

TOWN OF CLERMONT

HIGHWAY SPECIFICATIONS

JAMES POTTS SUPERINTENDENT OF HIGHWAYS

ADOPTED: JUNE 3, 2002

2.2 Preparation and Submission of Highway Plan.

Plans including Profiles and construction details of the proposed highways shall be prepared by a qualified Professional Engineer or Land Surveyor properly licensed by the State of New York. For Land Surveyors, any roadway and drainage design plans shall be carried out in conformance with applicable New York State Education Department Regulations. Where applicable the surveyor shall provide evidence of a "non-exemption." The plans shall clearly define the limits of the proposed right-of-way and shall include the location, widths, profiles, grades of proposed roadways, typical road drainage structures, and the location of easement and utilities. Plans shall first be submitted to the Town Superintendent of Highways and Town Engineer.

When any proposed highway drains toward or may otherwise effect a county or State Highway, Plans shall be submitted to County Commissioner of Public Works or New York State Department of Transportation for their review and comments, and to the Town Planning Board for review and approval under the applicable subdivision regulations of the Town. Such plans so submitted shall not be altered, modified, or amended after having been approved by the Planning Board, unless revised plans are resubmitted and approved by all proper authorities. However, the Developer shall at his own expense provide additional storm drainage facilities as may be ordered by the Town Superintendent of Highways or the Town engineer such additional structures or facilities are necessary to assure the durability of pavement, the future maintenance of right-of-way, and the welfare and safety of the Public.

If construction has not been started within one (1) year from the date of final approval by the Town Planning board, Plans shall be resubmitted and approved as above. Road paving must take place between April 15th and November 15th. The developer is to set up an escrow account for Town Engineering fees associated with the project. This amount is to be determined by the Town Engineer.

2.3 Securities

2.31 Performance Bond

Prior to the start of the construction of any approved highway plan or proposed road, the developer shall deposit with the Town Clerk a Performance Bond of acceptable surety or shall deposit with the Chief Fiscal Officer of the Town acceptable negotiable Government bonds, Cash, Letter of Credit or Certified Check drawn upon a National or State Bank payable at sight to the Town Board, guaranteeing:

- a) That within (2) two years the Developer will complete the construction of all required improvements within the right-of-way and easements in accordance with the approved plans and these specifications and
- b) That, upon certification by the Developer's Professional Engineer and by the Town Superintendent of Highways and Town Engineer that the construction of the highway has been completed in accordance with the approved plans and specifications, the Developer will dedicate the completed highway to the Town for use as a public highway free and clear of all liens and encumbrances. This guarantee of dedication shall apply to the owner of the property as well as the Developer, where the two are not synonymous.

Certification by the Developer's Engineer shall be made on the form included in Table 4 and shall be submitted with a record or as-built drawing in conformance with the standards included in Table 3.

As guarantee for the performance of the above requirements, the Developer shall deposit as heretofore set forth a surety bond, negotiable government bonds, cash or certified check as approved by the Town Attorney in the amount of one hundred (100) percent of total road cost as determined by the Town Engineer. This amount shall be determined by applying to the quantities or dimensions shown on the approved plan the rates per unit as established by the schedule of rates as determined by the Town Highway Superintendent or Town Engineer as attached hereto or as amended and forming a part hereof (Table 1), or amendments thereto which may later be established by to reflect changing costs.

The performance bond amount will be established by the Town Engineer and will be forwarded to the Superintendent of Highways, the Town Board and Planning Board for approval. The performance bond shall include provisions for inflation, legal and engineering fees. As significant work progresses the Developer may request a performance bond reduction for portions of work completed to date. Typically-, the request will be made to the Highway Superintendent or Town engineer, but it will not be approved until an affirmative recommendation is made to the Town Board by the Highway Superintendent, Town Engineer, and Planning Board.

The reduction does not take effect until a resolution by the Town Board is passed. Prior to acceptance of a road for dedication to the Town a maintenance bond shall be posted in the amount of twenty (20) percent of the original performance bond amount (maintenance bond not less than \$20,000.) the maintenance bond shall remain in affect for a period of one (1) year from the date of acceptance of the road dedication by the Town Board. This bond shall cover any potential defects in the constructed road and related appurtenances. The form of a maintenance bond shall be similar to those referenced above for a performance bond.

2.32 Insurance

The developer shall procure and maintain at his own expense and without expense to the Town, until final acceptance by the Town of the work covered by approved plan and specifications, insurance for liability for damages imposed by law, of the kinds and in amounts hereinafter provided, in insurance companies authorized to do such business in the State of New York covering all operation under the approved plan and specifications whether performed by him or subcontractors. Before commencing the work the Developer shall furnish to the Town Attorney and Town Insurance Agent showing that he has complied with this paragraph, which certificates shall provide that the policies shall not be changed or cancelled until thirty (30) days written notice has been given to the Town. The kind and amount of insurance is as follows:

Liability & property damage insurance: Unless otherwise specifically required by special specifications, each policy with limits of not less than:

Bodily Injury Liability- Property Damage Liability -

Each Person	1,000,000
Each Accident	2,000,000
Each Accident	1,000,000
Aggregate	2,000,000

2.4 Inspection

The Developer shall afford the Town Superintendent of Highways, the Town Engineer, or their duly authorized representative, the opportunity to inspect the work in order that they may assure themselves that these minimum specifications are being complied with.

Such inspections shall occur at the following places in order of construction, and the Developer shall give prior notice to the superintendent or Town Engineer at least three (3) working days in advance of such expected completions and shall not proceed to the next order of work until the superintendent or Town engineer has approved the work inspected. The following are the typical stages:

1. Rough grading complete.
2. Drainage and other underground facilities installed, but prior to backfilling; furnish the Superintendent with men and equipment to dig, or have dug, test holes to establish and confirm the depth and quality of the Foundation Course.
3. Before, during, and after, gravel base is spread and compacted. This shall include both the nine (9) inches of R-O-B gravel, and the three (3) inches of graded gravel.
4. When each pavement course is being applied.
5. After completion of all improvements.
6. The Superintendent, or his representatives, shall be given access to the work at all times in order that they may inspect the work as it progresses.

2.5 Maintenance

During development construction prior to final acceptance.

It is expected and it is understood that as part of the conditions of approval of the subdivision, the Developer shall agree to maintain the roads giving access to the houses in such condition that the residents shall have safe, convenient access. The minimum conditions for such access are listed below:

A. Paved Surface

- 1.) The edges of the road (i.e. the gutter line) shall be kept free and clear of debris, stone, gravel of any material, which prevent the

- free flow of water. Driveways shall be so constructed that the flow line remains clear.
- 2.) The storm sewer system shall be kept clean and operational, during all phases of construction.
 - 3.) The surface pavement shall be maintained on a continuing basis. Soft spots or other structural defects shall be repaired immediately by excavation and replacement with approved material as per the direction of the Town Highway Superintendent or Town Engineer, either verbally or in writing. " Immediate" shall be considered to be twenty-four (24) hours from the time oral or written notification by the superintendent or Town Engineer to the Developer, unless arrangements are made, satisfactory to the Superintendent or Town Engineer, to protect the traveling public by lights and barricades until such time as repairs can be made. Potholes and edge raveling shall be remedied on a continuing basis, or as ordered by the Superintendent or Town Engineer. Repairs shall be made with asphalt concrete (hot mix when available.)
 - 4.) Throughout the entire construction period, the Developer or his contractor shall have in place sufficient erosion controls throughout the construction site. Generally, these shall be placed in conformance with the approved erosion control plan as submitted and approved by the Planning Board. If such plan

does not exist, erosion and siltation controls should be placed in accordance with the New York State Soil Erosion and Sedimentation Control Guide Book; latest revision. The Town Highway superintendent or Town Engineer may require that additional erosion controls be placed due to field conditions. In any case, all erosion and siltation controls shall be properly maintained throughout the project until they are no longer required, as determined by the Superintendent of Highways or the Town Engineer.

2.6 Separability Clause

In the event that any part or parts of these Highway Specifications for subdivisions, or any other ordinance or regulations, which may govern or otherwise affect them, is of any reason modified or invalidated, the other portions of said specifications not affected thereby shall remain in full force and effect.

2.7 Certification by Engineer.

Prior to acceptance of a highway constructed under these specifications, the Developer's Professional Engineer shall certify in writing that he or his authorized representative has inspected all phases of the highway construction and that all work has been completed in accordance with the approved plans and these specifications. Evidencing this he shall submit signed and stamped plans and forms as set forth in Table 3 and 4 of these Specifications.

2.8 Dedication

Conditions to be satisfied before the Town Board considers the acceptance of a new highway. It is the responsibility of the Developer or his representative to prepare and obtain all necessary documentation for submission to the Town Board, Superintendent of Highways, Town Engineer and Town Attorney at least fifteen (15) working days prior to the Town Board meeting date on which the matter will be discussed.

1. A set of "as built" plans of the highway showing the information included on the checklist included in Table 3. In some cases additional information may be required but the Developer will be notified in advance. These plans must bear the original stamp and signatures of both a licensed Professional Engineer in New York State and a licensed Professional Land Surveyor in New York State. Also, a certification form shall be completed and submitted. See Table 4.
2. Written metes and bounds descriptions of all rights-of-way and easements prepared by a licensed Land Surveyor must be submitted to the Town Engineer and Town Attorney for review and approval. Once the descriptions have been prepared, the Developer's Attorney shall work with the Town Attorney to insure that the deeds are appropriately filed in the Office of the County Clerk.
3. The plans and descriptions must be reviewed by the Town Engineer who shall indicate his approval either by letter to the Town Board or by the stamping of said plans and descriptions. Where applicable, the as built plans shall also be reviewed by the Town of Clermont Water/Wastewater Superintendent. This is applicable for roads having a water main or sewer mains in the right-of-way.
4. The submitted deeds must be checked by the Town Attorney as to form and sufficiency. A title search must be made of the land offered to assure the validity of the title and the cost of the search shall be borne by the applicant.
5. The work completed on the highways at the date of submittal must be approved by the Town Highway superintendent and the Town Board be notified of this approval. The Town Highway superintendent shall submit in writing his order accepting the road.
6. Approved permanent concrete or granite monuments shall be set according to the Town Highway specifications or as directed by the Town Engineer, and their location shall be shown on the road plan. Iron pipes, unless embedded in concrete, shall not be considered permanent monuments for the purpose of these regulations. See figure 17 of these specifications.
7. The developer shall post a satisfactory maintenance bond as referred to in Section 10-2. In no case shall maintenance bond be less than \$20,000.
8. At the close of the meeting when the Board accepts a new road, the Developer shall prepare (2) two complete sets of the following and submit it to the Highway Department within (15) fifteen days of the Board meeting:
 - a. Copy of the actual Town Board resolution accepting the road.
 - b. A full size copy of the as-built and a reduced scale size (smallest legible reduction.)
 - c. Filed deeds for the road R-O-W and all easements.

This information will then be submitted by the Highway Department to the New York State Department of Transportation for inclusion of the new road into the Town's Highway Inventory.

2.9 Driveway Bonds

All driveway entrances for approved lots must be built in conformance with the driveway permit issued by the Superintendent of Highways. To insure satisfactory completion of the driveway entrance the lot owner shall post a driveway bond to cover the cost of entrance construction, should the lot owner not carry out the improvements. The bond will be set as to the amount by the superintendent of Highways depending on the nature of work required. In no event will the bond be less than \$300. The form of surety shall be satisfactory to the Town Attorney. The Superintendent of Highways shall be notified of the commencement of construction by the lot owner and shall be notified at the time of completion. The driveway bond shall not be returned to the lot owner until written approval of the Superintendent of Highways has been given to the Building Inspector. This shall occur prior to the issuance of a Certificate of Occupancy by the Building Inspector.

SECTION 3 HIGHWAY CLASSIFICATIONS

3.1 Definitions

The Town Planning Board shall determine and designate into which of the three (3) following classifications each proposed highway falls on the basis of one or more of the criteria hereinafter set forth.

- A. Major or Through Highway
- B. Rural or Suburban Type Highway

Final plans shall be drawn to show, and the Developer shall construct each highway in accordance with, the particular specifications for its designated classification as also hereinafter set forth as well as in accordance with the specifications common to all classifications.

3.2 Determining Criteria

3.21 Major or Through Highways (See Figure 1)

1. The proposed highway is the direct and logical continuation of an existing highway that carried five hundred (500) or more heavy and light vehicles during a twelve (12) hour period as shown on the latest traffic count.
2. The proposed highway creates a shorter and more convenient through traffic artery so that it can be reasonably expected that traffic will be diverted from

other major highways to such an extent that it will reach at least five hundred (500) cars in twelve (12) hours two (2) years after opening.

3. The proposed highway could logically be expected to become a major highway because of future construction or other foreseeable circumstances.

*Note: Heavy vehicles (trucks) described as being more than ten (10) percent of the design hour traffic and at least half of the trucks are anticipated to be at or near the legal maximum weight.

3.23 Rural or Suburban Highways (See Figure 2)

(Note: This classification is intended to cover the majority of subdivision roads.)

1. The proposed highway shall not be or be reasonably expected to become a through, commercial, or industrial highway.
2. The proposed highway shall be a dead end, loop, or other minor highway within a residential development.
3. The proposed highway is not or cannot reasonably be expected to become a continuation or extension of a highway of one of the two above described classifications. Should such be the case, the proposed highway shall take the classification of the highway of which it is a continuation or extension.
4. The proposed highway does not or cannot carry a substantial volume of traffic.

SECTION 4 CONSTRUCTION SPECIFICATIONS

4.1 Right of Way Layout

The Developer shall establish and clearly mark on site the limits of highway right - of - way and easements, the centerline and grades of the road pavement and the location and elevation of drainage and drainage structures in accordance with the approved plans. Said layout shall be performed by a licensed Land Surveyor, licensed for practice in the State of New York. Such markers shall be maintained at the Developer's expense until the construction of all required improvements within the Right-of-Way limits have been completed, inspected, and approved by the Town Superintendent of Highways.

4.2 Clearing and Grubbing

The Developer shall clear the entire area within the limits of:

1. The highway right-of-way exclusive of trees designated by the Town to remain.
2. Stream and drainage channels and ditches.

All roots and stumps shall be grubbed, excavated, and removed from the above areas. No roots, stumps etc. shall be buried within the right-of-way or easement areas or in any other areas proposed for dedication to the Town of Clermont.

4.3 Excavation, Filling and Rough Grading.

The Developer shall complete the shaping of the highway right-of-way, streams, ditches and easement areas to the line and grade as shown on the approved plan and as otherwise may be directed by the Town Superintendent of Highways or Town Engineer or their duly authorized representative. All unsuitable or unstable materials shall be completely excavated and removed from the right-of-way and all rock or boulders larger than six (6) inches in diameter shall be excavated at least eight (8) inches below the finished subgrade of road pavement, drainage, or drainage structures, curbs and sidewalks. Where fills are necessary to complete the required line and grade or to backfill trenches or other excavation, the materials incorporated in the work shall be acceptable to the Town Superintendent of Highways or Town Engineer and shall be placed in layers not exceeding eight (8) inches in depth, each layer to be thoroughly compacted by rolling with a self-propelled vibratory roller not weighing less than ten (10) tons. Other compaction methods shall be approved by the Superintendent of Highways or the Town Engineer. Impact rammer or vibrator equipment in areas

inaccessible to power rollers may be utilized subject to prior approval. All compacting shall continue until the fills are firm and unyielding. Specifically, all lifts shall be compacted to ninety-five (95) percent Standard Proctor Density as determined by a Testing Laboratory approved by the Town Engineer. In areas where fill is being placed in areas with groundwater problems, areas heavily laden with clay or other wet non-supportive soils and as directed by the Superintendent of Highways or Town Engineer, filter fabric (geo-textiles) shall be placed prior to filling. The filter fabric shall be Mirafi 600 X or approved equal. It shall be placed in conformance with the manufacturer's specification but in no case shall be lapped less than twenty-four (24) inches on any end. Special care shall be exercised in placing and compacting material immediately adjacent to pipes in order to avoid damage to the pipe and to prevent pipe misalignment.

The areas between the road shoulder edge or curbing and the right-of-way line must be graded and seeded in order to prevent erosion. See Section 30-5 for a detailed seeding specification.

The rough grade of the road pavement, curb and sidewalk areas shall be completed to within one (1) inch above or below finished subgrade as shown on the approved cross section of the right-of-way improvement.

