

**CONSTRUCTION AND
MATERIAL SPECIFICATIONS
MANUAL
FOR SUBDIVISION AND
LAND DEVELOPMENT**

FOR

**EAST HOPEWELL TOWNSHIP
YORK COUNTY
PENNSYLVANIA**

ADOPTED SEPTEMBER 4, 2002

TABLE OF CONTENTS

ARTICLE I	101
GENERAL PROVISIONS	101
Section 101 Conformity	101
ARTICLE II	201
MATERIAL AND CONSTRUCTION SPECIFICATIONS	201
Section 201 Street Construction	201
Section 202 Private Street, Driveway and Access Drive Entrance ..	207
Section 203 Drainage and Stormwater	207
Section 204 Street and Roadway Signs	207
Section 205 Shade Trees	208
Section 206 Private Roads or Streets	208
Section 207 Sanitary Sewer Construction	209
Section 208 Water Line Construction	210
Section 209 Inspections	210
Acceptable Street Trees	212
Standard Details	214
Typical Street Cross-Section	214
Standard Concrete Curb and Sidewalk Detail	215
Standard Slant Concrete Curb Detail	216
Handicap Ramp at Curb Single Curb Cut	217
Handicap Ramp at Curb Double Curb Cut	218
Plain Cement Concrete Curb Terminal End Section ...	219
Standard Depressed Curb Detail	220
Typical Section Driveway and Access Drive Entrance ...	221
Private Street Detail and Cross Section	222
Pipe Bedding and Trench Detail	223
Slant Curb Transition To Type 'C' Inlet	224
Pavement Treatment At Inlet Location	225
Precast Concrete Manhole	226
Deciduous Shade and Flowering Tree Planting Detail ...	227
Street Name Sign Detail	228
Stop Sign Detail	229
No Parking Symbol Sign Detail	230
No Parking Until Snow Is Removed Sign Detail	231

ARTICLE I

GENERAL PROVISIONS

101. CONFORMITY WITH ORDINANCES

- A. This Construction and Material Specifications Manual For Subdivision and Land Development for East Hopewell Township, York County, Pennsylvania (referred to as the Construction Manual) is intended to be supplemental to, and is to be used in conjunction and conformity with, the East Hopewell Township Subdivision and Land Development Ordinance, the East Hopewell Township Zoning Ordinance, the East Hopewell Township Stormwater Manager Ordinance, and The East Hopewell Township Erosion and Sedimentation Control Ordinance.

- B. The authority for this Construction Manual is Ordinance No. 4-2002, The East Hopewell Township Subdivision and Land Development Ordinance, Section 105.

ARTICLE II

MATERIALS AND CONSTRUCTION SPECIFICATIONS

201. STREET CONSTRUCTION

All street materials, construction procedures and testing requirements shall conform to the current editions of PennDOT Publications (Form 408, etc.), including all supplemental specifications, circular letters and amendments. All streets and related features shall be constructed according to the Township approved plans.

All references to Township shall include Township engineer and other township personnel such as codes enforcement officer, roadmaster or others designated by the engineer.

A. Stake-Out

1. All existing property pins or monuments shall be marked with suitable 4-foot high stakes before the beginning of construction.
2. All streets prior to being rough-cut shall be laid out in accordance with approved design plans. Adequate stake-out shall be provided so as to define both horizontal and vertical alignment.
3. Stake-out must be preserved so as to provide the Township with adequate means of verifying the horizontal and vertical alignment of all the improvements. Construction grade sheets shall be provided to the Township prior to the start of construction.

B. Excavation

1. This work shall include but not limited to excavation for roadways, shoulders, ditches, utility trenches drainage structures and stream channels.
2. During construction, excavation shall be graded to provide adequate drainage.
3. 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.
4. 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 road right-of-way. All root mats shall be removed to a depth of not less than one foot below subgrade.

Unsuitable materials shall be removed from the site. The disposal of this material on site will not be approved by the Township and will be the sole responsibility of the property owner, for the removal and disposal.

C. Embankment

1. Placement of embankment shall be in layers not exceeding eight (8) inches prior to compaction.
2. Material for the construction of embankments shall consist of all excavation materials on the project except such materials as may be determined by the Township to be unsuitable under PennDOT Publication 408, and when required will include borrow excavation.

D. Subgrade

1. Prior to preparation of the final subgrade, all required underground utilities and storm drainage to be placed within the cartway shall be installed. All underground utility and storm drainage trenches shall be backfilled with 2RC stone and compacted in layers per paragraph 4.i below.
2. 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.
3. Where necessary as determined by the Township Engineer, based on field conditions, proper underdrain shall be provided to address springs, spring-like conditions or spongy areas.
4. All large rocks, boulders or ledges shall be broken off six (6) inches below the improved subgrade surface.
5. All surface irregularities exceeding one-half ($\frac{1}{2}$)-inch shall be corrected by loosening the surface and removing or adding material as required. The corrected area and surrounding surface shall be thoroughly compacted.
6. Completed subgrade shall be maintained and protected in advance of the succeeding operation.

7. Subgrade shall be inspected, tested by proof rolling, and approved by the Township before placing of the base course.
8. All means necessary shall be used to control dust or mud on and near the site and on and near all off-site borrow areas, if such dust or mud is caused by the Contractor's operations during performance of the work or as 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.
9. 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 eight (8) inches and compacted until the density per cubic foot is not less than ninety-seven (97%) percent of the dry-weight density. Compaction shall be accomplished by utilizing a method as approved by the Township Engineer. Compaction tests may be required by the Township.
 - (a) When compaction tests are required, a soils engineer shall be retained to take soil samples, arrange for laboratory testing, such tests are moisture/density criteria, and perform compaction tests when required. All costs of testing shall be the responsibility of the property owner.
10. 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 one hundred (100%) percent of the dry mass density. Compaction tests may be required by the Township. Unsatisfactory subgrade conditions shall be corrected by removing these areas until suitable soils are encountered, installing filter fabric, and rebuilding to required elevations. An alternate method of soil stabilization, in the event it is approved by the Township Engineer, may be acceptable. In case satisfactory subgrade stability cannot be obtained, unstable material shall be removed and replaced with suitable material, in no more than six (6)-inch lifts (layers) properly compacted. At Township discretion, installation of geotextile may be required.

E. Stone Base Course

1. Base course material shall not be placed on wet, frozen, or unsuitable material.
2. All foreign material shall be removed from the subgrade prior to placing base course.

3. Base shall be spread uniformly to the required depth and rolled in maximum of 5-inch layers with moisture content within two (2) to eight (8%) percent, based on the dry weight of the aggregate as determined in accordance with PA DOT's PTM No. 106, Method B. The roller must be a minimum of ten (10) tons or equivalent vibratory roller. Particular attention is called to the requirements of PA DOT Form 408 regarding compaction. Base course more than eight (8) inches in compacted depth shall be constructed in two (2) or more layers.
4. Base course for streets shall be 3A modified stone rolled to a depth as indicated on the attached details.
5. Base shall have binder course applied as soon as possible to avoid damage to base course.
6. Base course shall be proof rolled and inspected by the Township prior to the placing of binder course. Repairs shall be made to the base course as directed by the Township Engineer. Compaction tests may be required by the Township.

F. Bituminous Binder Course

1. On the properly shaped Township inspected Stone Base Course, an ID-2 Binder Course shall be placed using a self contained, power propelled paving machine with an activated screed or strike-off assembly. Bituminous Binder Course shall be PennDOT approved mix from a certified batch plant.
2. Construction/placement shall be in accordance with Section 409 and 421, of Form 408.
3. Particular attention is directed to Form 408 regarding weather limitations for placing bituminous materials. Bituminous material shall not be placed on a wet surface, nor when the air temperature is less than 40° F, nor when the temperature of the surface is less than 40° F.
4. Binder pavement widths up to thirty (30) feet may be completed with two seams.
5. If BCBC is used for base course no binder course is necessary.
6. Compaction testing of the binder course may be requested. All asphalt compaction testing shall be performed by a PA DOT certified testing company. Costs of testing are the responsibility of the owner.

G. Bituminous Wearing Course

1. The final wearing course shall not be installed until authorized by the Township (usually when ninety (90%) percent of the development is complete (homes or industrial/commercial buildings) or three (3) years maximum).
2. Clean and repair the surface and provide bituminous tack coat in accordance with Pa DOT Form 408 as required.
3. A bituminous wearing course, ID-2, to the compacted depth as indicated on the attached details, 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 authorized by the Township.
4. Construction/placement shall be in accordance with Section 409 and 424, of PA DOT Form 408.
5. 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 surface is less than 40° F.
6. The wearing course shall be sealed using AC-20 where it comes in contact with other structures including curbs, inlets, water valves and manholes.
7. Paving notches shall conform to PennDOT RC-28.
8. Pavement width up to thirty (30) feet shall be completed with only one seam.
9. Compaction testing of the wearing course may be required. Asphalt compaction testing shall be performed by a PA DOT certified testing company. Costs of testing are the responsibility of the owner.

H. Curbs

1. Curbing shall be slant curb or vertical curb as specified in attached Details.

2. Materials and construction shall meet the requirements of PennDOT Form 408, for plain cement concrete curb.
3. The curb shall be constructed in continuous lengths with contraction joints scored at not more than fifteen (15) feet nor less than four (4) feet intervals. Contraction joints shall be placed in uniform lengths or sections and measure two (2) inches deep and three-sixteenths (3/16)-inch wide.

Premolded expansion joint material three-fourth (3/4) inch thick shall be placed at the end of each pour and at all structures.

