

**Construction and Materials Specifications
for
Subdivision and Land Development**

**Hopewell Township
York County, Pennsylvania**

Revised
November, 2005
February, 2006

Prepared by:

Martin and Martin, Incorporated
Engineering and Planning Consultants
37 South Main Street, Suite A
Chambersburg, PA 17201
717-264-6759 phone
717-264-7339 facsimile

TABLE OF CONTENTS

Part I – Minimum Standards for Roadway and Related Features

A.	Street Construction	Page 3
1.	Stake-Out	Page 3
2.	Excavation	Page 3
3.	Embankment	Page 3
4.	Subgrade	Page 4
5.	Stone Base Course	Page 5
6.	ID-2 Binder Course	Page 6
	ID-3 Binder Course	Page 6
7.	ID-2 Wearing Course	Page 7
8.	Curbs	Page 9
9.	Sidewalks	Page 9
10.	Private Streets	Page 10
B.	Driveway and Access Drive Entrances	Page 11
C.	Drainage and Stormwater	Page 13
	Pipe	Page 13
	Inlets	Page 13
	Manholes (Storm Sewer Only)	Page 14
	Miscellaneous Structures and Facilities	Page 15
	Detention Ponds	Page 15
	Swales	Page 15
D.	Street and Roadway Signs	Page 15
E.	Plantings	Page 16
F.	Utility Trenching in Roadways	Page 16
G.	Utility Fixtures in Roadways	Page 16
H.	Sanitary Sewer Construction	Page 16
I.	Water Line Construction	Page 17
J.	Inspections	Page 17

Details

Typical Minor Street Section	1
Plain Cement Concrete Curb	2
Plain Cement Concrete Curb (Terminal End Section)	3
Concrete Walk Detail	4
Wheelchair Ramp at Curb (Single Curb Cut Ramp)	5
Wheelchair Ramp at Curb (Double Curb Cut Ramp)	6
Driveway Paving Details	7
Private Road Paving Details	8
Typical Driveway w/Trench Drain & Dry Sump Detail	9
Standard Bedding for Stormwater Piping	10
Concrete Endwall	11
Type "C" Inlet	12
Type "M" Inlet	13
Pavement Treatment at Inlet Location	14
Slant Curb Transition to Type "C" Inlet	15
Precast Concrete Manhole	16
Stop Sign Detail (R1-1)	17
Street Name Detail (D3-1)	18
No Parking Symbol Sign (R8-3A)	19
No Parking Until Snow is Removed Sign (R7-22-1)	20
Snow Storage Area Detail	21
Deciduous Shade and Flowering Tree	22

PART I – MINIMUM STANDARDS FOR ROADWAY AND RELATED FEATURES

A. STREET CONSTRUCTION

All street materials, construction procedures and testing requirements shall conform to the current editions of PennDOT Publications 408, 418, 203, 68, 236 Standards for Roadway Construction (RC) Series 10-104, Publication 111 Traffic Standards – Signing TC Series 7700 and Traffic Standards Signals (TC) Series 7800 including all supplemental specifications, circular letters and amendments. All streets and related features shall be constructed to the line, grade and dimensions shown on the approved plans, profiles, cross sections and typical sections.

The pavement base and wearing course surface shall be constructed in accordance with the material quantity specifications as outlined in the attached detail.

1. Stake-Out

- a. All property pins or monuments will be witnessed with suitable four (4) foot high stakes before the beginning of construction.
- b. All streets prior to being rough-cut shall be laid out in accordance with approved design plans, using hubs and stakes set at fifty-foot intervals to provide both horizontal and vertical control.

2. Excavation

- a. This work shall include excavation for roadways, shoulders, ditches, drainage structures, structures and stream channels.
- b. During construction, excavation shall be graded to drain.
- c. Suitable excavated materials, as determined by the Township, may be used for the construction and preparation of the roadway embankments, subgrade, shoulders, driveway approaches, ditches, structures, stream channels, and approved backfilling.
- d. Unsuitable materials, as determined by the Township, including trees, stumps, brush, rubbish, and all organic or inorganic material not suitable for fill shall be removed from the project area. All root mats shall be removed to a depth of not less than one foot below subgrade.

3. Embankment

- a. Placement of embankment shall be in layers not exceeding 8” prior to compaction.

- b. Material for the construction of embankment shall consist of all excavation on the project except such materials as may be determined to be unsuitable, by the Township, under PennDOT Publication 408, and when required will include borrow excavation.

4. Subgrade

- a. Prior to preparation of the subgrade, install all required underground utilities and storm drainage to be placed within the cartway. Compact trench backfill (2RC Stone) in layers (8" maximum).
- b. No subbase or base course shall be placed on wet, frozen, or unsuitable material. Damaged areas or unsuitable material shall be promptly and satisfactorily reshaped and recompactd or removed and replaced. Unsuitable material includes sod, stumps, spongy soil and excess rock.
- c. Where necessary as determined by the Township based on field conditions, provide proper underdrain to address springs, spring-like conditions, or spongy areas.
- d. All large rocks, boulders or ledges shall be broken off six (6) inches below the improved subgrade surface.
- e. All surface irregularities exceeding one-half (1/2) inch shall be corrected by loosening the surface and removing or adding material as required. The corrected area and surrounding surface shall be compacted by rolling.
- f. Completed subgrade shall be maintained and protected in advance of the succeeding operation.
- g. Subgrade shall be inspected, tested, and approved by the Township before placing of the base course.
- h. Use all means necessary to control dust on and near the work and on and near all off-site borrow areas if such dust is caused by the Contractor's operations during performance of the Work or is a result of the condition in which the Contractor leaves the site. Thoroughly moisten all surfaces as required to prevent dust from being a nuisance to the public, neighbors, and concurrent performance of other Work on the site.
- i. Fill shall consist of clean earth, stone or such non-organic materials as may be approved by the Township. Fill shall be placed in layers not exceeding 8 inches loose and compacted until the density per cubic foot is not less than 97% of the dry-weight density. Compaction shall be accomplished by utilizing a method as approved by the Township. Compaction tests may be required by the Township. A soil engineer will be retained to take soil samples, arrange laboratory testing

(moisture/density criteria) and perform compaction testing when required. All cost of testing shall be the responsibility of the property owner.

- j. Fine grading shall consist of preparation of the subgrade for construction of street paving. The subgrade shall be carefully shaped and compacted to not less than 100% of the dry weight density. Compaction tests may be required by the Township. In case satisfactory subgrade stability cannot be obtained, unstable material shall be removed and replaced with suitable material, in no more than 6" lifts properly compacted. At Township direction installation of geotextile may be required.

5. Stone Base Course

- a. Base course material shall not be placed on soft, muddy or frozen areas. Unsatisfactory base conditions shall be corrected.
- b. All foreign material shall be removed from base course prior to placing binder course.
- c. Base shall be spread uniformly to the required depth. Coarse material shall meet the requirements for PennDOT No. 2A Aggregate. Particular attention is called to the requirements of Form 408 regarding compaction. If compaction is obtained by the use of rollers only, base course more than 8 inches in compacted depth shall be constructed in 2 or more layers. If approved vibratory equipment is used, base course of up to 10 inches in compacted thickness may be constructed in one course.
- d. Base course for streets shall be PennDOT No. 2A stone rolled to a 10" compacted depth. After the material has been satisfactorily compacted, fine material shall be spread uniformly over the surface. Immediately following this operation, fine material shall be broomed and rolled until the voids in the coarse material are completely filled. The spreading and rolling of fine material shall be carried out in sections of not less than 150 feet nor more than 1000 feet in length. Each section shall be completely bound and compacted before beginning another.

After the completion of the application and rolling of the fine material, the surface shall be sprinkled with water and rolled. This operation shall continue, and additional fine material added, until all voids in the coarse material are filled and a slight wave of grout forms in front of the roller wheels. Brooms, attached to the roller and hand brooms, shall be utilized to spread the grout uniformly into unfilled voids. After the wave of grout has been produced over the entire section of base course, this section shall be left to dry. The surface shall be sprinkled and re-rolled on succeeding days, as required to bond it thoroughly and to secure a satisfactory surface.

- e. Base shall have binder applied as soon as possible to avoid damage to base.

- f. Base course shall be inspected by the Township prior to the placing of binder course. Repairs shall be made to the base course as directed by the Township.
- g. A 5 inch thick Bituminous Base Course (BCBC) over 4 inches of 2 RC (compacted thickness) may be substituted for the 10" stone base course with Township approval.

6. ID-2 Binder Course

- a. On the properly shaped, compacted and Township inspected Base Course, a 4" compacted thickness ID-2 Binder Course shall be placed using a self contained, power propelled paving machine with an activated screed or strike-off assembly. ID-2 Binder Course shall be PennDOT approved mix from a certified batching plant.
- b. Immediately after the material has been spread, struck off, and surface irregularities adjusted, it shall be thoroughly and uniformly compacted by rolling. Rolling shall be done only when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving. Roller weight shall be sufficient to achieve not less than 90% of the density requirement established by the Marshall method at the time of approval mixture. Finish rolling shall continue until all roller marks are eliminated. Construction/placement shall be in accordance with PennDOT Form 408.

Particular attention is directed to Form 408 regarding weather limitations for placing ID-2 materials. ID-2 shall not be placed on a wet surface, nor when the air temperature is less than 40°F, nor when the temperature of the subbase is less than 40°F.

- c. Binder pavement widths up to 30' may be completed with two seams.
- d. If BCBC is used for base course no binder course is necessary.
- e. Compaction testing of the binder course may be requested. All asphalt compaction testing shall be performed by a PennDOT certified testing company. Costs of testing are the responsibility of the owner.

ID-3 Binder Course

- a. On the properly shaped, compacted and Township inspected Base Course, a 3 inch compacted thickness ID-3 Binder Course shall be placed using a self contained, power propelled paving machine with an activated screed or strike-off assembly. ID-3 Binder Course shall be PennDOT approved mix from a certified batching plant.

- b. Immediately after the material has been spread, struck off, and surface irregularities adjusted, it shall be thoroughly and uniformly compacted by rolling. Rolling shall be done only when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking or shoving. Roller weight shall be sufficient to achieve not less than 90% of the density requirement established by the Marshall method at the time of approval of the mixture. Finish rolling shall continue until all roller marks are eliminated. Construction/placement shall be in accordance with PennDOT Form 408.

Particular attention is directed to Form 408 regarding weather limitations for placing ID-3 materials. ID-3 shall not be placed on a wet surface, nor when the air temperature is less than 40°F, nor when the temperature of the subbase is less than 40°F.

Superpave 25mm Binder Course

- a. On the properly shaped, compacted and Township inspected Base Course, PennDOT-approved Superpave Mix 25mm, based on ESAL's Publication 408, shall be used. A minimum of four inches compacted of 25mm Superpave course, rolled, shall be placed a minimum of 26 feet wide for cartway construction. Superpave must be installed according to all PennDOT Specifications. See Publication 408 for paving and asphalt testing (asphalt content and percentage passing No. 200 sieve.) All asphalt plant test results must be received and approved by Hopewell Township prior to wearing course being applied.

7. ID-2 Wearing Course

- a. Base course and subsequent pavement layers shall be inspected by the Township prior to placing the next appropriate layer.
- b. Provide bituminous tack coat as required.
- c. A 1 ½" compacted depth ID-2 Wearing Course shall be composed of materials and constructed entirely in accordance with PennDOT Form 408, latest revision. Bituminous pavers shall be self-contained, power-propelled units, provided with an activated screed or strike-off assembly. In small areas, where the use of mechanical finishing equipment is not practical, material may be spread and finished by hand, if so directed by the Township.
- d. Roller weight shall be sufficient to achieve not less than 95% of the density requirement established by the Marshall method at the time of approval of the mixture. Finish rolling shall continue until all roller marks are eliminated. In no case shall vibratory equipment be permitted on bituminous surface course.
- e. Particular attention is directed to Form 408 regarding weather limitations for placing bituminous material. Bituminous material shall not be placed on wet

surfaces, nor when the air temperature is less than 40°F, nor when the temperature of the subbase is less than 40°F.

- f. Surface course shall be sealed using AC-20 where it comes in contact with other structures including curbs, inlets and manholes.
- g. Paving notches shall conform to PennDOT RC-28.

Superpave 9.5mm Wearing Course

- a. A PennDOT-approved Superpave Mix 9.5mm SRL treatment, based on ESAL's Publication 408, shall be used. A minimum of two inches compacted of 9.5mm Superpave course, rolled, shall be placed at a minimum of 26 feet wide for cartway construction. Wearing must be constructed according to all PennDOT Specifications. See Publication 408 for paving and asphalt testing (asphalt content and percentage passing No. 200 sieve.) All asphalt plant test results must be forwarded to Hopewell Township within five business days.

Mixture Comparison Table

<u>Superpave Paving Course</u>	<u>Corresponding PennDOT Conventional Paving Course</u>	<u>Superpave Material Thickness</u>		
		<u>Minimum Thickness</u>	<u>Maximum Thickness</u>	<u>Maximum Construction Lift</u>
Superpave 9.5mm Wearing Course	Typical ID-2 Wearing Course	1 ½"*	1 ½"	1 ½"
Superpave 12.5mm Wearing Course	Coarse-Graded ID-2 Wearing Course	1 ½"*	2"	2"
Superpave 19.0mm Wearing Course	Typical ID-3 Wearing Course	2"*	3"	3"
Superpave 19.0mm Binder Course	Fine-Graded ID-2 Binder Course	2"	3"	3"
Superpave 25.0mm Binder Course	Typical ID-2 Binder Course	3"	4"	4"
Superpave 25.0mm Base Course	Typical BCBC	3"	as designed	5"
Superpave 37.5mm Base Course	Coarse-Graded BCBC	4 ½"	as designed	8"

* When used as a wearing course, not for Scratch or Leveling.
 Recommend using 9.5mm for Scratch or Leveling; 60 to 110 lb/sq.

8. Curbs

- a. Curbing shall be either slant curb or vertical curb as specified in attached Details.
- b. Materials and construction shall meet the requirements of PennDOT Form 408, for plain cement concrete curb.
- c. The curb shall be constructed in continuous lengths not to exceed 30 feet, with contraction joints scored at not more than 15 feet nor less than 4 feet intervals. Contraction joints shall be placed in uniform lengths or sections and measure 2 inches deep and 3/16 inch wide.

Pre-molded expansion joints ½ of an inch in thickness shall be placed at the end of each pour and at all structures, but not exceeding 30-foot intervals.

- d. Terminal concrete curb end shall have an exposed face of 1 inch and be tapered over 3 feet.
- e. Backfill must be placed within forty-eight (48) hours after form removal and this backfill shall be thoroughly compacted mechanically to the required elevation and cross section. Curbing shall be backfilled on the street side to street subgrade with crushed stone. Grass plot areas and areas to rear of sidewalk shall be backfilled with clean earth to within four inches (4") of finished grade; at least four inches (4") of clean topsoil shall be spread as the last layer, to the proper grade to meet the finished curb and sidewalk grade. To the rear of the sidewalk, in fill areas, the backfill shall be carried level for a distance of 12 inches behind the rear line of the sidewalk, and then sloped down on two horizontal to one vertical slope to meet the existing grade.
- f. Curbs shall be inspected by the Township after the forms have been placed, just prior to the pouring of concrete and after completion of all work.
- g. Compaction testing may be required before pouring curb.

9. Sidewalks

- a. Sidewalks shall have a minimum depth of 6 inches with 6 x 6 #6 wire mesh and 4 inches of clean ¾ inch stone base and shall conform to the attached Detail. All concrete shall be Class A cement concrete per PennDOT Form 408.
- b. Sidewalks shall have a minimum depth of six (6") inches where traversed by a residential driveway and a minimum depth of eight (8") inches where traversed by a commercial driveway.
- c. Sidewalks shall be constructed in separate slabs 20 feet in length, separated by pre-molded expansion joints ½ of an inch (1/2") in thickness for the full depth of

the concrete. Between expansion joints, the slabs shall be scored as indicated on the attached detail. Pre-molded expansion joints shall separate the sidewalk from any existing building, stairs, other pavement, utility poles, fire hydrants, or other permanent structure.