Earth shoulders and flow line of ditches and gutters shall be maintained in satisfactory condition at the Developer's expense at all times during the course of construction of the subdivision and until such time as the Town Board has accepted dedication of the right-of-way.

4.4 Trench Excavation, Laying and Backfilling.

The width of the trench in which the pipe is placed, shall be sufficient to permit thorough tamping of the backfill under the haunches and around the pipe. Where rock, in either boulder or ledge formation is encountered, it shall be removed below grade and replaced with suitable

materials (graded gravel or other material approved by the superintendent of Highways or Town Engineer) in such a manner as to provide an earth cushion having a thickness under the pipe of not less than eight (8) inches; and where there are excessively heavy fills over the top of the pipe; the Town Superintendent of Highways may specify that a sand cushion up to one half inch in thickness per foot of fill be placed over the top of the pipe. In no case shall the top of any drainage pipe be less than eighteen (18) inches below the finished grade of the pavement. In areas outside of the pavement, the minimum cover shall be not less than twelve (12) inches. Where soft, spongy or other suitable soil is encountered at the grade established, all such unstable soil under the pipe shall be removed and replaced with R-O-B gravel or other acceptable material. In all cases the bed shall be thoroughly compacted and shall provide a firm foundation for the pipe. In some cases, as directed by the Superintendent of Highways or the Town Engineer, prior to placement of the R-O-B gravel in poor soil areas; filter fabric shall be placed below the pipe. Please refer to Section 30-3 for filter fabric specifications.

Pipe shall be laid to a true line and grade on the prepared bed of the trench. Pipe laying shall begin at the downstream end and progress upstream.

Backfilling of trenches shall be done in accordance with the paragraph on fills under the above heading of Section 30-3 Excavation, Filling and Rough Grading.

Any additional drainage facilities not shown on the approved plan and which may be ordered by the Town Superintendent of Highways or Town engineer due to field conditions shall be constructed by the Developer at the Developer's expense and in accordance with these specifications.

In proposed subdivision roadways where other utilities are present, the design plans should illustrate all possible utility line conflicts (crossings.) During design and construction, care shall be utilized to provide sufficient separations between utilities. A minimum of twenty-four (24) inches is required. Where possible storm drainage pipes shall always be above sewer and water lines to preclude maintenance problems for the Highway Department.

4.5 Restoration of disturbed Areas within the Right - of - Way.

It is the intent of this specification that all disturbed areas within the right-of-way due to highway construction and placement of utilities shall be restored to conditions acceptable to the Town of Clermont.

The removal of all equipment and parts, junk, rubbish, excess material, debris of all kind, trees damaged beyond repair shall be included in the restoration work.

All unpaved areas within highway rights-of-way and newly created or stripped earth slopes shall be seeded as follows:

RESTORATION SPECIFICATION

AREA CLASS	TOP SOIL DEPTH	SEED TYPE	SEED RATE
Shoulders 0-5% Slope	4"	Ky Blue grass	12 lbs/acre
		Red Fescue	12 lbs/acre
		Perennial Rye Grass	5 lbs/acre
Shoulders 5-10% Slope	4"	Red Fescue	20 lbs/acre
		White Clover	8 lbs/acre
		Perennial Rye Grass	5 lbs/acre
Embankments	6"	Crown Vetch	10 lbs/acre
		Perennial Rye Grass	20 lbs/acre
Drainage Swales	6"	Red Fescue	20 lbs/acre
		Red Top	2 lbs/acre
		Crown Vetch	15 lbs/acre
Detention Areas	6"	Red Fescue	20 lbs/acre
		Red Top	2 lbs/acre
		Crown Vetch	15 lbs/acre

Mulch: Hay or straw two (2) tons per acre Fertilizer: 10-10-10-600 lbs. Per acre

In order to control soil erosion, all erosion controls shall be checked and upgraded as necessary upon final grading, top soiling, seeding and mulching as specified in Section 10-4 of these specifications.

4.6 Grades and Vertical Curves.

Highway shall be so designed that finished tangent grades will not be less than one (1.0) percent nor more than ten (10.0) percent.

Every change in grade shall be effected with a vertical curve of sufficient length to insure adequate stopping sight distance and to provide for smooth transition. These vertical curves shall be designed in accordance with the graph shown on Figures 3 & 4 of Appendix B of these Specifications. Where a road intersection is controlled by means of proposed stop sign on a proposed road the vertical curve at this point only may be reduce to a minimum length of twenty-eight (28) times the algebraic difference in grade (28A).

SECTION 5 DRAINAGE REQUIREMENTS

5.1 Drainage Report

A hydraulic design report prepared by a licensed to practice in the State of New York, containing design information for all highway drainage structures, storm sewers and channels must be submitted to the Town engineer and Town Superintendent of Highways. This report should contain the basic design data required to arrive at each drainage structure size, such as design frequency, flow rate, grade, velocity, area, method used determining the waterway size. This shall include watershed area maps, soils description with map, flow paths indicated, runoff computations, stage-storage, stage discharge computations, flood routing computations and graphical presentation of hydrographs.

The report should include both before and after development runoff, should assess the need for on-site detention or retention to attenuate increases in runoff and should present pipe sizing computations for all proposed drainage structures. In some cases where one hundred (100) year floodplain elevations are not available from FEMA the drainage report may be required to include a floodplain determination by HEC-2 or other acceptable method as approved by the Town Engineer. The drainage report shall be prepared by utilizing TR-55 or TR-20 as developed by the United States Soil conservation Service. The rational method can only be utilized for pipe sizing computations for collector pipes. Large stream crossing etc. shall have runoff computed by other than the rational method. Any other drainage methodologies shall be as approved for use by the Town Engineer. All pipes and structures shall be sized for twenty-five (25) year, twenty-four (24) hour storm, as determined for Columbia County.

Any major stream crossing (as determined by the Town Engineer), any bridges or detention and retention areas shall be so designed to preclude overtopping during a one hundred (100) year, twenty-four 24 hour storm. Consideration should also be given to anticipated (if any) future development and any urbanization of the area.

There should be enough information shown on plans and profile to properly construct all the required drainage facilities. Type and size of culverts, end treatments of inlet and outlet, the gauge of metal pipe, or class of concrete pipe, and the class/type of ADS N-12 pipe, invert elevation of protection and alignment of ditches, are some of the information required on plan and profiles. A note shall be placed on the plans which requires shop drawing submission for all pipe, catch basins, catch basin tops, guide rail and other such items proposed for use in the work, in order that they may be reviewed and approved by the Superintendent of Highways and Town Engineer, prior to fabrication, shipment or installation of the materials.

5.2 Drainage Easements.

The Developer shall dedicate to the Town by record able instrument all easements as shown on the plan.

All drainage easements must have a minimum width of thirty (30) feet and shall include the right to enter upon said property for the purposes of installing, maintaining and repairing the ditches and pipes as placed in such easement. Monumentation as required by the Town Engineer shall be provided. Other easement widths may be required based on the size of the proposed improvements. These shall be as determined upon recommendation of the Town Engineer and as subsequently approved by the Superintendent of Highways. It is the policy of the Town that all storm drainage be contained in drainage swales, where possible, and all easements shall contain a provision providing for the right to install underground pipes and to discharge storm water therein. Open ditches shall be approved at the discretion of the Town Superintendent of Highways. The Developer shall also install in said easements, swales or pipe of size sufficient to provide for present and future run-off.

Where it is proposed that storm water be drained from the highway or from other lands of the Developer to the perimeter of the Developer's property, easements shall be provided in record able form and free and clear of all liens from the adjoining owners permitting the discharge of storm water drainage onto such adjoining lands. In cases where ponds are to become portions of the Town storm drainage system, the Town of Clermont may require special provisions and agreement to absolve them of maintenance responsibility and/ or damage relative thereto from roadway runoff. In these cases the Planning Board will so advise the Developer as to the additional requirements.

The developer shall provide an Attorney's Certificate of title indicating that the above mentioned easements and rights to discharge surface water are free and clear of all liens. The Town Attorney along with the Town Engineer shall make a determination of the extent of improvement responsibility regarding downstream drainage.

5.3 Pipe

Storm drain and culvert pipe may be asphalt coated corrugated metal (CCMP), reinforced concrete (RCP) or corrugated high density polyethylene (HDPE) specified as ADS-N-12 with a

smooth bore interior. All pipes used shall have a minimum diameter of fifteen (15) inches. Plain galvanized corrugated metal pipe is not permitted.

The pipe shall meet the following New York State Department of Transportation (NYSDOT) Standard Specifications (latest revisions and addendums):

- 1) CCMP - Section 707-02, pipe shall be 14 gauge (15" to 24"), 12 gauge (27" to 54") and 10 gauge (60" and greater.)
- 2) RCP - Section 706-02, pipe shall be Class IV.
- 3) HDPE - Section 706-14, only sizes 15" to 36" permitted.

All collars or connecting bands shall be twelve (12) inches wide and shall be furnished with two (2) bolts twelve (12) inches long.

Coated corrugated metal arch pipe and elliptical reinforced concrete pipe are permitted for use provided that they comply with NYSDOT Standard Specifications.

All reinforced concrete pipe shall be manufactured with slip joints or bell and spigot joints.

Each piece of reinforced concrete pipe shall be marked with the specification number and the date of manufacture.

Reinforced concrete pipe shall be sealed with flexible water tight electrometric gaskets, approved bituminous sealers or plastic sealers. Bituminous or plastic sealants shall be applied at the time the pipe is being laid to line and grade. Such sealants shall be installed in accordance with the sealant manufacturer's instruction so that the joint is completely filled with sealant.

Corrugated metal pipe and pipe arch connections for making field joints shall consist of corrugated bands, so constructed as to lap on equal portions of each culvert section to be connected.

HDPE pipe shall be connected by the use of corrugated bands manufactured for that specific pipe. The end sections used for this type of pipe shall not be HDPE. In lieu of these, either reinforced concrete headwalls or pre-fabricated asphalt coated metal end sections shall be used. These shall be the type used for conventional CCMP.

Where precast concrete box culverts or metal plate arch culverts are proposed for use, they shall be individually approved on a case by case basis by the Town Engineer, upon review of design drawings.

Height of the fill and pipe classes shall be designed to meet the minimum requirements of AASHTO HS-20 Highway Loading.

5.4 Treatment of culvert Ends

Whenever a drain pipe ends in an open ditch, pond or stream, inlet and outlet end shall be designed to protect embankments and channels and to preserve the hydraulic efficiency of the pipe.

The following end treatments shall be used for drainage pipes:

- A. Prefabricated asphalt coated metal end sections.
- B. Concrete headwall and wing walls with or without concrete apron. (See Fig.5)
- C. Reinforced concrete pre-cast end sections.

HDPE pre-fabricated end sections are permitted for use. Prefabricated end sections shall be of similar material and construction to the pipe when possible. End section shall be connected to the pipe in the same manner as pipe sections are connected.

All pipe ends, either inlets or outlets, shall be protected from entrance by persons or animals by means of grating. All pipes of size twelve (12) inch or greater shall be protected in such manner. See Figure 6 of these specifications for construction details on the grating. Where reinforced concrete box culverts are proposed for use, the ends shall be fitted with pre-cast headwalls and wing walls. Tapered box culvert ends shall not be permitted. Gratin for box culverts or plate arch metal culverts will be reviewed on a case by case basis. See Section 40-7 and Figure 6 for rip-rap specifications at culvert ends.

5.5 Under Drains

Under drains may be a perforated asphalt coated corrugated metal pipe or HDPE ADS N-12 smooth bore perforated pipe (rigid) pipe where approved by the Superintendent of Highways or Town Engineer, placed_ in trenches and surrounded by material which is both pervious to water and capable of protecting the pipe from infiltration by the surrounding soil. (See Fig.7)

Under drains must be slopped positively to an outlet such as a drainage channel or a catch basin/pipe drainage system.

Figures 7A of Appendix B shows the installation of under drain for the purpose of draining of pavement sections. This figure may be modified to apply to specific conditions so long as the installation is approved by the Superintendent of Highways or Town Engineer However, criteria described below should be considered.

The under drains should be placed at the interface of the pavement and shoulder and should intercept the water from the highest water bearing layer of the pavement section.

5.6 Catch Basin and Culvert

Specifications and drawings on figure 9, Appendix B, show the minimum acceptable construction for typical catch basins. Whenever, in the opinion of the Town superintendent, ground conditions or other circumstances require, larger or heavier materials, additional materials, reinforcing, or other modifications and improvements in design and construction shall be made as directed by the Town Superintendent or Town Engineer at any time prior to paving. Only precast, reinforced concrete catch basins are

approved for use in the Town of Clermont. No built up masonry catch basins are permitted for use.

5.61 Location

Catch basins or culverts shall be constructed at all points of change of slope or alignment and at all junction points. Catch basins or culverts shall be located in the lows of sag vertical curves as necessary to prevent excess ponding. At no time shall catch basins or culverts be spaced farther apart than four hundred (400) feet on slopes less than three (3) percent, three hundred (300) feet on slopes from three (3) percent to six (6) percent and two hundred and fifty (250) feet on slopes over six (6) percent in steepness. These spacings may be modified to a closer spacing by the Superintendent of Highways or Town Engineer when grade or other special circumstances warrants. The Town Highway Superintendent may also increase the spacing distance between catch basins.

5.62 Excavation and Construction

Hole for catch basin shall be excavated to a depth of thirty-five (35) inches below the designed elevation of the invert of the effluent pipe. Crushed stone or run-of-bank gravel to a uniform depth of nine (9) inches shall be leveled and compacted over the entire area under the base, where suitable excavated trench material does not exist. In cases where poor soil conditions exist the depth of stone placement may be greater as directed by the Superintendent of Highways or Town Engineer. On this stone or gravel base the precast concrete basin shall be placed level.

Shop drawings for all proposed catch basins shall be submitted for review and approval of the Superintendent of Highways or Town Engineer. All precast basins shall be reinforced concrete and shall be designed to carry HS-20 wheel loadings unless otherwise directed. Unless otherwise approved by the Superintendent of Highways or Town Engineer, the maximum depth of a catch basin shall be limited to twelve (12) feet.

Tops for catch basins shall be cast iron as those specified on Figure 813 unless otherwise approved by the Superintendent or Town engineer. Shop drawings shall be submitted for review and approval. No reinforced concrete tops shall be used.

All construction and materials shall comply with SECTION 604 of the current Standard Specifications of the State of New York, Department of Transportation.

5.63 Installation of Pipes

Concrete blocks around all pipes entering or leaving catch basin shall be cut to fit the contours of the pipes as closely as possible. Remaining interstices shall be solidly filled with mortar and concrete brick for the full thickness of the wall. Ends of all pipes shall be cut off flush with the inside surfaces of the catch basin walls and shall project outside a sufficient distance to allow for proper connection with adjoining pipe section.

When diameter of the effluent pipe is the same as or smaller than that of an influent pipe, the elevation of the top of the influent pipe shall be no lower than the elevation of the top of the effluent pipe.

5.64 Steps for Catch Basins

Catch basins having a depth greater than forty-eight (48) inches from the finished surface to the top of the concrete base shall be provided with steps. Steps shall be of a steel reinforced polypropylene as manufactured by MA Industries or approved equal. The steel reinforcing bar shall have a minimum diameter of one half (1/2) inch. The steps shall comply with the standard as shown on Figure 8 A solidly set in the catch basin. Steps shall extend four and one half (4 1/2 ") inches inside the wall of the catch basin. The top step shall be not more than 18" below the finished surface and thence to the base steps shall be no more than (18) eighteen inches apart. All steps shall be properly aligned in a uniform vertical manner. Reinforced plastic steps shall meet SECTION 725-02 of the Standard Specifications, State of New York, Department of Transportation.

5.7 Open Ditches

With the approval of the Town Superintendent of Highways and Town Engineer open ditches for back lots and side slopes may be used in lieu of storm drain pipes when the grade of the land traversed is flat or when it is desirable to drain and dry up the surrounding area.

In no case shall the grade of drainage swale exceed six (6) percent. The following guide line shall be used in treatment of these ditches:

Up to 1 %	Seed and Mulch
Up to 3.5%	Jute Mesh and Seed or other approved method
Up to 5%	Sod or hot mixed asphalt concrete
Over 5%	Rip-Rap

Rip-Rap, when called for, in ditches or at pipe inlets and outlets shall consist of field stone or rough, un hewn quarry stones as nearly cubical in form as in practicable, placed upon slope not steeper than 1:2 and so laid that the weight of the large stones is carried by the soil and not be the stone adjacent. All stones shall weigh more than twenty (20) pounds each. No tailings or rounded cobbles shall be utilized for rip-rap. No gravel mine outwash material shall be used. The intent of the rip-rap placement is so that the rock material interlocks to prevent soil erosion. Filter fabric shall be placed under the riprap.

