Residential Land Subdivision Regulation in Connecticut: Model Town Regulations

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RESIDENTIAL LAND SUBDIVISION REGULATION IN CONNECTICUT:

MODEL TOWN REGULATIONS

BY

PETER RUNELLS DEMALLIE

MASTERS PROJECT RESEARCH

SUBMITTED IN PARTIAL FULFILLMENT OF THE

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Approved:
FACULTY MEMBER IN CHARGE

UNIVERSITY OF RHODE ISLAND

1979
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This paper presents a model for residential land subdivision regulations in Connecticut, and is divided into three parts. First of these is the model itself, a contemporary prescription for the governmental regulation of land subdivision. It is rather comprehensive and lengthy by design, for a model of this grain should be available not only for reproduction, but for abridgement as well.

Second is a discussion of the unmet needs and problematic symptoms of residential land subdivision, and a defense for correcting the very problem of inadequate regulations and administration through the formulation of the model.

Third and finally is a section by section narrative keyed to the model in which the reader is offered an elaboration on the regulations. This is particularly directed towards the rationale behind them, the alternative available to them, and necessary administrative measures to ensure a manageable review process.

One parting note of limitation; these regulations were formulated relative to standard municipal staffing requirements, including a Town Planner, a clerk to the Planning Commission, a Town Engineer, a Zoning Enforcement Officer, and a Building Official. To the author's knowledge, each of Connecticut's 169 towns has the services of a Building Official and a clerk to the Planning Commission, even if available only on a part-time basis. For those seven towns in which zoning has not been instituted
and thus no zoning enforcement officer is available, as is the case in four of rural northeastern Connecticut's communities, all references to the zoning official or zoning itself should be omitted. The author maintains that at the minimum part-time planner and engineer services should be retained, for the absence of these professionals could jeopardize the entire process of residential land subdivision regulation. These latter services may be obtained through contract with most of the fifteen regional planning agencies or through private consultants.
Section 100  Purpose of the Regulations

It is declared to be the policy of the Commission to consider land sub-divisions as part of a plan for the orderly, efficient, responsible, and economical development of the Town. Such subdivision shall be guided and regulated in such a manner as to meet the following requirements for orderly and harmonious growth:

a). land to be subdivided shall be of such character that it can be used for building purposes without danger to health or the public safety, or peril from fire, water or air pollution, excessive noise, or other menace;

b). proper provision shall be made for water supply, drainage, sewage disposal, and other appropriate utility services;

c). in areas contiguous to brooks, rivers or other bodies of water subject to flooding, including tidal flooding, proper provision shall be made for protective flood control measures;

d). proposed streets shall be in harmony with existing or proposed principal thoroughfares shown in the Town Plan of Development, especially in regard to safe intersections with such thoroughfares;

e). proposed streets shall be so arranged, and existing and proposed streets and related improvements shall be of such width, grade, location, and design as to provide an adequate, safe, functional, and convenient system for present and prospective traffic and related needs as determined by existing and probable future land and building uses;

f). proper provision shall be made for open spaces, parks, and playgrounds;
g). proper provision shall be made for sedimentation control and the control of erosion caused by wind or water;

h). land shall be subdivided and developed in an energy-efficient pattern, accommodating solar and other renewable forms of energy;

i). proper provision shall be made for securing the actual construction, maintenance, and installation of required improvements and utilities within a reasonable period;

j). buildings, lots, and streets shall be so arranged as to afford adequate light, view, and air, to facilitate fire protection and to provide ample access for firefighting equipment to buildings;

k). land shall be developed with due regard to topography, so that the natural beauty of the land and vegetation shall be protected and enhanced.
Article II - Definitions
Section 200
Nomenclature

For the purposes of these regulations, certain terms used herein are defined below. In the event a term's definition is in question or altogether absent, accepted nomenclature and applicable state statutes shall be consulted. Accepted highway usage definitions may be found in the publication of the American Association of State Highway Officials entitled - "AASHO Highway Definitions", 1968, as amended. Definitions of terms pertaining to planning may be found in Title 8, Chapter 126 of the Connecticut General Statutes.

Section 210
Subdivision

Subdivision shall mean 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.

Resubdivision shall mean a change in a map of an approved or recorded subdivision or resubdivision if such change a) affects any street layout shown on such 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 lots shown thereon have been conveyed after the approval or recording of such map.
Section 220

Commission shall refer to the Town Planning Commission or combined Planning and Zoning Commission.

Section 230

230.1 Street (Road or Highway are acceptable substitutes) - A general term denoting a public way for purposes of vehicular travel, including the entire area within the right-of-way. Street shall mean and include streets, roads, highways, lanes, alleys, and any other way which may be dedicated to the Town for public use and excludes driveways serving not more than two contiguous lots.

230.2 Major Street - An arterial highway with intersections at grade and direct access to abutting property, and on which geometric design and traffic control measures are used to expedite the safe movement of through traffic.

230.3 Through Street (Collector Street is an acceptable substitute) - Every highway or portion thereof on which vehicular traffic is given preferential right-of-way, and at the entrances to which vehicular traffic from intersecting highways is required by law to yield right-of-way to vehicles on such through highway in obedience to either a stop sign or a yield sign, when such signs are erected.

230.4 Local Street - A street or road primarily for access to residence, business, or other abutting property.

230.5 Cul-de-sac Street - A local street open at one end only and with special provision for turning around.

230.6 Dead-end Street - A local street open at one end only without special provision for turning around.

230.7 Street, accepted public - Any street duly accepted by the Town in accordance with Section 13a-48 of the Connecticut General Statutes.

230.8 Street, proposed public - Any street duly proposed for acceptance by the Town in accordance with Section 13a-48 of the Connecticut General Statutes, provided said street has received prior subdivision approval by the Commission in accordance with these regulations.

230.9 Street, approved private - Any private street which has been
improved and meets the design standards and requirements of these regulations, and/or has received prior subdivision approval by the Commission in accordance with the standards and procedures of these regulations.

230.10 **Cul-de-sac** - A turnaround at the terminus of a cul-de-sac street.

230.11 **Roadway** - The portion of a highway, including shoulders, for vehicular use.

230.12 **Traveled Way** - The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

230.13 **Parking Lane** - An auxiliary lane primarily for the parking of vehicles.

230.14 **Shoulder** - The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles for emergency use, and for lateral support of base and surface courses.

230.15 **Right-of-way** - A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes. Rights-of-way are separate and distinct from lots or parcels adjoining such right-of-way, and shall not be included within the dimensions or areas of such lots or parcels.

230.16 **Street Line** - The limit of the street right-of-way; however, where such line has not been established, it is deemed for the purposes of these regulations to be a line parallel to and 25' distant from the center line of the traveled way.

230.17 **Pavement Structure** - The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

230.18 **Subgrade** - The top surface of a roadbed upon which the pavement structure and shoulders including curbs are constructed.

230.19 **Subbase** - The layer or layers of specified or selected material of designed thickness placed on a subgrade to support a base course.

230.20 **Base Course** - The layer or layers of specified or selected material of designed thickness placed on a subbase or a subgrade to support a surface course.
230.21 **Surface Course** - One or more layers of a pavement structure designed to accommodate the traffic load, the top layer of which resists skidding, traffic abrasion, and the disintegrating effects of climate.

230.22 **Binder Course** - The lower layer of the surface course.

230.23 **Wearing Course** - Top layer of the surface course.

230.24 **Bituminous Concrete** - A designed combination of dense graded mineral aggregate filler and bituminous cement mixed in a central plant, laid and compacted while hot.

230.25 **Curbing** - Structural material forming a curb.

230.26 **Easement** - A right to use or control the property of another for designated purposes.

230.27 **Drainage Easement** - An easement for directing the flow of water.

230.28 **Surety Company** - A company duly licensed and authorized by the State to issue bonds or other surety.

230.29 **Performance Bond** - Sums of money placed in escrow by the applicant which may be used by the Town to complete subdivision improvements provided the applicant does not complete the improvements as promised; does not complete the improvements as required; and/or does not complete the improvements as indicated in the application. This bonding assures that the Town will not be left with an unimproved subdivision lacking certain facilities should the applicant default or go bankrupt, and it may allow the applicant to install improvements in an orderly fashion and utilize staged financing. Performance bonds, as used herein, are bonds issued in favor of the Town and executed by a surety company.

230.30 **Maintenance Bond** - A bond furnished to the Town which guarantees for a period of one year (to indemnify against defective workmanship or materials) the work covered by a performance bond. Maintenance bonds, as used herein, are bonds issued in favor of the Town and executed by a surety company.

230.31 **Construction Plan** - A plan and profile drawing of all proposed improvements to be constructed, maintained and installed as part of the proposed subdivision development. Such construction plan shall also incorporate other methods of conveying the required information, including supportive documentation and calculations. All construction plans shall bear the seal of a qualified professional engineer registered in the State of Connecticut.
Section 240

Recordable means a document or map of such form, material, and size as to be suitable for filing or recording in the office of the Town Clerk in accordance with the Connecticut General Statutes.

240.1 Application - means a subdivision application submitted by the applicant(s) or his/her agent(s) requesting Commission approval of a subdivision or resubdivision, in the format and on the forms prescribed by these regulations, including all accompanying written statements, maps, engineering plans, renderings, and any other materials submitted to the Commission by the applicant(s) or his/her agent(s).

240.2 Applicant - Any person, firm, partnership or corporation who shall apply to the Planning Commission for approval of a subdivision, either for himself or as an agent for others.

240.3 Subdivision Plan Map - A recordable map of the proposed subdivision, on polyester film, 24" X 36", 18" X 24" or 12" X 18" in size with a scale no larger than 1" = 100', bearing the seal of a registered land surveyor, depicting information as required herein, and prepared in accordance with the standards of a Class A-2 survey as defined in the Code of Practice for Standards of Accuracy of Maps, effective October 1, 1976, as amended by the State Board of Registration for Professional Engineers & Land Surveyors, and conforming to Connecticut General Statutes Section 7-31, as amended. Upon approval of the Commission, this plan would be filed in the office of the Town Clerk. Conceptual elements of the application need only be shown on the Sketch Plan.

240.4 Sketch Plan - A map drawn to a scale no larger than 1" = 200' depicting a proposed subdivision development, including existing and future topography, structures, streets, drainage and any additional information which may aid the Commission in its determination. Sketch plans shall be prepared in accordance with the standards of a Class D survey as defined by the State Board of Registration for Professional Engineers and Land Surveyors.

240.5 Building Approval - Commission approval of a subdivision application for sale or building development purposes.

240.6 Sale Approval - Commission approval of a subdivision application for sale and not for building development purposes.
240.7 Modification Approval - Commission approval of a modification to a previously approved subdivision application, provided said modification does not constitute a resubdivision.

240.8 Open Space - Land set aside for parks, playgrounds, active or inactive recreation or conservation purposes, on any subdivision plan and not including unbuilt land on any residential lot. Open space may also mean land set aside for other public uses as required by the Commission.

240.9 Lot - A parcel, tract or plot which is or may at some future time be offered for sale, lease, conveyance, or transfer, and is an amount of land of sufficient size to meet the minimum dimensional requirements of the zoning district in which it is located.

240.10 Lot, Building - A lot proposed for building development.

240.11 Lot, Sale - A lot proposed for sale and not for building development.

240.12 Lot, Interior - A lot which meets all of the dimensional and other requirements for the zoning district in which it is located, save an access strip to a street is present in lieu of the minimum required frontage on said street.

240.13 Agricultural Purposes - As used herein, this term shall be construed to mean the pursuance of 'agriculture' and 'farming' as defined in Title 1 of the Connecticut General Statutes.
Article III
Section 300 Subdivision Application Required

Whenever any subdivision is proposed to be made and before any related public improvements are made or constructed, or contract for sale of or an offer to sell any lots in such subdivision shall have been negotiated, and before any permit for the erection of a structure shall be granted, the subdividing owner or his agent shall apply, in writing, in the format and on the form prescribed by these regulations, to the Commission for approval of such subdivision. Said application shall then be given due consideration by the Commission in accordance with these regulations and the enabling statutes for said regulations.