- d. The minimum sidewalk width shall be 4 feet or as may be required by the Subdivision and Land Development Ordinance.
- e. Sidewalks shall have a $\frac{1}{4}$ inch per foot slope towards the street.
- f. Handicap ramps shall be provided at all intersections and other locations necessary to provide proper pedestrian circulation as per ADA Regulations.
- g. Brick sidewalks will be permitted only where specifically authorized by the Township. Bricks must be laid on a concrete sidewalk constructed as noted above and grouted with cement.

10. Private Streets

- a. Every private road shall be improved with PennDOT 3A Modified material, unless other stone-based material is specifically approved by the Township Engineer, with a cartway width of at least sixteen (16') feet and a base of at least eight (8") inches thick after compaction.
- b. Every private road shall have a right-of-way of at least twenty-five feet (25'), and the right-of-way shall conform to the following design requirements:
 - i. The minimum centerline radius of all cul-de-sacs shall be seventy five feet (75');
 - ii. The maximum private road grade shall be fourteen percent (14%);
 - iii. The maximum intersection grade shall be five percent (5%) within twenty-five feet (25') of the public right-of-way. Any grade greater than five percent (5%) must be paved with one and one-half inch compacted ID-2 Base Course and one inch compacted ID-2 Wearing Course, or Superpave equivalent, (see attached Mixture Comparison Chart) unless approved by the Township Engineer and Roadmaster;
 - iv. The minimum horizontal and vertical site distance shall be seventy-five feet (75');
 - v. The angle of intersection with a public road shall be no less than seventy-five degrees (75°) nor more than one hundred five degrees (105°);

- vi. There shall be a clear sight triangle of seventy-five feet (75') for intersections with minor or collector streets and one hundred fifty feet (150') for intersections with arterial or greater streets;
- vii. Maximum banks shall be three horizontal to one vertical in fill conditions and two horizontal to one vertical in cut conditions;
- viii. A private road must be adequately drained, so as not to direct any water runoff onto public roads. Any drainage design must be approved by the Township Engineer and Roadmaster;
- ix. An erosion and sedimentation control plan must be approved by the York County Conservation District or its successor or assign prior to construction;
- x. All stone shall be compacted with roller, equivalent to five ton vibratory roller, as approved by the Township Engineer, Roadmaster or Zoning Officer;
- xi. All utility trenches must be kept a minimum of three feet from the stone portion of the roadway;
- xii. Inspections of the road will occur as follows:
 - 1) At grading with grade stakes showing finished stone grade;
 - 2) After stone is in place and rolling and compacting of stone is completed;
 - 3) Before occupancy permit is issued for each structure, at which time the entire road must comply to all standards and be in 'as new condition'.

B. DRIVEWAY AND ACCESS DRIVE ENTRANCES

- 1. Driveway and access drive entrances shall be paved to their full width. The driveway or access drive entrance shall be not more than two (2') feet wider than the driveway or access drive. The type of entrance surface shall be plain cement concrete (reinforced with 6 x 6 #6 wire mesh), with a minimum depth of six (6") inches for residential and eight (8") inches for commercial driveways provided from the sidewalk to the curb.
- 2. Bituminous driveways shall consist of six (6") inches of 3A Modified Base Course and two (2") inches of ID-2 Wearing course or Superpave equivalent (see attached Mixture Comparison Chart). Residential concrete driveways shall be a minimum of six (6") inches of concrete with 6 x 6 #6 wire mesh and four (4") inches of 2RC stone base course.
- 3. If the Permit Officer determines that proper drainage can be achieved, but that a drainage pipe or other appliance is needed for this to be accomplished, the

applicant shall be informed of the size and type of pipe or other appliance required and the applicant shall purchase or cause to purchase and install or cause to be installed the required pipe or other appliance. The pipe or other appliances as may be applicable and installation thereof must be approved by the Township prior to purchase and installation.

4. Water must be prevented from running from the driveway onto the Township or private street or road. If the Permit Officer determines that further grading is required for this to be accomplished, the applicant shall cause the required grading to be accomplished at applicant's expense.
5. The driveway must be located in safe relationship to sight distance and barriers to vision. The driveway may not exceed a slope of five percent (5%) within fifty feet (50') of the centerline of the Township or private street or road where a drive enters through a bank or cut. Unless a retaining wall is utilized for a shoulder, a cut may not exceed seventy-five percent (75%) slope within a triangle formed by the centerline of the Township or private street or road, the centerline of the proposed driveway, and a line drawn from a point along the Township or private street or road seventy-five feet (75') distance from the intersection of the centerline of the Township or private street or road and the centerline of the proposed driveway, and fifty feet (50') distance along the centerline of the proposed driveway from that intersection. The height of the bank created by this cut must not exceed three feet (3') within ten feet (10') of the Township or private street or road right-of-way line. Greater slopes can be permitted if there is no reasonable way that the slopes required by this subparagraph can be attained, and the Township Engineer approves the plan that will prevent the banks from eroding and ensure that the provisions of paragraph 6 of this section are complied with.
6. The applicant shall improve the twenty-five feet (25') most proximate to the improved portion of the Township road with eight inches (8") of crushed stone, and if the Permit Officer finds it necessary in order to protect the public road from earth, stone, and/or debris washing from the driveway into the public or private road, the applicant must pave a sufficient portion of the driveway so that the public road will be protected from earth, stone, and/or debris washing from the driveway onto it.
7. The slope of any portion of the driveway may not exceed fifteen percent (15%) unless specifically approved by the Township Engineer.
8. Inspections of the driveway will occur as follow:
 - a. At initial stakeout prior to any excavation;
 - b. After all grading and excavation, but prior to the placement of any stone;

- c. The final inspection to conform compliance with all of the requirements of this Part 1.B., including approval of all grades and slopes for banks and driveways, and all other improvements required by this Part.

C. DRAINAGE AND STORMWATER

1. Pipe

- a. Metal pipes shall be aluminized coated (Type 2) and conform to the current MSHTO M274-791 (and ASTM A819) material specification, or high density corrugated polyethylene smooth interior pipe and conform to the current AASHTO M 294 Type S (and ASTM D 3350) material specification, or equal or better as approved by the Township.
- b. All pipes shall be bedded as shown on the Standard Bedding Detail using 2 RC Cushed Stone Aggregate, or as approved in writing with the exception of PVC Pipe and plastic pipe. Bedding materials for all diameters of PVC Pipe shall be # 1B stone, and bedding materials for plastic pipe shall be # 1A Stone (pea gravel).
- c. Minimum gauge for metal pipes shall be:

<u>Diameter</u>	<u>Gauge</u>
15" – 54"	16
60"	14
66" – 96"	12
over 96"	10

- d. Pipe sizes shall be in accordance with that shown on approved drawings. Minimum pipe size for drainage facilities shall be fifteen (15") inches in diameter for on site collection. Pipes utilized for upstream conveyance of off site flows shall have a minimum size of eighteen (18") inches.
- e. Pipes shall be inspected by the Township prior to backfilling.
- f. Manholes or inlets shall be used for all pipe deflections in excess of manufacturer's acceptable deflection.
- g. Endwalls or flared end sections shall be used at all pipe inlets and outlets. Endwalls and end sections shall conform to PennDOT RC-31 and RC-33.

2. Inlets

- a. Inlets shall conform to the PennDOT RC-34 or other details approved by the Township.

- b. Use type "C" inlets wherever possible or as approved by the Township Engineer.
- c. All inlets shall have 1" weep holes covered with geotextile fabric placed at the appropriate elevations to completely drain the subgrade prior to placing the base course and surface course, see inlet details.
- d. All inlets in paved areas shall have bicycle safe grates and be backfilled with flowable fill at points of influent and effluent and at least to subgrade elevation.
- e. Where required by the Township, at all low points in curbed sections, swales and easements shall be provided behind the curb and through the adjacent properties to channelize and direct any overflow of water away from structures and buildings. The swale should be designed to accommodate a flow equal to that being collected by the inlets at the low point plus any additional drainage that may be directed to or collected by the swale itself.
- f. Inlets shall be inspected by the Township prior to backfilling and after completion of all work.
- g. Inlets over five (5') feet in depth shall have ladder rungs.
- h. Inlet grate surface shall be a maximum of 1", minimum of ½" below the sealed finished roadway surface.

3. Manholes (Storm Sewer Only)

- a. Manholes shall be constructed in accordance with the specifications as set forth in the PennDOT Publication 408, as amended.
- b. Manhole covers shall be a maximum of 1", minimum ½" below the sealed roadway surface.
- c. Manholes shall be inspected by the Township prior to backfilling and after completion of all work.
- d. Backfilling Around Manholes
 - 1) Excavation around manholes should be wide enough to allow clearance and access for compaction equipment.

4. Miscellaneous Structures and Facilities

Miscellaneous structures and facilities shall be constructed in accordance with PennDOT Publication 408 and Roadway Construction Standards where applicable or, as approved by the Township.

5. Detention Ponds

- a. Pond Bottom – The minimum slope of any surface on the bottom of any pond shall be 2%. A seepage trench of 2 feet wide x 10 feet long x 6 feet deep shall be installed directly in front of the outlet structure. Seepage trench may be enlarged by designer or at Township Engineer's request.
- b. Access – All facilities shall have stabilized access roads, gates, fences and easements where necessary for the proper maintenance, repair, and utilization of the stormwater facilities.
- c. Topsoil and Seeding – All pond areas including bottoms, side slopes, and top of berms shall be provided with a minimum 4 inches of topsoil and shall be mulched and seeded in accordance with PennDOT Publication 408, Section 804.

6. Swales

- a. The minimum longitudinal slope shall be 2%.
- b. The maximum side slopes shall be 3:1 for grass lined swales and 2:1 for rock lined swales.
- c. All grass lined swales shall be provided with a minimum of 4 inches of topsoil. Swales shall be mulched and seeded in accordance with PennDOT Publication 408, Section 804.

D. STREET AND ROADWAY SIGNS

1. Roadway name signs shall comply with the following standards:

- a. Road name signs shall have 6-inch letters on 8-inch signs. Color shall be specified by the Township.
- b. Stop signs shall be 30" x 30" on local roadways and 36" x 36" on state roadways.
- c. Sign posts shall be 2" square channel with 2 ¼" x 30" breakaway anchors and approved fasteners.

- d. In business, commercial, and residential districts where parking and pedestrian movement is likely to occur, the distance of clearance from the ground shall be at least 7 feet.
- e. "No Parking" signs per Detail R8-3A when required. "During Snow" signs shall be per Detail R7-22-1 when required.
- f. Size, location, placement, materials and configuration of all roadway signs shall be in accordance with the requirements of PennDOT Publication 236M (Handbook of Approved Signs) and Form 408.

E. PLANTINGS

1. All species are to be selected from a Hopewell Township approved list.
2. Trees may be placed within a minimum of 10 feet of the roadway right-of-way.
3. No. 12 gauge wire through reinforced rubber hose shall be used to tie the tree to three 2" x 2" stakes or steel channel bar posts.

F. UTILITY TRENCHING IN ROADWAYS

1. All trenching for piping or conduits within the roadway right-of-way is to be totally backfilled with compacted 2RC stone.

During the course of backfilling and compacting work, the Township may, at various locations or depths of trenches, require tests to determine whether the Contractor's compaction operations are sufficient to meet the Township requirements.

G. UTILITY FIXTURES IN ROADWAYS

1. All manhole covers, gate valve boxes and other utility fixtures located in paved roadway surfaces shall be installed a maximum of 1" and a minimum of ½ " below the sealed roadway surface.

H. SANITARY SEWER CONSTRUCTION

1. Construction of sanitary sewers that will be served by an adjoining municipality shall be constructed in accordance with that municipality's and/or authority's construction standards.
2. Construction of sanitary sewers that will not be served by an adjoining municipality shall be constructed in accordance with the municipality's construction standards.

3. Backfilling requirements shall be full depth select backfill (2RC) for all sewers placed within the street cartway and suitable material backfill shall be used in all other areas. Backfilling within the street right-of-way may be changed from select material backfill to suitable backfill only after approval by the Township and field conditions permit this change.
4. Requirements of Section A.4.i. shall pertain to this section.

I. WATER LINE CONSTRUCTION

1. Construction of water mains and services that will be served by an adjoining municipality shall be constructed in accordance with that municipality's and/or authority's construction standards. However, backfill of trenches in street cartway shall be select backfill (2RC). See 3 and 4 above under sewer construction.

J. INSPECTIONS

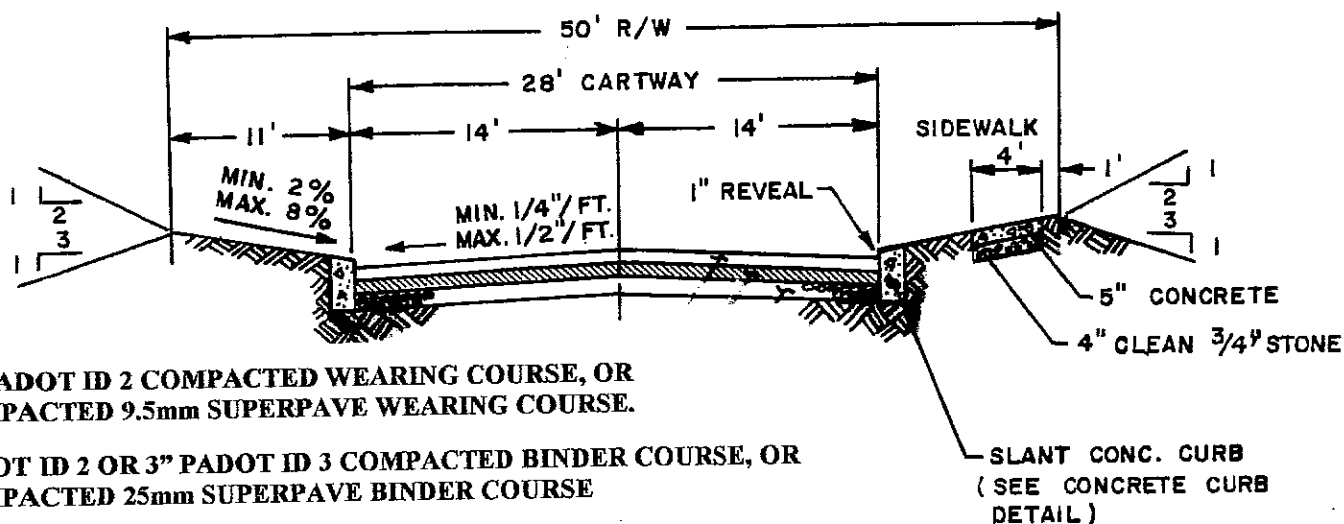
- a. Inspections of the road and site improvements will occur as follows:

- a. Pre-job – with Contractor and Owner minimum stake-out required, street centerline.
- b. Utility Installation Inspection – As required.
- c. Subgrade Inspection – grade check and proof rolling of the subgrade.
- d. Stone base inspection just prior to the installation of ID-2 binder course.
- e. ID-2 binder course just prior to the installation of ID-2 wearing course.
- f. Installation of the leaching pit (if required).
- g. Final inspection of all improvements. Such improvements must comply with requirements of these specifications and the township subdivision and land development ordinance prior to the issuance of an occupancy permit. For improvements to be considered completed, the Township Engineer must certify that all improvements have been completed in accordance with these specifications and the Township Subdivision and Land Development Ordinance.
- h. In order to insure that backfilling and roadway construction meets the requirements of these specifications and the township subdivision and land development ordinance, and that the construction is not comprised by inadequate materials or construction methods, testing and inspection

results on backfilling roadway construction may be provided by other entities only upon approval of the Township Engineer.