4. Terminal concrete curb end shall have an exposed face of one (1) inch and be tapered over three (3) feet. See attached detail.
5. 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 (4) inches of finished grade, at least four (4) inches of clean topsoil shall be spread as the last layer, to the proper grade to meet the finished curb and sidewalk grade. See attached detail.
6. 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, or during pouring if using curb machines.
7. Compaction testing may be required before pouring curb.

I. Sidewalks

1. Sidewalks shall have a minimum thickness of five (5) inches with four (4) inches of clean three-fourth (3/4)-inch stone base and shall conform to the attached Detail. All concrete shall be Class A cement concrete per PA DOT Form 408.
2. Sidewalks shall have a minimum depth of six (6) inches with six (6) x six (6) #6 wire mesh where traversed by a residential driveway and a minimum depth of eight (8) inches with six (6) x six (6) #6 wire mesh where traversed by a commercial driveway and four (4) inches of clean three-fourth (3/4)-inch stone base in both cases.
3. Sidewalks shall be constructed in separate slabs twenty (20) feet in length, separated by pre-molded expansion joints one-half (1/2)-inch in thickness for the full depth of the concrete. Between expansion joints, the slabs shall be scored as indicated on the attached detail.

Premolded expansion joints shall separate the sidewalk from any existing building, stairs, other pavement, utility poles, fire hydrants, or other permanent structure.

4. The sidewalk width shall be a minimum of three (3) feet.
5. Sidewalks shall have a one-fourth ($\frac{1}{4}$)-inch per foot slope towards the street.
6. Handicap ramps shall be provided at all intersections and other locations necessary to provide proper pedestrian circulation as per ADA regulations.
7. 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.

202. PRIVATE STREET, DRIVEWAY AND ACCESS DRIVE ENTRANCES

- A. Private street, driveway and access drive entrances shall be paved to their full width. The type of entrance surface may be plain cement concrete, or bituminous paving, as shown on detail attached.
- B. Beyond the required entrance paving, the paving shall be a minimum of six (6) inches (compacted thickness) of 2RC crushed stone.
- C. All materials, construction procedures and testing requirements shall conform to current editions of PennDOT Publications (Form 408, etc.), including all supplemental specifications, circular letters and amendments.

203. DRAINAGE AND STORMWATER

- A. The construction and materials specifications for drainage and stormwater facilities are set forth in The East Hopewell Township Stormwater Management Ordinance.

204. STREET AND ROADWAY SIGNS

- A. Road signs shall comply with the following standards:
 1. Road name signs shall have six (6)-inch letters on eight (8)-inch signs. Color shall be specified by the Township. See Detail D3-1
 2. Stop signs shall be thirty (30) inches x thirty (30) inches on local roadways and thirty-six (36) inches x thirty-six (36) inches on state roadways. See Detail R1-1

3. Sign posts shall be two (2)-inch square channel with two and one-fourth (2¼) inches x thirty (30) inches breakaway anchors and approved fasteners.
4. 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 seven (7) feet.
5. "No Parking" signs per Detail R8-3A when required. "No Parking Until Snow Is Removed" signs shall be per Detail R7-22-1 when required.
6. 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.

205. SHADE TREES (when required)

- A. All species shall be selected from the Township approved list of acceptable streets trees. See attached schedule.
- B. Trees shall be placed a minimum of ten (10) feet from the roadway right-of-way line.
- C. Trees shall be planted in accordance with the deciduous shade and flowering tree planting detail attached.

206. PRIVATE ROADS OR STREETS

- A. Every private road shall be improved with 2RC, unless other stone-based material is specifically approved by the Township, and shall have a minimum cartway width of sixteen (16) feet and a base of at least six (6) inches in thickness after compaction.
- B. Every private road shall have a right-of-way width as required by the SLDO. In addition, said right-of-way shall conform to the following design requirements.
 1. The minimum centerline radius shall be seventy-five (75) feet.
 2. The maximum private road grade shall be fourteen (14) percent. Private roads that slope towards a public road must be paved with two (2)-inch compacted ID-2 binder course and one and one-half (1½)-inch compacted ID-2 wearing course.
 3. The maximum intersection grade shall be five (5) percent, within fifty (50) feet of the public right-of-way.

4. The minimum horizontal and vertical site distance shall be seventy-five (75) feet.
5. The angle of intersection with public road shall be seventy-five (75) to one hundred five (105) degrees.
6. A clear site triangle of seventy-five (75) feet shall be maintained for intersections with minor or collector streets, and one hundred fifty (150) feet for intersections with arterial streets.
7. Maximum side slopes shall be three to one (3:1) in fill conditions and two to one (2:1) in cut conditions.
8. All private roads must be adequately drained, so as not to direct any water runoff onto public roads. Any drainage design must be approved by the Township.
9. An erosion and sedimentation control plan must be approved by the York County Conservation District prior to construction, per the East Hopewell Township Erosion and Sedimentation Control Ordinance and Subdivision and Land Development Ordinance.
10. All stone shall be compacted with a ten (10)-Ton roller or equivalent as approved by the Township Engineer.
11. All utility trenches must be located a minimum of three (3) feet from the stone portion of the roadway.

207. SANITARY SEWER CONSTRUCTION

- A. 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.
- B. Construction of sanitary sewers that will not be served by an adjoining municipality shall be constructed in accordance with approved standards.
- C. 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.
- D. Requirements of Section A.4.i shall pertain to this section.

208. WATER LINE CONSTRUCTION

- A. 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.

209. INSPECTIONS

- A. Inspections of the road and site improvements will occur as follows:
 - 1. Pre-job - with Contractor and Owner minimum stake-out required, street centerline.
 - 2. Utility Installation Inspection - As required.
 - 3. Subgrade Inspection - grade check and proof rolling of the subgrade.
 - 4. Stone base inspection just prior to the installation of ID-2 binder course.
 - 5. ID-2 binder course just prior to the installation of ID-2 wearing course.
 - 6. Installation of the leaching pit (if required).
 - 7. 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.
 - 8. 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 compromised 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.
 - 9. This inspection summary is only a guideline. The scheduling of inspections shall be at the discretion of the Township.

10. The Township may require compaction testing of trenches and roadway construction. Such testing shall be performed by a PA DOT certified testing company.