Section 310 Application Denial

In the event a subdivision application is denied, no work on said proposed subdivision may be undertaken, nor improvements made or constructed, nor contract for sale of or an offer to sell any lots in such subdivision negotiated, nor any permit for the erection of any structure issued or granted, until such time as a new subdivision application concerning said proposed subdivision has been submitted to the Commission and reviewed and approved in accordance with these regulations and the enabling statutes. Applications may be denied by the Commission for the following reasons:

a). the application failed to conform to the purposes and requirements of these regulations; or
b). the application materials or fees received by the Commission were incomplete, insufficient, inaccurate, or altogether absent; or
c). the application failed to conform to the requirements of the zoning regulations; or
d). the required reports of the Town Water Pollution Control Authority, Director of Health, Town Engineer, Public Works Director, Fire Marshall, are either absent or indicate serious problems relative to the suitability of the proposed subdivision for building development; or
e). the application failed to conform to the purposes and requirements of the enabling statutes.
Article IV  
Section 400  General Submission Requirements  

Prior to the review and consideration of any proposed subdivision, the subdivider (applicant) shall submit an application to the clerk of the Commission complete with all required application materials and fees. The absence of any required application materials or fees shall of itself constitute sufficient grounds for denial of the application. However, the Commission or its agent may give notice to the applicant or his/her agent as to the absence of certain materials, and may, at its option, grant the applicant the opportunity to submit any absent materials in a timely manner without prejudice. Regardless, it is the responsibility of the applicant or his/her agent to become familiar with the procedures and requirements of these regulations prior to submission of an application, and thus the Commission expects that all applications shall be complete upon submission.
Section 410

Application Submission

The applicant shall file with the clerk of the Commission:

1). four (4) copies (blue or black line prints) and a recordable copy (polyester film) of the subdivision plan map, 24" X 36", 18" X 24" or 12" X 18" in size with a scale no larger than 1" = 100', bearing the seal of a qualified professional land surveyor registered in the State of Connecticut; and

2). four (4) copies of a sketch plan if the subdivision plan does not include the entire tract, 24" X 36", 18" X 24" or 12" X 18" in size with a scale no larger than 1" = 200'; and

3). where improvements are proposed to be constructed and installed, one (1) recordable copy and three (3) copies (blue or black line prints) of a construction plan bearing the seal of a qualified professional engineer registered in the State of Connecticut; and

4). a completed copy of the application form; and

5). the required fee; and

6). where sale approval is desired, a written request for such approval; and

7). where applicable and required, written reports of the Water Pollution Control Authority, Director of Health, Public Water Company, Fire Marshall, Inland Wetlands Commission, and the Town Engineer; and

8). an erosion and sedimentation control plan bearing the seal of a professional engineer; and

9). other material, maps, documents and information as required herein.
Section 420  **Required Reports**

Upon submission of an application to the clerk of the Commission, the application shall be accompanied by certain required reports as described herein. Other required reports shall be requested by the applicant as described herein. These reports are:

1.) Report of the Town Water Pollution Control Authority. (WPCA).

Where subdivision applications contain proposed building lots proposed to be served by a sewage treatment and disposal system operated and/or regulated by the Town WPCA, prior to the date of submission of the application to the clerk of the Commission, the applicant shall request in writing a written report from the Town WPCA concerning the feasibility and adequacy of the proposed sewage treatment and disposal system. It shall be the responsibility of the applicant to request said report well in advance of the application submission, and to submit to the Town WPCA all materials, fees, and information so required by the Town WPCA so that the Town WPCA may pass judgement and submit its report to the Commission at an early date.

If the Commission has not received said report by the time thirty (30) calendar days have passed since the date of submission of the application to the clerk of the Commission, the absence of said report of itself may constitute sufficient grounds for denial of said application.


Where subdivision applications contain proposed building lots proposed to be served by a sewage treatment and disposal system regulated by the Director of Health, e.g., an on-site septic system, and also proposed to be served by a water supply regulated by the Director
of Health, e.g., an on-site private well, prior to the date of submission of the application to the clerk of the Commission, the applicant shall request in writing a written report from the Director of Health concerning the feasibility and adequacy of the proposed sewage treatment and disposal system and proposed water supply. It shall be the responsibility of the applicant to request said report and related tests/inspections well in advance of the application submission and to submit to the Director of Health all materials, fees, and information so required by the Director of Health so that the Director of Health may pass judgement and submit his/her report to the Commission at an early date. If the Commission has not received said report by the time thirty (30) calendar days have passed since the date of submission of the application to the clerk of the Commission, then the absence of said report of itself may constitute sufficient grounds for denial of said application.


Where subdivision applications contain proposed building lots proposed to be served by a public water supply, prior to the date of submission of the application to the clerk of the Commission, the applicant shall request in writing a written report from the Public Water Company proposed to serve said subdivision, concerning the feasibility and adequacy of the proposed water supply system. It shall be the responsibility of the applicant to request said report well in advance of the application submission, and to submit to the Public Water Company all materials, fees, and information so reasonably required by the Public Water Company so that the
Public Water Company may pass judgement and submit its report to the Commission at an early date. If the Commission has not received said report by the time thirty (30) calendar days have passed since the date of submission of the application to the clerk of the Commission, then the absence of said report of itself may constitute sufficient grounds for the denial of said application.


Where subdivision applications contain proposed building lots, prior to the date of submission of the application to the clerk of the Commission, the applicant shall request in writing a written report from the Town Fire Marshall concerning the feasibility and adequacy of the proposed subdivision design relative to fire safety. It shall be the responsibility of the applicant to request said report well in advance of the application submission, and to submit to the Fire Marshall all materials, fees, and information so required by the Fire Marshall so that the Fire Marshall may pass judgement and submit his/her report to the Commission at an early date. If the Commission has not received said report by the time thirty (30) calendar days have passed since the date of submission of the application to the clerk of the Commission, then the absence of said report of itself may constitute sufficient grounds for the denial of said application.


Where a subdivision application involves land regulated as an inland wetland or watercourse under the provisions of Chapter 440 of the Connecticut General Statutes and the subdivision application involves proposed activities regulated under Chapter 440, and the Town Inland
Wetlands and Watercourses Commission (or State of Connecticut, Department of Environmental Protection, Inland Wetlands Unit, where applicable) has not already reviewed the application, then the applicant shall file a copy of the application with the Inland Wetlands and Watercourses Commission within ten days after filing such application with the clerk of the Planning and Zoning Commission. The failure of the applicant to comply with the above of itself may constitute sufficient grounds for denial of said application. Prior to rendering a decision on said application, the Planning Commission shall give due consideration to any written report filed with it by the Inland Wetlands and Watercourses Commission concerning said application, if indeed the Inland Wetlands and Watercourses Commission files said written report prior to the time the Planning Commission renders a decision on said application. The absence of a written report from the Inland Wetlands and Watercourses Commission shall not prohibit the Planning Commission from rendering a decision on said application.


Where subdivision applications propose improvements, whether required by these regulations or otherwise, prior to the date of submission of the application to the clerk of the Commission, the applicant shall request in writing a written report from the Town Engineer or his/her agent concerning the feasibility and adequacy for the proposed improvements, particularly in regard to the requirements of these regulations. It shall be the responsibility of the applicant to request said report well in advance of the application submission,
and to submit to the Town Engineer all materials, fees, constructive plans, and information so required by the Town Engineer so that the Town Engineer may pass judgement and submit his/her report to the Commission at an early date. If the Commission has not received said report by the time thirty (30) calendar days have passed since the date of submission of the application to the clerk of the Commission, then the absence of said report of itself may constitute sufficient grounds for denial of said application.


In addition to the above required reports, the Commission may request a written report from the Town Planner concerning: the conformity of the application to the subdivision and zoning regulations; comments contained in written reports received by the Commission; the feasibility and adequacy of the proposed subdivision and of its design; consistency with the Town Plan of Development; the potential for positive or adverse impacts on existing or proposed facilities, town services, energy use, abutting properties, and the environment; and the merits of the application relative to the required material.
Section 430  **Required Fee**
In order to offset certain costs incurred by the Town for the processing of applications and inspection of improvements, a fee of fifty dollars ($50.00) for each application containing two or fewer lots requiring approval or twenty-five dollars ($25.00) per lot for each application containing three or more lots requiring approval shall accompany the subdivision application upon submission to the clerk of the Commission. Said fee shall be in the form of a check made payable to the Town. Said fee is non-refundable, save for an application which is withdrawn six or more business days prior to the first meeting at which it is expected to appear on the agenda, and provided said application has not been on file with the clerk of the Commission more than two business days.

Section 440  **Agenda Priority**
In order to afford the Commission and its staff adequate time to review all applications and to prepare for the orderly and productive operation of a meeting, no application shall be placed on the agenda of any regular meeting of the Commission unless said application has been received by the clerk of the Commission at least five business days prior to the date of the meeting. No new application shall be placed on the agenda of a special meeting of the Commission prior to having first been placed on the agenda of a regular meeting of the Commission.
Section 450
Lots to be Portrayed

Only those lots for which approval is required need be shown on the subdivision map. Hence, any lot legally in existence on the effective date of these regulations and the first lot legally created and conveyed therefrom may be excluded in accordance with the definition of subdivision contained in the Connecticut General Statutes; however, both shall be portrayed on the required location map. All subsequent conveyances would require subdivision approval and thus shall be portrayed on the subdivision plan map and approved by the Commission prior to conveyance.
Section 460
Subdivision Plan Map

The subdivision plan map shall portray all information as required herein, and shall conform to the following map standards and requirements:

a). Said map shall be prepared in accordance with the standards of a Class A-2 Survey as defined in the Code of Practice for Standards of Accuracy of Maps, effective October 1, 1976, as amended by the State Board of Registration for Professional Engineers and Land Surveyors, and conforming to Connecticut General Statutes Section 7-31, as amended; and

b). On each sheet of plans, there shall be a title block consisting of: name of subdivider; name and seal of registered land surveyor; graphic and word scale; date when drawings were prepared and any revisions thereto; north arrow; and name of subdivision; and

c). Whenever more than one sheet is used, each sheet shall show the number of that sheet, the total number of sheets included in the set, clearly labeled match lines, and a key map; and

d). Said map shall contain an insert location map with a scale of 1" = 2000' or 1" = 1000', indicating: boundary lines of the proposed subdivision and of any larger tract of which the subdivision is a part; all adjoining streets; and all subdivision, town boundary lines, and other significant landmarks within 2,000' of the subdivision; and

e). Said map shall identify the zoning classification of the subdivision and abutting properties, including those across any streets, and portray zoning setback lines for all proposed lots; and

f). Said map shall identify the names of abutting property owners; and

g). Said map shall show the location of all monuments and markers set or
proposed to be set, found or not found; and

h). said map shall portray the proposed lot layout and indicate lot numbers, the square footage and acreage of lots and all lot dimensions; and

i). said map shall portray the proposed street layout with pavement type and typical street cross-section, proposed street names; and

j). said map shall indicate the proposed location of storm water and sanitary sewer systems, including any pipes, catch basins, retention or detention basins, man holes, and other related elements; and

k). said map shall indicate the proposed location of sediment and erosion controls, including sediment basins, hay bale checks, and other measures; and

l). said map shall indicate existing and proposed rights-of-way, easements, and encroachments; and

m). said map shall indicate the location of all regulated wetlands and flood hazard areas; and

n). said map shall reveal the location and results of all test holes, with each such hole properly identified in accordance with the actual testing undertaken (results may be submitted in written report form by the Director of Health); and

o). said map shall show the location of existing natural (e.g. woodland areas, meadows ponds), man-made (all structures, buildings, stone walls, dams, roads, cartpaths, pedestrian footpaths, etc.), and historical features; and

p). said map shall indicate the location, dimensions, and square footage and acreage of proposed open space, recreation, or park areas with
designation of ownership; and

q). said map shall accurately identify all land areas in which the proposed grade will exceed 15%; and

r). for subdivisions requiring building approval, and containing three or more lots and for all subdivisions requiring building approval and containing proposed improvements, said map shall show existing and proposed topography at two (2) foot contour intervals, except in areas clearly labeled as to remain undeveloped, in which case said contours need be only at five (5) foot intervals; and

s). said map shall contain an approval block for the signature of the Commission Chairman, date of approval, and expiration date of said approval; and

t). for subdivisions requiring sale approval only, said map shall contain the notation as required in Section 520.

