ESSEX PLANNING COMMISSION

SUBDIVISION REGULATIONS

EFFECTIVE: SEPTEMBER 1, 1995
REVISION: MARCH 15, 2006

TOWN OF ESSEX

SUBDIVISION REGULATIONS

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SECTION 1 AUTHORITY AND PURPOSE

1.1 AUTHORITY

Pursuant to the authority granted by *Chapter 126 of the Connecticut General Statutes,* the Planning Commission of the Town of Essex hereby adopts these Regulations for subdivision and resubdivision of land within the Town of Essex. These Regulations supersede and cancel the Subdivision Regulations of the Town of Essex previously in effect.

1.1.1 Legal Requirements for Subdivision:

No person shall make a subdivision or resubdivision within the meaning of these Regulations of any land within the legal boundaries of the Town of Essex, nor proceed with any improvements including construction of streets or installation of utilities, unless and until an application including a subdivision plan has been submitted to and approved by the Essex Planning Commission. Further, no subdivision or resubdivision shall be made or improvement work begun until such plan has been recorded in the Office of the Essex Town Clerk.

1.1.2 Penalties:

Any person, firm or corporation making any subdivision or resubdivision of land without the approval of the Commission is subject to penalties provided in the General Statutes of the State of Connecticut. The Town may seek any lawful remedies to uphold the purpose and intent of these Regulations.

1.1.3 Other Laws:

These Regulations are in addition to and do not supersede other laws, ordinances or regulations governing the development of land and buildings. Where there is a conflict between requirements, the stricter specification will govern.

1.1.4 Administrative Policy:

The Commission may from time to time, by resolution, adopt forms, policies, procedures and interpretations for the administration of these Regulations.

1.1.5 Enforcement:

The Commission may designate an individual agent who shall enforce the regulations. The Agent may, but need not, be a member of the Commission.

1.2 PURPOSE

These Regulations are intended to assure that subdivision of land is part of a balanced conservation, growth and development plan for the Town of Essex, as recommended in the *Plan of Conservation and Development*, Essex, Connecticut. Subdivision of land shall be conducted in a manner which protects

the health and safety of the community and preserves the character of the land and valuable natural resources for future generations. These Regulations are further intended to provide the following:

a. Land to be subdivided shall be of such character that it can be used for building purpose without danger to health or public safety.

b. That proper provision is made for water supply, surface drainage and sewage disposal, in order to protect public health and safety and encourage the wise use and management of natural resources throughout the town;

c. In areas contiguous to brooks, rivers or other bodies of water subject to flooding, including tidal flooding, that proper provision is made for protective flood and drainage control measures;

d. That proper provision is made for an adequate and convenient system for present and prospective traffic needs, with particular regard to the avoidance of congestion in the streets and highways, and safe pedestrian traffic movement, and that adequate access to properties for fire-fighting apparatus and other emergency vehicles can be provided;

e. That proposed streets are in harmony with existing or officially proposed principal thoroughfares as shown in the *Essex Plan of Conservation and Development,* especially in regard to safe intersections with such thoroughfares;

f. That proper provision is made for open spaces, parks and playgrounds through the most efficient design and layout of land, protecting the natural beauty and topography of the town, including scenic features, ridges, vistas, wetlands, watercourses, and the coastal margin;

g. That proper provision is made for erosion and sediment control;

h. That streets are properly graded and improved, that necessary public utilities and services are provided, and that development does not impose burdens on municipal services in excess of their capacity and planned expansion;

i. That energy efficient patterns of development and land use are encouraged.

j. That all subdivisions comply with all applicable provisions of the Town of Essex Zoning Regulations.

SECTION 2 DEFINITIONS

For purposes of these Regulations, certain words shall be defined as stated below. Words in the present tense include the future tense, the singular includes the plural, and vice versa. The word “shall” is mandatory, not directory. The word “may” is discretionary.

Applicant, Developer, or Subdivider: An individual, partner, corporation, legal entity or agent thereof, who or which undertakes the subdivision or resubdivision of land or any activity included in these Regulations. For purposes of these Regulations, the terms “applicant”, “developer”, and “subdivider” shall be synonymous.

Application: The maps, prescribed forms, reports and fees submitted to the Planning Commission in accordance with these Regulations.

Base Flood: The flood having a one percent chance of being equaled or exceeded in any given year, sometimes referred to as a “100 year flood”.

Base Flood Elevation: The particular elevation of the base flood as specified on the Flood Insurance Rate Map for the Town of Essex for Zones A1-A30.

Bond: A type of surety or collateral posted by the applicant which guarantees that all required subdivision improvements shall be completed in accordance with the approved plans and these Regulations.

Buildable Land: Shall mean all land that is not inland or tidal wetlands or watercourses as defined in Sections 22a-19 and 22a-38 C.G.S., special flood hazard areas, or slopes with an incline of 20% or greater as measured over fifty foot intervals.

CAM or Coastal Area Management District: The boundary described in Section 22a-90 et. Sec. of the Connecticut General Statutes, and adopted by the Essex Zoning Commission.

Coastal Resources: The coastal waters of the state, their natural resources, related marine and wildlife habitat and adjacent shoreland, both developed and undeveloped, that together form an integrated terrestrial and estuarine ecosystem, including rocky shorefront, beaches and dunes, intertidal flats, tidal wetlands, fresh water wetlands and watercourses, estuarine embayments, coastal hazard areas, developed shorefronts, islands, near-shore waters, off-shore waters, shorelands, and shellfish concentration areas, as defined the Connecticut General Statutes, Section 22a-93.

Coastal Site Plan: The site plans, applications and project referrals listed in C.G.S. 22a-105, as required in Section 4.5.4 of these Regulations.

Commission: The Essex Planning Commission.

Development: Any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations.

Disturbed Area: An area where the ground cover is destroyed or removed, leaving the land subject to accelerated erosion.

Easement: A written authorization, duly recorded in the Land Records of the Town, for a specific purpose or purposes, which one person or agency may have in a designated portion of land of another.

Erosion: The detachment and movement of soil or rock fragments by water, wind, ice or gravity.

Erosion and Sediment Control Plan: A plan which sets forth measures to be undertaken for the control of erosion and sedimentation, to include, but not be limited to, drawings and descriptions sufficient in detail to establish clearly the location of areas to be stripped of vegetation and other proposed or unprotected areas; schedule of operations, including starting and completion dates for each major development phase, such as land clearing and grading, streets, sidewalks, utility and storm drainage installations, and the like; seeding, sodding or revegetation plans and specifications for all unprotected or unvegetated areas; location and design of all structural sediment control measures, debris basins and the like; timing of all planned sediment control measures; and general information relating to the implementation and maintenance of the sediment control measures.

Final Subdivision Plan: The final map, drawing or drawings, and all required supporting data upon which the subdiviser's plan of subdivision is presented to the Commission for approval.

Floodway: The channel of a river or other watercourse and the adjacent land that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than 1.0 feet anywhere in the Town. The regulated floodway is delineated on the Flood Boundary and Floodway Map.

Gateway: The Gateway Conservation District as described in Section 25-102c of the Connecticut General Statutes, and shown on the Essex Zoning Map.

Grading: Any excavating, grubbing, filling, or stockpiling of earth materials or any combination thereof, including land in its excavated or filled condition.

Lot: A plot or parcel of land occupied or capable of being occupied by one or more principal buildings and accessory buildings, as specified under Zoning Regulations.

Non-Commercial Cutting: The cutting or removal of forest tree species on a lot for the purpose of preparing a site for the construction of a building or other structure and/or cutting for the customary maintenance and improvement of a lot.

Open Space: A parcel or parcels of land or an area of water or a combination of water and land set aside for conservation, park or playground purposes.

Plan: The subdivision plan including maps, profiles, and supporting documents.

Regulations (or These Regulations): The Subdivision Regulations of the Town of Essex, unless otherwise specified.

Resubdivision: As defined in the Connecticut General Statutes, a change in the map of an approved or recorded subdivision or resubdivision, if such change:

a. affects any street layout shown on the approved map,
b. affects any area reserved thereon for public use, or
c. diminishes the size of any lot shown thereon and creates an additional building lot, if any of the lots shown thereon have been conveyed after the approval or recording of such map.

Sediment: Solid material, either mineral or organic, that is in suspension, is transported, or has been moved from its site of origin by erosion.

Special Flood Hazard Areas: Areas delineated as Zone A, and Zone A1-A30, AE, AH, AO, V, V1-30, or VE which are shown on a map entitled, "Flood Insurance Rate Map, Town of Essex, Connecticut, Middlesex County, Community Panel Number 090065", March 4, 1986, prepared by the Federal Emergency Management Agency. Said Map, as it may be amended from time to time by said Agency, is part of these Regulations.

Street: A public or private vehicular access way permanently dedicated to movement of vehicles and pedestrians, whether designated as a street, road, avenue, lane or other, located between right-of-way lines, but not including driveways; a parcel of land which has been improved so as to be suitable for vehicular traffic and accepted for public use, or a parcel of land shown and designated as a street to be constructed on a subdivision plan approved by the Planning Commission. Streets are further classified by the following functions:

a. Arterial Collector Street: Connects two or more subdivisions or residential, and/or business areas, and is part of a continuous route connecting various areas of the community and high traffic penetrating points.

b. Residential Collector Street: Carries or will carry traffic from the Light Residential Streets to Arterial Collector Streets or other Residential Collector Streets, and provides direct access to the subdivision from the Arterial Collector or other Residential Collectors.

c. Light Residential Street: Serves only as a means of access to residential properties and provides access to Arterial Collectors and Residential Collectors.

d. Private Street: A Street privately owned and maintained by a legally constituted homeowners' association, and constructed in accordance with the standards for private streets established by these regulations. A private street shall be identified on the record subdivision map as a "Private Street", and shall not be offered to or maintained by the Town of Essex.

e. Dead-End. A street with only one vehicular outlet not serving as the principal access to or providing circulation within a subdivision.

Street Pavement: The wearing or exposed surface of the roadway used by vehicular traffic, including the subbase and base course.

Street Right of Way: That portion of land between property lines over which a street is built and the adjacent area reserved for future widening and improvements.

Street Width: Means the width of the street right-of-way.

Subdivision: As set forth in the Connecticut General Statutes, the division of a tract or parcel of land into three or more parts or lots made subsequent to the adoption of subdivision regulations by the Commission, for the purpose, whether immediate or future, of sale or building development expressly excluding development for municipal, conservation or agricultural purposes, and includes “resubdivision”.

Town: The Town of Essex.

Town Development Plan: The Plan of Conservation and Development for the Town of Essex, prepared and adopted by the Planning Commission pursuant to Section 8-23 of the Connecticut General Statutes, and includes any part of such Plan separately and any amendment to such Plan or parts thereof.

Watercourses: The term “watercourses” as used in these Regulations, includes watercourses as defined in Section 22a-38 of the Connecticut General Statutes, as amended.

Wetlands: The term “wetlands” as used in these Regulations, is defined in Section 22a-38 of the Connecticut General Statutes, as amended.

Work: All physical improvements required by the approved plan, other than the staking out of lots, and includes but is not limited to the construction of roads, storm drainage facilities, and water and sewer lines, the setting aside of open space and recreation areas, installation of telephone and electric services, planting of trees or other landscaping, and installation of retaining walls or other structures.

SECTION 3 APPLICATION PROCEDURES AND APPROVAL PROCESS

3.1 INFORMAL PRELIMINARY REVIEW

In order to eliminate conflict or misunderstanding during the later stages of the subdivision application process, potential applicants shall submit a preliminary plan to the Commission for informal review. The objective of this review is to ensure that basic requirements can be met prior to incurring application, surveying, engineering and legal fees associated with submission of a formal application. The Commission may also schedule a field visit to the site of the proposed development as part of its preliminary review. Preliminary plans have no official status. Review in regard to their feasibility in no way implies approval of the formal subdivision plan. A completed application form is required for review of a preliminary subdivision plan; however, no fee is required.

3.1.1 Submission of Preliminary Plan:

Any potential applicant shall submit a preliminary plan for consideration. At least three copies of the preliminary plan shall be submitted to the Land Use/Zoning Office at least two weeks prior to a regular meeting of the Commission to allow for placement on the next meeting agenda. The applicant or an authorized representative of the applicant shall attend the meeting of the Commission to discuss the preliminary plan.

3.1.2 Contents of Preliminary Plan:

A preliminary plan should show sufficient information to enable the Commission to make a general planning review under the standards of these regulations and to determine whether an Open Space Preservation Subdivision is appropriate. The preliminary plan, at a scale no greater than 1” equals 100’, should generally show proposed lots, easements, roads, open spaces, drainage, contours at ten foot intervals, soil types from available sources, wetlands as mapped by a certified soil scientist, general location of ledge rock, plot plan information, utilities, location map, and other information pertinent to the subdivision. Concept sketches showing other alternative layouts may also be submitted.

3.2 FORMAL SUBMISSION

All applications for subdivision or resubdivision, together with maps, reports, legal documents, and any other information required under *Section 4* of these Regulations, shall be submitted by mail or by hand to the Land Use/Zoning Office in the Essex Town Hall. An application will be considered complete when an application form, fee, maps and other materials conforming substantially to the requirements of *Section 4* have been received. In order to receive prompt consideration of an application, whenever possible the complete application should be submitted no later than fourteen days prior to a Commission meeting in order to allow sufficient time for staff review, and so that the application may be placed on the agenda of the meeting. Incomplete applications shall be received by the Commission, but failure to submit a complete application may be cause for disapproval of an application.

3.3 ESTABLISHING THE DATE OF RECEIPT

In accordance with the *Connecticut General Statutes,* the official date of receipt of an application shall be the date of the next regularly scheduled meeting of the Commission immediately following the day of submission of the completed application to the Land Use/Zoning Office, or 35 days after submission, whichever is sooner.

3.4 SITE INSPECTION AS PART OF APPLICATION REVIEW

As part of application review, the Commission or its duly authorized representative or representatives may inspect the subdivision site to review the suitability of the site and the accuracy of all official submissions. Submission of a formal application confers the right of the Commission or its designated agent(s) to visit the site.

3.5 WAIVER OF SUBDIVISION REQUIREMENTS

When the Commission finds that extraordinary hardships or practical difficulties may result from compliance with these Regulations, the Commission may, by a 3/4th vote of all members, approve waivers to these Regulations. The Commission shall state upon its records the reason for which a waiver is granted in each case.

3.5.1 The Commission shall not approve a waiver unless it finds in each specific case that:

a. The granting of a waiver will not have a significant adverse impact on adjacent property or on public health and safety; and

b. The conditions upon which the request for a waiver are based are unique to the proposed subdivision for which the waiver is sought and are not applicable generally to other potential subdivisions; and

c. The waiver will not create a conflict with the provisions of the Zoning Regulations, the Town Plan of Development, town ordinances, or regulations of other Town boards and commissions.

A request for any such waiver shall be presented in writing by the applicant at the time when the subdivision application is first submitted. The request shall state how the proposed waiver meets the requirements stated above.

Any waiver granted shall not be a precedent for any future waiver, and the Commission may attach any reasonable condition to the grant of the waiver.

3.6 SUBDIVISIONS INVOLVING INLAND WETLANDS

When an application for a proposed subdivision or resubdivision involves land regulated as an inland wetlands or watercourse under *Chapter 400 of the Connecticut General Statutes,* the applicant shall file an application with the Inland Wetlands and Watercourses Commission no later than the day the formal

application is submitted to the Planning Commission. The Planning Commission shall not render a decision on the subdivision application until the Inland Wetlands and Watercourses Commission has submitted a report with its final decision to the Planning Commission. In making its decision, the Planning Commission shall give due consideration to the report of the Inland Wetlands and Watercourses Commission.

3.7 REFERRALS AND REVIEW BY OTHERS

3.7.1 The Commission shall transmit copies of maps, plans and documents to other officials and agencies where required and where appropriate, such as the following, for advisory reports and consultation and/or for approval as may be required by law:

a. Town Engineer: maps and plans, with particular regard to street design, storm drainage and other utility systems.

b. Town or Commission Attorney: bonds, easements, deeds and agreements.

c. Sanitarian/Water Pollution Control Authority: sanitation reports, maps and plans, with particular regard to on-site water supply and sewage disposal systems.

d. State Department of Transportation: maps and plans, with particular regard to street and utility connections with State Highways.

e. Inland Wetlands and Watercourses Commission: maps and plans, with particular regard to natural features of the site, including conservation elements, water resources and soils.

f. Park and Recreation Commission: maps, with particular regard to open spaces for parks and playgrounds.

g. Fire Department/Fire Marshal: maps and plans with particular regard to elements of fire protection and fire fighting resources.

h. Other persons or agencies as appropriate, including the Tree Warden, Municipal Historian, and emergency services personnel.

3.7.2 Referrals within the Gateway District:

For all subdivisions within the Connecticut River Gateway Conservation Zone, the Commission may refer copies of the maps and plans, including the Soil Erosion and Sediment Control Plan, to the Middlesex County Soil and Water Conservation District for review and advisory opinion concerning measures for erosion and sediment control.

3.7.3 Referral to CRERPA:

Any plan for subdivision of land which abuts or includes land in one or more municipalities as well as Essex shall be submitted to the Connecticut River Estuary Regional Planning Agency in accordance with CGS 8-26b.

3.7.4 Notice to Adjoining Municipalities:

Notice shall be given to the Town Clerk of an adjoining municipality in accordance with CGS 8-26f for any project in which

a. Any portion of the property affected by a decision of the Planning Commission is within 500 feet of the boundary of the adjoining municipality;

b. A significant portion of the traffic to the completed project will use streets within the adjoining municipality to enter or exit the site;

c. A significant portion of the sewer or water drainage from the project on the site will flow through and significantly impact the drainage or sewerage system within the adjoining municipality; or

d. Water runoff from the improved site will impact streets or other municipal or private property within the adjoining municipality.

Referrals shall be made within seven days of the date of receipt of the application. No hearing shall be conducted unless appropriate referrals have been made.

3.8 PUBLIC HEARING

A public hearing regarding an application for a subdivision may be held by the Commission if, in its judgment, the circumstances require such action. The Commission shall hold a public hearing on all applications for a resubdivision. Notice of any public hearing shall be given as required by law. Whether or not a public hearing is held, every applicant shall be afforded the opportunity to appear before the Commission to discuss the application before final action by the Commission.

3.8.1 Notification of Abutting Property Owners:

When a public hearing is scheduled, the applicant shall prepare a list of names and addresses of the owners of all property abutting the property to be subdivided, as shown on the Assessor's records of the Town of Essex on the date of receipt of the application by the Commission. The applicant shall mail notification of the scheduled public hearing to at least one owner of each property not more than 30 and not less than ten days prior to the date of the public hearing. The legal notice of the public hearing may serve as the text for notification of abutters. Evidence of such mailing shall be submitted to the Planning Enforcement Agent not later than the commencement of the public hearing.

3.9 PLANNING COMMISSION ACTION

Within 65 days after the close of the public hearing (if any), or within 65 days after receipt of such application if no public hearing is held, the Commission, by majority vote of members present and voting, shall approve, modify and approve, or disapprove the application for subdivision or resubdivision.

