ Industrial	24' min.	5' shoulder, gutter	Surface swale, underground conduit
Residential/ Subdivision	22'	4' shoulder, gutter	Surface swale, underground conduit
Private (one lot)	14'	None	None
Private (two or more lots)	14'	3' shoulder	Surface swale, underground conduit

G. Special Considerations

1. Surface Swale - Runoff to be directed to underground conduit via catch basins with swale. Note that in lieu of gutters, the prescribed shoulder treatment will be required.
2. Underdrains - Underdrains are required with the development of all dedicated roads. The method used shall be subject to the review and approval of the Town Engineer and the Superintendent of Highways.
3. Frontage Development - Where frontage development is to be approved along collector roads, the Planning Board may require that the roadside swale be enclosed in conduit along the fronts of the development. Such conduits shall be of the proper size to accommodate anticipated flows as previously outlined. A parallel access road may also be considered by the Planning Board and discussed during sketch plan submittal.

**A154-106. Road Design**

A. General Requirements

The Design Engineer shall consider the proposed use of the road when preparing a road design. The following criteria are listed as minimum standards to be considered by the designer. It is the intent of these requirements to obtain a road and a base that is stable and capable of supporting H-20 loading to the sites.

B. Minimum Design Standards

1. Commercial/Industrial

- a. Mirafi 1100N Nonwoven Polypropylene Geotextile Fabric
  - b. Two 6 inch lifts of No. 2 and 3 crushed stone equally mixed.
  - c. One 6 inch lift of Type I fine crusher-run stone.
  - d. Asphaltic concrete courses shall be 3 inches of Type 3 binder and 1 inch of Type 7F2 top. Note: Binder course is to be installed even with gutter.
  - e. Stabilized shoulder per Appendix HA or concrete gutter per Appendix M.
2. Residential/Subdivision
- a. Mirafi 1100N Nonwoven Polypropylene Geotextile Fabric
  - b. Two 6 inch lifts of No. 2 and 3 stone equally mixed.
  - c. One 3 inch lift of Type 1 crusher-run stone
  - d. Asphaltic concrete courses shall be 3 inches of Type 3 binder and 1 inch of Type 7F2. Note: Binder course is to be installed even with gutter.
  - e. Concrete gutter per Appendix M, or stabilized shoulder per Appendix HA.
3. Private (one lot)
- a. Mirafi 140N Nonwoven Polypropylene Geotextile Fabric
  - b. One 6 inch lift of No. 2 and No. 3 crushed stone mixed equally.
  - c. One 3 inch lift of crusher-run stone.
  - d. A private drive off a dedicated road shall:
    - (1) Be designed to keep surface water flows from entering the travel way of the dedicated street.
    - (2) Provide soil erosion measures on the site as it is being developed.
    - (3) Provide an adequately sized culverts with end sections or headwall treatment.
    - (4) Finish grade and seed the area immediately upon completion of the private drive base.
    - (5) Provide a hard surface from the edge of the existing pavement at least 30 feet toward the developed site.
    - (6) No private drive should exceed a slope greater than 3 percent from the edge of the pavement to a point 30 into the property being developed.
    - (7) Maximum grade within the development site shall be 12 percent.
4. Private (two or more lots)
- a. Mirafi 140N Nonwoven Polypropylene Geotextile Fabric

- b. One 6 inch lift of No. 2 and No. 3 crushed stone mixed equally.
- c. One 3 inch lift of crusher-run stone.
- d. One 3 inch lift of Type 3 binder
- e. A private drive off a dedicated road shall:
  - (1) Be designed to keep surface water flows from entering the travel way of the dedicated street.
  - (2) Provide soil erosion measures on the site as it is being developed.
  - (3) Provide an adequately sized culverts with end sections or headwall treatment.
  - (4) Finish grade and seed the area immediately upon completion of the private drive base.
  - (5) Provide a hard surface from the edge of the existing pavement at least 30 feet toward the developed site.
  - (6) No private drive should exceed a slope greater than 3 percent from the edge of the pavement to a point 30 into the property being developed.
  - (7) Maximum grade within the development site shall be 12 percent.

NOTE: All depths are compacted thicknesses.

#### **A154-107. Driveway Culverts**

- A. Shall be provided along existing road frontage lots to properly convey roadside drainage. The culverts shall be installed to the proper grade to allow the natural flow of water. All culverts installed shall be subject to the review of the Superintendent of Highways having jurisdiction on the road.
- B. Minimum of 12 inch diameter unless they are a part of a larger drainage course which may require larger diameter pipes.
- C. The culverts shall extend a minimum of 5 feet beyond the edge of the access driveway and be provided with end sections or headwalls. The slope from the driveway to the culvert end section shall be graded and seeded to maintain the slope stability.
- D. Elevations to be set by U.S. C. & G. S. datum.
- E. Culverts shall have a minimum of 12 inches of cover.

#### **A154-108. Sidewalk**

Where required by the Planning Board, sidewalks shall be concrete per Appendix U.

**A154-109. Monuments**

Monuments per Appendix L shall be located at:

- A. P.C. and P.T. of all horizontal curves along one side of the right-of-way.
- B. Maximum of 1,000 feet along one side of right-of-way line.

**A154-110. Reserved Land for Future Use**

Where land areas are reserved for future connections to adjacent parcels, all improvements, i.e., sanitary, storm, water, roads, will be constructed to the common property line.

**A154-111. Reserved**

**A154-112. Reserved**

**A154-113. Reserved**

**A154-114. Reserved**

**A154-115. Reserved**

**A154-116. Reserved**

**A154-117. Reserved**

**A154-118. Reserved**

**A154-119. Reserved**

## ARTICLE IX

### MATERIAL SPECIFICATIONS

#### **A154-120. General Information**

The materials intended to establish the degree of excellence are herein included and deemed to be of satisfactory quality for installation within the Town. When new materials may be made available, their use may be permitted in limited test sections with the restriction that should these materials prove unsatisfactory through the test period as established by the Town, they shall be removed and replaced with those herein called for at no expense to the Town.

#### **A154-121. Sanitary Sewers**

##### **A. Polyvinyl Chloride (PVC) Pipe for Gravity Sewer**

Shall meet the requirements of ASTM D-3034-06 for Sewer Pipe and Fittings, minimum wall thickness SDR-35. The joints shall be bell and spigot conforming to ASTM D-3212-07 with elastomeric gasket conforming to ASTM F-477-07. All pipe and fittings shall be made from PVC components as defined and described in ASTM D-1784-07.

##### **B. Polyvinyl Chloride (PVC) Pipe for Sewage Force Mains**

Shall meet the requirements of ASTM D-2241-05 for PVC plastic pipe. Pipe and fittings shall be 160 psi, minimum SDR-26 extruded from clean, virgin, resin compound conforming to ASTM D-1784-07. Bell and spigot joints are required with elastomeric gaskets conforming to ASTM D-3139-98.

##### **C. Ductile Iron (DIP) Pipe for Sewage Force Mains**

Shall conform to AWWA C-151/A21.51-02, minimum allowable thickness shall be Class 51. Rubber gasket push on joints shall be used in accordance to AWWA C-111/A21.11-07. All ductile iron pipe shall be cement-mortar lined in accordance with AWWA C-104/A21.4-03.

##### **D. Sewer Connections for Gravity Sewer**

Sewer connections on new sewer main installations shall be made with wye fabricated or injection molded fittings. The minimum strength classifications of these fittings shall be equal to that of the pipe and the fitting shall be compatible with the pipe.

Connections to an existing sewer shall be made with GENCO strap-on saddles with double stainless steel straps and stainless steel or bronze bolts for sewers up to 14 inches in diameter and GENCO bolt-on saddles for sewers greater than 14 inches in diameter.

Connections to mains must be separated by a minimum of 10 feet.

E. Sewer Lateral Pipe for Gravity Sewer

1. Cast iron sewer pipe shall be extra heavy class with rubber gasket joints and maximum lengths equal to 5'-0" per ASTM A-74.
2. PVC pipe shall be of a minimum wall thickness SDR 35 with elastomeric gasket joints, supplied in standard lengths and conform to ASTM D-3034 (#10 gauge solid copper tracer wire insulated with high density polyethylene per ASTM D-1248 from right-of-way or easement line to the structure shall be included).