Items e (zoning setback lines only), m, n, and q may be excluded from the subdivision plan map where sale approval only is being requested.
Section 470
Flood-Prone Area

The Commission may require of the applicant information and measures to prevent or minimize flooding, in accordance with the regulations adopted by the Commission related to the participation of the Town in the National Flood Insurance Program.
Article V - Commission Action

Section 500
Approvals

Applications for all proposed subdivisions may be reviewed and approved for sale and not for building development purposes (hereafter "sale approval"), or for sale or building development purposes (hereafter "building approval"). Modifications to an approved subdivision application may be reviewed and approved as well.

All applications which receive approval are approved conditional upon the completion of all required improvements in accordance with the procedures, design standards, specifications, and requirements of these regulations.

The application review process shall be undertaken in accordance with the procedures of the enabling statutes, including but not limited to when and how public hearings shall be advertised and convened (optional for subdivisions; mandatory for resubdivisions), decisions rendered, and notice given.

Section 510
Building Approval

Upon submission of a subdivision application, the Commission may review and approve said application for sale or building development purposes. Unless requested by the applicant in writing, all subdivision applications shall be reviewed relative to the requirements of these regulations for building approval. No such approval shall be granted for any proposed subdivision containing building lots which fail to meet the dimensional and other requirements of the zoning regulations.
Section 520  
Sale Approval

Upon submission of a subdivision application and a written request for sale approval, the Commission may review and grant sale approval for subdivisions containing lots proposed for sale and not proposed for building development purposes. No sale approval shall be granted for subdivision applications where building development is contemplated, as determined by the Commission, or proposed sale lots do not conform to the zoning regulations. Subdivision applications for sale approval need not be accompanied by reports from the Director of Health, the Water Pollution Control Authority, the Public Water Company, the Fire Marshall, or the Inland Wetlands Commission.

Sale approval may be granted, provided:

a). A notation shall be conspicuously inscribed on the subdivision plan map which clearly reads - "The designated lots (record lot numbers here) are approved for sale and not for building development purposes. No building or zoning permits shall be issued on these lots until such time as they have received subdivision approval for building development purposes from the (insert town name here) Planning and Zoning Commission".

b). The deeds for the subdivision's lots receiving sale approval shall contain a conspicuous restriction which clearly reads - "The subdivision approval for this lot was issued for sale and not for building development purposes. No building or zoning permits shall be issued for this lot until such time as this lot receives subdivision approval for building development purposes from the (Town) Planning and Zoning Commission."
c). Upon approval of this subdivision application, the applicant is hereby advised to notify, in writing, any known prospective buyer (or his/her agent), of any sale lot for which sale was granted, that said sale lot was not approved for building development purposes, and that building development approval shall be required prior to any future building development activities. Said notification should be similar in wording and content to the deed restriction required in b) supra.

Section 530
Modification Approval

Upon the written request of the applicant, without fee, the Commission may consider approval of a modification to a previously approved subdivision application. Said modification approval may be granted provided said modifications conform to these regulations and the zoning regulations. "Modification approval" shall not be granted for modifications to a previously approved subdivision application where said modifications actually constitute a resubdivision, in which case a new subdivision application shall be filed, accompanied by a request for either sale approval or building approval. Written requests for modification approval shall clearly identify any and all proposed modifications to the previously approved subdivision application, and shall be accompanied by a recordable subdivision plan map, engineer's construction plans, and any other pertinent information where appropriate.

Upon approval of said modifications, the Commission Chairman shall endorse the modified subdivision plan map, and thereafter said map shall be returned to the applicant for recording in the Town Clerk's office.
Section 540
Expiration Date

When endorsing the approval of the Commission on an approved subdivision plan map, the Commission Chairman or his agent shall record the date on which the subdivision approval expires. Said expiration date shall be the date five (5) years after the date of approval. All improvements required by these regulations shall be completed prior to said expiration date. In the event an approved subdivision's required improvements are not completed prior to the aforementioned expiration date, then Commission action shall be governed by Section 8-26c of the Connecticut General Statutes, as amended.

Section 550
Subdivision Plan Map Filing Requirement

Except as otherwise stated in these regulations (Section 975), in accordance with Section 8-25 of the Connecticut General Statutes, the subdivision plan map shall, upon Commission approval and endorsement thereon, be promptly returned to the applicant or his/her agent and filed or recorded by the applicant or his/her agent in the office of the Town Clerk within ninety (90) calendar days of the date such plan is returned to the applicant. Any subdivision plan map not so filed or recorded within the prescribed time shall become null and void, except that the Commission may extend the time for such filing for up to two additional periods of ninety days and the plan shall remain valid until the expiration of such extended time.

Section 560
Referral to Regional Planning Agency

Upon receipt of an application for land which abuts or includes land in
another municipality, the Commission shall submit a copy of said application (as provided by the applicant) to each Regional Planning Agency in whose jurisdiction the Town and the other municipality are located, prior to taking final action on the application. The Commission shall not approve or disapprove said application until thirty days have expired since said application was submitted to the Regional Planning Agency, or an advisory report has been received from said Regional Planning Agency, whichever comes first.
Article VI - Design Considerations

Section 600 Energy

The Commission hereby requires that the applicant design his/her subdivision in an energy-efficient pattern, particularly as it relates to transport (it should encourage pedestrian and transit modes), solar energy utilization and access, and general energy conservation. Where feasible, an east-west street layout is generally preferred in order to provide optimum building orientation for solar access. This becomes more critical in zoning districts permitting relatively small residential lot sizes. No such east-west layout shall be required where such layout would cause streets of undesirable gradients or inordinate disruption of the site's natural topographic features. ¹

The Commission may require pedestrian shelters at convenient locations to promote transit use, and reserves the right to disapprove any application which, in its opinion, has failed to conform to the requirements of this section.

The Commission welcomes responsible suggestions for amending these regulations in order to promote more energy-efficient subdivision designs.

¹ See Section 910-9, Street Gradients.
Section 610 Interior Lots

Lots which do not directly abut a street and are provided with vehicular access to a street by means of an access strip only, are generally discouraged by these regulations and thus should be avoided. Shared driveways for such interior lot(s) are similarly discouraged. Wherever possible, vehicular access to an interior lot shall be over an access strip owned in fee simple by the owner of said interior lot. When such fee simple ownership is infeasible, access rights shall be indicated on the subdivision plan map. The Commission reserves the right to disapprove applications containing an inordinate number of interior lots, or applications containing lots of unusual and inferior configuration. No more than two lots shall share an access strip or driveway.
Article VII - Permits
Section 700
Building Permits

No building permit shall be issued for any activity requiring said permit within any subdivision until all prerequisites of these regulations have been met. Specifically, these prerequisites are:

1. Building approval has been granted by the Commission for all subdivision application materials, including but not limited to the subdivision plan map, and said approval has been endorsed on said map by the Commission chairman. No building permit shall be issued until written confirmation of the subdivision's building approval (accompanied by one set of all approved maps and one copy of the approved application form) has been submitted to the Building Official by the Commission; and

2. Approval of the Zoning Enforcement Officer (or where required, approval by the Zoning Commission) has been granted for all activities covered by said building permit, where approval for such activities is required by the zoning regulations. No building permit shall be issued until written confirmation of the zoning approval (accompanied by one copy of the approved application forms and one set of all approved site plans, where required) has been submitted to the Building Official by the Zoning Enforcement Officer (in cases where he/she has jurisdiction) or by the Zoning Commission (in cases where the Zoning Commission has jurisdiction); and

3. Approval of the Inland Wetlands Commission has been granted for all public improvements proposed to be undertaken within the subdivision when such improvements fall within the jurisdiction of said Commission; and all activities covered by said building permit, when such activities fall within the jurisdiction of said Commission. No building permit shall be issued until written confirmation of the wetlands approval (accompanied by one copy of the approved application forms and one set of all approved site plans, where required) has been submitted to the Building Official by the duly authorized agent of the Inland Wetlands Commission; and

4. Approval of the Commission has been granted for a performance bond (or other surety) in an amount specified by the Commission, and said performance bond (or other surety) has been posted for 100% of the costs of all proposed and required public improvements. No building permit shall be issued until written confirmation of said approval and of said posting (or of said bond's release) has been submitted to the Building Official by the Commission.
5. In lieu of item 4 supra, all proposed and required public improve­ments have been completed to the satisfaction of the Commission in accordance with the requirements and procedures of Article IX, Section 975, and approval of the Commission has been granted for a maintenance bond in an amount specified by the Commission, and said maintenance bond has been posted. No building permit shall be issued until written confirmation of said approvals and said posting has been submitted to the Building Official by the Commission.

Section 710
Certificates-of-Occupancy

No certificate-of-occupancy shall be issued for any activity within any subdivision requiring said certificate prior to occupancy, until all prerequisites of these regulations have been met. Specifically, these prerequisites are:

1. All subdivision improvements are proceeding in conformity with the requirements, specifications, and procedures of these regulations and of the Commission's subdivision approval. No certificate-of-occupancy shall be issued until written confirmation of said conformity has been submitted to the building official by the Commission. Said written confirmations shall be submitted periodically throughout the duration of the construction period. In the event the subdivision contains plans for public improvements, the aforementioned written confirmations of conformity shall be supplemented by written confirmations of conformity prepared by the Town Engineer. These latter confirmations shall be based on actual inspections of construction activities; and

2. All required and approved activities and improvements are proceeding in conformity with the regulations, specifications, and procedures of the Zoning and Inland Wetlands regulations and of the requisite approvals previously granted by the Zoning Commission, the Zoning Enforcement Officer, the Water Pollution Control Authority, the Inland Wetlands Commission, and/or the Director of Health. No certificate-of-occupancy shall be issued until written confirmation of said conformity have been submitted to the building official by the aforementioned officials or their agents; and

3. Where no bond or other surety has been posted nor remains in effect, as in certain subdivisions abutting an improved and accepted Town Road requiring no major improvements, the required driveway apron, drainage facilities, erosion control measures, grading, and setting of monuments and pins has been completed in conformity with the regulations and the application's plans. No certificate-of-occupancy shall be issued until written confirmations of said conformity have been submitted to the Building Official by the Commission and the Town Engineer.
Article VIII - Building Lots to have Adequate Street Access

Section 800

Purpose

The purpose of this section is to assure that all proposed building lots front on or have access to a street which is of sufficient width, grade, condition, and design so as to provide an adequate, safe, functional and convenient system for present and prospective traffic and related needs, and to prevent the flooding and icing of streets through proper drainage, and to afford ample access to buildings for firefighting and other emergency vehicles.

Section 810

Access Required

No lot in any proposed subdivision shall hereafter be approved for building development purposes until (in accordance with the zoning regulations) said lot has the required frontage on or required access to a street which: meets or exceeds the minimum design standards and drainage requirements of these regulations; or is an improved and accepted public street containing a roadway in good condition, paved with bituminous concrete or concrete (or oiled) to a continuous width of at least twenty (20) feet and meets the drainage and other requirements of these regulations. Conditional approvals may be granted by the Commission in accordance with Article IX, Sections 970 to 974.3 inclusive.

Section 820

Improvements Required

In the event a proposed subdivision contains lots for building development purposes which front on or have the required access to an accepted Town road, whether improved or unimproved, and said road does not contain a
roadway in good condition paved with bituminous concrete or concrete
(or oiled) to a continuous width of at least twenty (20) feet and/or
does not meet the drainage and other requirements of these regulations,
then the roadway and/or drainage facilities and other related public
improvements for said Town road shall be improved in accordance with
Section 830 by the subdivider at his/her expense, prior to approval of
the aforesaid lots for building development purposes. Conditional
approvals may be granted by the Commission in accordance with Article
IX, Sections 970 to 974.3 inclusive.

Section 830
Requirements for Improvement

All accepted Town roads requiring improvements in accordance with
Sections 810 and 820 supra and this section shall be improved to the
design standards, requirements and procedures of this section at the
expense of the applicant.

The roadway (and its related facilities) upon which the proposed building
lots front or have the required access shall be improved to meet the
following standards in accordance with the procedures and requirements
prescribed in the following sections.