The applicant may consent to one or more extensions of any period required for commencing a public hearing, completing a public hearing or rendering a decision, provided the total extension of any such period shall not be for longer than the original period as specified under the *Connecticut General Statutes*.

Not withstanding the above, the Planning Commission shall not render a decision on the application until the Inland Wetlands and Watercourses Commission has submitted a report with its final decision to the Planning Commission.

3.9.1 Modifications:

In approving the application, the Commission may require modifications of the maps and/or documents submitted as part of the application to preserve the purpose and intent and assure conformance with these Regulations. Such modifications shall be made by the applicant and submitted for Commission review prior to endorsement of the subdivision plans.

3.9.2 Items which shall be completed:

The following items shall be completed as a condition of approval of a subdivision or resubdivision application, as applicable:

a. Presentation of any conveyance, easements and deeds in accordance with the requirements of *Section 4.6;*

b. Submission of a construction and inspection schedule, approved by the Commission's engineer, including establishment of a date when construction of roads, drainage and other improvements may commence;

c. Written evidence of application to the Connecticut Department of Transportation for any proposed street or storm drainage system which joins with a State Highway; the Commission may require written proof of CONNDOT intent to issue a permit for the proposed activity;

d. Evidence of approval from the Essex Inland Wetlands and Watercourses Commission, as may be required under the regulations of such Commission, for conduct of any activity necessary to complete required streets, drainage and other subdivision improvements;

e. Written evidence of an application to the Commissioner of the Department of Environmental Protection for a permit, as may be required for regulated activity within a designated tidal wetlands area;

f. Written evidence of an application to the U.S. Army Corps of Engineers for activities within the Corps' jurisdiction;

g. Where the subdivision involves construction of improvements or excavation, grading or depositing of materials in a Special Flood Hazard Area, presentation of written assurance from the Building Official that development activities comply with requirements of *Sections 4.5.4* and *5.3* of these Regulations;

h. Posting of an acceptable bond guaranteeing completion of any required road, drainage, installation of property markers and monuments, or other subdivision improvements in accordance with the approved plan, as required in *Section 3.11;*

i. Installation and maintenance of erosion and sediment control measures in accordance with the certified Soil Erosion and Sediment Control Plan, as required by *Section 4.4.5.*

3.9.3 Statement of Reasons for Decision:

In approving, modifying and approving, or disapproving an application, the Commission shall state in its records the reasons for its action. The Commission shall give notice of its decision as required by law.

3.10 APPEALS

Any person aggrieved by an official decision of the Commission may file an appeal to the Superior Court within fifteen days from the date when the notice of decision was published according to law. The Commission will not endorse the plan until after the time for taking an appeal from the decision has elapsed, or in the event of an appeal, upon termination of such appeal by dismissal, withdrawal or judgment in favor of the applicant.

3.11 POSTING A BOND

Prior to endorsement of the approved plan, the Commission shall require the applicant to post a sufficient bond or other security, in a form and amount acceptable to the Commission and to the Commission’s attorney, to guarantee one of the following:

a. Satisfactory completion of all work shown on the plan.

b. Restoration of the development site to a safe and attractive condition in lieu of completion of work, provided that the applicant guarantees in writing that no lots will be sold or offered for sale, no building permits will be sought, and no individual lot development including tree clearing and grading will commence, unless and until a bond for completion of work is posted with the Commission. Violation of this provision shall be grounds for revocation of the subdivision approval.

3.11.1 Bond Requirements:

a. In phased subdivisions, separate bonds may be posted for each phase.

b. The bond must be set and continuously maintained for the duration of the five year project (or other time for completion as designated by State Statute) unless released by vote of the Planning Commission.

c. Should the developer be unable to complete the bonded site improvements in a manner satisfactory under Town requirements, the bond deposited with the Town may be used by the Town to complete the required site improvements or, at the discretion of the Commission, to restore the property to a safe and attractive condition, provided that no individual lots have been sold or developed.

3.11.2 Separate Sedimentation and Erosion Control Bond:

Measures and facilities specified on the Soil Erosion and Sediment Control Plan shall be guaranteed by a separate cash or savings account bond. This separate bond must also be posted prior to any work on a conditionally approved subdivision. In the event of failure of the developer to maintain proper sedimentation and erosion controls on the subdivision site, the bond required under this Section may be used by the town to stabilize eroding areas, remove sedimentation, and otherwise correct sedimentation and erosion problems on site.

3.11.3 Conditional Approval:

Upon posting of a bond for sedimentation and erosion controls and for site restoration, the Commission may authorize the filing of a Plan with a Conditional Approval endorsed thereon. Such approval shall be conditioned on (1) the actual construction, maintenance and installation of any improvements or utilities required by the Commission, or (2) upon provision of a bond for completion of subdivision work or subdivision restoration, as required in *Section 3.11*. Upon the occurrence of either of such events, the Commission shall cause a final approval to be endorsed upon said Plan.

a. Any such conditional approval shall lapse on such date as established by the Commission, but in no event shall said date be later than five years from the date such conditional approval is granted. The applicant may apply for and the Commission may grant a renewal of such conditional approval for such additional period as the Commission in its discretion may establish, but in no event for a renewal period of more than five years.

b. Within subdivisions given conditional approval, no lots shall be sold nor shall any building permits be issued, until the conditions for final approval have been met and final approval has been endorsed on the plan.

3.12 ENDORSEMENT AND DELIVERY OF PLAN

Two fixed line photographic mylar and two print copies of all maps that are part of the approved subdivision or resubdivision map, along with two corrected print copies of any other maps which are part of the approved application, shall be delivered to the land use/zoning office within thirty days of a Commission vote to approve the subdivision or resubdivision application. Such plans shall contain all modifications or stipulations required by the Commission as part of its approval. All mylars shall contain the seal and original signature of the engineer and/or surveyor certifying the plan. In addition, the subdivision layout plan is requested to be submitted to the Town in a digital vector format for the purpose of updating the Assessor's maps.

Endorsement of the plan by the Commission shall not be executed until the end of the appeal period as set forth in *Section 3.10*, and until all conditions of approval have been met, including posting of any required bonds and submission of the final corrected plans and executed legal documents. If the applicant fails to comply with this requirement, the Commission may declare the approval null and void.

3.12.1 Commission endorsement of Plan:

Upon receipt of final plans including any required modifications, executed legal documents, and the posting of any performance bond required as part of the approval, the Chairman or Secretary of the Commission shall endorse the final plans, and shall note on the plans the date of approval and the date of project expiration. The applicant will then be notified that the endorsed plans and legal documents are available for recording with the Office of the Town Clerk. All plans shall be delivered to the applicant for filing or recording not less than thirty (30) days after the time for taking an appeal from the action of the Commission has elapsed, and in the event of an appeal, not less than thirty (30) days after the termination of such appeal by dismissal, withdrawal or judgment in favor the applicant. No such plan shall be recorded or filed by the Town Clerk until its approval has been endorsed thereon by the Chairman or Secretary of the Commission, and the filing or recording of a subdivision plan without such approval shall be voided by the Commission, and the plan shall become null and void.

3.13 FILING AND RECORDING PLAN

The applicant shall file and record the endorsed plans and legal documents, with the exception of deeds for Town roads, within 90 days of the expiration of the appeal period, or in the case of an appeal, within ninety days of the termination of such appeal by dismissal, withdrawal or judgment in favor of the applicant, except that the Commission may, by majority vote, extend the time for such filing and recording for two additional periods of ninety days each, and approved plans shall remain valid until the expiration of such extended time. Failure to file the approved plans within the 90 day period or any extensions thereof which are approved by the Commission shall render the subdivision approval null and void. Filing and recording fees shall be paid by the applicant.

3.14 AUTHORIZING COMMENCEMENT OF CONSTRUCTION

All construction and installation of roads, drainage and other improvements required by these Regulations shall not be deemed authorized and shall not be commenced until

a. The time for taking an appeal from the action of approval of the application by the Commission has elapsed, and in the event of an appeal, termination of such appeal by dismissal, withdrawal or judgment in favor of the applicant; and

b. The Commission or its designated agent has authorized such construction upon finding that the applicant has met all conditions of approval precedent to such construction.

3.15 INSPECTION OF IMPROVEMENTS

The Commission may appoint or hire an inspector to assure that all specifications and requirements are met during the construction of any required improvement which the Commission feels should be inspected, including but not limited to the inspections listed in *Section 3.15.3.* It shall be the duty of the developer to notify the Commission's designated inspector at least 48 hours prior to the time when such improvements are to commence and when they are to be completed. Said inspector shall, after completion of construction, notify the Commission when all required improvements have been constructed as required by the Commission.

3.15.1 Fee for Inspection of Improvements:

The developer shall pay to the Town a fee for all reasonable costs incurred in the inspection and reinspection, if required, of any required improvements by the Commission's authorized agent, in accordance with a schedule of fees established by the Commission, and amended from time to time to reflect the actual cost of performing the inspections.

3.15.2 Compliance with Plans:

If the inspector shall find, upon inspection of the improvements, that any of the required improvements have not been constructed in accordance with plans and specifications submitted by the subdivider as part of the subdivision application, the inspector shall so report to the Commission. The Commission shall then notify the developer, and if necessary the company guaranteeing the bond, and shall take all necessary steps to preserve the Town's rights under the terms of the bond.

3.15.3 Schedule of Inspections:

The Commission or its designated inspector shall have the right to enter upon the premises and to inspect, or cause to be inspected, construction work authorized by subdivision approval at any time, with or without notice, during, before or after regular business hours.

For subdivision road and drainage improvements, the work shall be inspected at the following stages of construction for each section of development:

a. After installation of sedimentation and erosion controls and prior to any grading;

b. After completion of rough grading;

c. After drainage and all other underground facilities, when applicable, have been installed, but prior to back- filling;

d. After completion of subgrade;

e. After completion of rolled granular base and processed aggregate base;

f. Notification shall be made to the Commission as to when paving operations shall be performed. Inspections may be made prior to, during and/or after pavement has been placed, at the discretion of the Commission's engineer;

g. At the completion of curbing installations, backfilling of curbing, grading of shoulder areas and embankment, loaming and seeding and the installation of monuments.

The developer shall not proceed to work on any subsequent stage above until the preceding section has been inspected and approved by the Commission or its duly authorized representative.

3.16 CHANGES DURING CONSTRUCTION

3.16.1 Modifications:

If at any time during the construction of the required improvements, unforeseen field conditions make it necessary or preferable to modify the location or design of such required improvements, the developer shall notify the Commission or its duly authorized representative, who shall determine whether the change is minor in nature or whether the Commission itself must act on the proposed change. If the change is minor, the representative shall either approve or disapprove the developer's request, and shall notify the Commission at its next regular meeting, and the action shall be noted in the meeting minutes.

If it is determined that the change is not minor, the developer shall submit an application for a modification of the subdivision approval. Such application shall meet all the informational requirements of *Section 4,* as applicable. Any change which affects any street layout or any area reserved for public use shall require a resubdivision.

3.16.2 Additional work:

If during the course of construction of any new street, or any other improvements required by the Commission in connection with the approval of a subdivision, it appears that additional work is required owing to unforeseen conditions such as,

but not limited to springs, ancient drains, wet conditions, side hill drainage from cuts, bedrock, or other conditions which were not apparent at the time of the approval by the Commission, the Commission may require such additional work to be done and may require additional surety.

3.17 COMPLETION OF WORK

Any person, firm or corporation making any subdivision or resubdivision of land shall complete all work in connection with such subdivision within five years after the date of the vote for approval of the plan for such subdivision. The Commission endorsement of approval on the plan shall state the date on which such five year period expires.

The subdivider or his successor in interest may apply for and the Commission may grant one or more extensions of the time to complete all or part of the work in connection with such subdivision, provided the time for all extensions shall not exceed ten years from the date the subdivision was approved.

If the Commission grants an extension of an approval, the Commission may condition the approval on a determination of the adequacy of the amount of the bond or other surety required under *Section 3.11*, securing to the municipality the actual completion of work.

For purposes of this section, “work” shall mean all physical improvements required by the approval, other than staking of lots, and includes but is not limited to the construction of roads, storm drainage, water and sewer lines, setting aside of open space and recreation areas, installation of utilities, installation of permanent property markers, planting trees and other landscaping, and installation of retaining walls and other structures.

Failure to complete all required work shall result in expiration of subdivision approval. In such event, the Commission shall file on the Land Records notice of such expiration and no additional lots shall be conveyed by the subdivider except with the approval by the Commission of a new application for subdivision of subject land. If lots have been conveyed during the five year or other approved period, the Town may call the performance bond of the subdivision to the extent necessary to complete the bonded improvements and utilities required to serve those lots.

3.18 MAINTENANCE OF IMPROVEMENTS

The applicant shall be required to maintain all improvements in the subdivision and provide for snow removal, street cleaning, drainage and general maintenance on streets and sidewalks until acceptance of said improvements by the Town. In the event that the applicant fails to comply, the Town is authorized, through the Board of Selectmen, to perform the necessary work, without incurring any liability, and charge such work to the applicant.

3.19 RELEASE OF BOND/AS BUILT PLANS

The Commission may, at its discretion, upon request of the developer, authorize partial release of the subdivision bond as various stages of work are completed to the satisfaction of the Commission. However, prior to release of the final portion of the subdivision performance bond, the following conditions must be met:

a. The final portion of the bond shall not be released until all required improvements have been accepted by the town and all conditions of town acceptance have been met.

b. Roads, drainage and other required improvements in the subdivision shall have been inspected and approved the Commission's engineer.

c. As-built plans shall have been submitted to the Commission in accordance with *Section 3.19.1.*

d. Maintenance Agreement and Security: The applicant shall execute an agreement and file a bond to cover unforeseen deficiencies in the required road, drainage and other subdivision improvements. The maintenance bond shall terminate no earlier than one year after the date of acceptance of the improvements by the Town. The maintenance bond shall be in the amount and with surety as approved by the Commission and Town Counsel, and not less than 10% of the original bond amount.

3.19.1 "As-Built" Plans:

Before the Commission authorizes release of any subdivision performance bond, the developer shall furnish a set of "as built" drawings showing all improvements as constructed, in the same detail as required for the approved Subdivision plan. Said drawings shall bear the live signature and raised seal of the registered land surveyor who prepared the "as built" plan, and a civil engineer registered in Connecticut who reviewed the plan.

3.20 ACCEPTANCE BY THE TOWN

The approval by the Commission of a subdivision application shall not constitute evidence of any acceptance by the Town of any street, recreation area, right-of-way or easement shown on such plan. Acceptance of formal offers of streets, open space, rights-of-way, and easements shall rest with the Town. The developer shall be required to maintain all improvements and provide for snow removal on streets and sidewalks until acceptance of said improvements at a Town meeting.

3.20.1 Procedure for acceptance of improvements:

Upon completion of all improvements, the applicant shall submit a written request to the Commission for acceptance of the improvements and release of the performance bond. Such request shall be accompanied by executed deeds, as-built plans, maintenance bond and any other documents necessary to support

the request. The Commission shall refer the request to the appropriate Town agencies for their review. Upon receipt of favorable reports from these agencies, the Commission shall recommend to the Board of Selectmen that the improvements be accepted and the performance bond released. The Board of Selectmen may then place the matter before the Town Meeting for action on acceptance.

SECTION 4 CONTENTS OF FORMAL APPLICATION SUBMISSION

4.1 WRITTEN APPLICATION

A written application, in a form prescribed by the Commission, shall be submitted by the applicant or lawful agent. If the applicant is not the owner of the land to be subdivided, the forms shall also be signed by the owner or lawful agent.

4.2 FEES

The subdivider shall pay all reasonable fees necessary to cover the cost of processing the subdivision application and inspecting any required improvement. Processing fees and inspection fees shall be paid to the Commission, or the Commission's duly authorized agent, by the subdivider in accordance with the Schedule of Fees established by the Commission.

4.3 PROFESSIONAL ASSISTANCE

All maps and reports required under these Regulations shall be prepared and certified by qualified professionals, as follows:

4.3.1 Professional Engineer

The applicant shall employ the services of a professional engineer, currently licensed to practice in the State of Connecticut, for the design of and preparation of maps and reports relating to the following work items required in the submittal of a subdivision application: roads; drainage systems, including the design and location of structures and pipes; sewage disposal systems; water supply and distribution system; and grading of lots and overall grading plans.

All submissions of the above items shall bear the name, seal and original signature of a professional engineer, currently licensed to practice in the State of Connecticut. A Land Surveyor's seal or Architect's seal alone is not acceptable. Documents other than final reports and maps shall be marked "Draft".

4.3.2 Land Surveyor

The applicant shall employ the services of a land surveyor, licensed to practice in the State of Connecticut, for the preparation of maps and reports relating to the following work items required in the preparation of a subdivision application: land surveys including the delineation of the boundary lines of the outside perimeter and the interior lots of a subdivision; topographic surveys including contour delineation and all natural features and constructed facilities on the land.

All submissions of the above items shall bear the name, seal and original signature of a land surveyor, currently licensed to practice in the State of Connecticut. A Professional Engineer's seal or Architect's seal alone is not acceptable. Documents other than final reports and maps shall be marked "Draft".

4.4 MAPS

The maps and plans required by these Regulations shall show information and shall be prepared in accordance with the standards hereinafter specified.

a. Information on the proposed subdivision shall be provided on maps with an overall dimension of 24" by 36". Seven copies of all maps shall be provided as part of the submission of a completed application. The Commission may require additional copies of plans if referrals to outside parties are indicated.

b. If more than one map sheet is required, each sheet shall be sequentially numbered in the form "Sheet ___ of ___". An index of all supporting detail map sheets shall be included on the first sheet. For a more efficient presentation, any information required in *Section 4.4* may be combined on plan sheets, provided that the information is presented in a clear and understandable manner. Revision dates shall be shown if plans are updated or revised during the review process.

c. All prints of maps and plans shall be clear and legible and shall be bound along the left side, with required identifying data on each sheet.

d. All maps shall be prepared by and shall bear the name, seal and original signature of a land surveyor or professional engineer, or both, as required under *Section 4.3.* Final maps presented for endorsement and filing shall include a raised seal and original signature of the land surveyor or professional engineer, or both, as required, and shall be a fixed line photographic mylar printed on good quality polyester film meeting State requirements for filing with the Town Clerk. In addition, the subdivision layout plan is requested to be submitted to the Town in a digital vector format for the purpose of updating the Assessor's maps.

e. All maps sheets shall include the following information:

   1. Name of the proposed subdivision or identifying title, which shall not duplicate the title of any previous subdivision in the Town of Essex;

   2. Name and address of the owner of land to be subdivided, the name and address of the subdivider if other than the owner;

   3. Date prepared, approximate true north point, numerical and graphic scale. North arrows, to the extent practical, shall be consistent from one map to another.

4.4.1 Key Map:

A Key Map showing the relationship of the proposed subdivision to the surrounding neighborhood shall be provided, and shall show all public streets, lands reserved for special use, and major subdivisions located within one-half mile of the boundaries of the tract to be subdivided. All proposed property lines within the tract to be subdivided shall be shown on the Key Map in sufficient detail to allow for transfer of information to the Commission's base map. The scale of the Key Map shall be 1" = 1000'.