The largest stones shall be placed first, roughly arranged and in close contact. The spaces between the larger stones shall be filled with spalls of suitable size. Whenever a drain pipe enters an open ditch, the bottom and sides of the ditch shall be rip-rapped for a distance of at least thirty (30) feet beyond the end of the pipe. Where ditches are permitted for use they shall not begin until they are past the dwelling, well or sewage disposal system area. Up to this point stormwater flows shall be carried in the pipe system.

Roadside ditches over five (5) percent grade shall be paved with asphaltic concrete in a three (3) inch thickness. The material shall be hot mix asphaltic concrete plant mix. It shall be top course mix and where possible, it shall be placed and incorporated in the finished top course of the road surface. At culvert inlets and outlets rip-rap shall be placed as shown on Figure 6.

SECTION 6 BASES AND SUBBASES

6.1 SUBGRADE

After completion of the rough grade and prior to the laying of the foundation course, the subgrade shall be shaped to line and grade and thoroughly compacted with an approved self-propelled vibratory roller weighing not less than ten (10) tons. All hollows and depressions which develop under rolling shall be filled with acceptable granular material and again rolled, this process to be continued until no depressions develop. The subgrade shall not be muddy or otherwise unsatisfactory when the foundation course is laid upon it. The subgrade shall be firm and unyielding and compacted to not less than ninety-five (95) percent Standard Proctor Density as determined by a testing laboratory approved by the Town Engineer.

Any soft or unstable portions of the subgrade, which develop under the right-of-way and shall be replaced with acceptable granular material and the area regarded and compacted as above.

6.2 Fine Grading

Before fine grading, all storm and sanitary sewers and all utilities, including house connections and hydrants, water mains, valves, cable, electric, and telephone shall have been installed and all fill and backfill shall have been thoroughly compacted to the satisfaction of the Town Superintendent of Highways or Town Engineer.

Fine grade shall conform to the prescribed width of pavement and shall extend equidistant from the centerline of the road right-of-way and shall conform to the typical cross sections of the road pavement and to the approved line and grade.

Any area heavily laden with clay or wet area within the area where the road is being constructed, a "Geo-textile" type fabric must be applied within the said areas mentioned above and should be placed before the final two (2) feet of road surface is applied. See Section 30-3 for further specifications. All fine grading shall be performed with an approved motor grader. A bulldozer shall not be permitted for use.

6.3 Foundation Course and Granular Material

After the fine grade and all curbs (where applicable) have been constructed to the satisfaction of the Town Superintendent of Highways or Town Engineer, the Developer shall furnish and place a foundation course of bank run gravel, approved graded gravel, process quarry material (commonly item 4), to the depths as called for in these specifications. All materials acceptable for these courses shall be hard, durable and sound and shall be graded from course to fine. For the nine (9) inch R-O-B gravel layer, one hundred percent by weight of the particles shall be of such size as will pass through a four (4) inch square hole, not less than thirty (30) percent shall pass one quarter (1/4) inch, not more than ten (10) percent by weight pass the #200 mesh sieve. When screened or graded gravel is used, it shall contain a sufficient amount of loam

content to insure that it possesses compaction properties. With the approval of the Superintendent of Highways, this layer only may be spread by the use of an approved bulldozer. Prior to installation a source sample shall be submitted to the Superintendent of Highways and Town Engineer for approval.

Fine grade shall conform to the prescribed width of pavement and shall extend equidistant from the centerline of the road right-of-way and shall conform to the typical cross sections of the road pavement and to the approved line and grade.

Any area heavily laden with clay or wet area within the area where the road is being constructed, a "Geo-textile" type fabric must be applied within the said areas mentioned above and should be placed before the final two (2) feet of road surface is applied. See Section 30-3 for further specifications. All fine grading shall be performed with an approved motor grader. A bulldozer shall not be permitted for use.

The materials shall be placed on the finished subgrade by means of mechanical spreaders in three (3) inch layers or a motor grader upon tailgate spreading by dump trucks and shall be thoroughly compacted by rolling with self-propelled vibratory roller not weighing less than ten (10) tons. Water

archaic, or not in proper mechanical condition, to provide a workmanlike job. Any rollers utilized shall have water only on the drums for lubrication/anti-sticking agent.

Extreme care shall be exercised in the placing of bituminous concrete to insure that all longitudinal joints shall be lapped in the placing of adjoining strips and that all lateral joints are trimmed before continuing with the placing of additional materials on that strip.

7.3 BITUMINOUS SURFACE TREATMENT (SINGLE COURSE)

Contractor shall construct bituminous surface treatment (single course) where required or as specified in approved plans and meeting the requirements of SECTION 410-3.02 of current Standard Specifications of New York State Department of Transportation.

Shoulders of highway with pavement shall be treated with additional surface treatment for surface texture and color contrast meeting requirements of SECTION 410-3.04 of Standard Specifications of New York State Department of Transportation. This will only be required in certain cases as determined by the superintendent of Highways or Planning. Where this is required, hot oil shall be applied on a clean road surface at a rate of .35 gallons per square yard. The oil shall be MC-5 or MC8 as approved by the Superintendent of Highways. Emulsions are not permitted for use. Upon placement of oil, the stone or aggregates shall be placed in a weight and method to be approved by the Superintendent of Highways, but shall consist of a mixture of 1 A's of clean crushed stone. If it is intended, upon approval of the Highway Superintendent and Planning Board, to oil and stone over the finished asphalt pavement to achieve a rural look, the developer will not be allowed to place the oil and stone for a period not less than two (2) months from the date of finished asphalt pavement.

SECTION 8 INCIDENTAL CONSTRUCTION

8.1 GENERAL

Prior to any construction or improvement commencing within the Town of Clermont R-O-W., the developer or lot owner proposing the improvement shall obtain a permit from the Town of Clermont Highway Superintendent. At a minimum, a sketch shall be prepared outlining the proposed improvements and location of the existing roadway and drainage structures. Once reviewed by the Highway Superintendent, a refundable permit fee will be required. The amount of this permit fee will be determined by the Highway Superintendent, based on the anticipated cost of the proposed improvement. In addition, the contractor or lot owner under NYS code 53, shall be responsible for contacting the Underground Utilities Call Center a minimum of two (2) working days prior to commencing any improvement.

8.2 DRIVEWAYS

Developer shall so design, layout, and construct all driveways both within and without the limits of the rights-of-way without difficulty.

Where a driveway is to be constructed as part of a new or recently developed subdivision, the driveway shall be constructed in full conformance with the approved subdivision plans upon obtaining a driveway permit from the Superintendent of Highways. For existing approved lots, or for improvements to any existing driveway, the driveway shall be constructed in accordance with these

shall be added to the materials in such amounts as the Town Superintendent of Highways or Town Engineer for approval.

The materials shall be placed on the finished subgrade by means of mechanical spreaders in three (3) inch layers or a motor grader upon tailgate spreading by dump trucks and shall be thoroughly compacted by rolling with a self propelled vibratory roller not weighing less than ten (10) tons. Water shall be added to the materials in such amounts as the Town Superintendent of Highways or Town Engineer may consider necessary for proper compaction. This layer shall be firm and unyielding and shall be compacted to ninety-five (95) percent Standard Proctor Density as determined by a laboratory approved by the Town Engineer. After compaction, the course shall be checked for any imperfections and these shall be eliminated by the use of additional granular materials, thoroughly compacted in order that it will not weave under the roller and the total depth after compaction shall not be less than twelve (12) inches. For the three (3) inch graded gravel top layer, the maximum particle size as will pass through a two (2) inch square hole; ten (10) to sixty-five (65) percent, by weight, shall pass the one quarter (1/4) inch square sieve, and not more than ten (10) percent, by weight, shall pass #200 mesh sieve. This layer shall also have sufficient amount of loam content to possess compaction characteristics. A source sample shall be submitted to the superintendent of Highways and Town Engineer for approval prior to installation.

SECTION 7 BITUMINOUS PAVEMENTS

7.1 Moto-Paving

Moto- Paving is not a permitted type or method of pavement installation for proposed roads in the Town of Clermont.

7.2 Hot Mix Asphalt Concrete (Plant Mix)

Contractor shall construct a two (2) course bituminous concrete pavement laid to conform to the required grade, thickness and cross-section shown on the plans and specifications. In no case shall the compacted finished thickness of the binder course be less than three (3") inches. In no case shall the finished thickness of the top course be less than one and one half (1 1/2") inches. These apply to a rural/suburban road. Other types of roads shall be as per the attached Figures, but all thicknesses referenced apply to a compacted finished thickness. Materials and method of construction shall conform to SECTION 401 of current Standard Specifications of New York State Department of Transportation.

After initial paving course has been thoroughly cleaned of foreign material, a tack coat of asphalt emulsion (ss-1 h) shall be applied to the surface at the rate of .1 to .2 gal. Per square yard in the event that the binder course has been subject to traffic for an extended period of time (typically 1 month unless otherwise dictated or approved by the Superintendent of Highways or Town Engineer based on the pavement condition.) Once the tack coat has been applied, if required, a final wearing course of fine hot mix asphaltic concrete shall be uniformly spread by a self-propelled mechanical spreader equipped with tamping bars and heating unit and in sufficient depth as to provide the required finished compacted thickness after rolling thoroughly with a two or three wheel tandem roller weighing not less than ten (10) tons. Static or vibratory rollers may be used as conditions dictate. The Superintendent of Highways shall have the right to reject any and all equipment related to paving, if in his opinion it is specifications. Any improvements such as regrading or paving of an existing driveway within the Town R-O-W shall also require a driveway permit.

8.21 SIGHT DISTANCE

All driveways shall be constructed with adequate sight distance as defined in section 70-4 of these specifications. Where adequate sight distance does not exist, it shall be incumbent upon the lot owner to clear and grade if necessary to obtain the sight distance. In cases where this must be carried out off-site, the lot owner shall obtain the necessary easements.

8.22 GRADES.

In all cases driveways shall have a grade of not less than one (1) percent, nor greater than fifteen (15) percent. Where possible all driveways shall be graded away from the roadway to preclude excess runoff and debris from entering the Town road. In cases

where this cannot be achieved sufficient grading and drainage shall be provided to minimize impact to the town Road. Further, all driveways and lot grading shall be performed to blend with the finished road grading to preclude ponding, and to promote overall drainage. Where lots are below road grade, all lot and driveway grading shall be performed in such a manner as to direct any road runoff away from the dwelling and appurtenant areas. Pipes, interceptor swales and the like should be utilized. The Town will be held responsible for improper lot grading, which results in damage from road runoff.

8.23 APRONS.

All driveways shall be constructed with a blacktop apron constructed over a twelve (12) inch gravel subgrade. In no case shall the apron extend less than twenty (20) feet from the edge of the paved road surface. In no case shall the apron be less than (15) fifteen feet wide. The apron shall be constructed of hot mix asphalt concrete plant mix and shall have a finished compacted thickness of three (3) three inches. The apron shall conform to Figure 21 of these specifications.

8.24 Mail Box Aprons

In addition to Section 70-3.3, all single driveways having rural type mailboxes in the new subdivisions, shall have a hot mix asphalt concrete plant mix placed over a twelve (12) inch gravel surface, in the delivery pull-off area. The apron shall have a finished thickness of not less than three (3) inches, and shall conform to the standards of figure 14 included in these specifications. All mailboxes shall be set in conformance with the standards of the U.S. Postal Service with regard to mounting height, location and post anchoring.

8.25 Driveway Culverts

Where required, all driveway culverts shall have a minimum diameter of not less than twelve (12) inches, unless otherwise permitted by the Town Highway Superintendent, and shall have a minimum length of not less than two (2) feet. These shall be installed where required as shown on an approved subdivision plan. If no such plan exists, culvert installation will be at the direction of the Town Superintendent of Highways during the driveway permit process. Pipes shall be of the type specified in Section 40-3 of these specifications. All driveway culverts shall have end sections on inlets and outlets.

8.3 Intersections

Developer shall construct all road intersection in accordance with Figure 9A. Intersecting streets shall be laid out so as to intersect at ninety (90) degrees where feasible. An angle of intersections of less than eighty (80) degrees shall not be permitted. Also to be included is an Intersection Profile.

A minimum of three hundred (300) feet of unobstructed stop line sight distance shall be provided for both approaches along the highway at driveway entrances.

Stop line sight distance shall be measured from a point on the centerline of the approaching lane of the minor road or driveway twelve (12) feet behind the projected edge of the roadway of the major road, to a point on the centerline of the approaching lane of major road. The height of eye and height of object shall both be assumed to be forty-four (44) inches above the road pavement. Each approach to the intersection shall be considered separately.

The minimum site distance shall be as shown in figure 9, Figure 9A and Table 5 of these Specifications. If the proposed road is connected to the Town Road, which has no posted speed limit, the speed limit shall be designated as 35 MPH for the purpose of determining site distance.

8.4 Road Name Signs

Developer shall furnish and install a four way road name sign at every road intersection made by the roads he constructs. This shall also include any new roads with existing roads. Signs and posts shall conform to the standards established by the Manual of Uniform Traffic Control Devices (MUTCD Manual 5746) as published by the NYSDOT. All signs shall meet the requirements of Figure 10. They shall not be set in concrete. No decorative or other sign types will be permitted for use. In general the signs shall have a reflective green background, with white reflective letters for the road name. In all cases road names shall be approved by the Planning Board, Town Clerk and Town Board. Names shall not conflict with existing road names for emergency services purposes. All required or proposed signs shall be shown on the plans.

If the proposed subdivision road is connected to a State or County Road, then their sight distance standards will govern; and will only be approved by the Town upon receipt of a valid Highway Work Permit by the Town.

All intersections shall have stop bars painted on the final course of asphalt. All stop bars shall be constructed in conformance with the Manual of Uniform Traffic Control Devices (MUTCD Manual 5746) as published by the NYSDOT.

8.5 Monuments

Monuments shall be a minimum of thirty-six (36) inches long, and five (5) inches square at the top and shall have centered in the top a three eighths (3/8) inch or one half (1/2) inch drill hole, a three eighths (3/8) inch or one half (1/2) inch steel rebar slightly protruding, or some other permanent and satisfactory center mark. Monuments shall be of cut granite free from imperfections or of concrete as shown on Figure 11, Appendix B.

Monuments shall not be set until roadway has been completed nor shall they set while frost is in the ground. They shall be so set and tamped as to prevent settlement or shifting. The Developer's

Licensed Surveyor shall certify that the location of the monuments is accurate before acceptance of the highway by the Town Board. Monuments shall be located in sufficient number to control the subdivision but at a minimum they shall be located at every point of tangency, point of curvature necessary to provide visibility between adjacent right a

way line of each street. All easements shall be similarly monumental. All installed monuments shall be shown on the as-built or record drawing.

8.6 Guide Rail

Type and need for guide rail installation shall be approved by Town Superintendent of Highways and Town Engineer. General guide lines for determining the need for guide rails are shown below.

1. Height of drop off from break of road shoulder slope to the toe of the slope. Slopes less than one (1) on two (2) with height of drop-off more than four (4) feet will require guide rail installation. Slopes one (1) on two (2) having a height of drop off more than ten (10) feet will be protected with guide rail.
2. Guard rails shall be installed to protect drivers from fixed objects and roadside hazards as shown on the following list.
 - a. Culvert headwalls
 - b. Along bodies of water
 - c. Rock cuts and rock outcrops
 - d. Retaining walls

Guide rail installation shall be in accordance with Sections - 710-20, "CORRUGATED BEAM GUIDE RAILING" of Current Standard Specification of New York State Department of Transportation. (See figures 12 and 12A; Appendix B.) The guide rails shall be new and shall be constructed of galvanized steel. Wooden guide rails are not permitted for use under any circumstances. Any areas of existing Town Roads being reconstructed by a developer in conjunction with his development plans which require guide rail upon completion, shall have guide rails installed at the Developer's expense.

8.7 Traffic Signs

All signs, signals, markings, regulatory warning and other control devices for maintenance and protection of traffic must conform to the requirements of the Manual of Uniform Traffic Control Devices (MUTCD Manual 5746) as published by the NYSDOT. All signs shall be mounted on breakaway posts. Any signs constructed by the developer for subdivisions or site plans shall be located outside the existing or proposed Town right-of-way and shall be the full responsibility of the developer for maintenance and removal. All Town of Clermont Zoning Ordinance stipulations shall be complied with. All required or proposed signs shall be shown on the plans.