Section 840
Required Roadway Improvements

Section 840.1
Roadway Construction

The roadway along which the proposed lot fronts or has the required access
shall be widened and improved to a minimum continuous paved width of ten
(10) feet from the centerline of said Town road towards said proposed
building lot. Any existing pavement material in good condition, including
bituminous concrete or concrete (or oiled), may be incorporated into the improved roadway, at the discretion of the Town Engineer. However, the interface of all new pavement and existing pavement shall be machine cut and sealed with liquid bituminous material. All existing pavement material in poor condition shall be replaced with 2\(\frac{1}{2}\)" of bituminous concrete surface course over 6" of processed gravel base course as measured after compaction. All new pavement shall be constructed of 2\(\frac{1}{2}\)" of bituminous concrete surface course over 6" of processed gravel base course as measured after compaction. Prior to the application of the surface and base courses, the subgrade shall, where feasible as determined by the Town Engineer, be compacted and free of all vegetative matter, loam, boulders and ledge. Any soft spots shall be replaced with gravel. The base course shall then be applied, and compacted, and followed by the surface course, which shall also be compacted to the finished grade. All compaction shall be undertaken with a minimum eight ton roller.

Section 840.2 
Curbs

Where necessary to stabilize banks, or to control erosion or stormwater runoff, new or replacement 6" bituminous concrete curbs shall be provided, as determined by the Town Engineer. Said curbs shall, where required, be constructed in accordance with Connecticut Department of Transportation standard specifications.

Section 840.3 
Side Slopes

Side slopes abutting the roadway along which the proposed lot fronts or has the required access shall not be steeper than three feet horizontal to one foot vertical. Where conditions and costs warrant, the Town
Engineer may waive the 3 to 1 requirement provided such slopes are not steeper than 2 to 1 in earth cuts or fills and 1 to 1 in rock cuts.

Section 840.4
Storm Drainage

The roadway along which the proposed lot fronts or has the required access shall contain storm drainage facilities adequate to handle the stormwater runoff generated up-grade and from the area bounded by the centerline of said Town road and the limit of the highway right-of-way; i.e., the one-half \( \left( \frac{1}{2} \right) \) of the roadway closest to the proposed lot. The applicant is encouraged to incorporate any existing public drainage facilities into the improved stormwater drainage system. Pipe shall be reinforced concrete, bituminous coated corrugated steel pipe, or pipe-arch with paved invert; however, when groundwater or wet conditions are encountered, perforated steel or reinforced concrete pipe shall be used. Peak discharges shall be determined by utilization of the Rational Method where the drainage area is less than 200 acres, by the Soil Conservation Service method where the drainage area exceeds 200 acres but is less than 5 square miles, or the Bigwood-Thomas Flood Flow Formula where the drainage area exceeds 5 square miles. A fifteen year design storm shall be used. Pipe shall be installed at a minimum 0.5 percent slope. In order to determine the proper spacing of catch basins, gutter flow analysis shall be performed. Double catch basins shall be required where the gutter flow analysis indicates such a need. All outlets shall be terminated with an approved headwall or flared end system. Rip rap shall be used where and as determined by the Town Engineer.
Section 840.5  
Sidewalks  
The highway right-of-way along which the proposed lot fronts or has the required access shall contain sidewalks on one side of the roadway in areas of substantial residential concentration where the density equals or exceeds three (3) dwelling units per acre, areas of any retail commercial development serving the immediate neighborhood, and any area within fifteen hundred (1500) feet of a school, library, or other public building. Sidewalks shall be located on the side of the roadway where it could best serve the pedestrian population, as determined by the Commission. Where in the opinion of the Commission the volume of pedestrian traffic or site conditions do not warrant, then the requirement for sidewalks may be waived. Sidewalks shall be constructed of a 4" concrete cement surface course over an 8" compacted gravel base course to a width of four (4) feet.

Section 840.6  
Erosion Control  
Except where infeasible, in rock cuts, permanent grass cover shall be established on all improved side slopes in accordance with the procedures and specifications of the Erosion and Sediment Control Handbook, as published by the U.S. Department of Agriculture, Soil Conservation Service.

Section 840.7  
Construction Plans  
Construction plans bearing the seal of a qualified professional engineer registered in the State of Connecticut shall be submitted for all required improvements.
Section 840.8
Surety
Surety shall be provided in accordance with Article IX, Sections 970 to 974.3 inclusive.

Section 840.9
Inspections
Upon approval of the application's construction plans and after the posting of required surety, arrangements shall be made with the Town Engineer for the inspection of all required improvements in accordance with Section 965. Only then may the construction, maintenance and installation of required improvements proceed.

Section 840.10
Easements
The applicant shall be responsible for providing all necessary drainage easements for dedication to the Town. Said easements shall be provided in accordance with Section 960.
Article IX  Required Improvements
Section R900 General Requirements

No subdivision application shall hereafter receive building approval from the Commission until construction plans bearing the seal of a qualified professional engineer registered in the State of Connecticut and prepared in accordance with the requirements of these regulations have been submitted to the Commission. All improvements required by this section shall be portrayed on said construction plan.

All improvements described herein shall be constructed, maintained, and installed by the applicant at his/her expense and in accordance with the procedures, requirements, and design standards of these regulations. All improvements specified and portrayed in the application's construction plans shall be constructed, maintained, and installed by the applicant at his/her expense and in accordance with the procedures, requirements, and design standards of these regulations.

All improvements shall be constructed in accordance with the requirements, procedures, and specifications of the "State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction, Form 811", 1974, as amended, except as described herein.

Required improvements to accepted town roads and related facilities shall conform to the procedures, design standards, and requirements of Section 830.

Section 910  New Street Design Standards

a). Rights-of-Way

All new streets shall be centered in a right-of-way a minimum of fifty (50) feet in width, however, the Commission reserves the right to require wider rights-of-way if safety factors, terrain, projected
traffic and/or grades are such as to create a safety hazard which cannot be properly handled with a fifty (50) foot right-of-way.

b). Roadways

1). Major streets and through streets (collectors) shall be constructed in accordance with the following minimum design standards:

roadway- thirty-two (32) feet in width
traveled way- two lanes ten (10) feet in width
parking lanes- at least one parking lane eight (8) feet in width
shoulders- one four (4) foot shoulder, however, in the event there are two parking lanes each eight (8) feet in width, no shoulders shall be required.

2). Local streets shall be constructed in accordance with the following minimum design standards:

roadway- twenty-six (26) feet in width
traveled way- two lanes nine (9) feet in width
parking lanes- none required
shoulders- two shoulders four (4) feet in width.

3). Pavement Structure

The pavement structure of all required streets shall be constructed in accordance with the following minimum requirements:

Subgrade- Prior to the construction of the pavement structure, the subgrade shall be cleared of all vegetative matter (roots, trees, branches, etc), loam, boulders, and other objectionable material. Any soft spots shall be replaced with gravel. Depth of excavation shall be as determined by the Town Engineer. The subgrade shall then be compacted with a three (3) wheel roller (hereafter "roller weighing a minimum of ten (10) tons, or compaction shall be completed by a means approved by the Town Engineer.}
Subbase—After compaction of the subgrade, the subbase course shall be applied and compacted with a roller. It shall consist of a minimum of eight (8) inches of bankrun gravel, as measured after compaction.

Base Course—Four (4) inches (measured after compaction) of crushed stone base course shall then be applied and compacted with a roller.

Surface Course—All streets shall be paved to full roadway width with bituminous concrete and in accordance with the following:
   a. Prior to placement of the surface course, the underlying base course shall be compacted with a roller and brought to the planned proper grade.
   b. All utilities requiring installation under the street's roadway shall be installed prior to installation of the surface course.
   c. The binder course shall consist of premixed bituminous concrete compacted by a roller to a minimum depth of one and one-half (1½) inches.
   d. After installation of the binder course, the bituminous concrete, Type 121, wearing course shall then be installed with a paving machine, and compacted by a roller to a depth of one and one-half (1½) inches. Where heavy truck and construction equipment traffic is anticipated due to additional construction activities, however, the application of the wearing course may be postponed by arrangement with and approval of the Town Engineer.

4). Curbs

Where environmental, erosion control, drainage, bank stabilization, public health and safety, or other factors may arise and thus necessitate such, the Commission shall require the installation of six (6) inch bituminous concrete lip curbing in conformity with the Connecticut Department of Transportation standard specifications.

5). Side Slopes

Streets in cut or fill shall be provided with slopes not steeper
than three (3) feet horizontal to one (1) foot vertical, and the permanence of such side slope shall be provided for to the satisfaction of the Town Engineer. Where conditions and costs warrant, the Town Engineer may waive the three to one requirement provided such slopes are not steeper than two to one in earth cuts or fills and one to one in rock cuts.

6). Sidewalks

In areas of substantial residential concentration where density equals or exceeds three (3) dwelling units per acre, areas of any retail commercial development serving the immediate neighborhood, and any area within fifteen hundred (1500) feet of a school, library, or other public building, sidewalks shall be constructed on one side of the roadway. Sidewalks shall be located within the street right-of-way and on the side of the roadway where it could best serve the pedestrian population, as determined by the Commission. Where in the opinion of the Commission the volume of pedestrian traffic or site conditions do not warrant, then the requirement for sidewalks may be waived. Where required, sidewalks shall be constructed of a four (4) inch concrete cement surface course over an eight (8) inch compacted gravel course to a width of four (4) feet, and shall conform to Connecticut Department of Transportation standard specifications, except as described herein.

7). Horizontal Design

Wherever a local road intersects a local road, or wherever a local road intersects a through street, a minimum
thirty (30) foot pavement radius shall be utilized. A fifty (50) foot minimum pavement radius shall be utilized for all major street intersections. The length of the turning radius shall be increased where the intersection angle exceeds ninety (90) degrees and/or the turning speed exceeds twenty miles per hour. In designing horizontal curves, the Engineer shall use flat curves. Reverse horizontal curves shall be acceptable only when approved by the Town Engineer. Curves shall be connected with a minimum tangent of one hundred (100) feet between curves.

8) Intersection Design

Except where impracticable because of topography or other conditions, all streets shall join each other so that for a distance of at least one hundred (100) feet, the street is at a ninety (90) degree angle to the street it joins.

No more than two streets shall intersect or meet at any one point, nor shall any street intersect or meet at angle of less than sixty (60) degrees.

The centerline of all crossroads shall pass through a single point, and this shall be the only exception to the requirement that no point of intersection of any local road shall be closer than one hundred fifty (150) feet from an intersection on the opposite side of the road.

9) Street Grades

The maximum recommended street grade shall be nine (9) percent, however, less desirable street grades of up to twelve (12) percent may be approved by the Town Engineer where the Town Engineer determines that such grades may be accommodated without inordinate compromise to safety and good design principles. The minimum
permissible street grade shall be one (1) percent. The gradient through street intersections shall not exceed three (3) percent for a distance of one hundred fifty (150) feet from the centerline intersection. Every reasonable effort shall be made to follow the natural topography of the area, thus minimizing the need for cuts and fills and other disruptions. Long steep grades perpendicular to the contours are less desirable than gradual grades generally parallel to the contours, especially in terms of vehicular travel during the winter months and the potential for erosion due to increased stormwater runoff velocity.

10). Cross Slopes

Pavement cross slopes shall be either one-quarter (\(\frac{1}{4}\)) inch per foot, or three eighths (\(\frac{3}{8}\)) inch per foot. The street’s crown shall be a minimum of three inches.

11). Vertical Design

A vertical curve for all grade changes shall be shown on the construction plan. The vertical curve shall have a minimum length of one hundred (100) feet. All vertical curves shall be subject to the approval of the Town Engineer.

c). Driveway Entrance

Bituminous concrete berm-type driveway aprons (entrances) shall be installed by the applicant for each building lot in order to check erosion, prevent surface flooding, minimize maintenance, and control stormwater runoff. All such driveway entrances shall be designed and located to provide safe and convenient vehicular access. No driveway shall be located so as to present possible traffic safety
problems. Said driveway apron shall be ten (10) feet wide at the right-of-way line and flare out thereafter some two and one-half (2½) feet on each side so that the width of said apron is a minimum of fifteen (15) feet where it intersects with the street's roadway. Said apron shall be a minimum of eight (8) inches higher in elevation at the right-of-way line than the elevation of the gutter for said roadway, regardless of whether the driveway has a sag or crest curve. As the driveway proceeds for the first twenty feet into the lot and away from the right-of-way line, the sag curve shall not exceed twelve (12) percent, and the crest curve shall not exceed nine (9) percent.

d). Terminating Streets

No dead-end streets shall be permitted without a suitable cul-de-sac. Such cul-de-sac street shall have a cul-de-sac conforming to the design standards of these regulations (see detail). Temporary cul-de-sacs shall be provided where streets temporarily terminate and where they are to be extended at a future date. Said temporary cul-de-sac shall conform to the design standards of these regulations (see attached detail). Where traffic design, safety, or convenience considerations arise, and such considerations point to potential problems, the Commission reserves the right to prohibit cul-de-sac streets exceeding six hundred (600) feet in length.
Section 920 Stormwater Drainage
Stormwater drainage facilities are hereby required to be constructed, maintained, and installed in all subdivisions for which building approval has been granted. The applications for said subdivisions shall contain construction plans for the construction, maintenance, and installation of all stormwater drainage facilities, in accordance with the specifications and requirements of this section and these regulations. Stormwater drainage systems shall be installed in all new roadways.