4.4.2 Boundary Survey Map:

A Boundary Survey Map of the entire tract to be subdivided shall be provided, prepared by a land surveyor to Class A-2 Standards, as specified in the "Code of Recommended Practice for Standards of Accuracy of Surveys and Maps", or equivalent standards as approved by the State Board of Registration for Professional Engineers and Land Surveyors. The Boundary Survey Map shall show names of all abutting land owners and public streets, the layout of all lots and streets within the tract to be subdivided, and all lands to be dedicated as open space, parks or playgrounds. The scale of the Boundary Survey Map shall be at 1" = 100'.

4.4.3 Detailed Layout Maps:

a. Detailed Layout Maps shall be at a scale of one inch equals 40 feet (1"= 40') unless otherwise approved by the Commission. Where it is not possible to fit the entire subdivision plan on one sheet at a scale of 1"=40', more than one sheet may be used, provided that match lines are indicated. If more than one sheet is used, an index map shall be provided showing the entire subdivision with lots, lot numbers, streets, street names, delineation of areas covered by the section or sheet and match lines between sections. Please note that the Commission may require portions or all of the maps to be at a different scale in order to provide more a detailed review.

b. All Detailed Layout Maps shall show the following information to the extent that the information occurs in, or is applicable to the particular subdivision: information on site conditions and land evaluation within the property to be subdivided and within 75 feet thereof, as follows:

1. Existing contours at intervals two (2) feet, based on field or aerial survey, using the bench mark as required for Construction Plans in *Section 4.4.4.* The Commission may require contour lines at lesser intervals where necessary to properly evaluate the proposed development. In areas where there is no significant change in elevation over an extended area, spot elevations shall be shown.

2. Existing man-made features, including buildings and structures; any proposed removal, demolition, relocation or retention of existing man-made features. Detailed layout maps shall also show existing trails, stone walls, fences and dams, and other man-made features.

3. Location of all known significant archaeological, historic, and natural features.

4. Location of all exposed ledge outcroppings

5. Existing watercourses; exterior limits of inland wetlands, if applicable, which shall be identified and located in the field by a certified soil scientist.

6. Any areas subject to frequent, periodic or potential flooding; the boundaries of any Special Flood Hazard Areas and floodways and the base flood elevation data and the lowest floor elevations that would be applicable for building on any lot in any Special Flood Hazard Area

7. Boundaries and classification codes of soil types under the National Cooperative Soils Survey of the U.S.D.A. Soil Conservation Service

8. Location and results of all percolation test holes, deep test pits, borings, and groundwater monitoring pipes

9. Location and species of specimen trees; existing mix of forest tree species, their approximate height, age and density; a description of the cutting or removal activities to be undertaken

10. Location of any existing wells on the property and on land within 75 feet of the property

11. Location of any drainage discharge points onto the property from any street or other property.

c. Property ownership information as follows, with all lines (except as noted) drawn with dimensions to the nearest hundredths of a foot, bearings or deflection angles on all straight lines and the central angle, tangent distance and radius of all arcs;

1. Name and address of owner of property; name and address of applicant, if different from the owner

2. Perimeter boundary survey of the entire property, with dimensions, and the area of the property to be subdivided; the boundary line shall be a heavy weight line easily distinguishable from other property lines

3. Location of existing property lines for a distance of 75 feet from the property, except where the property borders a road, where the location of property lines across the road shall be shown

4. Name of street, both street right-of-way lines, and pavement location of any street abutting or within 50 feet of the property

5. The survey relationship of the property to the State of Connecticut grid coordinate system

6. Names of all subdivisions or owners of property abutting the property to be subdivided, including those across any street if the proposed subdivision abuts an existing street

7. Existing property markers and monuments

8. The Zoning District in which the property is located, and any Zoning District within 75 feet of the property

9. Any municipal boundary line on or adjacent to the subdivision

10. Any boundary line of the Lower Connecticut River Gateway Conservation Zone and/or the Coastal Boundary

11. Any building setback lines established by zoning, Town ordinance or other law

12. Existing open space for parks and playgrounds and other open space purposes, and the square footage and acreage thereof

13. restrictions on the use of the land, including easements and covenants

14. Any reserved areas for watercourses and wetlands protection or for conservation areas; and

15. Any encroachment lines along rivers and watercourses

d. Proposals for development of the subdivision as follows:

1. Proposed lots and lot numbers utilizing the Assessor's map and lot numbers, and the square footage and acreage of each lot with dimensions and areas

2. Proposed contours at an interval not exceeding two (2) feet, based on field or aerial survey, using the bench mark as required for Construction Plans in *Section 4.4.4;* in areas where there is no significant change in elevation over an extended area, spot elevations shall be shown

3. Proposed man-made features, including but not limited to buildings, structures, fences, retaining walls and the like

4. The location proposed for a building on each lot and a driveway, including floor elevations and driveway grades where necessary to demonstrate feasibility of use of the lot

5. Proposed property markers and monuments in accordance with *Section 6.11*

6. Location and dimension of proposed easements; notation of all proposed restrictions on the use of the land, including easements and covenants

7. Any required or proposed setback lines or buffers

8. Proposed streets and other rights-of-way, and the width thereof; location and width of street pavement

9. Existing and proposed storm drains, catch basins, manholes, ditches, headwalls, sidewalks, gutters, curbs and other drainage structures

10. The proposed location of any activity that is subject to the Inland Wetlands and Watercourses Regulations of the Town of Essex, including any relocation or construction for channels or watercourses

11. Water mains, hydrants and appurtenances; electrical and telephone lines

12. The location of any proposed on-site wells and subsurface sewage disposal systems

e. The following additional information:

1. Map information as required for a Coastal Site Plan under *Section 4.5.3*

2. Map information as required for a Sedimentation and Erosion Control Plan as specified under *Section 4.4.5*.

3. Signature blocks, as follows:

a. A signature block entitled “Soil Erosion and Sediment Control Plan certified by ----- “ with a place for signature of the certifying agent and date of signing

b. A signature block entitled “Approved by the Essex Planning Commission”, with a designated place for the signature of the Chairman/woman or Secretary and the date of the Commission vote to approve; and the words “Expiration date per *Section 8-26c, Connecticut General Statutes”*, with a designated place for such date

c. A signature block entitled "Approved by the Essex Board of Selectmen", with a designated place for signing and for the date of such action

d. A signature block entitled "Approved by the Essex Fire Marshal", with a designated place for signing and for the date of such action

e. A signature block entitled "Approved by the Essex Town Sanitarian", with a designated place for signing and for the date of such action

f. Such additional notes as may be required or approved by the Commission, such as restrictions pertaining to building lines, reserved areas, easements, solar access, fire protection, on-site sewage disposal and water supply and other features on the map.

4.4.4 Construction Plans:

Construction plans shall conform to the standards set forth in *Section 5 and 6* and in *Appendix A* of these Regulations for streets, sidewalks, storm drainage, water and sewer systems, and other improvements, and to any other such design and construction standards as may from time to time be adopted by a formal vote of the Commission, and incorporated into these Regulations.

a. Preparation: Construction plans, including details and specifications, shall be prepared by and shall bear the name and seal of a professional engineer, provided however, that particular elements of the plan, as authorized under *Section 4.3*, may be prepared by a land surveyor or other qualified professional.

b. Scale: Construction plan drawings shall have a horizontal scale of 1" = 40'; profile drawings shall have a vertical scale of 1" = 4'. Drawings of special structures and details may be prepared in other format acceptable to the Commission or its designated agent. Profile drawings, inverts, existing and proposed contours and key elevations shall be based on official Town, State or U.S. bench marks. The bench marks used shall be consistent among the plan sheets and shown on the plans.

c. General Format: All plans showing construction of subdivision improvements shall include the following elements: (1) an overall view, (2) profiles and cross sections, (3) a Grading Plan, according to *Section 4.4.6* and (4) Sedimentation and Erosion Control Plan, according to *Section 4.4.5.*

d. Specific Information: The following information shall be shown on the Construction Plans as applicable to a particular subdivision:

1. Existing and proposed contour intervals shown on construction plans shall not exceed two feet, and shall be the result of a topographic survey performed to the standards of Class A-2.

2. Streets:

    a. Street names; right-of-way lines, the edge and width of pavement; center line radius; stations at 50' intervals, low points, high points, points of curvature, points of tangency and at intersections

    b. Existing profile grades at the center line and both right-of-way lines

    c. Proposed profile grades along road centerline elevations, and at the low points, high points, points of vertical curvature (pvc), points of vertical intersection (pvi) and points of vertical tangent (pvt)

    d. Pavement radii at corners

    e. Length of vertical curves

    f. Typical street cross section, cross section at all cross culverts, cross sections where there are to be substantial cuts and fills affecting abutting property

    g. The location of lot lines intersecting the right-of-way line and the lot numbers of the lots

    h. Location of sidewalks, curbs and gutters, guide rails or posts, street lights, road monuments, traffic control devices, and signage

3. Drainage, sanitary sewers and pipe systems:

   a. Location, depth, invert, slope, frame and grade elevations, size and type of all pipes, culverts, manholes, headwalls, and catch basins, including offsets from street centerline

   b. Cross section, depth, slope and location of all natural and man-made watercourses, ditches and swales

   c. Water mains, valves and hydrants; sanitary sewers and appurtenances; house service connections and curb stops

4. Detail drawings of bridges, box culverts, deep manholes, retaining walls and other special structures.

5. Provision for control of erosion and sedimentation both during and upon completion of construction, in accordance with *Section 4.4.5.*

6. At intersections and other locations where there may be sight distance restrictions, a sight line demonstration may be necessary.

7. Drainage analysis map and computations to enable the Commission or its agent to review the drainage design and the sufficiency of downstream drainage systems to accommodate runoff from the subdivision; design for any temporary or permanent storm water detention or retention area.

8. A signature block entitled "Approved by the Essex Planning Commission" with a designated place for the signature of the Chairman/woman or Secretary and the date of signing.

4.4.5 Sedimentation and Erosion Control Plan:

a. A soil erosion and sediment control plan shall be submitted with the subdivision application in the following cases:

   1. When the disturbed area of such subdivision is cumulatively more than one half acre, or contains inland wetlands or watercourses;

   2. For any lot within the Lower Connecticut River Gateway Conservation Zone; or

   3. For any lot within a proposed subdivision which is within 50 feet of coastal resources, including rocky shorefront, coastal bluffs and escarpments, beaches, dunes and tidal wetlands, as defined in the Connecticut Coastal Management Act.

b. The plan shall include a map showing existing and proposed topography; location of any areas proposed to be cleared, stripped of vegetation and/or graded, or otherwise altered; location and design of structural control measures, including diversions, waterways, grade stabilization structures, debris basins and other measures; revegetation plans; and a schedule of

operations including sequencing of clearing, grading, installation of control measures, and revegetation. Design of control measures and operations shall be consistent with principles, methods and practices found in the "Connecticut Guidelines for Soil Erosion and Sediment Control" (1985), and amendments thereto.

c. The applicant shall provide a written report describing the project, the schedule of conservation practices, design criteria, construction details and the maintenance program for any erosion and sediment control facilities that are installed.

d. All development shall comply with the following guidelines:

1. Development shall be fitted to the topography and soils so as to create the least erosion hazard;

2. Natural vegetation shall be retained and protected wherever feasible;

3. Only the smallest practical area of land shall be exposed at any one time during development;

4. When land is exposed during development, the exposure shall be kept to the shortest practical period of time;

5. Temporary vegetation and/or mulching shall be used to protect exposed areas during development;

6. Sediment basins (debris basins, de-silting basins or silt traps) shall be installed and maintained to remove sediment from runoff waters and from land undergoing development where feasible and practical;

7. Permanent final vegetation and structural erosion control measures shall be installed as soon as practical in the development.

e. The soil erosion and sediment control plan may be incorporated on the Detailed Layout Map and/or Construction Plans.

f. Name of person responsible for implementing the Sedimentation and Erosion Control Plan.

4.4.6 Grading Plan

If not shown on the Construction Plans, a grading plan shall be prepared which shall show proposed new grading of the roadway and any drainage courses, proposed grading of all lots within the subdivision for which substantial topographic alteration is required in order to accommodate the proposed construction, and any other major grading, cuts, fills or soil or rock removal proposed in the subdivision.

a. The area shown on the grading plan may be limited to the portion of the subdivision affected by the proposed grading, cuts, fills, or soil or rock removal

b. The grading plan shall be shown at the same scale as the detailed layout map, and shall be prepared to similar standards of accuracy

c. Existing and proposed contours at intervals of two feet are required. If requested by the Commission, cross-sectional drawings of the area to be regraded shall be provided

d. The plan shall indicate the total volume and nature of material to be removed or deposited for road construction.

4.4.7 Future Development of Undeveloped Portion of a Tract/Phased Development:

If the proposed subdivision covers only a part of the record owner's or applicant's contiguous land holding, the applicant is encouraged to submit a schematic map showing the possible location of future streets, lot layout, and open spaces. The Commission will review the schematic plan in order to assist the applicant in providing the most efficient use of land in relationship to the surrounding area. This schematic map is for informational purposes only and shall not be binding on either the applicant or the Commission.

4.5 REPORTS

Reports required under this Section may be included as plan notes where appropriate, provided that all information is shown in a clear and legible form. The applicant shall submit six copies of all reports not included as plan notes.

4.5.1 Water and Sewer:

The applicant shall submit a written report, prepared and sealed by a professional engineer, currently licensed to practice in the State of Connecticut, or other qualified professional, describing the proposed water supply and method of sewage disposal for the subdivision. Prior to submission of the report to the Commission, the applicant shall secure endorsement of the report by the Director of Health of the Town of Essex or his/her designated agent, and from the Water Pollution Control Authority as required by State Statute.

4.5.2 Traffic Study:

For all residential subdivisions containing 25 lots or more, and for all non-residential subdivisions, the Commission may require the applicant to submit a traffic study describing the pedestrian and vehicular access to and within the proposed subdivision. In the case of resubdivision or phased development, previously approved lots shall be considered as part of the total when determining the need for a traffic study. Traffic studies may be required for subdivisions containing less than 25 lots, if the Commission determines that hazardous or unsafe conditions may be created or exacerbated by the proposed development. The report shall include traffic characteristics and level of service on existing streets affected by the subdivision, and any proposed measures to increase traffic safety and mitigate identified hazardous or unsafe conditions resulting from the subdivision. In preparing this report, the applicant shall be guided by the requirements of *Section 5* and *Section 6* of these Regulations.

4.5.2.1 Stormwater Runoff:

For all subdivisions involving the creation of new streets, the applicant shall provide a mapped and written description of all drainage measures, prepared by a professional engineer according to *Section 4.3.* The mapped description shall be shown in accordance with requirements for construction plans in *Section 4.4.4.* The written description shall identify the method used to calculate runoff, runoff characteristics of the property before and after development, drainage calculations, structural elements of the proposed drainage design, maintenance procedures, safety measures including fencing and trash racks, proposed landscaping and vegetative measures used to stabilize slopes and bottom surfaces, and proposed ownership of any structural elements, and all design and construction requirements in accordance with *Section 5.7* and *6.7*. All stormwater measures shall conform to standards as outlined in the *2004 Connecticut Stormwater Quality Manual* by the Connecticut Department of Environmental Protection as updated.

4.5.3 Coastal Management:

All subdivisions of land located fully or partially within the Coastal boundary, as defined in the *Connecticut General Statutes Chapter 444, Section 22a-94*, and indicated on the Essex Zoning Map, shall be subject to the coastal site plan review requirements, procedures and definitions set forth in Chapter 444, and with the following requirements of these regulations:

a. In addition to requirements set forth elsewhere in these Regulations, coastal site plan applications must include the following information:

    1. A plan showing the location and spatial relationship of coastal resources on and contiguous to the property proposed for subdivision

    2. A description of the location, design, and timing of construction of any subdivision improvements

    3. An evaluation of the capability of resources to accommodate the proposed use

    4. An evaluation of the suitability of the subdivision for the proposed site

    5. An evaluation of the potential beneficial and adverse impacts of the subdivision and a description of proposed methods to mitigate adverse effects on coastal resources

b. The applicant shall demonstrate that the adverse impacts of the proposed subdivision on coastal resources and future water dependent development opportunities are acceptable and that such activity is consistent with the goals and policies of the Coastal Management Act.

4.5.4 Flood Protection:

When a subdivision is proposed for land subject to flooding, as identified by the National Flood Insurance Program, the applicant shall supply written confirmation from the applicant's licensed professional engineer that utilities, water, sewage disposal systems and electrical service are located or designed so as to minimize or eliminate flood damage or infiltration. The applicant's engineer shall provide assurances that the flood carrying capacity is maintained within any altered or relocated portion of any watercourse. Flood protection measures shall be designed in accordance with the requirements of *Section 5.3.*

4.5.5 Energy Conservation:

The applicant shall submit a written statement describing the manner in which the proposed subdivision will utilize passive solar energy techniques, as required in *Section 5.4.* This report may be included as a note on the subdivision map where appropriate.

4.5.6 Purpose and Disposition of Open Space:

The applicant shall provide a written report describing any open space proposed in accordance with *Sections 5.8* and *6.12.* The written report will include a description of natural resources on the open space tract, proposed use of the tract, proposed ownership and management recommendations. A copy of any restrictive covenants and/or conservation easements shall be included in the report.

4.5.7 Archaeological and Historic Preservation:

The applicant shall provide a written description of any significant historical sites or buildings, identified archaeological sites, existing trails, stone walls, and unique natural features located on the property to be subdivided. The applicant shall include a written statement of any measures which will be taken to preserve important cultural and natural resources on the site. Suitable public access to any preserved feature may be required by the Commission.

4.5.8 Fire Protection:

The applicant shall provide a written report describing measures to be taken to provide fire protection to the subdivision, including fire access and water supply, in accordance with *Section 5.9.* The applicant shall supply written confirmation that the report has been reviewed by the Fire Department, either in the form of a letter from the Fire Department or by an endorsement of the written report by a designated representative of the Fire Department.

4.5.9 Other Approvals:

a. State Highway Connections:

Where a proposed street, driveway, or storm drainage system joins with a State Highway, the applicant shall present a copy of a letter or other document giving evidence that the construction plans have been submitted to the Connecticut Department of Transportation. CONN DOT approval shall be obtained and submitted to the Commission prior to the filing of the final subdivision mylars.

b. Other State and Federal Approvals:

In the case of any use, improvement, system, or facility requiring approval of any department or agency of the federal or state government not cited elsewhere in these Regulations, the applicant shall provide evidence of the approval from such department or agency, or a copy of a letter or other documentation showing that the applicant has applied for such approval.

4.6 LEGAL DOCUMENTS

All legal instruments related to roads, open space, drainage and other restrictions shall be submitted in duplicate as part of the subdivision application. All legal documents are subject to approval by the Town Counsel and the Commission.