- i. This inspection summary is only a guideline. The scheduling of inspections shall be at the discretion of the Township.
- j. The Township may require compaction testing of trenches and roadway construction. Such testing shall be performed by a PennDOT certified testing company.

Details



1-1/2" PADOT ID 2 COMPACTED WEARING COURSE, OR
2" COMPACTED 9.5mm SUPERPAVE WEARING COURSE.

4" PADOT ID 2 OR 3" PADOT ID 3 COMPACTED BINDER COURSE, OR
4" COMPACTED 25mm SUPERPAVE BINDER COURSE

BASE COURSE 10" COMPACTED DEPTH 2A STONE

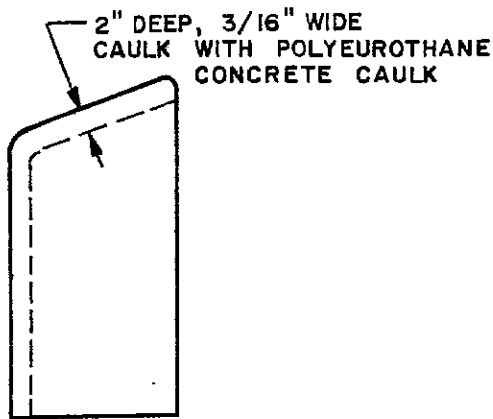
NOTE:

- COLLECTOR STREETS REQUIRE A MINIMUM 60' R.O.W. AND 36' CARTWAY WIDTH.
- ARTERIAL STREETS REQUIRE A MINIMUM 80' R.O.W. AND VARIABLE CARTWAY WIDTH AS DETERMINED BY THE TOWNSHIP BASED ON LOCAL CONDITIONS.
- BASED ON SITE CONDITIONS THE TOWNSHIP MAY REQUIRE INSTALLATION OF A SUBDRAINAGE SYSTEM.

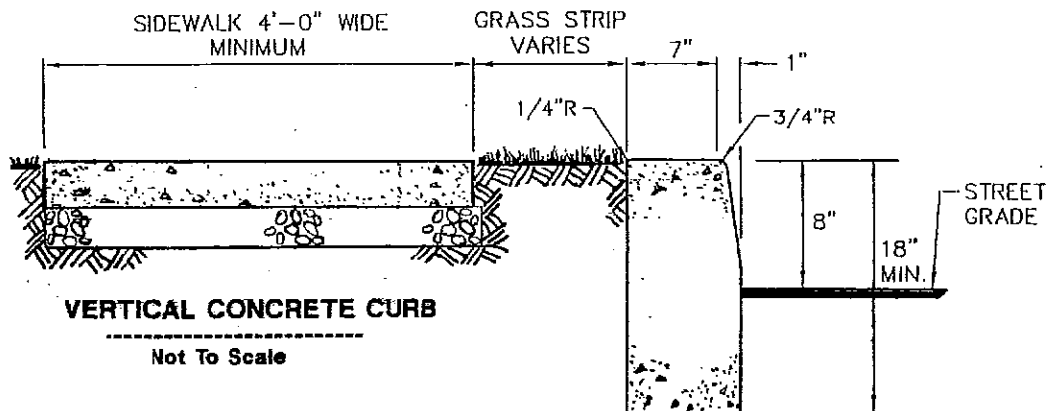
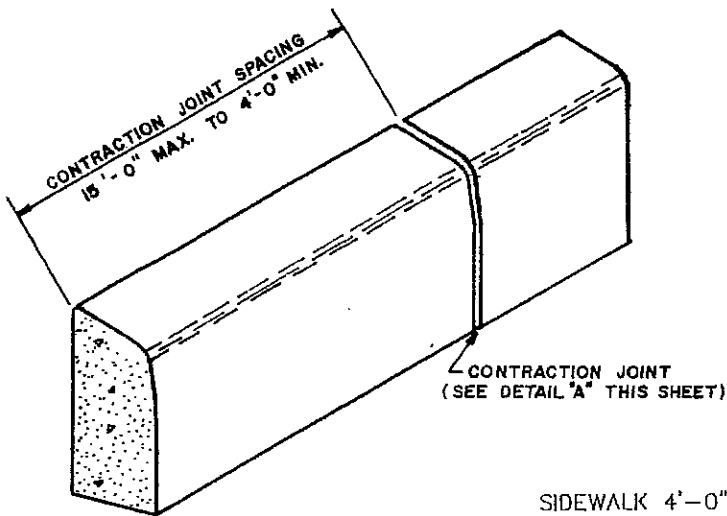
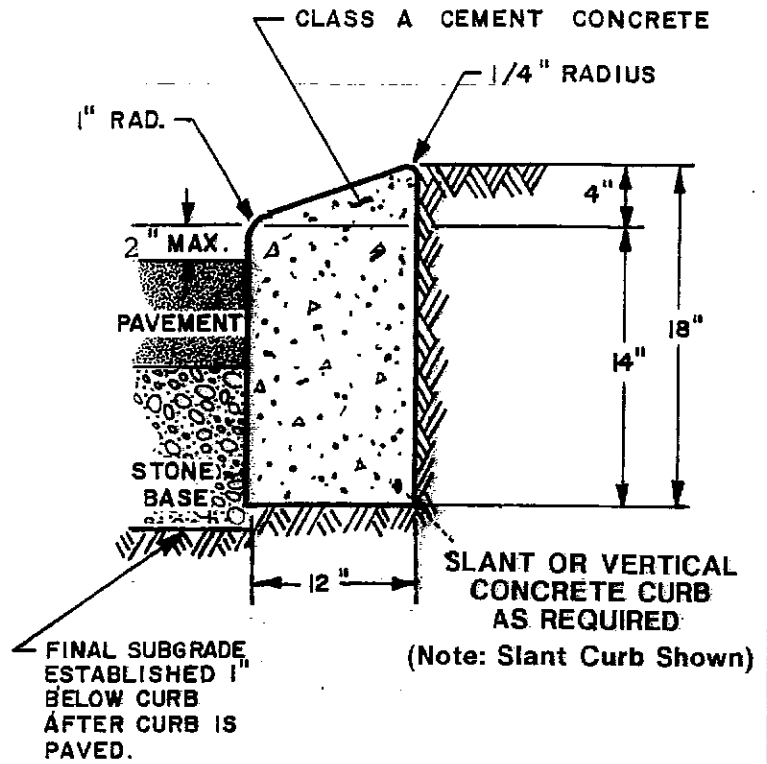
TYPICAL MINOR STREET SECTION

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
CONSTRUCTION AND MATERIAL SPECIFICATIONS

MMI martin and martin, incorporated
Phone: (717) 264-6799
37 South Main Street
Suite A
Fax: (717) 264-7339
Chambersburg, Pennsylvania 17201 - 2251



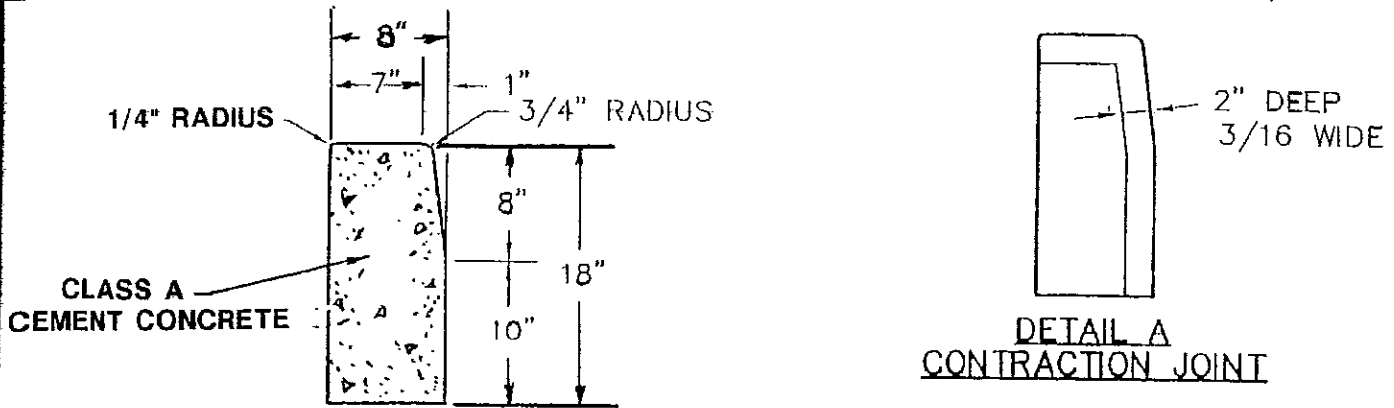
DETAIL "A"
CONTRACTION JOINT



PLAIN CEMENT CONCRETE CURB

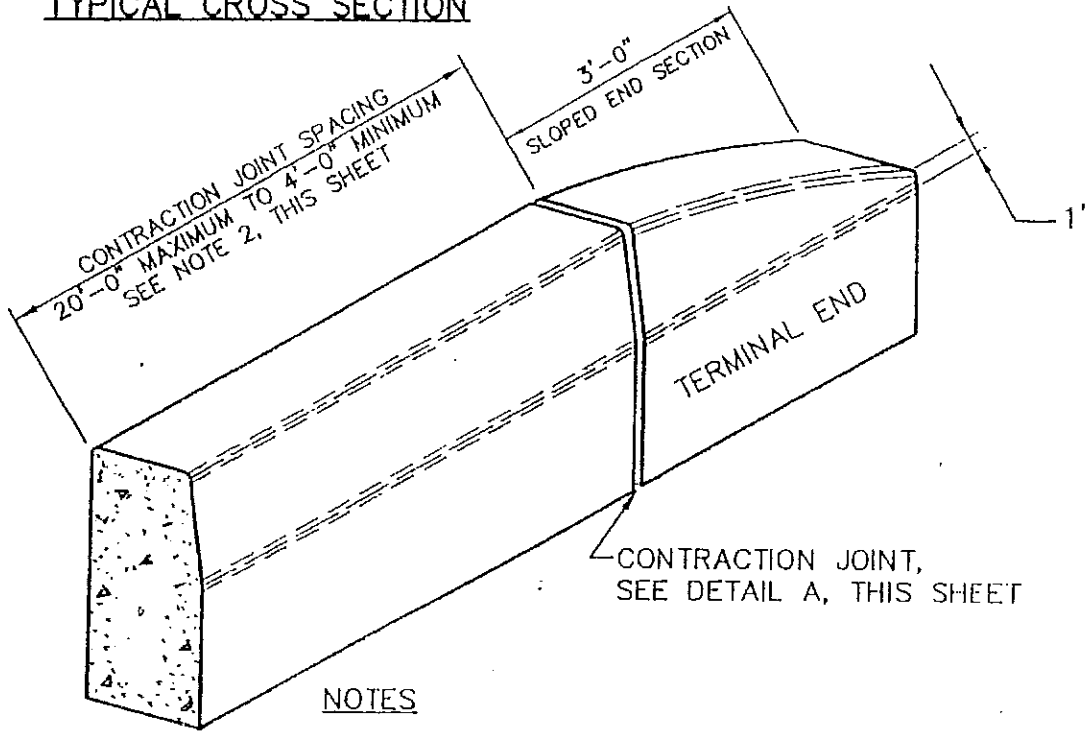
MMI martin and martin, incorporated
Phone: (717) 262-0750
Fax: (717) 264-7229
37 South Main Street -
Suite A
Chambersburg, Pennsylvania 17201 - 2251

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
CONSTRUCTION AND MATERIAL SPECIFICATIONS



TYPICAL CROSS SECTION

DETAIL A
CONTRACTION JOINT



NOTES

1. MATERIALS AND CONSTRUCTION SHALL MEET THE REQUIREMENTS OF PUBLICATION 408, SECTION 630 FOR PLAIN CEMENT CONCRETE CURB.
2. SPACE CONTRACTION JOINTS IN UNIFORM LENGTHS OR SECTIONS. SEE DRAWING NO. 2.
3. PLACE 3/4-INCH PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF THE WORK DAY. CUT MATERIAL TO CONFORM TO CROSS SECTIONAL AREA OF CURB.

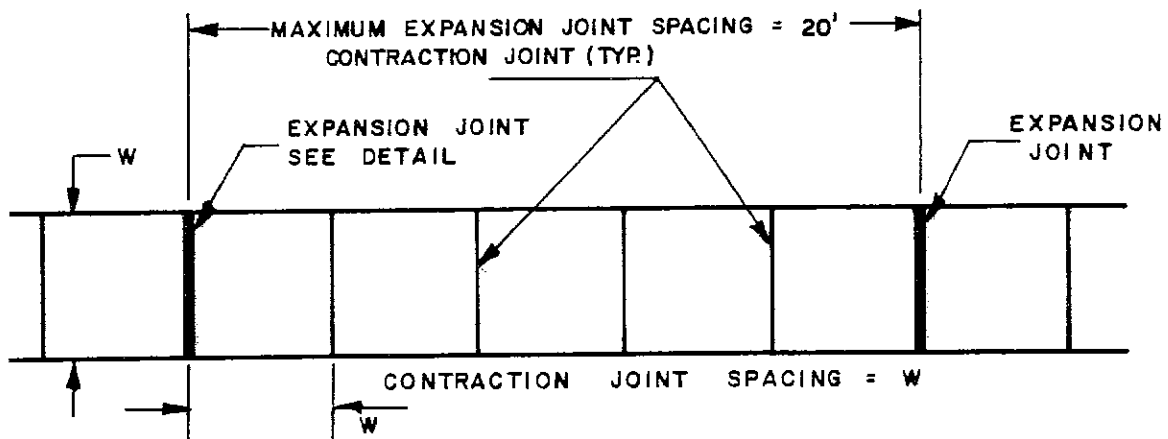
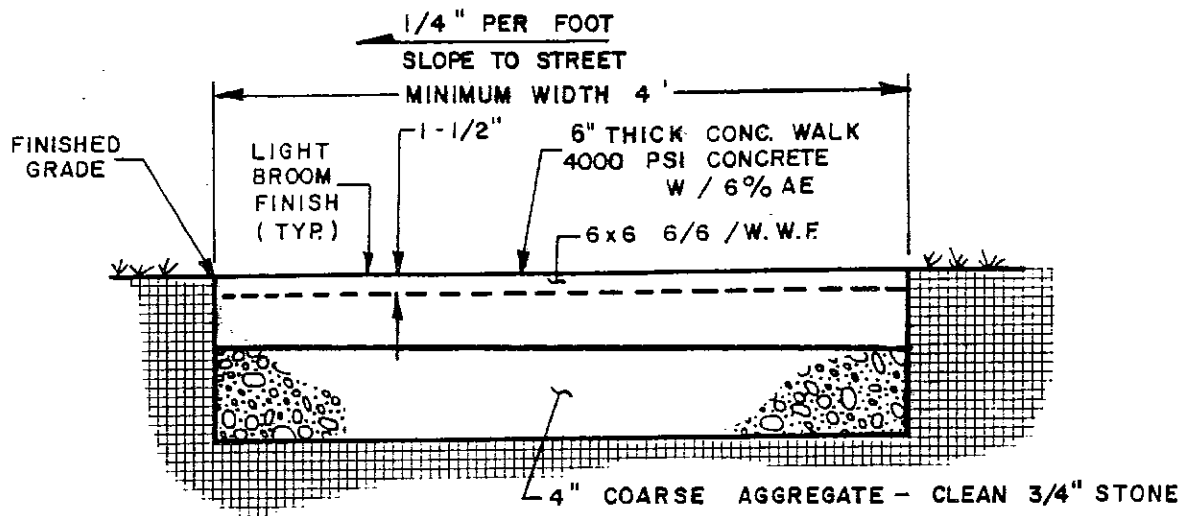
TERMINAL END SECTION

Not To Scale

PLAIN CEMENT CONCRETE CURB

MMI martin and martin, incorporated
 Phone: (717) 264-6790
 37 South Main Street
 Suite A
 Fax: (717) 264-7226
 Chambersburg, Pennsylvania 17201 - 2251

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



NOTES:

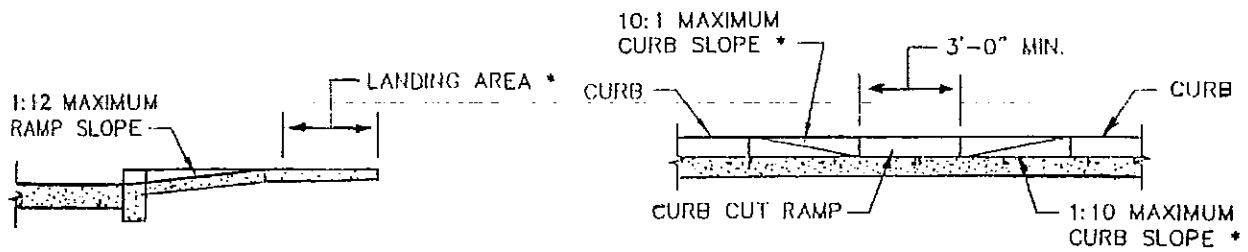
1. JOINT SPACING TO MATCH SIDEWALK (W)
2. SIDEWALK WIDTH (W) TO BE DESIGNATED ON DRAWINGS. (MIN. 4')
3. INSTALL EXPANSION MATERIAL AROUND ALL STRUCTURES EXISTING AND PROPOSED AND AS DIRECTED BY THE TOWNSHIP
4. UTILIZE THE ABOVE JOINT PATTERN UNLESS OTHERWISE DETAILED ON THE DRAWINGS OR DIRECTED BY THE TOWNSHIP.