8:8 House Drains

Roof and cellar drains shall in no case be allowed to flow onto the highway right-of-way. Without the approval of the Town Superintendent of Highways and Town Engineer, in writing, these drains may be piped to the roadway storm water drain to which they shall

be connected on the top only. Such drains must be installed prior to the start of fine grading of the roadway.

8.9 Turning Circles

Wherever a temporary or permanent dead-end is allowed on a subdivision highway, a turn-around shall be constructed. This turn-around shall take the form of a circle as required by the Town Planning Board and shall be constructed as shown on Figure 13 and 13A, Appendix B. The temporary type of construction shall be used only when authorized by the Town Planning Board in cases of the foreseeable future extension of the Highway.

Catch basins or culverts shall be placed in such a manner as to capture surface water in conformance with Section 40-6 of these Specifications. In no case, shall the diameter of the finished pavement in either a temporary or permanent cul-de-sac be less than one hundred (100) feet. In cases where temporary Cul-de-sacs are constructed the subdivision plans shall provide for the reverting of highway right-of-way to the abutting land owners at the time of future extension. This shall be carried out in conformance with the Town of Clermont Land Subdivision Regulations.

8.10 Rock Excavations

In cases where exposed rock cut become a portion of the permanent highway right-of-way, the slopes shall not exceed one (1) and one half ($1 \frac{1}{2}$), provided that the rock cut is stable, as certified in writing by the Developer's Licensed Engineer, in the State of New York. If the determination is made that the rock is not stable, the Developer shall "lay back" the slope by further excavation; or provide other such permanent means to protect the highway right-of-way, appurtenances and citizens from falling rock. All certifications and physical improvements shall be subject to the approval of the Town Superintendent of Highways and Town Engineer.

8.11 Existing Width Roads

Where Developer proposes to extend an existing Town Road as part of a new development, the Town Superintendent of Highways may permit a narrower road section or transition section to accommodate the difference between existing road widths and the standard which is now required. This decision would be made during the review of proposed development plans by the Planning Board and Town Engineer. Factors, such as amount of traffic, lot density, safety, etc. would be taken into consideration.

TABLE 1 PERFORMANCE AND MAINTENANCE BOND RATES

A performance bond is to be for a two (2) year period. If a Letter of Credit is posted it shall be renewed annually. Maintenance bonding will be for a one (1) year period and be twenty (20) percent of the original performance bonding amount or minimum twenty thousand (\$20,000) dollars.

PROCEDURE FOR BONDING BY DEVELOPERS OF NEW ROADS

A performance bond can be in the form of an insurance bond, irrevocable letter of credit or cash, and will run for a period of two (2) years, unless otherwise specified above. A one (1) year maintenance bond of twenty (20) percent of the original amount of the performance bond will be required thereafter, to be posted just prior to the acceptance of the road dedication by the Town Board.

amount of his road bond. When the bond method of bonding is submitted by the developer to the planning board, the Board will receive approval of such bond from the Town Attorney. Approval from the Town Attorney will be in writing.

After approval of the Town Attorney, the Planning Board may grant Final Approval, subject to such bond being accepted by the Town Board at a regular Town Board meeting.

The Planning Board submits the bond to the Town Board for their acceptance. The Town Board must advise the Planning Board when they have accepted the bond. The Planning Board may then sign the plat, if all other contingencies have been met.

The original bond is filed with the Town Clerk. The Highway Superintendent is advised of the date of the bond expiration date. It is his responsibility to follow construction of the new road and the bond expiration date. One month prior to the expiration date, the Highway Superintendent will determine if the new road drainage and other related improvements will be completed to the Town Specifications and if necessary advise the developer to get an extension on the bond until the new road is satisfactorily completed. A copy of that letter should be sent to the bonding company or bank involved.

If the Highway Superintendent has determined that a new road will not be satisfactorily completed by the expiration date of the bond, and a letter has been sent to the developer advising him that an extension of the bond is necessary AND NO EXTENSION OF THE BOND HAS BEEN RECEIVED ONE (1) DAY BEFORE THE EXPIRATION DATE, the Highway Superintendent will advise the Building Inspector not to issue any further building permits in that development and all work in the development should cease.

Highway Superintendent advises the Town Board in writing when the new road and drainage is satisfactorily completed. The Town Board will accept the dedication of the road to the Town, performance bond is returned to the developer and simultaneously a one year maintenance bond is received from the developer. At the end of the one year period for the maintenance bonding, the bond that has been posted (or remainder thereof) will be returned to the developer.

With regard to the maintenance bond, the Town Highway Superintendent and Town Engineer shall inspect the completed road and appurtenances ninety (90) days prior to the expiration of the maintenance bond. A written notification of the findings shall be issued within five (5) working days. Defects found shall be remedied by the developer within sixty (60) calendar days of the date of issuance of the notification. At the end of this period re-inspection shall be made. If all items are completed and no further defects are found or occur, the Town Highway Superintendent and Town Engineer shall advise

the Town Board in writing to release the maintenance bond at their regularly scheduled Board meeting. If the developer fails to make the repairs within the specified period the Town Highway Superintendent will notify the Town Supervisor that the maintenance bond shall be called, in order for the Town to make the repairs. This action shall take place at least thirty (30) days prior to expiration of the maintenance bond.

SEE NEXT PAGE FOR PERFORMANCE BOND UNIT ITEMS.

TABLE SUMMARY OF HIGHWAY
SPECIFICATIONS

**The Town of Clermont
HIGHWAY SPECIFICATIONS**

TABLE 2

SUMMARY OF HIGHWAY SPECIFICATIONS

	MAJOR/ THROUGH	RURAL/ SUBURBAN
R.O.W. Width	60'	50'
Clearing Width	60'	50'
Grading Width	60'	50'
Pavement Width	24'	22'
Storm Drains	Yes	Yes
Foundation	12" R-O-B	9" R-O-B
Course	Gravel 3" Graded Gravel	Gravel 3" Graded Gravel
Pavement Base Course	4" Asph. Conc. Hot mix	3" Asph. Conc. Hot mix
Pavement Top Course	2" Asph. Conc. Hot mix	1 1/2" Asph. Conc. Hot mix
Wearing Course	Single course bituminous surface treat.	Single bituminous surface treat.
R.O.W. Radius at intersec.	25'	10'
Pavement radius at intersection	30'	20'
Shoulder	12" R-O-B gravel, & T-S-M.	12" R-O-B gravel, & T-S-M.
Monuments	Yes	Yes
Road Name	Yes	Yes
Signs		
Road Safety Sign & Regulatory Signs	Yes	Yes

CHECKLIST

The following items shall be required on the record drawings for subdivision in the Town of Clermont where roads, drainage and other public improvements are required. These requirements can only be waived in writing by the Town of Clermont, Town Highway Superintendent and Town Board.

1. Record drawings shall be drawn at a scale which is identical to the appropriate approved subdivision plan (i.e: if a grading plan was approved at 1" = 50', the record drawing should be submitted at the same scale).
2. Six (6) copies of the record drawing shall be submitted (1 Town Clerk, 2 Highway Superintendent, 1 Town Planning Board, 1 Town Board, 1 Town Engineer) .
3. All rights-of-way and easements shall be shown with all monumentation and bearings and distances.
4. Show the curbs and pavement within the R-O-W.
5. Locate and show all drainage structures including those which are in the roadway and any easements. All structures shall be labelled, all pipe sizes, types and inverts notes, and all structure rim elevations shall be shown.
6. Show grading of all drainage ditches and swales and detention/retention ponds. Topographic contour interval shall be two (2) foot and shall be of sufficient detail and scope to show conformance to the approved plan.

NOTE: WHERE DEEP CUTS OF FILLS ARE REQUIRED, ADDITIONAL AREAS ELI REQUIRE GRADING TO BE SHOWN AS PER TOWN HIGHWAY SUPERINTENDENT OR TOWN ENGINEER.

TABLE N

RECORD DRAWING CHECKLIST

The following items shall be required on the record drawings for subdivision in the Town of Clermont where roads, drainage and other public improvements are required. These requirements can only be waived in writing by the Town of Clermont, Town Highway Superintendent and Town Board.

1. Record drawings shall be drawn at a scale which is identical to the appropriate approved subdivision plan (i.e: if a grading plan was approved at 1" = 50', the record drawing should be submitted at the same scale).
2. Six (6) copies of the record drawing shall be submitted (1 Town Clerk, 2 Highway Superintendent, 1 Town Planning Board, 1 Town Board, 1 Town Engineer).
3. All rights-of-way and easements shall be shown with all monumentation and bearings and distances.
4. Show the curbs and pavement within the R-O-W.
5. Locate and show all drainage structures including those which are in the roadway and any easements. All structures shall be labelled, all pipe sizes, types and inverts notes, and all structure rim elevations shall be shown.
6. Show grading of all drainage ditches and swales and detention/retention ponds. Topographic contour interval shall be two (2) foot and shall be of sufficient detail and scope to show conformance to the approved plan.

NOTE: WHERE DEEP CUTS OF FILLS ARE REQUIRED, ADDITIONAL AREAS REQUIRE GRADING TO BE SHOWN AS PER TOWN HIGHWAY SUPERINTENDENT OR TOWN ENGINEER.

TABLE NO. 4

SUBDIVISION ROAD AND RELATED PUBLIC IMPROVEMENT ENGINEER'S
CERTIFICATION FORM

1, I, _____, submit herewith six (6) copies
(PROFESSIONAL ENGINEER) of the RECORD DRAWING(S) for

SUBDIVISION NAME _____ which
have been prepared in conformance with the Town of Clermont
checklist. Based on a review of the RECORD DRAWING as based on
inspection of the construction activities, I hereby certify
that the subdivision roads and public improvements were built
generally in conformance with the approved plan. In addition to
the as-built plan, the following items were observed to be in
general conformance to the approved plans:

- A. INCHES R-0-B SUBGRADE
- B. INCHES FOUNDATION MATERIAL.
- C. INCHES ASPHALTIC CONCRETE BASE COURSE
- D. INCHES ASPHALTIC CONCRETE TOP COURSE
- E. TYPE OF SURFACE TREATMENT (MC-5 OR MC-8)
- F. FEET FINISHED PAVEMENT WIDTH
- G. TYPE(S) PIPE WERE INSTALLED

2. Due to site conditions or construction difficulties or contractor
error, the following changes were made from the approved plans.

- A. _____
- B. _____
- C. _____
- D. _____
- E. _____
- F. _____

Attached herewith are copies of letters from the Town of
Clermont approving the change and/or the following
documentation is submitted herewith demonstrating that the
change is not producing a deleterious effect and that it is
substantially conforming to the approved plans and Town Code:

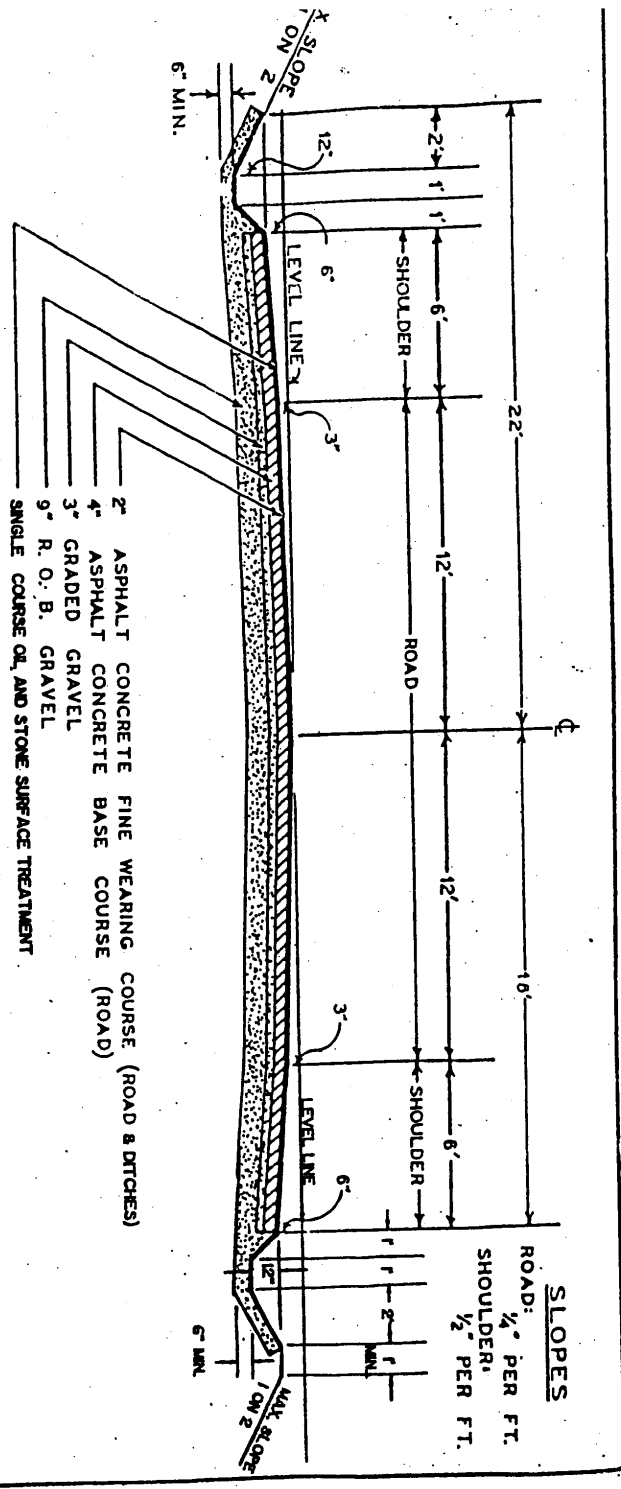
ATTACH ANY OR ALL OF THE FOLLOWING WHICH MAY BE REQUIRED:
(Drainage Report, Road Profiles, Grading Plans, Etc.)

PROFESSIONAL ENGINEER (TYPE)

LICENSE NO.