F. Sewer Lateral Pipe for Pressure Sewer

1. Polyvinyl chloride (PVC) pipe and fittings shall meet the same requirements as PVC force mains.

**A154-122. Storm Drain**

A. Reinforced Concrete Pipe

Shall be supplied in conformance with ASTM C-76 Class 11. Joints shall be of the bell and spigot type with compression type joint ASTM C-443.

B. Polyvinyl Chloride (PVC) Pipe

Shall meet the requirements of ASTM D-3034 or ASTM F-679, minimum wall thickness SDR 35 with elastomeric gasket joint, ASTM D-3212 or ASTM F-794 for ribbed gravity pipe. PVC pipe shall not be used as driveway culverts.

C. Corrugated Steel Pipe

All pipe shall be coated inside and outside and have joints made with connecting bands. Thickness gauge will be dependent on the load conditions, except that 16 gauge shall be the minimum allowable thickness.

D. Corrugated Polyethylene Tubing (HDPE)

Pipe shall be smooth lined (smooth bore) and shall conform to the requirements of ASTM F-405 or ASTM F-667. HDPE shall not be used as driveway culverts.

E. Storm Laterals

1. Corrugated steel pipe shall be coated inside and outside and have joints with connecting bands. Thickness gauge will be dependent on the load conditions, except that 16 gauge shall be the minimum allowable thickness.
2. PVC conforming to ASTM D-3034, minimum 4 inches in diameter with fabricated tees and wyes.
3. HDPE shall conform to ASTM F-405 with fabricated tees and wyes.

F. Catch Basin Leads

Shall be a minimum of 12 inches in diameter.

1. Reinforced Concrete Pipe.
2. Polyvinyl Chloride Pipe.
3. Corrugated Steel Pipe.
4. High Density Polyethylene Pipe.

**A154-123. Manholes and Manhole Ladders**

A. Manholes

Precast reinforced concrete sections shall be manufactured in accordance with ASTM Specification C-478. Riser sections shall have tongue and groove ends and super "O" joints and gaskets conforming to ASTM C-443. Manhole bases may be pre-formed or poured in the field. Roof slabs shall be precast structural concrete, reinforced for H-20 loading and 30 percent impact loading. A 24 inch diameter hole shall be eccentrically located in the roof slab. In place of preformed openings in base sections, flexible manhole sleeves may be cast directly into the base walls may be used with compatible pipe material.

All manholes shall be sealed inside and outside completely with two coats of heavy-duty water repellent protective coating which complies with ASTM Specification D-450-07, Type B.

Manholes constructed of other materials shall be considered for approval following a review of said manhole construction. In specifying these manholes, the Developer's Engineer shall submit adequate design data and/or shop drawings to substantiate the materials.

**B. Manhole Ladders and Steps**

Manhole ladders or steps shall be provided in all sanitary and storm manholes and shall be constructed of one of the following materials.

1. Non-corrodible, aluminum magnesium alloy ladders, with intermediate supports at 5 foot intervals
2. Forged aluminum with drop front design and grooved tread surface.
3. Cast iron with an asphalt coating as manufactured by Neenah R-1981-J or Syracuse Castings 2589 2252.

Steps shall be cast into the walls of riser sections and shall be aligned in each section to form a continuous ladder with rugs equally-spaced vertically in the assembled manhole at a distance of 12 inches apart.

**A154-124. Frames and Covers****A. Sanitary Manhole Frames and Covers**

Shall be Neenah R-1720-A or Syracuse Castings 1030 or other approved equal. The word "Sanitary" shall be cast into the top of the cover. The inside diameter for clearance shall be a minimum of 24 inches. Manhole frames and covers placed in pavement or steep sloped areas shall be the self leveling type as manufactured by Syracuse Castings.

Watertight sanitary manhole frames and covers shall be Neenah R-1755-F2 or Syracuse Castings 6542.

**B. Sanitary Cleanout Covers**

Cast iron per Neenah R-1974-A frame and cover marked "SEWER", or equal.

**C. Storm Manhole Frames and Covers**

Shall be Neenah R-1735 or Syracuse Castings 1030 with a vented cover or other approved equal. The inside diameter for clearance shall be a minimum of 24 inches.

**D. Catch Basin Frames and Grates**

Shall be rectangular, galvanized (ASTM A-123) and sized to fit gutter inlets or field inlets. The gutter grates shall be NYSDOT size no. 1 to fit the catch basin inside dimensions of 18" x 24". The minimum field inlet shall be NYSDOT size no. 9 to fit a field inlet of 24" x 24" inside dimension.

Catch basin manholes shall be set to allow a NYSDOT size no. 1 grate to be installed.

Frames and grates shall be as specified in NYSDOT Standard Sheet drawing 655-6 and Section 655 (or the latest applicable revision) of the NYSDOT Standard Specification Manual. All grates shall be bolted to the frames.

#### **A154-125. Water Mains**

##### **A. Ductile Iron (DIP) Pipe**

Shall conform to AWWA C151/A21.51-02, minimum allowable thickness shall be Class 51. Pipe shall be cement lined in accordance with AWWA C104/A21.4-03 and shall have rubber gasket push-on joint in accordance with AWWA C111/A21.11-07.

DIP installation shall include:

The Developer or his Engineer must submit certified results of the Ductile Iron Pipe Research Association's (DIPRA) Ten Point Soil Test prior to commencing construction. Testing shall be conducted by a qualified soil-testing laboratory, and the results shall be submitted to the Town on the report form included in Appendix II.

The DIPRA Ten Point soil test shall be taken along the route of the proposed water main at a maximum spacing of 500 feet with a minimum of one test in developments less than 500 feet long, in all wetlands, fill areas and railroad beds (existing or abandoned) that the water main route crosses or occupies, at the elevation of the top of the proposed water main, and referenced on the report by station number.

The Developer's Engineer shall certify that the samples tested are from the site referenced on the form and were taken along the pipe route at the appropriate depth. The certification may be done on the form or in a separate letter from the Developer's Engineer.

Upon submission of a satisfactory soil testing report, the Town Engineer will make the determination as to whether or not a main will require polyethylene encasement, and the limits of such encasement. Water mains installed in soils with DIPRA Point Totals of 10 or greater shall be wrapped in polyethylene. Polyethylene encasement shall be installed in accordance with the Town specifications. The Developer may choose to wrap the entire main in polyethylene in lieu of soils testing as per Appendix GG. In this case, a note stating this shall be placed on the plans.

1. Polyethylene wrap specifications:
  - a. Polyethylene tube: ANSI/AWWA C105/A21.5-05.
  - b. Thickness: 8 mils.

- c. Pigmentation: natural when exposure to ultraviolet light such as sun will be less than 48 hours. Pigmentation shall be 2.0 to 2.5% well-dispersed carbon black with stabilizers when exposure to ultraviolet light will be 2 to 10 days.
- d. Polyethylene: virgin polyethylene produced from Dupont Alathon or USI Petrothene resins.
- e. Method of manufacture: extruded tube form.
- f. Closure Tape: Polyken #900 or Scotchrap #50, 2" wide, plastic backed, adhesive tape.

#### B. Polyvinyl Chloride (PVC) Pipe

Shall conform to AWWA C-900 for pipe sizes 4-inch through 12-inch and AWWA C-905 for pipe sizes 14-inch through 48-inch. Minimum class shall be 150 (DR 18) with elastomeric gasket joints, integral bell and rubber rings locked in place.

PVC pipe installation shall include either:

1. Six inch wide metallic tape placed over the center of the pipe on top of the 12 inch safety cover as manufactured by Instock Now, Inc.
2. Solid copper wire (#8 gauge minimum) insulated with high density polyethylene per ASTM D-1248 attached to the pipe at 5 foot intervals with plastic ties with a minimum of 150# tensile strength. Wire shall be attached to all cast fittings, hydrants and valve boxes to make a continuous traceable system.

#### C. Fittings

1. Ductile iron shall meet AWWA C110 Specifications, minimum Class 250; with mechanical or push-on joint in accordance with AWWA C111/A21.11, except for hydrant branches, which shall be mechanical joint. Pipe and fittings shall be cement lined in accordance with AWWA C104/A21.4. Bolts and nuts shall be high-strength, low alloy steel.
2. PVC shall meet specifications of AWWA C900 for sizes 4-inch through 24 and AWWA C905 for sizes 14-inch through 48-inch made from PVC Compound 12454-B (ASTM D1784) with gasket joints meeting ASTM D3139-98(2005).