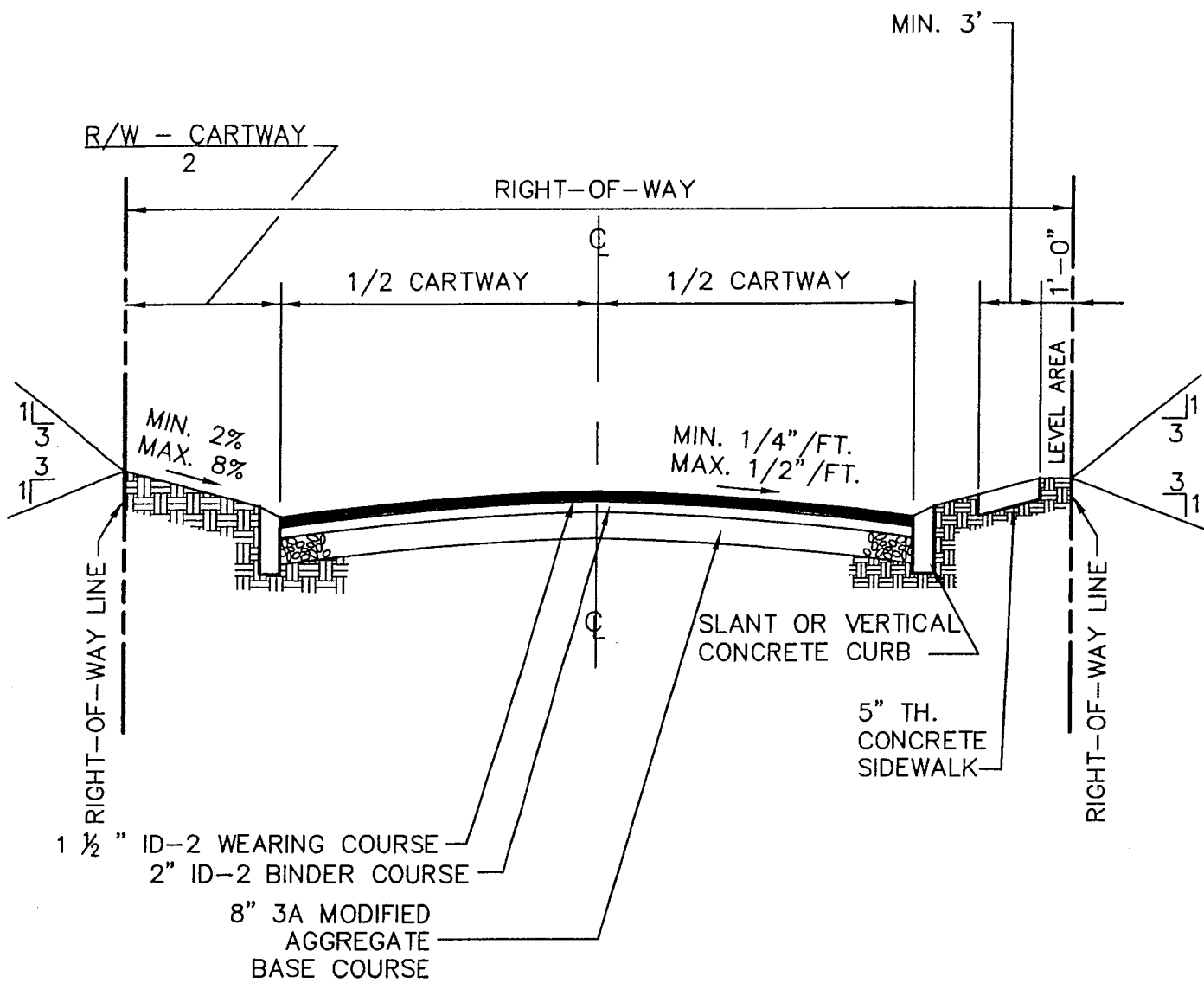
**EAST HOPEWELL TOWNSHIP
YORK COUNTY, PA
ACCEPTABLE STREET TREES**

Height in Feet at Maturity	Botanical Name	Common Name
75	<i>Acer rubrum</i>	Red Maple (N)
60	<i>Carpinus betulus</i>	European Hornbeam
60	<i>Cercidiphyllum japonicum</i>	Kaisuratree
60	<i>Ginkgo biloba</i> (male only)	Maidenhair Tree
50	<i>Prunus sargentii</i>	Sargent Cherry
75	<i>Quercus rubra</i> *	Red Oak (N)
90	<i>Tilia cordata</i>	Littleleaf Linden (N)
80	<i>Zelkova serrata</i>	Japanese Zelkova
40	<i>Ostrya virginiana</i>	Hop Hornbeam (N)
75	<i>Acer campestre</i> **	Hedge Maple
40	<i>Kolreuteria paniculata</i>	Goldenrain Tree
30	<i>Amelanchier canadensis</i> **	Shadbush, Serviceberry, Juneberry (N)
80	<i>Berula nigra</i>	River Birch (N)
80	<i>Berula papyrifera</i>	Paper Birch (N)
35	<i>Carpinus caroliniana</i> **	Ironwood, American Hornbeam
50	<i>Cladrastis lutea</i>	American Yellow-wood (N)
25	<i>Cornus kousa</i> **	Japanese Dogwood
25	<i>Cornus mas</i> **	Cornelian Cherry (N)
35	<i>Cornus florida</i> **	Flowering Dogwood (N)

25	<i>Cornus alternifolia</i> **	Pagoda Dogwood
80	<i>Fraxinus americana</i>	White Ash (N)
70	<i>Fraxinus pennsylvanica</i>	Green Ash (N)
70	<i>Gleditsia triacanthos</i> var. <i>inermis</i>	Thornless Honeylocust (N)
90	<i>Liriodendron tulipifera</i>	Tulip Tree (N)
50	<i>Nyssa sylvatica</i>	Black Gum (N)
100	<i>Larix decidum</i>	European Larch
30	<i>Maius floribunda</i> **	Japanese Flowering Crab (N)
30	<i>Oxydendrum arboreum</i> **	Sourwood (N)
20	<i>Prunus serrulata</i> cv <i>Kwanzan</i> **	Kwanzan (Cherry)
30	<i>Pyrus calleryana</i> cv <i>Fauriei</i>	Fauriei
30	<i>Pyrus calleryana</i> cv <i>Redspire</i>	Redspire
45	<i>Quercus acutissima</i> *	Sawtooth Oak
80	<i>Quercus borealis</i> (<i>rubra</i>)*	Northern Red Oak (N)
80	<i>Quercus coccinea</i> *	Scarlet Oak (N)
70	<i>Taxodium distichum</i>	Bald Cypress (N)
40	<i>Ulmus parvifolia</i>	Chinese Elm
20	<i>Magnolia virginiana</i> **	Sweetbay Magnolia (N)

* Requires clean-up of fruit, berries, acorns, etc.

** Suitable for use near overhead utility lines but may require pruning to provide clearances at sidewalks.



TYPICAL STREET CROSS SECTION

NO SCALE

NOTES: ALL DEPTHS SHOWN ARE COMPACTED THICKNESS.
 BASED ON SITE CONDITIONS THE TOWNSHIP MAY REQUIRE
 INSTALLATION OF A SUBSURFACE DRAINAGE SYSTEM.

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EAST HOPEWELL TOWNSHIP

**TYPICAL STREET
 CROSS SECTION**

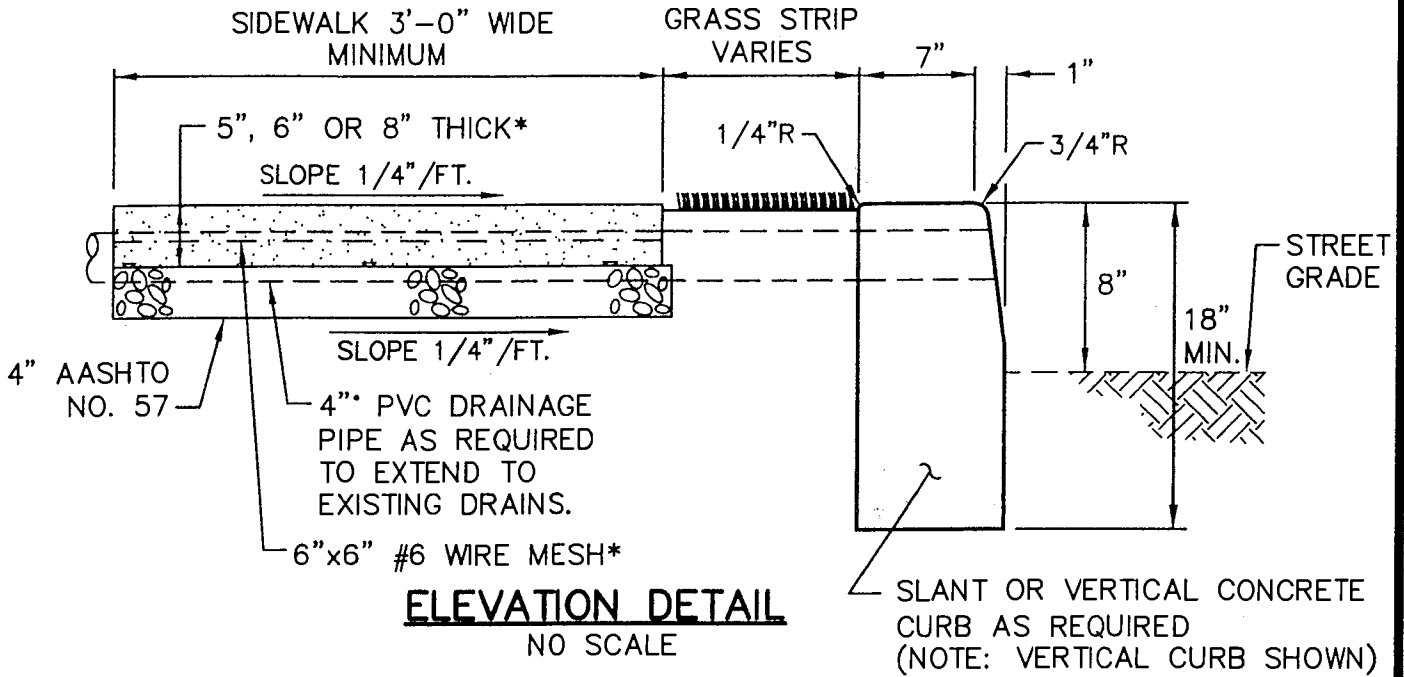
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POT	JRH	06/02	AS NOTED	1

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NOTES:

- CURBING - SHALL BE CONSTRUCTED PER SECTION 630, PENN DOT FORM 408
- FOR CURBING: SPACE CONTRACTION JOINTS IN UNIFORM LENGTH OR SECTIONS A MINIMUM OF 4'-0" TO A MAXIMUM OF 20'-0" AND BE 3/16" INCHES WIDE AN 2" INCHES DEEP.
- SIDEWALK - * SIDEWALK SHALL BE 6" THICK AT RESIDENTIAL DRIVEWAY CROSSINGS, AND 8" THICK AT COMMERCIAL DRIVEWAY CROSSINGS WITH WIRE MESH, ALL OTHER SIDEWALK SHALL BE 5" THICK.
- SIDEWALK SHALL BE CONSTRUCTED OF CLASS A (3000 psi) CONCRETE, 5, 6 OR 8 INCHES THICK AS NOTED AND PLACED ON 4 INCH BED OF CRUSHED STONE. THE WIDTH SHALL BE AS SHOWN OR AS REQUIRED.
- CONTRACTION JOINTS: SHALL BE EVERY 5 FEET AND BE 3/16 INCHES WIDE AND 1 INCH DEEP FOR SIDEWALKS, AND 2" DEEP FOR CURBS.
- THE 3/4 INCH EXPANSION JOINT MATERIAL SHALL BE CUT TO THE CROSS SECTIONAL AREA OF THE SIDEWALK AND OR STRUCTURE.
- INSTALL SIDEWALK IN ACCORDANCE WITH PUBLICATION 408, 2000 EDITION SECTION 676.
- SIDEWALK SHALL HAVE A LIGHT BROOM FINISH.