CONCRETE WALK TYPICAL JOINT SPACING

CONCRETE WALK DETAIL

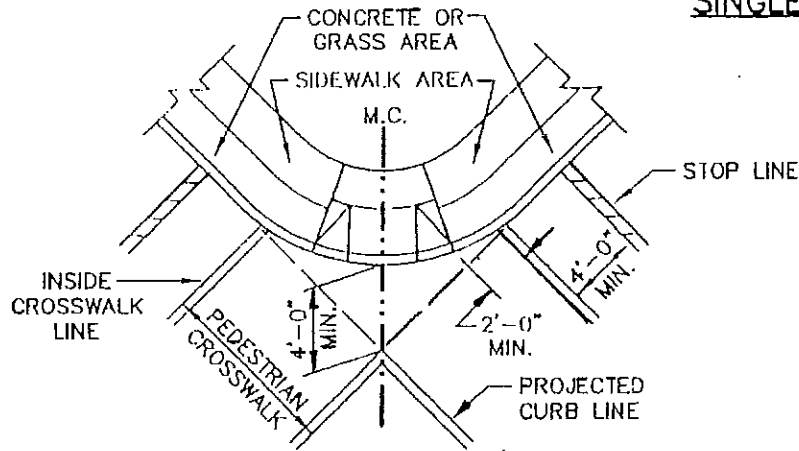
M&M martin and martin, incorporated
 Phone: (717) 351-6700
 Fax: (717) 351-7200
 37 South Main Street-
 Suite A
 Chambersburg, Pennsylvania 17201 - 2251

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS

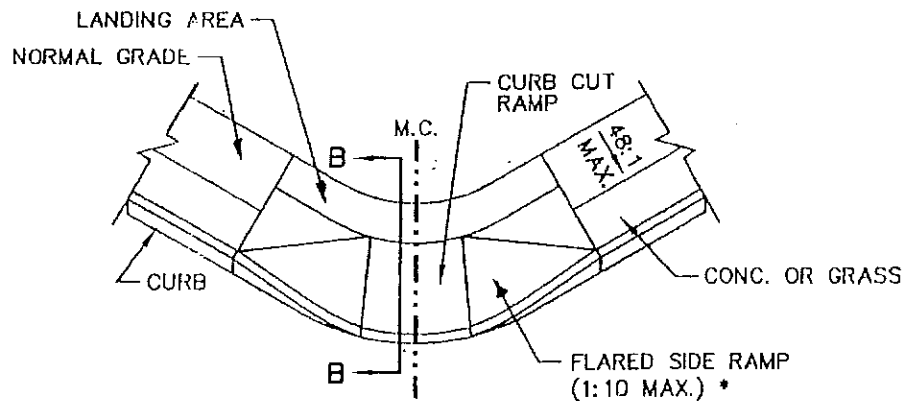


SECTION B-B

**ELEVATION VIEW
SINGLE**



PLAN VIEW



ISOMETRIC VIEW

SINGLE CURB CUT RAMP

NO SCALE

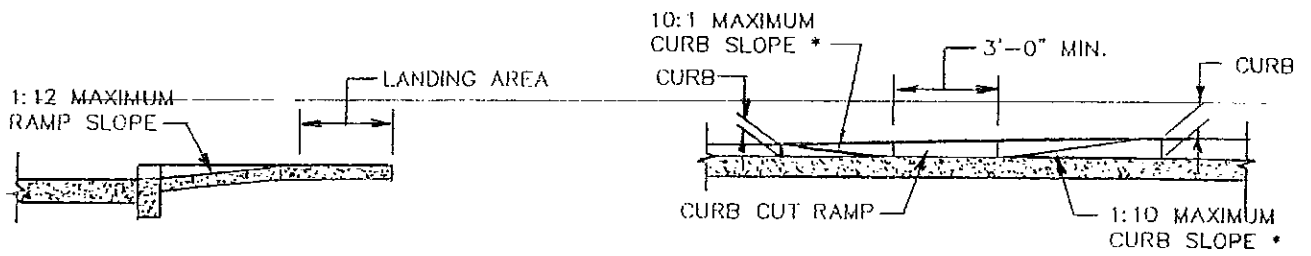
* IF LANDING AREA IS LESS THAN 48", THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 1:12

NOTE: TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB CUT RAMP SHALL NOT EXCEED 1:20.

WHEELCHAIR RAMP AT CURB

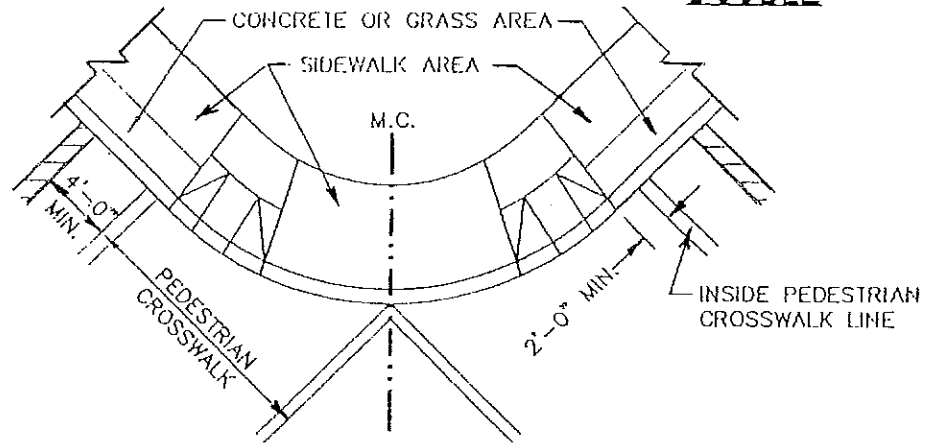
M&M martin and martin, incorporated
 Phone: (717) 342-6700
 37 South Main Street-
 Suite A
 Chambersburg, Pennsylvania 17201-2251
 Fax: (717) 342-7200

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS

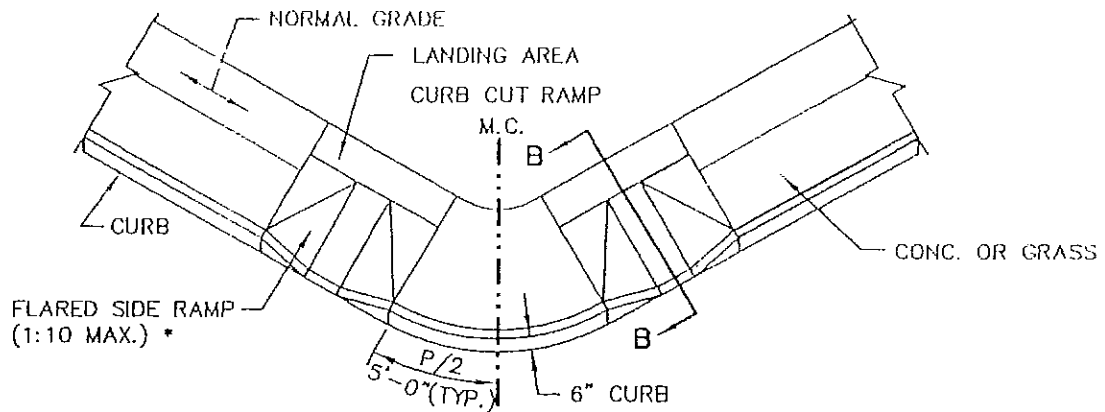


SECTION B-B

ELEVATION VIEW
DOUBLE



PLAN VIEW



ISOMETRIC VIEW

DOUBLE CURB CUT RAMP

NO SCALE

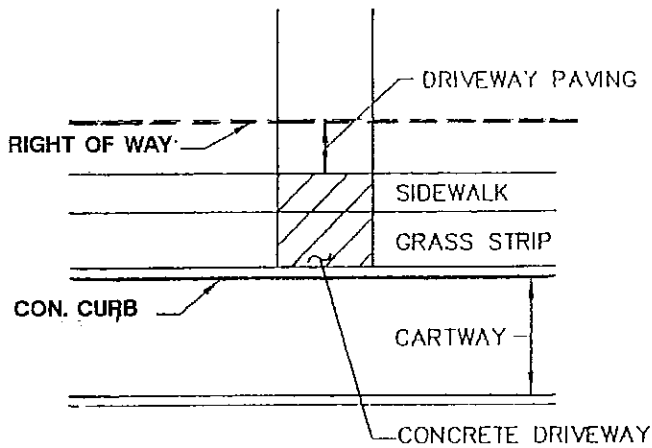
* IF LANDING AREA IS LESS THAN 48", THEN THE SLOPE OF THE FLARED SIDE SHALL NOT EXCEED 1:12

NOTE: TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB CUT RAMP SHALL NOT EXCEED 1:20.

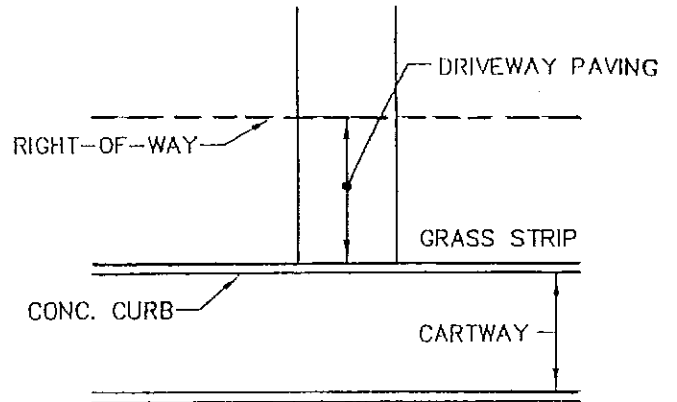
WHEELCHAIR RAMP AT CURB

MMI martin and martin, incorporated
 Phone: (717) 350-6700
 37 South Main Street
 Suite A
 Chambersburg, Pennsylvania 17201-2281

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS

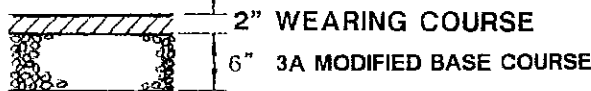
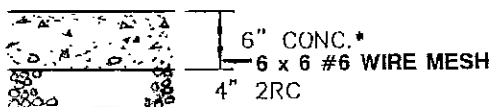


**DRIVEWAY PAVING
WITH CONCRETE
SIDEWALK**



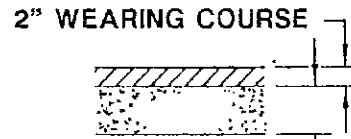
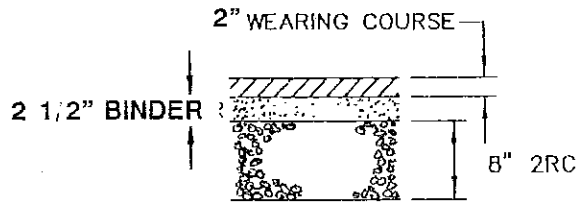
**DRIVEWAY PAVING
NO SIDEWALK**