#### D. Hydrants

Shall be manufactured in accordance with AWWA C-502. Hydrants shall be manufactured for 5 foot bury with break-away flange construction and 6 inch mechanical joint inlet. They shall open left and be painted yellow bodies with red bonnet and nozzle covers per Federal STD 595A. Hydrants shall be three way with

2-1/2 inch hose nozzles and one 4-1/2 inch pumper connection with National Standard threads. Main valve openings shall be 5-1/4 inch with the total unit consisting of the tee, guard valve, hydrant and adaptors.

The Mueller Centurion A-423 and U.S. Pipe Metropolitan 250 are approved hydrants in the Town.

E. Flushing Hydrant - Blowoff

Shall be 2 inch self draining, non-freezing with 5 foot bury, with all bronze parts designed to connect to a 2 inch main line outlet as manufactured by GIL Industries, Inc., Model Slim Line 2.

F. Gate Valves

Gate valves shall conform to AWWA-C509, Resilient-seated wedge type epoxy coated gate valves with a non-rising stem. They shall be of the 350 psi test class with a minimum working pressure of 250 psi. Valves shall be open left manufactured by U.S. Pipe, Mueller or an approved equal.

The valve ends shall depend on the type of pipe used and the particular use intended.

Valves shall be furnished with a screw type valve box, 5-1/4 inch inside diameter with covers marked with "WATER".

If the valves are buried deep they must have an extension stem that can be reached with a 6 foot valve box key.

G. Anchoring Fittings

Anchoring pipe in accordance with ANSI-A21.4 shall be employed to anchor all hydrants to gate valves. The anchoring pipe shall be coal tar coated, cement lined and provided with a rotating gland. There should be a minimum 18 inches between hydrant and gate valve. These anchoring pipes shall be as manufactured by Clow, Tyler or approved equal.

H. Restrainers

Shall be manufactured of high strength ductile iron pipe and incorporate a full 360 degree support around the pipe. They shall be as manufactured by Uni-Flange series 1300, 1350, 1360 depending on the specific use.

I. Water Service Material (3/4 inch)

1. Corporations stop shall be Mueller H-15008 compression type.
2. Curb stops shall be Mueller H-15209 Mark 11 compression type.

3. Curb boxes shall be Mueller H-10314, 5 feet long.
4. Copper pipe shall be Type "K" ASTM B88.
5. Plastic pipe shall be copper tube size (CTS) polyethylene ASTM D-2737, PE3408 per AWWA C-901 (only used from curb box to unit and a #10 gauge solid copper tracer wire insulated with high density polyethylene per ASTM D-1248 shall be included from the curb box to the structure). When polyethylene pipe is used for water service piping, the plain end of all pipe connections shall have an internal 304 stainless steel stiffener. Stiffener shall have a permanent outside diameter, which fits into the pipe inside diameter to reinforce and maintain concentricity of the pipe.

All services tapped into PVC mains shall utilize two bolt bronze saddles with triple "O" ring seals as manufactured by Ford or Mueller. All taps shall be spaced a minimum of 10 feet apart on the main.

J. Meter Pits for Individual Services

Shall be as manufactured by Ford or Mueller. Covers shall be double lid style with a 1-3/4" hole for radio read systems.

**A154-126. Concrete Gutters and Sidewalks**

A. Concrete

1. Shall be a minimum of 4000 psi (28 day strength) Class A concrete conforming to NYSDOT Specification 609.
2. Air entraining admixture conforming to ASTM Specification C-260.
3. Bituminous expansion material shall conform to NYSDOT Specification 705-07.
4. Curing and sealing compound - conforming to ASTM C-309, Type 1, Class B for curing and sealing.

**A154-127. Road Materials**

A. Sub-Base and Base Courses

1. Crusher run stone shall conform to NYSDOT Specification Section 304-2.02, Type 2.
2. Aggregate shall conform to NYSDOT Gradation Table 703-4, size as specified.
3. NYSDOT Specification 304-2.02 Type 4 gravel may be substituted for No. 2 crushed stone (NYSDOT Gradation Table 703-4) if acceptable subsoil conditions exist with the approval of the Superintendent of Highways and Town Engineer. The Design Engineer shall submit data justifying the use of gravel over specific subsoil conditions.

B. Bituminous Pavement

1. Binder course shall conform to NYSDOT Specification Section 403, Type 3 (Dense Binder).
2. Top course shall conform to NYSDOT Specification Section 403, Type 7F2.

C. Tack Coat

Shall conform to NYSDOT Specification Section 407. The grade shall depend on the specific use intended.

D. Premoulded Bituminous Joint Filler

Shall conform to NYSDOT Specification Section 705-07.

E. Underdrains

Shall be 4 inch perforated SDR-35 PVC per NYSDOT 706-15 or High Density Polyethylene Tubing per AASHTO M-252.

**A154-128. Monuments**

Monuments shall be constructed as shown in Appendix L.

**A154-129. Equivalents**

The mention of apparatus, articles or materials by name and such specific description of same as is made herein is intended to convey to the Developer and their Contractor an understanding of the degree of excellence required. The Town shall be the sole judge of the qualifications of the offerings and will determine all questions regarding the conformance of any offer outside the specifications.

For any project it will be assumed that the Developer will furnish the exact materials specified on the plans and specifications unless the Developer files with the Town of Ontario prior to any use in the development, the names and complete description of each article which he proposes to substitute for approval by the Town Board.

Any costs incurred by the Town or its representatives associated with the verification of substitute equipment and materials will be the responsibility of the Developer.

## ARTICLE X

### INSTALLATION OF IMPROVEMENTS

#### A154-130. General Information

##### A. Pre-Construction Meeting

A pre-construction meeting shall be requested by the Developer and scheduled through the Town Building Department prior to the start of construction of a development. The Developer, his Contractor and Design Engineer shall meet with all private utility representatives; Town Department Heads and project observers to discuss the overall project, its impacts and schedules. A schedule of construction shall be presented in writing at this meeting by the site contractor as well as copies of the fully approved drawings.

Prior to scheduling a preconstruction meeting, the Developer shall obtain a checklist from the Town Building Department, identifying all items that the Developer must bring to the meeting.

##### B. Meaning of Drawings

The Contractor shall abide by and comply with the true intent and meaning of all drawings and of the specifications taken as a whole. If the Contractor believes that the construction indicated on the project drawings will not, when executed, produce safe and substantial results or if it appears that there is any discrepancy in the drawings, it is his duty to immediately notify the Developer's Engineer, in writing, and to thereafter proceed only upon written order of the Town.

##### C. Protection of Property and Work

1. The Contractor shall conduct his operations to prevent damage to trees, garden plots, shrubbery, pipe lines, conduits, buildings and other structures. The Contractor shall use all necessary precautions to protect the work and adjacent structures of all kinds during construction and shall so conduct his operations that at no time shall the work or such structures be endangered.
2. Responsibility and damage - the Developer shall be responsible for all parts of his work, temporary or permanent, until the project is complete and shall thoroughly protect all work, finished or unfinished, against damage from any cause as all work is at the Contractor's risk until the same is accepted by the Developer. The use of part or all of the work by the Town as provided for in these specifications shall not relieve the Developer of this responsibility. The Contractor shall be responsible for damage to life and property due to his operations and shall provide all necessary guards, rails, night lights, etc.

D. Construction Schedule

The Developer shall provide a construction schedule showing the order in which work will be completed at the pre-construction meeting. The schedule shall be reviewed at the pre-construction meeting and revised if necessary. No work will begin until a schedule acceptable to the Town is on file with the Town.

E. Permits

The Developer shall secure all necessary permits from the Town including Highway, Water Utilities, and Watershed Departments and/or any other agency who may have authority over any work prior to the start of construction.

F. Existing Utilities or Structures

Before construction begins near any existing utility or structure, the Contractor shall notify the appropriate Owner of his intention and their instructions as to the protection of their property must be followed. Before commencing work, the Contractor shall determine the exact location of any structure or underground utility in order that the Contractor's project will not damage or disrupt these facilities.

The Contractor shall take necessary precautions to prevent entry of mud, debris, etc. into existing utilities or onto streets near the site.

All existing underground facilities shall be checked for damage before backfilling. In the event a facility is damaged, the Owner of that facility shall be notified by the Contractor so as to insure an acceptable repair and/or replacement.