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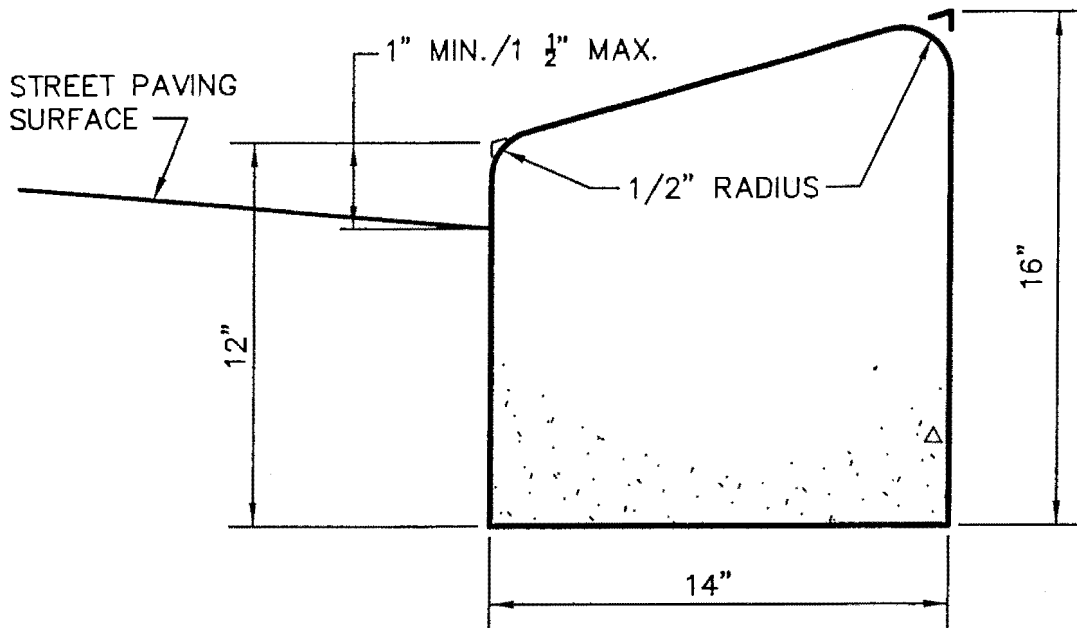
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EAST HOPEWELL TOWNSHIP
**STANDARD CONCRETE CURB
& SIDEWALK DETAIL**
YORK CO., PA.

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SLANT CONCRETE CURB

SCALE: NONE

NOTE: CURBING NOTES ON DRAWING NO. 2 APPLY.

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EAST HOPEWELL TOWNSHIP

**STANDARD SLANT CONCRETE
CURB DETAIL**

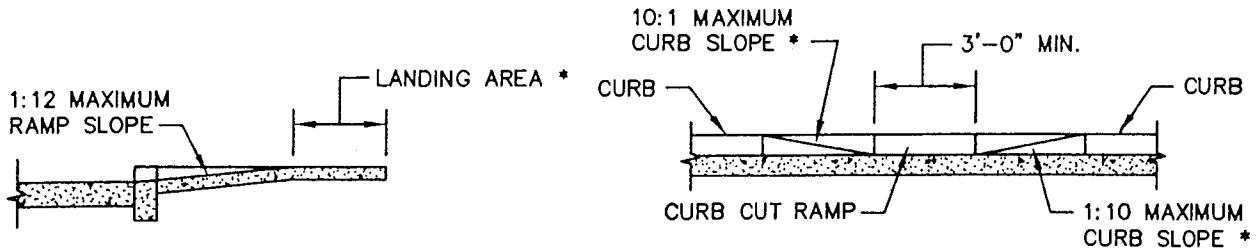
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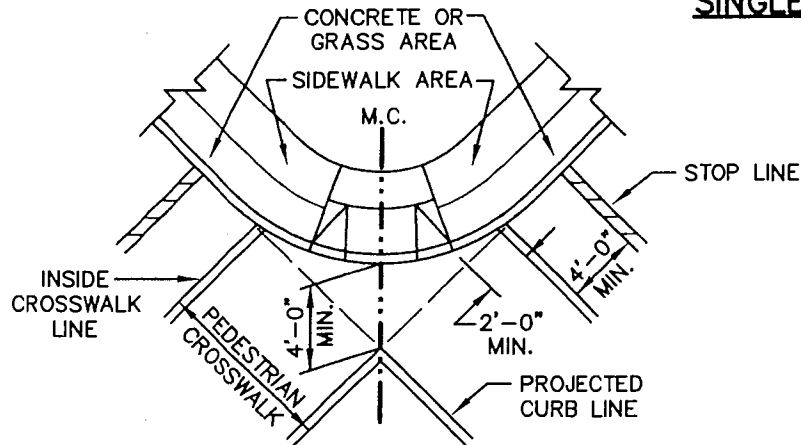
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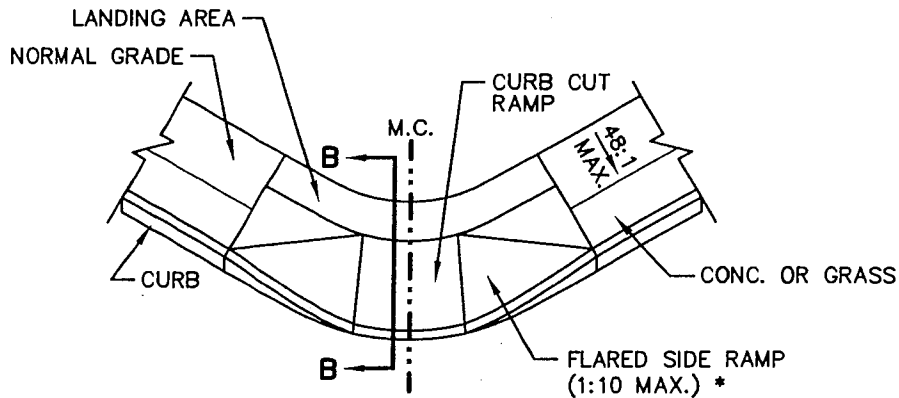


SECTION B-B

**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.

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EAST HOPEWELL TOWNSHIP

**HANDICAP RAMP AT CURB
SINGLE CURB CUT**

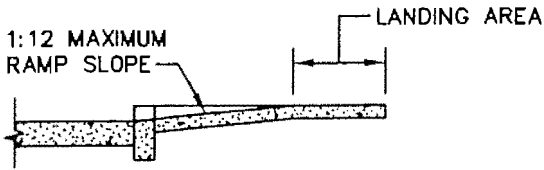
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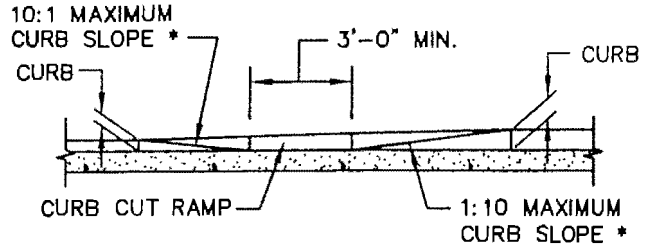
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DWN. BY	CK'D BY	DATE	SCALE	PROJECT NO.
POT	JRH	06/02	AS NOTED	4

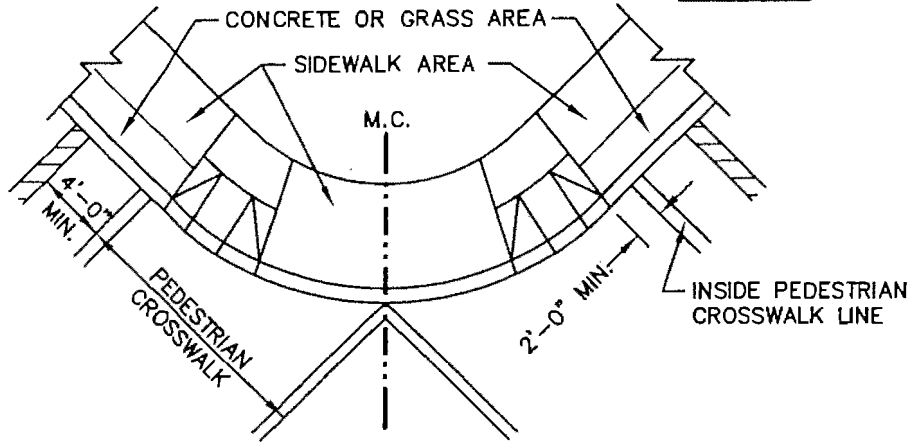
FILE: \010146\010125DE.dwg



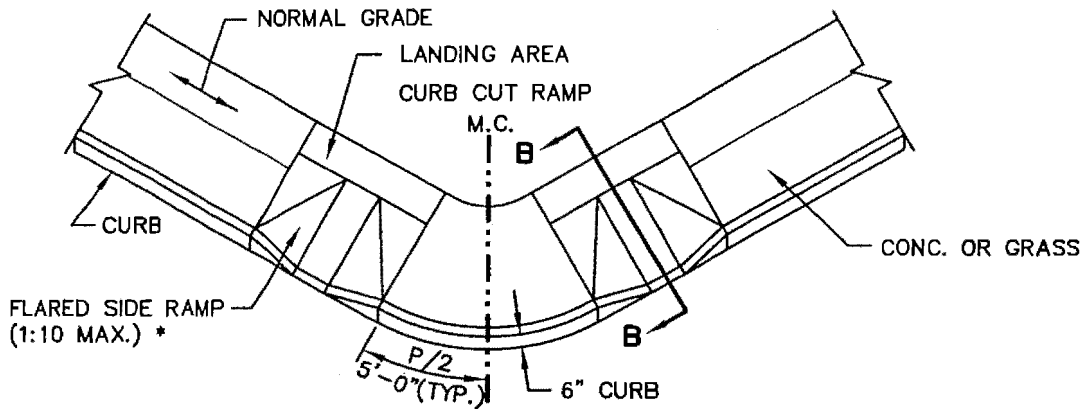
SECTION B-B



**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.

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EAST HOPEWELL TOWNSHIP

**HANDICAP RAMP AT CURB
DOUBLE CURB CUT**

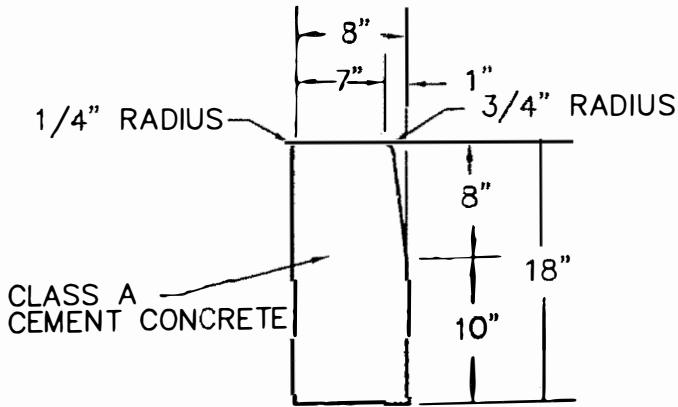
YORK CO., PA.