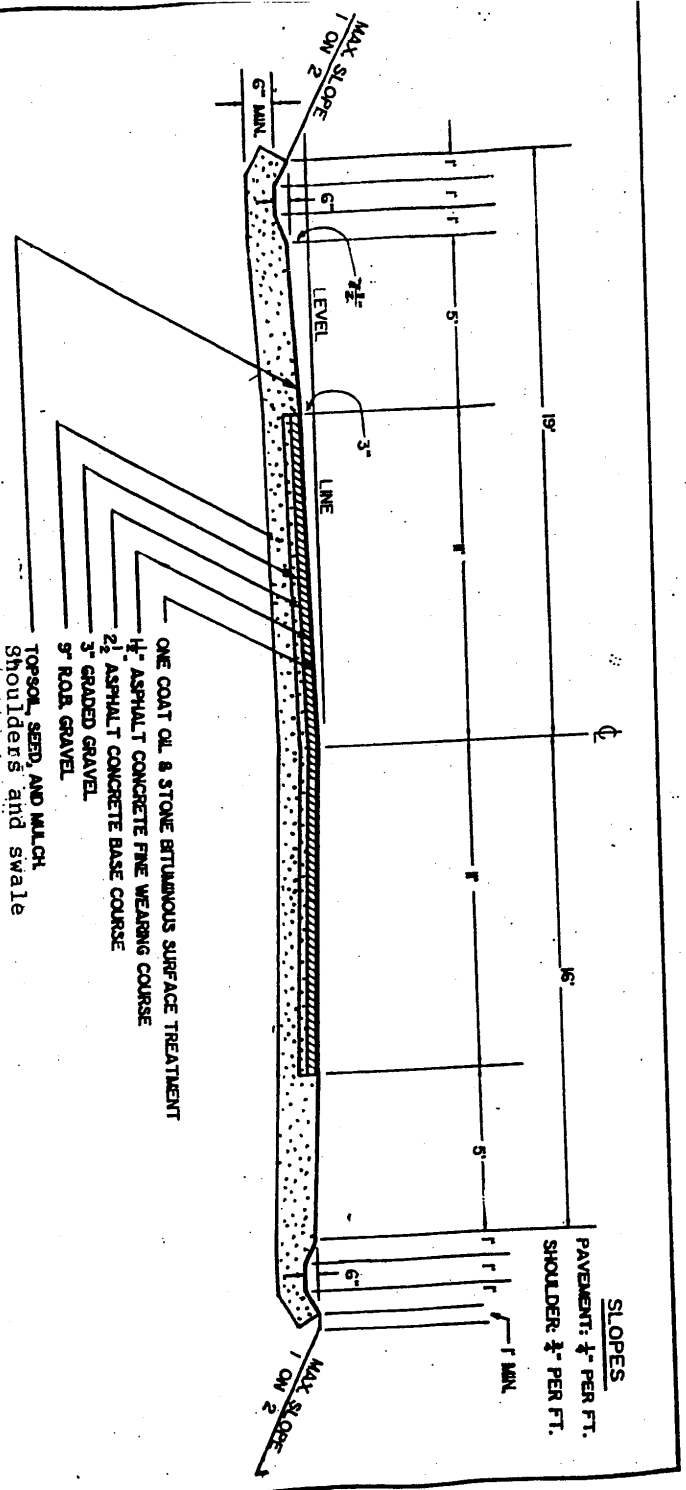
SIGNATURE AND SEAL

MAJOR / THROUGH HIGHWAY — TYPICAL SECTION



TOWN HIGHWAY STANDARDS

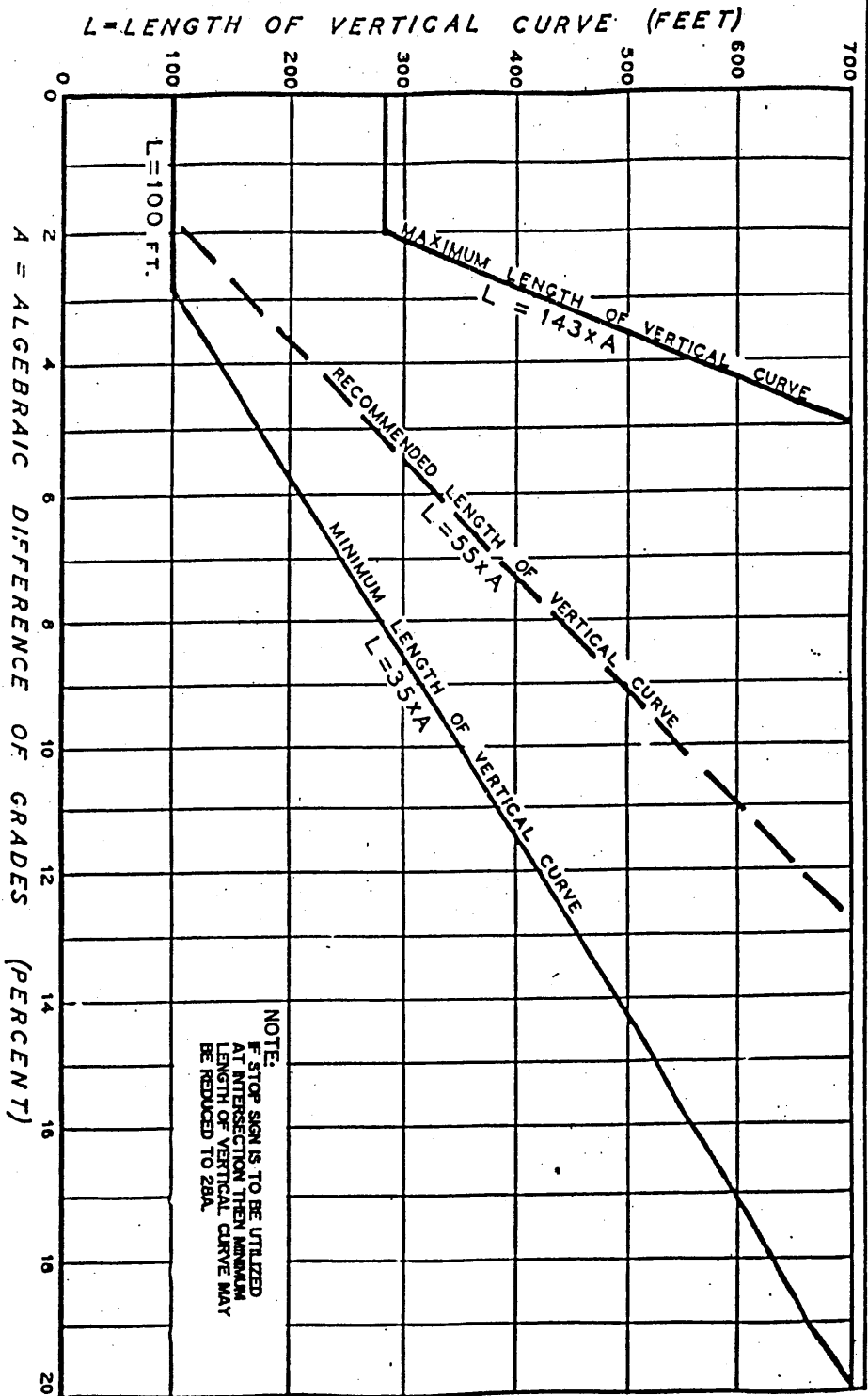
SCALE: 3/16" = 1'-0" FIGURE: 1
 PREPARED BY Town of Clermont October 2001



RURAL / SUBURBAN HIGHWAY — TYPICAL SECTION

TOWN HIGHWAY STANDARDS	
SCALE: $\frac{3}{8}$ " = 1'-0"	FIGURE: 2
PREPARED BY Town of Clermont	October 2001

VERTICAL CURVE SPECIFICATIONS



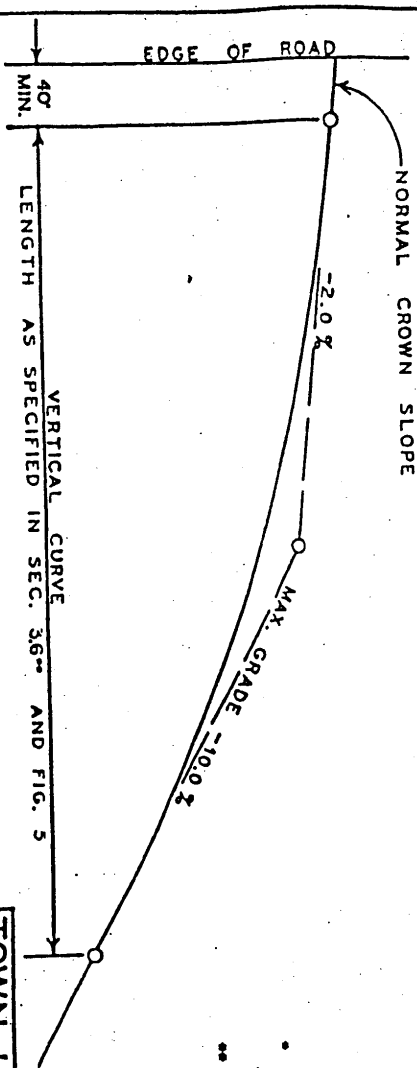
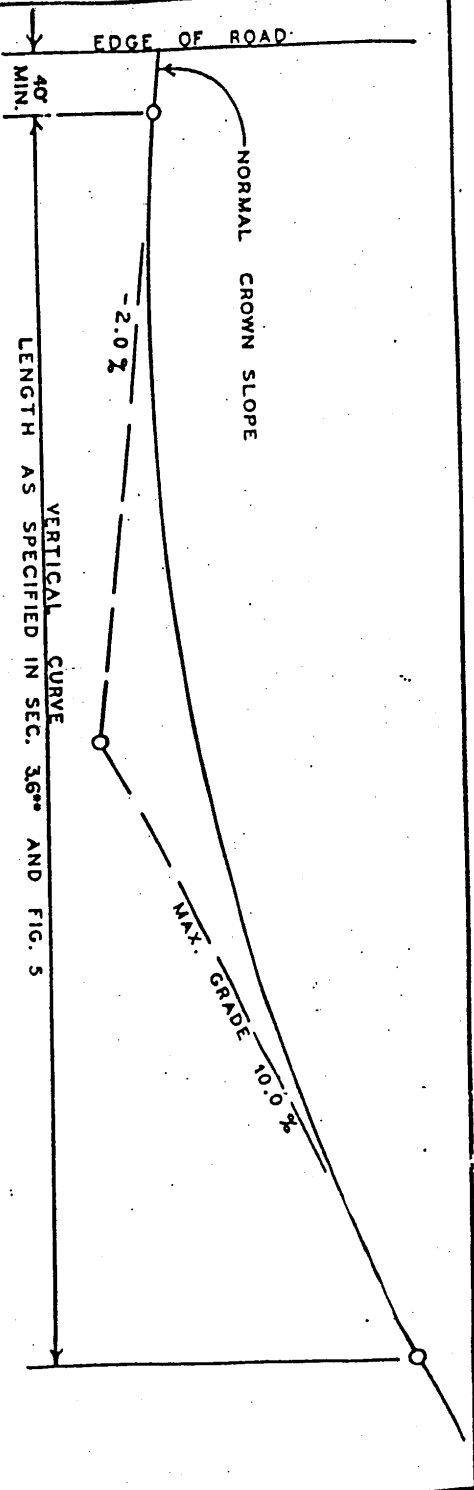
TOWN HIGHWAY STANDARDS

SCALE: NONE

FIGURE: 3

PREPARED BY Town of Clermont

October 2001



• FOR INTERSECTIONS WITH
STOP SIGN CONTROLS
** USE K VALUE OF 28

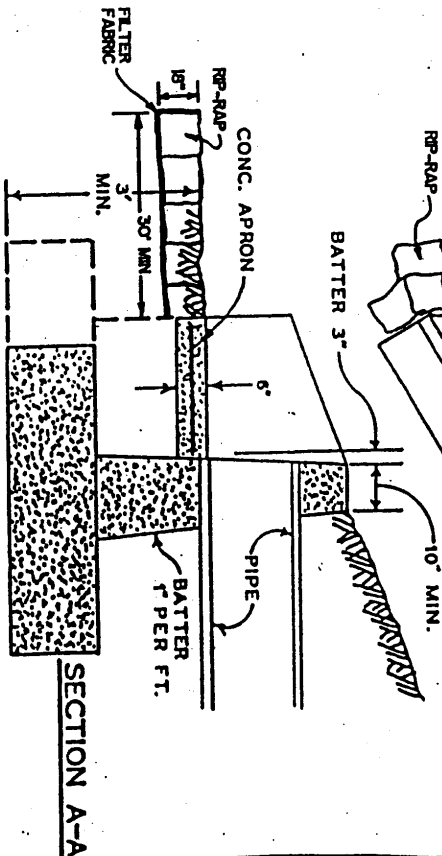
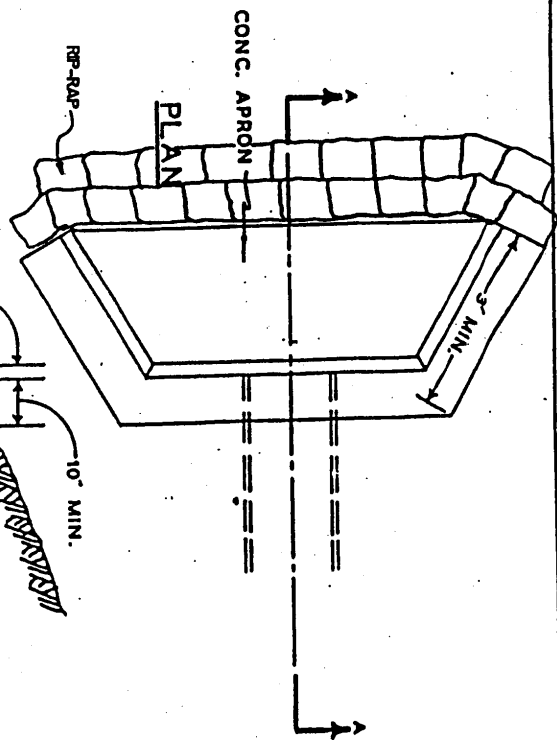
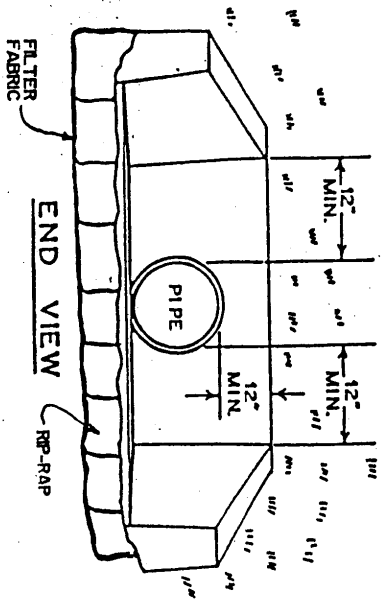
MINIMUM STANDARDS FOR*
SIDE ROAD APPROACH GRADES

TOWN HIGHWAY STANDARDS

SCALE: 1" = 50' HORIZONTAL | FIGURE: 4
1" = 10' VERTICAL
PREPARED BY: Town of Clermont | October 2001

NOTES

1. WALLS AND FOOTINGS SHALL BE PROPERLY REINFORCED CONSISTENT WITH THE SIZE OF THE STRUCTURE AND MODERN ENGINEERING PRACTICE.
2. APRON SLABS SHALL BE REINFORCED WITH #6-66 WELDED WIRE MESH LOCATED HALFWAY BETWEEN TOP AND BOTTOM SURFACES.
3. CONSTRUCTION JOINTS SHALL BE PROPERLY DOWELED OR REINFORCED.



CONCRETE HEADWALL AND WINGWALL DETAILS

TOWN HIGHWAY STANDARDS

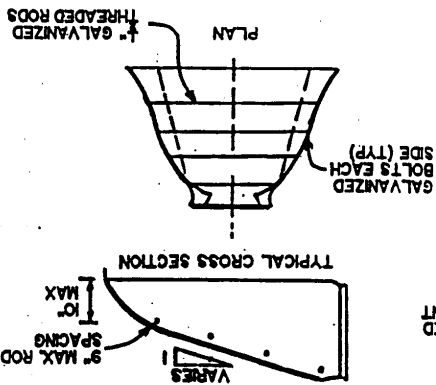
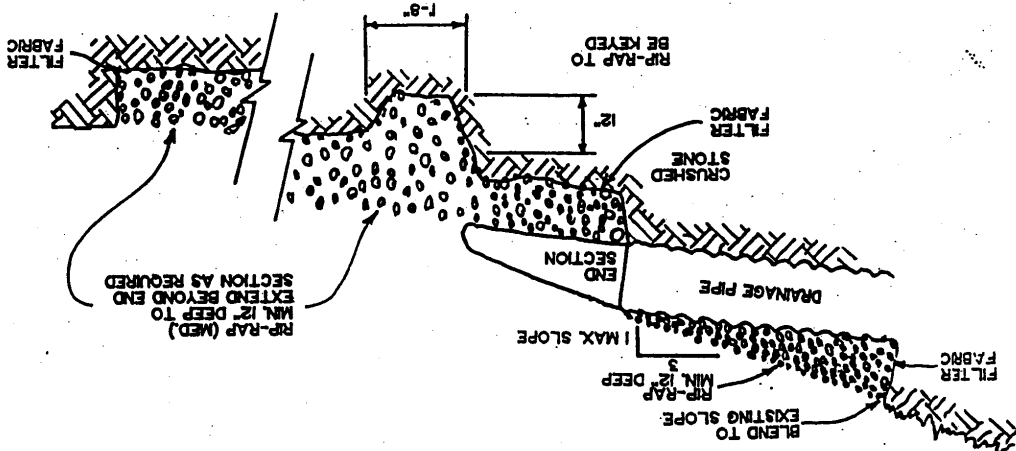
SCALE: N.T.S. FIGURE: 5
 PREPARED BY The Town of Clermont October 2001