PLAN



RESIDENTIAL

* 8" FOR COMMERCIAL



**COMMERCIAL
DRIVEWAY PAVING**

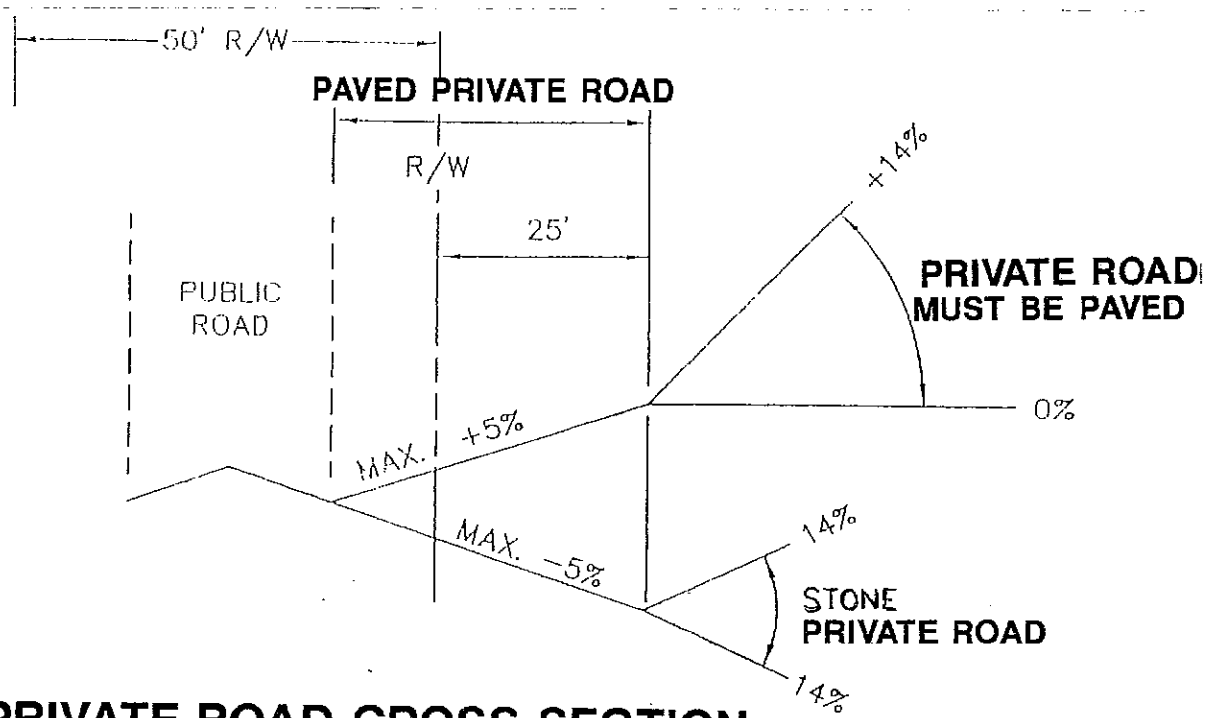
TYPICAL SECTION

NOTE: ALL DRIVEWAYS SHALL HAVE A BITUMINOUS OR CONCRETE SURFACE WITHIN THE STREET RIGHT-OF-WAY

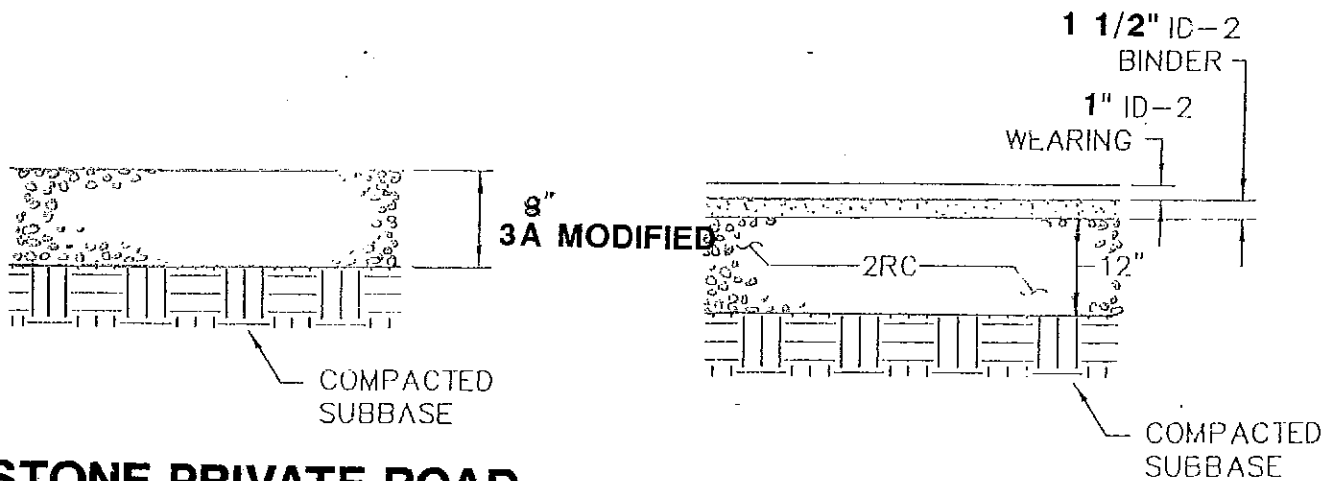
DRIVEWAY PAVING DETAILS

MMI martin and martin, incorporated
 Phone: (717) 381-6950
 37 South Main Street-
 Suite A
 Chambersburg, Pennsylvania 17201 - 2251
 Fax: (717) 381-7288

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



PRIVATE ROAD CROSS SECTION



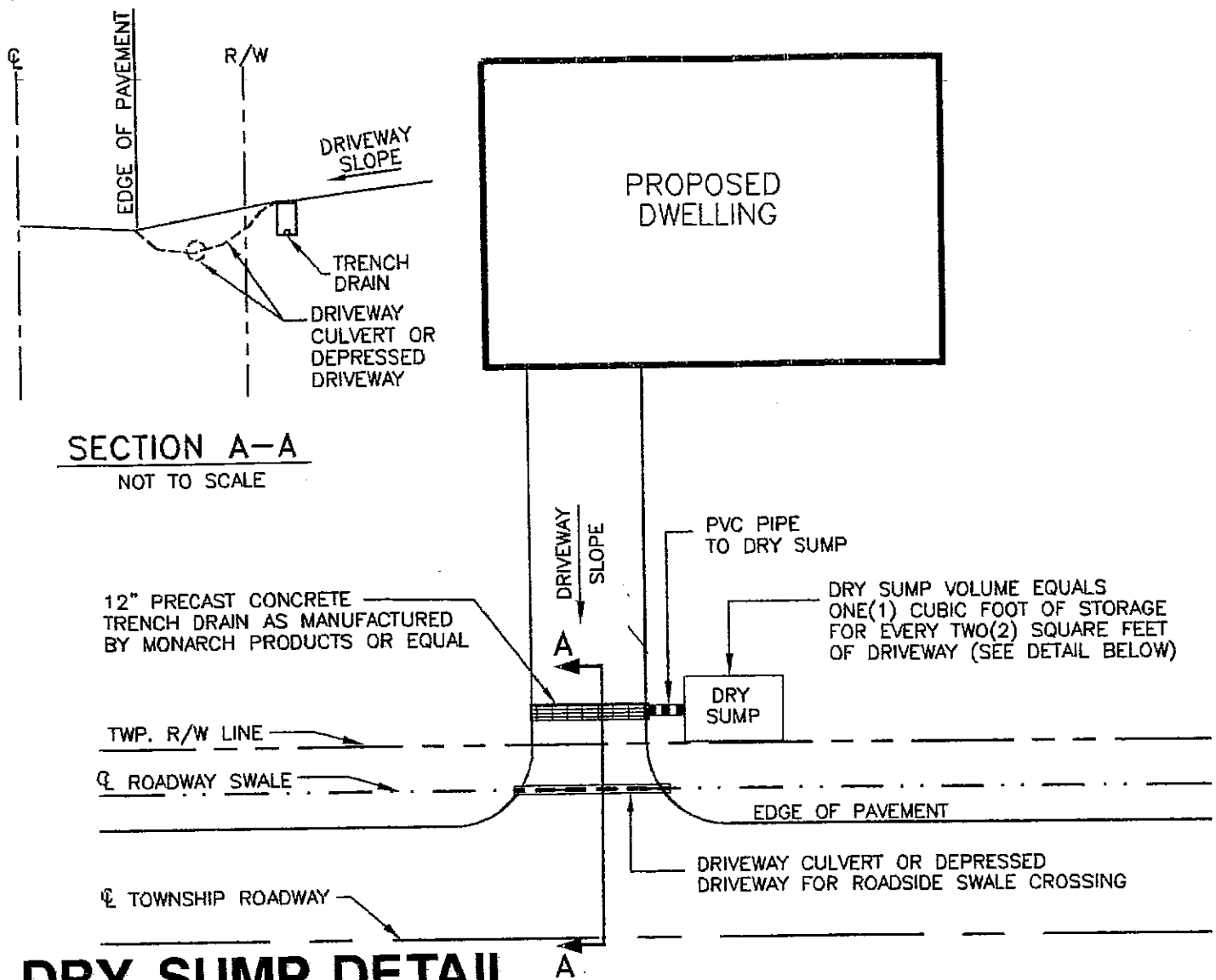
STONE PRIVATE ROAD

PAVED PRIVATE ROAD

PRIVATE ROAD PAVING DETAIL

MMI martin and martin, incorporated
 Phone: (717) 326-0000
 Fax: (717) 326-0000
 37 South Main Street-
 Suite A
 Chambersburg, Pennsylvania 17201 - 2281

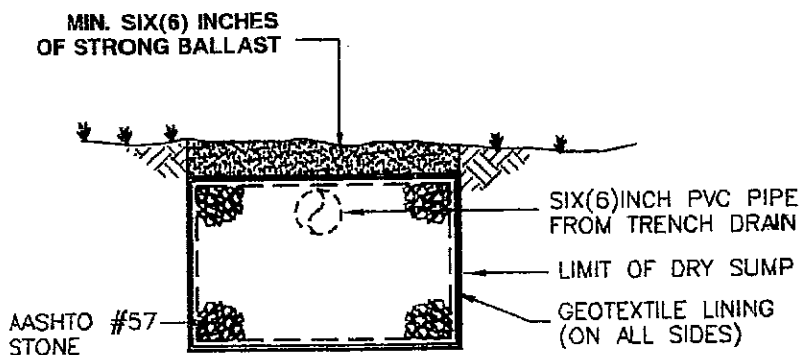
HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



SECTION A-A
NOT TO SCALE

PLAN
NOT TO SCALE

DRY SUMP DETAIL
Not To Scale



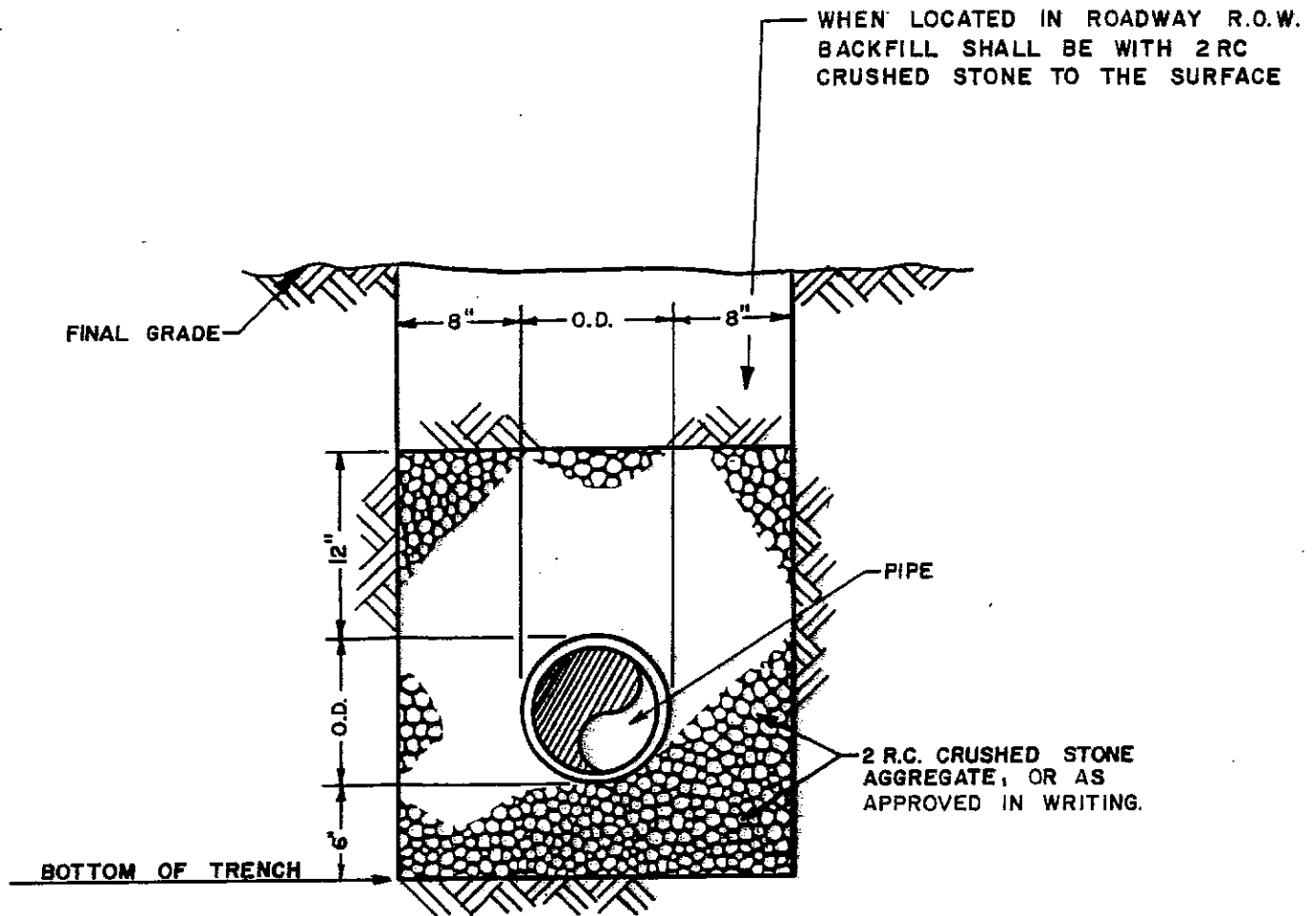
NOTES:

1. DRY SUMP AND TRENCH DRAIN TO BE LOCATED OUTSIDE OF TOWNSHIP RIGHT-OF-WAY.
2. DRY SUMP AND TRENCH DRAIN SYSTEM TO BE OWNED, OPERATED AND MAINTAINED BY EACH RESPECTIVE PROPERTY OWNER ON WHICH THE SYSTEM IS CONSTRUCTED.
3. MAINTENANCE, UNCLOGGING, AND REPAIRS SHALL BE THE RESPONSIBILITY OF THE INDIVIDUAL PROPERTY OWNER.

TYPICAL DRIVEWAY W/TRENCH DRAIN & DRY SUMP DETAIL

MMI martin and martin, incorporated
 Phone: (717) 353-6700
 27 South Main Street - Suite A
 Chambersburg, Pennsylvania 17201 - 2251
 Fax: (717) 353-7200

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
CONSTRUCTION AND MATERIAL SPECIFICATIONS

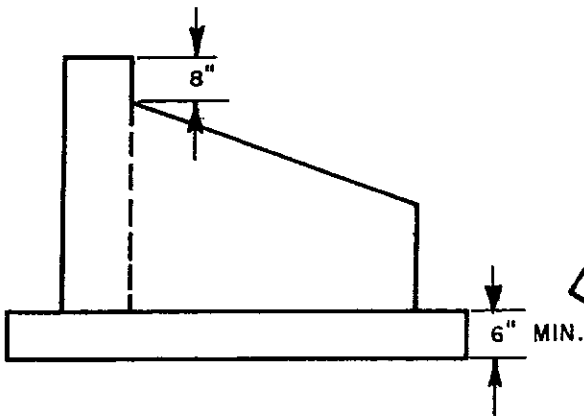
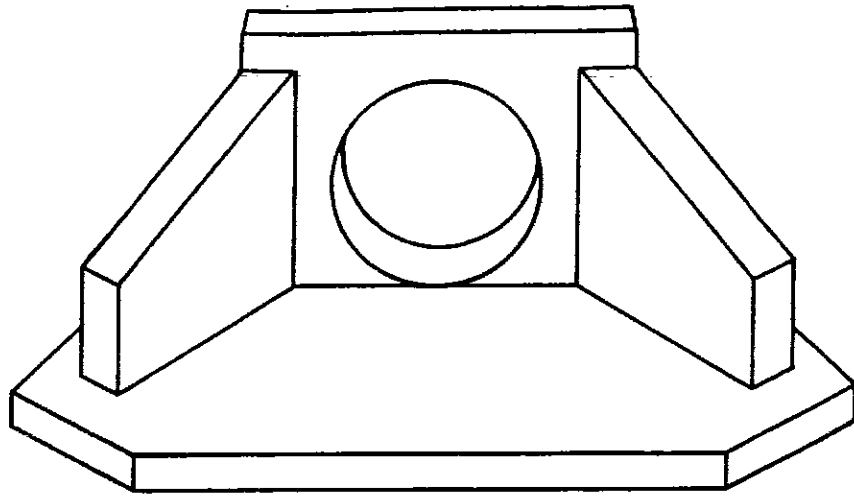


1. ALL PIPES SHALL BE BEDDED AS SHOWN ABOVE USING 2RC STONE WITH THE EXCEPTION OF PVC PIPE, AND PLASTIC PIPE.
2. BEDDING MATERIALS FOR ALL DIAMETERS OF PVC PIPE SHALL BE No. 1B STONE.
3. BEDDING MATERIALS FOR ALL DIAMETERS OF PLASTIC PIPE SHALL BE 1A STONE