G. Facilities for Observation

The Contractor shall furnish all reasonable facilities and aid to the construction observers for safe and convenient footways, scaffolds, ladders, etc., that may be needed for the examination and review of any part of the work. The Town of Ontario may stop work when the Contractor has no responsible agent on the project or if the Town feels that the Contractor is not performing the work in the best interests of the municipality. Disorderly, intemperate and incompetent persons shall not be allowed on the project. The employees who neglect or refuse to follow the construction observer's instructions shall be permanently removed from the project by the Contractor. Failure to conform to these controls may warrant refusal of the municipality to consider the development for dedication.

#### H. Layout

It shall be the responsibility of the Developer to have the work carefully laid out by qualified surveying or engineering personnel in a manner that will assure accurate completion of the work.

#### I. Defective Work

The review of the work shall not relieve the Developer of any of their obligations to comply with the specifications. Any defective work shall be made good and any unsuitable materials which have been previously overlooked by the Town or its representatives shall be removed and replaced. If the work or any part thereof shall be found defective at any time before the final acceptance of the project, the Developer shall make good such defect in a manner satisfactory to the Town.

### **A154-131. Grading**

Completion of grading per the grading plan to within 1 foot of design grade shall precede any trench excavation. Such grading shall include house "pads", removal of enough material to form "box" for road base, surface drainage channels, required temporary situation basins, etc.

Construction brush and debris will not be buried on the site. Wood materials shall be cut, chipped, mulched or removed from the site and deposited in a permitted construction/demolition landfill.

### **A154-132. Trench Excavation**

#### A. Excavation

Under this term will be included all excavation in trenches and pits, together with all backfilling and embankments that may be needed for the laying of the utilities and appurtenances or that may be necessary for the laying, changing and construction of any water, sewers, conduits, culverts, drainage ditches or Water courses, or for any other incidental work that may be required or ordered by the Town or its representative.

It is the Contractor's sole responsibility to make sure that all work shall be conducted in strict accordance with the Federal Safety Standards of OSHA.

#### B. Width of Trenches

The trenches shall be of such width as may be required by the Design Engineer to insure proper laying and handling of the pipes and appurtenances, proper tamping and backfilling operations. In all cases, trenches should be kept as narrow as

possible. The Contractor shall be responsible to provide sheeting/bracing or other requirements to insure the safety of his workmen in conjunction with the proper installation of the pipe.

C. Depth of Trenches

In general, the trenches shall be excavated to such a depth to properly install utilities to the grade established in the field by the Design Engineer. The depth of the excavation shall allow the proper bedding material to be placed under the pipe.

Any extra excavated depth by the Contractor shall be filled with compacted crushed stone to the proper grade required.

Utilities shall be designed to prevent damage from frost penetration or surface forces. Water mains and services shall be generally buried with 4'-6" of cover infields but at least 6'-0" when they cross existing or proposed roads.

D. Tunneling

Work shall generally be conducted in open trenches or excavations, with proper protection. Tunneling shall be done only in areas specifically called for by the design plans with design details approved by the Town.

E. Blasting

Whenever necessary to resort to blasting for making the excavations, the trench shall be covered in a form to prevent fragments of rock from being thrown out. Only experienced, licensed workmen shall be employed in the handling and uses of explosives. All blasting operations shall be conducted in strict accordance with existing ordinances, regulations and specifications relative to rock blasting, storage and use of explosives.

F. Bailing and Draining

The Contractor shall furnish a sufficient pumping plant and shall provide and maintain, at his own expense, satisfactory drainage whenever needed in the trench and other excavations during the progress of the work and up to final inspection. No structures shall be laid in water. Water shall not be allowed to flow or rise upon any concrete or other masonry or flow on adjacent lands. All water pumped or bailed from the trench or other excavation shall be conveyed in a proper manner to a suitable point of discharge and may require temporary siltation traps.

G. Bottom of Trench

The bottom of the trench shall be carefully graded and formed according to the directions of the Design Engineer, before any structures are laid thereon. When other

instructions or design are not indicated, all trenches shall be excavated in a straight line. In hard pan, boulder formations or rock, the excavation shall extend at least 6 inches below the bottom of the pipe and a carefully compacted bed of crushed stone screenings placed in the bottom of the trench up to the level of the spring line of the pipe. See Detail AA for specific material bedding requirements.

It is the intention of this specification to achieve not less than Class "B" pipe bedding.

#### H. Suitable Bedding and Safety Backfill Material

It shall be the responsibility of the Contractor to generally utilize material excavated from the trench in order to provide the required backfill to meet the listed specifications unless crossing an existing or proposed road. Should the nature of the soil be such that the Contractor is unable to meet the above requirements by selecting, with reasonable care, from the excavated material, he shall provide the following materials, if so ordered by the Town or its representative:

- Sand, stone or concrete cradle when the trench bottom does not provide sufficient bearing capacity or when specification requires specific bedding for certain utilities.
- Sand encasement shall be ordered by the Town when the trench is excavated in rock, boulders, or hard pan and none of the material above this level is suitable for backfilling the pipe.

### A154-133. Pipe Installation

#### A. Line and Grade

All pipes and appurtenances of whatever character shall, when set, conform to the alignments and grades required by the Design Engineer. All of the required special castings and other fixtures that are indicated upon the plans, or that may be required during the progress of the work, shall be installed in their proper positions. Minimum grades for gravity sewer shall be:

<b>Nominal Pipe Size</b>	<b>Minimum slope in Feet per 100 Feet</b>
4-inch	2.00
6-inch	1.00
8-inch	0.40
10-inch	0.28
12-inch	0.22
14-inch	0.17
15-inch	0.15
16-inch	0.14
18-inch	0.12

21-inch	0.10
24-inch	0.08
27-inch	0.067
30-inch	0.058
33-inch	0.052
36-inch	0.046
39-inch	0.041
42-inch	0.037

#### B. Laying Pipe and Castings

The Contractor shall use suitable tools and appliances for the safe and convenient handling and laying of all utilities and appurtenances. All pipes and castings shall be carefully examined by the Contractor for defects and no pipe or casting which is known to be defective shall be laid. If defective pipe or castings should be discovered after being laid, these shall be removed and replaced with sound pipe or castings. The pipes shall be cleaned before they are laid and shall be kept clean until they are accepted with the completed work. All ends of the pipes shall be watertight capped to exclude water and debris from entering the pipes.

Sewers shall be built to the lines and grades between manholes as shown on the project drawings. The Contractor shall provide sufficient grade control to properly install the pipe and appurtenances. Sewer pipe shall be laid upgrade with spigots placed in the direction of flow. All pipes shall be fitted together to form a smooth, even invert. Pipes disturbed after laying shall be removed and re-laid.

After the pipe has been placed and adjusted to line and grade, the bed shall be trimmed to support the pipe for its entire length. Material used for bedding shall be thoroughly compacted under the bottom and the haunches of the pipe. The trench shall then be backfilled to above the top of the pipe and carefully compacted to hold the pipe in position.

#### C. Cutting Pipe

Whenever it may be necessary to cut any straight pipe it shall be completed by skilled workmen with proper tools, in such manner as will not cause any cracking of the pipe.

### **A154-134. Manhole Construction**

#### A. General

Manholes shall be constructed of the size, type and at the locations shown on the Plans, or as designated by the Design Engineer in the field.

The manhole bed shall be excavated level and include a minimum of 6 inches of crushed stone.

Manhole risers and flat slab covers shall be precast reinforced units. Manhole bases may be precast "Monobase" or field poured with 3,500 concrete psi.

Eccentric cone sections may be used on the top of manhole riser sections if the inside height dimension from the bench wall to the bottom of the eccentric section exceeds 8 feet.

Interior and exterior concrete surfaces shall be sealed by the supplier and touched up or recoated by the Contractor with approved bitumastic coal tar sealer.

Manholes shall be cored before installation of any pipe into the manhole. Pipe shall be sawcut after installation and not "chipped off".

All openings and joints in the manhole sections shall be completely filled once the sections are set, with non-shrink grout\* and after initial set, waterproofed on the inside and outside with a coal tar coating.

\*NOTE: When PVC is used all openings around pipes shall be completely filled with 100 percent epoxy non-shrink grout.

Before each barrel of the manhole is set, the joint shall be cleaned and the barrel correctly aligned, so that the steps form a continuous ladder. The first step shall be no more than 30 inches below finished grade and continue to the top of the bench wall.

It is the intent of these specifications to construct first-class manholes which will exclude all ground water, by means of carefully constructed foundations, tight barrel joints and the coating of the inside and outside of the manholes.

