Adopted February 12, 2018
Resolution # 2018-09

TOWN OF MONTVILLE

ROAD STANDARD

AND

IMPROVEMENT DETAILS

MARCH 14, 2018

MONTVILLE PUBLIC WORKS DEPARTMENT

310 NORWICH-NEW LONDON TURNPIKE

MONTVILLE, CT 06382

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SECTION 10

PREAMBLE

10A AUTHORITY AND PURPOSE

For the purpose of promoting the public health, safety and welfare, to assure protection of the public against the dangers of unsafe roads, to assure protection of the use, value and enjoyment of premises adjoining roads and to assure the protection of the Town against costs and expenses in the repair and maintenance of roads after acceptance which are avoidable through careful planning, appropriate design and competent construction, these Regulations are and have been adopted pursuant to Sections 8-25 and 13a-71 of the Connecticut General Statutes.

10B SEPARABILITY

If a court of competent jurisdiction finds any provision of these Regulations to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to the particular provision which is expressly held to be invalid or ineffective and all other provisions of these Regulations shall continue to be separately and fully effective.

10C APPLICABILITY

To the extent that these regulations conflict with the provisions of the Montville Subdivision Regulations, these regulations shall apply, unless a waiver or waivers have been granted by the Commission pursuant to the Subdivision Regulations. If a court of competent jurisdiction finds the application of any provision of these Regulations to any use, land or improvement to be invalid or ineffective in whole or in part, the effect of such decision shall be limited to the person, property or situation immediately involved in the controversy and the application of any such provision to other persons, property or situations shall not be affected.

10D EFFECTIVE DATE

The effective date of these regulations shall be March 14, 2018

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 20

DEFINITIONS

20A DEFINITIONS

20A.l General

For the purpose of these regulations, the terms and words listed below shall have the following meanings assigned to them.

Americans with Disabilities Act Accessibility Guidelines - Appendix A to Part 36 entitled "ADA Accessibility Guidelines for Buildings and Facilities" as published in the Federal Register Vol. 56, No. 144, Friday, July 26, 1991, including any revisions.

Applicant - Any person, partnership, or corporation who shall make an application for approval under the provisions of these regulations either for himself or as an agent for others.

Bond – Any form of security including a cash deposit, surety bond, collateral, property, or instrument of credit in an amount and form satisfactory to the Director of Finance.

Centerline – Road centerlines are line data that present the geographic center of road rights-of-way.

Collector Street - A street that conducts traffic between major arterial streets, activity centers, and/or neighborhoods. It is a principal traffic route within residential areas and carries relatively high volumes of traffic. A collector street ties in at one or both ends with an arterial street. Intended to collect trips from local streets and distribute them to arterial streets.

Commission - The Montville Planning and Zoning Commission or its designated agent.

Connecticut Department of Transportation Standard Sheets - The most current detail drawings, including all revisions thereto, as issued by the Connecticut Department of Transportation.

Connecticut Guidelines for Soil Erosion and Sediment Control - The most current document entitled "Connecticut Guidelines for Soil Erosion and Sediment Control", DEEP Bulletin 34 as Amended.

Criteria - The Road Design (Section 70), Drainage Design (Section 90), Soil Erosion and Sediment Control (Section 110), Final Grading, Stabilization and Landscaping (Section 120) and, Design & Construction of Driveways (Section 130) criteria specified in these regulations.

Cul-De-Sac – A street with a common ingress and egress which dead ends at a turnaround. A dead end street with a turnaround.

Department of Public Works- The Montville Department of Public Works.

Director of Planning & Development - The Montville Director of Planning or his/her authorized agent.

Director of Public Works - The Montville Director of Public Works or his/her designated agent.

Driveway - A private vehicular access way that has not been accepted as a public road by the Town or approved as a private road by the Commission.

Manual of Uniform Traffic Control - The most current document entitled "Manual on Uniform Traffic Control Devices for Streets and Highways", as published by the U.S. Department of Transportation Federal Highway Administration.

Monuments – As defined in Section 20-300b-14 of the regulations of Connecticut State Agencies.

Paper Street – A paper street is a road or street that appears on maps but does not exist in reality.

Parking Lot - An area used for parking of vehicles.

Private Property - Property owned by persons, partnerships or corporations other than the Town, State or Federal government.

Private Road - Any road not lawfully accepted by the Town or the State of Connecticut for public vehicular travel.

Private Travel or Private Use (of Roads) -Any vehicular use of a road that is not defined as public travel or public use.

Public Road - Any road lawfully accepted by the Town or the State of Connecticut for public vehicular travel.

Public Travel, or Public Use (of Roads) - The vehicular use of (1) any public road or (2) any private road approved by the Commission.

Right-of-Way - A strip of land intended for, or dedicated and accepted for, the purpose of vehicular traffic, which includes the roadway, sidewalks, drainage facilities, shoulders and other improvements.

Road/Roadway - All surfaces, either paved or unpaved, constructed, designated and used to carry or guide vehicular traffic, between different lots or parcels within or outside of Town. The term does not include driveway or parking lots.

Standards - The Road Construction (Section 80), Drainage Construction (Section l 00) and Design & Construction of Driveways (Section 130) standards specified in these Regulations.

Standard Detail Drawings - The Standard Detail Drawings appended to the Montville Road Regulations as figures, as may be amended from time to time, the contents of which shall be considered as criteria and standards.

State - The State of Connecticut.

State Department of Transportation – The State of Connecticut Department of Transportation.

State Standard Specifications - The most current document entitled "Standard Specifications for Road, Bridges and Incidental Construction", and all additions, revisions, and supplements thereto, as published by the Connecticut Department of Transportation at the time of the work or installation of improvements.

State Statutes - The most current document entitled "General Statutes of Connecticut", including all volumes and revisions thereto.

Street - Same as Road/Roadway.

Stormwater - Excess precipitation, after accounting for all losses, which becomes surface runoff.

Survey Standards – Surveys shall comply with the following Sections of the Regulations of Connecticut State Agencies Sec. 20-300b-3 Control Surveys; 20-300b-3(a) Horizontal Control Surveys; Sec. 20-300b-3(b) Vertical Control Surveys; Sec. 20-300b-4(a)(b) Topographic Survey; 20-300b-5 Right of Way Survey.

Through Traffic - When used in reference to a particular street or category of streets, "through traffic" means traffic that is using the street only to gain access to another street.

Town- The Town of Montville.

Town Attorney- The attorney or law firm appointed by the Montville Town Council to represent the Town of Montville.

Town Road- Any road lawfully accepted by the Town for public vehicular travel.

Watercourse/Wetlands – Areas designated and defined as “Watercourses” and “Inland Wetlands” by the Montville Inland Wetlands and Watercourses Commission, pursuant to its Regulations, as the same may be amended from time to time.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 30

GENERAL PROHIBITIONS

30A USE OF LAND AS A ROAD

No person shall open any road for vehicular travel by the public without the approval of the Town Council. The Commission's approval of a road shall not prevent any other legal requirement for creating or establishing a public road, including the requirement in the Town Charter for formal acceptance by the Town Council.

30B CONSTRUCTION OF A PUBLIC ROAD

No person shall commence construction of any road which is then intended to be opened, at any future time, to the public unless approval of the location, layout, design and construction plans therefore have been approved by the Commission.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 40

DESIGN APPROVAL PROCESS

40A PROCEDURE

40A.l Design Approval Required for Public Use of Roads

The Commission may not approve the proposed establishment, construction or use of any road for public travel unless an application per Section 140, for such approval has submitted to the Commission as part of a subdivision and as the Commission grants such approval in accordance with these regulations.

40A.2 Roads Located Within an Area Proposed for Subdivision

If an application for subdivision or resubdivision involves the establishment, construction or use of a road or roads within the area to be subdivided, and such road or roads are proposed to be used for public vehicular travel, the application for subdivision shall also be deemed to be an app1ication for design approval of the road or roads, and no separate application for design approval shall be required. However, all supporting documentation and materials required by these regulations must be submitted in order for the Commission to consider or to grant design approval for the road or roads.

40A.3 Roads Not Located Within an Area Proposed for Subdivision

If a proposal to establish, construct or use a road or roads for public vehicular travel is not made in connection with an application for subdivision or resubdivision, an application for design approval of the road or roads must be submitted to the Department of Public Works, together with all supporting documentation and materials required by these regulations.

40A.4 Staff Review Prior to Application

All prospective applicants for design approval of a road or roads for public travel are encouraged to meet with the Town's Director of Planning prior to submission of a formal application. The Director of Planning shall coordinate the review of all the materials submitted by the prospective applicant with other Town staff, officials and consultants, and may set up informal meetings among the prospective applicant and others. The purpose of any and all pre-application reviews, meetings and comments shall be advisory only.

40A.5 Procedure for Decisions on Formal Applications

(A) Applications Made as Part of a Subdivision Application

When a request for design approval is made as part of a subdivision application, the Commission shall follow the same procedures in making its decision on the design approval application as it does in deciding upon the subdivision application. The Commission may approve, modify and approve, or deny design approval. A decision to deny a subdivision application shall also be deemed to be a decision to deny design approval.

(B) Applications for a Private or Public Road Not Made As Part of a Subdivision Application

All applications for a private or public road not made as part of a subdivision application will be reviewed by the DPW for conformance with these Regulations.

40A.6 Design Standard

These regulations shall be considered to be the minimum design standards acceptable and the Town shall have the right to vary these requirements as the situation dictates.

No road constructed for private use may be presented to the Town for acceptance at any time after the effective date of these regulations. Application to improve an existing town road – allows the Town to assess property owners for the total cost of the improvement.

These regulations are intended to provide for the best possible design and constructed of public improvements in terms of service, safety, economy, and ease of long-term maintenance. The regulations take into consideration the typical conditions encountered within the Town of Montville. Special designs are expected to be prepared for projects where unusual or extreme conditions are encountered. Alternate designs for proposed improvements may be submitted to the Town. However, the Commission, Public Works Director and Town Engineer are under no obligation to approve any variations of the design standards as set forth in these regulations.

40B SUPPORTING INFORMATION

40B.l General

In addition to any information required to be submitted in the subdivision regulations, an application for design approval to construct, reconstruct or complete construction of a road intended to be opened to the public, shall include the supporting information required in this section.

40B.2 Maps, Drawings and Plans

All information pertaining to topographic maps and delineation of street rights-of-way and property boundaries required under this Section shall be shown on plans, maps or drawings which are prepared by and certified by a registered land surveyor to the Survey Standards as amended. All information pertaining to design of roads and drainage systems and appurtenant facilities required under this Section shall be shown on plans, maps or drawings which are prepared by and certified by a registered professional engineer. All information shown in construction drawings shall be based on accurate field survey data referenced to U.S.G.S. vertical datum and the Connecticut Coordinate Grid System. Aerial survey data, based on accurate ground control surveys, may be utilized provided it is supplemented by field surveys at locations where elevations and dimensions are critical.

40B.3 General Plan

The general plan shall be a map or maps, drawn to a scale of 1"=100' or less to the inch, showing the following:

(A) The proposed road layout.

(B) Existing topography, including the identification of slopes ≥ 15%.

(C) Ledge outcrops, stone walls, rare/specimen trees and trees greater than 18 inches in diameter.

(D) Wetlands, watercourses and all proposed alterations thereof, flood hazard zones, floodways, stream channel encroachment lines, existing bridges, culverts and storm systems, proposed discharges to wetlands, DEEP stream classifications, wetlands within 50 feet of areas to be disturbed.

(E) Soil Conservation Service soil types and boundaries.

(F) All existing buildings and structures, sidewalks, properly identified, located upon, and within two hundred (200) feet outside of each boundary line of the land to which the application relates.

(G) Roads approved but not yet constructed, driveways and other vehicular access ways entering upon, or which will enter upon, the road to be laid out and constructed.

(H) All existing parking facilities, playgrounds, recreational facilities, and open space areas, access to which may be obtained from such proposed road, include sidewalks.

(I) The location of all structures and improvements, including subsurface uti1ities and improvements proposed in connection with the construction of such road.

(J) All areas to be conveyed to the Town for open space, drainage, etc.

(K) Numbered survey control points, wetland flags and test pits.

40B.4 Plan & Profile Drawings

Plan & Profile drawings shall be prepared on a 24" x 36" sheet size with scales of 1”=40' horizontal and 1" = 4' vertical, showing the following:

(A) The location and dimensions of existing and proposed street rights-of-way, edge of pavement, curbs, sidewalks, piping, catch basins, manholes, endwalls, bridges, utilities and utility easements, drainage easements, open channels, monuments, tops and toes of all slopes, all data required for accurate layout of roadway center lines and rights- of-way, including stationing, bearings, tangent lengths, arc lengths, radii and central angles of all curves; location of property lines intersecting the street right-of-way lines and the names of owners of such adjacent property; typical cross-sections of each street, showing proposed dimensions, materials of construction, and locations of drainage piping and other underground facilities and utilities; location and description of survey bench mark; and, street signs, street lights, and traffic control signs.

(B) Profiles of existing ground surface on the center line and at each right-of-way line shall be based on an accurate field survey.

(C) Profile of the proposed center line, showing proposed grades, vertical curve data and stations at grade changes, intersections, high points and low points.

(D) Profiles of all existing and proposed drainage facilities, bridges and other proposed improvements showing locations, sizes, grades and invert elevations.

40B.5 Detail Drawings

For proposed improvements that cannot be readily shown on the Plan & Profile drawings, or that are not included in the Standard Detail Drawings in Appendix A, additional drawings shall be submitted showing in further detail all information required for construction. Detail drawings shall be prepared at appropriate scales, and shall substantially conform in both form and manner to the Standard Detail Drawings in Appendix A. In addition to any necessary detail drawings, the following statement shall be included on all construction drawings; "All construction shall conform to the criteria and standards included in the 'Regulations for Public Improvements'".

40B.6 Drainage Report

A drainage report, conforming with the design criteria in Section 90 of these Regulations, shall be submitted which includes the basis of design, detailed design computations, and a drainage analysis map for sizing all proposed storm drainage facilities; the analysis of any required existing off-site facilities; and, for any proposed stormwater runoff control measures. Detailed design computations shall include the design criteria, parameters and methods used in selecting the location, configuration, type and size of all proposed drainage facilities. Such computations shall include tabulated summaries of pertinent design computations. Wherever feasible, such tabulations shall follow the most current format utilized by the Connecticut Department of Transportation, the Federal Highway Administration, the U.S. Soil Conservation Service, Connecticut Stormwater Manuals 2004 as revised or such format as may be adopted and amended from time to time by the Town.

40B.7 Soils Report

A soils report shall be submitted showing the type, nature and extent of the various soils existing within the proposed road right-of-way and in the area where the roadway slopes extend beyond the proposed road right-of-way. All soils types shall be identified on the basis of test pits, which shall also indicate seasonal high ground water and bedrock depths. Such report shall also include a description of the means and methods proposed to be utilized to overcome any potential soils problems.

40B.8 Earthwork Analysis

An earthwork analysis shall be submitted which quantifies the volumes of cut and fill required to construct the proposed road and associated public improvements.

40B.9 Soil Erosion and Sediment Control Plan

A detailed plan for soil erosion and sediment control, conforming with the requirements of Section 110 in these Regulations, shall be submitted. The plan shall include all measures to be taken to control erosion and sedimentation resulting from proposed road and drainage facility construction. All such measures shall be consistent with the requirements and standards outlined in the "Connecticut Guidelines for Soil Erosion and Sediment Control". When a project is of a size that requires a "General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities", it shall be the applicant's responsibility to file the required registration form with the Connecticut Department of Energy and Environmental Protection and to provide copies to the Town Planning Department.

40B.l0 Landscape Plan

A landscape plan shall be submitted for any median strips or other proposed landscaped areas to be located within the right-of-way lines of a road. All proposed landscaping shall be consistent with the criteria included in Section 120 of these Regulations.

408.11 Water Distribution System Report

If a public water distribution system is proposed to be extended within a road right-of-way, a water distribution system report, prepared by a registered professional engineer, shall be submitted. The report shall identify the proposed new service area, estimated average and peak day demands resulting from the full build out of the new service area, elevations, and pressures and supporting analysis demonstrating that the proposed water distribution system extension is sized to meet projected demands. The report shall also identify any improvements to the existing public water distribution system that are necessary to meet projected demands. The planning, design and construction of all proposed water distribution system extensions and/or improvements shall conform to the most current "Regulations of the Town of Montville WPCA or Southeast Connecticut Water Authority (SECWA) as applicable.

40B.12 Sewage Collection System Report

If a public sewage collection system is proposed to be extended within a road right-of-way, a sewage collection system report, prepared by a registered professional engineer, shall be submitted. The report shall identify the proposed new service area, estimated average and peak day flows resulting from the full build out of the new service area, and supporting analysis demonstrating that the proposed sewage collection system extension is sized to meet projected flows. The reports shall also identify any improvements to the existing public sewage collection system that are necessary to convey projected flows. The planning, design and construction of all proposed sewage collection system extensions and/or improvements shall conform to the most current "Sewer Ordinance of The Montville Sewer Authority". In addition to the preparation of a Sewage Collection System Report, applicants shall also be responsible for contacting the WPCA Administration regarding Supplemental Benefit Assessments for connection to the existing sewage collection system.

40B.13 Traffic Report

If, in the opinion of the Director of Planning or the Director Public Works, there is concern regarding the ability of the existing roadway network to accommodate prospective traffic in a safe and efficient manner, he/she may require the submission of a traffic report which shall evaluate and identify any required measures to address such concerns. Traffic reports shall be prepared by a Registered Professional Engineer with a specialization in Traffic Engineering.

40B.14 Connecticut Department of Transportation Approval

Where any road, drainage facility or other associated work is proposed to join with a state highway, or is to be located within a state highway right-of-way, the applicant shall obtain a letter from the Connecticut Department of Transportation which shall approve of such work. Such letter may be conditional upon prior approval of the project by the Commission, and/or submission of a permit application to the Connecticut Department of Transportation.

40B.15 Project Cost Estimate

A cost estimate for the construction of the public improvements shall be in a form and amount approved by the Town Engineer to cover the entire cost of improvements shown on the plans.

40C SUPPLEMENTAL INFORMATION

40C.1 General

Whenever the staff or Commission shall deem it reasonably necessary or appropriate to request additional information for consideration of an application, it may require the applicant to submit, at or prior to the hearing, any other information in such form as it may prescribe. Furthermore, whenever the Commission shall deem required information unnecessary for the consideration of an application, it may, upon request of the applicant, waive in writing the requirement of any information specified in Section 40B above.

40C.2 Layout

Within one week of submission of an application and supporting information, the approximate location of all drainage outlets, and the proposed road centerline at maximum intervals of 100 feet, shall be flagged in the field. The requirement for field flagging shall not permit the applicant to initiate any type of site clearing. If such flagging is not completed as requested, the Commission may deem that there is insufficient information on which to make a decision and deny the application.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 50

CONSTRUCTION INSPECTION PROCESS

50A PROCEDURE

50A.l General

Any project for which design approval has been granted by the Montville Planning & Zoning Commission to construct, reconstruct or complete construction of a road intended to be used for public travel or public use shall require periodic inspections to be conducted by the Town of Montville to monitor compliance with the approved drawings and plans, the requirements outlined in these regulations, and good construction practices. However, it is the applicant's sole responsibility to ensure that all construction shall conform to such requirements.

50A.2 Preconstruction Meeting

Prior to the start of any construction, it is the applicant's responsibility to schedule a preconstruction meeting with the Town. No such meeting shall, however, be scheduled until such time as the inspection fee has been paid, and the sediment and erosion control bond and the performance bond are posted as required in Sections 50A.4, 50A.5 and 50A.6 of these regulations. Scheduling of the preconstruction meeting shall be made with the Director of Planning, who shall be responsible for notification of the Public Works Department and other appropriate Town Staff. The applicant shall be responsible for ensuring that the Contractor and Construction Coordinator are in attendance. The general purpose of the preconstruction meeting is to introduce all parties, identify the person from the Department of Public Works who will be assigned construction inspection responsibilities, exchange telephone numbers, review the construction schedule, and discuss any additional requirements or concerns specific to the proposed project.

50A.3 Construction Coordinator

In respect of all matters pertaining to inspection hereunder, the applicant shall designate one Construction Coordinator who shall be fully authorized to communicate with the Town. Such designation shall be made in writing which shall state such individual’s mailing address, and telephone/cell phone and fax numbers, email address and shall be delivered to the Director of Public Works and the Director of Planning prior to commencement of any work. All notices, orders or other communications delivered to or served upon such individual shall be deemed to have been delivered or served upon the applicant. All notices or other communications received from him shall be deemed to have been received from the applicant.

50A.4 Inspection Fees

Prior to the start of any activity, the applicant shall pay an inspection fee to the Town, as specified in the Town of Montville Code of Ordinances.

50A.5 Erosion and Sediment Control Bond

Prior to the start of any activity, the applicant shall post a separate cash bond with the Town for sediment and erosion control and site stabilization measures in accordance with the procedures established in the Montville Subdivision Regulations.

50B REQUIRED INSPECTIONS

50B.1 General

Scheduled inspections shall be conducted by the Town at key construction stages specified in Section 50B.4 in order to provide a reasonable level of confidence that a road, which is to be used for public travel, as well as any associated improvements, has been constructed in general conformance with the approved drawings and plans; the requirements outlined in these regulations; and, good construction practice. At the discretion of the Town, the Construction Coordinator may be notified of additional inspections that may be required. It is the Construction Coordinator's sole responsibility to schedule and coordinate all required inspections with the Town's Construction Inspector. The applicant shall provide a minimum advance notification of twenty-four (24) hours for all inspections, which shall only be made during the Public Works Department normal working hours. Unannounced spot inspections may also be made by the Town at any time. All sanitary sewer inspection shall be scheduled with the WPCA and with SCWA if water lines are to be SCWA owned.

50B.2 Right-of-Entry

All relevant Town Staff, shall have the right to enter upon the premises and to inspect, or cause to be inspected, construction work authorized by Design Approval hereunder at any time with or without notice during, before or after regular business hours.

50B.3 Scheduled Inspections and Surveys

The following inspections shall be required and no further work shall be performed until each inspection shall have been made and the Construction Coordinator has been notified by the Town's Construction Inspector that further work may proceed:

(A) The approved limits of clearing, conservation easements and inland wetland and watercourses shall be flagged prior to the start of any work.

(B) After cutting of trees and brush, and the installation of sediment and erosion control measures, but prior to any stumping and/or grading.

(C) After stumping and stripping of topsoil and organic material from earth cut and fill areas, but prior to the placement of any fill material.

(D) After rough earth cuts and fills and the formation of the road subgrade. (The Town may require the applicant to perform compaction tests at this time.)

(E) After the installation of sewage collection system improvements, but prior to backfilling.

(F) After the installation of water distribution, but prior to backfilling.

(G) After the installation of storm drainage pipe and catch basins, but prior to back filling.

(H) After the installation of underdrains, but prior to backfilling.

(I) After formation of the finished road subgrade, following the construction of all underground utilities located within the roadway (water distribution, sewage collection, storm drainage, underdrains, gas, etc.) and prior to the placement of any rolled granular base materials.

(J) Provide an interim As-built survey, after formation of finished road subgrade, showing the edges of road, centerline profile and catch basin locations with invert and top of grate elevations.

(K) After the placement of rolled granular base.

(L) After the placement of processed aggregate base.

(M) Prior to the placement of bituminous concrete paving, the applicant shall be responsible for the excavation of shallow test holes for the purpose of confirming that the actual compacted depth of rolled granular base and processed aggregate base materials conform to Town Standards. Test holes will be required at a minimum interval of 100 feet and/or at locations designated by the Town of Montville. In addition, proof rolling of the road base must be observed by the Town.

(N) During the placement of bituminous concrete paving. A copy of all weight slips for bituminous concrete material delivered to the site must be provided to the Town of Montville.

(O) After placement of bituminous concrete lip curbs, but prior to any backfilling of curbs.

(P) After placement of the granular sidewalk base.

(Q) During the placement of Cement Concrete Sidewalks. A copy of all batch plant tickets for Cement Concrete delivered to the site must be provided to the Town of Montville.

(R) After backfilling of curbs and final grading of shoulder areas.

(S) After restoration of all disturbed areas, placement of road monuments, traffic control/street name signs and street trees.

50B.4 Construction Materials

The applicant shall be required to submit samples and certified laboratory reports to the Town documenting the conformance of certain construction materials with the specifications included in these regulations. The applicant shall not be permitted to place, or to have delivered to the project site, any materials for which approvals have not been granted by the Town. Any approvals granted by the Town on the basis of certified laboratory reports shall be conditional upon the tested sample being representative of all such materials utilized for construction. The Town shall reserve the right at any time during the course of construction, for whatever reason, to have additional materials testing conducted. Should the results of such testing find that the materials do not conform to specifications, then such materials shall be removed and replaced with conforming materials at the applicant's expense. The applicant shall be required to reimburse the Town for the cost of any such testing only if the results prove that the materials tested do not conform to required specifications. Samples and/or certified laboratory reports shall be submitted for the following materials:

(A) Rolled Granular Base - A five (5) gallon sample and sieve analysis for conformance with the State Standard Specification Section M.02.06 Grading A.

(B) Processed Aggregate Base - A five (5) gallon sample and sieve analysis for conformance with the State Standard Specification Section M.05.01.

(C) Bituminous Concrete - Plant certification by the State Department of Transportation for use of such materials in state highway construction projects.

(D) Roadway Subgrade - In place density tests at approximately one hundred (100) foot intervals and/or at other locations and depths as required by the Director of Public Works. Compaction testing shall be performed to the satisfaction of the Director of Public Works by a certified testing lab.

(E) Portland Cement Concrete - Slump tests and air content at frequencies required by the Director of Public Works. Slump testing shall be performed in accordance with AASHTO Method T119, and air content shall be determined to the satisfaction of the Director of Public Works by a certified testing lab.

50C FAILURE TO PROPERLY EXECUTE REQUIRED IMPROVEMENTS

50C.l General

Failure to follow the procedures set forth in these Road Regulations may result in a rejection of that portion of the work completed without required inspections, which may result in delays and added costs to the applicant in demonstrating compliance with applicable regulations and standards. Failure to construct road, drainage and other public improvements in accordance with approved construction plans, Town Regulations and Standards, and good construction practice may result in the Town's refusal to accept any such improvements. If the applicant fails to execute the approved or required improvements in accordance with these regulations or the terms of the permit or approval, and such failure causes unreasonable sedimentation, erosion, pollution or other nuisance conditions, the Town or the Commission may take whatever actions it deems necessary or appropriate to correct and/or abate the nuisance conditions. In such circumstances, the Commission may recommend that the Town not accept such improvements, unless and until the applicant reimburses the Town for all costs and expenses of such correction and abatement.