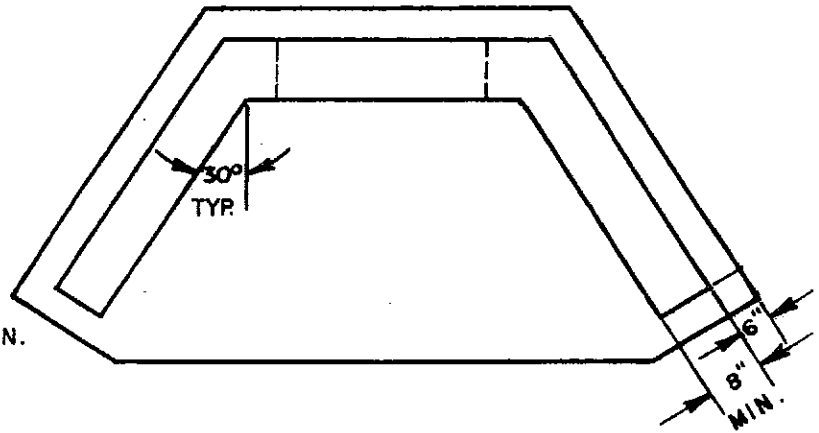
STANDARD BEDDING FOR STORMWATER PIPING

MMI martin and martin, incorporated
 Phone: (717) 350-6750
 Fax: (717) 350-7500
 37 South Main Street-
 Suite A
 Chambersburg, Pennsylvania 17201-2261

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



SIDE VIEW



PLAN VIEW

NOTE: DIMENSIONS VARY BASED ON SIZE OF PIPE

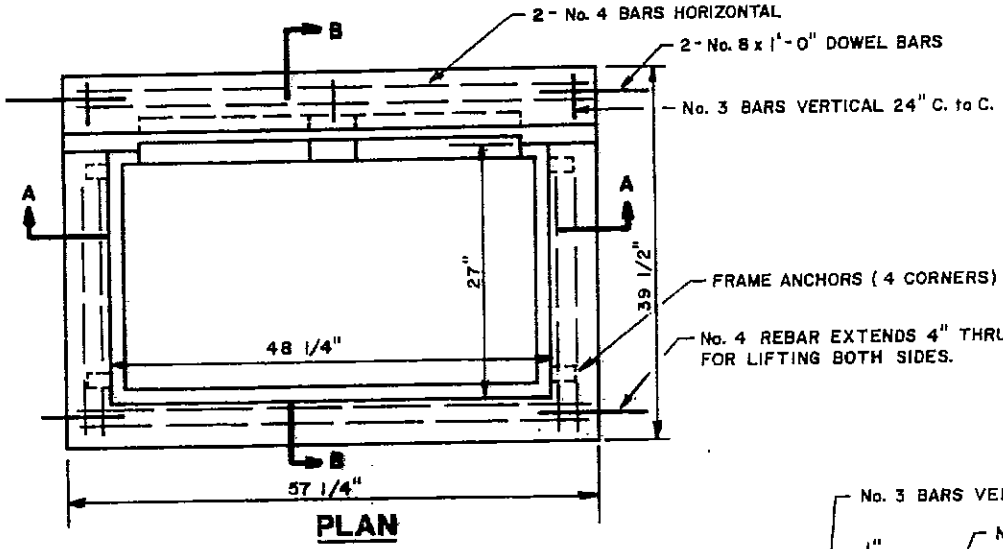
CONCRETE ENDWALL

MMI martin and martin, incorporated
 Phone: (717) 264-9799
 37 South Main Street -
 Suite A
 Chamberburg, Pennsylvania 17201-2251
 Fax: (717) 264-7208

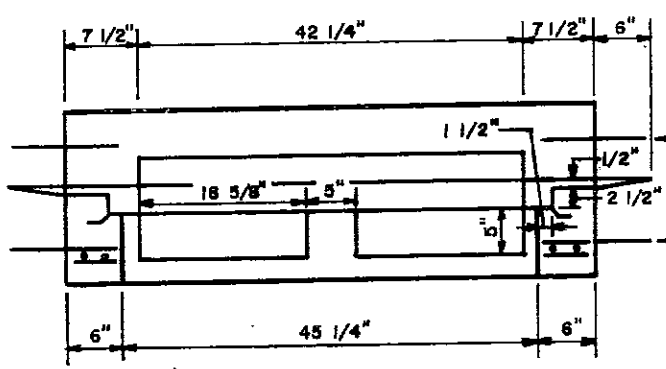
HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



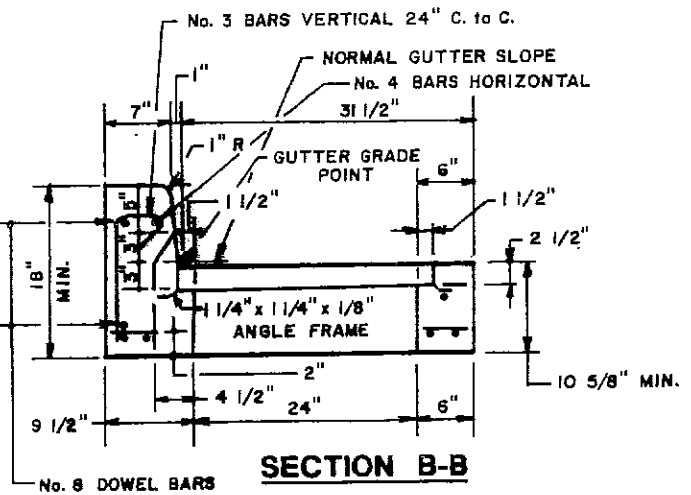
NOTE: WHEN LOCATED IN A PAVED STREET, GRATE SURFACE ELEVATION SHALL BE A MAXIMUM OF 1" AND A MINIMUM OF 1/2" BELOW THE SEALED FINISHED ROAD SURFACE.



PLAN



SECTION A-A

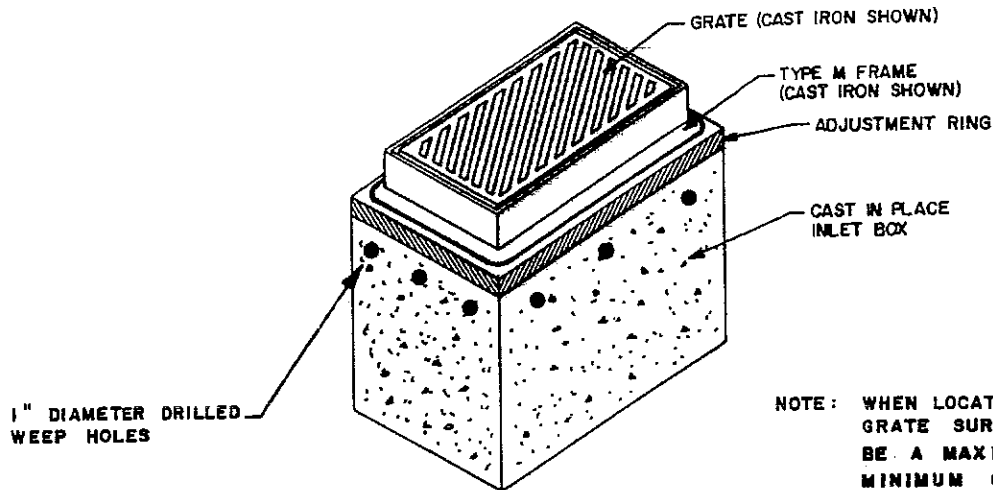


SECTION B-B

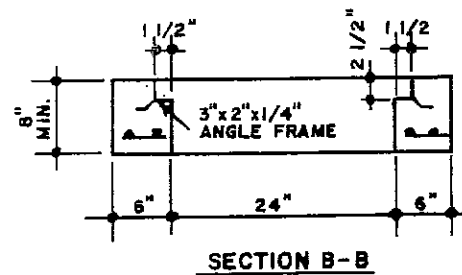
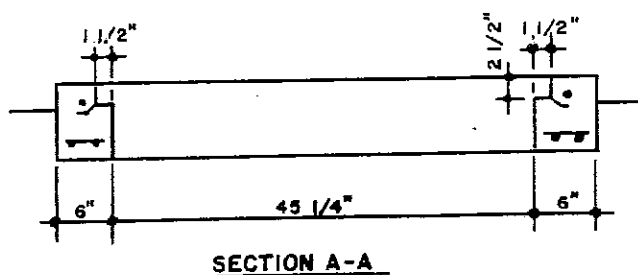
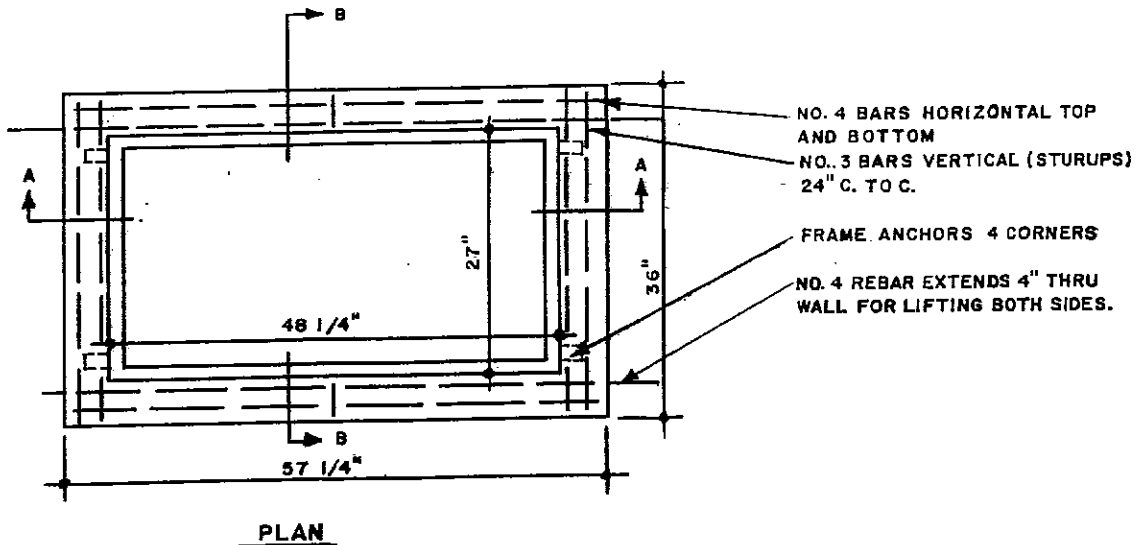
TYPE "C" INLET

MMI martin and martin, incorporated
 Phone: (717) 354-6700
 Fax: (717) 350-7200
 37 South Main Street, Suite A
 Chambersburg, Pennsylvania 17201-2281

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



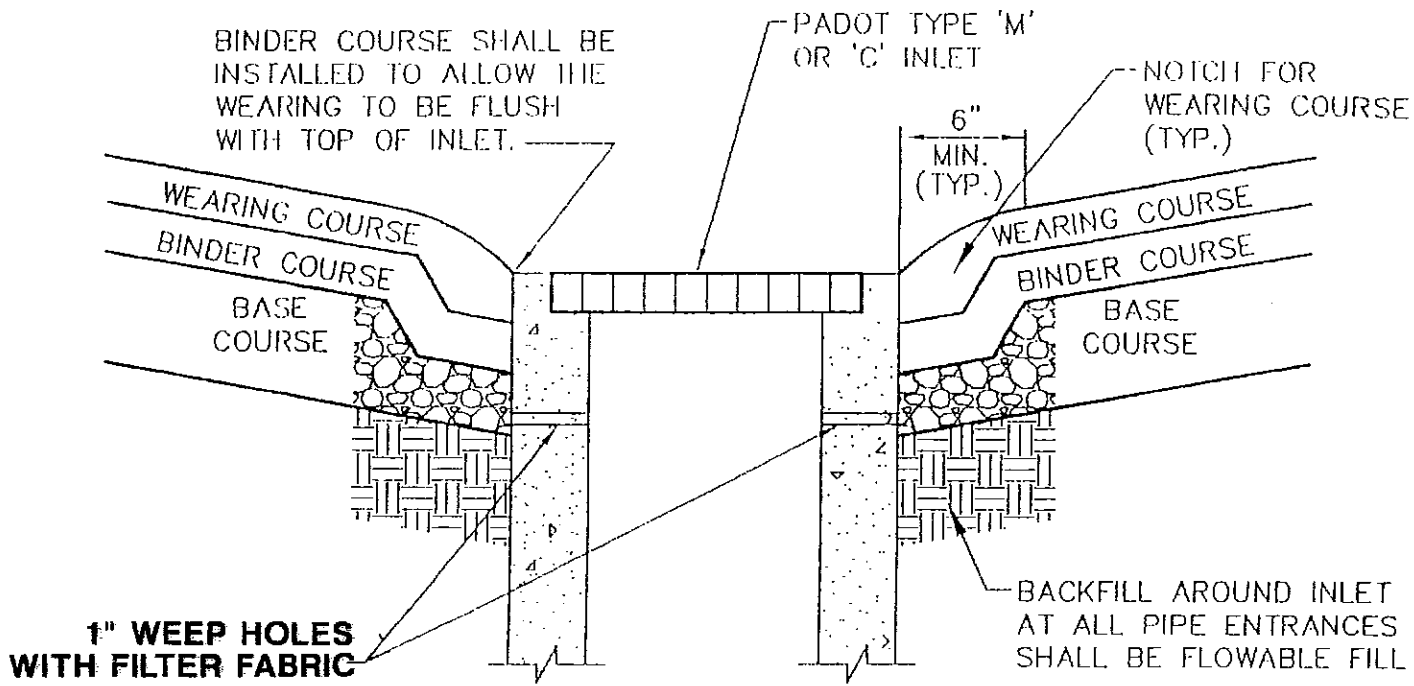
NOTE: WHEN LOCATED IN A PAVED STREET, GRATE SURFACE ELEVATION SHALL BE A MAXIMUM OF 1" AND A MINIMUM OF 1/2" BELOW THE SEALED FINISHED ROAD SURFACE.