4.6.1 Subdivision Submission:

Legal documents which must be submitted for Commission and Commission's Counsel review as part of the submission at time of application include, but are not limited to, the following:

a. Proposed deed for proposed open space areas

b. Proposed text of required easements of all types, including easements for storm drainage, conservation, utilities, access, temporary easements for construction purposes, and sloping rights

c. Organizational documents and by-laws for homeowners' association, when proposed

d. Any maintenance agreements

4.6.2 Final Approval Submission:

Legal documents which must be submitted prior to final approval of the subdivision and signing of the mylar by the Commission:

a. Deed for proposed roads

b. Deeds and/or easements for the proposed storm drainage system, including any necessary rights-to-drain onto private property

c. Documents required in *Section 4.6.1* in their final form

4.7 ADDITIONAL INFORMATION REQUIREMENTS

The Commission may require any other information necessary to establish that the proposed subdivision is in conformance with the purposes of these subdivision regulations, as established in *Section 1.2.*

4.8 WAIVER OF INFORMATION REQUIREMENTS

For all subdivisions, a waiver of specific information requirements of *Section 4* may be requested, in writing, prior to or simultaneously with the submission of a formal application. The Commission may grant the waiver request if it finds that the information for which the waiver is requested is not necessary to determine compliance with these subdivision regulations. Requirements of *Section 4.3* regarding professional assistance, and for the Key Map, Boundary Survey Map, Coastal Site Plan, Water and Sewer Report, and Sedimentation and Erosion Control Plan, where applicable, shall not be waived. When a waiver request is denied, the applicant shall provide the information requested no later than the next regularly scheduled meeting or the Commission, or at such later time as the Commission may allow.

SECTION 5 DESIGN REQUIREMENTS

5.1 GENERAL REQUIREMENTS

5.1.1 Plan of Conservation and Development:

Subdivisions shall be planned and designed in general conformance with the *Essex Plan of Conservation and Development,* adopted by the Planning Commission in accordance with *Chapter 126 of the Connecticut General Statutes,* particularly with regard to the following:

a. Location and classification of streets;
b. Provision of sewage disposal, water supply, drainage systems and service areas, and
c. Reservation of land for parks, recreation and open space.

5.1.2 Natural Features:

The planning and design of subdivisions, including streets, drainage and other improvements, and the layout of lots, shall provide for retention of the natural features of the tract:

a. By avoiding excessive cuts, fills and regrading which result in potential soil erosion, tree and other vegetation removal, and disturbance to water resources

b. By maintaining water courses and wetlands in their natural location and avoiding relocation of and encroachment thereon

c. By retention and protection of large specimen trees and forested areas

d. By management of coastal natural resources in a manner consistent with the policies of the *Chapter 444 of the Connecticut General Statutes,* in accordance with *Section 4.5.3* of these Regulations.

5.1.3 Historic Preservation:

Subdivisions and resubdivisions shall be laid out to preserve, to the greatest extent possible, significant historic sites and buildings, identified archaeological sites, and other cultural resources such as stone walls and existing trails. Suitable public access to any preserved feature may be required by the Commission.

5.2 LOTS

5.2.1 Building Lots:

Proposed building lots shall meet all requirements of the Town of Essex Zoning Regulations. In addition, in accordance with CGS 8-25, all building lots shall be of such shape, size, location, topography, accessibility and character that said lots can be occupied and used for building purposes without danger to the health and safety of the occupants, the neighborhood or the general public. Any proposed lot which is found to be unsuitable for occupancy and building by reason of water or flooding conditions, unsuitable soils, topography, ledge rock or other adverse conditions shall be combined with another contiguous lot that is suitable. Proposed building lots shall be planned as follows:

a. To make best use of the natural terrain; to preserve natural features, including substantial trees, woods, rock outcroppings, views and vistas, water features and the like;

b. To be capable of use without extensive filling, excavation, or regrading which would result in potential erosion and sedimentation, excessive vegetation removal, or substantial alteration of natural drainage patterns;

c. To be capable of accommodating buildings as permitted by the Essex Zoning Regulations, together with driveway access, parking spaces and suitable sites for on-site sewage disposal and water supply where required, without disturbing wetlands and watercourses unless authorized by the Essex Inland Wetlands and Watercourses Commission; and

d. To be laid out in such a way as to maximize potential use of passive solar energy design techniques, as defined in the *Connecticut General Statutes*, to the extent practicable.

5.2.2 Lot Size:

Each lot shall conform to the minimum acreage requirements of the Essex Zoning Regulations unless required by these Regulations to be larger because of natural conditions affecting public health and safety, including accommodation of on-site sewage disposal and water supply systems.

5.2.3 Lot Numbers:

All lots numbers shall be assigned by the Essex Zoning Enforcement Agent to conform with the town's lot numbering system, prior to filing the approved plan with the Town Clerk.

5.2.4 Lot Frontage:

All lots shall have frontage consistent with the Essex Zoning Regulations, on either an existing approved street or upon a new street to be created as part of an approved subdivision plan.

5.2.5 Minimum Square:

All lots in a subdivision shall be of such shape that a square equal to the "minimum lot width" of each side can be placed within the boundary lines of the lot. The "minimum lot width" is as set forth in the Essex Zoning Regulations.

5.2.6 Lot Access/Driveways:

Each lot shall be capable of being accessed by an individual driveway located at the designated lot frontage, except in cases where the Commission determines that a combined driveway serving more than one lot will reduce traffic conflicts or preserve significant natural features.

5.2.7 Lot Lines and Town Boundaries:

In general, lot lines shall be laid out so as not to cross Town boundaries.

5.2.8 Bodies of Water:

If a tract of land being subdivided contains a body of water or portion thereof, including a dam or other structure, the Commission may require that the lot lines be drawn so as to place the entire ownership and burden of maintenance of the body of water and dam or other structures in undivided ownership.

5.3 FLOOD PROTECTION

5.3.1 When the subdivision includes land in a Special Flood Hazard Area (SFHA) or regulated floodway, all site plan maps shall provide the boundary of the SFHA, the floodway boundary, and base flood elevation *(see also 4.5.4)* and the lots, streets, drainage and other improvements shall be reasonably safe from flood damage and shall conform to the following:

a. Lots and improvements shall be consistent with the need to minimize flood damage within Special Flood Hazard Areas and shall be capable of use without damage from flooding or flood related damage. All proposed lots or parcels that will be future building sites shall have the minimum buildable land that meets the requirements of the specific zoning district within which the project is located. The intent is that lots be large enough to accommodate any primary structures and associated structures such as sheds, barns, swimming pools, detached garages, on-site sewage disposal systems, and water supply wells (if applicable) outside of Special Flood Hazard Areas.

b. All utilities and facilities, such as sanitary sewer systems, water supply systems and electric and gas systems, shall be located and constructed to minimize or eliminate flood damage. Water supply and sanitary sewer systems shall be designed to minimize or eliminate both infiltration of flood waters into such systems and discharges from such systems into flood waters.

c. The Commission shall require written assurances prepared by and bearing the seal of the applicant's licensed professional engineer that utilities, water, sanitary sewer systems, and electrical service can be located or designed so as to minimize or eliminate flood damage or infiltration and is in compliance with the National Flood Insurance Regulations.

d. Where feasible, all proposed new streets (surfaces and base) shall be elevated above the published or computed flood elevation. The Commission shall require that in any subdivision with a single access way, the road shall be constructed above the published or computed base flood elevation as established by the Flood Insurance Study Town of Essex Connecticut dated March 4, 2986, the Flood Insurance Rate Maps, and any subsequent revisions thereto.

e. In all special flood hazard areas where base flood elevation (BFE) data are not available, the applicant shall provide a hydrologic and hydraulic engineering analysis that generates base flood elevations for all subdivision proposals and other proposed development which are five (5) acres.

5.4 ENERGY EFFICIENCY

Pursuant to *Section 8-25 (b) of the Connecticut General Statutes*, the applicant shall demonstrate to the Commission that in developing the subdivision plan, consideration has been given to the use on each lot of passive solar energy techniques that would not significantly increase the cost of use and occupancy of the lot. Passive solar energy techniques are subdivision or site design techniques which a) maximize solar heat gain, minimize heat loss and enable thermal storage within buildings on each lot during the heating season and b) minimize heat gain and provide for natural ventilation during the cooling season.

5.5 STREETS

5.5.1 Street Planning:

Proposed streets shall be planned in such a manner as to provide safe and convenient access to proposed lots, and safe and convenient circulation for present and prospective traffic within the neighborhood where the subdivision is located. In planning streets, due consideration shall be given to accomplishing an attractive layout and development of the land.

Grid layouts shall be avoided, and wherever feasible, streets shall follow a gently curving alignment compatible with the terrain, and which preserves substantial trees, woods and other natural features. If in the opinion of the Planning Commission the proposed streets require excessive grading and/or clearing so as to have an unfavorable impact on the environment, the Commission may require the applicant to take mitigating measures including, but not limited to, street redesign and lot reduction.

5.5.2 Reverse Frontage:

Wherever practicable, lots adjacent to a State Highway, Arterial or Collector Street, as defined in *Section 2,* shall have their frontage reversed and shall front on a street one lot depth removed from the state highway or town road, or shall front on an intersecting side street. Reverse frontage lots which have their rear lot line adjacent to a State highway or town road right-of-way shall have a buffer zone a least ten feet wide along the property line abutting the road right-of-way. The Commission may require that buffer zones contain a fence, wall, stream, hedge, dense trees or other suitable deterrent to access.

5.5.3 Connection to Existing Streets:

All subdivision streets shall connect directly to one or more accepted town roads or state highways. Subdivisions containing more than 25 lots shall have at least two direct connections to one or more accepted public roads, unless waived by the Commission. In the case of resubdivision or phased development, previously approved lots shall be considered as part of the total number of lots in determining the need for a second direct connection.

5.5.3.1 Access from another municipality:

Whenever access to the subdivision is required across land in another municipality, the Commission may request assurance that access is legally established and that the access road is adequately improved, or that adequate security has been posted in a form acceptable to the Commission and is sufficient in amount to guarantee the construction of the access road.

5.5.4 Future Street Connections:

Streets shall be laid out to provide connections with existing streets on adjacent properties where appropriate, and also with proposed streets that may be provided for in the *Plan of Conservation and Development.* When a subdivision adjoins undeveloped land, its streets shall be laid out so as to provide suitable future street connection with the adjoining land where it appears probable that the latter could be subdivided. Proposed streets which may be projected into adjoining properties shall be carried to the boundary line. Rights-of-way for future streets shall have proper width for the street classification, with suitable sloping and drainage rights, and shall be conveyed by warranty deed to the Town of Essex.

5.5.5 Street Widening:

a. No increase in width of a street right-of-way will be permitted beyond the minimum width specified in these Regulations, when the purpose of such widening is to create additional street frontage for additional proposed lots.

b. Where the proposed subdivision abuts an existing town street which does not have the minimum right-of-way width required in *Section 5.5.8,* the applicant shall convey to the Town sufficient land along such road as to permit its widening to conform to Town standards. The applicant shall also convey any necessary drainage easement or sloping rights necessary to improve the road to town road standards. Where the Commission determines that the condition of the existing road is such that the approval of the subdivision could result in a potential safety hazard, the Commission may require that the applicant make improvements to the existing town road to assure the safety of the residents of the new subdivision.

c. When the property to be subdivided abuts a state highway, the applicant may be required to convey land for road widening, or easements for drainage or grading purposes to the Town of Essex or the state of Connecticut as appropriate.

d. Where a proposed street right-of-way is located adjacent to a property boundary, which property is not owned by the subdivider, the right-of-way shall have extra width or area necessary to accommodate all road construction within the right-of-way without encroachment on the adjacent land. The requirement may also be met by the acquisition of construction easements and sloping rights from the adjacent land owner, provided that the rights are in a form approved by the Commission.

5.5.6 Street Names:

Streets which are designed to connect and align directly with other streets shall bear the same name. No duplication of street names shall be permitted, and similar sounding names shall be avoided. Street names shall be appropriate to the character of the Town and, wherever possible, shall reflect the geographic or historic aspects of the area in which the street is located. All street names are subject to the approval of the Commission.

5.5.7 Street Classifications:

The classification of streets shall be determined by the Planning Commission. All proposed streets in the subdivision and any existing street abutting the subdivision shall be classified as one of the following:

a. Collector Arterial (CA) Street: In general, a street which forms part of the intratown network, carrying traffic from one part of town to another or to other towns; or if the street is intended to accommodate traffic to and from commercial or industrial areas.

b. Residential Collector (RC) Street: In general, a street which carries primarily through residential traffic; if it serves as a collector for Light Residential Streets; or if the density in the neighborhood is such as to require on-street parking.

c. **Light Residential (LR) Street:** In general, a street which serves a residential area and is not intended to handle through traffic; if it serves as an interior street in a subdivision and connects Residential Collector or Collector Arterial Streets; if the density in the neighborhood is such as not to require on-street parking.

d. **Private Street:** In general, a private street is a street owned and maintained by a legally constituted homeowners' association, and constructed in accordance with the standards for private streets which are part of these Regulations.

e. **Dead End Streets:** Cul-de-sacs, streets closed at one end by building lots, and which will not be extended in the future, shall meet design standards for Light Residential Streets. Dead end streets in general shall not exceed a length of 1,500 feet in extreme length, with the following exceptions:

1. Temporary dead end streets, which may be projected into adjoining property at some future date, may exceed such length but shall not exceed a reasonable interim length for safe and convenient vehicular access, including emergency vehicles, as determined by the Commission.

2. Where, in the opinion of the Commission, public safety can be assured through incorporation into the subdivision design of intermediate rotaries or other devices to relieve traffic congestion and provide safe access for fire and emergency services.

5.5.8 Street Pavement and Right-of-Way Widths:

Street Classification	Width of R-o-W	Width of Shoulder	Width of Pavement (face of curb to face of curb)
Collector Arterial	50	8	30
Residential Collector	50	8	22-24*based on site Conditions & lots served
Light Residential	40	4	22
Private Street	30	2	18-20*based on site Conditions & lots served

a. **Right-of-Way width:**

Right-of-way widths shall be as listed above, unless an alternative width is approved by the Commission's engineer or other authorized agent to accommodate field conditions. Widths in excess of the above minimum for

the right of way may be required to accommodate unusual construction features such as deep cuts or fills, as well as other safety considerations. In cases where the required minimum presents a hardship, the adjoining land may be subjected to a “right to slope” where approved by the Commission’s engineer. The Commission shall approve the provisions, wording and manner of showing said “right to slope”.

b. Clearing of the Right-of-Way:

Clearing within the right-of-way shall be the minimum necessary to construct improvements and establish adequate sight lines, as determined by the Commission’s engineer or other authorized agent.

5.5.9 Street Alignment, Gradient and Sight Distances:

Street alignment and sight distances shall be based on a design speed of 35 mph for CA Streets and RC Streets, 25 mph for LR Streets, 20 mph for Private Streets, regardless of posted speed.

Street Classification	Minimum Radius Horizontal Curves	Maximum % of Grade	Minimum Stopping Sight Distance
Collector Arterial	200	10	250
Residential Collector	150	12	200
Light Residential	125	12	150
Private Street	*	*	

* **Private Street standards** are variable with approval of the Planning Commission’s engineer or other authorized agent, to accommodate field conditions; however, unless otherwise specified or authorized, Private Streets will meet the standards for Light Residential Streets.

a. Horizontal alignment: Changes in horizontal alignment shall be connected by curves with a center line radius in accordance with the above table. Any abrupt reversal in horizontal alignment should be avoided. There shall be a minimum tangent distance of at least 100 feet between reverse curves for LR Streets, and 150 feet for all other street classifications, except that horizontal alignment for Private Streets may be adjusted according to terrain and design speed with the approval of the Commission’s engineer.

b. Vertical alignment: Changes in vertical alignment shall be connected by vertical curves to insure adequate sight distance in accordance with the design speeds and minimum stopping distances specified above. Vertical curves shall have a minimum length of at least 100 feet; except that vertical alignment for Private Streets may be adjusted according to terrain and design speed with the approval of the Commission’s engineer.

c. Grade: The maximum grade shall be as shown above. A minimum grade of 1.0% is required for drainage purposes.

5.5.10 Intersections:

a. No more than two streets shall intersect at any one location.

b. Intersections of two LR Streets shall be spaced not less than 150 feet apart measured between center lines. Intersections of all other street classifications shall be not less than 400 feet apart, measured between center lines, unless otherwise approved by the Commission's engineer.

c. Except where impractical because of topography or other conditions, LR Streets shall be perpendicular to intersections for a distance of at least 100 feet, and RC and CA Streets shall be perpendicular to intersections for at least 150 feet. Intersections may be up to 25 degrees off square where permitted by the Planning Commission.

d. The minimum radii of curb lines shall be not less than 20 feet at the intersection of two LR Streets, not less than 25 feet at the intersection of LR streets with other street classifications, and not less than 35 feet for all other intersections. The Commission may require greater radii where the angle of intersection is less than 90 degrees.

e. At intersections, the gradient of proposed streets for a distance of not less than 100 feet from the center of the intersection, shall not exceed 2% for CA Streets, 3% for RC Streets, and 4% for LR and Private Streets.

f. Intersections shall be planned and located to provide as much sight distance as possible. The visibility at intersections shall be such as to allow a stopped vehicle on the intersecting roadway to see, and be seen from, a vehicle approaching from either direction along the intersected roadway at a distance of not less than 200 feet for LR Street intersections, and greater distances for other types of intersections based on design speeds. A sight line demonstration plan may be required by the Commission's engineer.

5.5.11 Turnarounds:

A turnaround shall be provided at the closed end of all permanent or temporary dead end streets. The turnaround shall be either of the following designs:

a. A thermometer type with a minimum right-of-way radius of 60 feet and a minimum paved radius of 50 feet, or a hammerhead type, as approved by the Commission's engineer. Right-of-way for a turnaround on a temporary dead end street shall be provided by means of a temporary easement accompanied by a notation on the subdivision map providing for automatic termination of the easement upon extension of the street (See Appendix A); or

b. A hammerhead type with a 50 foot minimum backing area (See *Appendix A)* if approved by the Fire Marshal, School District, Essex Highway Department, and Town Engineer.

5.5.12 Curbing:

Curbs shall be constructed along the edge of street pavement of all streets, unless waived by the Commission's engineer. Where curbing is not required, swales must be constructed to direct storm drainage to a suitable discharge location away from the road. Curbing shall be modified Cape Cod curbing (See Appendix A.)