50D CHANGES DURING CONSTRUCTION

50D.l Modifications

If at any time during the construction of the required improvements, unforeseen field conditions make it necessary or preferable to modify the location or design of such required improvements, the Construction Coordinator shall notify the Director of Public Works and the Director of Planning in writing, who shall determine whether the change is minor in nature or whether the Commission itself must act on the proposed change. If the change is minor, the Director of Public Works shall either approve or disapprove the applicant's request. If it is determined that the change is not minor, the applicant shall submit an application for a modification of the Commission’s approval. Such application shall meet all the informational requirements required by the Commission.

50D.2 Additional Work

If during the course of construction of any new road, or any other improvements required by the Commission in connection with the approval of a subdivision, it appears that additional work is required owing to unforeseen conditions such as, but not limited to springs, old drains, wet conditions, side hill drainage from cuts, bedrock, or other conditions which were not apparent at the time of the approval by the Commission, the Director of Public Works may require such additional work to be done.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 60

TOWN ACCEPTANCE OF A COMPLETED ROAD

60A PROCEDURE

60A.l General

Whenever a completed road is intended to be offered for acceptance by the Town, a written request for acceptance, including supporting and supplemental information required in this section, shall be submitted to the Director of Planning, who shall forward such information to the Director of Public Works, Town Engineer, utility representatives and Town Attorney for review. The Director of Planning shall notify the person(s) making the request of any comments requiring revisions to the supporting and supplemental information and any outstanding maintenance bills due to the Town. Upon receipt and confirmation that all required revisions have been made, and outstanding bills paid, the Director of Planning shall forward the written request and supporting and supplemental information, along with recommendations from the Director of Public Works, Town Engineer and Town Attorney, to the Planning & Zoning Commission. The Planning & Zoning Commission, after review of all information, shall make a recommendation to the Town Council regarding the request for acceptance as a town road. The procedure for formal acceptance shall be as required by state law and the Charter of the Town.

60A.2 Who May Request Acceptance

A written request for acceptance of a completed road may be made by any person who is:

(A) The owner, or all the joint owners, of the land underlying the proposed road.

(B) The purchaser, or all the purchasers, under a written contract to purchase the land underlying the proposed road, provided that written consent of the owner, or all joint owners, of the land accompanies the written request.

60B SUPPORTING AND SUPPLEMENTAL INFORMATION

60B.l General

A written request for Town acceptance of a completed road shall include six (6) copies of all required supporting information and supplemental information as may be requested.

60B.2 Supporting Information

Supporting information shall include the following items:

(A) A written description by metes and bounds or courses and distances, of all land and additional easements as necessary to be conveyed to the Town or State.

(B) Fixed line mylars of Record Plan-Profile Drawings, prepared at the scale and, showing the information specified in Section 40 on an "As-Built" basis. All record drawings shall be prepared by a Land Surveyor licensed in the State of Connecticut.

(C) Fixed line mylars of Record Detail Drawings, where any previously approved details have been modified, showing all information on an "As-Built" basis.

(D) A copy of a completed Work Permit or letter, issued by the State Department of Transportation, confirming the satisfactory completion of all work conducted within a State Highway Right-of-Way.

(E) Completed copies of all conveyances or other legal instruments, properly executed in form and manner suitable for recording in the Town Land Records, effectively transferring or creating the rights in each instance required under Sections 70F.5 and 90A.7.

(F) A Warranty Deed properly executed by the owner or owners of the land to which the written request relates, in form and manner suitable for recording, effectively conveying good and marketable title to said land to the Town, together with a Certificate of Title from an attorney admitted to practice in Connecticut certifying that said owner or owners hold good and marketable title to said land at the date of such written request free and clear of all title defects and encumbrances. By delivery of such deed, said owner or owners shall be deemed to authorize delivery to and recording thereof by the Town upon acceptance of such road by the Town.

(G) A Certificate of Accurate Monument Location prepared by a Land Surveyor licensed in the State of Connecticut.

(H) Digital data for Special Permits and Resubdivisions/Subdivisions shall be provided to the Planning Office after the recording of the final mylars on the land records. For Site Plans the data shall be provided to the office after all signatures have been obtained by the appropriate authorities and prior to the issuance of a Zoning Permit.

The Digital Data shall include:

a. (1) one PDF copy of the project
b. Copy of the project in ArcView (GIS) format or AutoCAD
    i. Shapefile (.shp)
    ii. Geodatabase (.mdb)
    iii. Export file (.e00)
    iv. AutoCAD.dwg

1. Having all features in a single AutoCAD layer or GIS file will not be accepted. For example there must be separate layers/files for text, buildings, roads, wetlands, etc.
2. All data represented in a digitally submitted AutoCAD or GIS drawing must be registered to the CT State Plane Coordinate System Using NAD 1983 datum.
3. Data can be submitted to the Planning Office via a flash-drive or CD.

60B.3 Supplemental Information

Whenever the Commission shall deem it reasonably necessary or appropriate to a proper disposition of any written request for acceptance of a completed road, it may require submission of any other information in such form as it may prescribe. Until such supplemental information has been received by the Commission, it shall decline to make any recommendation to the Town Council regarding acceptance.

60C ACCEPTANCE

60C.l Conformance

Prior to considering acceptance of a road, the Commission shall determine whether or not the road and all associated improvements, including but not limited to detention basins, water storage tanks and any required off-site improvements, conform to the approved location, layout, design and construction plans and to the criteria and standards hereinafter specified or prescribed for such road and all associated improvements in or pursuant to these Regulations.

60C.2 Maintenance Bond

Prior to the acceptance of any road by the Town Council, the applicant shall post with the Town a maintenance bond or bonds, in an amount and with surety and conditions satisfactory to the Department of Finance indemnifying the Town for a one year period against costs and expenses of labor and materials necessary or appropriate to correct or replace improper or defective materials or faulty workmanship, including any damage to any property of the Town resulting therefrom, or to complete construction in conformity with the standards, criteria and specifications prescribed in these Regulations. Such maintenance bond shall be in an amount

equal to not less than ten percent (10%) of the total project road cost. The maintenance bond shall be delivered to the Director of Planning, who shall deliver the maintenance bond to the Montville Director of Finance for review and safe keeping.

60C.3 Recording of Documents

The owner shall provide all supporting information set forth in Section 60B.2, including the required maintenance bond, prior to acceptance of the completed road by the Town Council. Final acceptance of a completed road shall not be deemed effective until all required documents have been filed on the Town Land Records.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 70

ROAD CRITERIA

70A GENERAL

70A.l Road Types

Any road, highway, avenue, lane, or other public right-of-way dedicated to the movement of motor vehicles and that is shown on a subdivision plan approved by the Commission; or that is a State or Town Road as found on the most current map entitled, Town Roads, Montville, Connecticut Department of Transportation, scale one inch (1") equals 1,000 feet; but private right-of-ways, private roads, and discontinued, abandoned, or impassible streets are excluded.

Subcollector Street: a street that provides access to abutting lots and conducts traffic from local and minor streets to a higher classification street or to an activity center. Usual ADT range is 200-1,000 trips and serves 26 to 80 parcels.

Local Street: a cul-de-sac, loop street, or short street that primarily provide access to abutting lots, but may also serve as a connector to other local and minor streets. Usual ADT range is 75-350 trips and services 11 to 25 parcels.

Minor Street: A short-dead-end or loop street that serves only as access to abutting lots which shall number no more than ten (10). Minor streets do not serve as through streets to any other street. Usual ADT range is less than 100 trips and serves 1 to 10 parcels.

Business/Industrial Road: Roads within or directly serving business and industrial zones.

70B PAVEMENT AND RIGHT-OF-WAY WIDTH

Road and Right-of-Way Width

The minimum pavement width of roads, as measured from face to face of curbs, shall be as follows:

Classification	Right-of-Way	Pavement Width
Business/Industrial	60	30'
Sub-collector Street	50	26'
Local Street	50	24'
Minor Street	50	22'

70B.l PRESERVATION OF EXISTING RESOURCES

All significant existing natural, human-made, or scenic resources shall be preserved and protected to the greatest extent possible. Such resources include, but are not limited to: stone walls, steep slopes with a gradient greater than 25%, ledge outcroppings, specimen trees and stands of trees including rare and unusual flora and fauna, endangered species, species of special concern, watercourses, ponds, wetlands, scenic vistas, ridge lines and any other significant geological features.

70C HORIZONTAL AND VERTICAL DESIGN CONTROLS

70C.1 Minimum Criteria

ROAD CLASSICIATIONS

Design Element	Business/Industrial	Sub Collector	Local	Minor
Design Speed, mph	40	30	25	20
Maximum Gradient, % (2)	10	10	10	10
Minimum Gradient, %	1.0	1.0	1.0	1.0
Stopping Sight Dist. (3) ft.	300	200	150	125
K Value for Vertical Curve (4) Crest	70	36	25	20
Sag	80	40	30	24
Minimum Center Line Radius, (5) ft.	400	300	200	150
Min. Sight Distance at Intersections (6) ft.	500	360	300	240

1) All values shown for arterial streets are for a 50 mph design speed.
2) The maximum grade may be increased up to 2% in special cases, by the Town Engineer.
3) Criteria for determining the Minimum Stopping Sight Distance: height of eye, 3.75 ft., and height of object 0.5 ft.

4) K value is a coefficient by which the algebraic difference in grade may be multiplied to determine the length in feet of the vertical curve which will provide minimum sight distance.
5) Depending on the application of super elevation.
6) Intersection sight distance is measured from a point of the intersecting road 20' (twenty feet) from the edge of the other road pavement and measured from a height of eye of 3.75 ft. on the intersecting road to a height of object of 4.5 ft. on either lane of the other road.

70D INTERSECTIONS

70D.1 General

The following standards shall apply to all intersections:

(A) No more than two roads shall intersect at any one location.
(B) Cross (four-cornered) intersections shall require approval by the Director of Public Works.
(C) Spacing of intersections, as measured between centerlines, shall be at least 200 feet.
(D) Driveways shall not be located any closer than 75 feet from an intersection.
(E) Wherever possible, roads shall intersect at a 90 degree angle, or as close thereto as is practical. In no event however, shall an intersection be allowed where the angle of intersection is less than 75 degrees within 100 feet of the intersection.
(F) The minimum radii of curb lines at intersections shall be as follows:
    1. Sub Collector/Local/Minor/Roads 25 feet
    2. Business/Industrial Road 35 feet

    The Commission may require greater radii where the angle of intersection is less than 90 degrees.
(G) The visibility at intersections (intersection sight distance) shall be such as to allow a stopped vehicle on the intersecting roadway, located 15 feet back from the gutter line, to see, and to be seen from, a vehicle approaching from either direction along the intersected roadway at a distance of not less than 250 feet, based on a height of eye and object of 3.5 feet.
(H) Sufficient clearing and regrading shall be accomplished to meet the sight distance visibility requirements of Subparagraph (G) of this subsection and no structures, fences, walls, hedges, rock, shrubs, trees or other landscaping shall be permitted to obstruct such visibility.
(I) Permanent sight line easements shall be provided on all private property so as to maintain the sight line requirements established in this subsection. In addition, no objects of any kind, that are located on private property outside the limits of a permanent sight line easement, shall be permitted to extend or protrude within the

plane of such easement. In the case of trees, all foliage shall be trimmed up to a minimum height of six feet as measured from the top of curb or edge of pavement adjacent to the nearest road.

70E DEAD END ROADS

70E.l General

All dead end roads (cul-de-sacs), permanent and temporary, shall be provided with a circular right-of-way at the terminating end. The required radii of the right-of-way and pavement shall be as follows:

Element	Radius
Right-of-Way	60 feet
Outside Edge of Pavement	50 feet

70E.2 Layout

The layout of the turnaround shall be in accordance with the most current Standard Detail Drawings for either a circular or offset type turnaround.

70E.3 Snow Storage Reserve Area

Unless otherwise approved, an open unrestricted area shall be reserved at the end of all turnarounds for the storage of snow. Such area(s) shall be located at the end of the turnaround between the curb and the right of way line for distance(s) and location(s) as shown on the Standard Detail Drawings. This area, which shall be delineated on the Record Subdivision Map, shall be free from all obstructions including, but not limited to, driveways, mailboxes, landscaping and fences.

70E.4 Length

The maximum length of a dead end road shall be as specified in the Montville Subdivision Regulations and shall be measured from the gutter line of the intersected road to the center of the turnaround.

70F SHOULDERS AND SLOPES

70F.1 General

For all roads, a shoulder area from edge of pavement to the right-of-way line in width in back of the curbing shall be excavated to a depth of at least 6 inches, and then backfilled and final graded with not less than 6 inches of topsoil, as hereinafter specified.

70F.2 Grading of Shoulder Areas

The shoulder areas shall be graded so as to slope toward the centerline of the road at a cross slope of 3/8 inch per foot unless otherwise approved by the Department of Public Works due to special conditions encountered during construction.

70F.3 Grading Beyond Shoulder Areas

Areas outside of the shoulders shall be graded up or down to existing grades, at a slope not to exceed two feet horizontal to one foot vertical. In rock cuts, slopes of one foot horizontal to not more than six feet vertical shall be allowed, but care shall be taken to insure that all exposed rock is stable and free from faults, cracks or other infirmities which might lead to collapse or flaking.

70F.4 Special Conditions

The Department of Public Works may require additional measures to be taken to maintain the stability of slopes, and to control groundwater seepage, under prevailing soil conditions encountered during construction. These measures may include, but not necessarily be limited to, a decrease in the amount of slope, stabilization blankets or grids, stone slope protection, plantings, wedge drains, underdrains, terracing, drainage swales or retaining structures. In cases where the exposed face of a cut slope consists of decomposed, flaking, highly fractured or unstable rock, slopes shall be flattened so as to protect public safety and minimize future maintenance.

70F.5 Limits

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

70F.6 Trees

If, in the opinion of the Commission, a slight modification of the shoulder or slope would result in the saving a valuable shade tree, the Commission may in its discretion allow such variation.

70G CURBING

70G.l General

Curbs shall be constructed along the edge of street pavement in accordance with the dimensions and details shown in the most current Standard Detail Drawings.

70H UTILITIES

70H.1 General

For new road construction, all utilities within the right-of-way of a road shall be located underground and installed as shown in the most current Standard Detail Drawings for underground utility assignments. Individual services shall be extended to the right-of-way line prior to the placement of any pavement. Installation of utilities within existing road right-of-ways shall be as approved by the Director of Public Works. To the extent possible, separation distances shall be maximized from existing municipal utilities.

70I PROTECTIVE BARRIERS

70I.l Guide Rails

Guide rails shall be installed wherever necessary to minimize the risk of personal injury or property damage resulting from vehicle departure from the right-of way. In general, guide rails shall be installed at the following locations:

(A) Embankments - Such protective barriers shall be required on any roadway section constructed on an embankment which places the roadway surface five (5) feet or more above the existing ground surface at the toe of the embankment slope. This requirement may be waived by the Department of Public Works where the embankment slopes are not steeper than four (4) feet horizontal to one (1) foot vertical.

(B) Culvert Endwalls - Such protective barriers may be required at culvert endwalls, depending on the height of the endwall and its proximity to the edge of the road.

(C) Roadside Obstacles - Such protective barriers may be required to shield natural or man-made fixed object hazards including, but not limited to, trees, rock outcrops, ditches, retaining walls, bridge abutments and permanent bodies of water.

Where marginal situations occur with respect to the placement or omission of a guide rail, or where it is determined that a vehicle striking a guide rail could potentially be more severely damaged than an accident resulting from hitting an unshielded roadside obstacle, the Public Works Department may approve the use of an object marker in accordance with Section 70P.4.

70I.2 Fencing

A securely anchored PVC coated chain link fence four (4) feet in height, shall be installed wherever necessary to minimize the risk of personal injury.

In general, fencing shall be installed at the following locations:

(A) Rock Cuts - such protective barriers shall be required along the top of slope where a rock cut exceeds five (5) feet in height.

(B) Culvert Endwalls - such protective barriers shall be required at the top of any endwall that exceeds five (5) feet in height.

70J ROAD LIGHTING

70J.l Places

Road lighting shall be provided if required by the Director of Public Works at any location where illumination in darkness is necessary to minimize the risk of accident involving vehicles or pedestrians or to assure safe and convenient vehicle and pedestrian passage. In general, the placement of lighting should be limited to intersections and when required at turnarounds.

70J.2 Nature

Lighting standards and luminaries shall conform to the Standard Detail Drawings, unless otherwise approved by the Director of Public Works. They shall be so located as to safeguard against discomfort glare and disability glare and avoid adverse effects from illumination upon the use, enjoyment and value of adjacent property.

70K MONUMENTS

70K.1 General

All new roads shall be accurately monumented to allow the ready determination of points along all rights-of-way lines. Monuments shall be placed at all points of tangency and points of curvature and elsewhere as required to permit seeing from one monument on a line to another on the same line.

70L ROAD NAMES AND SIGNS

70L.1 General

Road and other location names shall be approved by the Commission, and be so distinctive as to preclude possible confusion with other existing roads and locations within the Town. Road name signs shall be installed at all intersections. Such signs shall be erected in such places as to assure clear legibility by vehicle operators and shall conform to the dimensions and details as approved by the Public Works Director.

70M TRAFFIC CONTROL DEVICES

70M.l General

Traffic control devices, including signs, pavement markings, object markers, and other regulatory devices, shall be provided in such places as may be necessary to minimize the risk of accident involving vehicles or pedestrians and to assure safe and convenient vehicle and pedestrian passage.

70M.2 Signs

The design and placement of regulatory, warning and guide signs (Stop, Speed Limit, No Outlet, etc.) shall conform to the most current edition of the Manual of Uniform Traffic Control Devices.

70M.3 Pavement Markings

The location, type, color, width and patterns of pavement markings and object markers, shall conform to the most current edition of the Manual of Uniform Traffic Control Devices. In general, pavement markings shall include stop lines and crosswalks. Longitudinal pavement markings (center lines), to delineate the separation of traffic flows in opposing directions, shall only be required on business/industrial roads or other roads as required by the Director of Public Works.

70M.4 Object Markers

The design and placement of Type 2 Object Markers shall conform to the most current edition of the Manual of Uniform Traffic Control Devices.

70N SIDEWALKS

70N.l General

The Commission may require the installation of sidewalks upon recommendation of the Director of Public Works, town engineer and Director of Planning, along roads and in pedestrian easements. In general, when required, the installation of sidewalks should be limited to projects located adjacent to arterial, collector, and subcollector streets; adjacent to local streets within 1.5 miles of a school, library or recreational facility; in the vicinity of public or quasi-public buildings, playgrounds, shopping areas, transit stops or high density residential areas; and, at other locations when deemed necessary where the expected or probable volume of pedestrian traffic makes sidewalks necessary or appropriate in the interest of public safety and convenience.

70N.2 Location and Dimensions

Sidewalks shall be a minimum of four feet in width and shall be located within the street right-of-way line, as shown on the Standard Detail Drawings.

70N.3 Handicap Ramps

Curb cuts shall be provided at all pedestrian cross walks to provide access for the safe and convenient movement of physically handicapped persons. Such curb cuts shall conform to the most current State Statutes and the Americans with Disabilities Act Accessibility Guidelines.

70O ALTERNATIVE OPEN DRAINAGE SYSTEM

70O.1 General

In certain circumstances the Commission may permit an open drainage system where such system would be more consistent with the surrounding neighborhood and where the Commission, upon recommendation from the Public Works Director and the Town Engineer determines that such a system would be more appropriate to the particular site. This determination shall be based upon at least the following factors and the applicant shall submit a report that addresses each of these items:

A. The depth to highest ground water level;

B. The location of the site in the watershed and the amount of overland flow anticipated;

C. The design of the storm drainage system of the surrounding streets;

D. The natural features of the site (such as slopes and depth to ledge) that would permit or restrict the construction of open swales;

E. The proposed density of the subdivision including proposed lot size;

F. The impacts of ground water recharge that may result from the proposed drainage system; that Commission and/or the Town Engineer may require the applicant to provide data, reports, studies, test borings, and other information to make this determination;

G. Roadway intersections, where a closed drainage system may be more acceptable;

H. Location of open space;

I. The type of roadway swale linings proposed and the difficulty of long term maintenance;

J. The potential for erosion and sedimentation on the site as well as both temporary and permanent erosion control measures.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 80

ROAD CONSTRUCTION STANDARDS

80A CONSTRUCTION SURVEY PROCEDURE

80A.l General

The centerline of the traveled portion of the road shall be placed in the center of the right-of- way, and shall be located in the field by a State licensed land surveyor. Suitable construction ties shall be established at all control points, which shall be protected during construction so that the centerline may be re-established at any time.

80A.2 Stations

Stations shall be established every 50 feet and at all radius points (P.C. and P.T.'s). The beginning of this line shall be located in the gutter line of the intersected street and shall be designated as Station 10+0. A construction stake shall be placed at right angles to each station, clear of construction and grading. This stake will show the station on the side facing toward Station 10+0 the measured distance to centerline (offset) on the side facing away from Station 10+0 and on the face nearest to center line the cut or fill which will establish the center line grade. A grade list showing the Stations, stake elevations, offset from centerline grade, cuts and fills shall be provided to the Department of Public Works by the Applicant, or his designee who is to have charge of the construction layout, before construction begins.

80A.3 Bench Marks

A permanent Bench Mark shall be established at the beginning and end of each road and at intervals not exceeding 500 feet along the length of the road. These Bench Marks shall be referenced to the same datum shown and identified on the construction drawings for the road. Sketches showing at least three ties to each Bench Mark, the Bench Mark elevation and a description of each Bench Mark shall be provided to the Department of Public Works.

80A.4 Protection of Stakes and Bench Marks

Grade stakes and permanent Bench Marks shall be protected and preserved until the road construction has been approved by the Department of Public Works. If such stakes or Bench Marks are disturbed, they shall be replaced immediately.

80B CLEARING AND GRUBBING

80B.l Clearing

All trees, brush, boulders, structures, walls, fences, perishable matter and debris of whatever nature shall be cleared from the full width of the right-of-way, including areas necessary for cuts and fills, construction of storm drainage systems, and required sight lines, except that valuable shade trees may remain in shoulder areas as provided for in Section 80B.3.

80B.2 Grubbing

All roots and stumps within the clearing limits specified in Section 80B.l above shall be grubbed and excavated. All stumps shall be chopped or disposed of off-site in a lawful manner. No stumps shall be buried on site.

80B.3 Trees

Valuable shade trees may be permitted by the Commission to remain in shoulder areas as provided for in Section 701.6, but not within three (3) feet of any curbline, if no substantial increase in the risk of injury or damage results by reason of its presence in the particular place where it stands, and a written opinion is provided from a qualified arborist stating that the long term health of the tree will not be adversely impacted by proposed construction or proximity to proposed road improvements. Any such tree shall be effectively protected and preserved so as to insure that it will suffer no damage during construction operations. All tree branches overhanging the roadway pavement or shoulder areas shall be trimmed by a qualified arborist to a clearance of sixteen feet above the finished grade of the road.

80B.4 Topsoil

Topsoil shall be stripped from all surfaces of the roadway section which will be disturbed by cut or fill operations. Topsoil so stripped shall be stockpiled on the site of the work in accordance with the approved E&S plan, and shall be reserved for roadway landscaping.

80C ROADWAY EXCAVATION, FORMATION OF EMBANKMENT AND DISPOSAL OF SURPLUS MATERIAL

80C.l General

The excavation, filling, compaction, and the disposal of all surplus or unsuitable materials required to construct the roadbed, subgrade, shoulders, slopes and other associated improvements shall be accomplished in accordance with all applicable requirements of the State Standard Specifications for "Roadway Excavation, Formation of Embankment and Disposal of Surplus Material" except as modified herein.

80C.2 Unsuitable Material

All unsuitable material, including material removed during clearing and grubbing and preparation of subgrade, shall be removed from within the limits of the right-of-way and disposed of in a lawful manner.

80C.3 Surplus Material

Surplus suitable material may be used to flatten fill slopes within the limits of the right-of- way and any slope easements if approved by the Department of Public Works. Surplus suitable materials that cannot be so utilized shall be disposed of in a lawful manner.

80C.4 Blasting

Blasting shall be performed only by licensed competent personnel and shall be done in accordance with all applicable State and Federal laws, local ordinances, rules and regulations pertaining thereto, and only after obtaining all necessary permits.

80D PREPARATION OF SUBGRADE

80D.l General

All topsoil, peat, other organic matter and all soft and yielding material shall be stripped and removed to their full depth, and boulders and ledge rock removed to a depth of at least twelve (12) inches below finished subgrade. The surface shall then be backfilled up to subgrade elevation with bank or crushed gravel conforming to the requirements of the State Standard Specification Sections M.02.l and M.02.06 (Grading B). All construction methods shall conform to the requirements of the State Standard Specifications for "Subgrade”

80E ROLLED GRANULAR BASE

80E.l General

After the subgrade has been compacted, proof rolled and approved by the Department of Public Works, a rolled granular base shall be applied for the full required width of pavement plus one foot beyond each curb line. The rolled granular base shall not be less than eight (8) inches thick after compaction and shall have the cross-slope shown on the Standard Detail Drawings.

80E.2 Materials and Methods

Construction methods shall conform to the requirements of the State Standard Specifications for "Rolled Granular Base", and materials shall conform to the requirements of the State Standard Specification Sections M.02.03 and M.02.06 (Grading A).

80F PROCESSED AGGREGATE BASE

80F.l General

After the rolled granular base has been placed and compacted, processed aggregate base shall be applied for the full required width of pavement plus one foot beyond each curb line. The process aggregate base shall not be less than four (4) inches thick after compaction and shall have the cross slope shown on the Standard Detail Drawings.

80F.2 Materials and Methods

Construction methods shall conform to the requirements of the State Standard Specifications for "Processed Aggregate Base", and materials shall conform to the requirements of the State Standard Specification Section M.05.01.