TOWN HIGHWAY STANDARDS

SCALE: N.T.S. FIGURE: 6

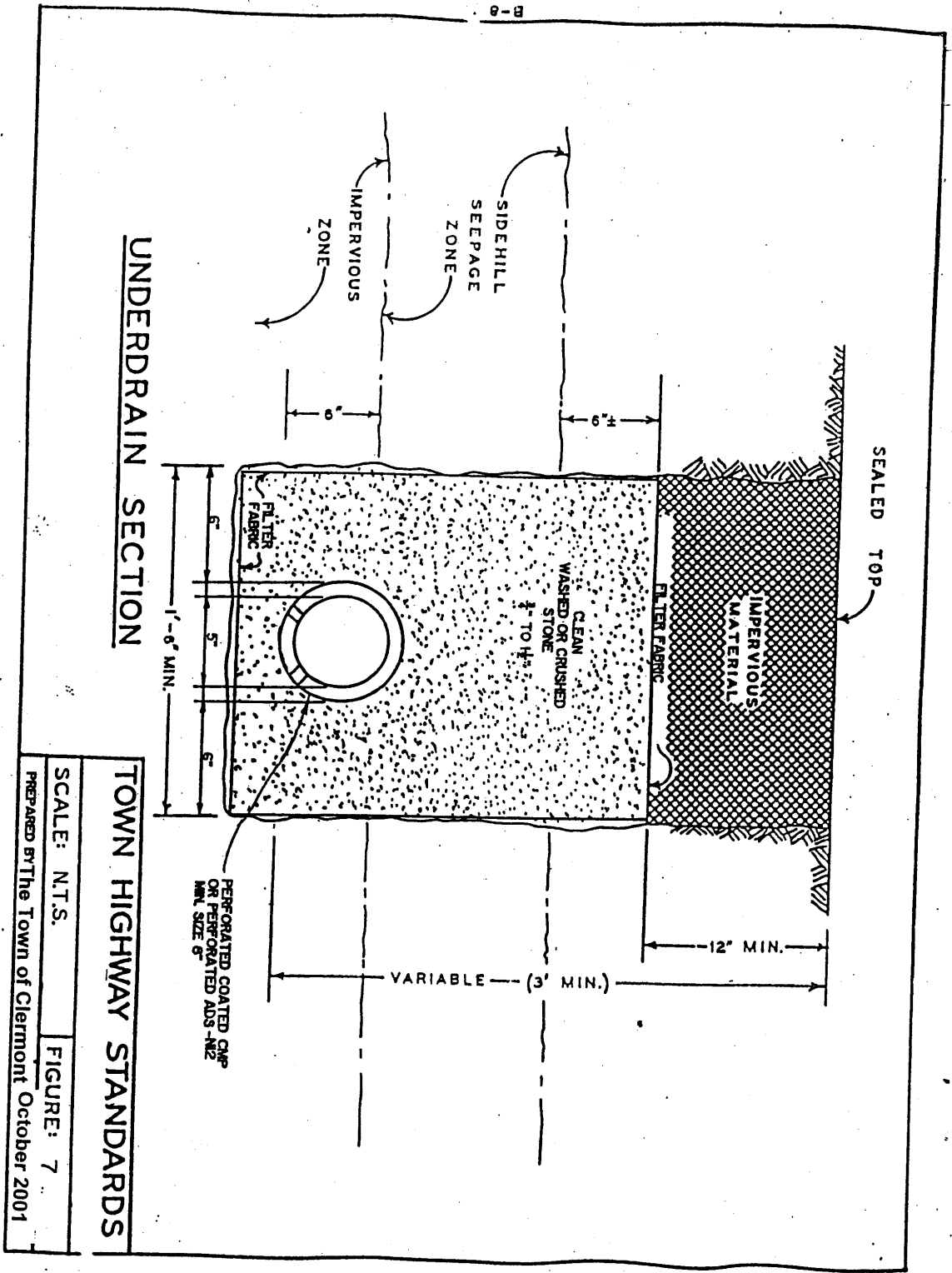
END SECTION DETAIL
N.T.S.

NOTE: ALL END SECTIONS SHALL BE RIP-RAPPED A MIN. OF 30 FT. BEYOND THE END SECTION OR APPROVED EQUAL. FILTER FABRIC SHALL BE MIRAFI 600X



PIPE DIA.	# BARS
50"	7
48"	7
46"	7
44"	7
42"	7
40"	7
38"	7
36"	7
34"	7
32"	7
30"	7
28"	7
26"	7
24"	7
22"	7
20"	7
18"	7
16"	7
14"	7
12"	7
10"	7
8"	7
6"	7
4"	7
3"	7
2"	7
1"	7

NOTE: PIPE SIZES OVER 60" SHALL HAVE GRATES PRIORLY APPROVED BY THE HIGHWAY SUPERINTENDENT



UNDERDRAIN SECTION

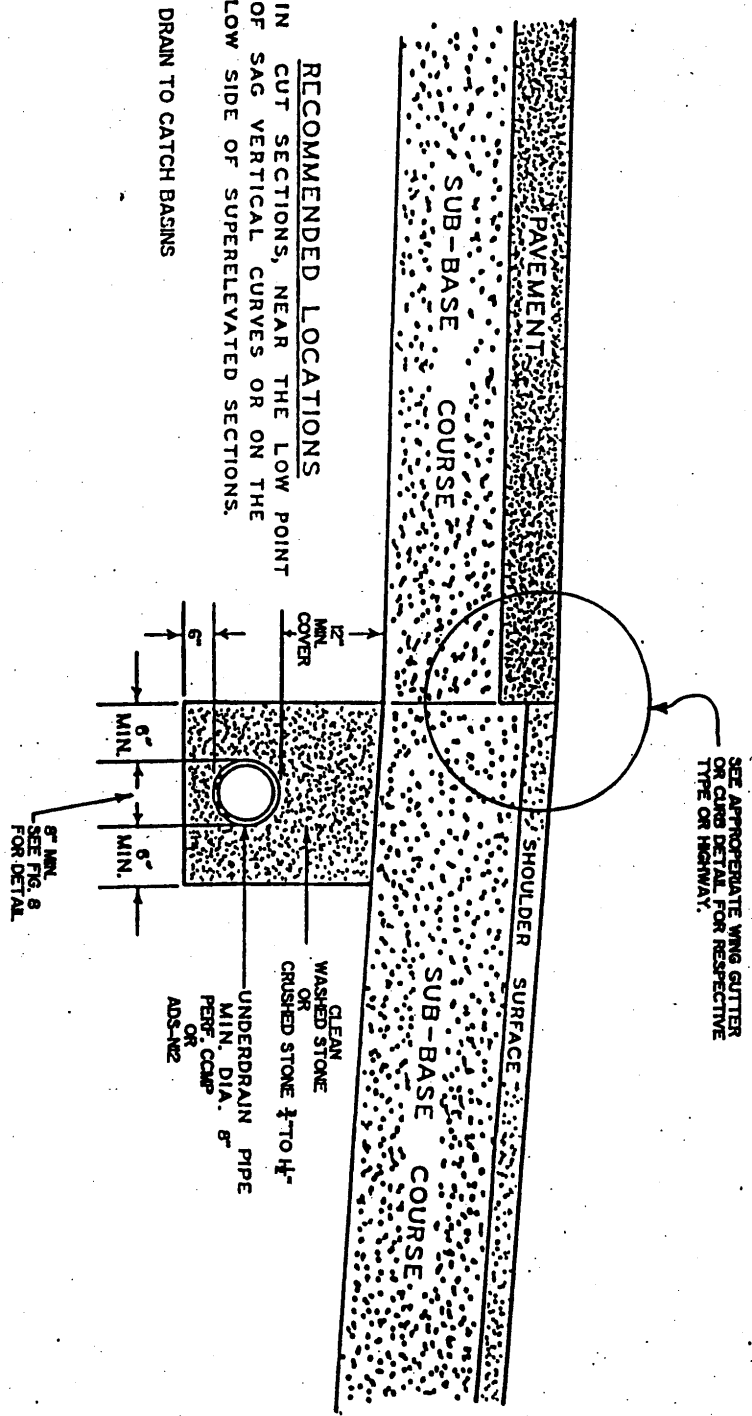
TOWN HIGHWAY STANDARDS

SCALE: N.T.S. FIGURE: 7
 PREPARED BY The Town of Clermont October 2001

EDGE OF PAVEMENT DRAIN SECTION

TOWN HIGHWAY STANDARDS

SCALE: NONE FIGURE: 7A
 PREPARED BY The Town of Clermont October 2001



* DRYWELLS ARE NOT PERMITTED

CATCH BASIN DETAIL

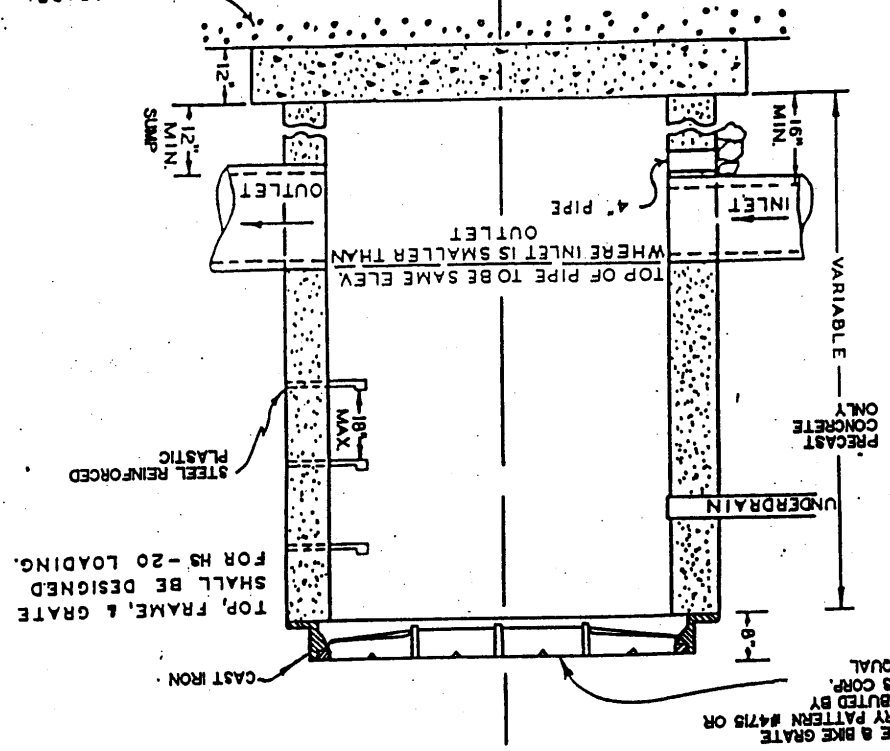
TOWN HIGHWAY STANDARDS

SCALE: NONE
FIGURE: 8
October 2001
PREPARED BY The Town of Clermont

B-10

9" SUBGRADE
CRUSHED STONE
OR R.O.B. GRAVEL

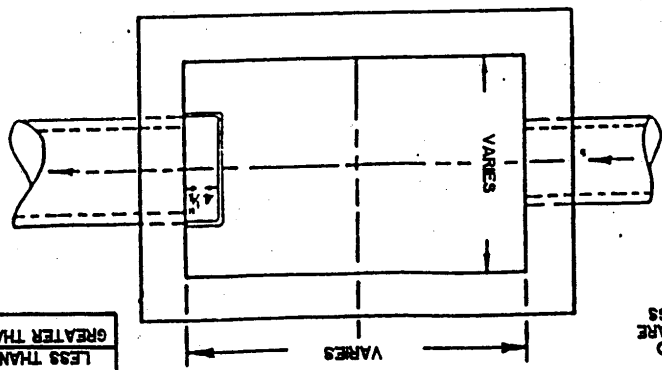
FRONT ELEVATION



CAST IRON FRAME & BIKE GRATE
LAPLÉ FOUNDRY PATTERN #4715 OR
#2308 AS DISTRIBUTED BY
EDGERTON SALES CORP.
OR APPROVED EQUAL

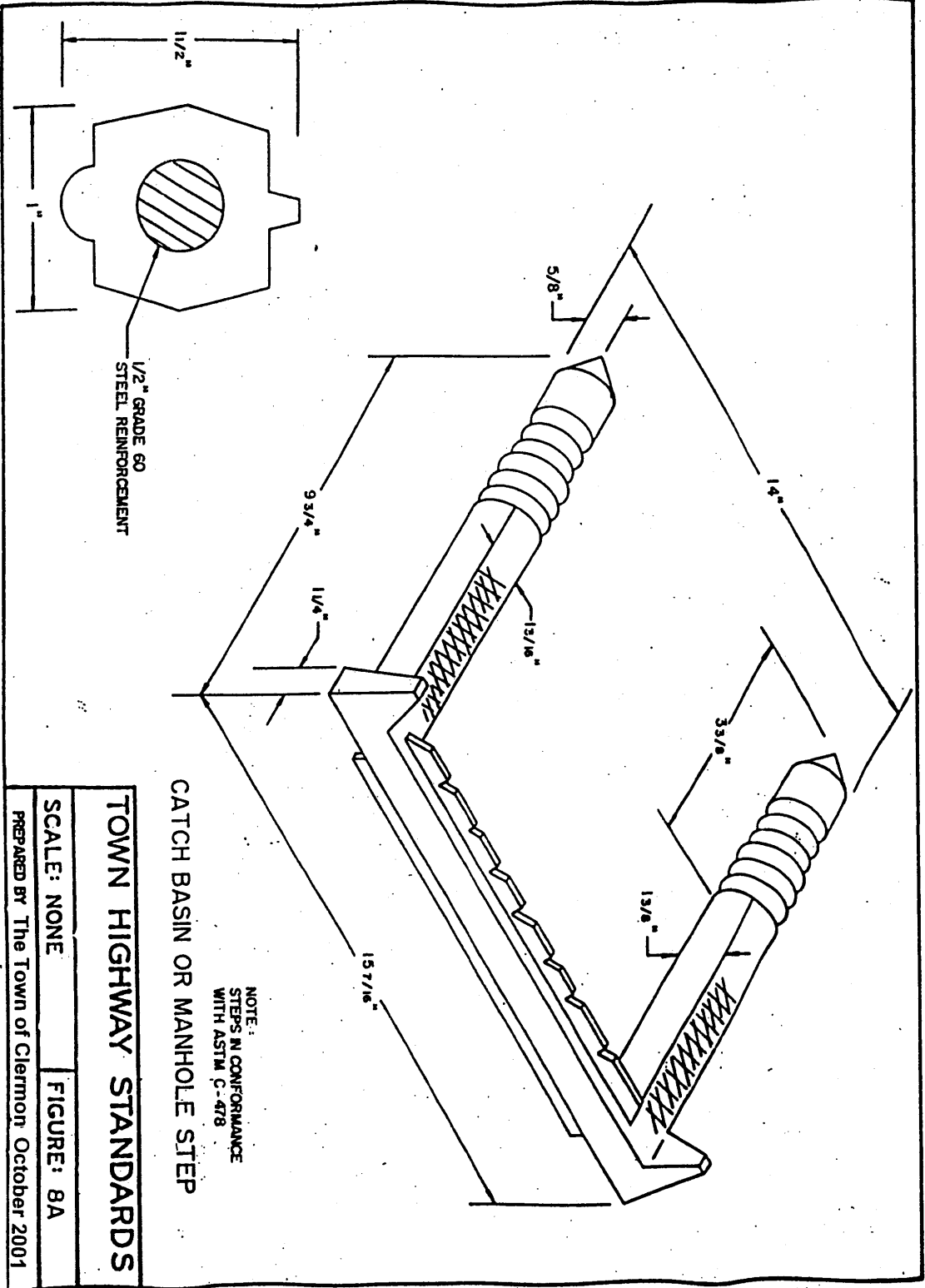
TOP, FRAME, & GRATE
SHALL BE DESIGNED
FOR HS - 20 LOADING.
STEEL REINFORCED
PLASTIC
18" MAX

PLAN



NOTE:
ONLY PRECAST REINFORCED
CONCRETE CATCH BASINS ARE
PERMITTED. SHOP DRAWINGS
MUST BE SUBMITTED FOR
REVIEW AND APPROVAL OF
TOWN

CATCH BASIN DEPTH	24"x24"	GREATER THAN 3'	30"x48"
CATCH BASIN SIZE	24"x24"	LESS THAN 3'	30"x48"



1/2" GRADE 60
STEEL REINFORCEMENT

NOTE:
STEPS IN CONFORMANCE
WITH ASTM C-478

CATCH BASIN OR MANHOLE STEP

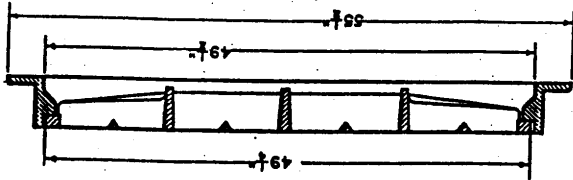
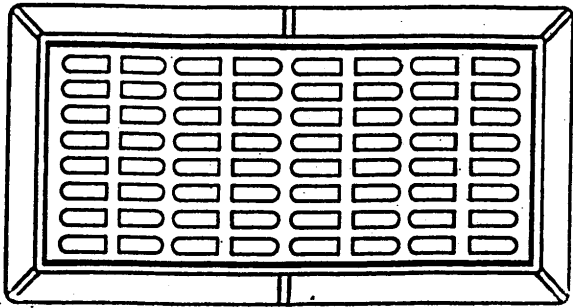
TOWN HIGHWAY STANDARDS

SCALE: NONE | FIGURE: 8A

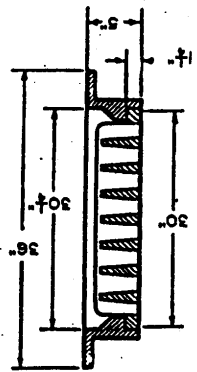
PREPARED BY The Town of Clermont October 2001

N27246

**Heavy Duty Inlet
Frames & Bike
Grates**



Pattern Number 2308



FOR USE ON CATCH BASINS OVER
3 FEET DEEP WITH 30" X 48" OPENING.