#### B. Frames and Covers

The frames shall be firmly set in a bed of not less than one full inch of cement mortar and adjusted to the finished grade. The manhole frame may be set directly on the concrete roof slab, providing the top will be at the proper grade; otherwise, precast concrete spacers or bricks shall be mortared to the roof slab to raise the frame to the proper grade. A maximum of three courses of spacers or bricks shall be used to adjust the frames and grates to the proper grade.

#### C. Inverts

Inverts shall be constructed in all manholes. The inverts may be constructed of the mainline pipe or brick (Grade SS) and shall be the depth of the pipe. When PVC

material is used, all brick, concrete or other masonry material that interfaces with the PVC shall be adhered to the PVC with 100 percent epoxy non-shrink grout.

**D. Drop Manholes**

Wherever the invert of the entering sewer is more than 2 feet above the invert of the outlet sewer, it shall be connected with a vertical outside drop with a clean-out pipe half bricked up. When drops are placed, the entire excavation around the drop pipe shall be filled with 3,000 psi concrete extending not less than 2 feet along the main sewer.

The clean-out opening in the barrel of the manhole shall be cut in after the manhole wall pipe is in place and the joint between the clean-out pipe and the manhole wall shall be thoroughly sealed with cement mortar on the inside and bituminous joint material on the outside.

**E. Shallow Sewer Manholes**

Where any manhole is less than 4 feet from invert to bottom of roof slab, the Contractor is to provide a manhole as shown in Appendix S. The roof slab shall be precast structural concrete reinforced to withstand a concentrated H-20 load plus 30 percent impact. The slab shall be formed to fit into the ends of the vertical pipe and shall have a full bearing for its entire circumference.

**F. Sealing, of Manholes**

All manholes shall be sealed with two coats of sealer as applied by the manhole manufacturer to the entire interior and exterior surfaces in minimum dry thickness of 11 mils per coat. Application shall be in accordance with the coating manufacturer's recommendations and shall be certified thereto by the suppliers. Before placement in the field, abraded areas shall be touched up with two coats by the Contractor. Covers and other exposed surfaces shall also be coated in the field. Improper materials or mil thickness shall be cause for rejection of manhole sections.

**A154-135. Catch Basins**

Catch basis shall be constructed as shown in the Appendix N or as shown on the plans for-special conditions. Catch basins shall be constructed of precast concrete structures.

All catch basins shall be coated inside and outside with two coats of heavy duty coal tar sealer.

**A154-136. Sewer Laterals and Water Services**

Sewer laterals and water services shall be installed to the right-of-way (or easement) line for all lots. Each service shall be located with a stake color coded in conformance with Industrial Code 53 to denote the type of service they represent.

**A154-137. Hydrants and Valves**

A hydrant unit shall consist of a hydrant, guard valve, mechanical joint tee and anchor pipes.

Before hydrants or valves are installed they shall be checked to determine if they are in the proper working order.

Hydrants shall be set plumb with the break flange 3 inches above the finished grade. Hydrant weeps shall be surrounded by at least 10 cubic feet of crushed stone or gravel. If the ground water is higher than the drainage plug, the plug shall be closed and the crushed stone eliminated.

Valve boxes shall be placed plumb over the operating nut of the valve and adjusted to the final grade.

All hydrants shall be painted yellow and all valve box covers shall be painted blue.

**A154-138. Backfilling and Finishing**

A. General

Trenches shall be immediately backfilled following the installation of utilities unless specifically changed in writing by the Design Engineer and approved by the Town. The roadways and sidewalks shall be left unobstructed, with their surface in a safe passable condition. The trench shall be tamped sufficiently to prevent settlement of or damage to existing or newly installed structures.

B. Backfill Immediately After Approval

Only select earth material shall be deposited around the utility and appurtenances covering them by hand for a depth of at least 12 inches above the pipe. This earth shall be thoroughly tamped as it is being placed so as to fill the lower portion of the trench thoroughly to give utilities a Class B bed for their entire length.

C. Restrictions as to Materials

No rock or frozen materials shall be placed in trenches within existing or proposed streets. Such material may be used in fields where immediate compaction is not necessary and at least 2 feet of select fill has been placed over the pipe.

D. Backfilling, Pavement Crossings

All utility lines or laterals that cross existing or proposed streets shall be backfilled with crusher run stone conforming to NYSDOT Specification Section 304-2.02 Gradation Type 2. At the discretion of the Superintendent of Highways, native trench material may be used for backfill in lieu of crusher-run.

Material shall be compacted in lifts of 1 foot maximum to the elevation of the road subgrade. From there the backfill shall conform to the material specifications for individual road sections.

E. **Cleaning Up**

As the work progresses or as directed by the Design Engineer, all rubbish or refuse, unused materials and tools shall be removed at once from along and near the trench line construction.

Rough clean up along the route shall immediately follow installation procedures. Large spoil banks will not be permitted in developed areas.

Final clean up and landscaping shall proceed immediately after the installation, testing and approval of the facility.

Erosion control measures must be maintained throughout the construction process and removed only upon the approval of the Town.

In all cases, the project site shall be restored to a condition equal to or better than that which previously existed.

**A154-139. Compaction**

Compaction densities specified herein shall be the percentage of the maximum density obtainable at optimum moisture content as determined and controlled, in accordance with AASHTO Standard T-10, Rodded Unit Weight. Field density tests shall be made in accordance with AASHTO Standard T-238.

Each layer of backfill shall be moistened or dried as required and shall be compacted to the following densities, unless otherwise specified.

A. **Select Fill**

Under all existing or proposed roads, driveways, parking areas      95%

All other areas      85%

B. **Methods and Equipment**

Methods and equipment proposed for compaction shall be subject to the approval of the Town. Compaction by rolling or operating heavy equipment over fill areas shall be conducted in a manner by which injury to existing utilities and structures shall be avoided. Any pipe or structure damaged thereby shall be replaced or repaired as directed by the Town at the expense of the Developer.

C. Testing

1. Field density tests may be ordered by the Town as necessary and will be paid for by the Developer.
2. The Developer shall furnish all necessary samples for laboratory tests and shall provide assistance and cooperation during field tests. The Developer shall plan his operations to allow adequate time for laboratory tests and to permit taking of field density tests during compaction.

Any areas found to be below required compaction densities shall be removed and replaced with new material at the Developer's expense. The methods of operation and/or the backfill materials shall be changed to meet required compactions.

Inadequate compaction shall be cause for the Town to issue a stop work order on a project.

**A154-140. Testing of Underground Utilities**

A. General Information

Upon the satisfactory completion of the installation of the underground utilities, the Contractor shall proceed to test each of the installed facilities as here in specified. All utilities shall be pretested by the contractor before the Town is to witness the final tests. No test will be accepted unless witnessed by the Town. Records and date of these tests shall be submitted to the municipality as part of the record drawing information.

Water or test required of the Developer during any procedures will be paid for by the Developer. All hydrants for water supply or testing use shall be operated only by the Town Water Utilities Department.

B. Sanitary Gravity Sewers

1. All sewers shall be flushed clean by the Contractor and the lines shall be lamped with the Town.

2. All flexible pipe shall be tested for deflection. The deflection test shall be conducted after the final backfill has been in place at least 30 calendar days to permit stabilization of the soil-pipe system.
  - a. No pipe shall exceed a deflection of 5 percent. If deflection exceeds 5 percent, replacement of the defective sewer will be required.
  - b. A rigid ball or mandrel having a diameter of not less than 95 percent of the base inside diameter of the specified pipe shall be used for the deflection test. The test shall be performed without mechanical pulling devices.
3. Leakage test shall also be conducted on the sewer. This test shall be by low pressure air testing (see Appendix V). Under specific circumstances the Town may require the contractor to infiltrate a sewer system depending on ground water levels.
4. Manholes

Each manhole shall be subjected to testing as follows:

Vacuum Testing - Each manhole shall be subjected to a vacuum of 10 inches of Hg for one minute with an allowable loss of 1 inch of Hg.

C. Sanitary Pressure Sewer

Pressure tests shall be made only after the completion of backfilling operations and at least 36 hours after the concrete thrust blocks have been cast.

The duration of pressure tests shall be one hour, unless otherwise directed by the Town. Test pressure shall be 60 psi minimum or a pressure of 2-1/2 times the maximum system operating pressure, whichever is greater.

The pipe line shall be slowly filled with water. The specified pressure, measured at the lowest point of elevation, shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Town.