Section 920.1 Design Criteria
All improvements shall be constructed in accordance with the requirements, procedures, and specifications of the "State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges, and Incidental Construction, Form 811"*, 1974, as amended, except as described herein.

Runoff Peak Discharge:
In determining runoff peak discharge, the Rational Method shall be utilized for areas draining less than two hundred (200) acres, the Soil Conservation Service (SCS) method shall be utilized for areas draining between two hundred (200) acres and five (5) square miles, and the Bigwood-Thomas Flood Flow Formula shall be utilized for areas draining more than five square miles.

Design Storm Standards:
All drainage systems shall be designed for the fifteen (15) year design storm. The twenty-five (25) year storm shall be utilized for discharge pipes at low points including cross culverts without roadway pickups. For minor streams draining between two hundred (200) and one thousand (1,000) acres, the fifty (50) year design storm shall be used. Where
major streams drain in excess of one thousand (1,000) acres, the one hundred (100) year design storm shall be the standard.

Rainfall Intensity:
In determining rainfall intensity, the Seelye Method shall be required where overland flow is less than one thousand (1,000) feet, and the Kirpich Method shall be required where overland flow exceeds one thousand (1,000) feet.

Coefficient of Imperviousness:
The coefficient of imperviousness shall be: 0.90 for pavement, roofs, and other impervious surfaces; 0.80 for commercial areas; 0.70 for apartments; 0.50 for residential areas; and 0.20 for parks, cemeteries, and recreational areas.

Storm Drain Pipe:
Class Four reinforced concrete pipe shall be required for all storm drains. Pipe shall be no less than fifteen (15) inches in size, and the minimum cover over the pipe shall be two (2) feet. The Town Engineer may approve asphalt coated corrugated metal pipe in special cases, however, where such pipe is permitted, it shall be covered as directed by the Town Engineer. Due to reduced life and critical cover considerations, the use of such metal pipe is to be minimized.

Storm Drain Slope:
All installed storm drains shall have a minimum slope of 0.5 percent.

Hydraulic Design:
The hydraulic design of pipes shall be based on the Manning Formula. During its application, the roughness coefficient (n) shall be 0.013 for concrete pipe and 0.019 for corrugated metal pipe.
All pipes shall be checked for inlet control. The maximum headwater (HW) in catch basins shall be 1.0 feet below the top of grate. At endwalls, when headwater divided by diameter of pipe (HW/D) exceeds 1.2, the limits of flooding shall be shown on the construction plan.

Catch Basins and Manholes:

Gutter flow analysis shall be utilized to determine catch basin spacing and the need for double basins in roadway sags. The first inlet in the roadway's storm drain system shall be located within three hundred fifty (350) feet of the roadway's high point. Other than the first inlet, all inlets shall be spaced along the roadway a maximum of three hundred feet apart. Where the spacing between inlets exceeds four hundred (400) feet, such as with certain overland stormwater trunk lines, manholes shall be placed to give a maximum length of pipe between structures of four hundred (400) feet. In order to facilitate maintenance and inspection activities, drainage structures (either catch basins or manholes) shall be placed at each grade change along a storm drain, at each change in horizontal direction, and at each junction point of two (2) or more storm drains. Inlets shall be installed to drain all intersections of new streets and intersections of new and existing streets. Double grate inlets shall be installed at sags where, due to off-street runoff, a design flow in excess of 3.0 cubic feet per second will be entering the inlet.

Stormwater Discharge:

Stormwater shall be discharged into Town or State drains (permission of appropriate authority shall be obtained), or into suitable streams or rivers with adequate capacity to carry the additional water, when
permitted by the agencies over which such activities are regulated, including the Town Inland Wetlands and Watercourses Commission, the State Department of Environmental Protection, and the U.S. Army Corps of Engineers (404 Program). Where drainage systems discharge into a watercourse or existing drainage system, the construction plans shall provide calculations indicating the ability of the watercourse and related downstream structures or existing drainage systems to assimilate such additional flow without causing streambank erosion or overflow, or without causing the watercourse or its related downstream structures or said existing drainage system to exceed its capacity. Detention basins shall be required where deemed necessary by the Town Engineer.

Underdrain:
Where necessary to assure the long-term life and proper functioning of improvements such as wet areas near, in, over, or under areas of improvement, and where required by the Town Engineer or Commission, underdrains shall be installed. Wherever practicable, such underdrains shall be connected to drainage structures, and otherwise terminated with an endwall approved by the Town Engineer.

Storm Drain Outlets
Termination of all storm drain system outlets shall be with a headwall or flared end section, as approved by the Town Engineer. Where approved by agencies with jurisdiction and where practicable, storm drains shall terminate at a natural watercourse. No such terminations shall be approved if within one hundred fifty (150) feet of a street line, save where such terminations are direct discharges into a watercourse. Cross culverts without roadway pickup shall terminate in approved headwalls
located at the right-of-way lines.

Other Drainage Structures

Other drainage structures shall be subject to the approval of the Town Engineer and/or the Commission. Bridges and box culverts shall be designed to carry at least the full roadway width and at least a four (4) foot sidewalk on each side of said roadway.

Detention Basins:

Detention basins shall be utilized where necessary or as required by the Commission and shall be utilized to limit the subdivision's peak storm drainage discharge to the peak ten (10) year—twenty four (24) hour flow whenever the size of the subdivision equals or exceeds five (5) acres. Designs for such detention basins shall be subject to the approval of the Town Engineer.

Conformity to Governmental Regulations:

Where streets in the subdivision join existing state roads and town streets, the applicant shall provide drainage at intersections as necessary to conform to either state regulations or town regulations, whichever the case may be.
Section 930
**Erosion and Sedimentation Control**

The construction plan shall portray all physical measures to be implemented by the applicant during or before construction so as to control erosion and reduce sedimentation.

Section 930.1
**Erosion and Sedimentation Control Plan Required**

A written erosion and sedimentation control plan, supported by the construction plan, and bearing the seal of a professional engineer shall accompany the application upon submission to the clerk of the Commission. Said control plan is required only where building approval is requested, and shall conform to the procedures and measures contained in the "Erosion and Sediment Control Handbook", published by the U.S.D.A. Soil Conservation Service, Storrs, Connecticut, 1976, as amended.

Said control plan shall show: location of areas where vegetation is to be removed and soils thereby exposed and what activities shall cause their exposure; a schedule of major construction activities where soils are to be exposed; a schedule of when certain measures shall be implemented to minimize erosion and sedimentation; a description of such measures including their specifications and design; a description of the activities to be undertaken to assure proper maintenance of such measures.

Section 930.2
**Erosion and Sedimentation Control Requirements**

The applicant shall make every reasonable effort to minimize the exposure of soils and removal of vegetative ground cover during and immediately following construction activities. During interim periods of soil exposure, temporary vegetative cover or mulch shall be established.
When final grades are achieved, a permanent vegetative cover shall be established in accordance with Section 910 b)5, however, baled hay or straw checks shall be installed at the toe of all slopes exceeding ten (10) feet in height. Wherever areas become exposed, runoff diversions or benches shall be placed up-slope. All fill material shall, where necessary, be compacted and so placed as not to cause undue soil movement. Fill material other than stable materials such as large rocks shall not be dumped or moved to an area in close proximity to a waterbody or watercourse unless measures have been taken to minimize the sedimentation of said waterbody or watercourse resulting from the erosion of the fill material. Where drainage systems discharge into a watercourse, the erosion and sedimentation control plan shall provide calculations indicating the ability of the watercourse and related downstream structures to assimilate such additional flow without causing streambank erosion. Heavy construction equipment such as bulldozers shall not cross through watercourses but, shall cross over them by means of a bridge or other measure.

Section 930.3
Sedimentation Basin

Prior to the commencement of any construction activities, sedimentation basins shall be installed in order to prevent the undue sedimentation of down grade watercourses and waterbodies. The schedule for the installation of this structure shall be included in the erosion and sedimentation control plan, and the design and specifications of said structure shall be portrayed on the construction plan. The sediment basin shall be adequate to trap all sediment as is practicable, and shall conform to the standards.
of the "Erosion and Sediment Control Handbook". The final design shall be as approved by the Commission.
Section 940

Monuments and Markers

All monuments, markers, pins, and merestones portrayed on the subdivision plan map and the construction plans are required herein shall be installed and set by a land surveyor registered in the State of Connecticut. Upon installation, said land surveyor shall submit a written report to the Commission, certifying that all such required monuments, markers, pins, and merestones have been accurately installed in accordance with these regulations, and in accordance with the standards of a Class A-2 survey as defined in the Code of Practice for Standards of Accuracy of Maps, effective October 1, 1976, as amended by the State Board of Registration for Professional Engineers and Land Surveyors.

Section 940.1

Street Boundaries

Monuments and markers indicating street boundaries shall be of granite or reinforced concrete not less than four (4) inches square and at least thirty six (36) inches long and set flush with the proposed grade.

Section 940.2

Lot Boundaries

Markers indicating lot boundaries shall be metal rods of no less than one-half (½) inch O.D. or metal pipes of no less than one-half (½) inch O.D. and two and one-half (2½) feet long or equivalent semi-permanent marker set flush with the proposed grade, and shall be installed at all corners and other control points in conformity with A-2 survey standards.

Section 940.3

Monuments and Markers Required

No lots shall be sold or certificates of occupancy issued in any approved subdivision until all required monuments and markers have been installed,
save in instances where a performance bond or other acceptable surety covering such installations has been posted and remains in effect. No posted surety covering the installation of required monuments and markers shall be released until such monuments and markers have been installed and certified by a registered land surveyor.

Section 950
Open Space

Public open spaces may be required by the Commission in an amount and in locations it considers proper and reasonable for parks, playgrounds and open spaces. This land shall be adequately prepared to serve the intended purposes. To provide for proper maintenance and care, the Commission may require the dedication of such land to the Town.

Section 955
Rights-of-Way

All subdivision plan maps shall indicate the limit of the street right-of-way. New streets shall have a right-of-way a minimum of fifty (50) feet in width. Where existing streets contain a right-of-way, and said right-of-way is less than fifty (50) feet in width, and the distance between the centerline of the roadway within said right-of-way and the limit of the street's existing right-of-way (at the property line of said subdivision) is less than twenty-five (25) feet, the subdivision plan map shall portray a new right-of-way limit (at the property line of said subdivision) which measures a distance of at least twenty-five feet from the centerline of said roadway. Where due to the location of existing structures or facilities, or due to other factors which make it infeasible to require said new right-of-way for existing streets, the Commission may waive said requirement.
The Commission may require additional pedestrian or vehicular rights-of-way to be dedicated to the Town in order to provide access to municipal facilities, public facilities, parks, open spaces and the like, or to provide pedestrian access where such pedestrian access is deemed desirable by the Commission.

Section 960

Easements

Where stormwater drainage systems and sanitary sewer systems required by these regulations, or required by the Commission approval, or contained in the construction plans, are located outside of a street right-of-way, the applicant shall provide acceptable easements for dedication to the Town. Such easements for storm drain or sanitary sewer pipe shall be at least twenty-five (25) feet in width and centered on said pipe, except certain easements adjacent to the street right-of-way may have reduced widths. Easements for outlet pipes shall extend to a suitable existing storm drain or an adequate natural water course. Where an element of the drainage system used for outfall is beyond the limits of the subdivision, the applicant shall obtain and propose for dedication to the Town the necessary easements through adjoining property, prior to or as a condition of Commission approval of the application. Easements shall be provided of sufficient width to include the width of any ditch, channel, or water course portrayed on the subdivision plan map or the construction plan, as well as an access strip ten (10) feet in width.
Section 965
Inspections

All required improvements shall be inspected by the Town Engineer or his/her agent as they are being constructed, maintained, or installed in order to assure that all procedures, design standards, and requirements of these regulations have been met during the required construction, maintenance, or installation of any improvement. It shall be the duty of the applicant to notify the Town Engineer at least forty-eight hours prior to the commencement of required construction, maintenance, or installation activities of the time when such activities are to be commenced. The applicant shall take every reasonable measure to facilitate such inspections. The failure of the applicant to so notify said Town Engineer may result in the Town not approving work performed, or may also result in the delay of a bond release or other complications as stated herein.