Pattern Number	Dimensions in Inches										Weight #
	B	BB	C	CC	E	F	FF	X			
2308	36	55 1/2	30	49 1/4	5	30 1/4	49 1/2	1 1/4			690

TOWN HIGHWAY STANDARDS

SCALE: NONE

FIGURE: 8B

- 1) CAST IRON CONFORMING TO A.S.T.M. A-48 LATEST REVISION, CLASS 30-B.
- 2) HEAVY DUTY, CONFORMING TO A.A.S.H.T.O. H-20S16 HIGHWAY LOADING.
- 3) CASTINGS ARE BITUMINOUS COATED.

October 2004

PREPARED BY The Town of Clermont October 2001

SCALE: NONE

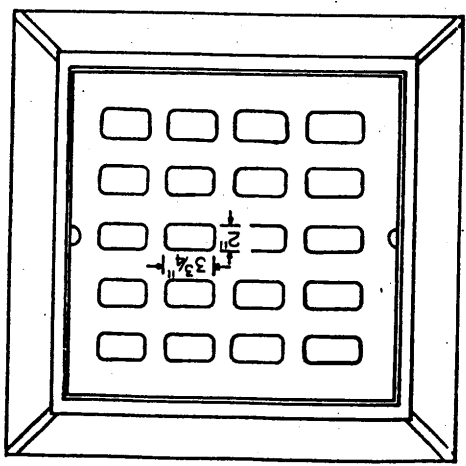
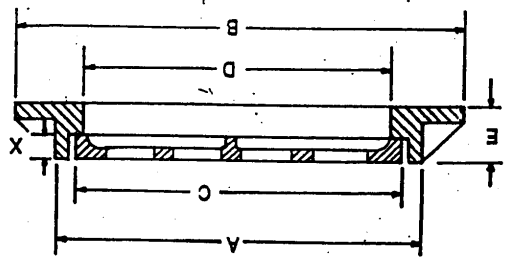
FIGURE: BC

TOWN HIGHWAY STANDARDS

1. Cast iron conforming to A.S.T.M. A-48
2. Heavy duty, conforming to A.A.S.H.T.O. H-20516 highway loading.
3. Castings are bituminous coated.

Pattern Number	Dimensions in Inches						Weight #
	A	B	C	D	E	X	
4715	26 ^{3/4}	30	25 ^{1/4}	24	4	1 ^{1/2}	315

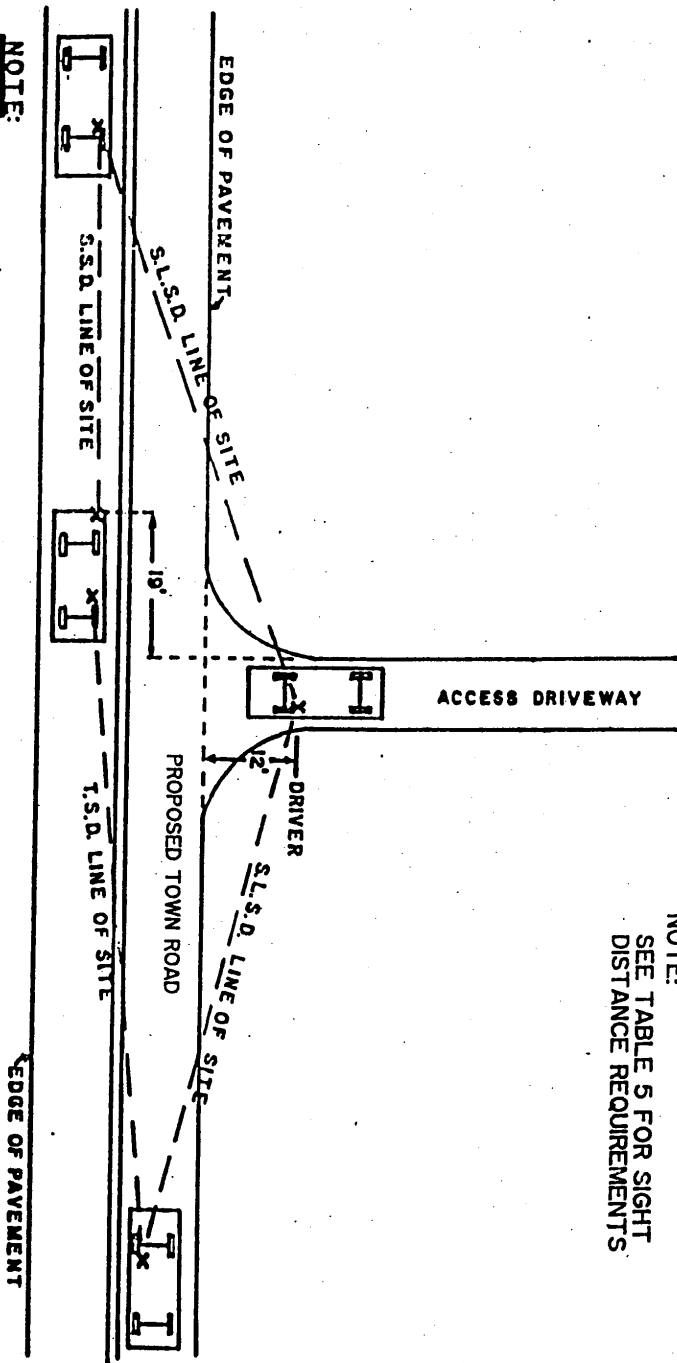
FOR USE ON CATCH BASINS UNDER 3 FEET DEEP WITH 24" X 24" OPENING.



Straight Type Frame

Heavy Duty Frames & Bike Grates

NOTE:
SEE TABLE 5 FOR SIGHT
DISTANCE REQUIREMENTS



NOTE:

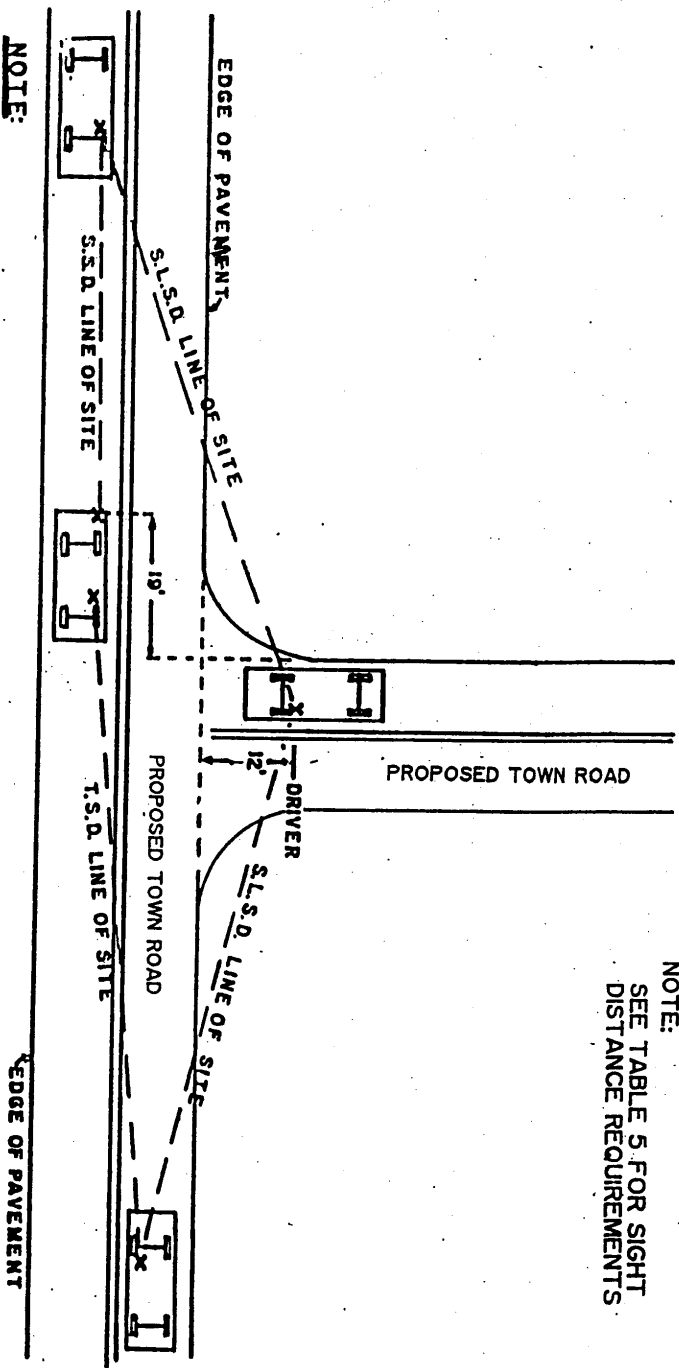
STOP LINE SIGHT DISTANCES(SLSD) AND TURNING SIGHT DISTANCE(TSD) ARE MEASURED 44" ABOVE FINISHED DRIVEWAY SURFACE AND ROAD PAVEMENT SURFACE.

STOP SITE DISTANCES (SSD) IS MEASURED FROM 24" ABOVE ROAD PAVEMENT(BRAKE LIGHT ELEVATION) TO 44" ABOVE ROAD PAVEMENT.

TOWN HIGHWAY STANDARDS

SCALE: NONE | FIGURE: 9
PREPARED BY The Town of Clermont | October 2001

NOTE:
SEE TABLE 5 FOR SIGHT
DISTANCE REQUIREMENTS



NOTE:

STOP LINE SIGHT DISTANCES(SLSD)AND TURNING SIGHT DISTANCE(TSD)ARE MEASURED 44" ABOVE FINISHED DRIVEWAY SURFACE AND ROAD PAVEMENT SURFACE.

STOP SITE DISTANCES (SSD) IS MEASURED FROM 24" ABOVE ROAD PAVEMENT(BRAKE LIGHT ELEVATION) TO 44" ABOVE ROAD PAVEMENT.

TOWN HIGHWAY STANDARDS

SCALE: NONE FIGURE: 9A
PREPARED BY The Town of Clermont October 2001

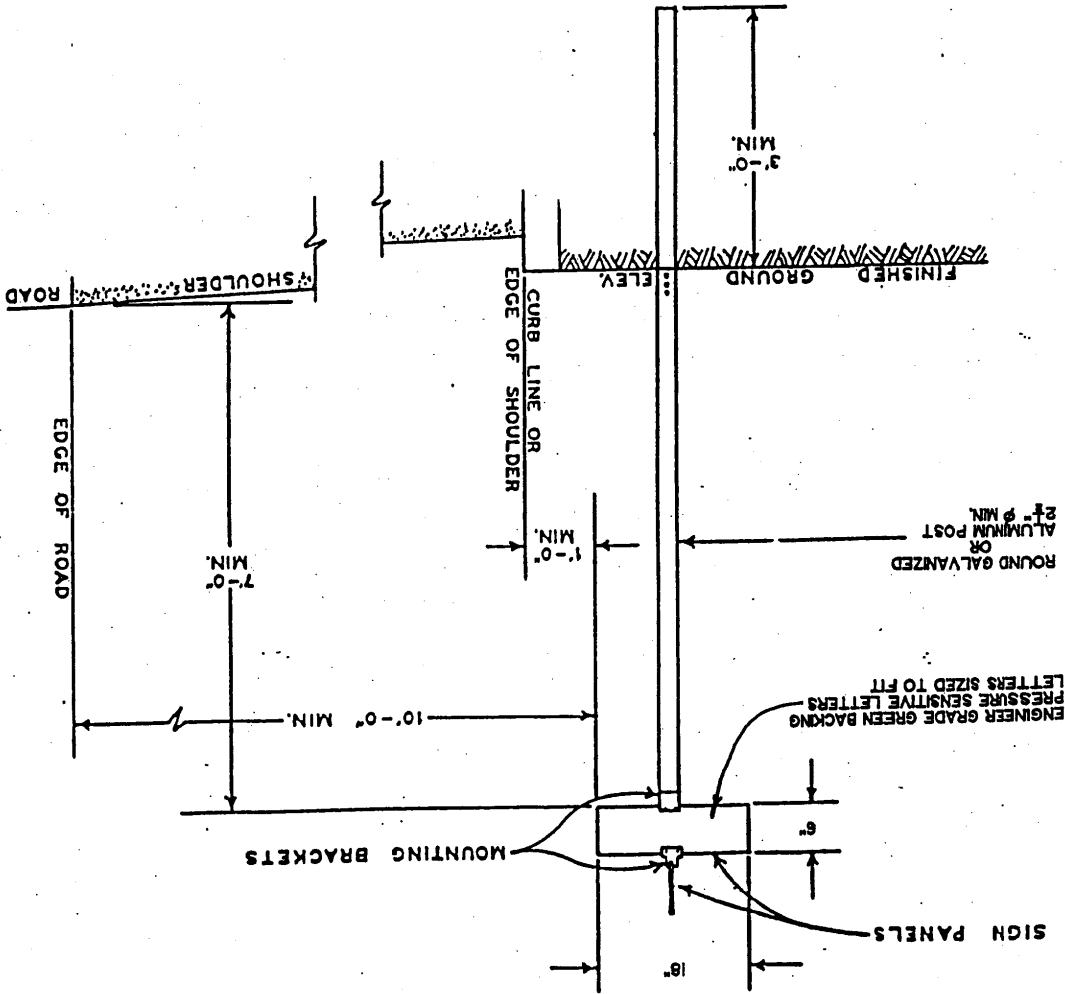
TOWN HIGHWAY STANDARDS

SCALE: 1/2" = 1'-0" | FIGURE: 10

PREPARED BY The Town of Clermont October 2001

* LOCATION MAY BE OTHERWISE APPROVED.

ROAD NAME SIGN



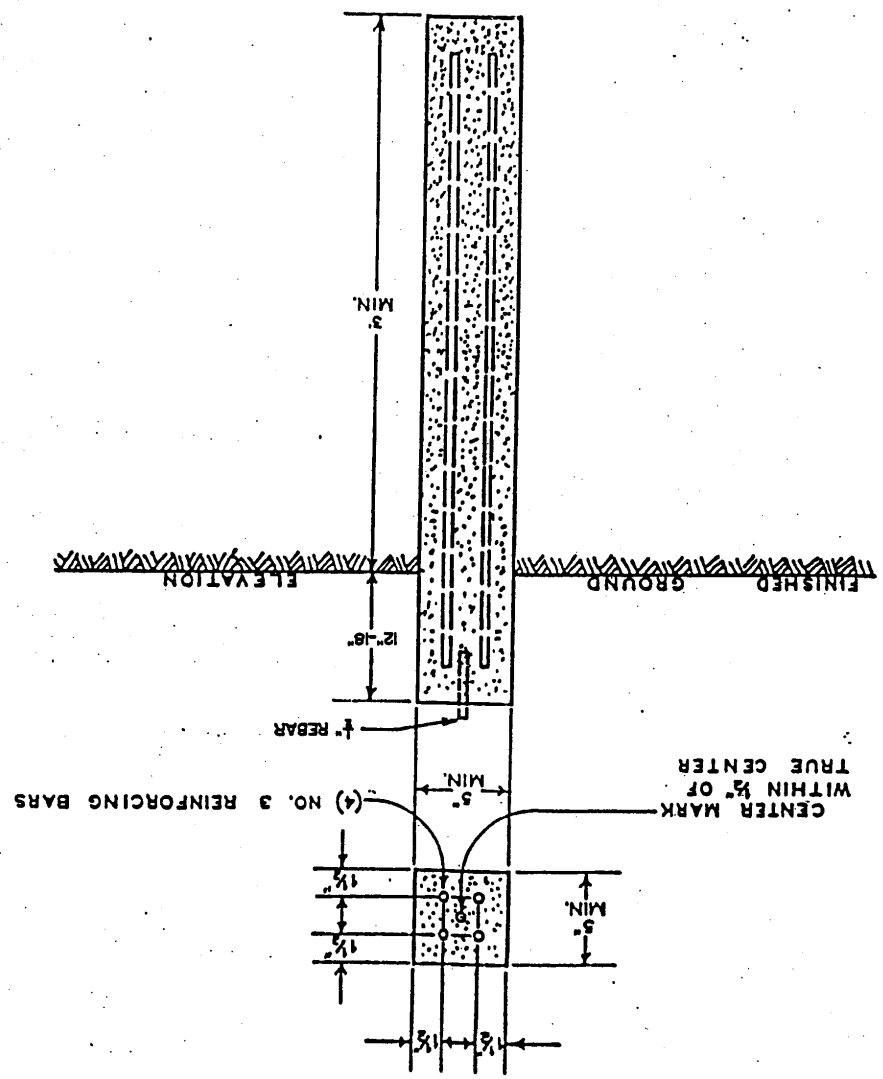
NOTE:
 GREEN BACKGROUND SHALL BE REFLECTIVE
 WHITE NAME LETTERS SHALL BE WHITE &
 SHALL BE REFLECTIVE.