TYPE "M" INLET

MMI martin and martin, incorporated
 Phone: (717) 294-9799
 37 South Main Street -
 Suite A
 Chambersburg, Pennsylvania 17201-2251
 Fax: (717) 294-7298

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



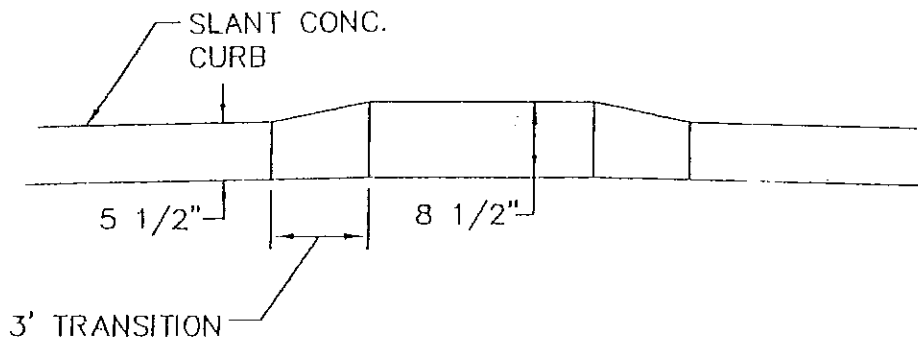
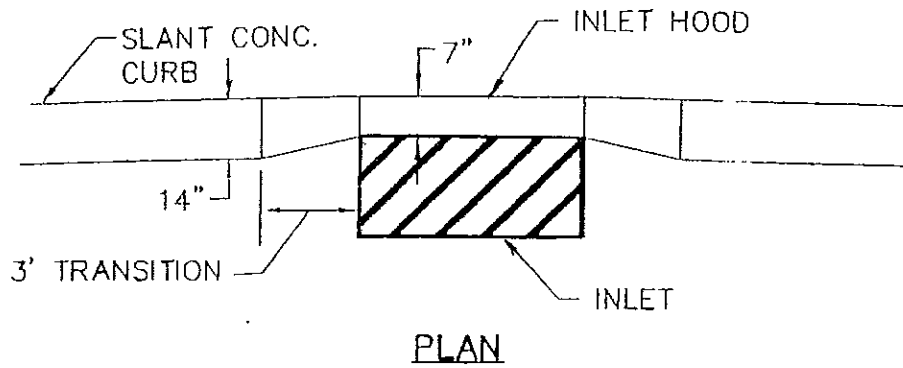
PAVEMENT DETAIL AT INLET LOCATION

Not To Scale

PAVEMENT TREATMENT AT INLET LOCATION

MMI martin and martin, incorporated
 Phone: (717) 354-4700
 37 South Main Street, Suite A
 Chambersburg, Pennsylvania 17201-2261
 Fax: (717) 354-7200

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



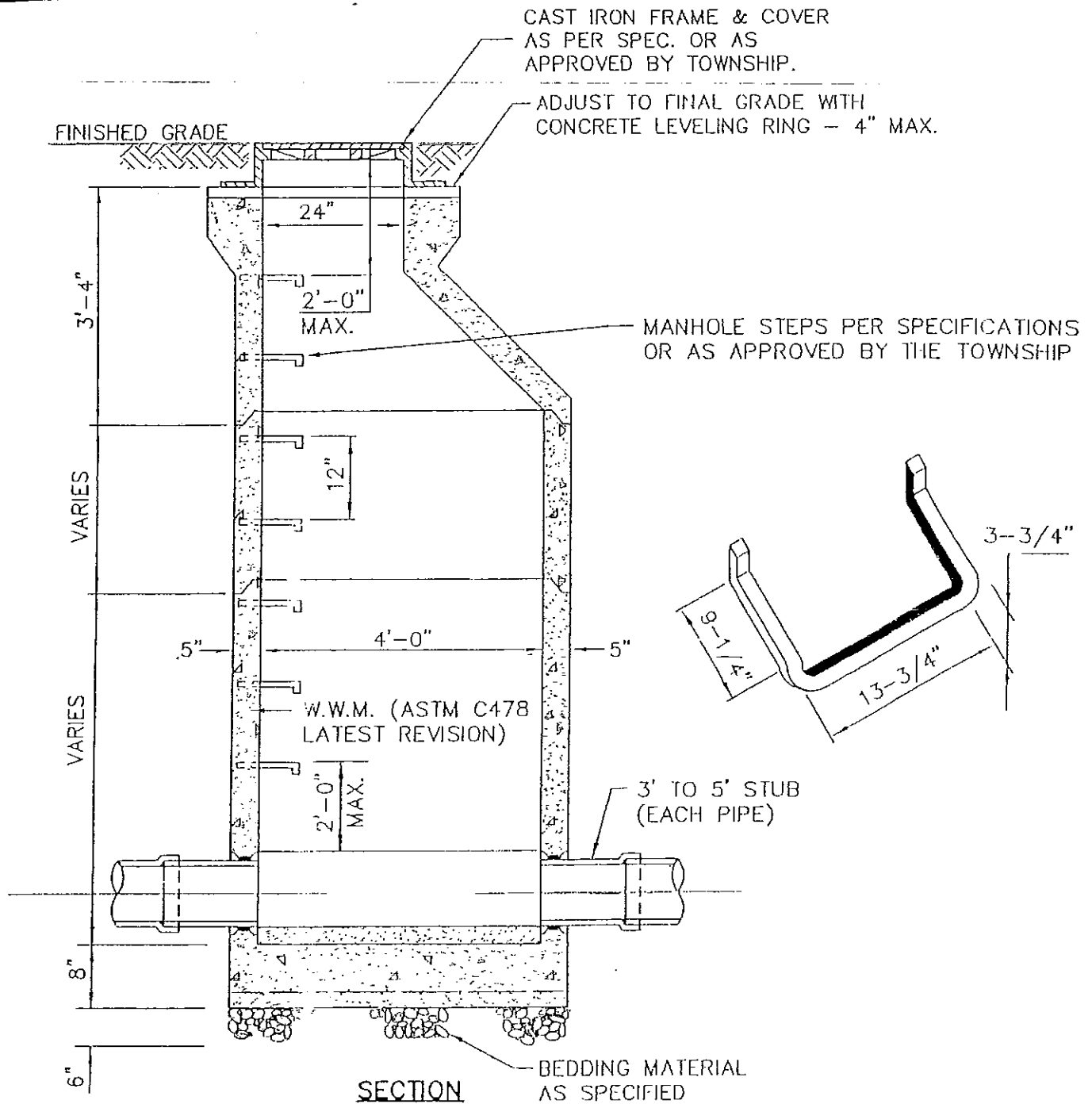
ELEVATION

 Not To Scale

SLANT CURB TRANSITION TO TYPE 'C' INLET

MMI martin and martin, incorporated
 Phone: (717) 353-6700
 37 South Main Street,
 Suite A
 Chambersburg, Pennsylvania 17201-2251

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS



NOTES:

1. ALL JOINTS TO BE SEALED WATERTIGHT WITH RAMNECK OR EQUAL.
2. PRECAST REINFORCED CONCRETE BASE WITH RISER SECTION - CHANNEL FORMED ON JOB WITH GROUT AFTER MANHOLE IS SET AND PIPE STUBS INSTALLED, HOLES FOR PIPE CAST TO SUIT JOB CONDITIONS.
3. PIPE CONNECTION MADE WITH RUBBER GASKET PER ASTM C-443 CAST INTEGRALLY IN MANHOLE BASE.
4. ALL LIFT HOLES SHALL BE PLUGGED WITH AN APPROVED NO SHRINK GROUT.

PRECAST CONCRETE MANHOLE

MMI martin and martin, incorporated
 Phone: (717) 341-6700
 37 South Main Street -
 Suite A
 Chambersburg, Pennsylvania 17201 - 2261
 Fax: (717) 341-7200

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS

R1-1

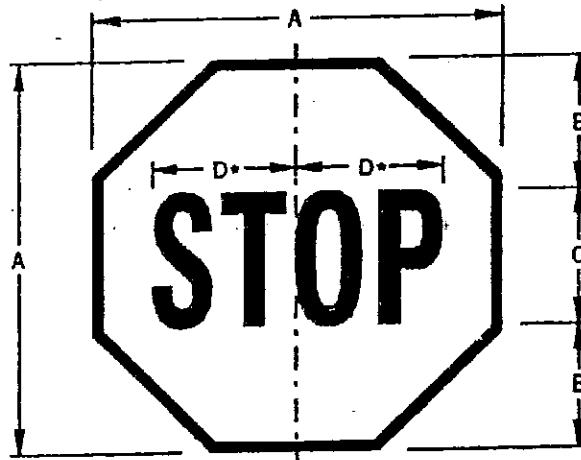
STOP SIGN

(a) Justification. The Stop Sign (R1-1) is authorized for use on those streets or highways which intersect with a through highway or at a stop intersection so designated by the Department with reference to State-designated highways or local authorities with reference to highways under their jurisdiction. The R1-1 sign is also authorized for use in work zones involving one-lane, two-way roadways in accordance with Publication 203M (relating to work zone traffic control).

(b) Authorization. Before local authorities designate any highway as a through highway or stop intersection which will intersect or affect a State-designated highway, approval of such designation shall first be obtained from the Department. Approval to install R1-1 signs in work areas shall not require the approval of the Department or local authorities when the conditions stipulated in Publication 203M (relating to work zone traffic control) are satisfied.

(c) Placement. The R1-1 sign shall be placed in accordance with Department regulations (relating to location of stop and yield signs), or in accordance with Publication 203M (relating to work zone traffic control). When the number of stop approaches to an intersection is three or more, or two or more at an intersection involving two one-way streets, the Multiway Stop Sign (R1-3) shall be placed below each Stop Sign.

(d) Size. The standard size R1-1 sign shall be 750 mm by 750 mm; however, at intersections on minor roads and secondary streets, a 600 mm by 600 mm sign may be used. In work zones, the standard size R1-1 sign for controlling one-lane, two-way traffic shall be 750 mm by 750 mm.



SIGN SIZE AxA	DIMEN. (IN mm)			BOR- DER	BLANK STD.
	B	C	D		
600x600	200	200C	254	15	B1-600
750x750	250	250C	318	20	B1-750
900x900	300	300C	381	20	B1-900
1200x1200	400	400C	508	30	B1-1200

* REDUCE SPACING 40%

COLOR:

LEGEND AND BORDER:
WHITE (REFLECTORIZED)

BACKGROUND:
RED (REFLECTORIZED)

APPROVED FOR THE

Date 10/8/97

Secretary of Transportation

By: Art Brewer
Chief, Traffic Engineering and Operations Division
Bureau of Highway Safety and Traffic Engineering

D3-1

STREET NAME SIGN

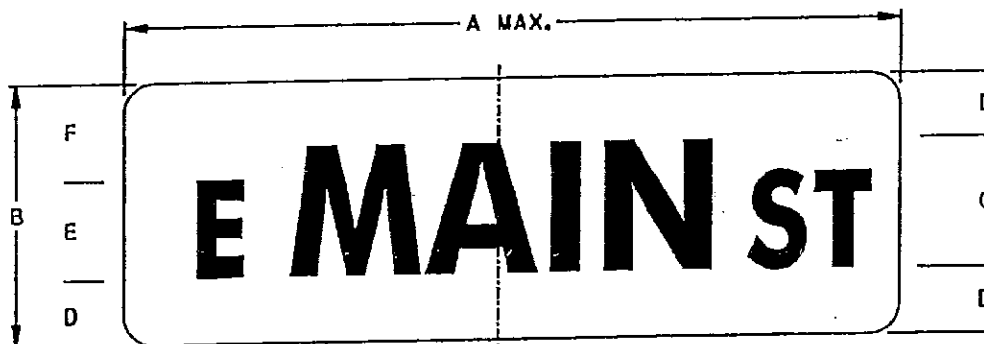
The Street Name Sign (D3-1) shall be authorized for use as a post mounted sign to identify names of streets for motorists and pedestrians. The D3-1, or other official type of street name sign, should be placed at all street intersections regardless of other route marking that may be present.

When the D3-1 signs are used in business districts, they should be placed at least on the diagonally opposite corner so that they will be on the far right-hand side of the intersection for traffic on the more important street. Signs naming both streets should be erected at each location. They should be mounted with their faces parallel to the streets they name, as close to the corner as practical with the nearest part of the each sign not less than 0.3 m, and preferably 0.6 m, back from both curb lines.

In residential districts, D3-1 signs should be mounted as in business districts, but a single locations at each intersection shall ordinarily suffice on all but the most important thoroughfares.

The name shall appear on street name signs in capital lettering at least 150 mm high. Larger legend, however, is optional. Lettering 200 mm or greater should be composed of lower-case letters with an initial upper-case letter. The overall width of the sign is variable up to 900 mm width with 150 mm legend. Except when necessary to avoid confusion, suffixes such as "ST", "DR", and "RD", or sections of the city such as "NW" should not be used. When used, this supplemental lettering may be in smaller lettering, at least 100 mm high.

The street name sign should be reflectorized or illuminated and should have a white legend on a green or black background or black legend on a white background or other contrasting colors.



SIGN SIZE AxB	DIMEN. (IN mm)				
	C	D	E	F	G
900x200	150*	25	100*	75	35

*CHOOSE STANDARD ALPHABETS SERIES FOR BEST FIT

COLOR:

LEGEND:

WHITE (REFLECTORIZED)

BACKGROUND:

GREEN (REFLECTORIZED) OR
BLACK (NON-REFLECTORIZED)

OR

LEGEND:

BLACK (NON-REFLECTORIZED)

BACKGROUND:

WHITE (REFLECTORIZED)

APPROVED FOR TIF

Date 4/3/97

Secretary of Transportation

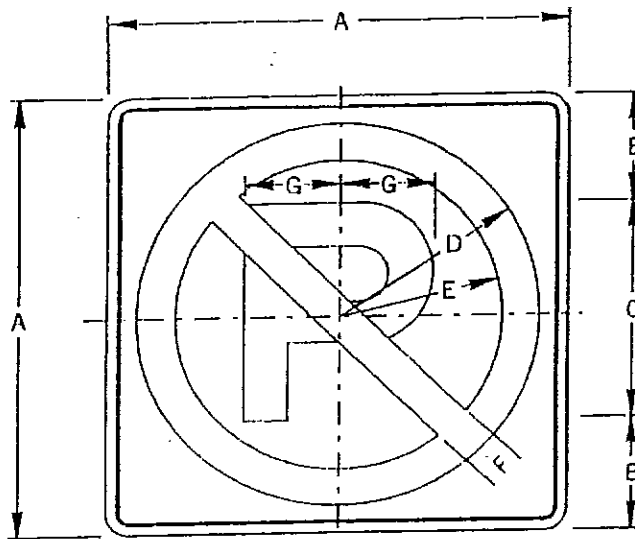
By: A.H. Brennan
Chief, Traffic Engineering and Operations Division
Bureau of Highway Safety and Traffic Engineering

R8-3A

NO PARKING SYMBOL SIGN

(a) Justification. The No Parking Symbol Sign (R8-3A) shall be authorized for use in accordance with Department regulations (relating to justification and description; placement; and size) to prohibit parking along a given highway. If the restriction applies to a limited area or zone, supplemental signs or messages shall be authorized to show the limits of the restriction. Authorized supplemental signs include, but are not limited to the Restricted Hours Panel (R3-20), No Parking Restricted Hours Plaque (R7-2), No Parking Loading Zone Plaque (R7-6), No Parking Arrow Plaque (R7-7), Tow Away Zone Sign (R7-201) and No Parking On Pavement Sign (R8-1). As an alternate to the use of supplemental signs, the appropriate supplemental message and the no parking symbol may be incorporated into a single sign.

(b) Size. The standard size R8-3A sign shall be 300 mm by 300 mm in business, residential, or park areas and 600 mm by 600 mm in rural areas. The standard size for expressways shall be 900 mm by 900 mm.



SIGN SIZE AxA	DIMENSIONS (IN MILLIMETERS)						MAR- GIN	BOR- DER	BLANK STD.
	B	C	D	E	F	G			
300x300	75	150 E(M)	122	97	25	61	10	10	---
600x600	150	300 E(M)	262	212	50	123	10	15	B3-600
900x900	225	450 E(M)	395	320	75	182	15	20	B3-900

COLOR:

SYMBOL AND BORDER:
BLACK (NON-REFLECTORIZED)

CIRCLE AND DIAGONAL:
RED (REFLECTORIZED)

BACKGROUND:
WHITE (REFLECTORIZED)

APPROVED FOR THE

Date 4/3/91

Secretary of Transportation

By: A.H. Benjamin
Chief, Traffic Engineering and Operations Division
Bureau of Highway Safety and Traffic Engineering

R7-22-1

NO PARKING UNTIL SNOW IS REMOVED SIGN

(a) Justification. The No Parking Until Snow Is Removed Sign (R7-22-1) may be used in accordance with Publication 201M, Section 201.21(e) (relating to miscellaneous restrictions) and in accordance with Department regulations (relating to justification and description; placement; and size) when the Department or local authorities, by ordinance or ruling deem it necessary to prohibit parking for a short time on a street or highway after a snowfall to enhance snow removal operations. This sign should be removed during the summer months, or covered.

(b) Placement. Since the use of this sign is temporary, it may be made of cardboard and attached to poles, trees, or other existing supports at convenient heights, angles, and locations, or the sign may be semi-permanent and placed on permanent sign posts. The R7-22-1 sign should be placed so that drivers are aware of the restriction.