80G BITUMINOUS CONCRETE PAVEMENT

80G.l General

After the processed aggregate base has been brought to the required grade and cross slope, rolled, and compacted, the roadway shall be surfaced with bituminous concrete Class I binder course for the full required width of pavement plus one foot beyond each curb line to a compacted depth of not less than 2 1/2 inches. After placement of bituminous concrete curbing on the binder course, a bituminous concrete Class II top or surface course not less than 1/1/2 inches thick after compaction shall be placed. The total compacted depth of Class I binder course and Class II top or surface course shall not be less than 4 inches. Prior to the pavement of the Class II surface course, the surface of the binder course shall be broomed clean and a tack coat applied. No paving shall be permitted between October 31 and April 1 unless the Public Works Department specifically permits an exception due to unusually mild weather conditions. No paving shall be permitted on any day where the base temperature is less than 35 degrees Fahrenheit or when weather conditions of fog or rain prevail or when the pavement surface shows any signs of moisture. Pavement shall be placed so that each course shall have the cross-slope shown on the Standard Detail Drawings.

80G.2 Materials and Methods

All materials and construction methods shall conform to the requirements of the State Standard Specifications for "Bituminous Concrete" except as modified herein. "Bituminous Concrete" shall conform to the requirements of the State Standard Specifications Sections M.04.01 and M.04.03 (Class I for the binder course and Class II for the top or surface course).

80G.3 Source

All bituminous concrete pavement material shall be obtained from a plant certified by the State Department of transportation for provision of such materials for use in State highway construction. Original signed copies of certification by the supplier that each load of bituminous concrete pavement materials incorporated in the work conforms to the requirements specified in Section 80.G.1 shall be submitted to the Public Works Department.

80H CURBING

80H.l General

The type of curbing shall be of the several types listed below as directed by the Commission and the Director of Public Works. Machine laid "Cape Cod" style bituminous concrete curbing six (6) inch bituminous concrete lip curbing, concrete curbing and/or granite curbing as shown on the Standard Detail Drawings, shall be placed on both sides of the pavement along the entire length of new and improved roads at the offset from centerline of road shown on the Standard Detail Drawings. Bituminous concrete curbing shall not be required on existing Town roads where it is determined by the Director of Public Works that the installation of enclosed storm drainage systems is not warranted. Wavy or damaged curbing shall not be accepted, and the Public Works Department shall require that improperly placed or unacceptable curbing be removed and replaced.

80H.2 Materials and Methods

All materials and construction methods shall conform to the requirements of the State Standard Specifications for "Bituminous Concrete Lip Curbing", “Concrete Curbing” and “Granite Curbing”. For bituminous curbing types curbing shall be placed on the road binder course at a height which will maintain a 6 inch curb reveal after placement of the road surface course. Prior to the placement of any curbing, the surface of the pavement shall be cleaned of all loose and foreign material. The surface of the pavement, which shall be dry at the time the curbing is placed, shall be coated with an approved tack coat. All curbing shall conform to the shape shown in the Standard Detail Drawings.

80I GUIDE RAIL

80I.1 General

Guide railing shall be installed as shown in the Standard Detail Drawings. The type of guide rail to be utilized shall be as follows:

(A) Metal beam rail or, 3 cable guide rail with steel posts shall be used on all new road ways provided that a minimum clear zone of eleven and one half (11.5) feet is maintained behind the guide rail so as to accommodate the maximum deflection

distance. The use of alternate types of guide rail may be required by the Director of Public Works where insufficient clear zone or other conditions warrant.

(B) Steel backed timber guide rail may be required in areas of aesthetic or historical significance as determined by the Commission.

801.2 End Anchorage

Regardless of the type of guide rail to be used, all leading and trailing ends shall be secured with concrete end anchors. Blunt or flared ends shall not be permitted.

801.3 Materials and Methods

For three cable guide rail and end anchorages, construction methods shall conform to the requirements of the State Standard Specifications for "Three Cable Guide Railing (1-Beam Posts) and Anchorages", and materials shall conform to the requirements of the State Standard Specification Sections M.10.08 for wire rope, steel posts and plate anchors, fittings and anchorages, and M.18.09 for reflective delineators.

80J FENCING

80J.1 General

Fencing shall be a minimum of four (4) feet in height and shall be installed as shown in the Standard Detail Drawings.

80J.2 Materials and Methods

Steel fabric, posts, and all hardware shall be coated with a black colored polyvinyl chloride, with all materials conforming to the requirements of the State Standard Specifications Section M.10.05. All construction methods shall conform to the requirements of the State Standard Specifications for "Chain Link Fence" with the exception that top tension wires shall be provided in lieu of top rails.

80K MONUMENTS

80K.l General

Monuments shall be of reinforced concrete, not less than four (4) inches square at the top and not less than three (3) feet long, shall have a cross mark indented in the top to indicate the exact point of reference, and shall be set so as to project not more than two (2) inches above finished grade. Under no circumstances shall monuments be buried beneath the ground surface or covered with landscape or other materials such that they are not visible. Monuments shall conform with the dimensions and details shown in the most current Standard Detail Drawings.

80K.2 Exposed Ledge Areas

In exposed ledge areas, a brass plug 1/2 inch in diameter and three (3) inches long shall be installed in the ledge and cemented in place with mortar.

80L Traffic Control Devices

80L.l General

Except for street signs, which shall conform to the Standard Detail Drawings, the design and placement of signs, pavement markings, and object markers shall conform to the most current edition of the Manual of Uniform Traffic Control Devices.

80L.2 Materials and Methods - Signs

All other signs shall be sheet aluminum with materials conforming to the requirements of the State Standard Specification Sections M.l8.09 and M.18.13. Construction methods shall conform to the requirements of the State Standard Specifications for "Sign-Face - Sheet Aluminum". Materials for metal sign posts and sign mounting bolts shall conform to the requirements of the State Standard Specification Sections M.l8.14 and M.l8.15 respectively. Posts shall be galvanized U-channel with a weight of two (2) pounds per foot.

80L.3 Materials and Methods - Pavement Markings

Construction methods shall conform to the requirements of the State Standard Specifications for "Painted Pavement Markings", and materials shall conform to the requirements of the State Standard Specification Section M.07.20 for 15-minute dry paint.

80L.4 Materials and Methods- Object Markers

Construction methods shall conform to the requirements of the State Standard Specifications for "Object Marker". Materials shall conform to the Requirements of the State Standard Specification Sections 18.13 for Sheet Aluminum, 18.09 for Reflective Sheeting, 18.14 for Metal Sign Posts, and 18.15 for Sign Mounting Bolts. Posts shall be galvanized U-Channel with a weight of two (2) pounds per foot.

80M SIDEWALKS

80M.l General

Sidewalks shall be located as shown on the Standard Detail Drawings, and shall be constructed of 3000 PSI Montville Cement Concrete, with an air entraining admixture. Sidewalks shall be a minimum of four (4) feet in width and five (5) inches thick, and shall be constructed on a granular fill base having a minimum compacted thickness of eight (8) inches. At all driveway crossings, the concrete thickness shall be increased to eight (8) inches, and a welded wire fabric reinforcement provided.

80M.2 Materials and Methods

All materials and construction methods shall conform to the requirements of the State Standard Specifications for "Concrete Sidewalks", except that a one-quarter inch premolded bituminous joint, set one-quarter inch below the finished surface of the walk and extending the full width and depth of the walk, shall be provided at sixteen (16) foot intervals, and dummy joints placed at four (4) foot intervals. "Granular Fill" shall conform to the requirements of the State Standard Specifications Sections M.02.01 and M.02.06 (Grading A). Cement Concrete shall conform to the requirements of the State Standard Specifications Section M.03.01 (Class C). Welded wire fabric reinforcement shall be WWF 6x6-W2.9xW2.9.

80M.3 Handicap Ramps - General

Handicap ramps shall be constructed to the dimensions shown on the Standard Detail Drawings; shall be located as shown on the Approved Design Drawings; and shall be constructed of 3000 PSI Montville Cement Concrete, with an air entraining admixture. Handicap Ramps shall be five (5) inches thick, and shall be constructed on a granular fill base having a minimum compacted thickness of eight (8) inches. A detectable warning strip approved by the Director of Public Works shall be installed at each ramp.

80M.4 Handicap Ramps - Materials and Methods

All materials and construction methods shall conform to the requirements of the State Standard Specifications for "Concrete Ramps". "Granular Fill" shall conform to the requirements of the State Standard Specifications Sections M.02.01 and M.02.06 (Grading A). Montville Cement Concrete shall conform to the requirements of the State Standard Specifications Section M.03.01 (Class A). Welded wire fabric reinforcement shall be WWF 6x6- W2.9xW2.9.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 90

DRAINAGE DESIGN CRITERIA

90A DESIGN CRITERIA

90A.l General

Proposed drainage facilities shall be designed to accommodate surface runoff from proposed land development as well as the entire upstream drainage area and to protect wetlands, watercourses and water bodies from the adverse impacts of post construction stormwater runoff.

90A.2 Analysis

Computations, conforming to the requirements outlined in this section, shall be submitted for sizing all proposed storm drainage facilities as well as the analysis of any existing off- site facilities required by the Commission. In addition, computations shall be submitted for both pre-development and post-development conditions for the 2, 10, 25, 50 and 100-year frequency 24-hour duration Type III storm events at each location from which storm water discharges will exit the property under development.

90A.3 Potential Overload

Where the proposed land development, including roadway and drainage facility construction, is likely to cause an increase in the rate of stormwater runoff such as to hydraulically overload or cause damage to existing downstream drainage structures, facilities, or watercourses, and/or cause flooding which would likely result in physical damage of land and improvements adjacent thereto, adequate stormwater runoff control measures shall be designed and constructed to prevent or alleviate such harmful effects.

90A.4 Stormwater Runoff Control

Where stormwater runoff control measures are required by the Commission, they may include, but not be necessarily limited to, retention and/or detention with controlled release of increased flows, increasing the hydraulic capacity of downstream drainage facilities, erosion protection measures, stormwater treatment or any combination of the above.

90A.5 Stormwater Quality

Best Management as recommended in the Connecticut Stormwater Quality Manual shall be used to enhance the removal of both particulate and soluble pollutants during storm events so as to improve the quality of stormwater runoff discharged to receiving waters.

90A.6 Stormwater Detention

When stormwater detention facilities are required, they shall be sized such that the peak discharge after development shall not exceed the peak discharge prior to development for each of the storm frequencies identified in Section 90A.2. Design and construction of surface stormwater detention facilities shall conform to the requirements for "Detention Basin" as outlined in the "Connecticut Guidelines for Soil Erosion and Sediment Control", with the exception that basin side slopes shall not exceed 4H:1V, and the maximum basin depth (as measured from the bottom of basin to the top of berm) shall not exceed six feet. In addition, detention basins shall be located no closer than one hundred fifty feet from an existing or proposed residential dwelling, or active recreation area. To the maximum extent possible, detention basins shall be designed as extended detention ponds or wet ponds, or used in conjunction with other stormwater treatment practices to provide water quality benefits; shall be irregular in shape and landscaped so as to enhance the appearance of the surrounding environment; shall be screened; and, shall be designed to minimize future maintenance. All detention basins shall be readily accessible for maintenance purposes via an improved access drive. In addition, unless specifically waived by the Commission, fencing (refer to Section 80J) shall be required around the perimeter of all detention basins. In granting any requests for a waiver of this requirement, the Commission shall consider the proximity of the basin to adjacent residential dwellings; future population density in the general vicinity; and, the size and depth of the proposed basin.

90A.7 Discharge

Unless otherwise approved by the Commission, the discharge of all stormwater shall be into established watercourses, wetlands, or Town/State Highway drains having adequate capacity to accommodate such discharges.

90A.8 Drainage Easements and Rights to Discharge

Where the discharge of stormwater shall be onto or through private property, perpetual drainage easements and discharge rights, in favor of the owner of the road, shall be secured by the applicant. Where drainage easements are required, they shall have a minimum width of thirty feet (30’). For open channels, flared end sections/headwalls, and other outlet protection measures, they shall extend a minimum of fifteen feet (15’) beyond the outside edge of such measures.

90A.9 Diversion Permit Required

The diversion of stormwater runoff from one watershed or watercourse to another shall normally be avoided. Where it is necessary to create such a diversion, special provisions shall be made to minimize the potential damages which may occur as a result of such diversion.

90A.l0 Capacity Within Roadway

Storm drainage systems within the roadway, exclusive of culverts and bridges carrying flows under the road, shall be designed to safely accommodate flows resulting from storms of the maximum intensity which can be expected to occur on an average of once in twenty-five (25) years (25-year storm) without being surcharged.

90A.l1 Capacity Under Roadways

Culverts crossing under roadways shall be designed to accommodate the following flows:

(A) Minor Structures

These shall include pipe, box culverts or bridges providing for the drainage of adjacent lands less than one square mile in area in which there is no established watercourse. These structures shall be designed to pass a 25-year frequency discharge without flooding or damaging the highway or adjacent property.

(B) Small Structures

These shall include pipe, box culverts or bridges providing for the drainage of adjacent lands less than one square mile in area in which there is an established watercourse. These structures shall be designed to pass a 50-year frequency discharge with one foot of freeboard, and without flooding or damaging adjacent property. The effects of a discharge equal to the 100-year frequency storm shall be checked. Where such effects are likely to cause damage to persons or property, structures shall be designed to alleviate these problems.

(C) Large Structures

These shall include pipe, box culverts or bridges for the drainage of adjacent lands one (1) square mile or large in area. These structures shall be designed to pass a one hundred (100) year frequency discharge with a minimum one foot (1') under clearance, relative to the low chord of the upstream face of the structure, and shall not create a backwater which will flood or endanger property or roads upstream.

90A.12 Capacity Within Open Drainage Channels

New open channels and existing open channels into which a new or expanded storm drainage system is proposed to discharge shall be designed to accommodate flows resulting from storms of the maximum intensity which can be expected to occur on an average of once in twenty five years with a minimum freeboard of six inches. When conditions are such that lining of the open channel with rip rap is necessary to prevent erosion, the size of the rip rap shall be no less than "intermediate", and the thickness shall be no less than eighteen inches.

90A.l3 Municipal Improvements

The requirements specified in Section 90 are not intended in any way to preclude the Montville Public Works Department from making storm drainage improvements on existing public roadways. Such improvements, including, but not limited to the conversion of road side ditches to piped drainage systems, the extension, repair, or replacement of existing storm drainage systems, and the installation of new storm drainage systems, shall be permitted provided that a determination is made by the Director of Public Works that such improvements will not result in significant adverse impacts.

90B COMPUTATION OF STORMWATER FLOWS

90B.l General

Stormwater flows may be computed by use of the Rational Method or by use of the methods described in the most current edition of the U.S. Soil Conservation Service Technical Release No. 20, or Technical Release No. 55. In general, the use of the Rational Method is discouraged for use in computing flows from drainage areas in excess of 200 acres, or for computing flows from 100-year frequency storms.

Regardless of the method that is utilized, all computations shall include a Drainage Analysis Map which clearly delineates the drainage area and flow path used for determining the time of concentration to each proposed drainage facility and each existing downstream drainage structure that may become hydraulically overloaded or damaged. The drainage analysis map shall show existing topography of the drainage areas (based on the best available existing mapping), existing and proposed roads watercourses, wetlands, flood hazard zones, existing and proposed vegetation (woods, fields, lawns, etc.), existing and proposed drainage facilities and structures, and the proposed area of development. When U.S. Soil Conservation Service methods are used, the drainage analysis map should also show soil types as shown on the most currently available soils maps as prepared by the U.S. Soil Conservation Service.

90B.2 Rational Method Computations

Where the Rational Method formula is used, computations shall conform with the following guidelines:

(A) Runoff Coefficients

Where the Rational Method formula is used, the following runoff coefficients ("C" values) shall be the minimum values utilized for each type of surface, and a composite "C" value computed for each tributary drainage area. In any case, a composite "C" value of less than 0.30 shall not be used for single family residential developments.

Type of Surface	**Runoff Coefficient "C" (1) (10-year Storm)**
Pavement, Roofs & Impervious Surfaces	0.90
Embankment Slopes (Cuts & Fills)	0.40
Lawns:	
Fast Slope (2% or Less)	0.17
Average Slope (2% to 7%)	0.22
Steep Slope (7% or Greater)	0.35
Cultivated Fields	0.45
Pasture	0.30
Meadows (Moist, Level Grassland)	0.10
Forested Areas	0.20

For 25-year storm increase runoff coefficients by 25%, for 50-year storm increase by 40%, and for 100-year storm increase by 60% (except for pavement, roofs and impervious surfaces)

(B) Time of Concentration

Time of concentration (t) shall be determined by the Technical Release No. 55 Method.

(C) Rainfall Intensities

Rainfall intensities (i) shall be determined using the frequency/intensity/duration curves for New Haven, Connecticut. The minimum allowable time of concentration shall be five minutes.

90C MINIMUM PIPE SIZES

90C.l Surface Drainage

All pipe carrying surface drainage or a combination of surface drainage and subsurface drainage (groundwater) shall have a minimum internal diameter of twelve (12) inches.

90C.2 Subsurface Drainage

All subsurface drainage pipe used exclusively for intercepting groundwater shall have a minimum internal diameter of six (6) inches.

90D CATCH BASINS

90D.l General

Catch basins shall be provided in order that surface water will not travel along the roadway curbline without interception for more than 350 feet on roads with grades up to and including 5% and not more than 250 feet on roads with grades up to and including 10%.

Catch basins shall also be installed at all low points, roadway intersections and at the lower end of all cui-de-sacs. Catch basins located within the paved roadway shall have Type "C" heads and provided with two foot deep sumps.

90D.2 Off-Road Locations

Where it is necessary to provide catch basins in off-road locations outside of the limits of pavement, they shall have Type "C-G" heads and provided with two foot deep sumps.

90D.3 Inlet Capacity

Where additional inlet capacity is necessary, the installation of double Type II catch basins, or more closely spaced catch basins shall be required.

90E MANHOLES

90E.1 General

In general, a manhole is less preferable to a catch basin and should only be provided where the use of a catch basin is not feasible.

90E.2 Places

Manholes shall be provided at each change of drainage pipe slope or horizontal alignment, at all pipe junctions and otherwise at intervals of approximately 350 feet on long lengths of pipe where catch basins are not used.

90F FLARED END SECTIONS/HEADWALLS

90F.l General

The inlets and outlets of all exposed drainage conduits shall be protected with flared end sections except where hydraulic, or other considerations necessitate the use of a headwall. When headwalls are provided, they shall be of reinforced concrete construction. Wingwalls shall be provided when required to contain and protect the adjacent earthen slopes and/or direct the flow of water entering or leaving the conduit. Outlet protection shall be provided in accordance with the standards outlined in the "Connecticut Guidelines for Soil Erosion and Sediment Control".

90G OPEN CHANNELS

90G.1 General

In general, open channels shall be avoided, except as may be required at storm drainage system outlets to convey storm water discharges to an acceptable outlet. Where open channel flow is required, the channel shall be properly designed to safely carry the design flow. Open channels shall be in the form of a trapezoid having a bottom width of at least two feet and side slopes of not less than two feet horizontal to one foot vertical. The channel shall be seeded and protected with erosion control blankets, sodded, riprapped or otherwise stabilized as the flow quantities and velocities require.

90G.2 Stabilization of Open Channels

Special attention shall be given to the stabilization of open channels in the immediate vicinity of pipe inlets and outlets, bridges, at bends and curves and at other critical locations as required to prevent scouring, erosion and/or siltation of watercourses and culverts, and undermining of drainage structures.

90G.3 Criteria

Hydraulic design of open channels and design of bed and bank stabilization shall be done in accordance with the applicable criteria of the most current edition of the Federal Highway Administration publication entitled "Design of Roadside Drainage Channels".

90H UNDERDRAINS

90H.l General

The installation of subsurface drainage systems or underdrains will be required beneath the edge of pavement of a proposed street wherever the ground water is known or found to be less

than three (3) feet below the proposed finished grade of the street. Underdrains shall also be installed where localized seeps or springs are observed within the proposed street lines during construction, or where otherwise required by the Director of Public Works.

90I CONNECTION OF PRIVATE DRAINS

90I.1 General

Unless otherwise approved by the Director of Public Works, private storm drains, footing drains, curtain drains, underdrains, basement drains, yard drains or area drains of any kind shall not be permitted to discharge up gradient of or into a town road or road proposed to be dedicated to the Town at a future date. Any such private drains shall be connected to storm drainage structures. When such a connection is not possible or practical, they may be connected directly to an existing or proposed storm drain if approved by the Director of Public Works. Where direct connections are made, they shall utilize appropriate fittings, and be preceded by an access extended to grade.

Such access shall be located within a town road right-of-way or easement, and shall have a minimum diameter of twelve inches, or as otherwise deemed necessary to provide direct observation and to facilitate sampling. All access structures shall be provided with a secure top to preclude accidental entry. The following notation shall be placed on all design drawings where the connection of private drains are proposed; "Private drains are the sole responsibility of the owner and the Town of Montville shall assume no responsibility for any maintenance, replacement and/or repair. The owner of the drain shall hold the Town of Montville harmless for any damage or injuries resulting from such connection".

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 100

DRAINAGE CONSTRUCTION STANDARDS

100A PIPE

100A.l General

All pipe used for storm drainage shall be either Class IV Reinforced Concrete Pipe (RCP) or High Density Corrugated Polyethylene Smooth Interior Pipe (CPEP).

100A.2 Minimum Cover

The minimum cover over all storm drainage located within the right-of-way shall be two (2) feet. Where conflicts with other subsurface facilities occur, and with approval of the Director of Public Works, pipe may have as little as 18 inches of cover, but in such cases extra strength Class V RCP shall be used with a crushed stone bedding extending to a minimum depth of four (4) feet below finished grade.

100A.3 Slotted or Perforated Storm Drains

Where water is encountered in the pipe trenches, or where underdrains are required under Section 90H, storm drains shall either be slotted RCP or Perforated High Density Corrugated Polyethylene Smooth Interior Pipe.

100A.4 Additional Underdrains

Where additional underdrains are deemed necessary in locations not requiring other storm drainage, Perforated High Density Corrugated Polyethylene Smooth Interior Pipe with a minimum internal diameter of six (6) inches shall be used.

100A.5 Materials and Methods

Except as noted herein, construction methods shall conform to the State Standard Specifications for "Culverts" and "Underdrain and Outlets". Where High Density Corrugated Polyethylene Smooth Interior Pipe is used for storm drains, it shall be installed in a Type II installation, regardless of the internal pipe diameter, with backfill material conforming to the State Standard Specifications for No. 8 crushed stone (3/8") under Section M.O1.01, with geotextile fabric conforming to the State Standard Specification Section M.08.01-26 placed over top of the crushed stone. Backfill conforming to the Connecticut Department of Transportation Materials

Testing Lab Reference File 163-1 for medium processed aggregate (3/4" minus) will also be permitted. Use of this material will not require placement of a geotextile fabric. Where reinforced concrete pipe is used for storm drains, it shall be installed in a Type II installation with backfill material conforming to the State Standard Specifications Section M.02.06 – Grading C. For underdrains, pipe shall be installed with holes in a downward position. Aggregate used for backfilling around underdrains and slotted or perforated pipe shall conform to the State Standard Specifications Section M.08.03 - 1 (No. 8 Crushed Stone). Sand shall not be permitted as backfill around underdrains. Geotextile fabric, conforming to the State Standard Specification Section M.08.01 - 26, shall be wrapped around the aggregate as shown in the Standard Detail Drawings. Reinforced concrete pipe shall conform to the State Standard Specifications Section M.08.01 - 6, or Section M.08.0- 10 for Slotted Reinforced Concrete Pipe. Material used for sealing joints in concrete pipe shall conform to the State Standard Specifications for Cold-Applied Bituminous Sealer (Section M.08.01-18), or Pre-formed Plastic Gaskets {Section M.08.09.19). High Density Corrugated Polyethylene Smooth Interior Pipe shall conform to the AASHTO Standard Specifications M 294 Type S, or M 294 Type SP/M 252 Type SP for Perforated High Density Corrugated Polyethylene Smooth Interior Pipe.

100B CATCH BASINS AND MANHOLES

100B.l General

Catch basins and manholes shall be precast reinforced concrete constructed in accordance with the Connecticut Department of Transportation Standard Sheets.

100B.2 Materials and Methods

Except as noted herein, all materials and construction methods shall conform to the requirements of the State Standard Specifications for "Catch Basins, Manholes and Drop Inlets". All catch basin and manhole structures shall be of precast reinforced concrete construction. Use of brick, concrete building brick or masonry concrete units shall not be permitted unless otherwise approved by the Director of Public Works. However, a course of brick or concrete building brick shall be provided to allow for adjustment of catch basin tops and manhole frames. All pipe penetrations shall be bricked and mortared inside and outside of all catch basin and manhole structures. All catch basin frames and grates shall be 507K- Type A, constructed of galvanized steel. Manhole frames and covers shall be heavy traffic duty, constructed of cast iron. Frames shall have a twenty-four {24) inch internal opening. Covers shall be marked "STORM". Where required by the Director of Public Works, covers shall be bolted.

100C FLARED END SECTIONS/HEADWALLS

100C.1 General

Flared end sections and headwalls shall be constructed in accordance with the Connecticut Department of Transportation Standard Sheets.

100C.2 Materials and Methods

All materials and construction methods shall conform to the State Standard Specifications for "Culvert Ends" and "Retaining Walls, Endwalls and Steps". When high density corrugated polyethylene smooth interior pipe is used, and culvert ends are specified, they shall be metal culvert ends. High density polyethylene culvert ends shall not be permitted.

100D RlPRAP

100D.l General

Stone for this work shall be of the size, and placed to the limits and depth, specified on the Drawings.

100D.2 Materials and Methods

Construction methods shall conform to the requirements of the State Standard Specifications for "Riprap" and materials shall conform to the requirements of the State Standard Specification Section M.l2.02. Where geotextile fabric is specified underneath riprap, it shall conform to the requirements of the State Standard Specification Section M.08.01 - 26.

100E STABILIZATION OF OPEN CHANNELS

100E.l General

Open channels shall be stabilized with riprap, sod, or seed protected with erosion control/turf reinforcement mattings. The method of stabilization shall be as specified on the Drawings.

100E.2 Materials and Methods

For stabilization with rip rap, all work shall conform to the requirements specified in Section 1OOD above. For stabilization with sod or seed protected with erosion control/turf reinforcement mattings, all materials and methods shall conform to the State Standard Specifications for "Sodding" and "Turf Establishment" respectively.