5.5.13 Shoulders and Slopes:

a. Use of Shoulders as Drainage Swales: Where swales are approved by the Commission's engineer to carry off storm water, such swales shall be not less than six feet wide and of sufficient depth to carry off storm water expected in a 50 year storm. Where high runoff velocities can be anticipated, the swale shall be stabilized with stone or riprap. No driveway shall cross a drainage swale unless provision is made through piping or grading not to impede flow of runoff.

b. Slope Grading: Within shoulder areas, land shall be graded so as to slope toward the curb where the road is in cut or away from the curb where the road is in fill. In either case, the cross slope of the shoulders shall be one half inch per foot. Areas outside of the shoulders shall be graded up or down to existing grades, at a slope not greater than two feet horizontal to one foot vertical, unless other structural measures are provided to retain the slope. In rock cuts, slopes of one foot horizontal to not more than six feet vertical shall be allowed, but care shall be taken to insure that all exposed rock is stable and free from faults, cracks or other infirmities which might lead to collapse or flaking. The Commission may require a decrease in the amount of slope to whatever extent necessary to maintain stability of cut slopes under soil conditions encountered during construction.

c. Slope Rights: No cut or fill slopes shall extend beyond the limits of the right of way onto private property unless appropriate slope rights are acquired which provide a perpetual right, running with the land in favor of the Town of Essex, to enter upon said private property for purposes of constructing, maintaining and repairing such slopes. In the absence of slope rights, appropriate retaining walls shall be constructed to prevent encroachment on adjoining private property.

5.5.14 Guide Rails:

Guide railing shall be installed wherever necessary for safety purposes, including along all streets where there will be an embankment with a depth of four feet at the toe of the embankment slope, unless the slope is less than 4:1. Guide rails shall also be installed at all culverts. Guide rails shall conform to current CONNDOT standards unless otherwise approved by the Board of Selectmen.

5.5.15 Street Lighting:

a. Location: Road lighting shall be provided if required by the Commission at any location where illumination is necessary to minimize the risk of accident involving vehicles or pedestrians or to assure safe and convenient vehicle and pedestrian passage.

b. Type: Lighting standards and luminaries shall be of such type and design and shall be so located as to safeguard against discomfort glare and disability glare and avoid adverse effects from illumination upon the use, enjoyment and value of adjacent property.

5.5.16 Street Name Signs, Traffic Aids, and Regulatory Signs:

a. When required by the Commission, street name signs shall be installed at all intersections. Such signs shall be designed and erected in such places and manner as to assure clear legibility by vehicle operators and shall conform to the size and design currently in use by the town.

b. When required by the Commission, stop signs, dead-end signs, caution signs and other traffic regulatory devices and aids shall be provided in such places as may be necessary to minimize the risk of accidents involving vehicles or pedestrians or to assure safe and convenient vehicle and pedestrian passage. Such traffic regulatory devices shall conform to the most current State standards with respect to design, construction and placement.

c. At its discretion, the Town of Essex may provide and/or install necessary new road signage, and may charge the developer for the cost of procurement and installation of road signs.

5.5.17 Location of Utilities:

Utility lines, whether above or below ground, should be located so as to minimize the need for later adjustment and to permit servicing with minimum interference to street traffic. Longitudinal installations should be placed within the road right of way, outside of the curb or edge of paved portion of the roadway, as close as possible to the right of way line. If sidewalks are present, utility lines should be located at least one foot behind the outside edge of the sidewalk. Facilities under the pavement should be limited to lateral service connections whenever possible. If a need for additional utility lines are anticipated in the future, utility sleeves shall be placed under the full width of the pavement before placing the pavement.

5.5.18 Additional Requirements for Streets:

Additional requirements for street design and construction are set forth in *Section 6.5,* and shown on Standard Detail Drawings in *Appendix A.*

5.6 PROVISION OF WATER AND SEWER

Each lot shall be capable of being provided with adequate and safe means of sewage disposal and water supply on a continuous, long term basis to meet the requirements of uses permitted on the lot under the Zoning Regulations for Essex, Connecticut.

5.6.1 Water Supply:

a. The Commission shall require public water supply connections and/or extensions to be made available to each lot in any subdivision which is either

   1. Located within an area currently served by an existing public water supply system, or

   2. Where any part of the land being subdivided is located within 200 feet of the nearest existing public water supply service line.

b. Where such service is available, each lot shall be served by and provided with a curb connection to a central water supply system. Such system and connection shall meet all the technical and administrative requirements of the Director of Health of the Town of Essex, the State of Connecticut, and the utility company providing the service. The Commission may approve individual private wells if it determines that a central water system is not available or cannot reasonably be provided or extended by the applicant to serve the lot. The Commission may also approve a community water system in accordance with all requirements of the Connecticut Public Health Code.

   1. If a public water supply is to be used for the subdivision, the applicant shall submit written evidence of agreement by the water company to provide a safe and adequate public water supply.

   2. If private water supply wells for individual lots are proposed, the applicant shall submit a written statement from the Director of Health, Town of Essex, or his designated agent stating that the protective well radius required by the Connecticut Public Health code, latest revision, or the Ordinances and Special Acts of the town of Essex, whichever are more restrictive, shall be entirely located on the lot served by such a well. However, the well separation distance may infringe upon roadways, designated open space and conservation easements.

   3. For any subdivision in which private water supply wells are proposed, the Commission may require a water study, prepared by a certified hydrogeologist, addressing the adequacy of ground water supplies and the effect of the proposed subdivision on surrounding wells.

5.6.2 Sewage Disposal:

A private subsurface sewage disposal system shall be provided for each lot in accordance with the Connecticut Public Health Code, latest revision, or the Ordinances and Special Acts of the Town of Essex, whichever is more restrictive. The Commission may allow a community sewerage system as described in the *Connecticut General Statutes Section 7-245, 7-246 and 7-246F* (or subsequent updates) and approved by the Connecticut Department of Environmental Protection, the Essex Director of Health, and the Essex Water Pollution Control Agency.

a. For all lots, soils tests shall be required in accordance with *Section 6.3.1* of these Regulations. Written evidence must be submitted that the subsurface sewage disposal system proposal is acceptable to the Essex Director of Health or his authorized agent.

b. For lots in Flood Hazard Areas, the applicant shall submit a report by a professional engineer, currently licensed in the State of Connecticut, giving assurances that each lot is capable of accommodating on on-site sewage disposal system in a manner that avoids impairment of the system and contamination from the system as a result of flooding.

5.7 STORM DRAINAGE

Storm drainage shall be designed and constructed to be capable of accommodating additional runoff which can reasonably be expected to result from future development of the upstream drainage area. Due consideration shall be given to minimizing the disruption of existing drainage patterns.

The design engineer shall evaluate and comment on the consequences of failure of the proposed drainage design. Where the proposed development is likely to cause an increase in the volume or rate of stormwater runoff so as to overload the existing drainage system, causing flooding and damage downstream, measures shall be taken by the developer to prevent or alleviate such harmful effects. Such measures may include runoff retardation by vegetative plantings, stormwater detention or retention basins, replacement of existing inadequate downstream drainage structures and facilities, erosion protection, and other measures deemed effective by the Commission or its engineer. All stormwater shall be collected, retained, or discharged according to the recommendations and standards as set forth in the 2004 Connecticut Stormwater Quality Manual by the Connecticut Department of Environmental Protection (as updated.)

5.7.1 Discharge:

All storm water from the subdivision shall be discharged only into Town or State drainage facilities with adequate capacity to carry the additional water. Where the discharge is onto private property adjoining the subdivision, proper easement and discharge rights shall be secured by the applicant prior to approval of the subdivision plan. Discharge shall be designed with particular regard to discharge points and velocities, and in a manner that protects streams and wetlands from pollution and flooding due to increase in runoff. Where the developer is unable to

obtain the required easements, the subdivision shall be designed to detain any increase in rate of runoff due to development on the site.

If in its judgment there will be no substantial danger from soil erosion to the public health and safety, the Commission may approve, on lots of one acre or larger, the discharge of storm water in open ditches, swales, or detention basins, except that such structure shall not be located in that portion of the lot customarily used for front and side yards, or which might be used for on-site sewage disposal or water supply systems.

5.7.2 Diversion Prohibited:

In general, stormwater runoff shall not be diverted from one watershed or watercourse to another.

5.7.3 Channel lines:

Channel and building lines shall be provided along any major stream or river for the purpose of preventing encroachment upon and constriction of the natural water channel by buildings, filling operations or other facilities and construction. The width of the channel shall be based on sound engineering calculations anticipating major storms (100 year frequency) and flow potentials, and recognizing proper alignment and gradients of the channel. A note shall be placed on the subdivision plan explaining the channel and building lines and stating the restrictions against encroachment upon the channel.

5.7.4 Design Capacity

Pipe design for residential drainage systems shall be based on 10 and 25 year storms. Pickups and lines contributing to collectors may be designed on the basis of a 10 year storm; collector lines, discharge lines, ditches and channels shall be designed on the basis of a 25 year storm. Encroachment lines on existing streams shall be based on a 50 year storm frequency where culverts are installed for a road crossing of the stream. All structures designed for a 50 year storm or greater flood must incorporate allowances for sufficient freeboard or overflow facilities. Drainage systems to accommodate commercial or industrial areas shall be designed on the basis of a 25 year storm frequency.

a. Capacity within Roadway: Storm drainage systems within the roadway, exclusive of culverts and bridges carrying flows under the road, shall be designed so that no flooding or damage will occur from a storm having a ten year frequency of surface runoff.

b. Capacity Under Roadways: Culverts crossing under roads shall be designed to safely accommodate the following flows:

1. Flows resulting from storms having a 25 year frequency without causing the depth of the headwater pool to exceed 1.5 times the height of the culvert barrel or flooding of the roadway or adjacent buildings, sewage disposal systems and water supply systems; and

2. Flows resulting from 100 year frequency storms without causing damage or flooding of buildings, sewage disposal systems, water supply systems, or causing damage to the culvert or roadway.

c. Capacity Under Bridges: Bridges over watercourses shall be designed in accordance with the required capacity under roadways. In addition, bridges shall have a minimum underclearance (water surface to closest bottom projection of bridge) of one foot at the design flow.

5.7.5 Computing Stormwater Flows:

a. Method: Stormwater flows may be computed by use of the Rational Method or by use of the methods described in the most current edition of the U.S. Soil Conservation Service Technical Release No. 55. In general, use of the Rational Method is discouraged for use in computing flows from drainage areas in excess of 200 acres or for flows from 100 year frequency storms. Other methods of computing stormwater flows may be used provided they conform to sound engineering practice. Where computerized hydrologic models are utilized for analysis and design, the developer's engineer shall provide documentation of the computer program and the method it is based upon.

1. When the Rational Method formula is used, Hartford rainfall intensities shall be used. Runoff coefficients shall be computed in accordance with Appendix A Tables.

5.7.6 Minimum Pipe Size and Slopes:

Culverts under roadways which are open at both ends shall have a minimum diameter of twenty-four inches. All other piping carrying surface drainage and groundwater shall have a minimum diameter of fifteen inches. Minimum slope of pipe is .5%.

5.7.7 Catch Basins and Drop Inlets:

a. Location: Catch basins, or drop inlets (catch basins without sumps) where permitted, shall be provided so that no one catch basin will collect storm water in excess of three cubic feet per second. Slope, width of storm water in gutters, velocity of flow, type of catch basin top, area being served, as well as other factors must be considered in the design. In general, this will produce a spacing of 350 feet on roads with grades up to and including 5%, and not more than 250 feet on roads with grades over 5%. Catch basins, or drop inlets where permitted, shall also be installed at all low points and at all corners of intersections.

b. Debris and/or Sediment: Drop inlets shall not be used where the potential exists for debris and/or sediment entering the drop inlet to clog the storm drainage piping.

c. **Catch Basins and Drop Inlets:** All catch basins and/or drop inlets shall be designed in accordance with the standards in the *2004 Connecticut Stormwater Quality Manual by the CT DEP as updated.*

5.7.8 Manholes:

In general, a manhole is less preferable to a catch basin or drop inlet and should only be provided where the use of a catch basin or drop inlet is not feasible. Manholes shall be provided at each change of drainage pipe slope or alignment, at all pipe junctions and otherwise at intervals of approximately 350 feet long on lengths of pipe where catch basins or drop inlets are not used.

5.7.9 Open Channels:

Where open channel flow is required, the channel shall be properly designed to safely carry the design flow. Open channels shall be in the form of a trapezoid having a bottom width of at least two feet and side slopes of not less than two feet horizontal to one foot vertical. The channel shall be seeded, sodded, riprapped or otherwise stabilized as the flow quantities and velocities require. Special attention shall be given to the stabilization of open channels in the immediate vicinity of pipe inlets and outlets, bridges, at bends and curves and at other critical locations as required to prevent scouring, erosion and/or siltation of watercourses and culverts and undermining of drainage structures.

5.7.10 Underdrains:

The installation of underdrains will be required beneath the edge of pavement of a proposed street whenever the ground water is known to be less than three feet below the proposed finished grade of the street, or as otherwise required by the Commission's engineer. The Commission may require underdrains to be installed where localized seeps or springs are observed within the proposed street lines during construction.

5.7.11 Additional Requirements:

Additional requirements for design and construction of stormwater runoff measures are set forth in *Section 6.7* and Standard Detail Drawings in *Appendix A.*

5.8 OPEN SPACE

Land for parks, playgrounds, recreation areas and open spaces shall be provided and reserved in each subdivision as deemed necessary and in locations deemed proper by the Commission. The land reserved shall be of such suitable area, dimensions, topography and natural character as to satisfy the open space needs determined by the Commission. Such needs may include, but are not limited to the following:

a. Preservation of natural resources such as, but not limited to, unusual topography, wetlands, aquifers, agricultural land, wildlife habitat, visual corridors and vistas;

b. Retention of natural drainage ways;

c. Avoidance of undifferentiated sprawl patterns, provision for visual edges, focal points and centers to enable people to relate to their surroundings and to integrate or separate various types of uses and activities;

d. Provision for passive and/or active recreation;

e. Enhancement of historic and cultural activities and locations; and

f. Maintenance of scenic quality.

The reservation of land shall conform, to the greatest extent possible, to any plan of development for parks, playgrounds, recreation land, conservation or open space which has been formally adopted by the Planning Commission or by the Essex Conservation Commission.

5.8.1 Open Space Dedication Requirement:

In determining the need for reservation of open space, the Commission shall be guided but not limited to a standard of 20% of the land area of the subdivision, and a minimum reservation area of one acre. Inland and tidal wetlands shall not be included as meeting of the open space area requirement. The Commission may determine that a lesser area is sufficient to satisfy the need for such open space within the subdivision or that such reservation is not feasible because a) adequate existing parks, playgrounds, recreation areas and open space are available in the neighborhood; or b) there is no land in the subdivision suitable for such reservation.

5.8.2 Access and Location:

The area or areas reserved for open space shall be laid out so as to be used in conjunction with similar areas of adjoining subdivisions or of probable future subdivisions. Open spaces shall be easily accessible and shall be situated so as to preclude grouping of lots and open spaces in the extremities of the property. The Commission may require that proper pedestrian and vehicular access be provided for each such reservation.

5.8.3 Coastal Waterfront Sites:

In such cases where the proposed subdivision site abuts coastal waters, the Commission may require such open space in the form of public access to and along the waterfront.

5.8.4 Methods of Open Space Reservation:

Open space areas shall be permanently reserved for the designed use by means acceptable to and approved by the Commission, in accordance with Section 6.12.

5.8.5 Fee-in-lieu of Open Space:

In lieu of the above requirement to provide open space, the Commission may, at its discretion, approve the payment of a fee to the municipality by the applicant, or may approve the payment of a fee to the municipality and transfer land to the municipality by the applicant in accordance with the provisions of *Section 8-25 of the Connecticut General Statutes.*

5.8.6 Other requirements:

Additional requirements for provision of open space are set forth in *Section 6.12.*

5.9 FIRE PROTECTION

In order to assure that all new developments have an adequate water supply for the purposes of fire protection, the Commission shall require that all subdivision applications be reviewed by the Essex Fire Department and the Essex Fire Marshal. The applicant shall be required to demonstrate that such water supply meets or exceeds the minimum requirements as set forth in National Fire Protection Association (NFPA) Standard 1141 (Standards for Fire Protection in Planned Building Groups) and National Fire Protection Association (NFPA) Standard 1231 (Water Supplies For Suburban and Rural Firefighting).

a. All underground water storage tanks shall have a minimum capacity of 20,000 gallons, and their design, location and capacities shall be approved by both the Essex Fire Company and the Fire Marshal's Office. **After subdivision approval, any change in the location of a fire tank shall also be approved by the Planning Commission prior to the installation of the tank. See Appendix A for typical tank design requirements.**

b. Such required water sources shall be installed at the expense of the developer and the cost of such shall be included within any bond. Such water sources are to be installed prior to the issuance of any Certificate of Occupancy on new dwellings within the subdivision.

c. The applicant shall identify the person or organization responsible for all maintenance of water supply facilities.

SECTION 6 IMPROVEMENTS/CONSTRUCTION REQUIREMENTS

6.1 GENERAL REQUIREMENTS

6.1.1 Applicable Standards:

Proposed subdivisions and resubdivisions, and all streets, storm drainage and other improvements required by these Regulations shall be designed and constructed in accordance with the following standards specified in these Regulations; all applicable Ordinances and Special Acts of the Town of Essex; the Connecticut Public Health Code, latest revision; Connecticut Department of Transportation Standards for Roads and Drainage, and other codes and standards which may be incorporated by reference within these Regulations. Whenever there is a conflict among the standards cited herein, the most stringent requirement shall govern.

6.1.2 Alternate Construction Standards:

The Planning Commission may approve alternative construction standards if all of the following conditions are met:

a. Such standards are prepared by a professional engineer, currently licensed in the State of Connecticut, with experience in the field of stormwater runoff and municipal and highway engineering; and

b. Such standards do not conflict with the requirements of other Town, State or Federal regulatory bodies, unless exceptions are granted thereunder; and

c. Such standards can be shown to be equal or superior to the requirements contained herein; and

d. The Commission's designated reviewing engineer recommends in favor of use of the alternate standard; and

e. Such standards will be in accord with the purpose and intent of these Regulations as may be determined by a majority vote of members of the Planning Commission present and voting.

6.1.3 Site Disruption and Restoration:

Insofar as possible, natural vegetation and unusual topographic features shall not be disturbed during construction. Upon completion of improvements, and prior to release of the construction bond in its entirety, the developer shall be required to properly grade any disturbed land to dispose of undesirable surface water, remove all brush and debris created by human intervention, and grade and seed all open or disturbed areas to field grass. All temporary ditches shall be filled; all sewer lines, drains, catch basins and manholes shall be cleaned and flushed; all streets, walks, curbs and other structures shall be cleaned and repaired; and the whole site shall be left in a neat and clean condition.

6.1.4 Disposal of Construction Debris:

No onsite burial of construction debris, brush or stumps is permitted, except that large boulders and other earth materials may be disposed of on site only with the explicit written approval of the Commission. Any area used for disposal of large rocks or other earth materials shall be shown and designated on the subdivision plan as a “rock disposal area”.