During the filling of the pipe and before applying the specified pressure, all air shall be expelled from the pipe line by making taps at the point of highest elevation. After completion of the test, the taps shall be tightly plugged at the main.

D. Storm Drains

All storm sewers shall be flushed clean by the Contractor and the lines shall be lamped with the Town.

E. Water Mains

1. Pressure Tests

The entire system, including services to the curb stops, shall be pressure tested at a minimum 1.5 times the working pressure or 150 psi whichever is greater for a period of two hours. The test pressure shall not vary by more than 5+/- psi during the test period. No high pressure test will be allowed when temperature is less than 32 degrees, unless a heated shelter is provided for test equipment. A leakage test at operating line pressure shall be conducted for 24 hours in addition to the pressure test. These tests shall be performed in accordance with AWWA C600. The pressures at the point of testing shall be related to the highest elevation of the main. Test requirements are listed in the Appendix W.

2. Disinfection

Upon completion of the pressure testing the main shall be disinfected in accordance with AWWA C651 as applicable.

3. Samples

After flushing of the newly disinfected main, the Town of Ontario Water Utilities Department shall obtain samples of water and submit them to a laboratory approved by the New York State Department of Health. Upon the receipt of a satisfactory laboratory report, this information together with the Town Engineer's Certificate of Construction shall be submitted to the New York State Department of Health for approval. Upon receipt of the Approval of Completed Work from the Health Department, the water system shall be considered complete and may be accepted for service by the Town.

F. Defective Areas

In any areas where satisfactory results of applied tests cannot be obtained, the defective portion of the system shall be located and replaced with new material.

That portion of the system shall then be retested until satisfactory results are obtained. Use of repair clamps will not be permitted by the Town.

**A154-141. Roads, Gutters and Sidewalks**

A. General Information

The Contractor shall not proceed to construct any surface improvements until the underground system has been installed, tested and approved by the Town.

Careful attention shall be given by the Contractor to obtain the necessary compaction densities as specified. All surface improvements shall be constructed to the shape and dimensions as shown on the typical sections or on the approved plans. A greater road width and base may be required in those areas where particular soil conditions or traffic patterns require special considerations.

#### **A154-142. Roads**

##### **A. Sub-grade**

The sub-grade shall be graded to remove all unsatisfactory or unstable material. Where material is removed below the sub-grade elevation, suitable granular material shall be used to bring the road to proper sub-grade. Where ground water or poor soil conditions exist, the Developer shall be required to install perforated underdrain and crushed stone weeps to drain the base. The entire sub-grade surface shall be thoroughly compacted according to NYSDOT Specification 203-3.12.

Fabric filter material may be required by the Town to stabilize the base or sub-base before the Contractor proceeds to install same.

No movement shall be observed in the sub-grade material as the roller passes. When the sub-grade is completed, the Contractor shall so notify the Town Superintendent of Highways and the Town Engineer for a base determination. Upon the review and written approval of the sub-grade by the Superintendent of Highways and the Town Engineer, the base material may be placed.

##### **B. Base Material**

Approved base materials shall be uniformly deposited and compacted in layers with a roller, according to NYSDOT Specifications. Rolling shall begin at the sides and continue toward the center and shall continue until there is no movement of the course ahead of the roller. After compaction, the top surface of this course shall not extend above the theoretical elevation for this course and when tested with a straight-edge 16 feet in length, any bump or depression over 1/4 inch from the theoretical grade line shall be satisfactorily eliminated.

When the base has been prepared to the satisfaction of the Superintendent of Highways, the Developer may place the binder course. If base conditions are changed as determined by the Highway Superintendent before the binder is placed, he may order the Developer to seal the stone with a rapid sealing liquid asphalt emulsion as specified in NYSDOT Section 702-10 or 702-11 with 0.5 gallons per square yard as determined by the conditions and not more than 24 hours prior to placement of binder asphalt.

If the compaction of the base is questionable by the Superintendent of Highways, it may require re-rolling or stone replacement by the Developer.

C. Bituminous Pavement

1. Binder shall be placed and compacted to a minimum finished layer thickness or 3 inches with a self-propelled asphalt spreader and rolled according to NYSDOT Specifications 402-3.07 and 402-3.04. Before applying the top course, any irregularities in the binder course shall be eliminated but at no time will "cold patch" or "winter mix" be allowed on the binder for repair work.
2. Before the surface course is placed, the binder will be cleaned and inspected by the Superintendent of Highways to determine the condition of the pavement. It may be necessary to apply a tack coat at the rate of 0.1 gallon/square yard before placing the surface.
3. Surface Course shall be placed and compacted to a minimum finished layer thickness of 1 inch with a self-propelled asphalt spreader and rolled in accordance with NYSDOT Specifications 402-3.04 and 402.3.07.

D. Temporary Road Construction

Where construction sequences preclude the specified road construction items and these requirements for Certificates of Occupancy, a temporary road consisting of the specified road section less top surface course may be constructed.

This temporary road shall be reviewed by the Superintendent of Highways and approved in writing prior to the issuance of any Certificate of Occupancy. The Town Board may accept dedication of the road if sufficient monies remain in the financial guarantee to top the road the next year.

E. Continuation of Existing Road

When construction of a road is continued from an existing road or previous developed section, the pavements shall be joined with a triangular cut of at least 15 feet from edge of the pavement to the centerline of the old pavement. The intent of this provision is to eliminate any grade difference and make a smooth riding transition.

All pavement joints shall receive a tack coat before placing the binder or top course.

F. Stabilized Shoulders

Stabilized shoulders shall be constructed to the dimensions shown on the typical sections in Appendix HA. Construction methods shall conform to NYSDOT Specification 410-3.01. The base course shall consist of a wedge of crusher run stone with a single surface treatment.

G. Underdrains

Underdrains shall be installed in conformance with NYSDOT Specification 605 and underdrain filter Type 1 per NYSDOT Specification 605-2.02. The underdrain shall be installed per Appendix M.

**A154-143. Concrete Gutters and Sidewalks**

A. Concrete Gutters (Appendix M)

1. Concrete gutters shall be a minimum of 6 inches in depth and constructed true to the shape, line and grade on a thoroughly compacted base. The gutters may be constructed using a slip form method or in-place formwork.
2. Joints between sections shall be placed every 10 feet at right angles to the flow line and must be "wet struck" 1/8 inch wide and 3/4 inch deep. Full depth bituminous expansion joints shall be placed every 50 feet and at all structures or inlets.
3. Gutters shall be broom finished before the joints are struck and the finish shall be consistent throughout the project.
4. Gutters shall be cured and sealed by spraying with an approved curing and sealing compound at the rate recommended by the manufacturer.
5. One coat of curing and sealing compound shall be applied when the work is complete and another coat after the gutters have set for 48 hours.
6. The use of burlap or coverings for curing or protection is not acceptable until after the concrete has been sprayed and set.
7. The gutters, prior to final paving, shall be flooded and checked for horizontal and vertical line and grade and finish. If any gutters are found to be constructed in an unacceptable manner by the Superintendent of Highways, they shall be removed and replaced.
8. Gutter replacements shall conform to the existing gutter regarding finish and color.

B. Concrete Sidewalks (Appendix U)

1. Minimum 4 inches in depth and constructed true to shape, line and grade. Sidewalks installed through driveways shall be 5 inches in depth and be reinforced with 6"x 6" wire mesh (10 gauge).
2. Minimum width shall be 5 feet or to match existing.

3. The base shall be thoroughly compacted crusher run stone with a thickness of 4 inches. The base material shall extend 6 inches outside each edge of the concrete sidewalk.
4. A cross slope of 1/4 inch per foot shall be maintained for positive drainage.
5. Construction joints shall be wet struck at 5 foot increments and be 3/4 inch deep. Full depth bituminous expansion joints shall be placed every 25 feet and at all castings.
6. Sidewalks shall be broom finished and have troweled edges with a corner radius of 1/4 inch. The finish shall be consistent throughout the project.
7. Two coats of approved curing and sealing compound shall be applied. One coat immediately following the finish work and the second coat 48 hours later.

C. Testing

1. The Contractor shall obtain in accordance with ASTM C-31-08 two samples from every other truck delivering concrete to the site and have the samples compression tested by an independent testing laboratory.
2. Results of these tests shall be submitted to the Superintendent of Highways.

**A154-144. Monuments (Appendix L)**

The monuments shall be installed at those locations shown on the approved final plan and as located in the field by a Licensed Land Surveyor. They shall be installed to a depth of at least 30 inches below finished grade with the top surface to be flush with finished grade. Upon the installation of the monuments the location shall be certified to the Town by a Licensed Land Surveyor as to their accuracy.