100F SPECIAL STRUCTURES

100F.1 General

Special structures, including but not limited to bridges, box culverts, retaining walls and stormwater treatment units shall be designed and constructed in accordance with the most current applicable standards of the Connecticut Department of Transportation, or as otherwise directed by the Director of Public Works. Plans and specifications prepared and sealed by a licensed professional engineer registered in the State of Connecticut who is competent in the field of structural engineering shall be submitted for all special structures. In the case of bridges, such plans and specifications shall be accompanied by a written statement from the design engineer certifying that the bridge has been designed to withstand AASHTO HS20 Live Loads, and that any waterway opening conforms to the Standards established in Section 90A.ll of these Regulations. Upon completion of construction of any special structure, the licensed professional engineer shall be required to provide a written statement to the Director of Public Works and Planning Department that the special structure was constructed in substantial conformance with the approved design drawings and specifications.

100F.2 Private Drain Access Structure

Where private drain access structures are required prior to a direct connection to a storm drain, they shall be fabricated from high density corrugated polyethylene pipe and fittings conforming to AASHTO Standard Specification Sections M 294 Type S and M 252 Type S. The fabrication of the access structures shall include as a minimum a standard 12"x l2"x l2" tee with reducers and couplings as required at each end of the horizontal run, and a 12-inch inside diameter vertical riser pipe extending to grade. A snap on end cap shall be securely fastened at the end of the vertical riser pipe, and shall be set flush with the proposed finish grade elevation.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 110

SOIL EROSION AND SEDIMENT CONTROL CRITERIA

110A SOIL EROSION AND SEDIMENT CONTROL PLANS & PERMITS

110A.1 General

No construction shall be undertaken unless an erosion and sediment control plan, which explains and illustrates the measures, which will be taken to control erosion and sediment problems, is submitted to and approved by the Town of Montville. Plans shall be prepared in accordance with the requirements and standards outlined in the most current edition of the "Connecticut Guidelines for Soil Erosion and Sediment Control".

110A.2 Stormwater General Permits

When a project requires a Connecticut DEEP Agency, "General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities", copies of the registration form and Stormwater Pollution Control Plan submitted to the State shall also be submitted to the Town of Montville Planning Department prior to the start of any activity.

110B CONSTRUCTION & MAINTENANCE PROCEDURES

110B.1 General

The practices and measures included in the approved erosion and sediment control plan shall be implemented during the entire construction period and maintained until adequate permanent vegetation is established. Erosion control measures shall be supplemented as field conditions require, or as directed by the Town of Montville.

110B.2 Contact Person

Prior to the start of any roadway construction, the name, address and day/night telephone numbers of the person designated by the owner to be responsible for the implementation of erosion and sediment control practices and measures shall be provided to the Director of Public Works and the Director of Planning.

110B.3 Final Site Clean-Up

Following the permanent stabilization of all disturbed areas, all remaining temporary erosion control measures that are not bio-degradable, as well as all accumulated sediments, shall be removed from the site and disposed of in a lawful manner. In addition all accumulated sediments remaining in permanent facilities such as plunge pools, drainage channels, detention areas and catch basins, shall be removed and disposed of in a lawful manner. The removal of temporary erosion control measures and accumulated sediments shall be conducted in a manner so as not to disturb existing permanent vegetation. All exposed areas remaining after the removal of erosion control measures shall be immediately seeded and mulched.

REGULATIONS FOR PUBLIC IMPROVEMENTS

SECTION 120

FINAL GRADING, STABILIZATION AND LANDSCAPING CRITERIA

120A FINAL GRADING AND STABILIZATION

120A.l General

Except as otherwise specified herein, all areas disturbed by the construction of roads, drainage facilities and associated improvements that are not paved or occupied by structures shall be properly graded to smooth uniform slopes that maintain the general shape of existing landforms, covered with topsoil to a minimum depth after settlement of six (6) inches, and limed, fertilized, seeded and mulched.

120A.2 Materials and Methods

Construction methods shall conform to the requirements of the State Standard Specifications for "Topsoil", "Turf Establishment", and "Liming". Materials shall conform to the State Standard Specification Sections M.13.01-l for Topsoil, M.13.03 for Fertilizer, M.l3.04 for Seed, M.13.05-2 for Mulch, and M.13.02 for Lime.

120B LANDSCAPING

120B.1 Ornamental Landscape Features

Ornamental landscape features including, but not limited to boulders, grouping of rocks, statues, signs, exterior lighting (except required street lights), walls, basketball hoops and other obstructions, shall be prohibited within the road right-of-way, medians, sight line easements, storm drainage easements or other easements.

120B.2 Medians

Medians, when permitted by the Commission, shall be planted with low-growing plants and shrubs that will not exceed a fully mature height in excess of two and one half feet as measured from the adjacent roadway gutter line. Surface areas that remain unplanted shall be covered with wood or stone chips underlayed by a landscape fabric barrier designed to retard the growth of weeds, so as to effectively eliminate any requirements for mowing, weeding, or other forms of maintenance. Construction methods for new plantings shall conform to the requirements of the State Standard Specifications for "Furnishing, Planting and Mulching Trees, Shrubs, Vines and Ground Cover Plants". Materials shall conform to the State Standard Specification Section

M.l3.07 for Plant Materials. The Town of Montville shall neither accept any responsibility, nor costs, associated with the maintenance of median areas. Where medians are proposed, and approved by the Commission, a legal mechanism shall be established for perpetual maintenance. Such mechanism shall require the approval of the Commission, the Director of Public Works, and the Town Attorney.

120C MAINTENANCE OF STABILIZED AND LANDSCAPED AREAS

120C.l General

All areas stabilized by vegetation, and all landscaped areas, shall be properly maintained by the person or firm constructing the road, drainage facilities and associated improvements until permanent growth of such plantings has been firmly and effectively established for a period of one year after planting. Maintenance shall include watering, mowing, pruning, fertilizing, cultivating and all else required to maintain the planted areas in a vigorous and healthy condition. All grassed areas showing root growth failure, deterioration, bare or thin spots and eroded areas shall be replanted and all dead, dying or diseased shrubs, plants and trees shall be replaced so as to meet the requirements specified herein.

MONTVILLE ROAD REGULATIONS

SECTION 130

DESIGN & CONSTRUCTION OF DRIVEWAYS

130A PERMIT REQUIREMENTS

130A.l Purpose

The purpose for establishing regulations governing the construction of driveways serving private property is to maintain the physical integrity of existing Town Roads; to protect the public from adverse situations that may otherwise endanger their health, safety and welfare; and, to establish basic standards for providing access by emergency service vehicles.

130A.2 General

A driveway or access road serving private property and intersecting with a town or private road shall be constructed and/or reconstructed in such a manner that it does not interfere with the existing drainage, movement of traffic, or removal of snow from the abutting road. No person, firm or corporation shall construct a driveway connecting to a town road or associated right-of-way, including but not limited to clearing, excavating or grading, until a permit has been obtained from the Director of Public Works or his authorized agent at least seventy-two (72) hours prior to the commencement of any work. Driveways serving more than one lot shall conform to the standards set forth in Section 130D of these Regulations.

130A.3 Application

Application for a permit shall be made on forms provided by the Director of Public Works and shall be accompanied by a sketch or drawing showing the proposed work to be done. The sketch or drawing shall be in sufficient detail to facilitate an inspection of the work by Town personnel. The Director of Public Works may require the submission of more detailed plans, specifications and other engineering data with the application when he shall deem it to be necessary. No permits shall be issued unless all proposed work conforms to the requirements outlined in this section and the Standard Detail Drawings.

130A.4 Application Fees, Certificate Of Insurance & Driveway Completion Bond

Application fees, in an amount prescribed on the most current Town Fee Schedule, shall be submitted with all applications. In addition, a Certificate of Insurance conforming to current Town requirements with respect to the types of coverage and limits of liability, and a Driveway Completion Bond in the amount determined by the Director of Public Works, shall also be submitted. No permit shall be issued until the application fee has been paid, and the Certificate of Insurance and Driveway Completion Bond received.

130A.5 Repair of Pre-Existing Driveways

The Permit Requirements and Driveway Criteria included within this section are not intended to preclude the routine maintenance, repair, or reconstruction of driveways constructed prior to the adoption of these regulations. As such, the Director of Public Works may, at his or her discretion, waive any Permit Requirement and Driveway Criteria included within Sections 130A and 1 30B respectively, except that the application required in Section 130A.3 shall be submitted.

130A.6 Inspection

All construction work covered by a Driveway Permit shall be subject to the inspection and approval of the Director of Public Works or his/her authorized representative. It is the responsibility of the owner to notify the Director of Public Works at least seventy-two (72) hours prior to each of the following inspection points:

1. After rough grading of the driveway has been completed and prior to the placement of any base materials.
2. After placement and fine grading of the base materials.
3. After placement of bituminous concrete pavement.

If in the opinion of the Director of Public Works or his/her authorized representative there is some question if the driveway exceeds the maximum grades permitted in this section, then it is the responsibility of the owner to retain the services of a licensed land surveyor to prepare a profile based on an actual field survey. Any driveway that is not found to be in conformance with the requirements in this section shall be reconstructed as required to conform.

130A.7 Completion Time

All proposed construction work shall be completed within one hundred eighty (180) calendar days after the date of issuance of the Driveway Permit unless a one hundred eighty (180) calendar day extension of time is granted by the Director of Public Works, upon written request by the owner for such extension, and for good cause shown.

130A.8 Final Approval

The Director of Public Works or his/her authorized representative shall have final approval of the completed driveway. If due to the time of year or other extenuating circumstances, the driveway paving cannot be completed, a Driveway Completion Bond shall be provided to the Town of Montville to ensure that all work is completed no later than July 31 of the next paving season. Driveway Completion Bonds shall be in the form of a certified check in an amount as determined by the Director of Public Works to complete the work.

Should the owner fail to complete the driveway improvements by August 31 of the following paving season, the bond shall be forfeited, and the Town shall utilize the funds to complete the required work.

130A.9 Waivers and Appeals

Requests for waivers from the specifications, and appeals, when any party or individual is aggrieved by a decision or determination made by the Director of Public Works, shall be made to the Town Council in accordance with the procedure included in the "Ordinance regulating excavations, construction of driveways and drains abutting streets, highways, public rights-of-way and other public properties".

130B DRIVEWAY CRITERIA

130B.1 Driveway Aprons

Paved bituminous concrete driveway aprons shall be provided at each intersection of a driveway with an abutting road. The driveway apron is that portion of the driveway extending from the town road pavement to the right-of-way line of the town road or to a distance often (10) feet in from the edge of the town road pavement, whichever is greater. In the case of uncertainty as to the true location of a town road right-of-way line, for the purposes of this section a reference right-of-way line shall be established by measuring twenty-five (25) feet from the centerline of the existing road pavement. However, this clause shall not be construed as establishing any rights in ownership of land, its purpose being merely to establish a reference line for driveway improvement purposes. Where a town road adjacent to a proposed driveway does not have any type of bituminous surface course, the Director of Public Works may waive the requirement for a bituminous concrete driveway apron.

130B.2 Driveway Lip

All paved driveway aprons along curbed roads, or where otherwise required by the Director of Public Works, shall have a minimum lip of one and one-half (1 ½) in inches at the town road gutter line. If a driveway apron is constructed prior to the placement of the top or surface course of a subdivision road to be dedicated to the Town of Montville at some future date, then the driveway lip shall be increased in height so that after completion of the road construction, a minimum lip of one and one-half (1 1/2) inches is maintained.

130B.3 Driveway Width

Driveways serving a single residential dwelling unit shall have a minimum pavement width of ten (1 0) feet, and a maximum pavement width of twenty (20) feet. The minimum corner or curb radius at the intersection of a town road and driveway shall be five (5) feet All brush, trees and any other obstructions shall be cleared and removed for a distance of three (3) feet beyond the edge of pavement along both sides of the entire length of the driveway, and to a height of twelve (12) feet above the driveway surface.

130B.4 Maneuvering Area

All driveways shall include a suitably sized maneuvering area, located on the private property that it serves, so that for vehicles entering the property there is sufficient area to turn around and exit from the property without backing out into the street.

130B.5 Side Line Setback

Unless otherwise permitted, the side or edge of a driveway shall not be located any closer than five (5) feet from an adjacent property line. In addition, the point at which the driveway curb radius intersects the edge of pavement or curb line of a town road shall not encroach beyond the point where the extension of the property line meets the town road.

130B.6 Horizontal Alignment

For all driveways the minimum radius of centerline curvature shall be seventy-five feet (75’).

130B.7 Vertical Alignment

To facilitate access for emergency service vehicles, driveway grades shall have gradual transitions so as to prevent "bottoming out" on a crest and "bumper drag" in sags. Such transitions shall be sufficient to permit transit by a vehicle with a twenty foot (20’) wheel base and four foot (4’) front and six foot (6’) rear bumper overhang.

130B.8 Sight Distance

The visibility at driveway intersections with town roads shall be such as to allow a stopped vehicle on the driveway, located ten feet (10’) back from the gutter line, to see, and to be seen, from a vehicle approaching from either direction along the town road, a distance of not less than two hundred feet (200’), based on a height of eye and object of 3.5 feet. The Director of Public Works may require the removal of sight obstructions including but not limited to trees, bushes, shrubs, boulders, rocks, stonewalls, and adjustments of cut slopes adjacent to intersections of a private driveway with a town road in order to assure an adequate sight distance and to ensure a safe and efficient means of access for emergency vehicles.

130B.9 Gradient

Driveway grades within the street right-of-way shall not exceed eight percent (8%), and within private property shall not exceed fifteen percent (15%).

130B.10 Ascending Driveways

Driveways which ascend into private property shall be paved from the driveway apron to the high point in the driveway. Unless otherwise approved by the Director of Public Works, driveways shall be cross sloped so as to establish sheet flow drainage and avoid the discharge of concentrated runoff into town roads.

130B.11 Descending Driveways

For driveways which descend into private property, driveway aprons shall rise in elevation from the town road gutter line to the town road right-of-way line a minimum of six (6) inches before descending into the property.

130B.12 Drainage

Driveways shall be constructed in such a manner that they do not permit the runoff of water from the abutting town road to enter into the property of the owner, or adjacent properties, thereby creating a nuisance to the Town and the property owner, unless an easement in a form satisfactory to the Town of Montville is granted by such owner to the Town for such runoff. Under no circumstances shall a driveway apron be constructed so as to obstruct or alter the free flow of water in the road gutter line or other drainage ways of the Town of Montville. In addition, if in the opinion of the Director of Public Works, discharges from concentrated surface runoff or groundwater seeps will adversely impact upon a town road or associated right-of-way, then he shall require the installation of a storm drainage and/or subdrainage system to intercept and convey such discharges to an acceptable outlet location.

130B.13 Driveway Culverts

Where culverts under driveways are required by the Director of Public Works within the town road right-of-way, such culverts shall be constructed of reinforced concrete pipe, or when the cover over top of the culvert exceeds thirty inches (30”), high density corrugated polyethylene smooth interior pipe. Culverts shall be of such size, not less than fifteen (15) inches in diameter, as to adequately convey under the driveway all surface runoff which may reasonably be expected to reach the culvert inlet during a storm with a 10-year recurrence interval. All culverts shall be of such design to withstand AASHTO HS20 loadings and shall have a minimum cover over the top of the culvert of one (1) foot, unless otherwise approved by the Director of Public Works or his duly authorized representative. Culverts shall be placed on a minimum eight (8) inch depth

bed of 1/2-inch crushed stone, and, shall be backfilled with 1/2-inch crushed stone to a minimum dimension of six (6) inches around the outside perimeter of the pipe, with a layer of filter fabric placed on top of the crushed stone. Inlet and outlet ends of culverts shall have flared end sections. When high density corrugated polyethylene smooth interior pipe is utilized, metal culvert ends shall be provided.

130B.14 Private Bridges

When a driveway crosses a watercourse or other feature such that a bridge is required, plans shall be prepared and sealed by a licensed professional engineer registered in the State of Connecticut who is competent in the field of structural engineering. Such plans shall be accompanied by a written statement from the engineer certifying that the bridge has been designed to withstand AASHTO HS20 Live Loads, and that any waterway opening conforms to the standards established in Section 90A.ll of these Regulations. Upon completion of construction of a private bridge, the licensed professional engineer shall be required to provide a written statement to the Director of Public Works that the bridge was constructed in substantial conformance with the design drawings and specifications.

130B.15 Removal of Guide Rails

To the extent possible, driveways shall avoid the removal of existing guide rail systems. Any driveway installation which requires the removal of a portion of a guide rail shall be secured with concrete end anchorages on each side of the driveway. Concrete and anchorages shall conform to the requirements outlined in Section 801 of these Regulations. All such work shall be the responsibility, and at the expense of, the applicant.

130B.16 Disturbance of Monuments or Property Markers

Driveways shall be located and constructed such that no disturbance of road right-of-way monumentation occurs. In the event of accidental disturbance of a monument or property marker, the owner of the property served by the driveway shall be responsible for retaining and paying for the services of a land surveyor licensed in the State of Connecticut to reset the monument or property marker and to provide a Letter of Certification to the Director of Public Works. Where driveways are constructed on new roads which have not yet been monumented, they shall be located so as not to interfere with the future placement of monuments.

130B.17 Final Grading and Stabilization

Where grading is required within a town road right-of-way, slopes shall not be steeper than one (1) unit vertical to two {2) units horizontal, and shall provide a smooth transition to adjacent grades. All disturbed areas shall be covered with a minimum of six (6) inches of topsoil, and limed, fertilized, seeded and mulched. When, in the opinion of the Director of Public Works,

additional measures are necessary to maintain the stability of slopes, special measures as outlined in Section 70H.4 of these Regulations may be required.

130B.18 Placement of Protective Barriers Along Driveways

It shall be the property owner's responsibility to place protective barriers along driveways as needed to minimize the risk of personal injury resulting from a vehicle departing from the driveway.

130C DRIVEWAY CONSTRUCTION STANDARDS

130C.l Paving Materials

Driveway apron paving shall consist of bituminous concrete pavement or concrete pavement. Required driveway paving beyond the driveway apron shall consist of a non-erodable all weather surfacing including, but not necessarily limited to, bituminous concrete pavement; concrete pavement; brick, concrete, or stone pavers; or, penetration macadam.

130C.2 Base Materials

The prepared base upon which paving materials are placed shall consist of a minimum depth of eight (8) inches, after compaction, of a "Rolled Granular Base" that conforms to the State Standard Specifications Sections M.02.03 and M.02.06 (Grading C). Regardless of the type of paving surface to be utilized, the base materials shall be capable of supporting AASHTO HS20 loadings. Base materials for all remaining portions of the driveway that extend beyond the required limits of paving shall also be capable of supporting AASHTO HS20 loadings.

130C.3 Bituminous Concrete Pavement

Driveways and driveway aprons constructed with a bituminous concrete pavement surface shall consist of a minimum of two inches (2”), after compaction, of Class II bituminous concrete. Class II "Bituminous Concrete" materials shall conform to the State Standard Specifications Sections M.04.01 and M.04.03.

130D COMMON DRIVEWAYS

130D.l General

Driveways which serve more than one lot and up to five lots shall be considered Common Driveways and shall be subject the additional requirements of this section. Where not specifically addressed in this section, permitting, design criteria and inspection requirements shall be as specified in Sections 130A through 130C for private driveways.

130D.2 Common Driveway Surfacing

Common driveways shall be surfaced with a minimum 2" depth bituminous concrete pavement and shall maintain a cross-section consistent with the standard cross-section for a town road. Where proposed grades and impacts from surface drainage are minimal or where the specific design may be better served by having a cross-slope to the driveway a waiver may be requested to these requirements. Such allowances will be determined by the Director of Public Works. In any case the common driveway shall be paved to the high point for ascending driveways and a minimum of 25 feet from the intersection with the Town Road for descending driveways.

130D.3 Common Driveway Width

Common driveways shall have a minimum width of fifteen (15) feet. All brush, trees and any other obstructions shall be cleared and removed for a distance of three (3) feet beyond the edge of pavement along both sides of the entire length of the driveway, and to a height of twelve (12) feet above the driveway surface.
Common driveways

130D.4 Drainage

In addition to the requirements of Section 130.8, storm water runoff from common driveways must controlled so as not to adversely impact any of the properties for which the driveway will provide access or any other adjacent properties. In this regard the Applicant shall submit a plan to the Director of Public Works indicating how stormwater runoff will be controlled.

130D.5 Maintenance

Prior to the issuance of a permit for a common driveway the Applicant must demonstrate to the Director of Public Works Director that there is an agreement among the property owners gaining access from the driveway to provide for maintenance of the driveway. Such agreement shall be included in the property owner's deeds.

MONTVILLE ROAD REGULATIONS

SECTION 140

EXCAVATION WITHIN A TOWN ROAD RIGHT-OF-WAY AND PUBLIC LAND

140A PERMIT REQUIREMENTS

140A.l Purpose

The purpose for establishing regulations governing Excavation within a Town Road right- of-way and Public Land is to maintain the physical integrity of existing Town Roads and to protect the public from adverse situations that may otherwise endanger their health, safety and welfare.

140A.2 General

No person, firm or corporation shall conduct work or make improvements of any kind within a town road right-of-way and public land, including but not limited to clearing, excavating, grading, paving or installation of any utility lines until an Encroachment Permit has been obtained from the Director of Public Works or his/her authorized agent at least seventy-two (72) hours prior to the commencement of any work.

140A.3 Application

Application for an Encroachment Permit shall be made on forms provided by the Director of Public Works and shall be accompanied by a sketch or drawing showing the proposed work to be done. The sketch or drawing shall be in sufficient detail to facilitate an inspection of the work by Town personnel. The Director of Public Works may require the submission of detailed plans, specifications and other engineering data with the application when he shall deem it to be necessary. No permits shall be issued unless the application and all drawings conform to the requirements outlined in this section and the attached Standard Detail Drawings.

140A.4 Application Fees, Certificate of Insurance & Performance Bond

Application fees, in an amount prescribed on the most current Town Fee Schedule, shall be submitted with all applications. In addition, prior to final approval of the Encroachment Permit, a Certificate of Insurance conforming to current town requirements with respect to the types of coverage and limits of liability, and a Performance Bond in the amount determined by the Director of Public Works, shall be submitted. No Encroachment Permit shall be issued until the application fee has been paid, and the Certificate of Insurance and Performance Bond received.

140A.5 Performance Bond

A Performance Bond shall be provided to the Town of Montville to ensure that all work is completed within a one hundred eighty (180) calendar day period or at the end of any subsequent extension of time granted by the Director of Public Works. Performance Bonds shall be in the form of a certified check, a Letter of Credit issued by a bank licensed to conduct business in Connecticut or a Surety Bond.

All such bonds and insurance coverages shall be for a term of at least one year and shall be kept in force continuously until the maintenance provisions hereinafter specified in Section140B.8 are satisfied. Evidence of renewal of coverage shall be furnished annually to the Director of Public Works. The applicant may request a release of bonds and insurance upon completion of all required work.

The contractor shall hold harmless and indemnify the Town of Montville for any and all liability, damages, and costs which may in any manner be incurred by the Town of Montville by reason of, or in connection with, the issuance of a permit for such excavation, or by reason of any act or omission of the contractor or his agents.

Contractors and public service corporations may dispense with the filing of a separate insurance policy and Performance Bond for each excavation by filing annually with the Director of Public Works the proper evidence of insurance coverage and Performance Bond hereinbefore required, provided however, that an application must be made for a permit for each separate excavation.

140A.6 Completion Time

All proposed construction work shall be completed within one hundred eighty (180) calendar days after the date of issuance of the Encroachment Permit unless an extension of time is granted by the Director of Public Works, upon written request by the owner for such extension, and for good cause shown. Any such extension of time shall be limited to a maximum additional period of one hundred eighty (180) calendar days. No extensions of time shall be permitted beyond three hundred sixty (360) calendar days from the date of issuance of an Encroachment Permit.

140A.7 Inspection

All construction work covered by an Encroachment Permit shall be subject to the inspection and approval of the Director of Public Works or his/her authorized representative. It is the responsibility of the owner to notify the Director of Public Works at least seventy-two (72) hours prior to conducting any work. Any work that is not found to be in conformance with the requirements in this section shall be reconstructed as required to conform. Any periodic inspections made by the Director of Public Works or his/her authorized representative shall be strictly limited to making

general observations regarding the progress of the work and general conformance of the work with the provisions of these regulations. In making these inspections, neither the Director of Public Works nor his/her authorized representative shall have authority over, or responsibility for, the means, methods, techniques, sequences or procedures of construction selected by contractor(s); for supervision, direction and control over contractor(s) work; for safety precautions and programs incident to the work of contractor(s); for enforcing any requirements with respect to safety precautions and programs incident to the work of the contractor(s) or any of contractor(s)' subcontractors; or for any failure of contractor(s) or any of contractors(s) subcontractors to comply with laws, rules, regulations, ordinances, codes or orders applicable to contractor(s) furnishing and performing their work, all of which are under the direct control, and are the sole responsibility, of the contractor(s).

If the extent of the proposed excavation warrants more than short term periodic inspections at a frequency of more than once per day, or for a period exceeding three days, then the Public Works Director may authorize the Town Consulting Engineer to provide inspection services. In such cases, the Public Works Director shall notify the applicant of his decision, and the applicant shall be responsible for reimbursing the Town of Montville for all associated inspection service costs.

140A.8 Exemptions

All municipal departments, authorities, commissions, municipal utilities or agencies shall be exempt from the requirements of Section 140A.4 and 140A.5 when using their own work force and equipment. No permit fee shall be required of a private contractor or contractors doing work for the Town of Montville or any department, authority, commission, municipal utility or agency when done under the direction of the Director of Public Works of the Town of Montville.

140B EXCAVATION CRITERIA

140B.l Excavations

The applicant shall at all times take all proper precautions to safeguard any sewer lines, water mains, storm drains, electrical conduits, telephone conduits, cable TV conduits, gas mains, or appurtenances encountered in the excavation, and shall properly maintain such installations so as to provide uninterrupted service of the same. In locations where the use of power equipment will endanger such installations, the work must be done by hand labor. It shall be the applicant’s sole responsibility to ensure that all excavations are braced and sheeted as required to conform with applicable State and Federal safety regulations.

All excess material removed from a town road right-of-way and public land shall remain the property of the Town of Montville, and at the option of the Director of Public Works, shall be removed and disposed of at a location within the Town that he designates.

If the Director of Public Works determines that any such excess material is not needed by the Town, the applicant shall be responsible for disposing of the excess material in a lawful manner.