6.2 REQUIRED EASEMENTS

Easements for access to and use of land outside a street right-of-way shall be provided as required or approved by the Commission, and shall be shown on the subdivision map with adequate survey information so that the land subject to easement may be accurately located by field survey. Easements shall be provided in at least the following cases:

a. For access to bridges and culverts by construction and maintenance equipment;

b. For storm water pipes and other drainage features, water mains and sanitary sewers and appurtenances shown on the plan, or which may need to be installed in the future, such easements to be not less than 30 feet in width;

c. For the full width of the channel, plus an additional width of ten feet for maintenance purposes, of any stream or drainage ditch in the subdivision which will carry drainage runoff from any proposed street, existing street or streets which may be constructed in the future on the undeveloped land within the watershed;

d. Easements for temporary turnarounds;

e. Where such grading is required, temporary construction easements for grading and other construction work in the front 25 feet of each lot along a proposed street;

f. Sight easements across corners of lots at intersections or other places where viewing is obstructed, to assure safe line of sight on the street;

g. Easements at least 10 feet in width for pedestrian ways to parks, playgrounds, schools and other public or semi-public places where the street system does not conform to a convenient pattern of pedestrian circulation; and

h. For shared driveways in accordance with *Section 6.9.*

6.3 SEWAGE DISPOSAL REQUIREMENTS

Suitable sewage disposal shall be provided in accordance with *Section 5.6.2.* No proposed lot shall be approved unless a written report endorsed by the Director of Health, Town of Essex, or his/her designated agent, is submitted to the Commission, concurring with the adequacy of plans for sewage disposal facilities.

6.3.1 Soil tests required:

If private subsurface sewage disposal systems on individual lots are proposed, percolation tests and deep observation pits shall be required on each lot, in the vicinity of the primary and reserve leaching areas, at the subdivider's expense. These tests shall be conducted to conform with requirements of the Connecticut Public Health Code or the Ordinances and Special Acts of the Town of Essex, whichever are more restrictive. The Director of Health or a designated agent may prescribe the location and depth of tests, number of tests, specifications for testing, season of year necessary for valid testing, and stage of site preparation suitable for relevant testing. All soil tests shall be witnessed by the Director of Health or a designated agent, whose findings and recommendations shall be submitted to the Commission. All proposed lots shall provide for a reserve leaching area in accordance with the Connecticut Public Health Code or the Ordinances and Special Acts of the Town of Essex, whichever are more restrictive.

6.3.2 Site capacity for Individual Lots and Site Capacity for Multiple Lots:

The applicant shall demonstrate to the satisfaction of the Commission's reviewing professional that each proposed lot can accommodate a subsurface sewage disposal system that meets all requirements of the CT Public Health Code and the town of Essex Ordinances and Special Acts for a single family residence having four bedrooms. The applicant may be required to demonstrate that the cumulative effect of all the sanitary systems to be built in the subdivision will not degrade the groundwater quality at the boundaries of the subdivision, the total sewer shed area, or at areas of concern, ie. wetlands, ledge outcroppings and the like. The analysis of the cumulative effect shall include, but not be limited to nitrogen renovation, bacteria renovation, and hydraulic capacity.

6.3.3 Larger Lots:

When the results of deep test pits and percolation tests indicate a need for larger lots, final approval of the subdivision plan shall not be granted until such larger lots as required are shown on the maps.

6.3.4 Test Results on Plan:

Location, test dates and results of deep test pits and percolation tests shall be shown on Detailed Layout Maps.

6.3.5 Compliance with Code:

All subsurface sewage disposal systems shall be designed and constructed in accordance with the Connecticut Department of Public Health and Addiction Services, Public Health Code Regulations, Section 19-13 B100a, B103, and B104, Ordinances and Special Acts of the Town of Essex, and any applicable regulations and standards of the Connecticut Department of Environmental Protection, whichever are more restrictive.

6.3.6 Septic Systems in Flood Hazard Areas:

For lots in Flood Hazard areas, the applicant shall submit a report by a professional engineer, currently licensed in the State of Connecticut, giving assurances that each lot is capable of accommodating an on-site sewage disposal system in a manner that avoids impairment of the system and contamination from the system during flooding.

6.4 WATER SUPPLY

A suitable water supply shall be provided in accordance with *Section 5.6.1.* A written report, prepared by the applicant and endorsed by the Director of Health, Town of Essex, or his designated agent, shall be submitted to the Commission concurring with the adequacy of plans for a permanent means of water supply.

6.5 STREET CONSTRUCTION

6.5.1 Construction Survey Procedure:

The center line of the traveled portion of the road shall be run in the field by a land surveyor, currently licensed in the State of Connecticut, and suitable construction ties established at all control points. These ties shall be protected during construction so that the center line may be re-established at any time.

a. Stations: Stations shall be established every fifty feet and at all radius points. The beginning of this line shall be designated as Station 0+0. A construction stake shall be placed at right angles to each station, clear of construction and grading. This stake will show the station on the side facing toward Station 0+0, the measured distance to centerline (offset) on the side facing away from Station 0+0 and on the face nearest to center line the cut or fill which will establish the center line grade. A grade list showing the Stations, stake elevations, offset from centerline grade, cuts and fills shall be presented to the Commission's engineer by the applicant or his designee who is to have charge of the construction layout, before construction begins.

b. Bench Marks: A permanent bench mark shall be established at the beginning and end of each road and at intervals not exceeding 1000 feet along the length of the road. These bench marks shall be referenced to the same datum shown and identified on the construction drawings for the road. Sketches showing at least three ties to each bench mark, the bench mark elevation and the description of each bench mark shall be furnished to the Commission's engineer.

c. Protection of Stakes and Bench Marks: Grade stakes and permanent Bench Marks shall be protected and preserved until the road construction has been approved by the Commission. If such stakes or Bench Marks are disturbed during construction, they shall be replaced immediately.

6.5.2 Clearing and Grubbing:

a. All trees, perishable matter, boulders, structures, fences and debris of whatever nature shall be cleared from the full width of the roadway section, including all areas to be disturbed by cuts or fills, except that certain natural features may be exempted from this requirement as provided in *Section 6.5.2.c and Section 5.5.8.b.*

b. All roots and stumps within the limits of the road section shall be grubbed and excavated, except that no grubbing will be required where the finished roadway surface will be five feet or more above the original ground surface and the foundation soil is satisfactory. Where trees are cleared and grubbing is not required, the trunks shall be cut off flush to the ground if possible and in no event more than six inches above the ground.

c. Individual trees may be retained in shoulder areas if located more than three feet from any curb line and if the location of the tree does not create a safety hazard. Any such tree shall be effectively protected and preserved to insure that it will suffer no damage during construction operations. All tree branches overhanging the roadway pavement or shoulder areas shall be trimmed to a clearance of twelve feet above the finished grade of the road.

d. Topsoil shall be stripped from all surfaces of the roadway section which will be disturbed by cut or fill operations. Topsoil so stripped shall be stockpiled on the site of the work and shall be reserved for roadway landscaping. The stockpile area shall be shown on the Sedimentation and Erosion Control Plan.

6.5.3 Roadway Excavation, Fill and Disposal of Surplus and Unsuitable Material:

a. Unsuitable Material: All unsuitable material, including material removed during clearing, grubbing and preparation of subgrade, shall be removed from within the limits of the right of way and disposed of lawfully at a safe location approved by the Commission's engineer or other designated agent.

b. Surplus Material: Surplus suitable material may be used to flatten fill slopes within the limits of the right-of-way and any slope easements. Surplus materials that cannot be so utilized shall be disposed of lawfully in a manner approved by the Commission's engineer or other designated agent.

c. Blasting: Blasting shall be performed only by licensed personnel and shall be done in accordance with all applicable laws, ordinances, rules and regulations pertaining thereto. The Commission may, at its discretion, require pre-blast surveys and photographs.

6.5.4 Preparation of Subgrade:

All topsoil, soft spots, peat and other organic material shall be stripped to their full depth, and boulders and ledge rock shall be removed to a depth of at least 12 inches below finished subgrade. The subgrade shall then be backfilled with bank run gravel. The gravel shall consist of sand, gravel and soil binder, free from thin or elongated pieces, lumps or clay, soil, loam or vegetable matter or stones larger than five inches in greatest dimension. The particles shall be well graded from coarse to fine and not more than ten percent shall pass the No. 200 sieve. All construction methods shall conform to the requirements of the State Standard Specifications for “Subgrade”.

6.5.5 Rolled Granular Base:

After the subgrade has been rolled and compacted, a rolled granular base shall be applied for the full required width of pavement plus one foot beyond each curb line. The rolled granular base shall not be less than 8 inches thick after compaction, shall be applied in two courses, each of which shall be at least 4 inches thick and each course shall have the cross-slope shown in Standard Detail Drawings in Appendix A. The rolled granular base shall conform to all requirements of the State Standard Specifications.

6.5.6 Processed Aggregate Base:

After the rolled granular base has been rolled and compacted, a processed aggregate base shall be applied for the full required width of pavement plus one foot beyond each curb line. The processed aggregate base shall be not less than 4 inches after compaction and shall have the cross slope shown in a Standard Detail Drawing in Appendix A. The processed aggregate base shall conform to all requirements of the State Standard Specifications.

6.5.7 Pavement:

a. After the processed aggregate base has been rolled and compacted, the roadway shall be surfaced with bituminous concrete for the full required width of pavement plus one foot beyond each curb line, and to total compacted depth of not less than 3 inches for Light Residential Streets and not less than 4 inches for all other street classifications.

b. The bituminous concrete shall be applied by machine in two courses, each of which shall not be less than 1 ½ inches thick after compaction for Light Residential Streets, and not less than two inches for all other street classifications.

c. In general, no paving shall be permitted between October 31 and April 1, unless the Commission's engineer specifically permits an exception due to unusually mild weather conditions.

d. Pavement shall be placed so that each course shall have the cross-slope shown in Standard Detail Drawings in Appendix A, and shall meet State Standard Specifications for bituminous concrete.

6.5.7.1 Materials and Construction Methods:

All materials and construction methods shall conform to the requirements of the State Standard Specifications for “Two Course Bituminous Concrete” except as modified herein. Mixing plant inspections required in the State Standard Specifications are hereby waived. However, all bituminous concrete pavement material shall be obtained from a plant certified by the State Department of Transportation for provision of such materials for use in State highway construction. Original signed copies of certification by the supplier that each load of bituminous concrete meets the requirements of this Section shall be submitted to the Commission.

6.5.8 Curbing:

Machine-formed bituminous concrete curbing shall be applied by machine to both sides of the pavement along the entire length of the road at the offset from center line of road, as shown in Standard Detail Drawings in Appendix A. Wavy or damaged curbing shall not be accepted, and the Commission shall require that improperly placed curbing be removed and replaced. All materials and construction methods shall conform to the requirements of the State Standard Specifications for “Bituminous Concrete Lip Curbing”. The curbing shall conform to the shape as shown in Standard Detail Drawings in Appendix A, or other shape approved by the Commission’s engineer.

6.5.9 Guiderails:

Unless otherwise permitted by *Section 5.5.14,* all materials and construction methods shall conform to the most current requirements of the State Standard Specifications.

6.6 SIDEWALKS AND BIKEWAYS

The Commission may require the installation of sidewalks in pedestrian easements, on local streets in the vicinity of schools and playgrounds, and in other places deemed proper by the Commission for public necessity and safety. When sidewalks are required, plans for the sidewalks shall be shown on the construction plans. Sidewalks shall be a minimum of four feet in width and shall be located within the street lines, with one edge abutting the property line unless otherwise authorized by the Commission’s engineer.

6.6.1 Sidewalk Construction:

Sidewalks shall be constructed of Portland Cement Concrete, shall be a minimum of five inches thick and shall be constructed on a gravel base having a minimum compacted thickness of eight inches. All materials and construction methods shall confirm to the requirements of the State Standard Specifications for “Concrete Sidewalks”.

6.6.2 Pedestrian Easements:

In areas where the proposed street system does not conform to a convenient pattern of pedestrian circulation, particularly in the vicinity of parks, schools, playgrounds or other public or semi-public places, the Commission may require the establishment of easements for pedestrian ways, which shall be a minimum of 10 feet in width.

6.6.3 Bikeways:

The Commission may require bikeways to be constructed when deemed necessary for public safety, and when such bikeways will contribute to a integrated system of bikeways providing an alternative means of transportation for the town. A bikeway may be either a separate trail or path for the exclusive use of bicycles, or a portion of the roadway which has been designated for preferential or exclusive use of bicycles, separated from the roadway by a paint stripe or curb or other similar device.

6.7 STORM DRAINAGE

Stormwater drainage shall be installed in accordance with *Section 5.7* of these Regulations, and the following additional standards:

6.7.1 Pipe:

All pipe used for storm drainage shall be in accordance with State DOT standards. Class 4 reinforced concrete pipe (RCP) or asphalt coated corrugated metal pipe (ACCMP) shall be used unless otherwise approved by the Commission's engineer. Where the bedding of the pipe is to be in unstable material, or where the gradient of the pipe exceeds 10%, ACCMP shall be used in lieu of RCP, unless otherwise approved by the Commission's engineer.

6.7.1.1 Minimum Cover:

The minimum cover over all storm drainage pipe within the right-of-way shall be two feet. Where conflicts with other subsurface facilities require, and with the approval of the commission, pipe may have as little as 18 inches of cover, but in such cases extra strength Class 5 RCP shall be used, unless otherwise approved by the Commission's engineer.

6.7.1.2 Slotted or Perforated Storm Drains:

Where water is encountered in the pipe trenches, or where underdrains are required, storm drains shall be either slotted RCP or perforated ACCMP. Where additional underdrains are deemed necessary in locations not requiring other storm drainage, 6 inch perforated ACCMP shall be provided, unless otherwise approved by the Commission's engineer.

6.7.1.3 Materials and Methods:

Materials and construction methods shall conform to the requirements of the State Standard Specifications for “Culverts” and “Underdrains and Outlets”.

6.7.2 Other drainage structures:

Catch basins, manholes, drop inlets, endwalls, riprap, bridges, box culverts, retaining walls and other special drainage structures shall all conform to the applicable requirements of State Standard Specifications and to Standard Detail Drawings in Appendix A.

6.7.3 Open Channel Stabilization:

Seeding, sodding, erosion control matting, and other methods of stabilizing beds and banks of open channels shall conform to the applicable materials and construction methods specified in the State Standard Specifications for the particular method approved for use. Where the State Standard Specifications do not cover the stabilization method approved for use, materials and construction methods shall conform to the Standards and Specifications contained in the most current edition of the “Erosion and Sediment Control Handbook for Connecticut” as published by the U.S. Soil Conservation Service.

6.8 FINAL GRADING AND LANDSCAPING

6.8.1 Grading and Stabilization:

Except where otherwise specified in these Regulations, all areas disturbed by construction of roads, drainage facilities and associated improvements that are not paved or occupied by structures shall be properly graded to smooth uniform slopes, covered with topsoil to a minimum depth, after settlement, of four (4) inches and limed, fertilized, seeded and mulched. All materials and construction methods shall conform to requirements of State Standard Specifications.

6.8.2 Landscaping:

Center islands of turnarounds and median strips, where permitted, shall be planted with low-growing shrubs and plants that will allow full vision at all points, except that a tree or trees of an approved species may be planted anywhere within five feet of the center of the island of a turnaround. An ornamental boulder or grouping of rocks or boulders may also be placed anywhere within five feet of the center of the island of a turnaround. All plantings shall be such as to eliminate any requirement for mowing, weeding or other forms of maintenance.

6.8.2.1 Street Trees:

Trees shall be required along both sides of all roadways and spaced not farther than fifty feet apart on each side, subject to variations made necessary by driveways, utilities, street corners and walks. Trees shall be located a minimum of four feet beyond the outer edge of curbing. Trees to be planted shall have a minimum diameter of three inches at a point four feet above the ground. All

stock shall be nursery grown and burlaped. The commission may require the subdivider to post satisfactory surety to sufficiently cover the estimated cost of such trees.

a. Acceptable Species: If underground utilities are to be used, we recommend any of the following species:

Acer rubrum – Red Maple
Acer saccharum – Sugar Maple
Carpinus betulus – European Hornbeam
Fraxinus americana – White Ash
Fraxinus pensylvanica – Green Ash
Ginko biloba – Ginko (Male only clones)
Liquidambar styraciflua – Sweet Gum
Platnus x acerifolia – London Plane Tree
Platanus occidentalis – Sycamore
Tilia cordata – Greenspire Littleleaf Linden

If aerial utilities are to be used, we recommend any of the following species:

Acer griseum – Paperbark Maple
Carpinus caroliniana – American Hornbeam
Cercis Canadensis – Eastern Redbud
Cornus kousa – Kousa Dogwood
Crataegus laevigata – Crimson Cloud Hawthorn
Crataegus x lavellei – Lavalle Hawthorn
Crataegus viridis – Winterking Hawthorn
Viburnum prunifolium – Blackhaw Viburnum
Viburnum sieboldii – Siebold Viburnum

In order to protect against the potential for all the street trees in any subdivision to be lost to disease or insects, not more than one third of all trees shall be of the same species. Trees shall have temporary labels so that inspectors can determine that the species shown on the plan have actually been planted. The developer is responsible for assuring that all planted trees live through one growing season.

b. Planting Requirements:

Each tree to be planted shall have a hole dug one foot wider and deeper than any part of the root ball. Soil to be placed around the root ball should be of good quality loam. Each tree shall be watered immediately after planting in order to settle soil and moisten roots. Thereafter, trees shall be watered weekly during the first spring, summer, and fall depending upon weather conditions. A soil dike around the perimeter of the root ball is an acceptable method to retain water.

c. Existing Trees:

As part of submitted subdivision plans, the developer shall identify any Landmark Tree(s) and shall delineate the buildable area of the proposed development. The Planning Commission may permit the removal of a tree outside of the buildable area, with the advice of the Essex Tree Warden, provided the removal of the tree be reasonably required to develop the parcel in compliance with this regulation. Existing trees along the proposed street which conform to these regulations may be substituted for new trees at the discretion of the Commission in accordance with *Section 6.5.2.c*.

d. Landmark Tree:

A landmark tree will qualify for such designation if it meets one or more of the following criteria:

The tree species is rare.
The tree is more than one hundred years of age.
The tree has been connected with a significant historical event.
The tree is of outstanding trunk diameter, or it has a drip line that is substantial for its species.
The quality of its foliage is outstanding for a tree of its species.
The location, shade value, erosion control, aesthetic features or scenic enhancement of such tree is of special importance to the Town.

Prior to the removal of any designated Landmark Tree, the Planning Commission may suggest alternate building areas in an effort to preserve said Landmark Tree. If no alternate plan is agreed to by the Planning Commission and the owner(s) of said property on which the Landmark Tree is located, it can be removed for construction to be done within the buildable area.

6.9 DRIVEWAYS

A permit to connect a new driveway to a State highway must be obtained from the Connecticut State Department of Transportation. A permit to connect a new driveway to a Town road must be obtained from the Board of Selectmen or their designated agent (see “Ordinance Concerning Construction of Driveway Approaches in the Town of Essex”).

6.9.1 Driveway drainage:

In addition the requirements of any other regulations, driveways to individual lots shall be located, designed and constructed so as to prevent excess road drainage down driveways or excessive driveway drainage on to public streets.