**A154-145. Final Grading**

Upon satisfactory completion of the utilities and roads, the entire area within the right-of-way shall be raked and graded to the approved plans.

The site Contractor shall be responsible to fine grade the right-of-way and maintain erosion control. In those areas where home building has started, clean up and site maintenance will then become the responsibility of the builder.

Debris and spoil banks created during the development (not home building) of the site shall be entirely removed and/or disposed of from the site. No burying of debris or material shall be allowed on approved or proposed building lots.

**A154-146. Final Cleaning**

During the time period between initial installation and testing and acceptance for dedication, debris and/or sediment may accumulate in the utility systems. The Developer shall be responsible to flush and remove this debris from the system prior to the final inspection for dedication.

**A154-147. Signs**

Street and traffic signs shall be supplied and installed by the Town of Ontario Highway Department in accordance with standards outlined in the Manual of Uniform Traffic Control Devices (State of New York, Department of Transportation, Division of Traffic and Safety).

Signs and posts shall be ordered by the Highway Department for consistency throughout the Town. Upon receipt of signs, they shall be placed in the field by the Highway Department with sign, post and installation cost the responsibility of the Developer.

**A154-148. Reserved****A154-149. Reserved**

## ARTICLE XI

### REQUIREMENTS FOR DEDICATION AND PROJECT ACCEPTANCE

#### **A154-150. General**

All construction within the right-of-way or lands to be dedicated to the Town shall be complete with final site reviews and written approvals of the construction by the following:

1. Superintendent of Water Utilities
2. Building Department
3. Superintendent of Highways
4. Town Engineer

In addition to the field review, the Town Attorney shall notify the Town in writing that all legal aspects of the project have been satisfied.

#### **A154-151. Monuments**

Monuments shall have been set in their required locations and certified to the Town.

#### **A154-152. Grading**

Final grading shall be completed within the right-of-way and all spoil removed from the site.

#### **A154-153. Street Signs**

All street and traffic signs shall be properly set in their designated locations.

#### **A154-154. Record Drawings**

Record drawings and all testing results shall be supplied to the Town Building Department and are subject to their review and approval at least 15 calendar days prior to any dedication procedures.

Record maps shall be prepared by a licensed professional. Upon approval, a reproducible (mylar and digital version) shall be submitted to the Town's Building Department. The record drawings shall contain, at a minimum, the following information:

- A. The horizontal and vertical position of new utilities to be dedicated to the Town of Ontario shall be related to the New York State Plane Coordinate system Central Zone, North American Datum, 1983 horizontally and North American Vertical Datum 1988. The coordinate positions (x,y,z) shall be clearly delineated on the

record drawings. Positions requiring coordinates shall include, but not limited to, all manholes, drainage inlets, end sections, clean outs, valves, curb boxes, hydrants, pump stations, points of utility connection to existing, and dead ends. Maximum horizontal positional error to be no greater than  $0.5' \pm$ , vertical error shall be no greater than  $0.10' \pm$ .

- B. The locations, sizes, elevations, lengths, slopes and invert and top elevations of all structures in storm and sanitary sewer systems.
- C. The elevations of any drainage swales and drainage structures to be dedicated to the Town.
- D. The locations including ties to all valves, curb boxes and hydrants to permanent structures.
- E. The locations at the property or easement line of each individual lot -
  - 1. Sanitary Lateral Cleanouts
  - 2. Storm Lateral
  - 3. Water Service Curb Box
- F. Any other significant details affecting the operation or maintenance of any system by the Town.
- G. The location of all facilities shall be tied to visible and reproducible objects.

**A154-155. Maintenance Bonds**

The submission and acceptance of the two year Maintenance Bonds for all improvements to be offered to the Town for dedication. Maintenance Bonds shall be written by a surety licensed to do business in New York State and they shall be in the amount of 10 percent of the final construction cost. Bonds shall be approved as to form and content by the Attorney for the Town prior to any dedication procedure.

**A154-156. Final Release of Funds**

The Town Board, upon signature recommendation of the Design Engineer, Owner, Town Engineer, receipt of the Attorney for the Town's written opinion of legal status, receipt of two year Maintenance Bond, record drawings accepted by the Town Departments and a final field review report, shall then authorize release of monies retained in the Letter of Credit.

**A154-157. Reserved**

**LIST OF APPENDICES**

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PIPE BEDDING DETAILS FOR WATER, SANITARY AND STORM MAINS

MRB Group, P.C.  
Date: September 2003  
Appendix: JJ

TYPE OF UTILITY:           **Water Main**

PIPE MATERIAL:           **Ductile Iron Pipe**

APPLICABLE PIPE SIZE:   4" I.D. 24"

TRENCH WIDTH (2):       Min. O.D. +12"  
                                  Max.O.D. +24"

TRENCH CONDITIONS:   **Select Earth**

**BEDDING SPECIFICATION:** The trench bottom shall be true, even and free from stones, large dirt clods and any frozen materials with any dimension greater than 1-1/2". Loose material left by the excavator on the trench bottom or soft material shoveled down from the sidewalls will be adequate for bedding the pipe barrel so that it is fully supported. Depressions shall be provided in the trench bottom for pipe bells at each joint end to allow for withdrawal of pipe slings to assure that the pipe barrels lie flat on the trench bottom.

**BACKFILL SPECIFICATION:** All backfill material shall be free from cinders, ashes, refuse, vegetable or organic material, boulders, rocks or stones, frozen soil or other material that in the opinion of the Town is unsuitable. From the top of the bedding material to 12" above the top of the pipe, the backfill shall meet the standards of gradation for select granular fill (NYSDOT Spec. 203-2.02C) and be firmly tamped. Excavated material may be used for backfill provided that such material consists of loam, clay, sand, gravel or other materials that, in the opinion of the Town, are suitable for backfilling.

If there is a deficiency of backfill material due to a rejection of a portion of the excavated material, the required amount of approved select material shall be provided.

PIPE BEDDING DETAILS FOR WATER, SANITARY AND STORM MAINS

MRB Group, P.C.  
Date: September 2003  
Appendix: JJ

TYPE OF UTILITY: **Water Main**

PIPE MATERIAL: **Ductile Iron Pipe**

APPLICABLE PIPE SIZE: 4" I.D. 24"

TRENCH WIDTH (2): Min. O.D. +12"  
Max.O.D. +24"

TRENCH CONDITIONS: **Rock or Hard Pan**

**BEDDING SPECIFICATION:** When excavation of rock or hard pan is encountered, all rock or hard pan material shall be removed to provide a minimum clearance of 6 inches below and on each side of all pipe, valves and fittings. In its place approved NYSDOT crushed stone screenings (NYSDOT gradation Table 703-4) or coarse sand shall be installed (minimum 6 inches) and tamped. From this point follow backfill instructions for Bedding in Select Earth.

**BACKFILL SPECIFICATION:** See instructions for Backfill in Select Earth.

TRENCH CONDITIONS: **Wet Earth (3)**

**BEDDING SPECIFICATION:** When the subgrade is found to be wet or unstable, such material shall be removed to a minimum of 8" or to the depth ordered by the Owner and replaced with 6" of crushed stone, #2 and #3 mixed equally as per gradation in NYSDOT Table 703-4 and 2" of crushed stone screenings (NYSDOT Gradation Table 703-4) or approved coarse sand. From this point, follow instructions for Bedding in Select Earth.

**BACKFILL SPECIFICATION:** See instructions for Backfill in Select Earth.

PIPE BEDDING DETAILS FOR WATER, SANITARY AND STORM MAINS

MRB Group, P.C.  
Date: September 2003  
Appendix: JJ

TYPE OF UTILITY:           **Water Main**

PIPE MATERIAL:           **PVC Pressure Pipe**

APPLICABLE PIPE SIZE:   4" I.D. 12"

TRENCH WIDTH (2):       Min. O.D. +12"  
                                  Max.O.D. +24"

TRENCH CONDITIONS:    **Select Earth**

**BEDDING SPECIFICATION:** The trench bottom shall be true, even and free from stones, large dirt clods or any frozen material with any dimension greater than 1/211 for PVC and 1-1/2" for RTRP. Generally, loose material left by the excavator on the trench bottom or soft material shoveled down from the sidewalls will be adequate for bedding the pipe barrel so that it is fully supported. Depressions shall be provided in the trench bottom for pipe bells at each joint and to allow for withdrawal of pipe slings. This is to assure that the pipe barrel lies flat on the trench bottom.