140B.2 Protection of Excavations and Public Safety

While the Director of Public Works may prescribe such measures that he/she deems necessary to permit the safe passage of pedestrian and vehicular traffic through the work area, it shall be the Applicant's sole responsibility to maintain public safety. All excavations shall be protected at all times by barricades, danger warning signs, and during the night by warning lights. When deemed necessary by the contractor, or as required by the Director of Public Works or the Montville Police Department, traffic control personnel shall be provided. Unless unavailable, Montville Police Officers shall be utilized for traffic control. All measures necessary to protect excavations and maintain public safety shall be the sole responsibility, and at the expense, of the contractor. Excavations shall only be permitted on one half of the traveled portion of a street, so as to allow the safe passage of vehicular traffic on the remaining half. Under no circumstances shall an excavation or opening be made across the width of the entire street or highway, or in such a manner as to prohibit the safe passage of vehicular traffic without the written permission of the Director of Public Works. Such written permission shall be obtained in advance of such excavation or opening.

140B.3 Restoring Excavations

All excavations provided for in this ordinance shall be backfilled with bank-run gravel approved by the Director of Public Works. Material removed from the excavations may be used for backfill only with permission of the Director of Public Works or his authorized agent. No muck, clay, frozen earth, topsoil, stones over 6 inches in any dimension or other deleterious material shall be placed in the excavation. All backfilling must be done in properly compacted layers not exceeding 12 inches in depth after compaction. The dry density after compaction shall not be less than 95 percent of the dry density for the material when tested in accordance with AASHTO T-180, Method D. Where bituminous concrete pavement is to be placed over the surface of an excavated area, a twelve inch depth of processed aggregate base shall be provided directly under the pavement. Materials and methods of placement shall conform to the requirements outlined in Section 80F.2 of these regulations.

140B.4 Restoration of Paved Surfaces

Within roadway areas, the existing pavement shall be cut back to the locations indicated by the Director of Public Works and saw cut to create vertical faces. The vertical faces shall be sealed with a tack coat to ensure a good bond between the old and new pavement material. All roadway areas shall be surfaced with a 4-inch compacted depth of bituminous concrete consisting of a 2-1/2 inch depth of Class I Binder Course and a 1-112 inch depth of Class II Top Course. The placement of bituminous concrete shall be flush with the adjacent pavement and shall conform with the Construction Standards outlined in Section 80G of these regulations. Curbs are

considered to be part of the paved surface and are to be replaced in accordance with the Construction Standards outlined in Section SOH of these regulations.

140B.5 Restoration of Off Road Surfaces

Within off road areas all disturbed surfaces shall be provided with a minimum depth of six inches of topsoil, limed, fertilized, seeded and mulched in conformance with the final grading and stabilization criteria outlined in Section 120A of these regulations. All other off road features, include but not limited to mail boxes, paper boxes, street signs, traffic control signs and pavement markings shall be reset or replaced so as to conform to their original location and condition before the excavation was made.

140B.6 Restoration of Sidewalks

Any excavation that crosses over or damages (cracking, chipping, etc.) an existing sidewalk shall require the complete removal and reconstruction of that portion of the sidewalk extending to the closest construction joint located beyond the edge of the excavation. The reconstructed sidewalk section shall match the grade and width of the original sidewalk unless otherwise approved by the Director of Public Works. Construction of the sidewalk shall conform to the Construction Standards outlined in Section 80M of these regulations.

140B.7 Disturbance of Monuments

Excavations shall be conducted such that no disturbance of road right-of-way monumentation occurs. In the event of accidental disturbance of a monument, the contractor shall be responsible for retaining and paying for the services of a land surveyor licensed in the State of Connecticut to reset the monument and to provide a Letter of Certification to the Director of Public Works.

In the event that any required repairs have not been promptly completed by the contractor, the Montville Public Works Department may make whatever repairs are necessary, or arrange for a private contractor to do so. All costs associated with any such repairs shall be billed to, and paid by, the contractor. The contractor shall be liable for all costs of collection, including attorney's fees, and no further permits shall be issued to the contractor until the balance owed to the Town is paid in full.

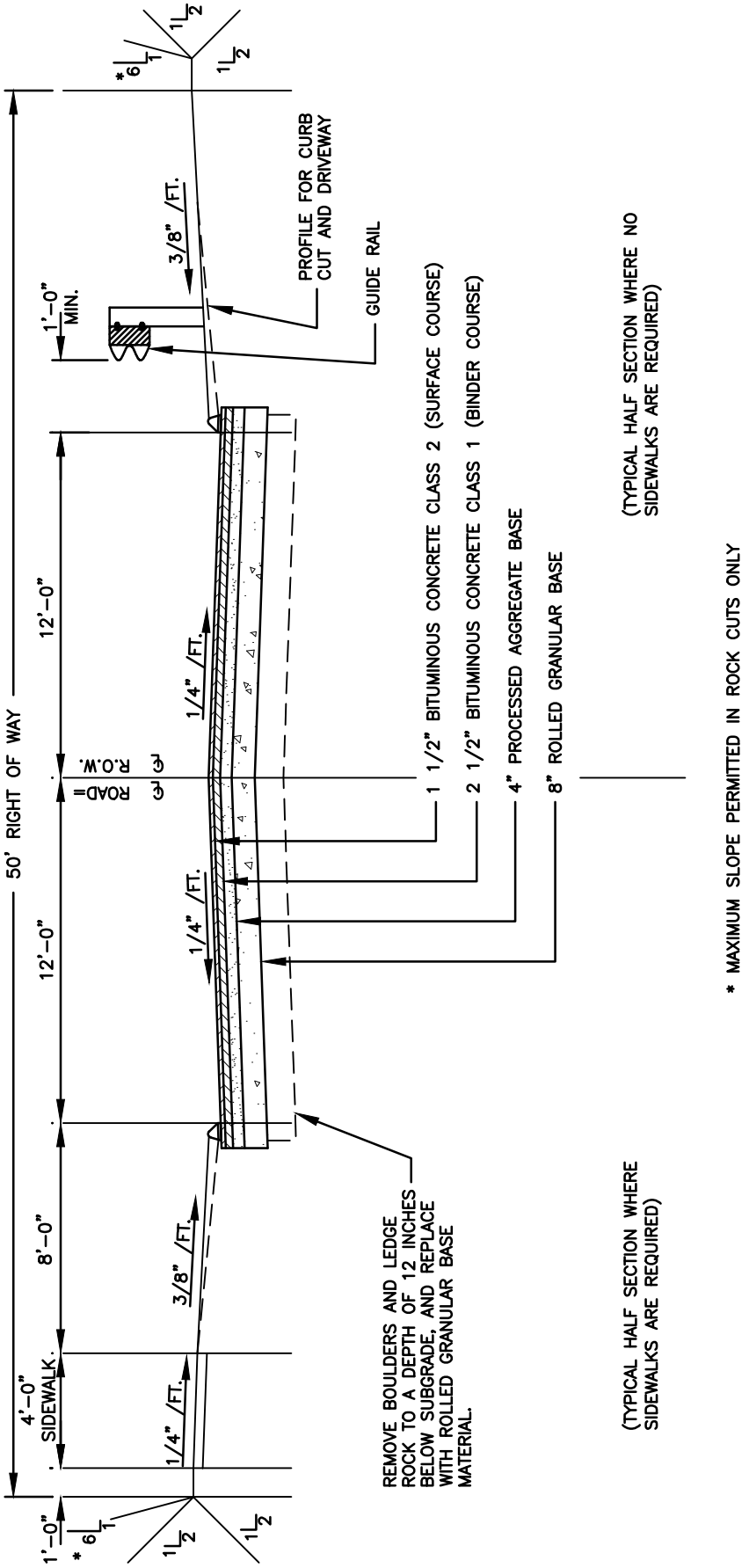
140B.8 Maintenance

The insurance and Performance Bond specified in Sections 140A.4 and 140A.5 of these regulations shall remain in full force and effect for a one year period following acceptance of the final restoration work by the Director of Public Works. Such insurance and Performance Bond shall indemnify the Town against costs and expenses of labor and materials necessary or appropriate to correct or replace improper or defective materials or faulty workmanship,

including any damage to any property of the Town resulting therefrom, or to complete construction in conformity with the standards, criteria and specifications prescribed in these regulations.

In the event that any required repairs have not been promptly completed by the contractor, the Montville Public Works Department may make whatever repairs are necessary, or arrange for a private contractor to do so. All costs associated with any such repairs shall be billed to, and paid by, the contractor. The contractor, shall be liable for all costs of collection, including attorney's fees, and no further permits shall be issued to the contractor until the balance owed to the Town is paid in full.

APPENDIX A



CLA

STANDARD DETAIL DRAWING

TYPICAL ROAD SECTION
LOCAL ROAD

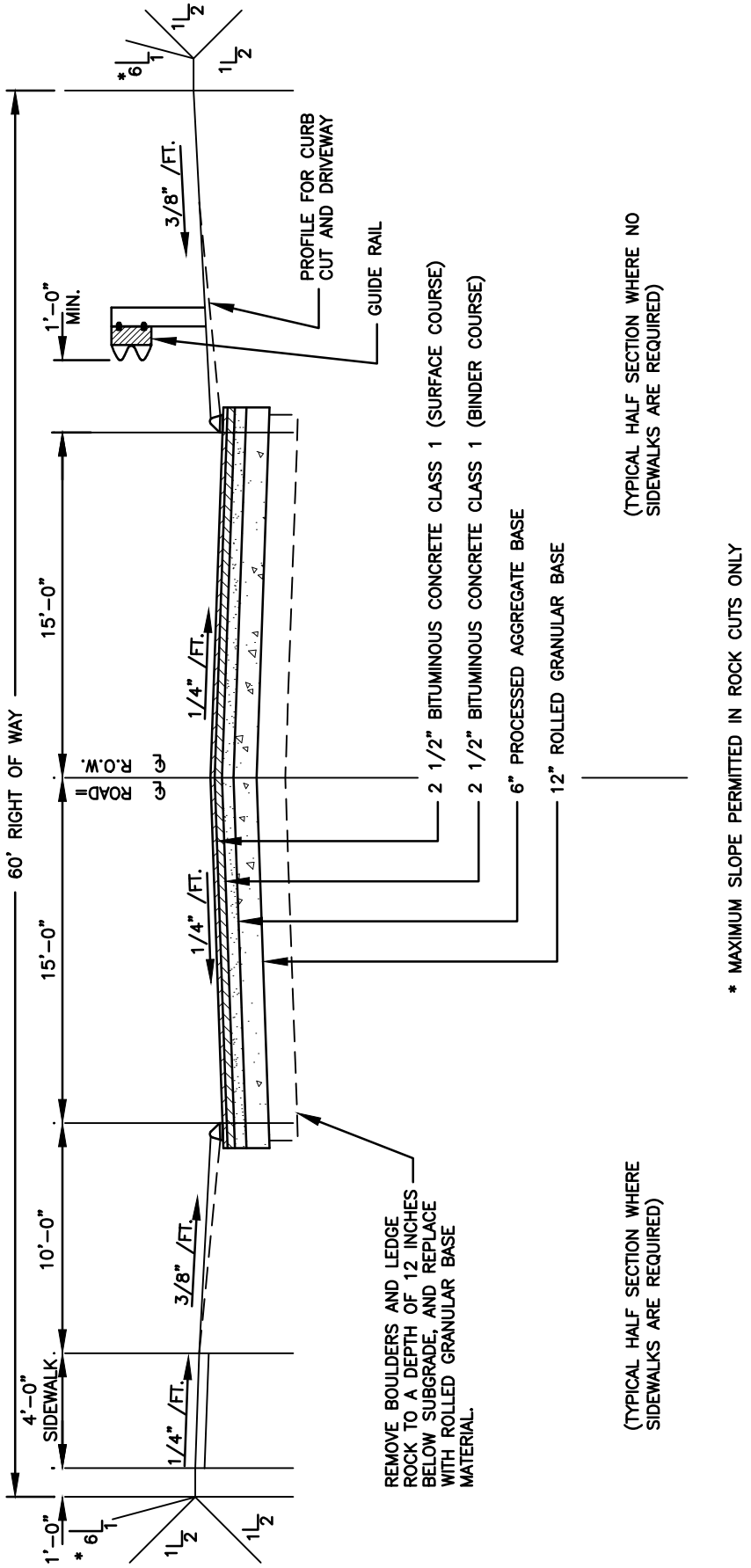
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 1



CLA

STANDARD DETAIL DRAWING

TYPICAL ROAD SECTION
BUSINESS/INDUSTRIAL ROAD

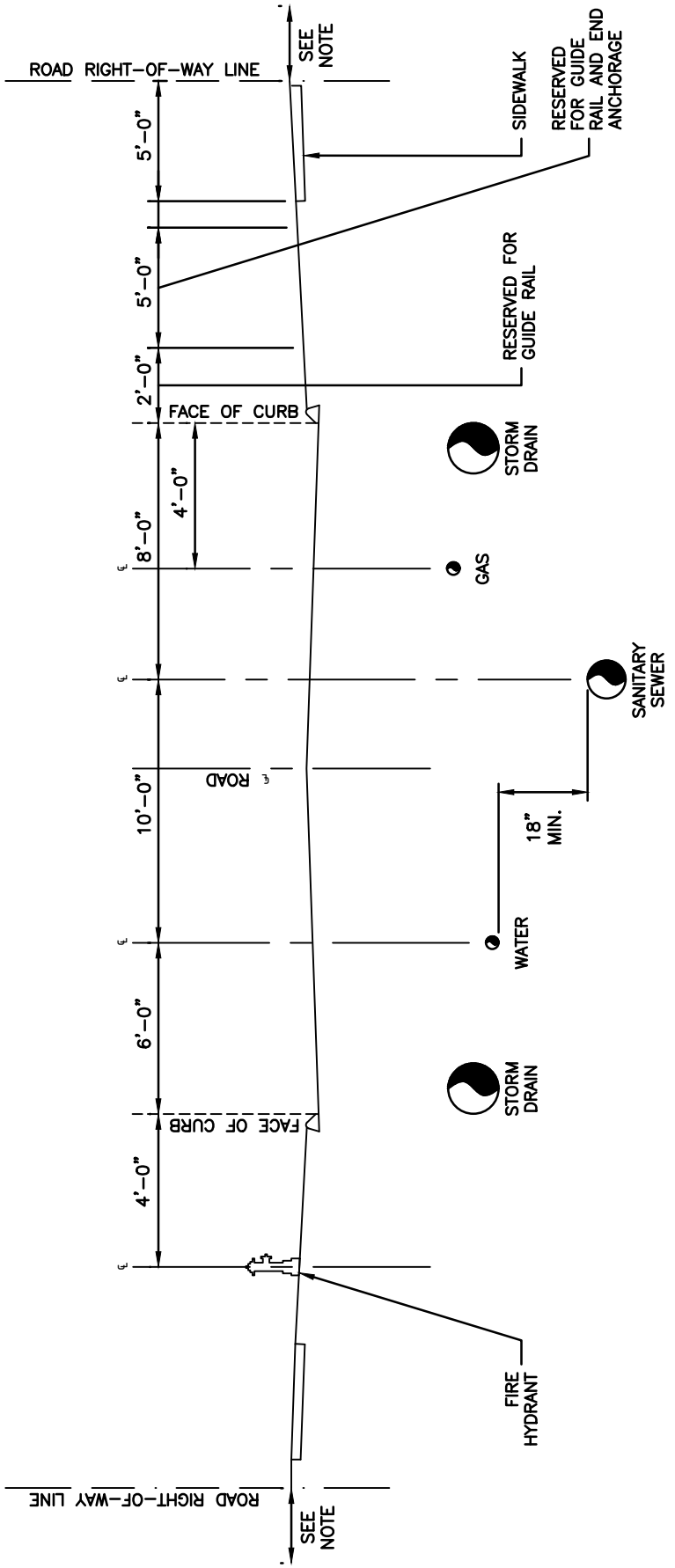
SCALE: NONE

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

REVISIONS

FIGURE 2



NOTE;

UNDERGROUND POWEER, TELEPHONE, CABLE T.V., AND ELECTRICAL TRANSFORMERS SHALL BE LOCATED OUTSIDE OF THE ROAD RIGHT-OF-WAY WITHIN A UTILITY COMPANY EASEMENT

CLA

STANDARD DETAIL DRAWING

UNDERGROUND UTILITY ASSIGNMENTS

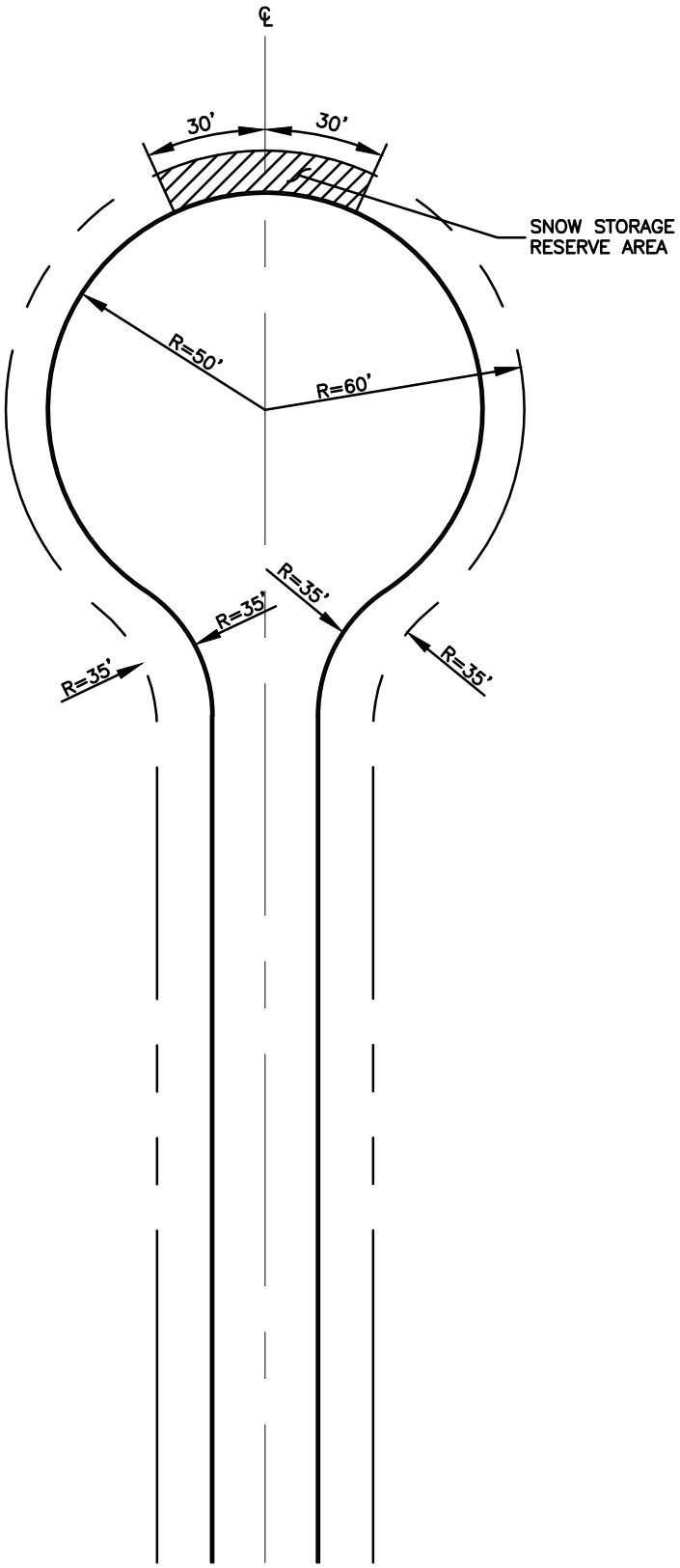
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: FEBRUARY 2015

FIGURE 3



CLA

STANDARD DETAIL DRAWING

CIRCULAR TURN AROUND
END OF CUL-DE-SAC

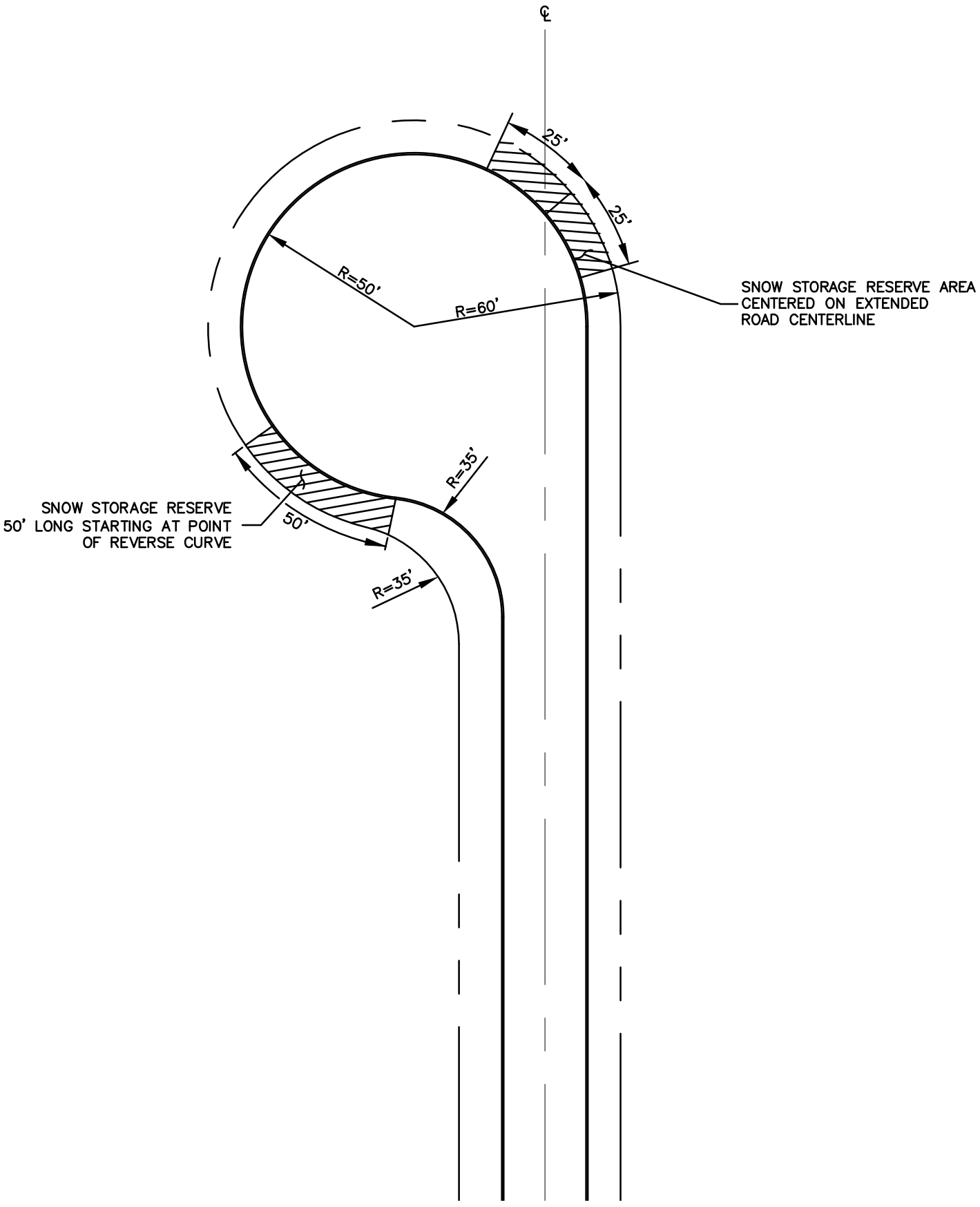
SCALE: NONE

REVISIONS

REGULATIONS FOR
PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 4



CLA

STANDARD DETAIL DRAWING

OFFSET TURN AROUND END OF CUL-DE-SAC

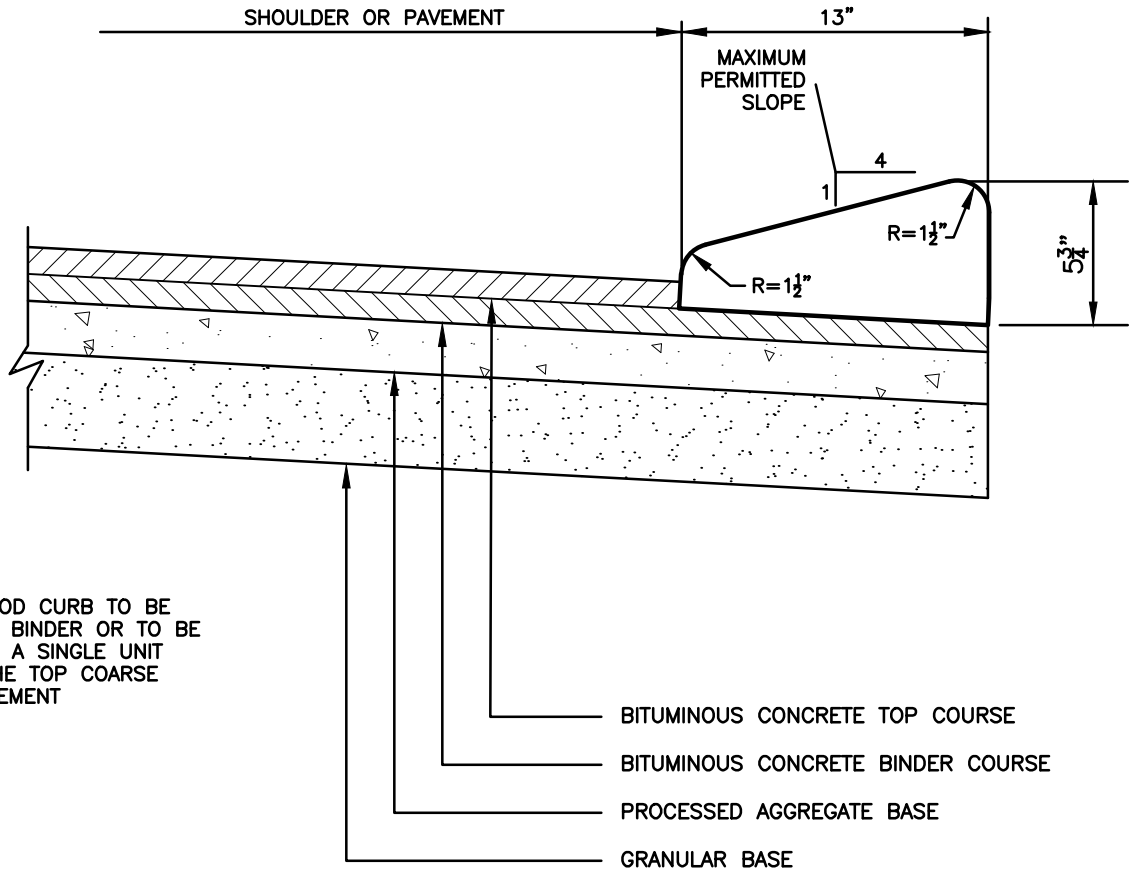
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 5