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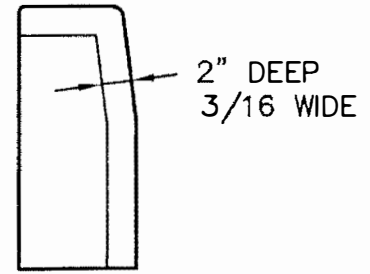
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POT	JRH	06/02	AS NOTED	5

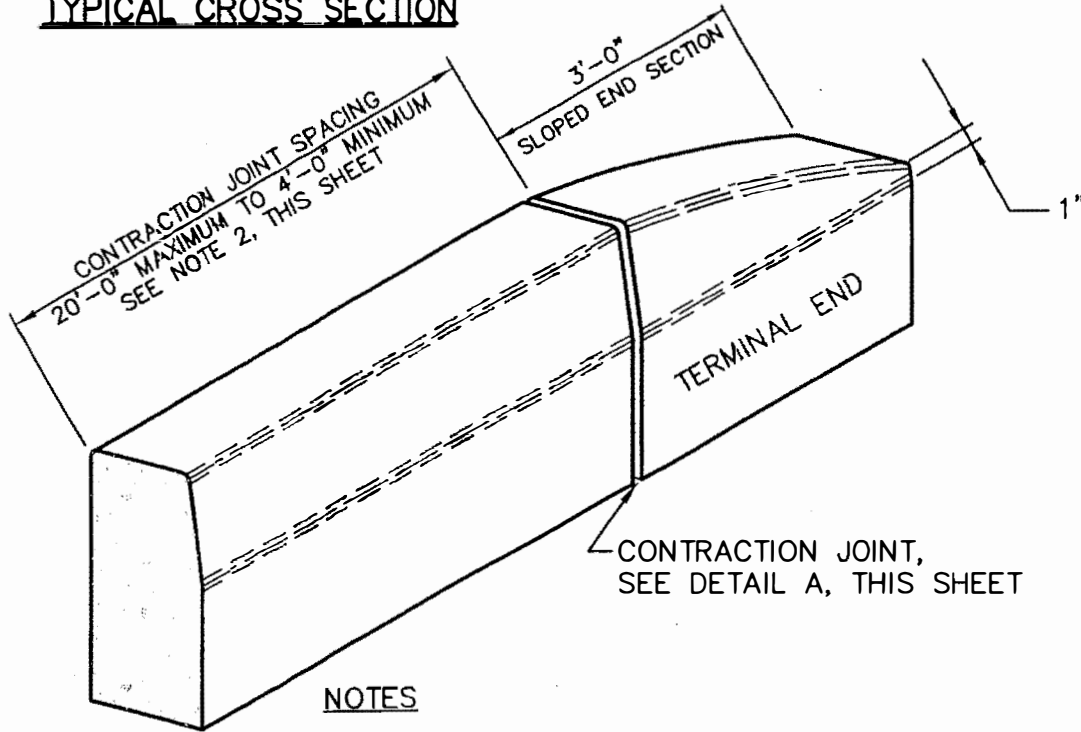
FILE: \010146\010125DE.dwg



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.

PLAIN CEMENT CONCRETE CURB

NO SCALE

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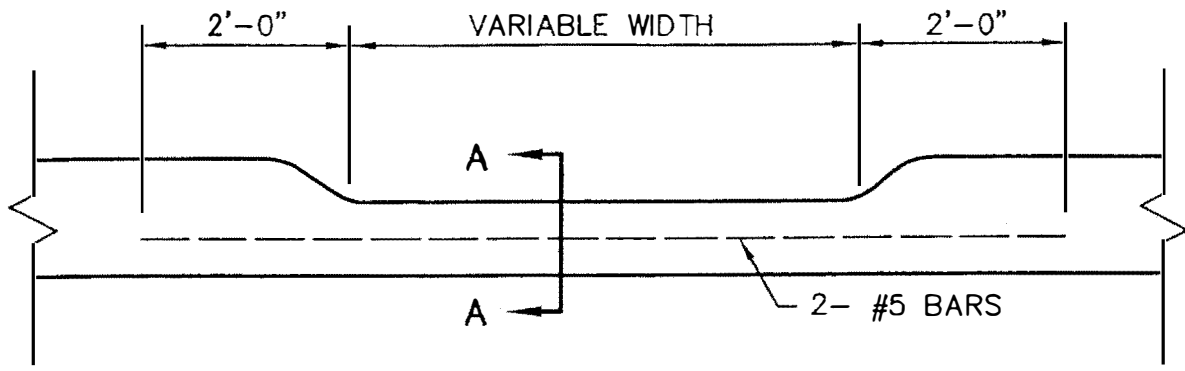
FILE: 010146\010125DE.dwg

EAST HOPEWELL TOWNSHIP
**PLAIN CEMENT
CONCRETE CURB**
TERMINAL END SECTION

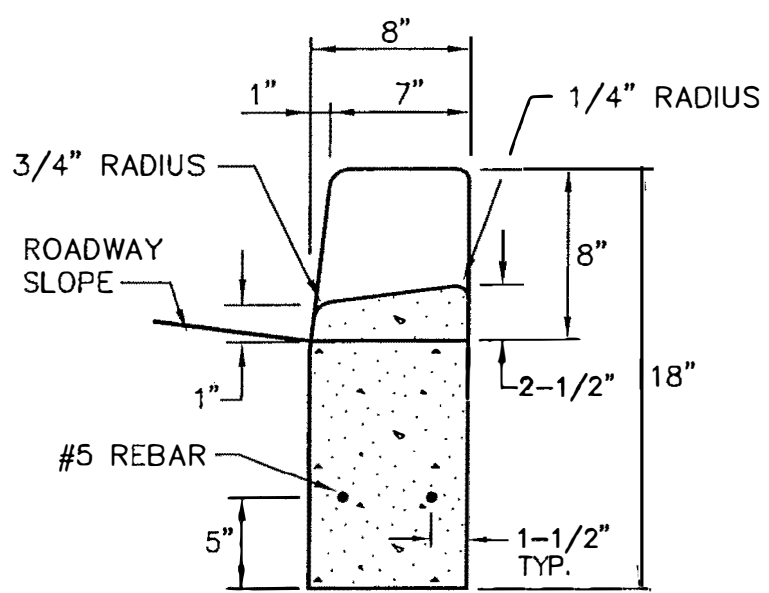
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POT	JRH	06/02	AS NOTED	6



ELEVATION VIEW



SECTION A - A

**DEPRESSED CURBS FOR PRIVATE STREETS,
DRIVEWAYS, AND ACCESS DRIVES**

NO SCALE

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EAST HOPEWELL TOWNSHIP

**STANDARD DEPRESSED CURB
DETAIL**

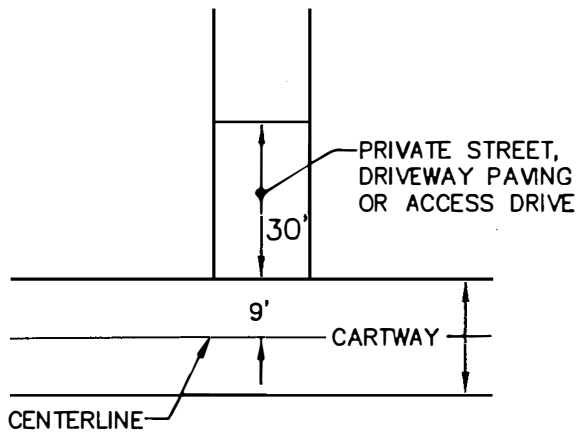
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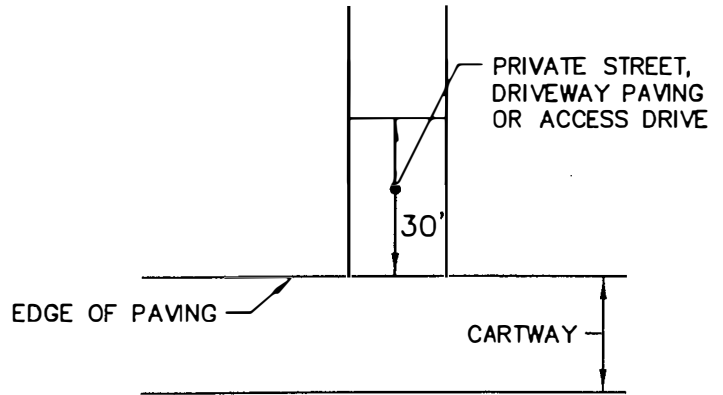
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DWN. BY	CK'D BY	DATE	SCALE	PROJECT NO.
POT	JRH	06/02	AS NOTED	7