6.9.2 Restricted driveway access:

In accordance with *Section 5.5.7,* driveways shall not enter onto State highways, or Town roads classified as Residential Collector or Collector/Arterial, except where no method of layout other than entrance onto such roads is possible. In

such event, driveways shall be combined between lots wherever possible. Frontage where access is restricted shall be so indicated on the subdivision plan. A specific driveway access to a lot may be required in order to avoid large trees or other natural features and shall be so indicated on the subdivision plan. See *Section 6.5.2.c and Section 6.8.2.1.c & d.*

6.9.3 Driveway Sight lines:

Safe driveway entrances with adequate sight lines for safe vehicular entry onto a street shall be required for all lots, and adequate vehicular turnarounds provided within each lot.

6.9.4 Requirements for shared driveways:

The Commission may allow or may require common or shared driveways to serve more than one lot in order to minimize adverse environmental impacts of development or to reduce the need for driveway cuts. Whenever a shared driveway is proposed, the following requirements shall be met:

a. A driveway layout for the individual driveway(s) as well as a shared driveway layout shall be submitted with proposed grading, clearing limits, and erosion controls for each driveway.

b. All shared driveways shall be provided with a right-of-way at least 25 feet in width. The driveway location shall allow the construction of a driveway not exceeding 12 percent grade at any point. Pavement width shall be a minimum of twelve (12) feet with two (2) foot gravel shoulders. A larger width may be required depending upon the number of lots involved and based upon safety concerns and the recommendations of the town engineer and Fire Marshal.

c. The deed for any lot which utilizes a shared driveway shall include all appropriate easements to pass and repass and to install utilities as necessary. Further, the deed shall contain the provisions that the access driveway shall not be used for access to any other property except for agricultural purposes, and that the Town of Essex shall not ever be required to plow, maintain, assume ownership or provide school bus service or other service along the driveway access to such lot.

d. Street numbers for all the houses along the shared driveway shall be placed at the intersection of the driveway and the road. Individual house numbers shall be placed at the intersection of the private driveway and the shared driveway.

6.10 UTILITIES

6.10.1 Electric, Telephone and Cable Lines:

New electric, telephone and cable television wires within the subdivision shall be installed underground unless the Commission determines, based on a written report submitted by the applicant, that such underground installation is

inappropriate or unfeasible for all or part of the subdivision. In making such a determination, the Commission shall take into account the type of service existing in the area adjacent to the subdivision, topographic and construction conditions, and the size of the subdivision.

Requirements for underground wires shall be noted on the subdivision plan.

6.11 BOUNDARY MARKERS AND MONUMENTS

Monuments and pins shall be installed in accordance with the following requirements:

6.11.1 Permanent Monuments:

Permanent monuments shall be installed at all points of change in direction or curvature of new streets and at other points as shown on the final plan, and where in the judgment of the Commission, permanent monuments are necessary. These monuments shall be installed along the line separating the street right of way and the adjoining property. Granite or concrete monuments at least 30 inches in length, dressed to at least 4 inches square at the top and with a cross or a 3/8 inch hole drilled to a depth of ½ inch in the center of the top shall be set to a height of 4 inches above the finish grade. No permanent monuments shall be installed until all construction which could destroy or disturb the monuments has been completed. In the event that any monument is destroyed or disturbed during construction of subdivision improvements, the monument shall be replaced or repositioned prior to release of the subdivision construction bond.

a. In cases where large boulders, surface ledge, or stone walls are present, a 3 inch long 3/8 inch diameter brass pin inserted in a rock may be substituted for the monuments described in *Section 6.11.1.*

6.11.2 Lot Markers:

Permanent monuments as described above shall be installed at one front and one rear corner of all lots. At the remaining front and rear corners, and at other points of change in direction along property lines, the applicant shall have a choice of permanent pipe markers, consisting of 5/8 inch rebar, 36 inches long, set to a height of 4 inches above grade, or drill holes, or permanent monuments. During construction, it is permissible to use temporary surveyor's stakes or pipe markers to delineate boundaries.

6.11.3 Open Space Markers:

Monuments, permanent pipe markers or brass pins shall be installed at all corners and at intervals no greater than 100 feet along the boundaries of all open space parcels. Rights-of-way to open space parcels which are 50 feet in width or less shall be marked at intervals no greater than 50 feet.

6.11.4 Driveway Access Markers:

Driveway access strips for all rear lots shall be marked with permanent pipe markers, monuments or brass pins on both sides at intervals of not more than 100 feet for the length of the access strip.

6.11.5 Certification of Installation:

The accurate placement and location of markers and monuments shall be certified by a land surveyor and the cost of such shall be included in the construction bond. In subdivisions where property markers are the only "improvement", the applicant may choose to have the markers installed prior to filing the subdivision plan in lieu of posting a bond.

6.12 OPEN SPACE

In addition to the requirements of *Section 5.8,* open space within subdivisions shall comply with the following requirements:

6.12.1 Condition of Land:

Land reserved for open space shall not be used for the storage of equipment or the deposit of debris. The land so reserved shall not be excavated, filled or regraded, and trees shall not be removed except in accordance with a grading plan submitted under *Section 4.4.6.*

6.12.2 Methods of Open Space Reservation:

Open space areas required under *Section 5.8* shall be permanently reserved for the designated use by means acceptable to and approved by the Commission, such as, but not limited to:

a. **Deeded to the Town of Essex:** Where open space areas are to be conveyed to the Town, the applicant shall convey them at the stage and in the condition agreed upon in connection with the processing and approval of the subdivision.

b. **Deeded to a non-profit organization acceptable to the Commission:** Such non-profit organization shall be a private non-profit, non-stock corporation which has as its purpose the preservation of open space land. The deed to such organization shall contain language satisfactory to the Commission requiring that the land be held in perpetuity as open space land for the use of the general public. If open space is to be conveyed to a non-profit organization, the Commission may require that a copy of the organization's Certificate of Incorporation be submitted for its review. The deed to the organization shall contain the provision that in event of the dissolution of the corporation, the property shall be conveyed to the Town of Essex, or subject to the approval of the Commission, to another non-profit corporation. The Commission shall have the right to reject any proposal for the transfer of open space land to a private non-profit organization if the Commission determines that such conveyance would not be in the best

interest of the Town. The organization shall present evidence of liability insurance to the Town.

c. **Held in corporate ownership by owners of lots within the subdivision:** Open space may be conveyed by warranty deed to a homeowner's association within the subdivision upon such terms and conditions as specified by the Commission. When tracts are conveyed in this manner, a copy of the bylaws of the homeowners' association shall be submitted as a part of the application for the subdivision. Membership in such corporation shall be mandatory for all lot owners within the subdivision. Each deed conveyance to lot owners shall include the provisions of the declaration of rights and responsibilities in regard to open space, and shall be recorded in the Essex Land Records. Wording on each deed shall state that such open land is reserved for use only as open space in perpetuity and the homeowners' association must maintain adequate liability insurance for the property.

d. **Perpetual conservation easement:** Where the right of use, interest or privilege, short of fee ownership in the open space owned by another, is obtained by the Town or acceptable non-profit organization, a deed stipulating that the owner transfers development rights to, and open space or scenic easements over, the land shall be required. The fee owner shall retain the fee title to the premises and all incidents of fee ownership therein, except the right to construct any structure, sign, fence, or other improvement thereon, or to alter the contours thereof. Minimum lot requirements cannot be satisfied by use of land dedicated to open space.

6.12.3 Conditions of Open Space Conveyance:

Title to the open space land shall be unencumbered and shall be transferred at a time approved by the Commission, and in any case, not later than the time at which title to the streets in said subdivision is accepted by the town.

6.12.4 Deed Guarantees:

Regardless of the method employed, the instrument of the open space conveyance must include provisions suitable to the Commission and the Town Counsel for guaranteeing the following:

a. The continued use of such land for the intended purpose;

b. Continuity of proper maintenance for those portions of the common open space land requiring maintenance;

c. When appropriate, the availability of funds required for such maintenance; and

d. Recovering of loss sustained by casualty, condemnation or otherwise, and sufficient liability insurance.

SECTION 7 ALTERNATIVE SUBDIVISION DESIGN

7.1 REAR LOTS

A rear lot shall be any lot where the required minimum lot width is located to the rear of the minimum Front Set Back under the Essex Zoning Regulations. The Planning Commission may permit rear lots in VR and RU, and RUM Residential Districts, subject to the following conditions and safeguards:

7.1.1 Design:

The Planning Commission may approve the creation of new rear lots as an integrated part of an overall subdivision design, where such rear lots can provide suitable building sites. The applicant shall prove to the satisfaction of the Commission that the land characteristics and physical site conditions make such rear lot development practical, reasonable and desirable; and that such rear lot development will be in harmony with the purpose and intent of the *Essex Plan of Conservation and Development,* and will comply with all applicable town codes, regulations and ordinances.

The Commission shall determine that the character of the property to be subdivided is such that the soils, topography and configuration of the property is suitable for rear lots. Rear lots shall not be approved if the Commission determines that the use of rear lots creates a hazard to public health or safety, or does not contribute to a more efficient and less environmentally detrimental subdivision layout than would result without the use of rear lots.

7.1.2 Access:

Each rear lot shall have an access way as part of the lot which shall have the following characteristics:

a. The access way shall be at least 25 feet in width for its entire length and shall be capable of accepting a typical vehicular driveway of acceptable slopes and elevations without significant modification of the land as it exists prior to construction activities;

b. The maximum number of adjoining access ways shall not exceed one; however, one driveway may be shared by more than one lot;

c. The area of such access way shall not be included in the minimum required area of the lot;

d. Such access way shall extend to an accepted town road or to a road in an approved subdivision;

e. The grade of the access way shall not exceed 12% and shall conform to the Town's "Ordinance Concerning Construction of Driveway Approaches in the Town of Essex" and the Zoning Regulations.

f. No rear lot driveway access strip shall be located so as to impede future development or use of land through which it passes.

7.1.3 Maximum number of Rear Lots:

The maximum number of rear lots shall not exceed one fifth (1/5) of the total number of lots in any subdivision.

7.1.4 Zoning Compliance:

Each lot shall comply with the minimum requirements of the Zoning Regulations for the Zoning District in which it is located. The Commission may require larger size lots than required by the Zoning Regulations where it deems such lots necessary because of conditions affecting drainage, sanitary sewage disposal or water supply.

7.1.5 Other Conditions:

The Commission may impose other such conditions as it finds necessary to protect the public health, safety and welfare, including but not limited to the establishment of a minimum sight line at the driveway access point, requiring combining individual driveway entrances, establishing a maximum total length of the driveway access strip, and increased frontage where necessary to assure adequate separation between individual driveway entrances.

7.2 NON-RESIDENTIAL SUBDIVISIONS

A non-residential subdivision shall be subject to all other requirements of these Regulations. In addition, the applicant shall demonstrate to the satisfaction of the Commission that the following requirements are met:

7.2.1 Streets:

Street rights of way and pavement shall be adequate to accommodate the type and volume of traffic anticipated to be generated thereupon and special requirements may be imposed by the town with respect to street, curb, gutter, and sidewalk design and construction.

7.2.2 Utilities and drainage:

Special requirements may be imposed by the Town with respect to the installation of public utilities, including water, sewer and stormwater drainage.

7.2.3 Extension of streets:

Streets carrying non-residential traffic, especially truck traffic, shall not normally be extended to the boundaries of adjacent existing or potential residential areas.

7.3 OPEN SPACE PRESERVATION SUBDIVISION

7.3.1 Purpose:

The Planning Commission may require that land be developed according to the open space preservation subdivision regulations instead of being developed under the general subdivision requirements. It is the purpose of this regulation to provide "clustered housing' as an alternative to standard development layouts. Following the suggestions of the *Essex Plan of Conservation and Development,* this will allow for the best use of the remaining land available in Essex through increasing acreage in committed open space in parallel with continued development.

The regulation is intended to encourage ingenuity and originality in subdivision design, especially in regard to the preservation of the character of the community and the creation of more energy efficient, environmentally sensitive and cost effective subdivision layouts. This alternative will allow for the integration of lower cost housing units within a subdivision and encourage compatibility with existing neighborhoods. It will serve to improve the protection of inland wetlands through reducing road cuts, reducing the amount of asphalt surface and making more feasible the use of natural beauty of existing land while increasing the amount of open space available to subdivision and town residents for active and passive recreation. The flexibility offered by this alternative is intended to also make more feasible designs oriented toward enhanced use of passive solar energy. It would contribute to the common town goal of avoiding municipal sewers by allowing more control over development activities that could degrade the water supply.

7.3.2 General:

Under this regulation, development could be proposed in the Rural Residential district with a minimum lot size of 50% of the existing lot size allowed in a Rural residential District.

7.3.3 Interpretation:

Nothing in this regulation shall be construed to allow for an increase in the intensity of land use over what it would have been in a standard development.

7.3.4 Application:

The developer shall apply for an Open Space Preservation Subdivision by submitting:

a. A preliminary layout of a standard subdivision in accordance with *Section 3.1* of the Essex Subdivision Regulations.

b. The Application for an Open Space Preservation Subdivision shall include a statement setting forth the factors relating to a property which would qualify it for such development under the criteria set forth in *Section 7.3.1.*

7.3.5 Open Space Preservation Subdivision Standards

The Open Space Preservation Subdivision Plan shall conform to the following standards in addition to the standards of the Subdivision Regulations not herein modified. The Commission reserves the right to modify the location of the proposed open space and to require specific house locations to avoid a monotonous street appearance.

7.3.6 Acreage:

The area covered by the Application shall consist of not less than ten (10) acres.

7.3.7 Required Characteristics, Lot Size, and setbacks:

a. Only one single family dwelling unit shall be allowed on each lot

b. The number of lots shall not exceed the number of lots as specified in *Section 7.3.4(a).*

c.	Front Setback	25 feet from property line
d.	Side Setback	15 feet
e.	Rear Setback	30 feet
f.	Minimum Lot Width	125 feet
g.	Maximum Building Coverage	15%
h.	Maximum Impervious Coverage 25%	
i.	Maximum Building Height	30 feet/35feet in Gateway/See Section Zoning Regulations for requirements

j. Perimeter buffer between cluster development subdivision boundary line and boundary line of any lot therein will be seventy-five (75) feet.

k.	Minimum Lot Size:	50% of rural Residential District Lot Size

These characteristics are consistent with *Section 40W* of the *Essex Zoning Regulations.* If, due to future amendments of the Zoning Regulations, these characteristics are no longer consistent with said *Section 40W*, then the characteristics of that *Section 40W* shall apply.

7.3.8 Area of Open Space:

The Subdivision shall include the following areas as open space which area shall not be included within the area of any lot:

a. The total area reserved as open space shall consist of not less than one-third (1/3) of the total area covered by the application. The Commission reserves the right to specify land for the inclusion within the open space area requirement and to disqualify for the inclusion land reserved for other purposes, if the use of the land for such purpose is inconsistent with the open space purpose intended and reserves the right to reserve perimeter land as open space.

b. Exclusive of all land designated as tidal wetlands and inland wetlands and watercourses.

7.3.9 Open Space Dedication:

The provisions of *Section 6.12* of the *Essex Subdivision Regulations* shall apply.

7.3.10 Septic Systems and Water Supply:

Septic systems and water supplies shall be designed and constructed in accordance with all State and Town codes and Regulations. So-called community systems and water supply systems shall be permitted, providing they meet all State and town codes and regulations or any other governmental regulations governing their use, and further, providing that the Commission is satisfied with the provisions for their use and for their continued operation. It should also be noted that on lots with the 125' minimum width, the approved site plan showing a specific house location, septic system, and well location may be mandated for construction so that the minimum distances required per the Public Health Code are met. No deviations from the approved plan will be allowed unless approved by the Director of Public Health or his/her agent and the Planning Commission.

7.3.11 Passive Solar Energy:

Energy efficient patterns of development and land use, the use of solar and other renewable forms of energy, and conservation shall be considered in the development of the Plan. Passive solar energy techniques mean site design techniques which maximize solar heat gain, minimize heat loss and provide for natural ventilation while determining 1) orientation; 2) Street and Lot Layout; 3) Vegetation; 4) Natural and man-made topographical features.

7.3.12 Bonds:

In addition to the requirements of *Section 3.11* of the *Essex Subdivision Regulations,* the Commission shall require a cash deposit in order to guarantee the performance of the requirements for any community septic system, community water supply system, private roads, paths and access ways.

7.3.13 Streets:

The Commission may permit streets within an Open space Preservation Subdivision to be private provided:

a. Said Streets meet the requirements of *Section 5.5* of the Essex Subdivision Regulations

b. Provision is made for street ownership which assures the continued upkeep and maintenance of said private streets. This provision is subject to the approval of the Commission.

7.3.14 Public Hearings:

No Open Space Preservation Subdivision shall be approved without a public hearing.

7.3.15 Approval:

Prior to approving an open Space Preservation Subdivision, the Planning Commission shall find the subdivision as proposed, is consistent with the statement of purpose as set forth in *Section 7.3.1.* The Planning Commission reserves the right to deny the application for an Open Space Preservation Subdivision plan by reason of its failure to be consistent with the statement of purpose.

SECTION 8 AMENDMENTS AND VALIDITY

8.1 AMENDMENTS

These Regulations may be amended from time to time in accordance with the procedures specified in *Section 8-25 of the Connecticut General Statutes,* and amendments thereto.

8.2 VALIDITY

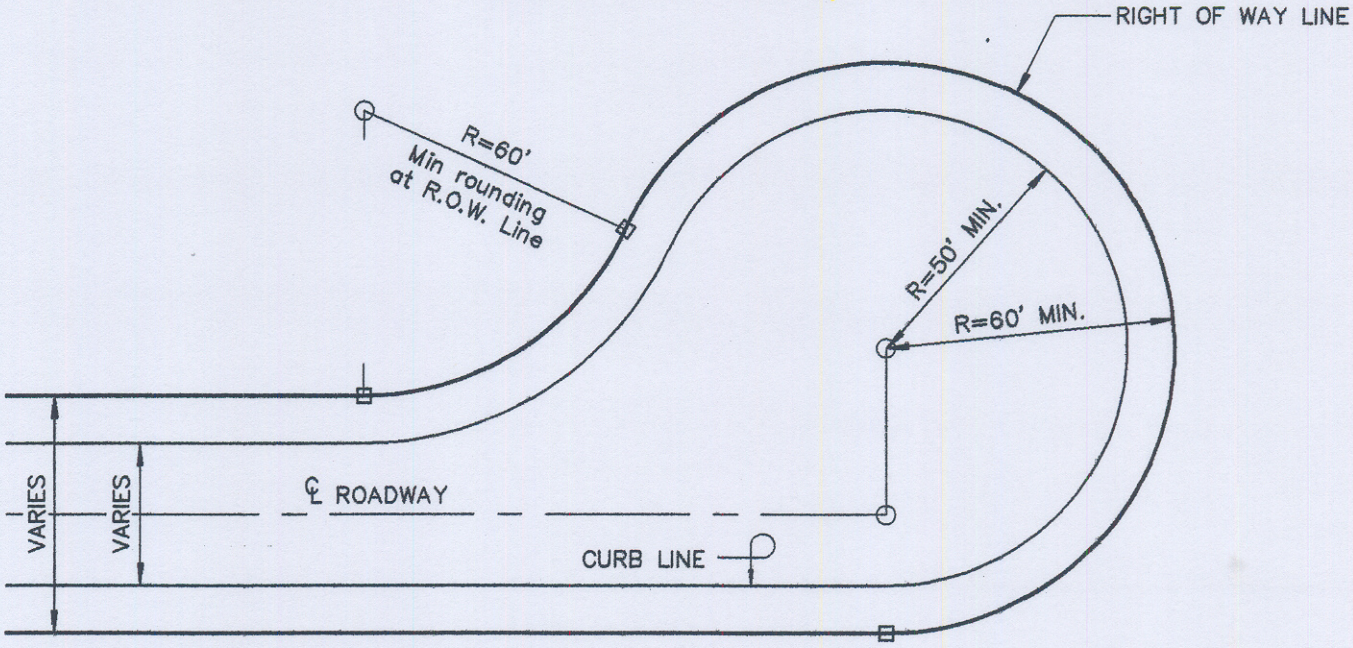
8.2.1 If any section, paragraph, sentence, clause or phrase of these Regulations shall for any reason be held to be invalid or unconstitutional by a decree or decision of any court or competent jurisdiction, such decree or decision shall not affect or impair the validity of any other section or remaining portion of these Regulations.