NOTE:
CAPE COD CURB TO BE SET ON BINDER OR TO BE LAID AS A SINGLE UNIT WITH THE TOP COARSE OF PAVEMENT

CLA

STANDARD DETAIL DRAWING

CAPE COD CURBING

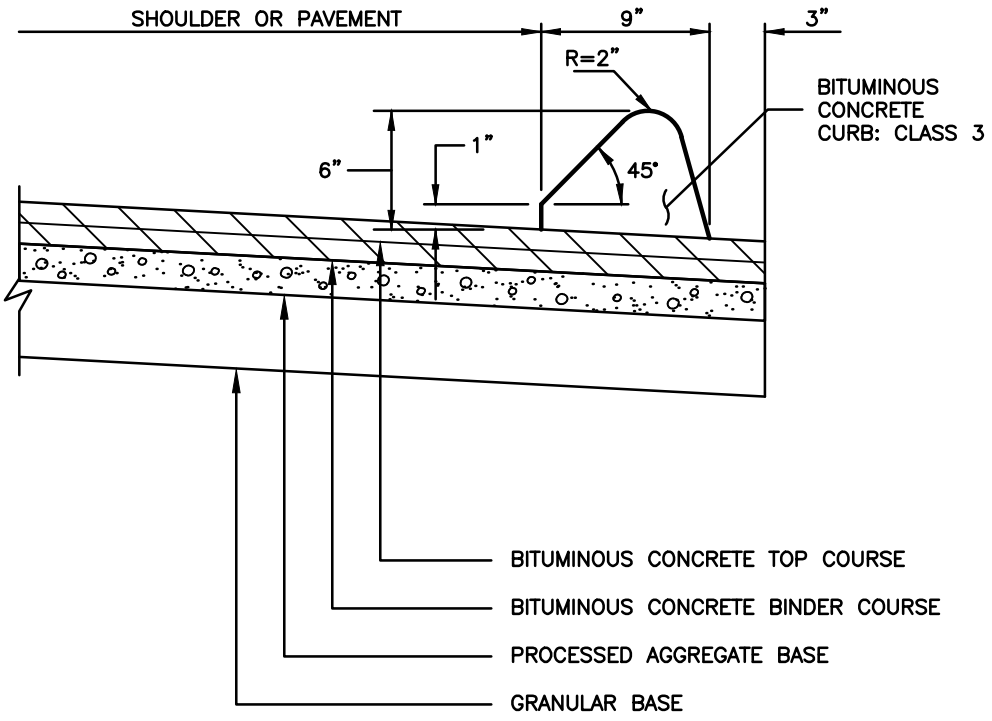
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 6



CLA

STANDARD DETAIL DRAWING

BITUMINOUS CONCRETE LIP CURBING

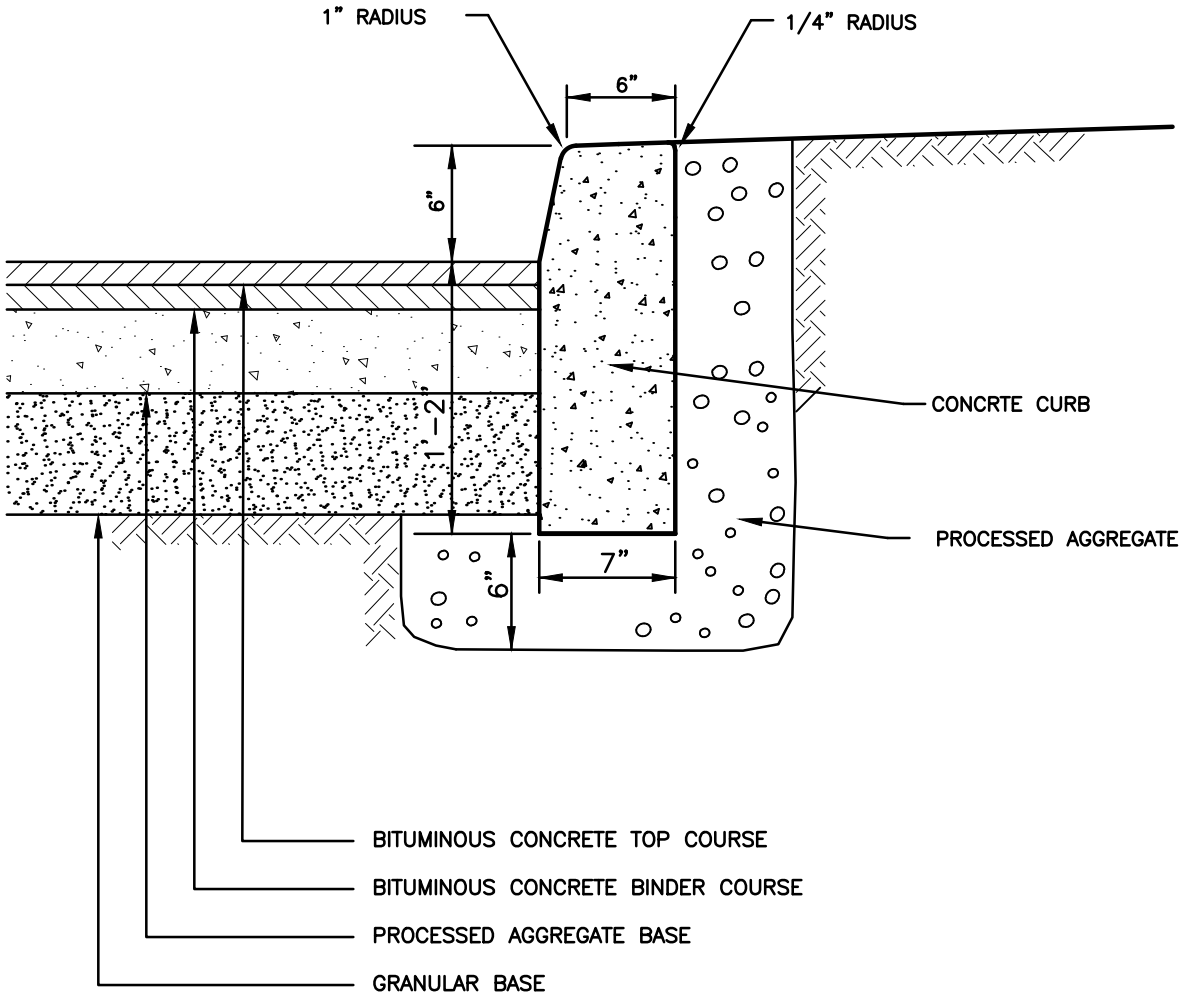
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 7



CLA

STANDARD DETAIL DRAWING

CONCRETE CURBING

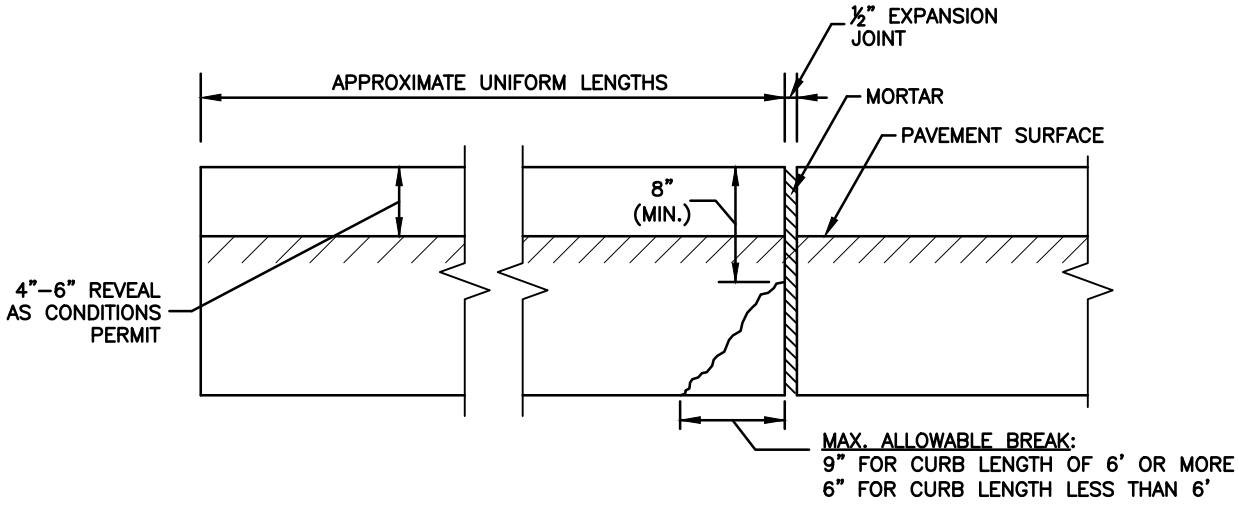
SCALE: NONE

REVISIONS

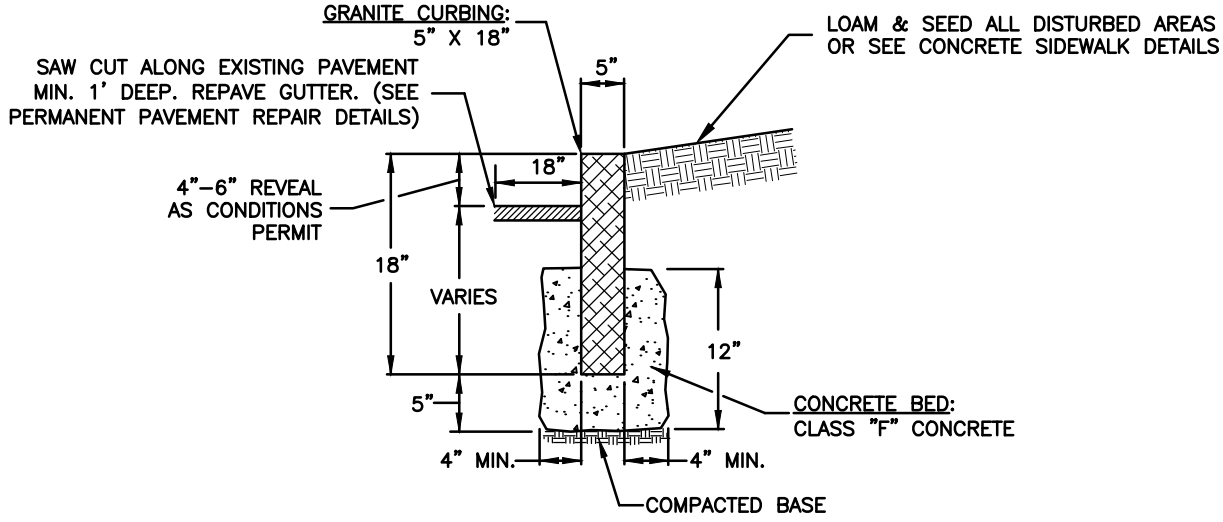
REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 8

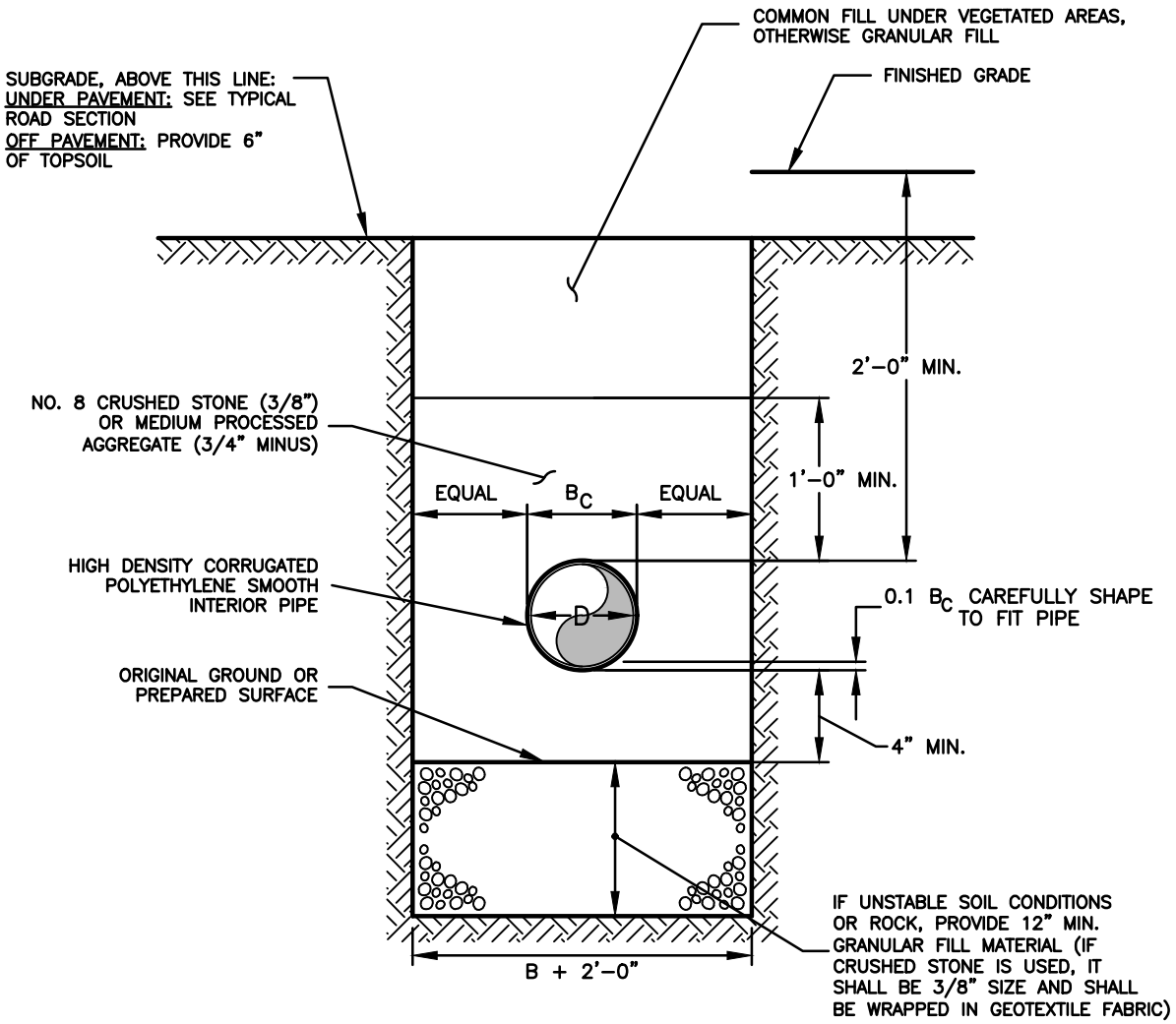


ELEVATION



SECTION

CLA	STANDARD DETAIL DRAWING	REGULATIONS FOR PUBLIC IMPROVEMENTS
	GRANITE CURBING	DATE: JANUARY 2015
REVISIONS	SCALE: NONE	FIGURE 9



NOTES:

1. CONTRACTOR SHALL PROTECT EXCAVATIONS BY SHORING, BRACING, SHEET PILING, UNDERPINNING OR OTHER METHODS TO PREVENT CAVE-IN OR LOOSE SOIL FROM FALLING INTO THE EXCAVATION AND DAMAGING THE WORK OR ADJACENT STRUCTURES AND UTILITIES.

CLA

STANDARD DETAIL DRAWING

STORM TRENCH SECTION HIGH DENSITY CORRUGATED POLYETHYLENE SMOOTH INTERIOR PIPE (CPEP)

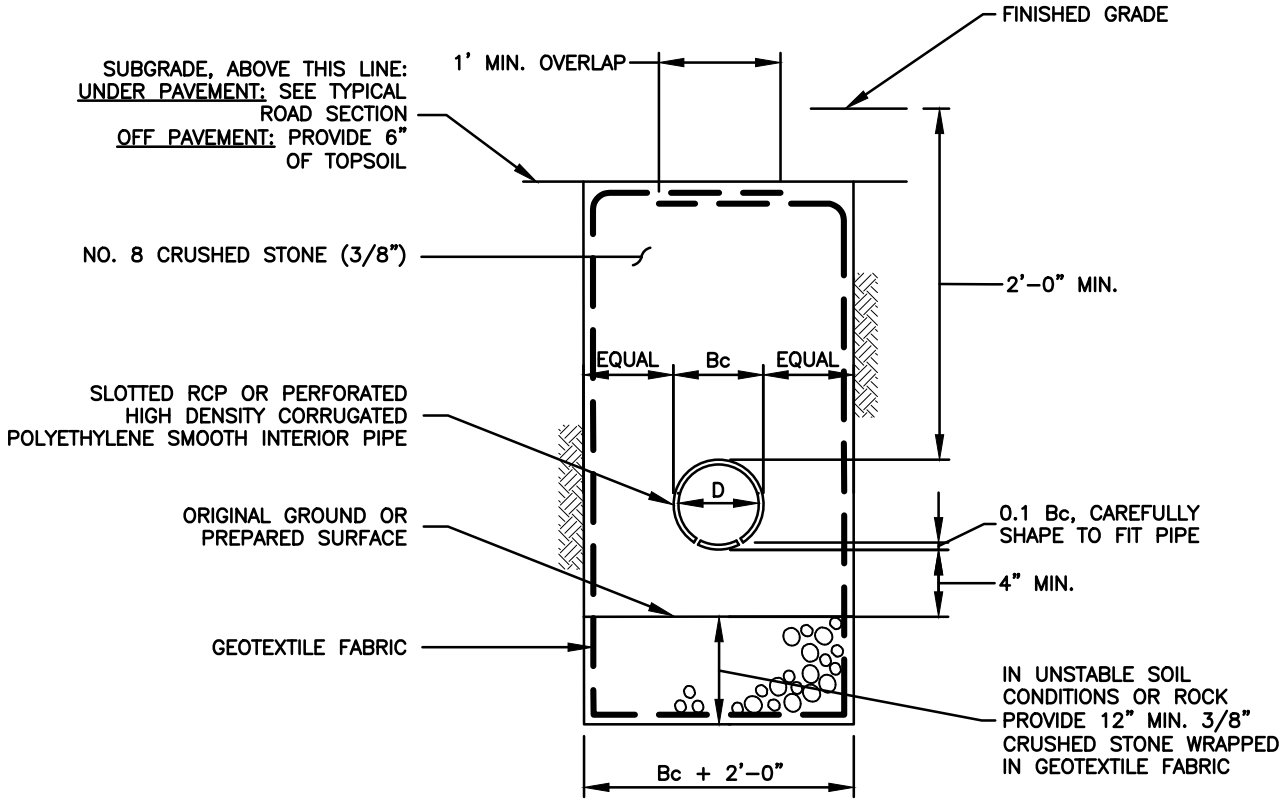
REVISIONS

SCALE: NONE

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 10



NOTES:

1. CONTRACTOR SHALL PROTECT EXCAVATIONS BY SHORING, BRACING, SHEET PILING, UNDERPINNING OR OTHER METHODS TO PREVENT CAVE-IN OR LOOSE SOIL FROM FALLING INTO THE EXCAVATION AND DAMAGING THE WORK OR ADJACENT STRUCTURES AND UTILITIES.

CLA

STANDARD DETAIL DRAWING

STORM TRENCH SECTION
SLOTTED PERFORATED STORM DRAIN

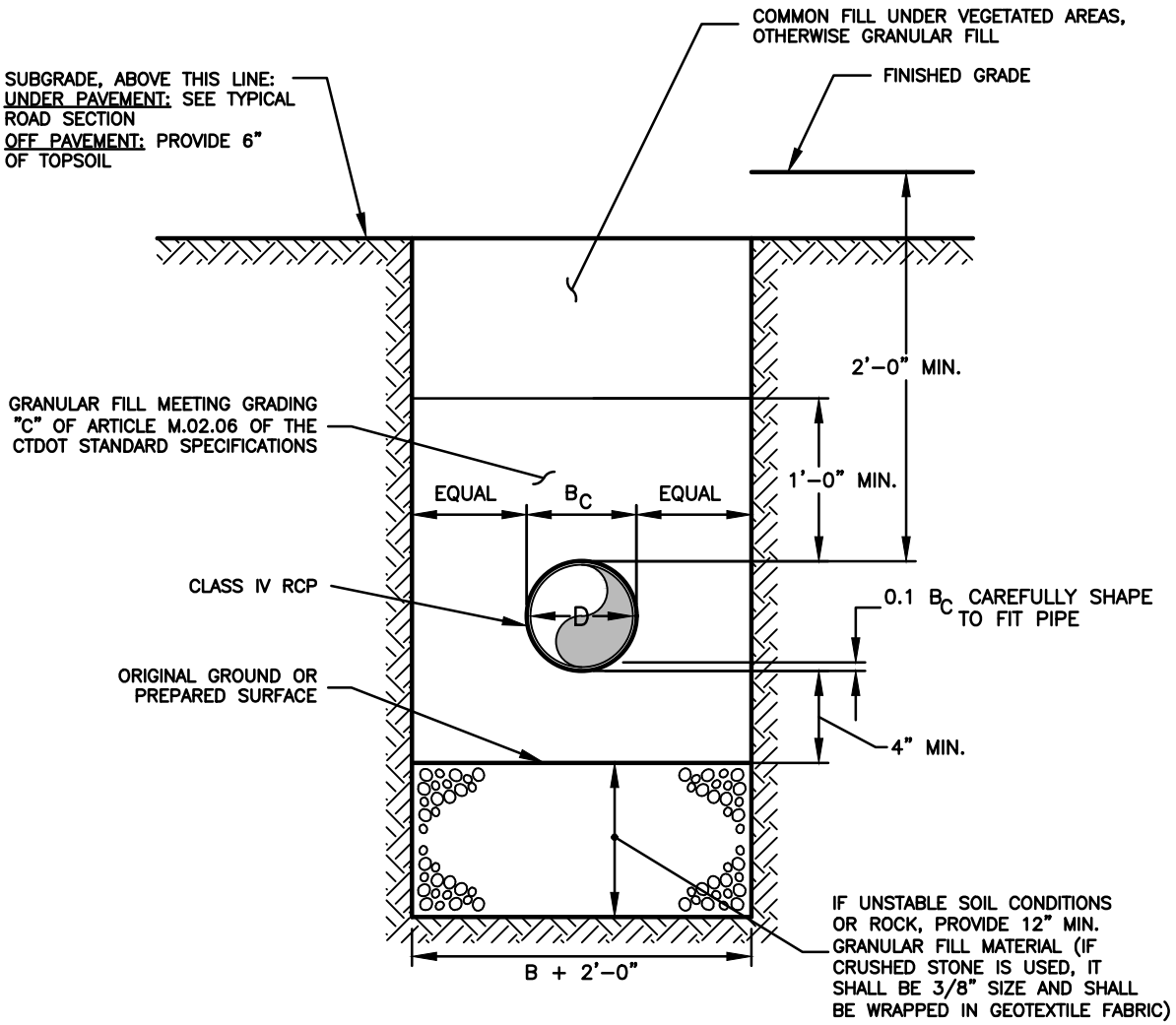
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: FEBRUARY 2015

FIGURE 11



NOTES:

1. CONTRACTOR SHALL PROTECT EXCAVATIONS BY SHORING, BRACING, SHEET PILING, UNDERPINNING OR OTHER METHODS TO PREVENT CAVE-IN OR LOOSE SOIL FROM FALLING INTO THE EXCAVATION AND DAMAGING THE WORK OR ADJACENT STRUCTURES AND UTILITIES.

CLA

STANDARD DETAIL DRAWING

STORM TRENCH SECTION
REINFORCED CONCRETE PIPE

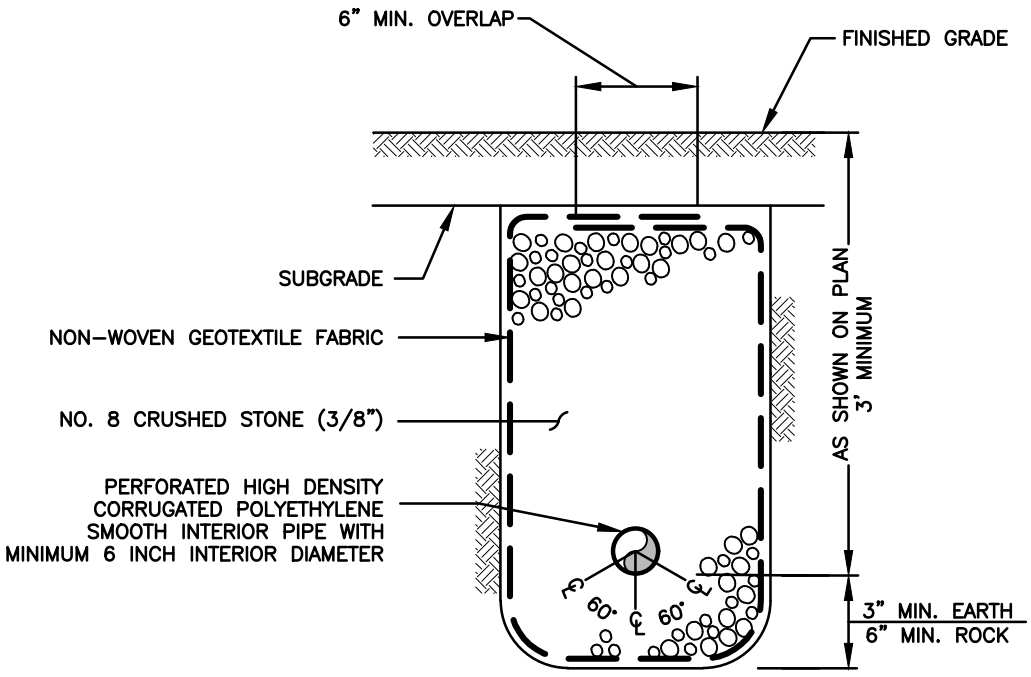
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 12



NOTES:

1. CONTRACTOR SHALL PROTECT EXCAVATIONS BY SHORING, BRACING, SHEET PILING, UNDERPINNING OR OTHER METHODS TO PREVENT CAVE-IN OR LOOSE SOIL FROM FALLING INTO THE EXCAVATION AND DAMAGING THE WORK OR ADJACENT STRUCTURES AND UTILITIES.