Where at the time of the final inspection actual improvements undertaken differ from the construction plans, are as yet incomplete, have been installed unsatisfactorily, or otherwise fail to conform to these regulations or the subdivision approval, then said Town Engineer shall submit a written report to the Commission indicating that all approved and required improvements have not been satisfactorily completed.

If, however, the only problems are variations to the approved plans, and "as-built" plans and profiles of any variations to the approved plans are prepared and submitted by a registered professional engineer and found by the Town Engineer to be equal to or better than the approved designs, then the Town Engineer may submit a favorable report. Regardless, the Town Engineer shall submit a written report to the Commission indicating
whether or not all approved and required public improvements have been properly installed in accordance with the subdivision approval and these regulations.

The Commission is under no obligation to approve any variations to the approved application's construction plans, and indeed may refuse such variations and require that all improvements failing to conform to the construction plans, these regulations, or the approval be reconstructed or installed to the original specifications as approved by the Commission prior to the release of any surety, further issuance of any building or zoning permit, or issuance of any certificate-of-occupancy.

The applicant is thereby encouraged to properly notify the Town Engineer when inspections should or are required to be made, and to install all improvements in accordance with the approved plans and these regulations.
Section 970  Surety
Section 971.1  Performance Bond

No lots shall be sold or building permits issued until a performance bond acceptable to the Commission or other surety acceptable to the Commission has been approved by the Commission and posted for 100% of the costs of the approved subdivision's proposed improvements, except as stated below in Section 975. The purpose of the performance bond is to insure installation of all approved and required improvements within or related to the approved subdivision.

Section 971.2  Performance Bond Form

No performance bond or other surety shall be approved by the Commission unless said bond or other surety is in a form acceptable to the Commission. The Commission reserves the right to add conditions to the bond which, in the opinion of the Commission, are deemed necessary to insure the proper and timely installation of all approved and required improvements within or related to the approved subdivision.

Section 971.3  Performance Bond Amount

The amount of a performance bond or other surety shall be as determined by the Commission. Said determination shall account for all costs of the proposed improvements when built to the specifications of these regulations. The Commission may request reports from the Public Works Director, Town Engineer, or other sources concerning current cost estimates prior to or during deliberations.
Section 972
Surety Company

No performance bond, maintenance bond or other surety shall be approved by the Commission unless said bond or surety is issued in favor of the Town and executed by a company duly licensed and authorized by the State to issue said bonds or surety. The Commission reserves the right to refuse said bond or other surety if in its opinion, the performance record of said company is unsatisfactory. No performance bond, maintenance bond, or other surety shall be approved by the Commission until it has been documented that the individual signing said bond or surety on behalf of said company has the power of attorney.

Section 973
Performance Bond Release

No performance bond or other surety shall be released by the Commission until the Commission has received a favorable written report from the Public Works Director, the Town Engineer, or another qualified source retained by the Town to inspect all approved and required public improvements indicating that all approved and required public improvements have been properly installed in accordance with the subdivision approval and these regulations. The Commission shall not release said bond or other surety if said written report indicates that any approved or required public improvement is as yet incomplete, has been installed unsatisfactorily, or fails to conform to the subdivision approval or the procedure, standards, and/or design criteria of these regulations, unless however, "as-built" plans and profiles of any variation to the approved plans are prepared and submitted by a registered professional or another engineer retained by the Town and approved by the Commission. The

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Commission is under no obligation to approve said variations, and indeed may refuse such variations and require that all improvements be reconstructed or installed to the original specifications prior to the release of a performance bond or other acceptable surety. All such modifications shall be reviewed in accordance with Section 530.

In addition, no performance bond or other surety shall be released by the Commission until a maintenance bond as described herein has been furnished to the Town.

Section 974
Maintenance Bond

A maintenance bond which guarantees for a period of one year to indemnify against defective workmanship, materials or design the improvements covered by the performance bond (or other acceptable surety) shall be furnished to the Town. No performance bond (or other acceptable surety) shall be released until such time as said maintenance bond acceptable to the Commission has been approved by the Commission and posted either in cash or in surety in the amount of five percent of the subdivision's total estimated costs for all approved and required improvements.

Section 974.1
Maintenance Bond Form

No maintenance bond shall be approved by the Commission unless said bond is in a form acceptable to the Commission. The Commission reserves the right to add conditions to the bond which, in the opinion of the Commission, are deemed necessary to indemnify against defective workmanship, materials, or design the improvements covered by the performance bond (or other acceptable surety).
Section 974.2
Maintenance Bond Amount

The amount of a maintenance bond shall be as determined by the Commission. Said bond shall be in the amount of five percent of the amount posted in the subdivision's performance bond (or other acceptable surety).

Section 974.3
Maintenance Bond Release

No maintenance bond shall be released by the Commission until it has been in effect for a minimum of one year's duration. The Commission shall release said bond only upon receipt of a favorable written report from the Public Works Director, the Town Engineer, or another qualified source retained by the Town to inspect all approve and required public improvements, indicating that all improvements are free of defective workmanship, materials, or design, or that any defects have been corrected to their satisfaction.

Section 975
Immediate Construction of Improvements

Any applicant who desires to proceed with the immediate construction of certain required improvements in lieu of posting a performance bond or other acceptable surety as per Section 971.1 supra, shall comply with all procedures and requirements as stated herein. This section, however, shall not apply to the construction, reconstruction, maintenance, or installation of any public improvements to be undertaken on municipally owned land. All such public improvements shall require the posting of a performance bond in accordance with Section 971.1. The applicant shall submit to the Commission a written request that the statutory ninety (90) day deadline for filing approved subdivision plan...
maps upon delivery to the applicant be extended for two (2) additional ninety (90) day periods as per Section 8-25 of the Connecticut General Statutes, and stating therein the applicant's:

1). desire to proceed forthwith with the construction of the required improvements; and

2). intention to conform to the approved subdivision plan map and approved construction plans; and

3). intention to comply with the requirements of these regulations pertaining to the inspection of improvements; and

4). intention to comply with all town regulations and ordinances; and

5). intention to comply with the design, detail, procedural, construction, maintenance, and installation requirements of these regulations and of the application approval; and

6). assurance that in accordance with Section 965 of these regulations, the Town Engineer shall be informed at least forty-eight hours in advance of the undertaking of any construction, maintenance, or installation activity which should or is required to be inspected, and that the applicant shall take every reasonable measure to facilitate such inspections.

The Commission may thereupon approve said extension of the deadline for filing the approved subdivision. Such extension shall not cause the subdivision to be subject to any subdivision or zoning amendments which may be approved during the extension period.

Upon Commission approval of said extension, and when proper arrangements have been made by the applicant with the Town Engineer for the inspection of improvements, then the construction, maintenance, and installation of required improvements only may proceed. However, under no circumstances shall lots be sold, or building or zoning permits issued, until: all required improvements have been inspected by the Town Engineer or his/her agent; all improvements have been constructed, maintained, and installed
in accordance with the requirements of these regulations and in conformity to the approved construction plans and subdivision plan map; all procedures stated herein have been complied with; a written report of the Town Engineer has been submitted to the Commission indicating all required improvements have been constructed to his/her satisfaction and in accordance with the approved construction plans and subdivision plan map, and the requirements and procedures of these regulations; and upon completion of said improvements, a maintenance bond has been posted as per Section 974 supra; and the Building Official and the Zoning Enforcement Officer are in receipt of a written report from the Commission or its agent indicating that all required improvements have been completed and a maintenance bond posted. Upon issuance of said report, the Commission shall release the approved subdivision plan map for filing with the Town Clerk.
Section 980
Public Improvements

Upon receipt by the Commission of a report from the Town Engineer indicating that all approved and required improvements have been properly installed in accordance with the subdivision approval and these regulations, and after a maintenance bond for said improvements has been posted, the Commission may consider recommending Town acceptance of certain proposed public improvements including proposed public streets and related drainage facilities, in accordance with 8-24, 13a-48 and other applicable sections of the Connecticut General Statutes. No such recommendation shall be made until a warranty deed or other acceptable instrument for all easements, rights-of-way, land parcels and rights required to be deeded to the Town has been furnished to the Commission and has been approved by both the Commission and the Town Counsel.

Section 981
Penalties

Any person, firm or corporation making any subdivision of land without the approval of the Commission shall be fined not more than five hundred dollars ($500) for each lot sold or offered for sale or so subdivided.

Section 982
Effective Date

These regulations were adopted by the Commission on _____________, and shall take effect on _________________.

Section 983
Validity

If any section, paragraph, subsection, clause or provision of these regulations shall be judged invalid by the courts, such adjudication shall apply to that item so judged and the remainder of these regulations shall
be deemed valid and effective.

Section 984
Amendments

These regulations may be amended by the Commission at a meeting called for that purpose. However, no such amendment shall become effective until after a public hearing has been held in accordance with Section 8-25 of the Connecticut General Statutes. No subdivision or resubdivision application which has been approved by the Commission prior to the effective date of an amendment to these regulations, where the approved subdivision plan map has been filed or recorded with the town clerk, shall be required to conform to such amendment until a period of five years has elapsed from the effective date of such amendment.
Any town in Connecticut may by ordinance institute a five member Planning Commission to undertake three primary functions: the formulation of a Plan of Development (also known as a master plan); the adoption and implementation of subdivision regulations; and the review of proposed municipal development projects. Most Commissions fail to fully exercise this authority, as evidenced by the plethora of obsolete Plans, the inadequacy of both subdivision regulations and subdivision administration, and the ignorance of Commissioners to their entrusted responsibility for reviewing and reporting on all proposed municipal development projects.

This paper, however, and the accompanying model regulations, addresses the middle function - the adoption and administration of regulations covering the subdivision of residential land, and particularly the problem behind the symptoms, that of inadequate regulations and administration.

Symptoms of the problem surface daily throughout Connecticut. One such symptom is that of municipal burden. For example, all too often subdivisions are constructed on inadequate Town streets without proper provisions being made for their upgrading prior to occupancy of the subdivision. Indeed, at present there is a financial incentive to developers for choosing sites along Town-maintained roads, for new roads and related improvements need to be constructed at the developer's expense. As a consequence, these very streets may be unable to accommodate the increased traffic flow without compromising vehicular and
pedestrian safety. In some cases, these streets fail to meet even elementary urban standards for stormwater drainage systems or roadways. The roadway for rural Town streets frequently is paved to less than twenty feet in width and does not contain as much as a catch basin, causing ponding in the roads (which leads to winter icing), and problems of vehicular negotiation. These inadequacies could render the streets unsafe even for the light traffic volumes in evidence prior to subdivision development.

So where is the burden for the necessary improvements placed? In most communities, they now fall on the municipal tax roles. In order to partially offset the costs incurred by the municipality when disgruntled newly arrived homeowners rightfully demand immediate roadway improvements, and perhaps to avoid these problems altogether in the future, the preferred mode of attack is through regulatory change. Thus the problem of regulatory inadequacy is positively altered by utilizing the subdivision regulations as a change agent, changing the burden of municipal roadway improvements related to subdivision development from the tax base to the developer who will profit from earlier municipal investment, or as an alternative, even directly to the affected homeowner. And these roadway and drainage systems could even be upgraded in stages as roadsides become urbanized. The possible resolutions to this problem are easily within the grasp of the Commission.

As intimated above, this problem can be corrected through regulation, and such corrective measures are enumerated in the model as well as discussed at length in subsequent sections of this narrative. The symptom need
not always plague us.

A second symptom is that of subdivision application submissions which are so failing in their presentation of the development proposal that the Commission often endorses the plans without really knowing the merits of the design relative to building development requirements, or even whether or not the proposal is feasible given environmental or man-made limitations. The key to this symptom's resolution is to again go to the root cause of the symptom, the problem itself - the subdivision regulations. Thoughtfully developed regulations can spell out exactly what information must be contained in the application submission, information of such detail and form so as to permit a thorough review of the proposal. This could result in a full comprehension by the Commission of the application's merits concerning the needs of the future inhabitants, as well as its impact on the environment and its feasibility given infrastructural and site condition limitations.