NOTE:
SEE STANDARD ARROW
FOR DIMENSIONS OF
ARROWHEAD

SIGN SIZE AxB	DIMENSIONS (IN MILLIMETERS)										MAR- GIN	BOR- DER	BLANK STD.
	C	D	E	F	G	H	J	K	L	M			
300x450	50	50C	30	50B	60	34	118	125	95	20	10	10	85-300450

* REDUCE SPACING 25%

COLOR:

LEGEND, ARROW AND BORDER:
RED (REFLECTORIZED)

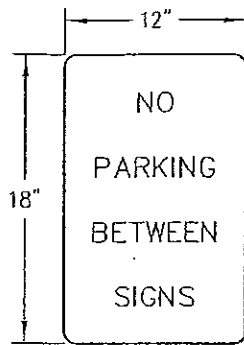
BACKGROUND:
WHITE (REFLECTORIZED)

APPROVED FOR THE

Date 1/5/98

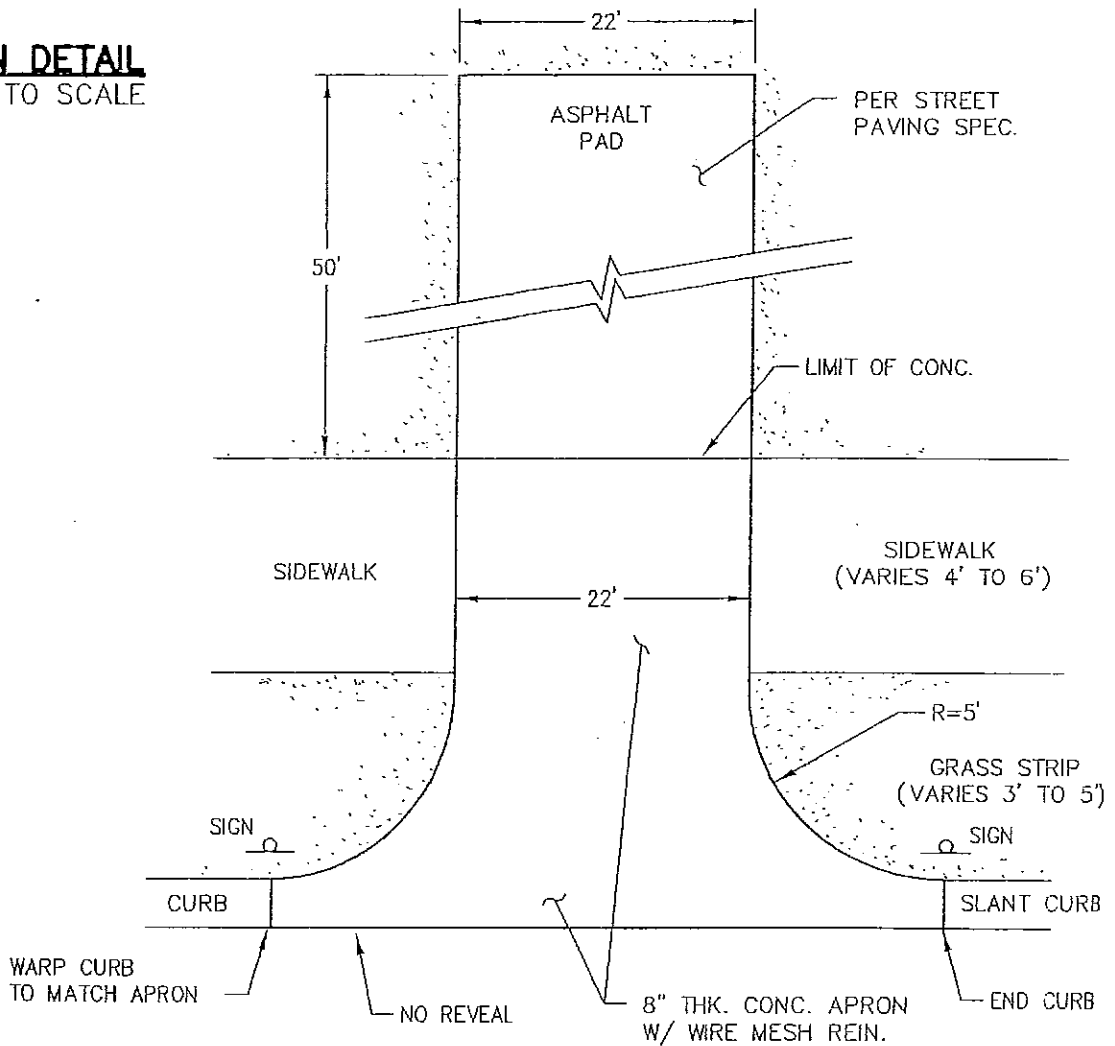
Secretary of Transportation

By : [Signature]
Chief, Traffic Engineering and Operations Division
Bureau of Highway Safety and Traffic Engineering



SIGN DETAIL
NOT TO SCALE

MAX. SLOPE ON APRON TO BE 4%
MAX. SLOPE ON ASPHALT PAD TO BE 6%

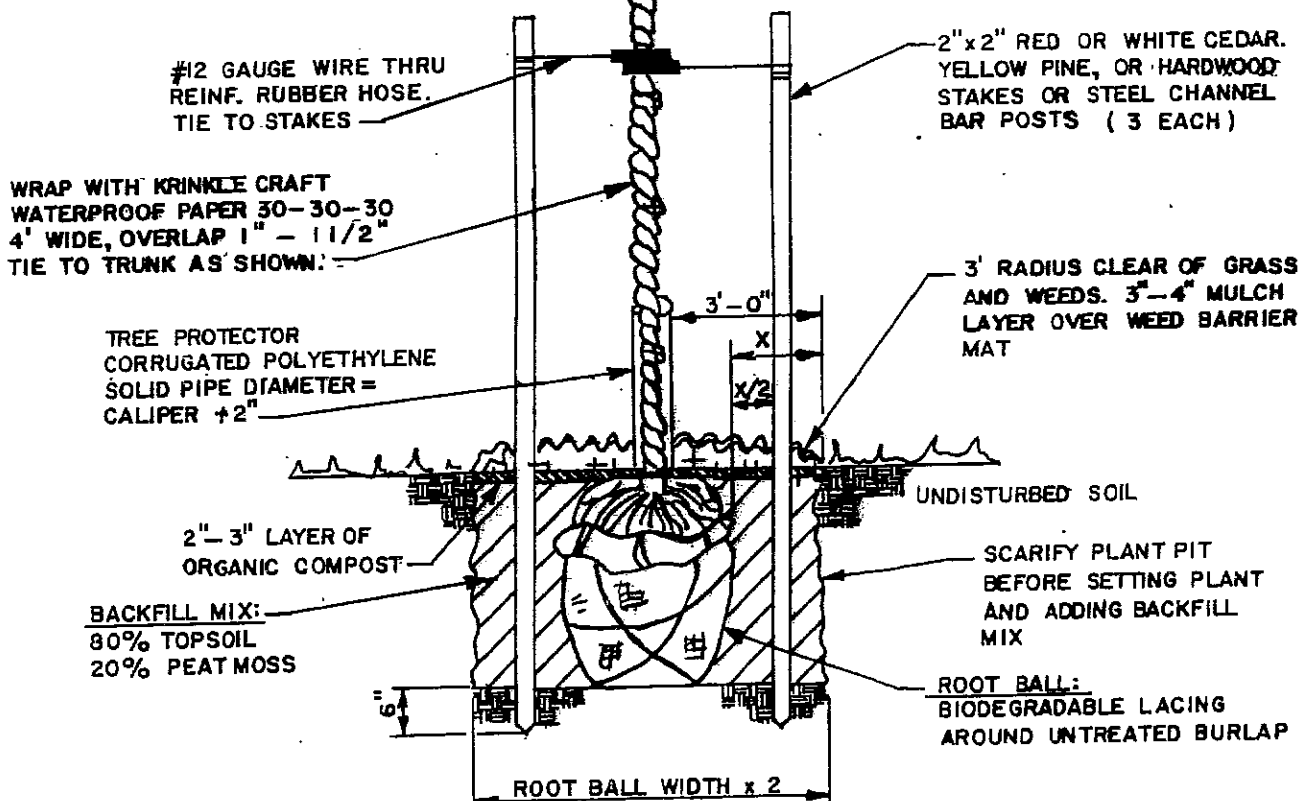
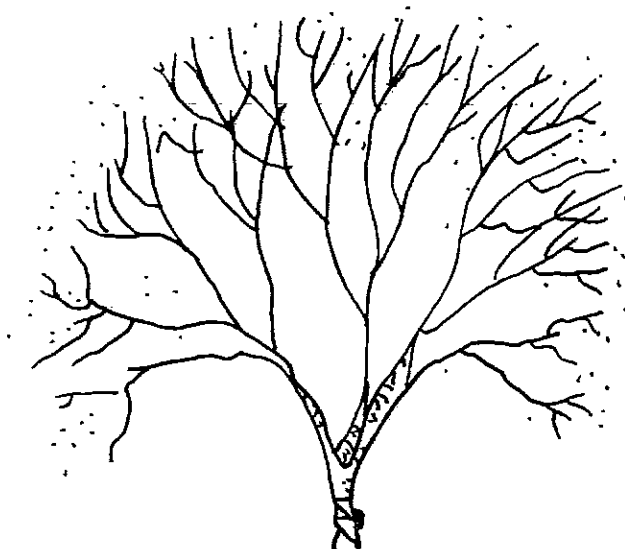


SNOW STORAGE AREA
NOT TO SCALE

SNOW STORAGE AREA DETAIL

MMI martin and martin, incorporated
Phone: (717) 261-4400
Fax: (717) 261-7200
17 South Main Street - Suite A
Chambersburg, Pennsylvania 17201 - 2251

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
CONSTRUCTION AND MATERIAL SPECIFICATIONS



- * FERTILIZE WITH 0-20-0 (CLAY SOIL), 20-10-5 OR 16-8-16 (SANDY SOIL) BEFORE MULCHING (1 LB./CU. FT. OF SOIL)
- * TREE'S MIN. 10'-0" OFF ROAD R/W.
- * SPECIES TO BE SELECTED FROM HOPEWELL TOWNSHIP APPROVED LIST

PLANTING DETAIL

DECIDUOUS SHADE AND FLOWERING TREE

MMI martin and martin, incorporated
 Phone: (717) 354-4700
 37 South Main Street, Suite A
 Chambersburg, Pennsylvania 17201-2261
 Fax: (717) 354-7200

HOPEWELL TOWNSHIP, YORK COUNTY, PENNSYLVANIA
 CONSTRUCTION AND MATERIAL SPECIFICATIONS

Rec'd
11-20-02
By Fax

RESOLUTION NO. 1-2002

A RESOLUTION OF HOPEWELL TOWNSHIP,
YORK COUNTY, PENNSYLVANIA AMENDING THE
CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR SUBDIVISION AND LAND DEVELOPMENT
MANUAL OF HOPEWELL TOWNSHIP BY CLARIFYING
TERMINOLOGY FOR ROOF DRAIN SEEPAGE PITS

WHEREAS, by Resolution No. 4-1998 the Board of Supervisors of Hopewell Township (Board) adopted a Construction and Material Specifications For Subdivision and Land Development Manual (Manual); and

WHEREAS, by Ordinance No. 6-1999, the Township amended its Building Permit Ordinance to require roof drain seepage pits under certain circumstances, and directed those seepage pits to be designed according to the criteria and specifications in Manual; and

WHEREAS, by Resolution No. 4-1999, the Township amended the Manual to add criteria for roof drainage seepage pits; and

WHEREAS, the Township desires to amend those criteria by clarifying the terminology used in calculating the size of the roof seepage pits:

NOW, THEREFORE, BE IT RESOLVED and it is hereby resolved by the Board of Supervisors of Hopewell Township as follows:

SECTION 1: Part II Section A of the Construction and Materials Specifications For Subdivision and Land Development Manual of Hopewell Township (Manual) shall be amended by adding at the end of paragraph 2.a the following: "For purposes of this paragraph, roof surface shall mean the roof surface measured on a horizontal plane."

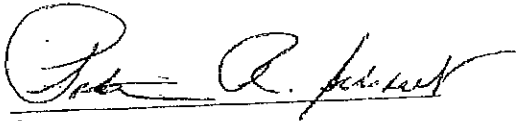
SECTION 2: In all other respects, the standards in Part II.A of the Manual relating to roof drain seepage pits shall remain in full force and effect, and unchanged.

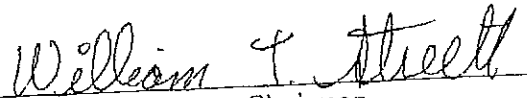
SECTION 3: This Resolution shall be effective five (5) days after its enactment.

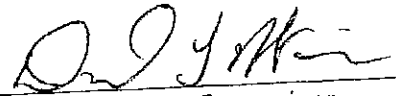
RESOLVED this 5th day of September, 2002.

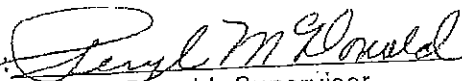
HOPEWELL TOWNSHIP BOARD
OF SUPERVISORS

ATTEST:


Secretary

By: 
William T. Streett, Chairman

By: 
David T. Wisnom, Supervisor

By: 
Peryl McDonald, Supervisor

HOPEWELL TOWNSHIP
YORK COUNTY, PENNSYLVANIA

ORDINANCE NO. 6-1999

AN ORDINANCE AMENDING THE BUILDING
PERMIT ORDINANCE OF HOPEWELL TOWNSHIP,
YORK COUNTY, PENNSYLVANIA, AS AMENDED,
TO REQUIRE ROOF DRAIN SEEPAGE PITS IN CERTAIN
DWELLINGS, BUILDINGS OR STRUCTURES AS
PART OF THE BUILDING PERMIT PROCESS,
AND REPEALING CERTAIN ORDINANCES

WHEREAS, Section 1517 of the Second Class Township Code, 53 P.S. §66517, authorizes second class townships to enact and enforce ordinances governing and regulating building; and

WHEREAS, the Township of Hopewell (Township) is a municipality subject to the Second Class Township Code, being a second class township; and

WHEREAS, the Township had previously adopted and amended a Building Permit Ordinance; and

WHEREAS, the Township wishes to make further amendments to its Building Permit Ordinance, specifically to provide for and require roof drain seepage pits on certain dwellings, roofed accessory buildings or structures; and

WHEREAS, the Township desires to repeal certain outdated building permit ordinances:

NOW, THEREFORE, be it ordained and enacted and it is hereby ORDAINED AND ENACTED as follows:

SECTION 1: Section 4 of the Building Permit Ordinance of Hopewell Township, Ordinance of September 3, 1981, is amended by adding at the end thereto subsection (g) as follows:

“(g) All dwellings, roofed accessory buildings, or structures in excess of eight hundred (800) square feet of floor area shall construct and utilize roof drain seepage pits for stormwater. Farm buildings or structures are exempt. Such pits shall be constructed in accordance with criteria and specifications set forth in the Township’s Construction and Materials Specifications For Subdivision and Land Development Manual adopted by the Board of Supervisors by Resolution, as amended from time to time by the Board of Supervisors by Resolution.”

SECTION 2: To the extent not previously superseded or overruled by the Building Permit Ordinance of Hopewell Township dated September 3, 1981, as amended, all Ordinances inconsistent with that Ordinance, including but not limited to the Building Permit Code dated February 11, 1974 and its amendments, and the Building Permit Ordinance of Hopewell Township dated March 6, 1980, and any amendments, are hereby repealed. All amendments to the Building Permit Ordinance of Hopewell Township dated September 3, 1981, including but not limited to amendments dated March 6, 1986 and November 1, 1990, shall remain in full force and effect, together with the Building Permit Ordinance of Hopewell Township dated September 3, 1981.

SECTION 3: This Ordinance shall be effective five (5) days after its enactment.

ORDAINED AND ENACTED this 1st day of April, 1999.

HOPEWELL TOWNSHIP
BOARD OF SUPERVISORS

ATTEST:

Pat R. [Signature]

By: Mark S. Leach
Mark S. Leach, Chairman

By: William T. Streett
William T. Streett, Supervisor

By: David T. Wisnom
David T. Wisnom, Supervisor

(SEAL)