2. GRADED STONE FILTERS WITHOUT GEOTEXTILE FABRIC MAY BE USED WITH APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.

CLA

STANDARD DETAIL DRAWING

UNDERDRAIN

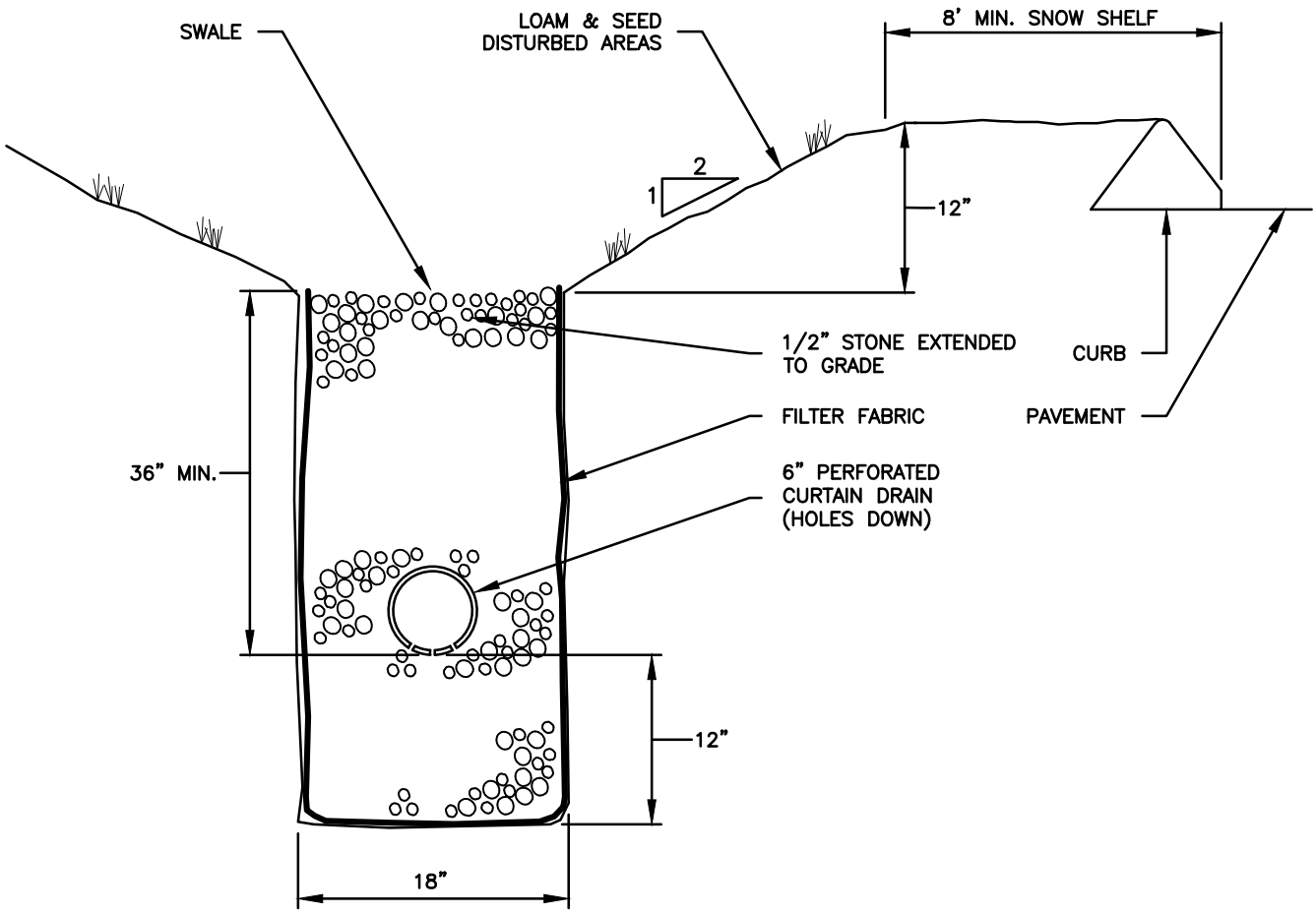
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

FIGURE 13



CLA

STANDARD DETAIL DRAWING

CURTAIN DRAIN

SCALE: NONE

REVISIONS

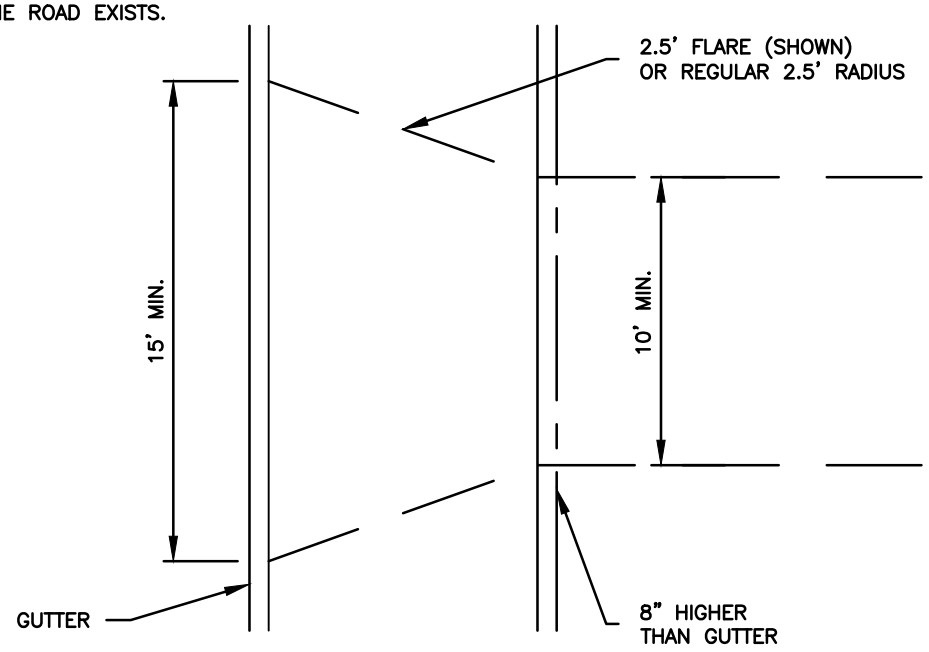
REGULATIONS FOR
PUBLIC IMPROVEMENTS

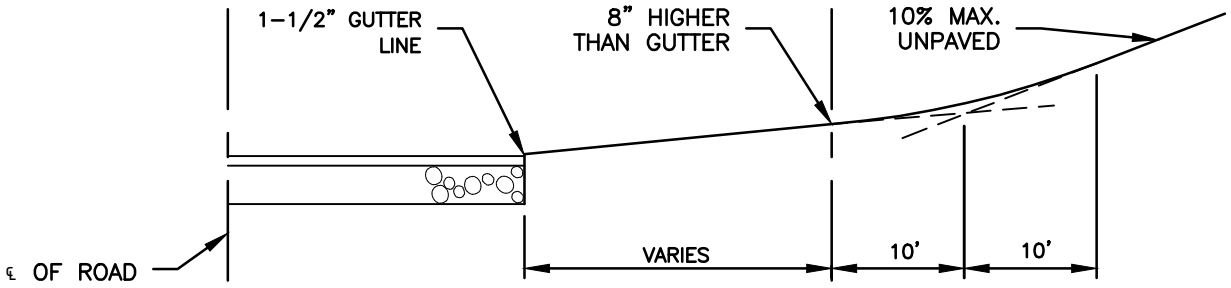
DATE: FEBRUARY 2015

FIGURE 14

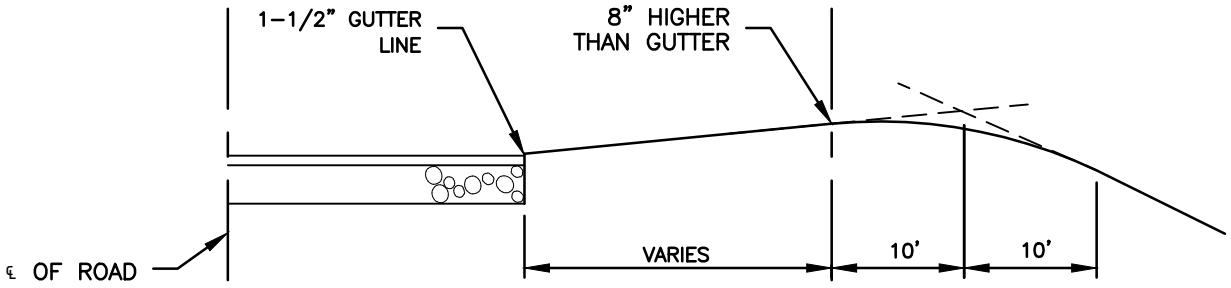
NOTE:

BELOW DETAILS SHALL BE USED WHERE A STORM DRAINAGE SYSTEM IN THE ROAD EXISTS.





SAG CURVE IN DRIVE

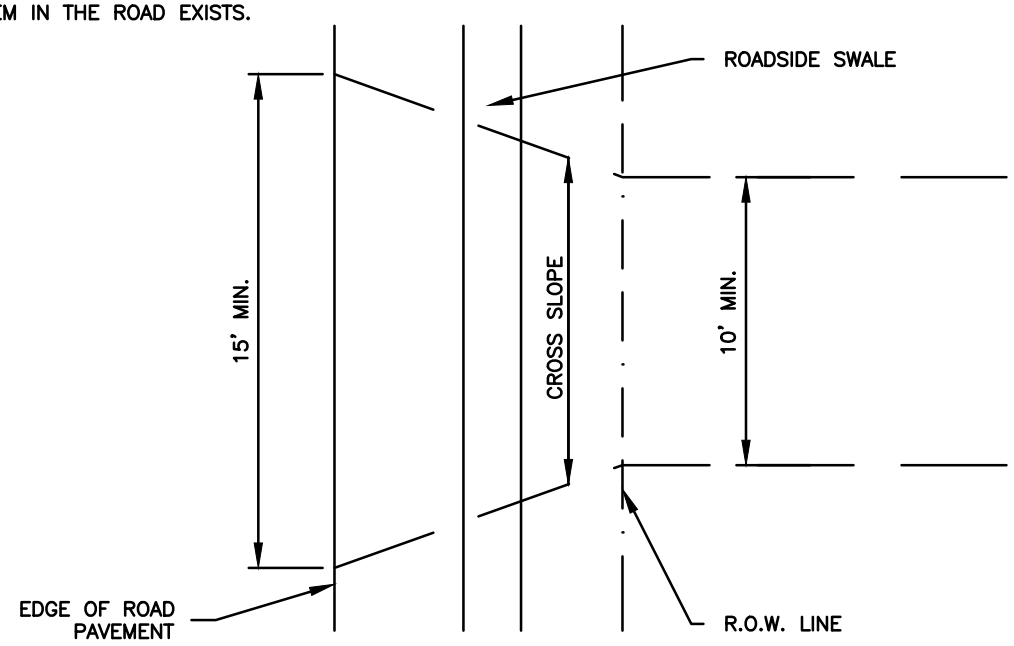


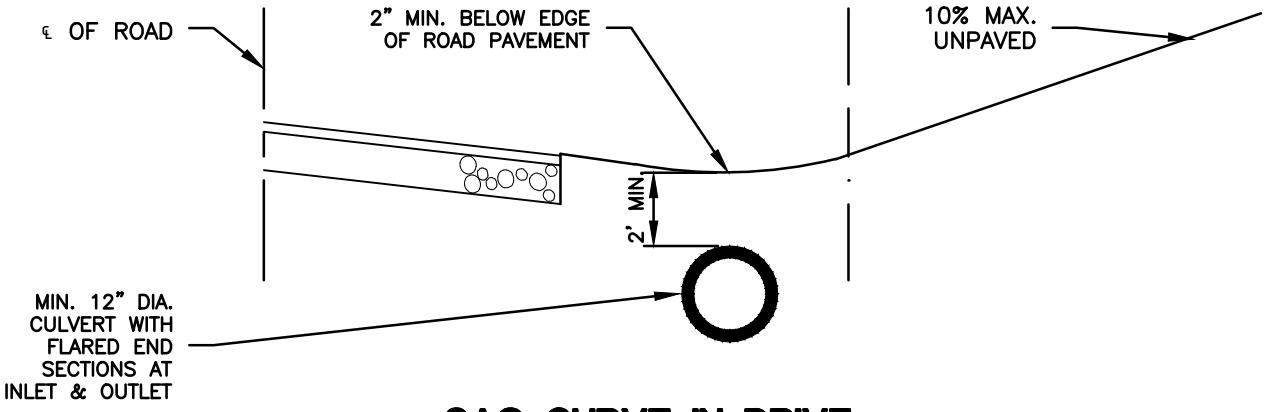
CREST CURVE IN DRIVE

CLA	STANDARD DETAIL DRAWING **RESIDENTIAL DRIVEWAY CURBING** SCALE: NONE	REGULATIONS FOR PUBLIC IMPROVEMENTS DATE: FEBRUARY 2015
REVISIONS		FIGURE 15

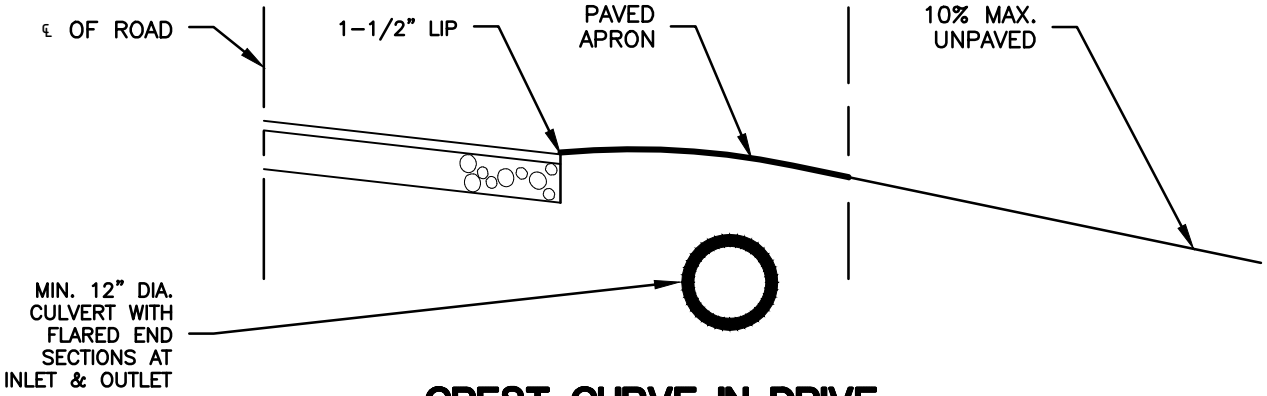
NOTE:

BELOW DETAILS SHALL BE USED WHERE A STORM DRAINAGE SYSTEM IN THE ROAD EXISTS.



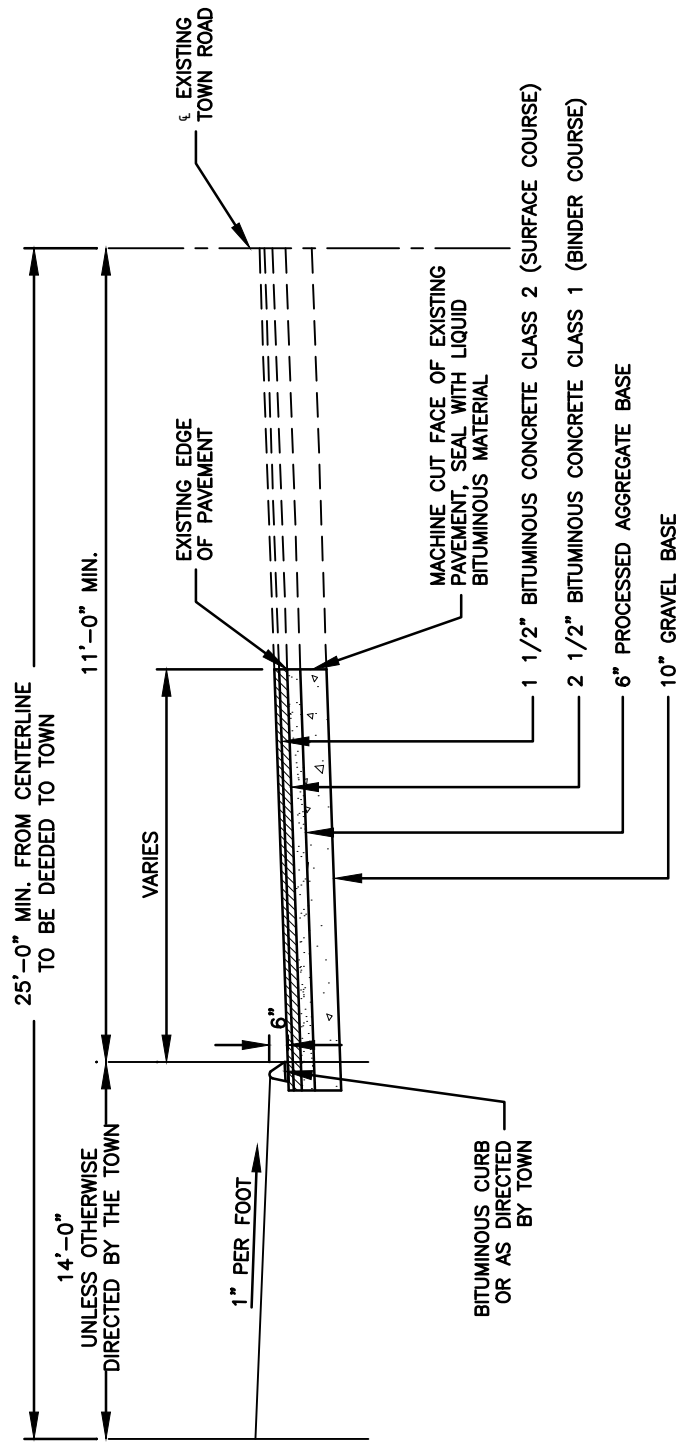


SAG CURVE IN DRIVE



CREST CURVE IN DRIVE

CLA	STANDARD DETAIL DRAWING **RESIDENTIAL DRIVEWAY SURFACE DRAINAGE** SCALE: NONE	REGULATIONS FOR PUBLIC IMPROVEMENTS DATE: FEBRUARY 2015
REVISIONS		FIGURE 16



CLA

STANDARD DETAIL DRAWING

IMPROVEMENT TO EXISTING STREET

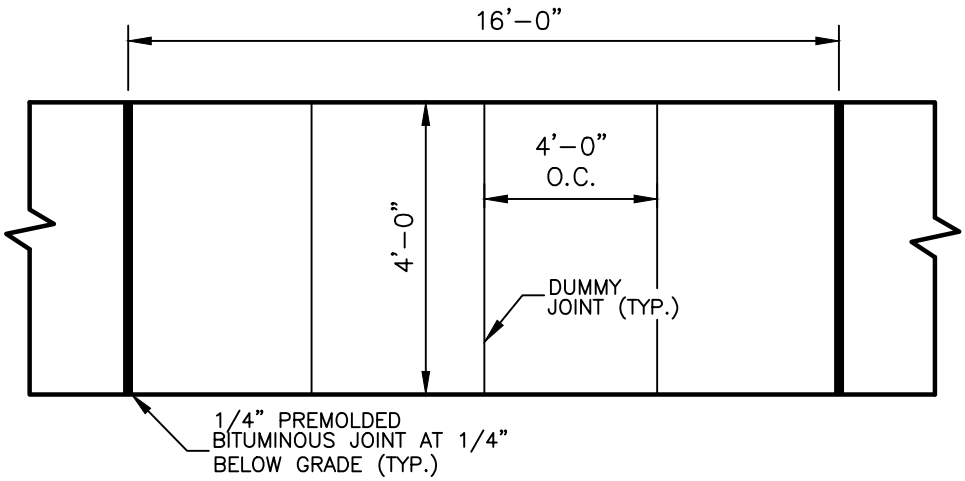
SCALE: NONE

REVISIONS

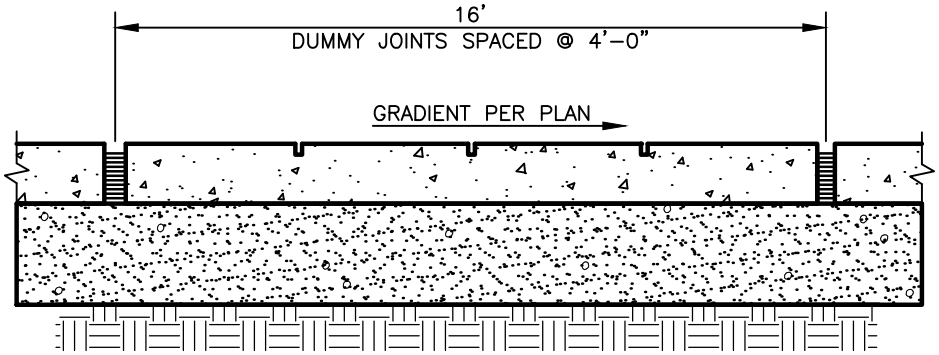
REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: FEBRUARY 2015

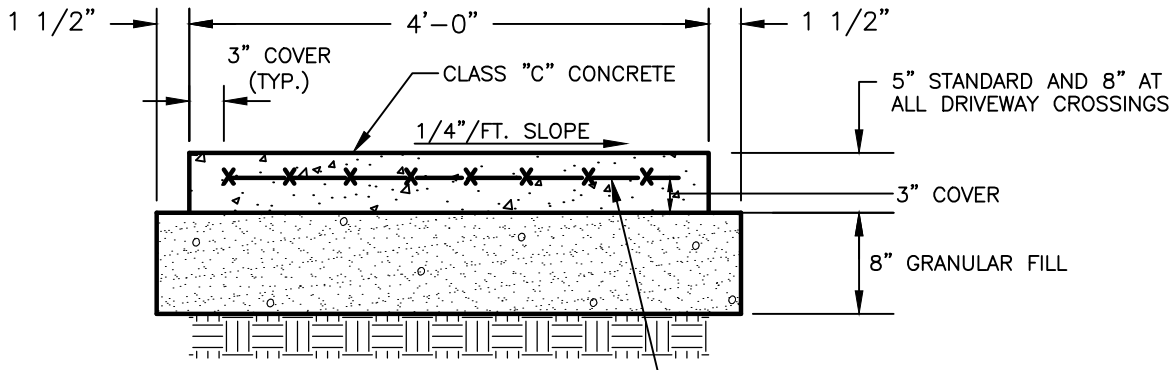
FIGURE 17



PLAN



LONGITUDINAL SECTION

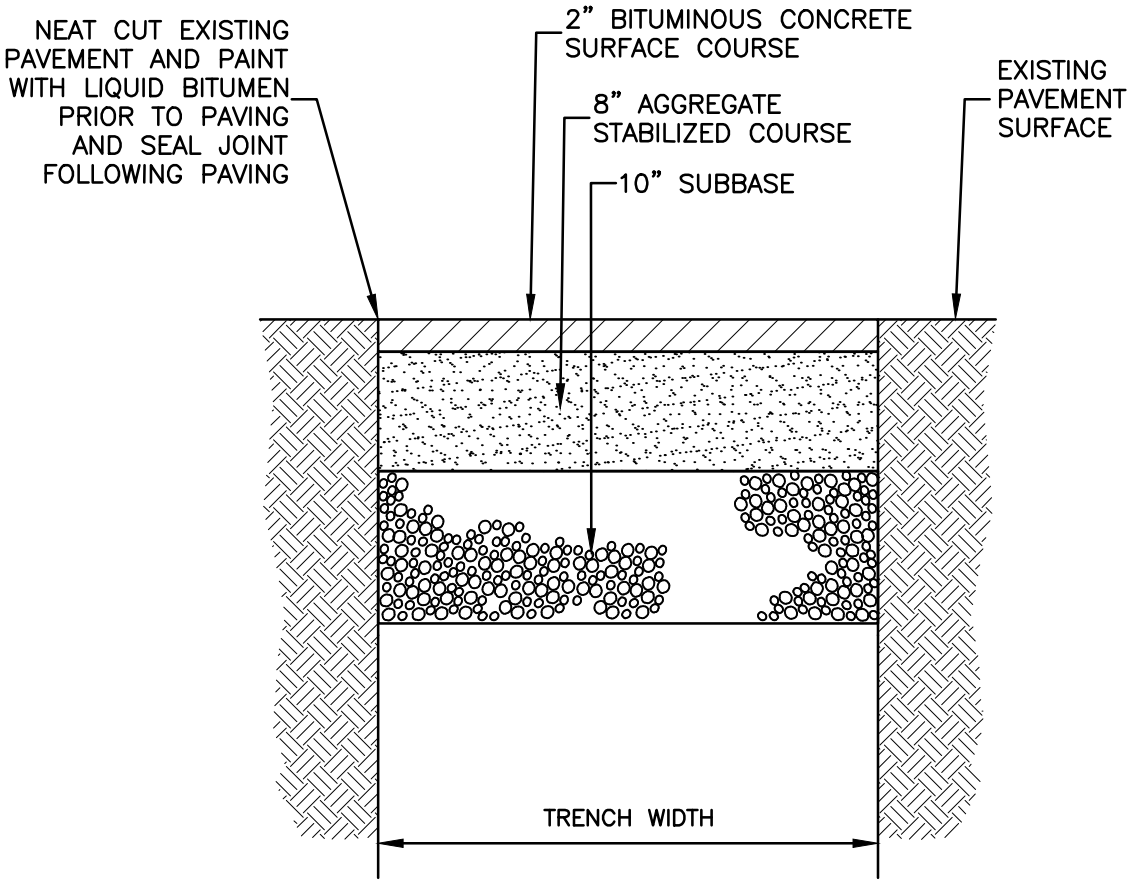


CROSS SECTION

NOTES:
1: PROVIDE TRANSVERSE BROOM FINISH

2: OUTSIDE EDGES OF SLAB AND ALL JOINTS TO BE EDGED WITH ¼" RADIUS EDGING TOOL

CLA	STANDARD DETAIL DRAWING	REGULATIONS FOR PUBLIC IMPROVEMENTS
	CONCRETE SIDEWALK	DATE: JANUARY 2015
REVISIONS	SCALE: NONE	FIGURE 18