Not far astray from the aforementioned symptom is the persistent air of diverging opinions on the constitution and application of "subdivision" as defined in the subdivision enabling statutes. Many Commissioners are known to believe, incorrectly, that every property owner has the right to subdivide his land at least once before becoming subject to subdivision regulation. This false notion has led to the illegal waiver by unknowing officials of the subdivision review process where indeed subdivision approvals have been required by law. This has wrought upon us some poorly planned developments, developments which could have been showcases had they undergone review. To set the record straight, the model contains
the "official" definition, and supplements it with a section indicating just which lots require subdivision approval and which don't even have to be shown on the subdivision plan map and thus can forego an expensive survey. This approach was taken because case law has shown that no Commission can adopt a definition of "subdivision" which differs from that in the statutes.\(^1\)

This paper has also proposed a resolution to the symptom caused somewhat in part by the enabling statutes, changes to which are beyond the scope of this paper. As now written, Chapter 8-25 requires the Town subdivision regulations to "provide that the land to be subdivided shall be of such character that it can be used for building purposes without danger to health or the public safety.\(^2\) This wording has been confusing to many in the planning field, for it implies that all lots contained in proposed subdivisions must be suitable for building development, must have undergone tests and reviews to assure such suitability, must have been supported by expensive application materials showing how land development will be undertaken, and must be designated for near-term building development. The confusion is compounded by the definition of subdivision itself, which includes the clause-"Subdivision means the division of a tract...for sale or building development purposes,\(^3\) which, with other sections of the

enabling chapter, requires the submission of applications for subdivi-
sion approval of lots prior to conveyance, be they for sale purposes
only, or sale and building development purposes. How or better yet
why does a Commission evaluate a lot's suitability for building develop-
ment purposes when no building development is contemplated in the near
term? Such an evaluation puts undue pressure on both parties, and
indeed financial and other burdens upon the applicant should he be
unnecessarily required to arrange for septic system permits and designs,
well permits, public sewer hookup, public improvements, surveys, engineer-
ing, and make other arrangements which are frivolous in order to con-
summate a simple sale of land to, for example, a son or daughter.

Through the model, this paper has proposed to correct one of aforementioned
problems, the subdivision regulations (another being the statutes), so
as to eliminate the confusion surrounding the symptom, and to provide
the opportunity for separate application review criteria, processes, and
submission requirements for sale, or alternatively building approval,
without conflicting with the statutory requirements. Elements of this
approach have been tested by the author in one large eastern Connecticut
town, with relative success.

Nearly all rural towns surveyed by the author have deficient design and
installation requirements for public improvements such as streets, storm-
water drainage systems, driveway entrances, erosion and sedimentation
control measures, and monuments and markers. Through consultation with

1. Rural towns surveyed were the ten towns comprising the northeastern
Connecticut planning region. Other surveyed regulations were from
suburban towns in the Hartford Metropolitan area.
a registered professional engineer and the review of such requirements of suburban towns, as well as the rural Town of Killingly, the regulations contained in the "Required Improvements" article were formulated. In setting out this task, the primary objective was to develop regulations that would not only afford the Town and future inhabitants of the subdivision the opportunity to ensure that all necessary improvements were constructed in accordance with standards sufficient for long-term low-maintenance service but also, to minimize superfluous requirements which only serve to unnecessarily increase development costs and thereby increase housing costs for the consumer. Most of the rural towns noted above do have deficient public improvement requirements, which have posed a recurring problem for them inasmuch as Commissions are generally not empowered to impose upon the applicant requirements not enumerated in their subdivision regulations. Conflicts may arise between the two parties where regulations are unclear, and personal preferences differ, as has been observed by this author. Thus, it is best to incorporate into the regulations a reasonable but comprehensive set of design standards and installation procedures for all required improvements. Such requirements are set forth in Article IX, Required Improvements, such to reduce deficiencies and superfluous standards observed as symptoms of the subdivision regulation problem in one large suburban town near Hartford and nearly all rural towns in Northeastern Connecticut.

The vast majority of subdivisions have been designed so as to maximize the number of building lots engendered. Indeed, computers are now
being utilized by site planners to achieve the desired results. As a consequence, Commissions reviewed the subdivision plans relative to conformity to basic regulations, such as dimensional (zoning) requirements and proper provisions for streets, while ignoring the impact of the design pattern on such fateful concerns as energy consumption. The result has been the development of an energy consumption design pattern standard which is excessively reliant on the private automobile for transport, often necessitating a substantial trip just to get that bottle of milk, and overreliant as well on non-renewable resources for space and hot water heating. The problem behind this symptom is the regulations, both subdivision and zoning, for neither have encouraged nor required energy efficient development. Zoning regulations need to include inducements to spur the use of cluster developments (planned residential or planned unit developments, the latter being the most desirable where population concentrations can be served by neighborhood retail services within a pedestrian zone).

Subdivision regulations need to require energy-efficient designs, particularly through measures to facilitate pedestrian and transit modes of transport, and solar energy utilization through street layout. A first cut resolution to the problem has been advanced in the model. The model does, however, discourage the use of shared driveways as access to interior lots due to legal and maintenance problems which often arise from such arrangements, notwithstanding the potential for energy conservation through this concept. Perhaps at some later date, this perrenial problem could be overcome, or in the interests of
national priorities, tolerated.

Another observed issue has been that of coordination among town authorities. Without proper provision for an administrative framework which assures that no permit or approval is issued until all necessary prerequisites to that approval have been met, bedlam prevails. The conflicts can be underscored by the example of building permits being rightfully issued by the building official for the erection of homes prior to reception by the Commission of assurances that all necessary improvements serving the houses, such as streets for access, have been bonded. Similarly, the issuance of a certificate-of-occupancy for a dwelling prior to the installation of the surveyor's monuments and pins, if no bonding were in effect guaranteeing such installation, could make it difficult if not impossible for the eventual installation to be ensured. Many professionals in the field are quite aware of the ramifications of such an incomplete improvement. Of greatest impact is that upon the homeowner, who would incur grossly inflated costs the next time he is in need of a survey, such as prior to a real estate conveyance, just because these monuments and markers were not installed by the original surveyor. Accordingly, this conflict, or symptom, has been addressed in the model regulations, particularly sections concerned with permits (Article VII, Sections 700-710, inclusive), required reports (Article IV, Section 420), commission action (Article V, Sections 500-530, inclusive), improvements to existing streets (Article VIII), and surety (Article IX, Sections 970-975, inclusive).

The lack of enforcement ability of Commissions, primarily attributed
to the absence of a subdivision enforcement officer, the relatively minor penalties (although more than doubled by the last legislative session) permitted, and the mounting costs of litigation, all in concert require that the Commissions adopt additional measures to facilitate compliance. The previously mentioned coordination is crucial, yet this too may be supplemented by surety guaranteeing the installation of required public improvements. In the absence of these instruments, however, the model contains provisions permitting the early construction of required improvements without permitting concurrent house construction. This option recognizes the inability of many small contractors to secure bonds (the legislature has provided for limited assistance), however, its liabilities to the contractor are that he cannot commence work on his only revenue-producing structures, homes, until all of the streets and related improvements have been inspected and approved, and he must generate considerable advance cash flow as well.

Bonds, however, are known and accepted by the development community, and do afford the Commission that extra enforcement clout necessary to ensure timely completion of the subdivision. The major difficulty with bonds is calling them when channels of cooperation have broken down. Thus, the model provides for Commission approval of all surety and surety bond forms as extra measures of guaranteeing compliance. Several surety companies are known to be extremely incooperative when their bonds are called, and this factor should be given due consideration by the Commission prior to approval for surety.
In conclusion, the model provides Connecticut's Planning Commissions with an opportunity to put teeth in their residential land subdivision regulations, and to begin to approach the problems of land subdivision and indeed society's contemporary problems with a primed guide. The cumulative problem in a nutshell is this inadequacy of residential land subdivision regulations and administration, and only through the implementation of new and improved regulatory vehicles can the symptoms of the problem, as outlined above, be minimized or even eradicated.
PART III  Discussion Keyed to the Model

Section 100- Purpose of the Regulations
This section has been formulated in conformity with the mandatory requirements of the enabling statutes, Section 8-25. Its function is to clarify the various purposes of the regulations thus serving as a prelude and guide to them.

Article II- Definitions
Terms used in the regulations must be adequately defined so as to avoid confusion and conflict in the interpretation of their meaning. For example, "recordable" means suitable for recording in the Town Clerk's office to the professional but, it means little to the layman. Many terms are defined through reference to publications where definitions may be found. It is recommended that the Commission evaluate their regulations from this perspective, and add or change definitions as required.

Section 300- Subdivision Application Required
This section simply informs the reader that no conveyances should be negotiated or consummated, nor subdivision improvements made, nor permits granted for activities within a subdivision, until the required subdivision application has been filed.

Section 310- Application Denial
This section informs the reader that the activities mentioned in Section 310 cannot proceed until an application for the subdivision is approved by the Commission, and if such application is disapproved, then no such
activities can proceed until a new application is submitted and approved. It also outlines the criteria to be utilized by the Commission when rendering a disapproval, criteria which should be recorded in the minutes of the meeting at which the decision was rendered. Criteria should be used to deny those applications which simply fail to include all of the required application materials, or the application fee. This action should be taken, however, in accordance with all of the procedures required by statute, or otherwise the application denial might be subject to a reversal by the court. A Commission should never refuse to receive an application on the grounds that it is incomplete. It should react decisively by following required procedures and denying the application on the simple grounds that it is incomplete. No in-depth review of any incomplete application need be undertaken.

Section 400- General Submission Requirements
This section strengthens the argument presented above but, encourages the Commission to grant the applicant the opportunity to submit the missing material. The onus of responsibility is still left on the applicant for ensuring that all required parts of the application are submitted, and for knowing they are required to be submitted.

Section 410- Application Submission
This section furnishes the Commission and the applicant with a laundry list of required application materials, and to whom they should be submitted.
Section 420- **Required Reports**

In order to avoid the approval of applications which either do not meet the requirements of other regulatory agencies, including those slated to furnish necessary services without which the subdivision could not satisfy the requirements of the regulations, or have not been reviewed by persons who might offer constructive comments, such as the Fire Marshall concerning fire protection, this section requires the applicant to request certain reports. The failure of the applicant to request at an early enough date might result in a disapproval of the application due to the report's absence. While it is not anticipated that this problem would develop often, the applicant is given fair warning. The "Town Water Pollution Control Authority" is the new name for what was formerly called the Town Sewer Authority, as per a recent statutory change. The report of the Town Planner, albeit optional, should become mandatory in communities where a planner's services are retained, so as to assure, from a professional's view, that the application meets all requirements, and that nothing is overlooked.

Section 430- **Required Fee**

This section simply states the required application fee. It is sufficient to offset some limited costs of the Commission but, never all costs related to the review and followup in Towns utilizing engineering, planning, and other services. The Commission has the option to lower the application fee to no lower than fifty dollars, or it can lower the per lot fee to an amount of its choosing provided in all cases the minimum fee is fifty dollars (see Section 8-26 of the Connecticut General Statutes).
Section 440- Agenda Priority
Self explanatory, however, the provision for receiving new applications first at a regular meeting affords the Commission the opportunity to adjourn special meetings after dispensing with any unfinished business, thus occasionally permitting an early adjournment for these extra meetings.

Section 450- Lots to be Conveyed
This section describes the lots for which approval must be secured. It clarifies which lots need not be portrayed on the subdivision's map, at a considerable cost savings to the applicant.

Section 460- Subdivision Plan Map
This section enumerates the specific requirements for the subdivision's map. The map would thus convey much of the information needed by the Commission to conduct a thorough evaluation of the proposal. Significant requirements are those requiring: that all steep slopes be identified inasmuch as such slopes in excess of fifteen percent are generally considered critical for development; that topography be represented at contour intervals of two feet in subdivision where development is to occur; that the approval block contain a space for an application expiration date; and that the map for subdivisions approved for sale and not building development contain a notation indicating certain restrictions.