FILE: \010146\010125DE.dwg

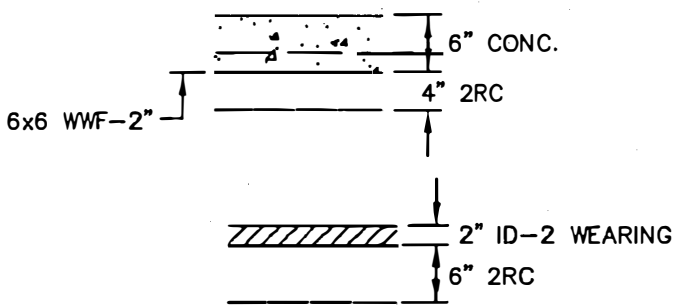


ENTRANCE PAVING AT UNPAVED STREET

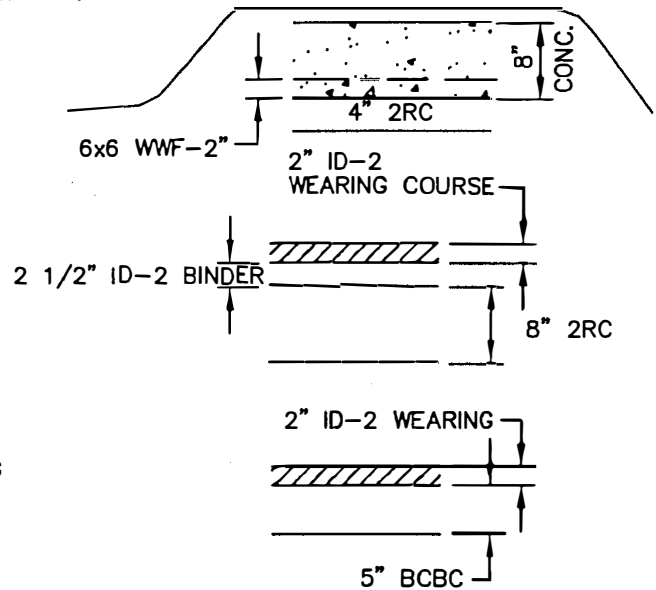


ENTRANCE PAVING AT PAVED STREET

PLAN



RESIDENTIAL PAVING



COMMERCIAL PAVING

TYPICAL SECTION

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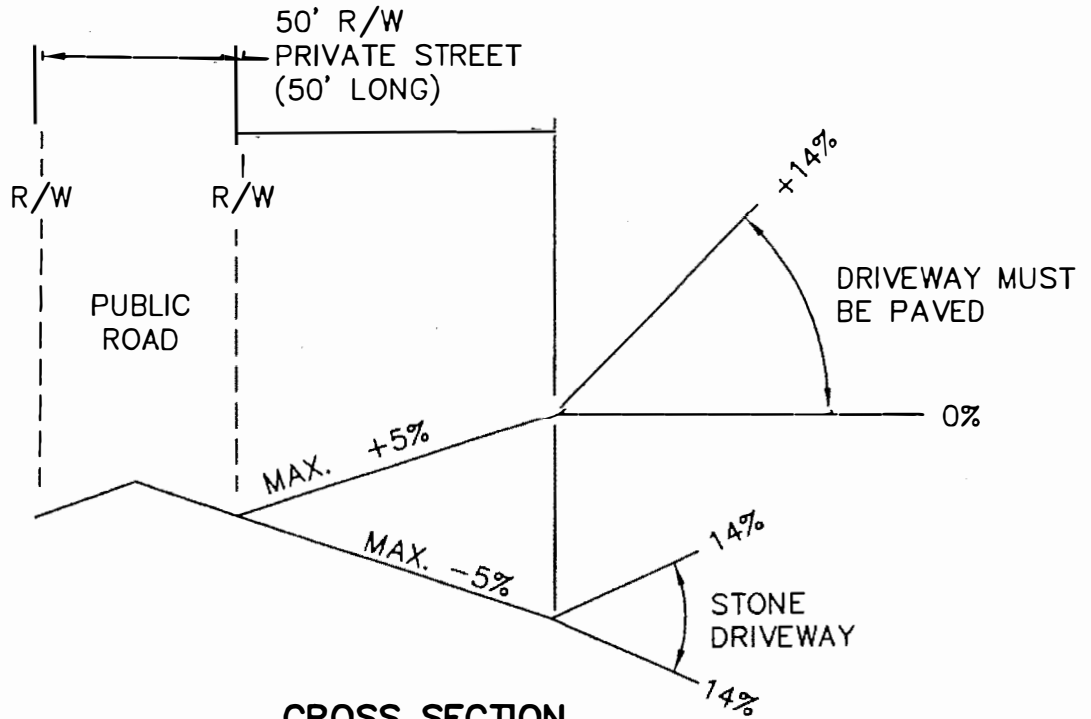
EAST HOPEWELL TOWNSHIP
**TYPICAL SECTION
 DRIVEWAY AND
 ACCESS DRIVE ENTRANCE**
 YORK CO., PA.

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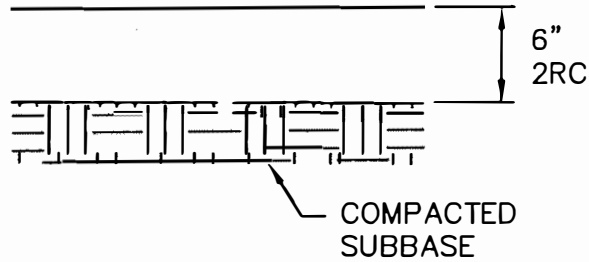
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CROSS SECTION
PROPOSED PRIVATE STREET



STONE STREET

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EAST HOPEWELL TOWNSHIP

**PRIVATE STREET DETAIL
AND CROSS SECTION**

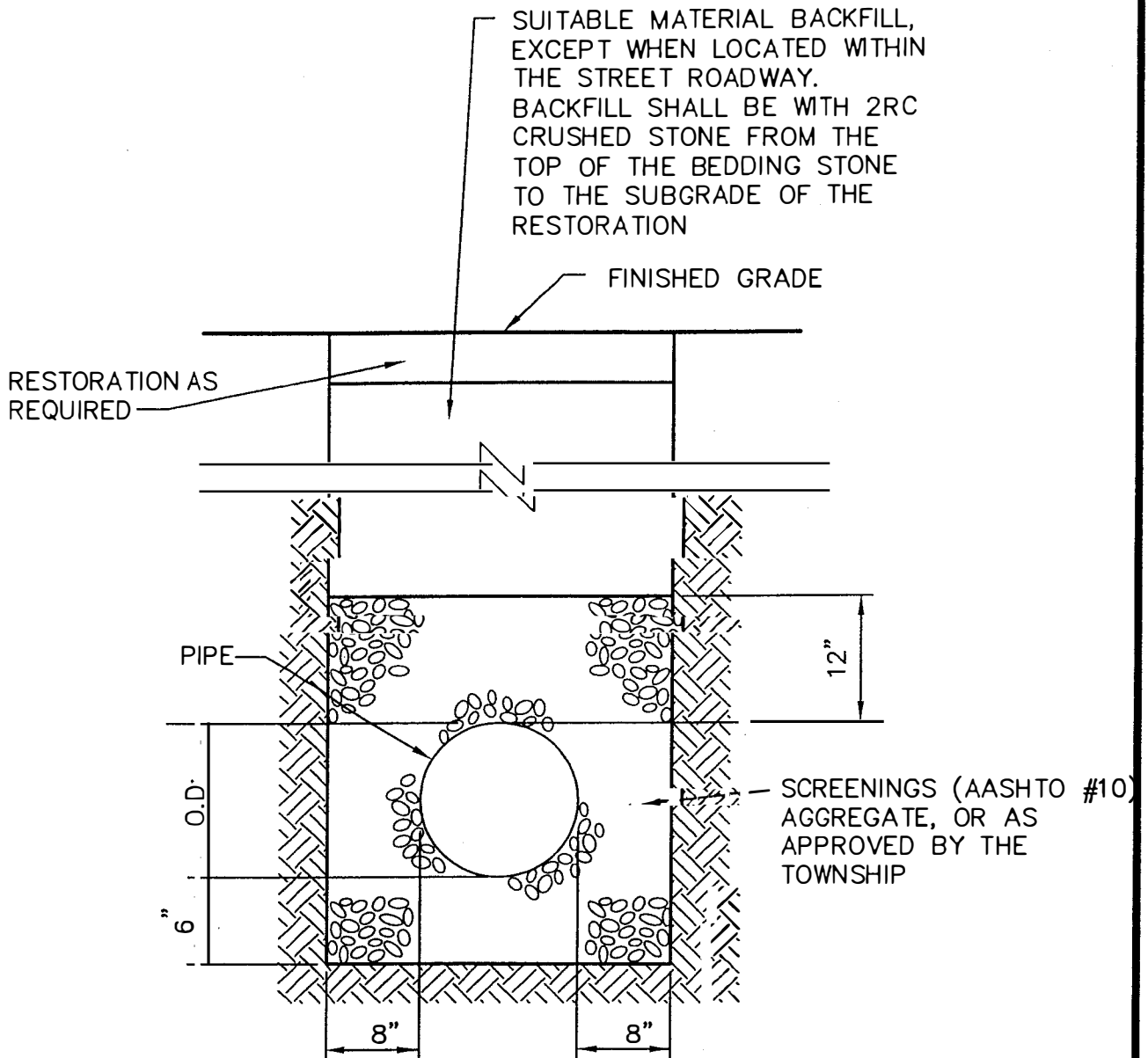
YORK CO., PA.

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POT	JRH	06/02	AS NOTED	9

File: 010125DE.dwg



PIPE BEDDING & TRENCH DETAIL

SCALE: NONE

NOTE:

ALL PIPES SHALL BE BEDDED AS CALLED FOR ABOVE.

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EAST HOPEWELL TOWNSHIP

**PIPE BEDDING &
TRENCH DETAIL**

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DWN. BY	CK'D BY	DATE	SCALE	PROJECT NO.
POT	JRH	06/02	AS NOTED	10

FILE: \010146\010125D.E.dwg

SLANT CURB TRANSITION TO TYPE 'C' INLET

EAST HOPEWELL TOWNSHIP

YORK CO., PA.