CLA

STANDARD DETAIL DRAWING

TEMPORARY PAVEMENT REPAIR

REVISIONS

SCALE: NONE

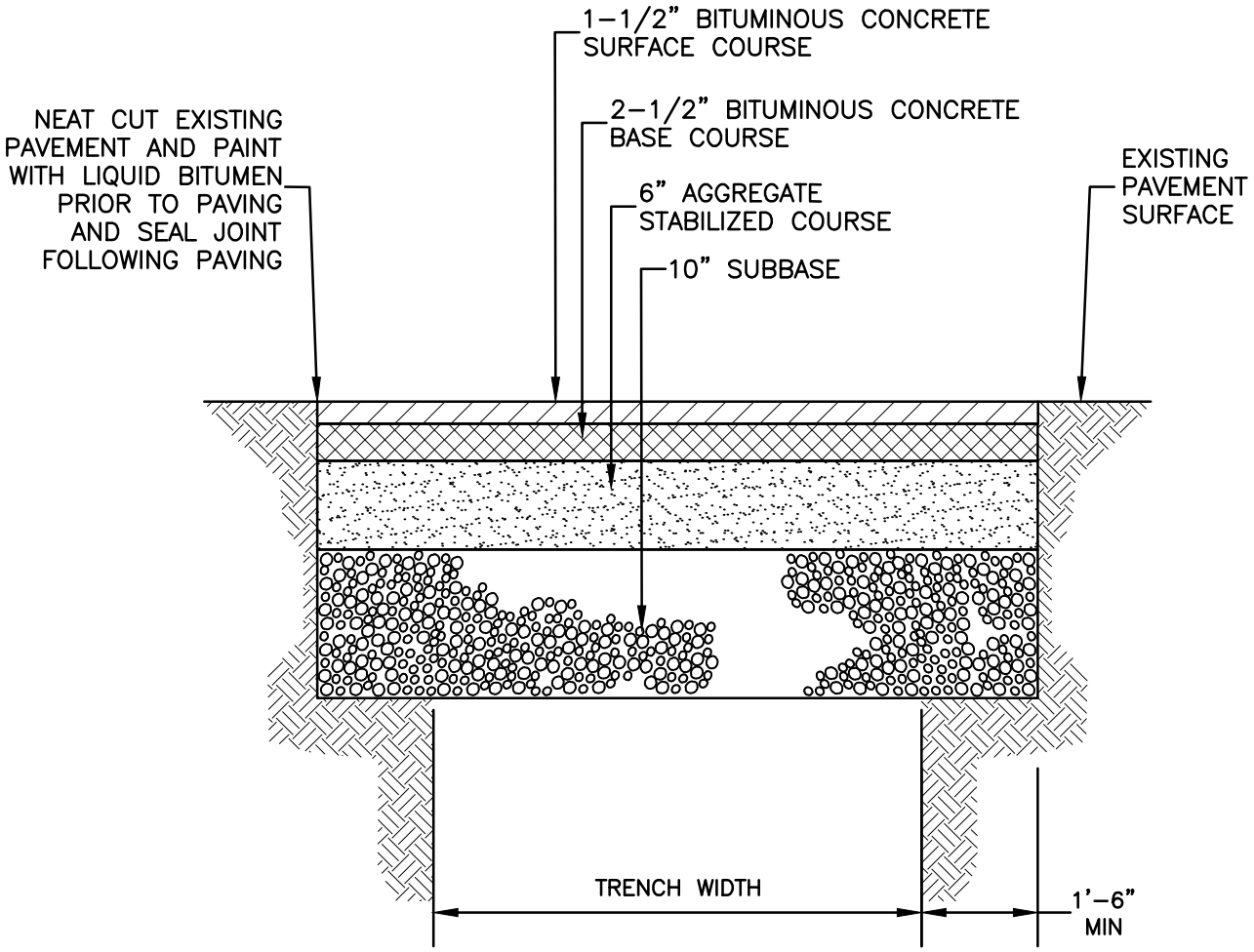
REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: FEBRUARY 2015

FIGURE 19

NOTE:

THE CONTRACTOR SHALL MAINTAIN A MINIMUM 15' WIDE TRAVEL WAY AT ROAD CROSSINGS AT ALL TIMES DURING CONSTRUCTION.



CLA

STANDARD DETAIL DRAWING

PERMANENT PAVEMENT REPAIR

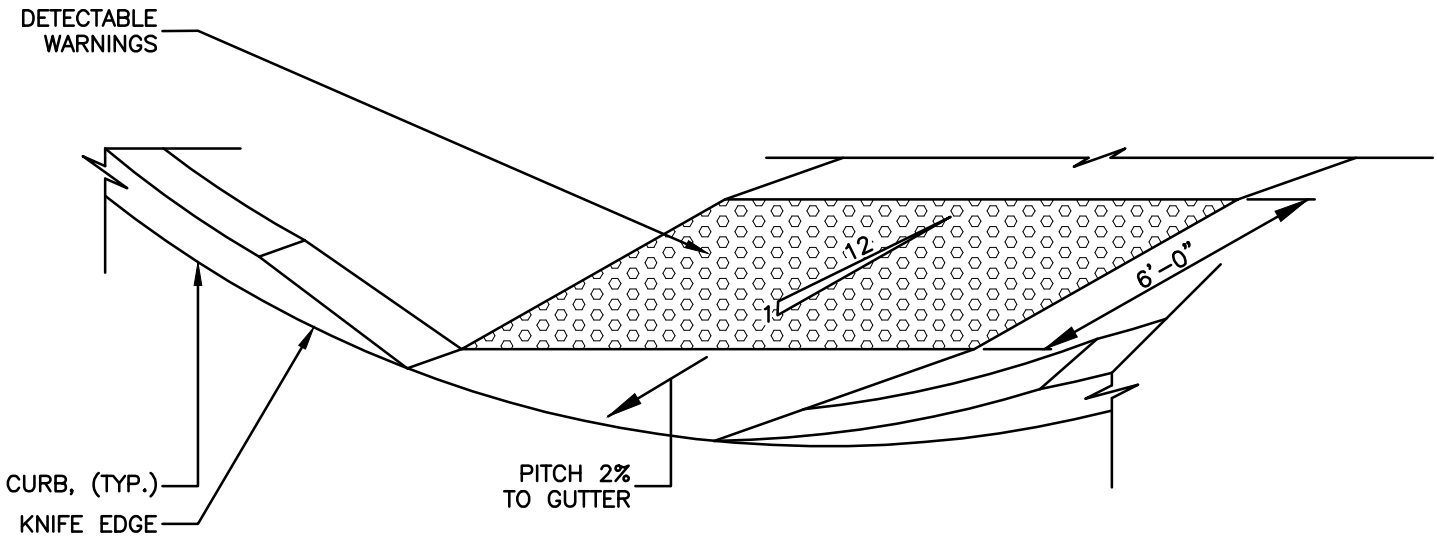
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: FEBRUARY 2015

FIGURE 20



NOTES:

1. ORIENTATION OF RAMP SHALL BE AS SHOWN ON PLAN.

CLA

STANDARD DETAIL DRAWING

CURB RAMP - TYPE I

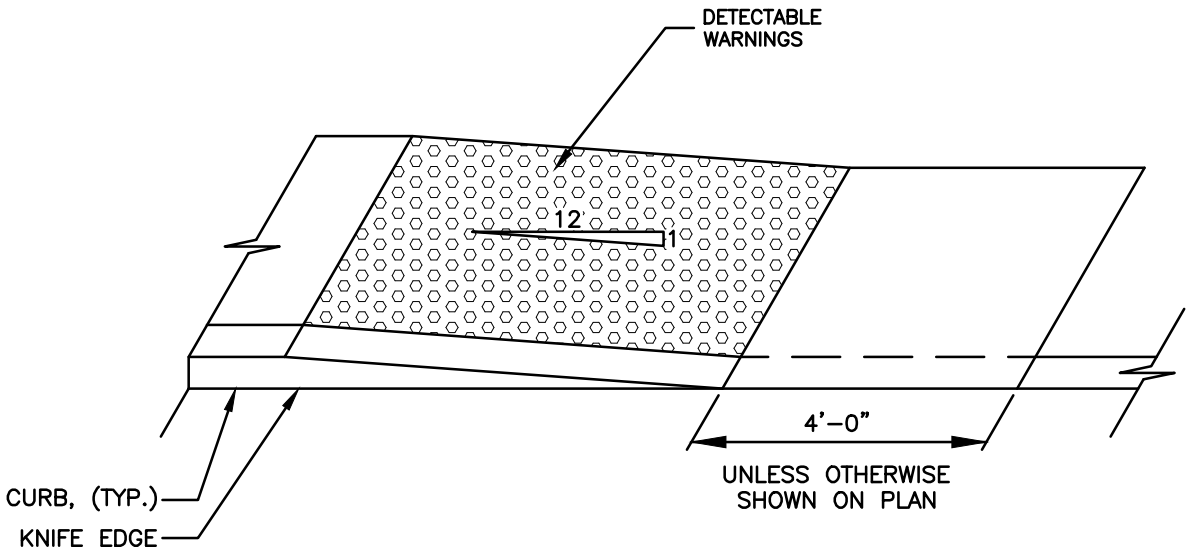
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: FEBRUARY 2015

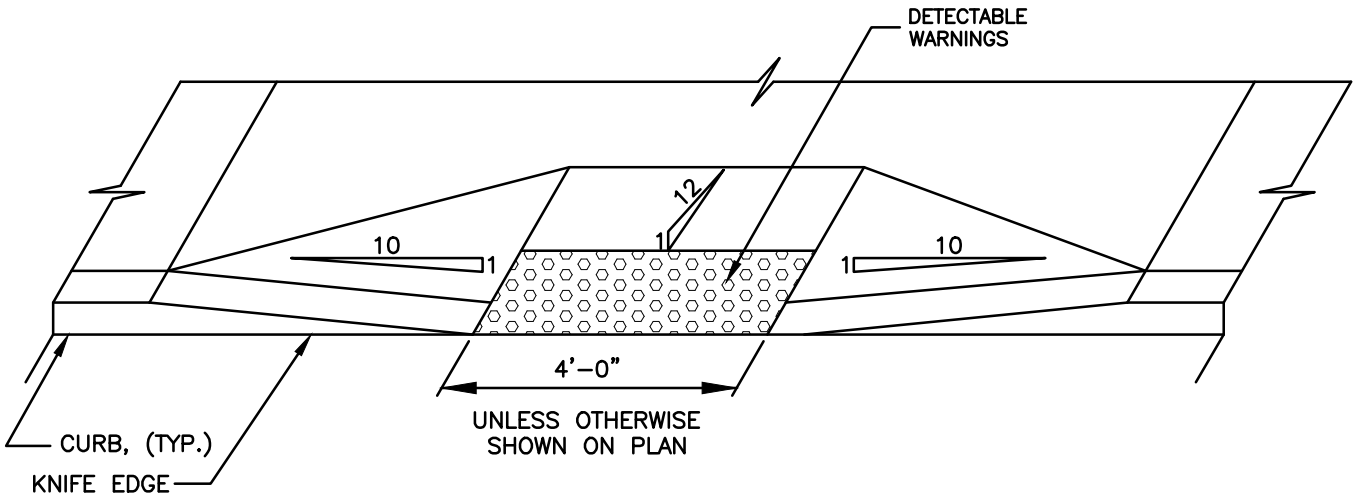
FIGURE 21



TYPE II

NOTES:

1. ORIENTATION OF RAMP SHALL BE AS SHOWN ON PLAN.



TYPE III

CLA

STANDARD DETAIL DRAWING

CURB RAMP - TYPE II & III

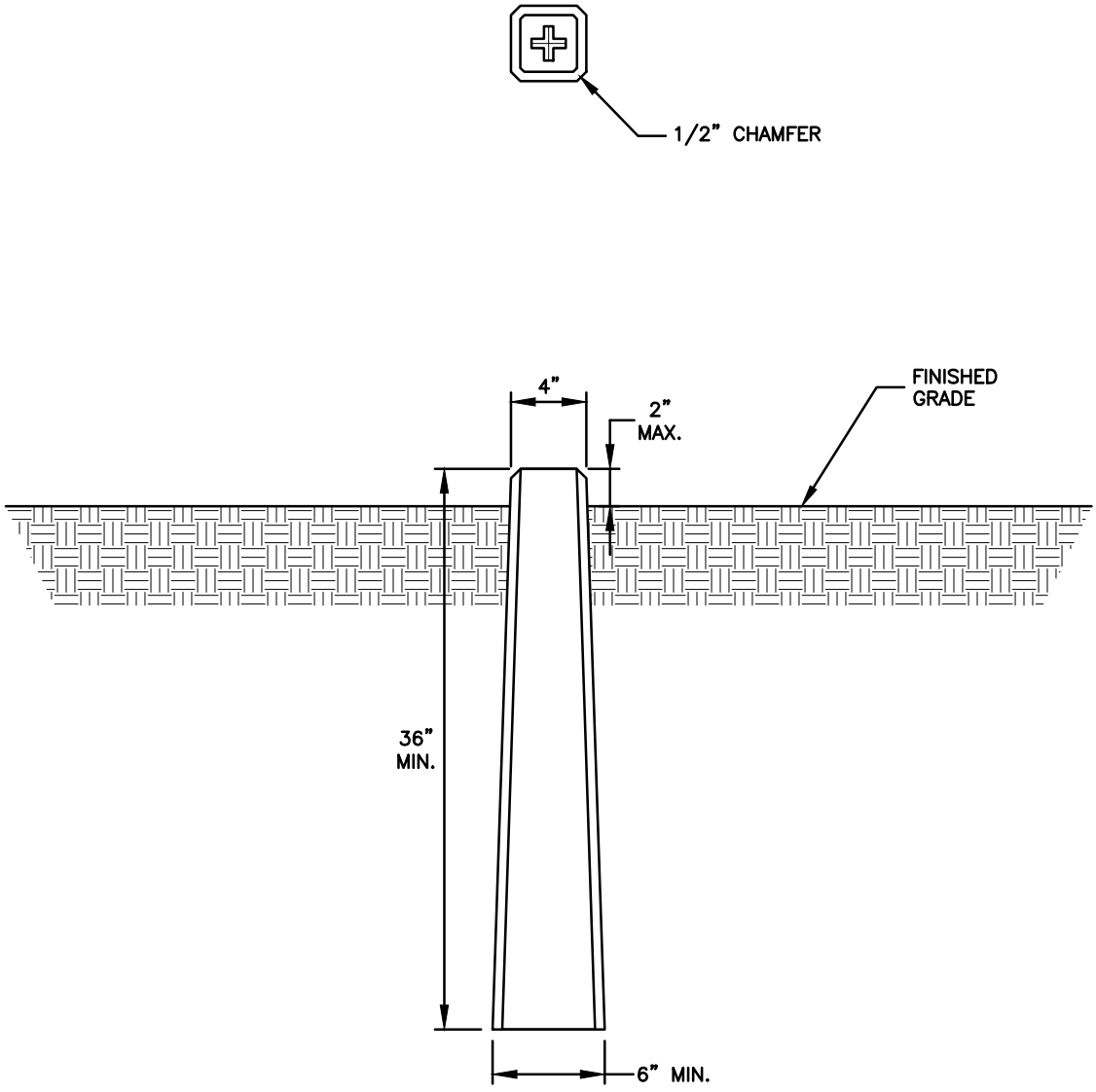
SCALE: NONE

REVISIONS

REGULATIONS FOR
PUBLIC IMPROVEMENTS

DATE: FEBRUARY 2015

FIGURE 22



CLA

STANDARD DETAIL DRAWING

CONCRETE MONUMENT

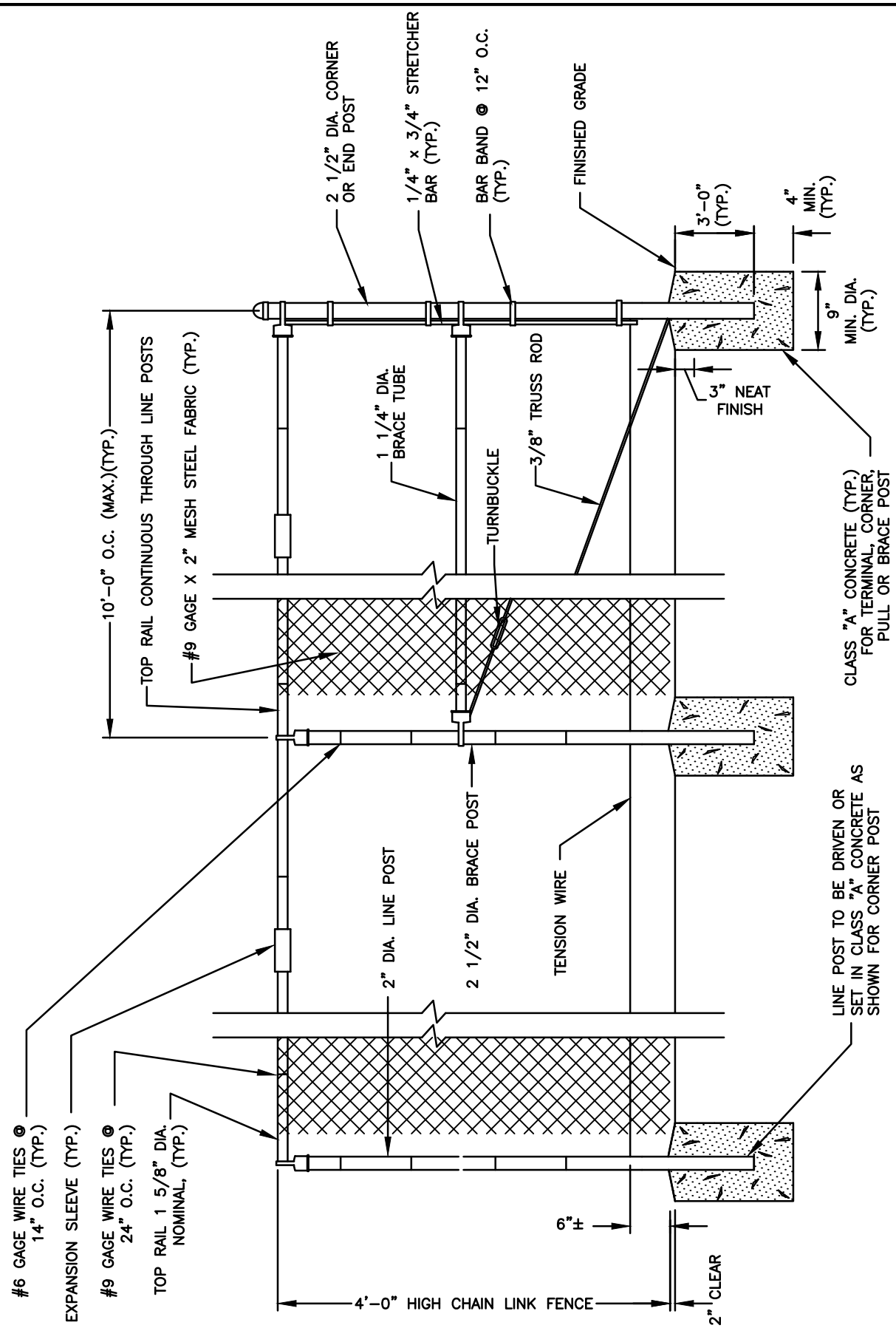
SCALE: NONE

REVISIONS

REGULATIONS FOR
PUBLIC IMPROVEMENTS

DATE: FEBRUARY 2015

FIGURE 23



NOTES:
1. GRADE OF FENCE TO BE PARALLEL WITH THE GRADE OF PAVEMENT, CURBING OR GROUND.
2. LINE POSTS TO BE SPACED 10'-0" C TO C MAXIMUM.

CLA

STANDARD DETAIL DRAWING

CHAIN LINK FENCE

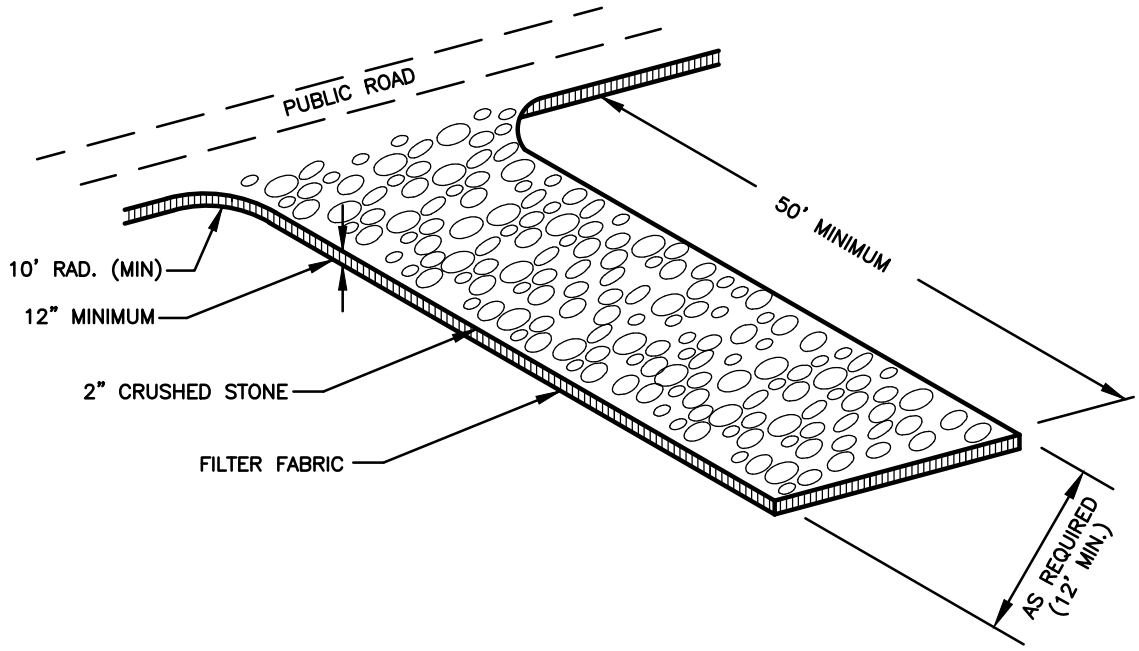
REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: JANUARY 2015

REVISIONS

SCALE: NONE

FIGURE 24



CLA

STANDARD DETAIL DRAWING

CONSTRUCTION ENTRANCE

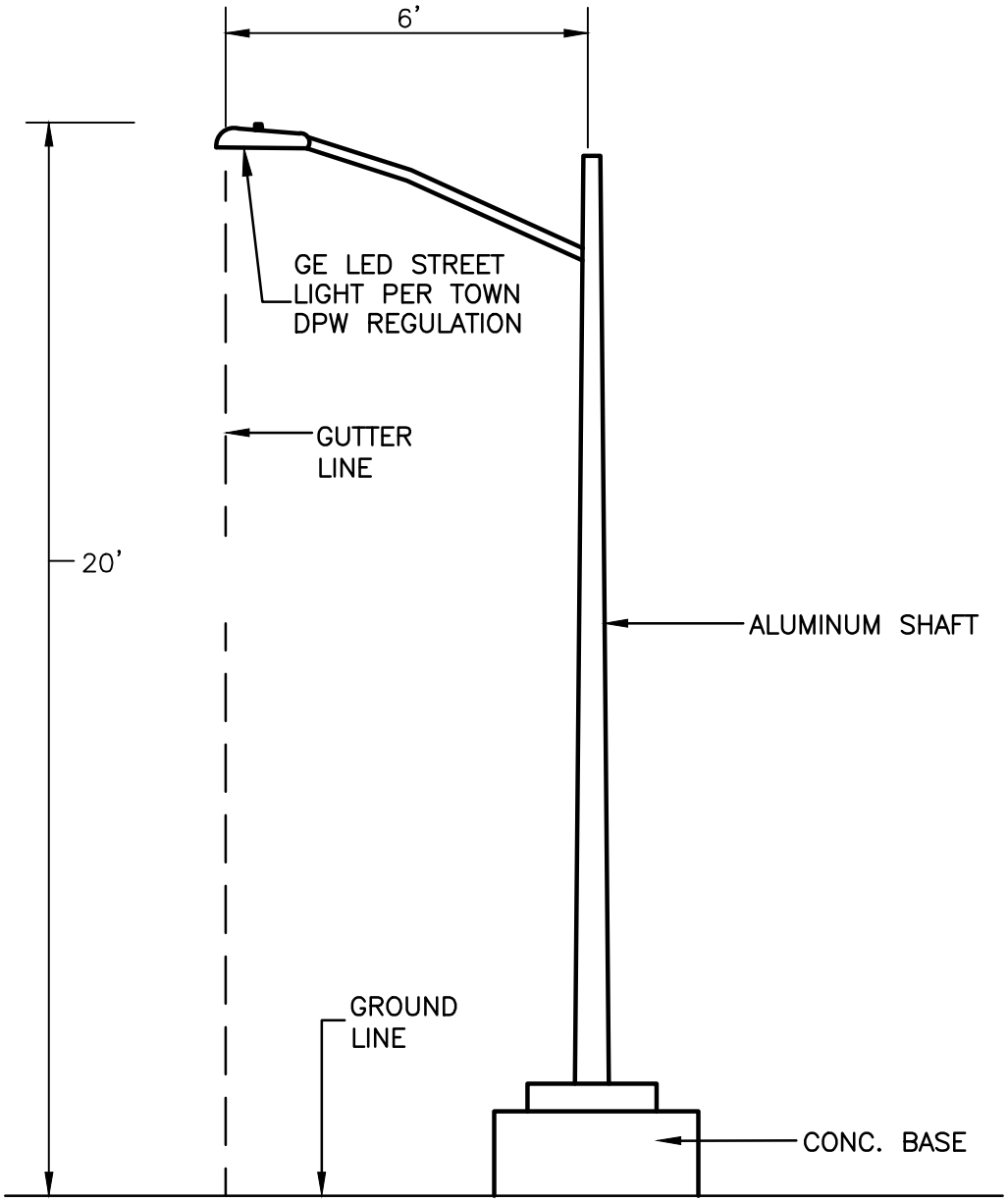
SCALE: NONE

REVISIONS

REGULATIONS FOR PUBLIC IMPROVEMENTS

DATE: APRIL 2015

FIGURE 25



CLA

STANDARD DETAIL DRAWING

STREET LIGHT FIXTURE

SCALE: NONE

REVISIONS

REGULATIONS FOR
PUBLIC IMPROVEMENTS

DATE: NOV. 2017

FIGURE 26