Section 470- Flood Prone Areas
This section was deliberately left vague simply because the regulatory requirements of the National Flood Insurance Program differ depending
upon the status of a various participating town's program. Prior to adoption of such a section, the Commission should find out whether or not their town is participating, and the requirements for subdivision regulation. The Boston Regional Office of the U.S. Department of Housing and Urban Development administers the program.

Section 500- Approvals
This section introduces the three types of approvals granted by the Commission—building, sale, or modification. Each is defined in Article II.

Section 510- Building Approval
This section describes the approval which is rendered by most Commissions where none other is optional. It is the full approval permitting lots to be conveyed and building activities to commence. Unless otherwise requested by the applicant, all subdivisions are reviewed pursuant to building approval.

Section 520- Sale Approval
This author knows of only one community now exercising provisions similar to this section. Review for sale approval is considered only in cases where the applicant files a written request, and no building development is contemplated. This latter condition may very well be readily determined, however, in selected cases where it is unclear, the written word of the applicant would have to be the determining variable. Even if an occasional subdivision application were to slip through where the applicant contemplated development, the regulations have sufficient checks to assure
that no building development will take place legally until subsequent building approval is granted. These checks include notations on the recorded map and in the deeds indicating that building approval was not granted. The principal function of this section is to permit the submission of an application without much of the information which might be necessary for the review of building developments but, certainly frivolous where no building development is anticipated. It could be applied, for example, in cases of conveyances amongst relatives where the land's eventual use is as yet unknown.

Section 530- Modification Approval
The purpose of this section was to provide a procedure and special requirements for Commission review and endorsement of changes to an approved subdivision application--a common occurrence in planning. This section clarifies the simple process, requiring no fee, for review, approval, endorsement, and recording. It eliminates the need for a new subdivision application, save for instances where the desired change would constitute a resubdivision.

Section 540- Expiration Date
If complied with by the Commission, by first endorsing the approved subdivision plan with a five-year expiration date and then following this up with a notice in the land records and a notation on the approved map of such expiration, should the subdivision be incomplete by the date of expiration, then this section could well serve to spur the completion of tardy improvements. The benefits to residents of such a subdivision, who might have resided in a subdivision lacking certain promised facili-
facilities, are justification alone for making the application of this section a policy of the Commission. This section is supported in part by the requirement that the approval block for all subdivision maps contain a space clearly marked for the expiration date.

Section 550- **Subdivision Plan Map Filing Requirement**

This section requires that the Commission or its staff adhere to strict administrative discipline by promptly returning the endorsed subdivision map to the applicant for recording. Applicants who have had their request approved for proceeding with the early construction of improvements in lieu of bonds, in accordance with Section 975, would have to await the approval of the completed improvements before the map would be returned for recording.

Section 560- **Referral to Regional Planning Agency**

This provision follows the prescribed procedures outlined in Section 8-26b of the Connecticut General Statutes, except it additionally provides that the Commission shall not render its decision on the application until the report of the Regional Planning Agency has been received, or thirty days has expired. This affords the Regional Planning Agency the assurance that no decision will be rendered before it submits its reports, if it submits its report at an early date.

Section 600- **Energy**

This section fosters the design of subdivisions which are energy efficient, a provision which is particularly contemporary to national priorities. It encourages an east-west street layout because such a layout is known
to provide more building sites with improved solar access. It provides the Commission the option of requiring bus shelters where they might promote transit usage, and solicits suggestions for amending the regulations to promote more energy efficient subdivision designs.

Section 610- Interior Lots
This section concerns itself with the problem of interior lots. While occasional interior lot creation may be unobjectionable, their proliferation defeats the purpose of zoning (frontage), and access to them via shared access strips and driveways may result in legal and maintenance difficulties, as well as excessive energy consumption over the long term.

Section 700- Building Permits
This section serves to coordinate the various regulatory functions dealing with residential land development by utilizing the building official as the buck-stopper. It calls for the withholding of building permits until subdivision approval has been granted for building purposes, zoning permits issued, wetlands approval secured, surety posted, and improvements completed in accordance with Section 975.

Section 710- Certificates-of-Occupancy
Functioning much the same as Section 700 above, this section concerns itself with the withholding of certificates-of-occupancy until assurances are received that public improvement construction is proceeding satisfactorily and in accordance with the various Town regulations. This

section works collaboratively with Section 940.3, which requires monuments and markers to be set or assured of being set prior to the issuance of the certificate.

Section 800- Building Lots to have Street Access
Introducing the more controversial sections of the model, Section 800 requires that all building lots have frontage on or direct access to streets of good condition, drainage, and width, and meets other design standards.

Section 820- Improvements Required
Continuing, Section 820 requires the improvement of Town roads upon which building lots front but, are in substandard condition.

Section 830- Requirements for Improvement
Section 830 sets forth the standards and procedures for improving Town roads as required by Sections 810 and 820. It adheres to a minimum road width requirement of twenty feet, to which the applicant must incur improvement costs for half of the roadway where the road upon which any building lot fronts or has access fails to meet the minimum requirement. This standard, i.e. 20', was developed after consultation with an engineer, a public works director, in deference to Connecticut Department of Transportation town-aid fund standards, and in accordance with a nationally recognized standard for low volume roads. Other standards were developed after conferring with a professional engineer and

evaluating regulations. As with all engineering standards contained in the model, a Commission should confer with a registered professional engineer prior to adopting them to ensure that the regulations are satisfactory and applicable given Town variations.

The requirements for storm drainage require the installation of systems adequate to handle the runoff flow along the roadway out to the street's centerline. Sidewalks are required in urbanized areas or near facilities likely to generate appreciable pedestrian traffic.

Alternatives to this approach concerning residential land development along accepted, yet substandard, Town roads include:

1). Require the improvement of the entire roadway width pursuant to the notion that the traffic generated by the subdivision will flow in both directions. While this judgement of need is sound, it is somewhat difficult and perhaps unfair to require the owner of land along one side of a road to incur the costs for improving both sides of the road, just because he applied for approval before his neighbor across the street; and

2). Require the Town to first improve the Town road to urban standards, and then assess a benefit charge to all landowners benefitting from improvements. This is provided for in the last sentence of Section 8-25 and in Section 8-29 of the Planning enabling statutes.

The greatest difficulty with this approach is first obtaining assurance that in this time of voter sentiment against government's capital improvement spending, the construction funds will be available and applied and second that of procedure and collection; and
3). Deny all such proposed subdivisions until the Town, at some future unguaranteed date, improves it; and

4). Have the Town incur all improvement costs as needed. This would be a real success at the voting booth.

Section 900- Required Improvements

This section requires that all subdivisions in which building development is to occur contain specific improvements including new streets and drainage facilities. Required improvements for subdivisions fronting on existing streets are enumerated in Article VIII, Sections 800-840, inclusive. Prior to rendering of the subdivision approval, engineering plans are required.

Section 910- New Street Design Standards

This section lists requirements for roadway construction. It establishes standards for reduced roadway widths which are consistent with many national standards including that of three nationally recognized professional associations-- the Urban Land Institute, the American Society of Civil Engineers, and the National Association of Home Builders. It is however, inconsistent with most Connecticut standards at this time, such as those in the Waterbury area which are greater. The standard is being applied in a few progressive Towns in Northeastern Connecticut, however, including Pomfret and Killingly.

Sidewalks are required only in areas such as those required in Article VIII. Long steep streets are discouraged in favor of streets parallel to the contours.

Bituminous concrete berm-type driveway entrances with 8" berms are required for all entrances, regardless of whether or not the driveway has a sag or a crest curve. The purpose of this requirement is to avoid typical problems such as: roadway deposition of eroded driveway materials; and street ponding and icing which results from excessive driveway runoff.

Section 920- Stormwater Drainage
Section 920 introduces a series of design standards, procedures, and installation requirements for drainage systems, primarily that to be contained in new streets.

Section 930-930.3- Erosion and Sedimentation Control
This section recognizes the ever increasing costs of unchecked erosion. These costs include the loss of precious soil, the pollution of watercourses and waterbodies (pollutants adsorb or cling to eroded particles), and the capacity reduction of Town maintained drainage systems when they unnecessarily fill up with sediment. This latter problem often inflates lean public works budgets.

Aside from the requirement for a plan to arrest erosion from subdivision development activities, the most important element of this section is the provision for the installation of sediment basins prior to the commencement of construction activities. This should serve to check sediments before they get into drainage systems and watercourses, and thus conserve soil-on-site.

Section 940- Monuments and Markers
This section serves to ensure the professional installation of boundary
markers on all lots. This is achieved especially through provisions for the written certification of the accuracy of installed markers by the land surveyor, and the retention of all certificates-of-occupancy until the markers have been set or surety has been posted assuring their installation.

Section 950 - Open Spaces

This section affords the Commission the opportunity to secure open space, playgrounds, and parks where it deems necessary. The Commission might desire to develop more detailed standards, although any such standards should preserve the flexibility now built into the model.

Section 955 - Rights-of-Way

This section prescribes minimum standards for rights-of-way, not only for new streets but, for existing streets as well. The primary intent in developing this section was to provide for the dedication of increased right-of-way widths along existing roads where the existing right-of-way was inadequate, especially in regard to future roadway improvements. This tested method has proven that over time municipalities can legitimately acquire necessary increased right-of-way widths at little, or better yet no, cost.

Section 960 - Easements

Easements provide access to critical elements of the infrastructure, including drainage systems, watercourses, and sanitary sewers. They are mandatory in order to ensure the continued maintenance, repair, and inspection of such facilities.
Section 965- **Inspections**

The purpose of this section is to encourage applicants to install all improvements in accordance with the procedures, standards, and requirements of the model regulations. Compliance is confirmed only when inspections are made during the various stages of construction; thus, the requirement that applicants make advance arrangements with the Town Engineer for his inspections. Sanctions are imposed should the applicant happen to install improvements differing from the approved construction plans, or if he fails to notify the Town Engineer when various stages of construction activities are to be undertaken. A final engineer's report concerning conformity is prescribed.

Section 971.1 **Performance Bond**

In order to insure the installation of all required improvements, a performance bond is required to be posted.

Section 971.2- **Performance Bond Form**

This and the preceding section gives the Commission the right to refuse or modify the bond. Commissions are encouraged to draft their own model bond form with the assistance of the Town Planner and Counsel.

Section 971.3- **Performance Bond Amount**

Establishing the bond amount is an important function of the Commission, however, every effort should be made to be reasonable yet objective. Although optional in the regulations, it is recommended that the Town Engineer be consulted regarding cost estimation.

Section 972- **Surety Company**
This section is necessitated by the poor record of certain surety companies issuing bonds in this state. Litigation has been a route taken by many Commissions after they tried with little success to call bonds when developers defaulted. Consequently, this section empowers the Commission to refuse a bond issued by a surety company of questionable repute.

Section 973- Performance Bond Release
This section provides the Town with certain protection against the hasty release of a bond by requiring the Town Engineer's report on the conformity of completed improvements, and by requiring the posting of a maintenance bond, prior to its release. Similar sections follow which deal with the form, content, acceptance, amount, and release of maintenance bonds.

Section 975- Immediate Construction of Improvements
In recognition of the difficulties experienced by many small contractors in securing bonds, provisions have been made for the early completion of most construction activities prior to the commencement of dwelling construction activities, without the posting of a performance bond, and prior to the sale of lots or issuance of permits. This alternative is unavailable for improvements made to Town facilities, such as required in Article VIII. A maintenance bond is required prior to the release of the aforementioned conditions.

Section 980- Public Improvements
This section outlines the procedures inherent in the process of recommending to the Town's legislative body "acceptance" of proposed public
facilities. Acceptance, of course, refers to the dedication of these facilities to Town ownership, primarily to transfer maintenance obligations from the developers to the Town.

Section 981 - Penalties
This section simply reiterates the planning enabling statute which permits penalty fees to be levied against violators of the regulations.

Section 982 - Effective Date
This is to be completed by the Commission upon completion of the adoption process and after establishing an effective date for the regulations.

Section 983 - Validity
This is a standard caveat statement which simply reads that if any section of these regulations were to be denied by the courts, then the remainder remains valid.

Section 984 - Amendments
Section 984 recognizes the mandatory procedures to be followed prior to the adoption of regulatory amendments, and further stipulates that approved subdivisions are exempt from new amendments for a period of five years.
BIBLIOGRAPHY