POT
DWN. BY

JRH
CK'D BY

06/02
DATE

AS NOTED
SCALE

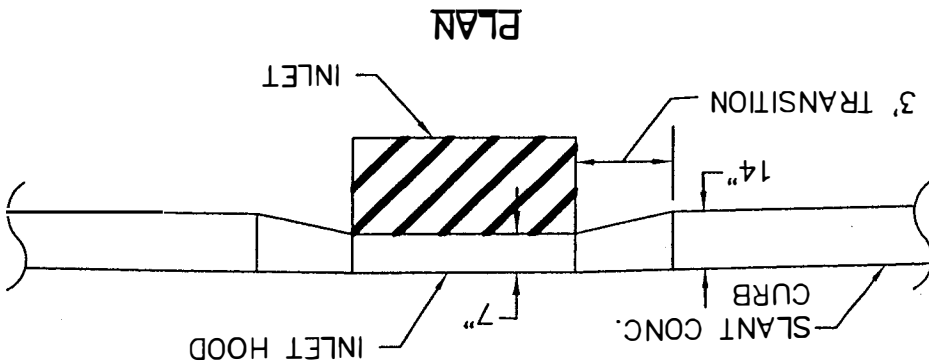
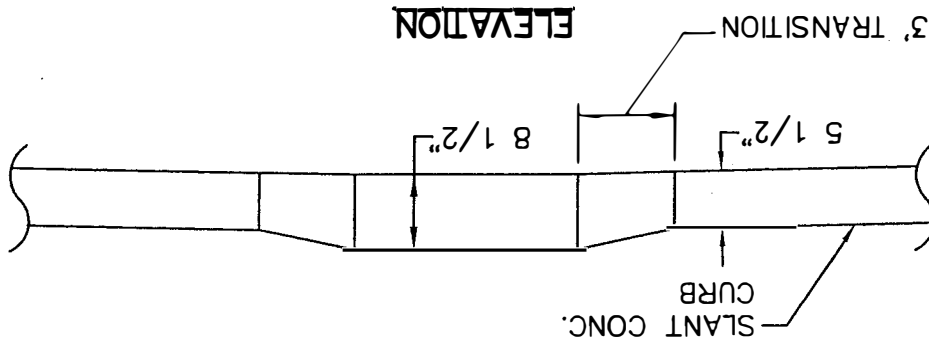
PROJECT NO.
11

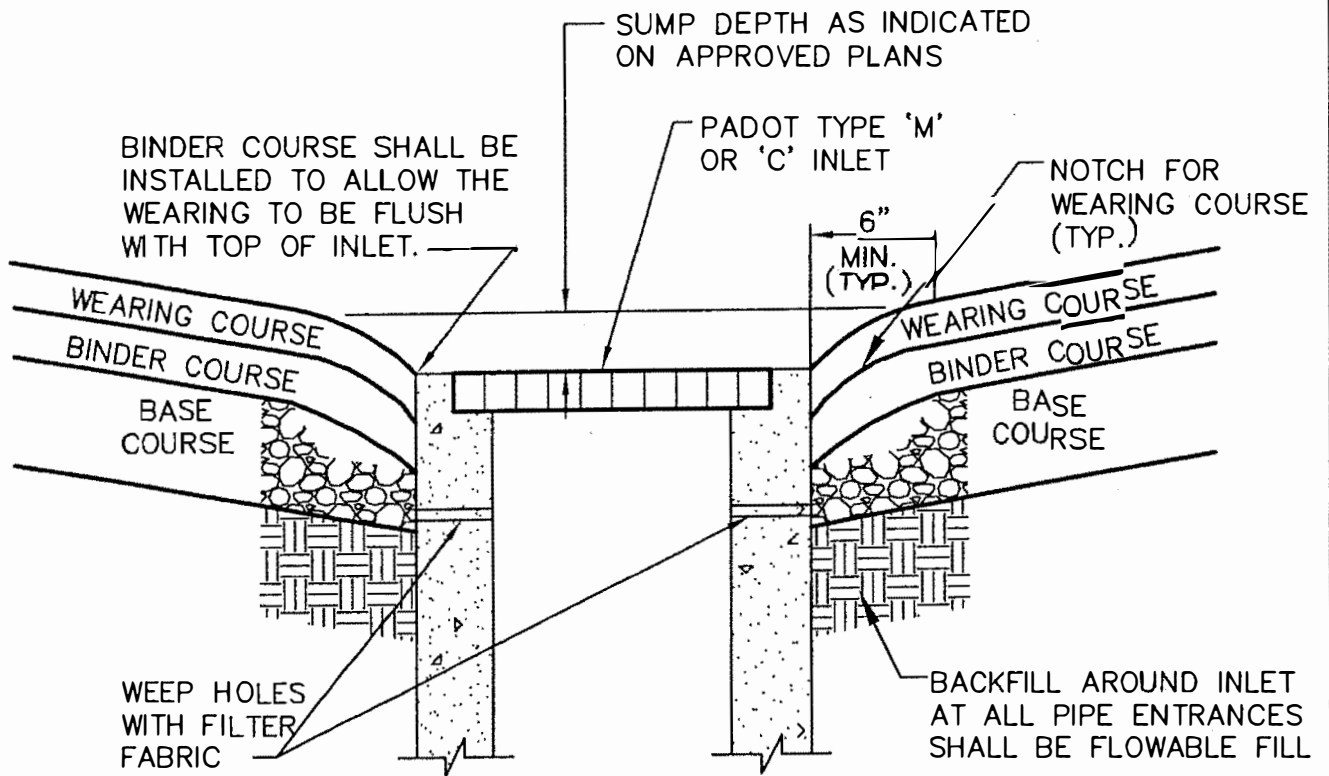
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SLANT CURB TRANSITION TO TYPE 'C' INLET

NO SCALE





**TYPICAL DETAIL OF PAVEMENT
TREATMENT AT INLET LOCATION.**

NO SCALE

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EAST HOPEWELL TOWNSHIP

**PAVEMENT TREATMENT
AT INLET LOCATION**

YORK CO., PA.

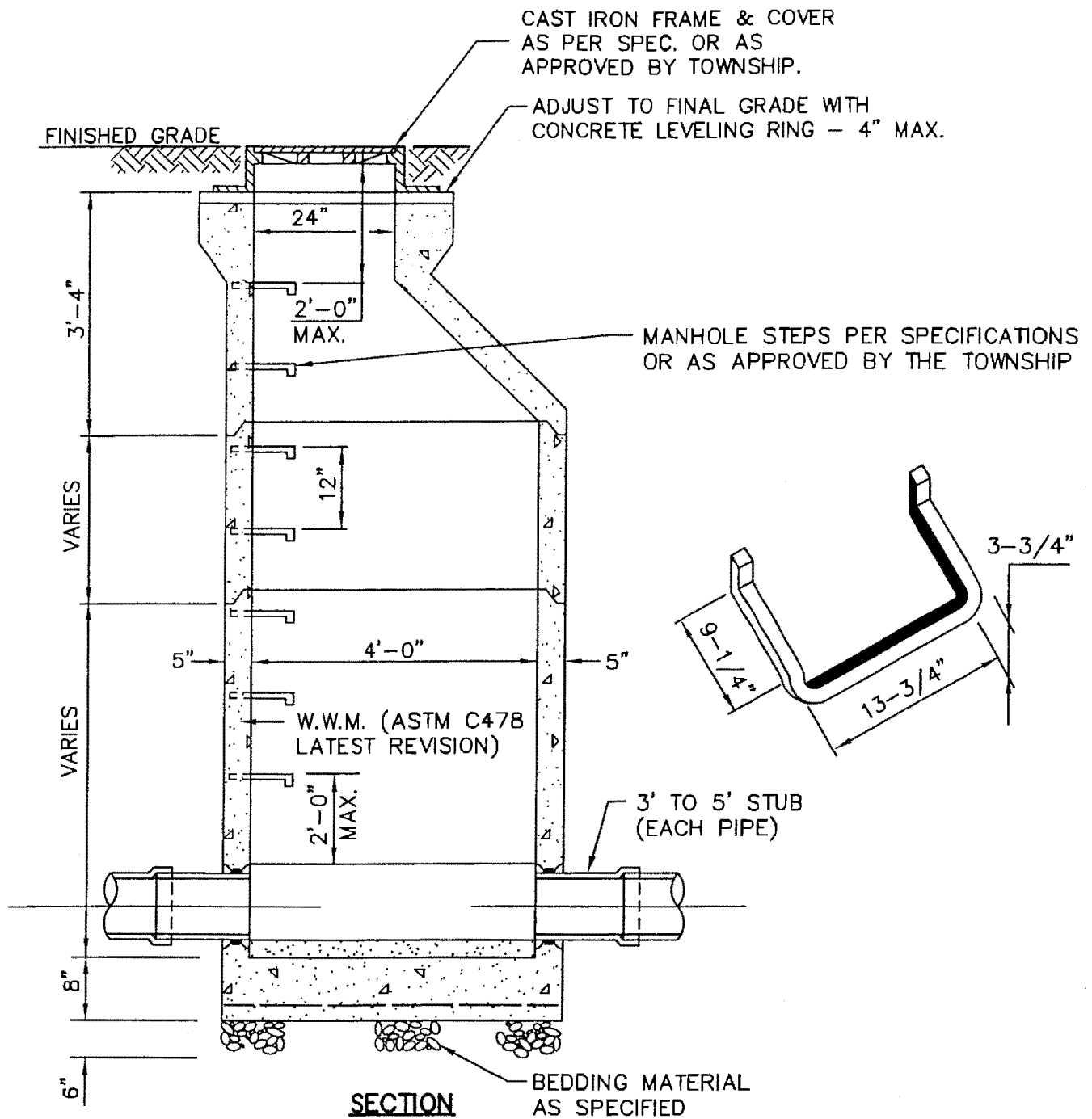


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POT	JRH	06/02	AS NOTED	12

FILE: \010146\010125DE.dwg



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.