**BACKFILL SPECIFICATION:** initial backfill material shall be select earth fill free from rocks, dirt clods or frozen material with any dimension greater than 1/2" for PVC and 1-1/2" for RTRP. It shall extend twelve inches above the top of the pipe be properly tamped.

If such material is not available on site then approved crushed stone screenings (NYSDOT Gradation Table 703-4) or coarse sand shall be provided.

The balance of the backfill need not be as carefully selected as the initial material. It should, however, be free of large stones which could damage the pipe. It shall be placed in uniform layers in such a manner as to provide a uniformly dense backfill load on the pipe and avoid unfilled spaces in the backfill. Rolling equipment shall not be used until a minimum of 30" for RTRP and 18" for PVC of backfill material cover the top of the pipe.

PIPE BEDDING DETAILS FOR WATER, SANITARY AND STORM MAINS

MRB Group, P.C.  
Date: September 2003  
Appendix: JJ

TYPE OF UTILITY: **Water Main**

PIPE MATERIAL: **PVC Pressure Pipe**

APPLICABLE PIPE SIZE: 4" I.D. 12"

TRENCH WIDTH (2): Min. O.D. +12"  
Max.O.D. +24"

TRENCH CONDITIONS: **Rock or Hard Pan**

**BEDDING SPECIFICATION:** See Instructions for Ductile Iron Pipe, Bedding in Rock or Hard Pan.

**BACKFILL SPECIFICATION:** See Instructions for Ductile Iron Pipe, Backfill in Rock or Hard Pan.

TRENCH CONDITIONS: **Wet Earth (3)**

**BEDDING SPECIFICATION:** See Instructions for Ductile Iron Pipe, Bedding in Wet Earth.

**BACKFILL SPECIFICATION:** See Instructions for Ductile Iron Pipe, Backfill in Wet Earth.

PIPE BEDDING DETAILS FOR WATER, SANITARY AND STORM MAINS

MRB Group, P.C.  
Date: September 2003  
Appendix: JJ

TYPE OF UTILITY:           **Sanitary and Storm Sewer**

PIPE MATERIAL:           **PVC**

APPLICABLE PIPE SIZE:   4" I.D. 15"

TRENCH WIDTH (2):       Min. O.D. +18"  
                                  Max.O.D. +24"

TRENCH CONDITIONS:   **Select Earth (3)**

**BEDDING SPECIFICATION:** The trench bottom shall be true, even and free of large stones, large dirt clods and any other frozen material as approved by the Engineer. A minimum of three inches of No. 1 and No. 1A crushed stone mixed equally (NYSDOT Gradation Table 703-4) shall be installed and tamped to provide a satisfactory bedding for the pipe which is firm and gives continuous support of the pipe barrel. Depressions shall be hollowed in the trench bottom for pipe bells at all joints in this granular lift.

**BACKFILL SPECIFICATION:** Initial backfill from the top of the pipe bedding material to the spring line of the pipe shall consist of No.1 and No. 1A crushed stone (NYSDOT Gradation Table 703-4), mixed equally.

From the spring line of the pipe to twelve inches above the top of the pipe, approved select backfill material free of large stones, dirt clods or frozen material with any dimension greater than 1-1/2" shall be installed.

The remainder of the backfill material need not be as carefully selected as the initial backfill. Large stones shall be avoided that could damage the installed pipe when dropped or when forced through the soil cushion of the initial backfill.

The consolidation of the final backfill above the initial material has no effect, except for weight, on flexible pipe performance. Therefore, its placement and compaction requirements shall be as dictated with consideration of the proposed surface use.

PIPE BEDDING DETAILS FOR WATER, SANITARY AND STORM MAINS

MRB Group, P.C.  
Date: September 2003  
Appendix: JJ

TYPE OF UTILITY: **Sanitary and Storm Sewer**

PIPE MATERIAL: **PVC**

APPLICABLE PIPE SIZE: 4" I.D. 15"

TRENCH WIDTH (2): Min. O.D. +18"  
Max.O.D. +24"

TRENCH CONDITIONS: **Rock or Hard Pan**

**BEDDING SPECIFICATION:** A minimum cushion of six inches of No. 1 and No. 1A crushed stone (NYSDOT Gradation Table 703-4) shall be used when excavating through rock or hard pan. The remainder of the bedding instructions shall be as those for Bedding in Select Earth.

**BACKFILL SPECIFICATION:** See instructions for PVC Sewer Pipe, Backfill in Select Earth.

TRENCH CONDITIONS: **Wet Earth (3)**

**BEDDING SPECIFICATION:** in addition to the bedding required for PVC Sewer Pipe in Select Earth, an additional six inches of No. 2 and No.3 crushed stone (NYSDOT Gradation Table 703-4) mixed equally shall be installed to support the specified bedding material, 3" of No. 1 and No. 1A crushed stone.

**BACKFILL SPECIFICATION:** See instructions for PVC Sewer Pipe, Backfill in Select Earth.

PIPE BEDDING DETAILS FOR WATER, SANITARY AND STORM MAINS

MRB Group, P.C.  
Date: September 2003  
Appendix: JJ

TYPE OF UTILITY: **Storm Sewer**

PIPE MATERIAL: **Reinforced Concrete Pipe (RCP) and Corrugated Steel Pipe (CSP), Corrugated PVC**

APPLICABLE PIPE SIZE: 12" I.D. 27" for RCP  
12" I.D. 24" for CSP  
12" I.D. 24" for C. PVC

TRENCH WIDTH (2): Max. O.D. +24"

TRENCH CONDITIONS: **Select Earth**

**BEDDING SPECIFICATION:** See instructions for PVC Sewer Pipe, Bedding in Select Earth and substitute No. 1 and No. 2 crushed stone, mixed equally, for No. 1 and No. 1A crushed stone.

**BACKFILL SPECIFICATION:** See instructions for PVC Sewer Pipe, Backfill in Select Earth and substitute No. 1 and No. 2 crushed stone, mixed equally, for No. 1 and No. 1A crushed stone.

TRENCH CONDITIONS: **Rock or Hard Pan**

**BEDDING SPECIFICATION:** See instructions for PVC, Sewer Pipe, Bedding in Rock or Hard Pan and substitute No. 1 and No. 2 crushed stone, mixed equally, for No. 1 and No. 1A crushed stone.

**BACKFILL SPECIFICATION:** See instructions for PVC Sewer Pipe, Backfill in Select Earth and substitute No. 1 and No. 2 crushed stone, mixed equally, for No. 1 and No. 1A crushed stone.

TRENCH CONDITIONS: **Wet Earth (3)**

**BEDDING SPECIFICATION:** See instructions for PVC, Sewer Pipe, Bedding in Wet Earth and substitute No. 1 and No. 2 crushed stone for No. 1 and No. 1A crushed stone.

**BACKFILL SPECIFICATION:** See instructions for PVC Sewer Pipe, Backfill in Select Earth and substitute No. 1 and No. 2 crushed stone for No. 1 and No. 1A crushed stone.

## PIPE BEDDING DETAILS FOR WATER, SANITARY AND STORM MAINS

MRB Group, P.C.  
Date: September 2003  
Appendix: JJ

### **GENERAL NOTES:**

- (1) These details are to be used by Developers as minimum standards of design. Individual projects, local soil conditions and intended use are the design parameters that should be considered by the Developer's Engineer when he/she designs the bedding requirements for a proposed development.
- (2) Trenches shall be of such extra width, when required, to permit placement of timber supports, sheeting, bracing and appurtenances.
- (3) When wet earth or other unstable sub-grade conditions are encountered, the pipe diameter and height of fill will be the controlling factors for additional stone bedding requirements.

**APPENDIX LL**

**CODE OF THE TOWN OF ONTARIO**

**CHAPTER 147**

**"WATERSHED MANAGEMENT CONTROL"**

**APPENDIX MM**

**CODE OF THE TOWN OF ONTARIO**

CHAPTER 65

"NOISE ORDINANCE"

**APPENDIX NN**

**CODE OF THE TOWN OF ONTARIO**

**CHAPTER 116**

**"STORMWATER MANAGEMENT"**

**APPENDIX OO**

**CODE OF THE TOWN OF ONTARIO**

**CHAPTER 118**

**"STORMWATER POLLUTION"**