SCALE: 1 1/2" = 1'-0" FIGURE: II

* NOT INSTALLED UNTIL FINAL GRADE IS COMPLETED

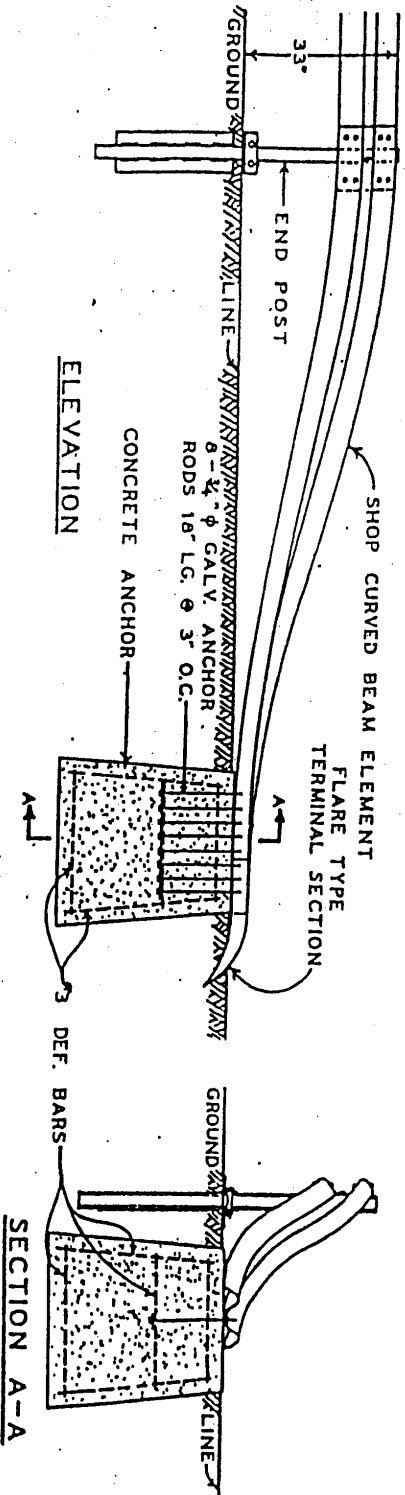
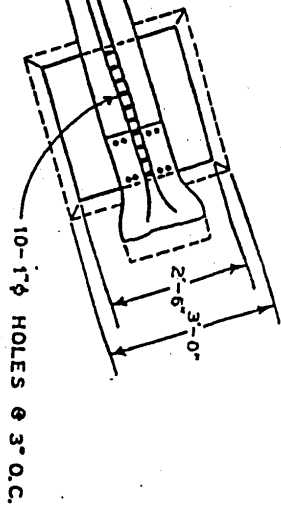
TOWN HIGHWAY STANDARDS

CONCRETE MONUMENT



END POST:
 SEE 'STEEL POST MOUNTING' DETAIL,
 FIGURE 18d. OMIT SUPPORT BOLT.
 INSTALL 4"x3" STEEL ANGLES AS
 SHOWN IN FIGURE 19, DETAIL 'B';
 OR SEE 'WOOD POST MOUNTING'
 DETAIL, FIGURE 18a.

PLAN

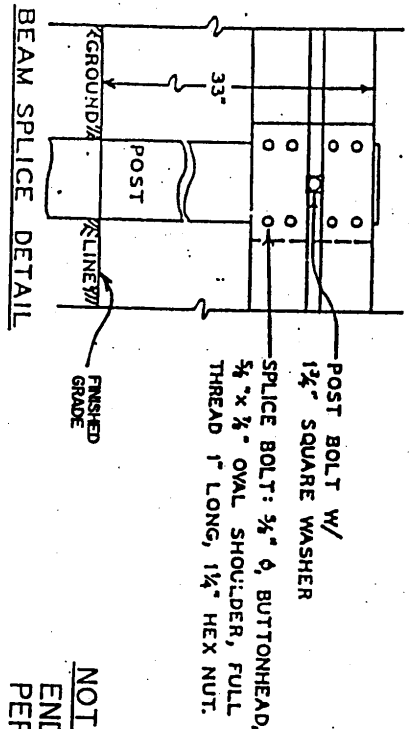
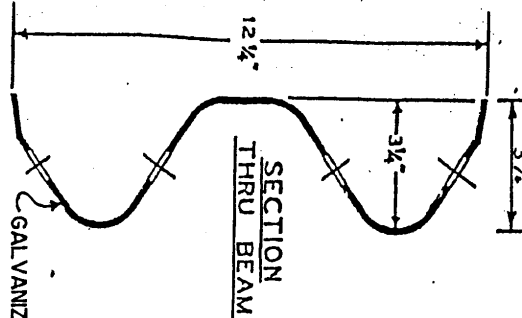
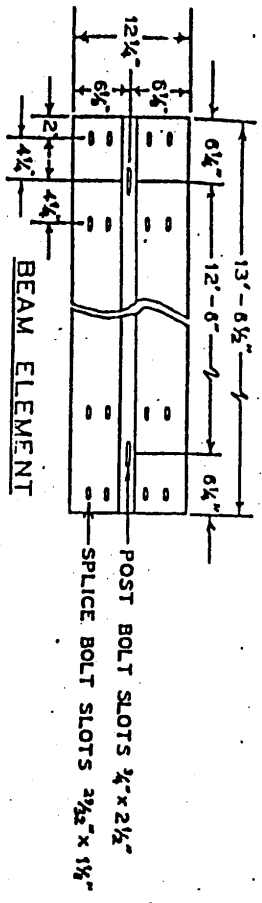


SECTION A-A

TERMINAL SECTION WITH CONCRETE ANCHOR

TOWN HIGHWAY STANDARDS

SCALE: 3/8" = 1'-0" | FIGURE: 12
 PREPARED BY The Town of Clermont | October 2001



STEEL POST MOUNTING

CORRUGATED BEAM TYPE GUIDE RAILING

NOTE:
END ANCHOR
PER FIG. 12
WRAP-AROUND TYPE
TERMINAL SECTIONS ARE
PROHIBITED TO USE.

TOWN HIGHWAY STANDARDS	
SCALE: NONE	FIGURE: 12A
PREPARED BY The Town of Clermont October 2001	

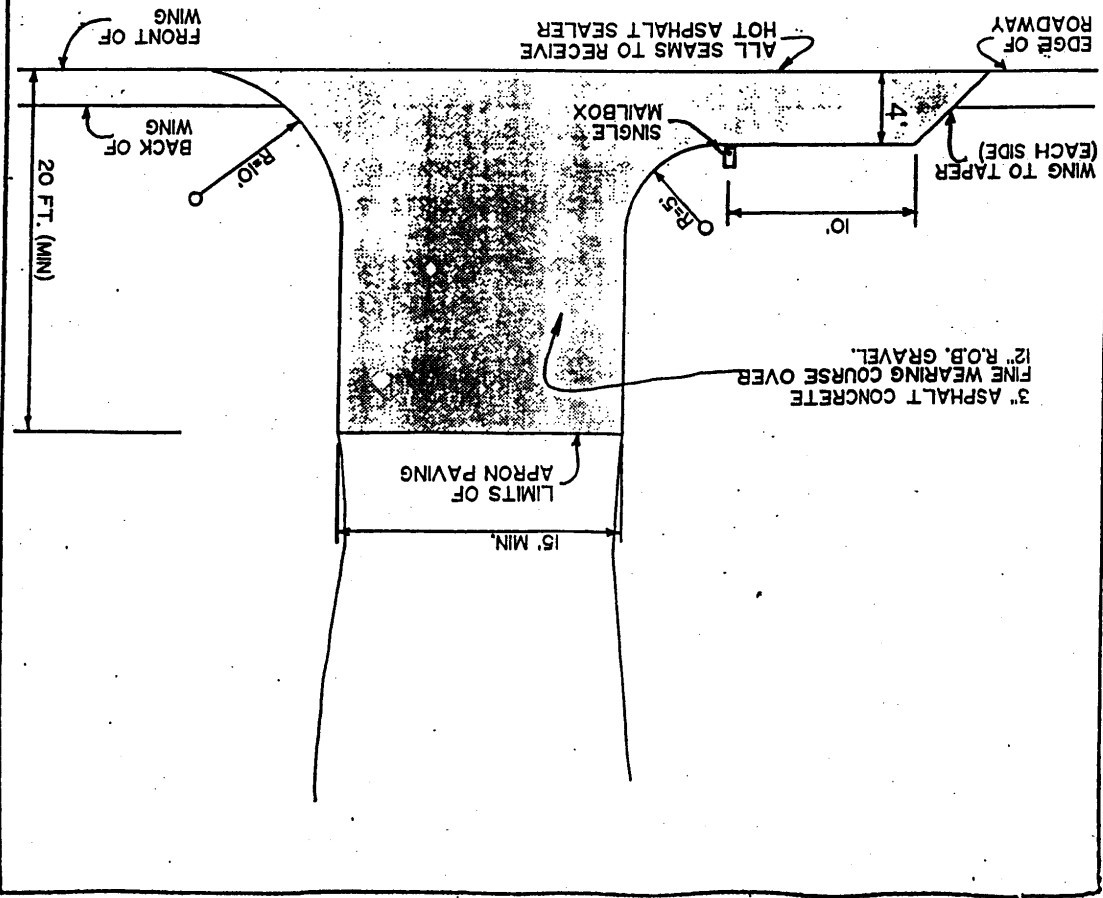
TOWN HIGHWAY STANDARDS

SCALE: N.T.S.

FIGURE: 14

NOTE:
 COMMON DRIVEWAYS MAY REQUIRE ALTERATION OF
 THIS DETAIL. ADJUST AS REQUIRED FOR ALTERNATE
 MAILBOX LOCATION.

EXISTING OR PROPOSED TOWN ROADWAY

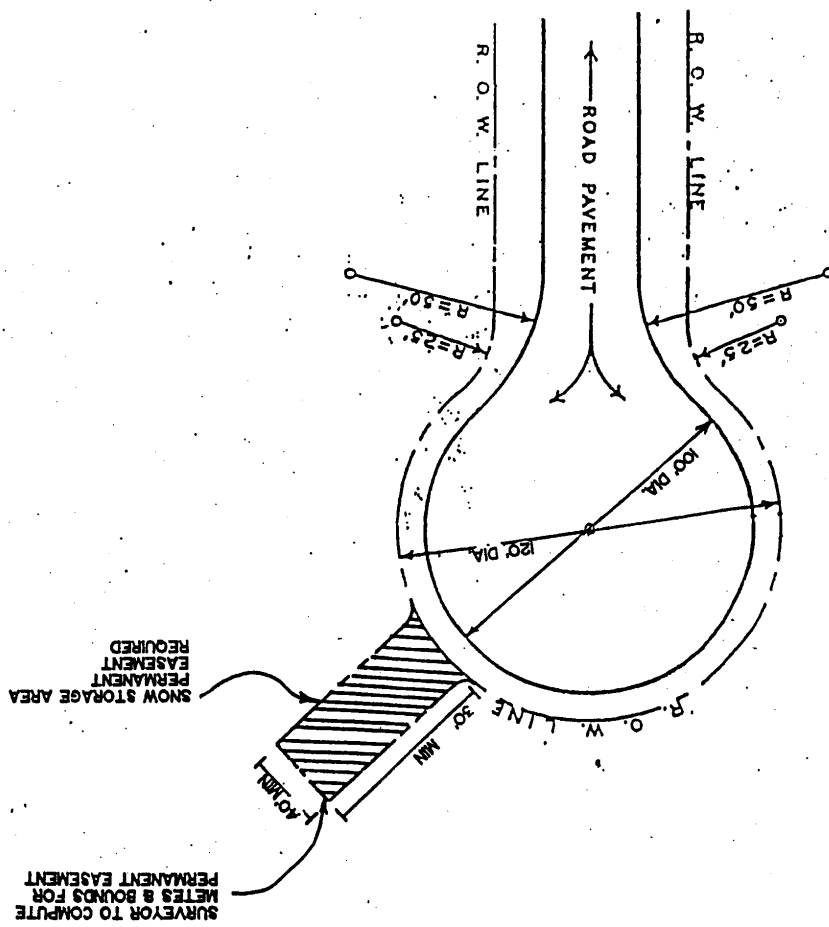


TOWN HIGHWAY STANDARDS

PREPARED BY The Town of Clermont, October 2001

SCALE: N.T.S. FIGURE: 13A

PERMANENT TURNING CIRCLE

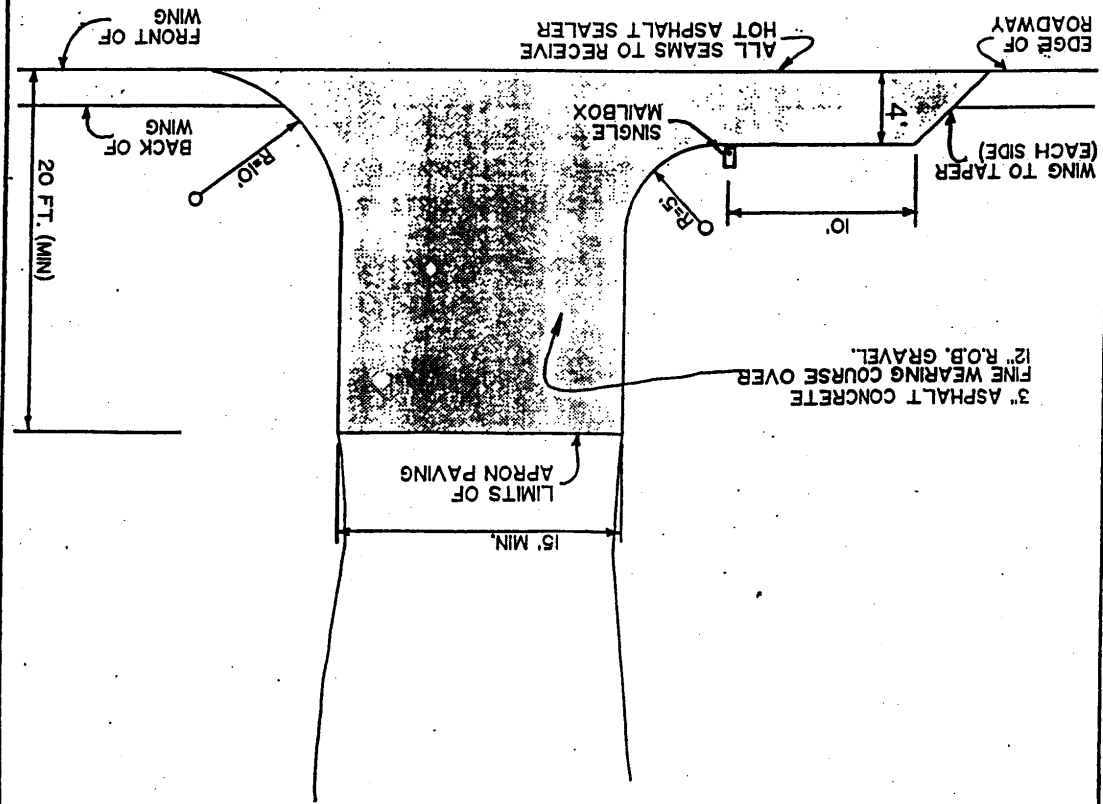


TOWN HIGHWAY STANDARDS

SCALE: N.T.S.

FIGURE: 14

EXISTING OR PROPOSED TOWN ROADWAY



NOTE:
 COMMON DRIVEWAYS MAY REQUIRE ALTERATION OF
 THIS DETAIL. ADJUST AS REQUIRED FOR ALTERNATE
 MAILBOX LOCATION.