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EAST HOPEWELL TOWNSHIP

**PRECAST CONCRETE
MANHOLE**

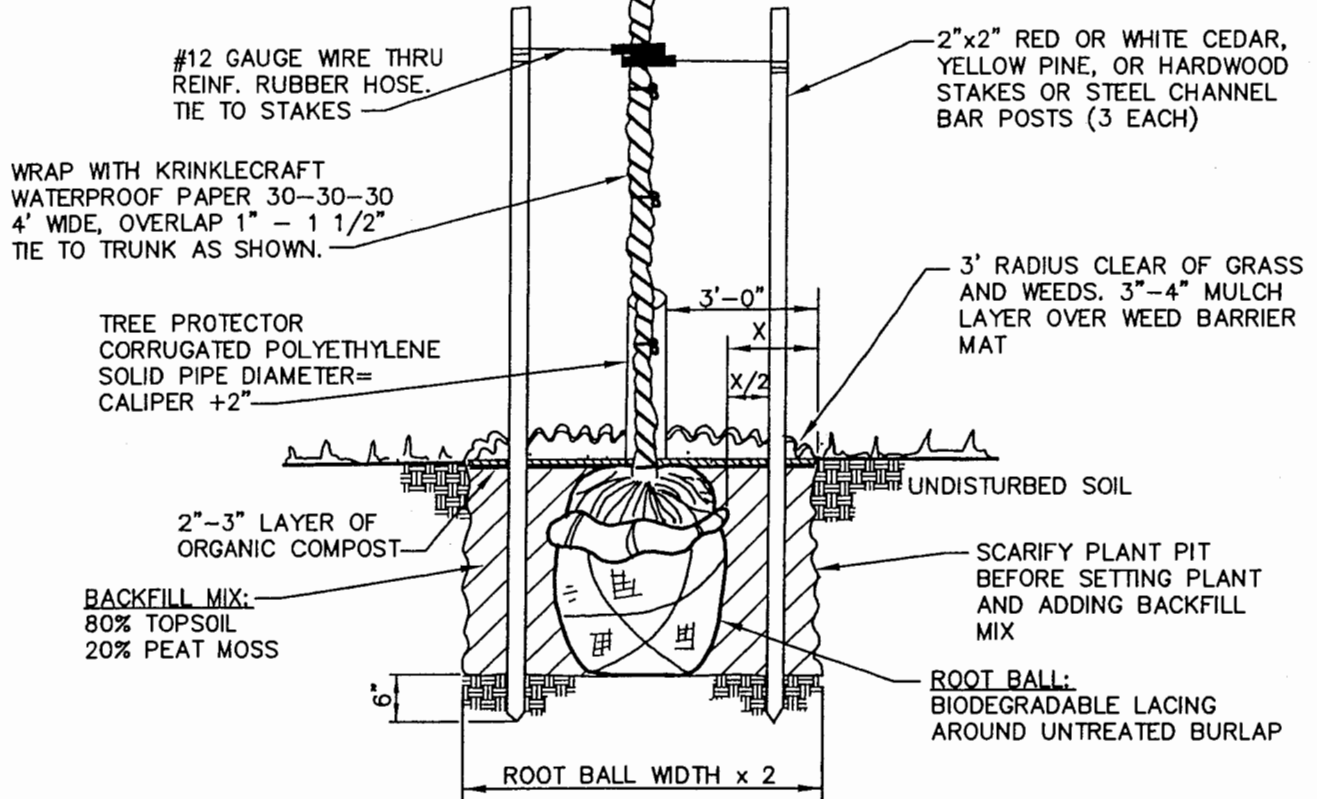
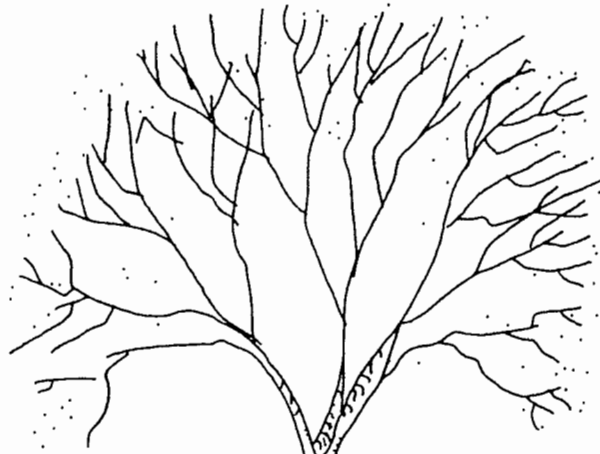
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DWN. BY POT	CK'D BY JRH	DATE 06/02	SCALE AS NOTED	PROJECT NO. 13
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FILE: \010146\010125DE.dwg



- * 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 - MINIMUM OF 10'-0" OUTSIDE STREET RIGHT-OF-WAY
- * SPECIES TO BE SELECTED FROM SHREWSBURY TOWNSHIP APPROVED LIST
- * X = ROOT BALL WIDTH/2

DECIDUOUS SHADE AND FLOWERING TREE PLANTING DETAIL

NO SCALE

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EAST HOPEWELL TOWNSHIP

DECIDUOUS SHADE & FLOWERING TREE PLANTING DETAIL

YORK CO., PA.

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POT	JRH	06/02	AS NOTED	14

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9/4/02

227

D3-1

STREET NAME SIGN

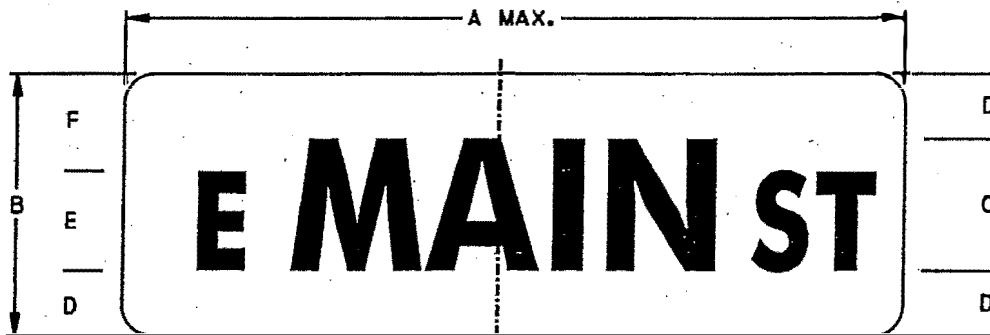
The Street Name Sign (D3-1) shall be authorized for use as a post-mounted sign to identify names of streets for motorists and pedestrians. The D3-1, or other official type of street name sign, should be placed at all street intersections regardless of other route marking that may be present.

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 THE

Date 4/3/97

Secretary of Transportation

By :

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

R1-1

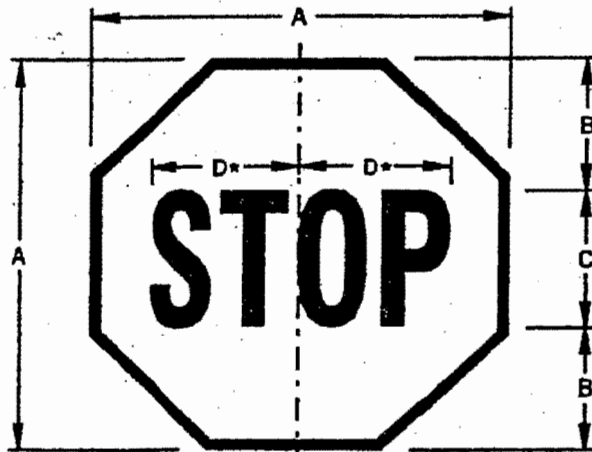
STOP SIGN

(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

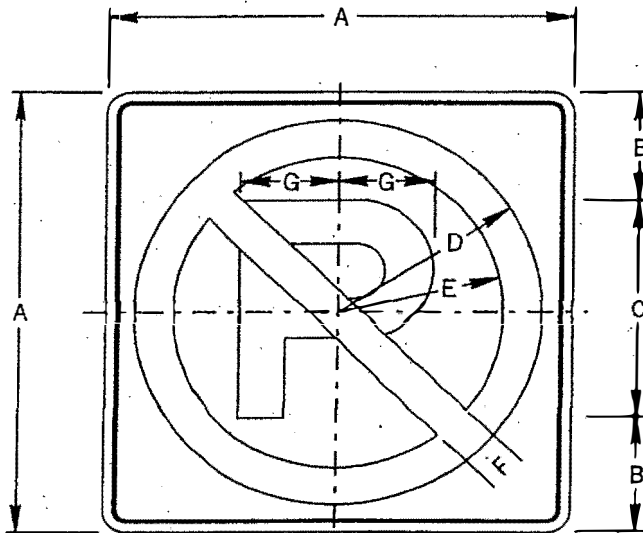
By: Art Brene
Chief, Traffic Engineering and Operations Division
Bureau of Highway Safety and Traffic Engineering

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 4/3/01

Secretary of Transportation

By: A.H. Brannon
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	B5-300450

*REDUCE SPACING 25%

COLOR:

LEGEND, ARROW AND BORDER:
RED (REFLECTORIZED)

BACKGROUND:
WHITE (REFLECTORIZED)

APPROVED FOR THE

Date 1/5/92

Secretary of Transportation

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