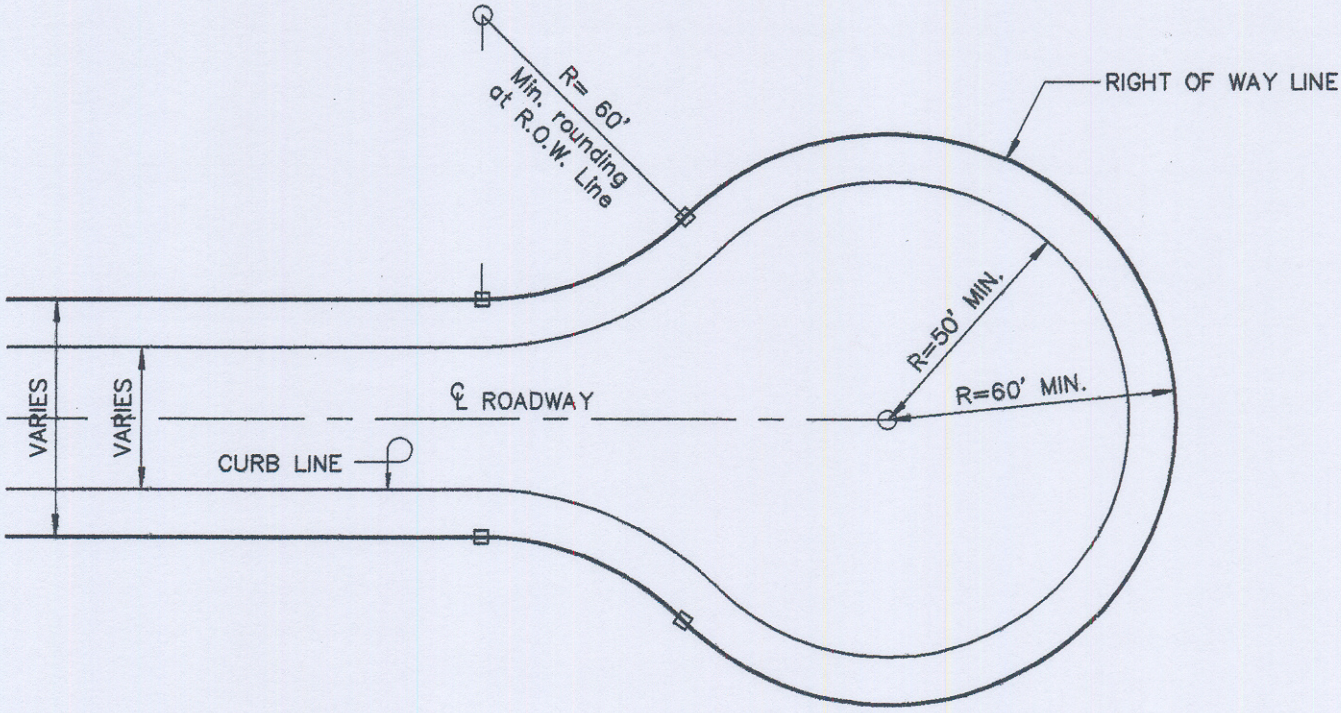
8.2.2 If any section, paragraph, sentence, clause or phrase or these Regulations shall for any reason be held to be invalid or unconstitutional, as applied to a particular subdivision or subdivision application, by decree or decision of a court or competent jurisdiction, such decree or decision shall be limited to the particular subdivision or subdivision application and the general applicability of these Regulations to other subdivisions and subdivision applications shall not be affected.

8.3 EFFECTIVE DATE

These Regulations shall take effect on March 15, 2006.

APPENDIX A

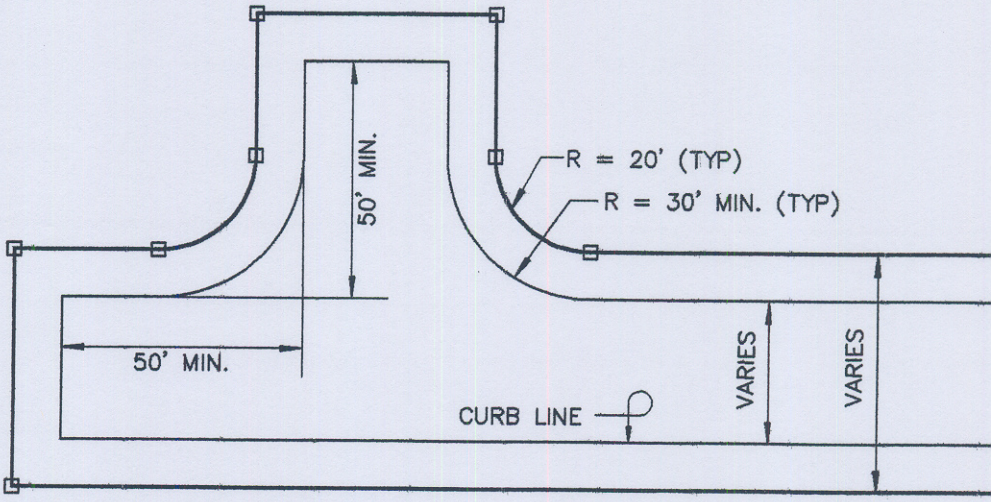




NOTE: THE CUL-DE-SACS SHOWN ARE ONLY TWO MINIMUM ARRANGEMENTS OUT OF MANY POSSIBILITIES. CUL-DE-SACS SHALL BE DESIGNED SO AS TO PROPERLY HANDLE THE TYPE AND AMOUNT OF TRAFFIC INVOLVED.

TYPICAL CUL-DE-SAC ARRANGEMENTS

NOT TO SCALE



TYPICAL "HAMMERHEAD" CUL-DE-SAC

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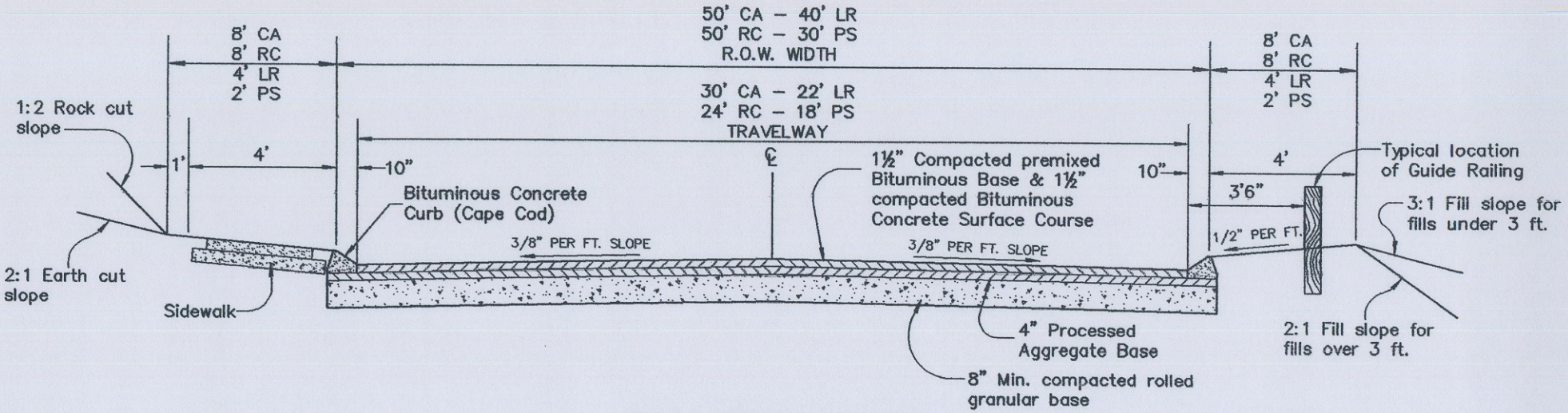
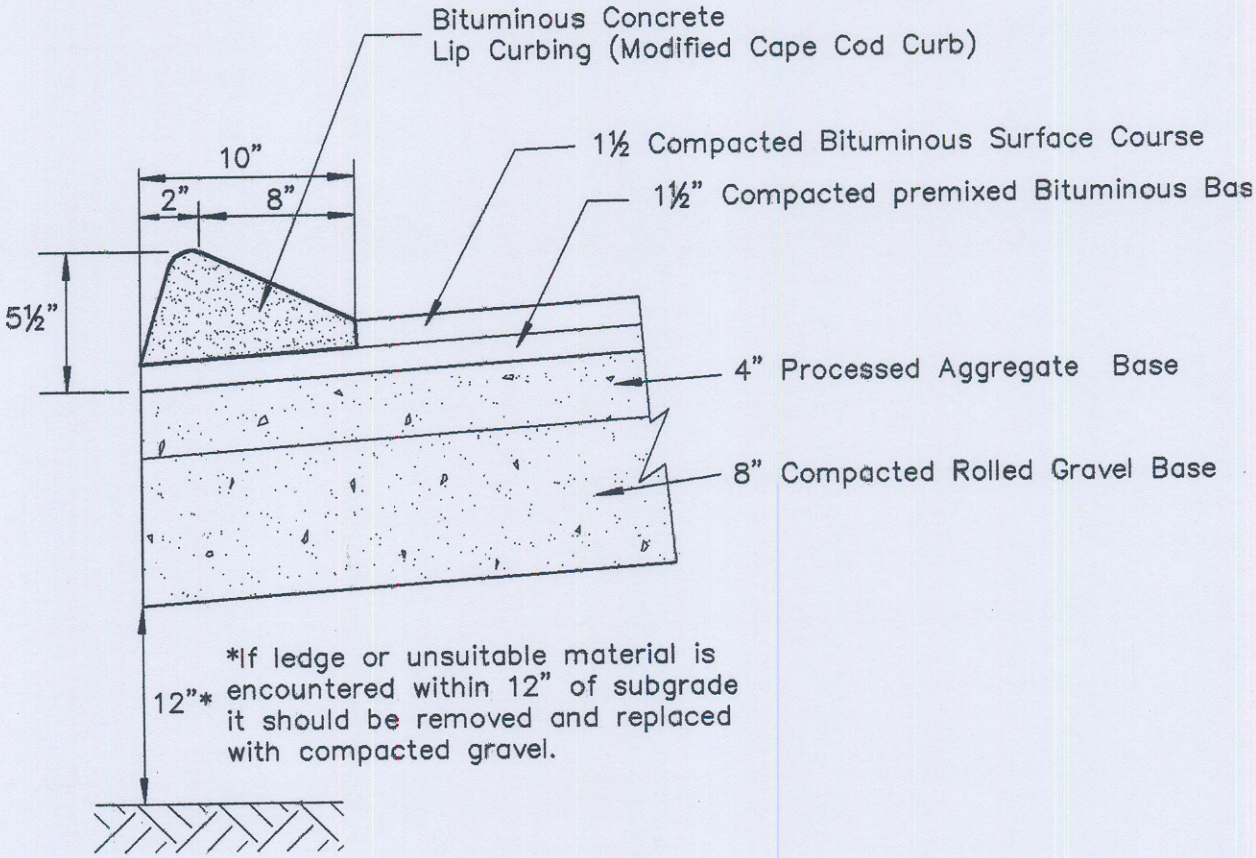


ROAD CROSS SECTION

Not to Scale

STREET CLASSIFICATIONS: COLLECTOR ARTERIAL (CA)
RESIDENTIAL COLLECTOR (RC)
LIGHT RESIDENTIAL (LR)
PRIVATE STREET (PS)



MODIFIED CAPE COD BERM

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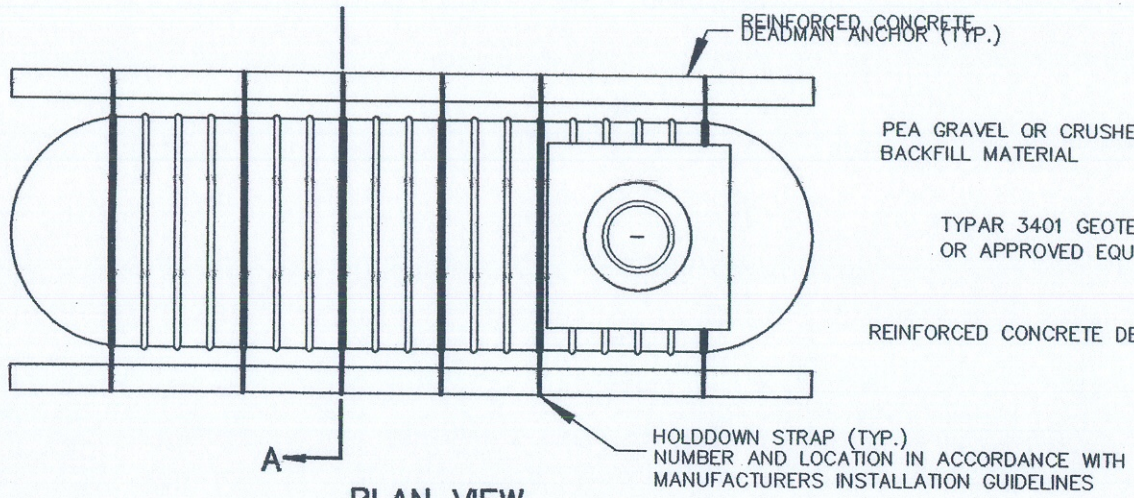
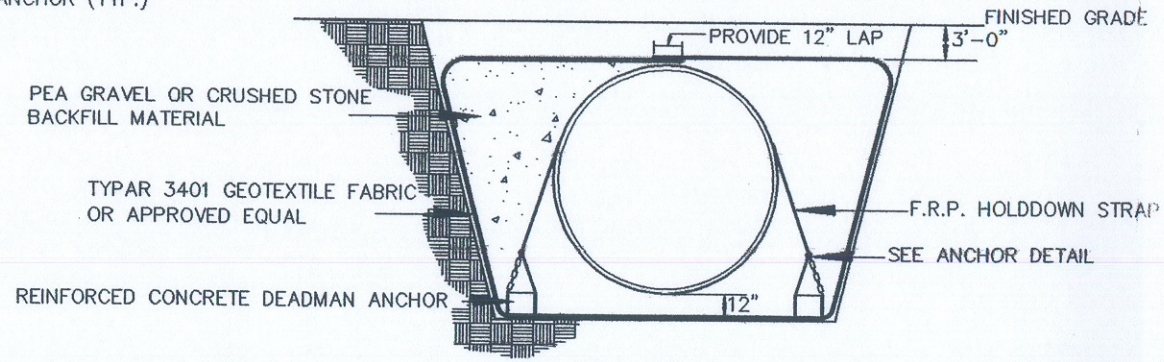
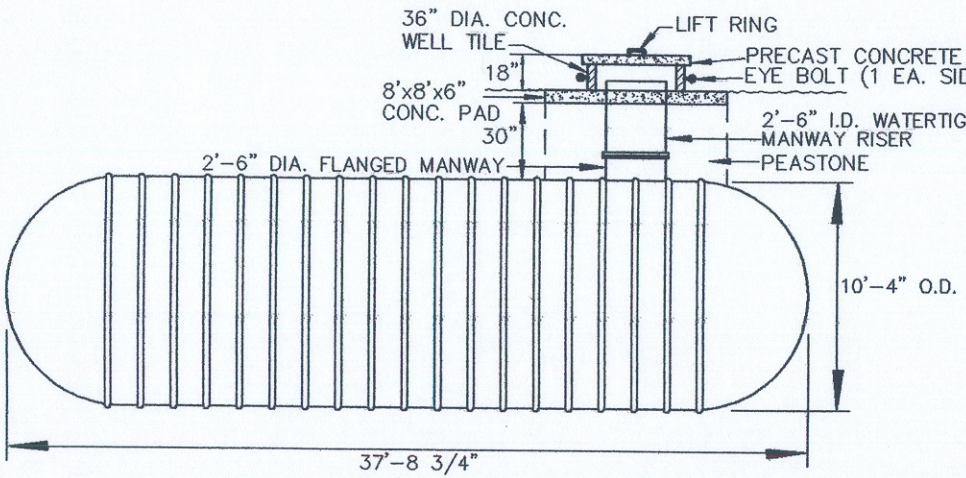


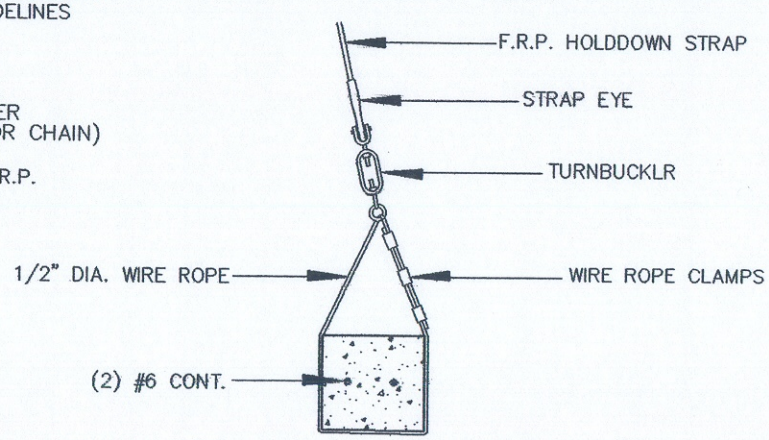
PLAN VIEW



SECTION A–A



ELEVATION



ANCHOR DETAIL

FIRE PROTECTION STORAGE TANK

N.T.S.

Values of Runoff Coefficient for Use in the Residential Equation

CHARACTER OF SURFACE	**RUNOFF COEFFICIENT, C**
PAVEMENT, ROOFS	0.9
LAWNS:	
FLAT – UP TO 2%	.15-.20
AVERAGE – 2 TO 7%	.20-.30
STEEP – 7% OR GREATER	.30-.40
WOODS:	
FLAT – UP TO 2%	.1-.15
AVERAGE – 2 TO 7%	.15-.20
STEEP – 7% OR GREATER	.20-.30
GRAVEL ROADWAYS OR SHOULDERS	.4-.6
CUT, FILL SLOPES	.5-.7