


SUSSEX COUNTY, DELAWARE

PRIVATE ROAD STANDARD DETAILS



AUGUST 19, 2008

	Revised	Sussex County, Delaware Engineering Department Approved: <i>Michael J. Jago</i> Sussex County Engineer	Cover	Detail R-0.01
	Revised			
	08/19/2008 Approved			

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08/19/2008
Approved

Sussex County, Delaware
Engineering Department
Approved: *Michael J. Jago*
Sussex County Engineer


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Detail

R-0.02


GENERAL NOTES:

1. THESE STANDARDS HAVE BEEN ADOPTED PURSUANT TO ARTICLE 99 OF THE SUSSEX COUNTY CODE AND SET FORTH FOR THE DESIGN AND CONSTRUCTION OF ALL NEW SUBDIVISION ROADS WITHIN SUSSEX COUNTY, DELAWARE. AS SUCH, THESE STANDARDS SHALL APPLY TO ALL NEW SUBDIVISION ROADS.
2. THESE SUBDIVISION ROAD STANDARDS INCORPORATE DESIGN ELEMENTS WHICH ARE ENCOURAGED, BUT NOT REQUIRED BY THE COUNTY. SUCH ELEMENTS INCLUDE SIDEWALKS, RESIDENTIAL BOULEVARDS, AND BIKE PATHS. THESE STANDARDS PROVIDE DESIGN GUIDANCE IN THE EVENT SUCH ITEMS ARE REQUIRED BY THE COUNTY OR ARE USED BY THE DEVELOPER.
3. ENTRANCES FROM DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) ROADS ARE NOT COVERED UNDER THESE STANDARDS AND SHALL BE DESIGNED, APPROVED AND CONSTRUCTED IN ACCORDANCE WITH DELDOT STANDARDS. REFER TO THE DELDOT PUBLICATION "STANDARDS AND REGULATIONS FOR SUBDIVISION STREETS AND STATE HIGHWAY ACCESS" FOR MORE INFORMATION.
4. ALL MATERIALS REFERENCED WITHIN THESE STANDARDS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH DELDOT STANDARD SPECIFICATIONS (YEAR 2001 OR LATEST REVISION THEREOF).
5. ALL GRADED AGGREGATE BASE COURSE (GABC) SHALL BE TYPE B AS SPECIFIED IN SECTION 821 OF DELDOT'S STANDARD SPECIFICATIONS. ALL GABC AND APPROVED SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
6. ALL TYPES OF P.C.C. CURB AND INTEGRAL P.C.C. CURB & GUTTER ARE ACCEPTABLE AS SHOWN ON DEL DOT'S STANDARD CONSTRUCTION DETAIL C-1. IF INTEGRAL P.C.C. CURB & GUTTER ARE USED, THE GUTTER SHALL NOT BE INCLUDED AS PART OF THE VEHICULAR TRAVEL LANE. ON TYPE II AND TYPE III STREETS, THE RIGHT-OF-WAY MUST BE EXTENDED AS NECESSARY IF INTEGRAL P.C.C. CURB & GUTTER ARE USED.
7. BICYCLE SHOULDERS SHALL BE DISTINGUISHED FROM BICYCLE LANES AND SHALL CONSIST OF A 4' EXTENSION OF THE VEHICLE TRAVEL WAY. BICYCLE SHOULDERS DO NOT REQUIRE STRIPING OR SIGNING. FOR BICYCLE LANE REQUIREMENTS REFER TO DETAIL R-5.04.

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DEFINITIONS:

- ALLEY: A STREET DEDICATED FOR PUBLIC USE WHICH PROVIDES SECONDARY ACCESS ALONG THE REAR LOT LINE OF ADJOINING PROPERTIES. ALLEYS ARE INTENDED TO ACCOMMODATE ACCESS TO PARCELS OR UNITS AND SERVICE DELIVERY SUCH AS TRASH COLLECTION, UTILITY SERVICES, AND FIRE PROTECTION.
- AVERAGE DAILY TRIPS (ADT): THE AVERAGE NUMBER OF VEHICULAR TRIPS MADE IN A 24-HOUR PERIOD.
- BOULEVARD STREET: TYPICALLY A COLLECTOR STREET WITH A LANDSCAPED MEDIAN WHICH DIVIDES OPPOSING TRAFFIC LANES.
- CUL-DE-SAC STREET: A SUBDIVISION STREET WITH A SINGLE POINT OF ACCESS WHICH TERMINATES AT A CIRCULAR PAVED TURN-AROUND.
- LANE: THE PORTION OF A ROADWAY FOR THE MOVEMENT OF A SINGLE LINE OF VEHICLES WHICH DOES NOT INCLUDE THE GUTTER OR SHOULDER OF THE ROADWAY.
- PLANT STRIP: THE PORTION OF THE RIGHT OF WAY DEDICATED TO VEGETATION OR TREE PLANTING.
- SERVICE OR FRONTAGE ROAD: ADJACENT TO A LIMITED ACCESS ARTERIAL ROADWAY OR HIGHWAY, WHICH IS INTENDED TO PROVIDE ACCESS TO ADJOINING PROPERTIES CLOSE IN PROXIMITY.
- SHARED-USE PATH: A PATH AND RIGHT-OF-WAY PROVIDED FOR NON-MOTORIZED TRAFFIC (I.E. PEDESTRIANS AND BICYCLES).
- SIDEWALK: PAVED PEDESTRIAN PATHWAYS INSTALLED ALONG SUBDIVISION STREET FRONTAGES.
- STOPPING SIGHT DISTANCE: THE DISTANCE REQUIRED BY A DRIVER OF A VEHICLE, TRAVELING AT A GIVEN SPEED, TO BRING THE VEHICLE TO A STOP AFTER AN OBJECT ON A ROAD BECOMES VISIBLE. IT INCLUDES THE DISTANCE TRAVELED DURING DRIVER PERCEPTION AND REACTION TIMES AND THE VEHICLE BREAKING DISTANCE.
- STREET: A PUBLIC OR PRIVATE MEANS OF PRINCIPAL VEHICULAR ACCESS TO PARCELS OR UNITS.

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STREET DESIGN DATA

STREET CLASSIFICATION	AVERAGE DAILY TRIPS (ADT'S)	MAXIMUM DESIGN SPEED	STOPPING SIGHT DISTANCE	LEFT TURN INTERSECTION SIGHT DISTANCE	RIGHT TURN INTERSECTION SIGHT DISTANCE	ALLOWABLE GRADE	MINIMUM HORIZONTAL ϕ RADII
TYPE I	≤ 500	25 MPH	155 FT	280 FT	240 FT	0.1% - 5%	150 FT
TYPE II	501 - 3000	30 MPH	200 FT	335 FT	290 FT	0.1% - 5%	300 FT
TYPE III	> 3000	35 MPH	250 FT	390 FT	335 FT	0.1% - 5%	500 FT

MINIMUM INTERSECTION DESIGN RADII

INTERSECTING STREETS		EDGE OF PAVEMENT RADII
TYPE I	TYPE I	15 FT
TYPE I	TYPE II	20 FT
TYPE II	TYPE II	25 FT
TYPE II	TYPE III	25 FT
TYPE III	TYPE III	SET TO MEET DESIGN VEHICLE

PAVEMENT DESIGN DATA

AVERAGE DAILY TRIPS (ADT'S)	PAVEMENT SECTION
TYPE I STREET	1- $\frac{1}{4}$ " TYPE C HOT MIX SURFACE COURSE 1- $\frac{3}{4}$ " TYPE C HOT MIX SURFACE COURSE 6" GRADED AGGREGATE BASE COURSE APPROVED SUBGRADE
TYPE II STREET	1- $\frac{1}{2}$ " TYPE C HOT MIX SURFACE COURSE 2- $\frac{1}{2}$ " TYPE B HOT MIX BASE COURSE 6" GRADED AGGREGATE BASE COURSE APPROVED SUBGRADE
TYPE III RESIDENTIAL/ COMMERCIAL/ INDUSTRIAL/ SERVICE OR FRONTAGE STREET	1- $\frac{1}{2}$ " TYPE C HOT MIX SURFACE COURSE 3" TYPE B HOT MIX BASE COURSE 8" GRADED AGGREGATE BASE COURSE APPROVED SUBGRADE

TRIP GENERATION DATA FOR RESIDENTIAL USES

HOUSING TYPE	ADT'S/UNIT
SINGLE-FAMILY DETACHED	9.6
RESIDENTIAL TOWNHOUSE	5.9
APARTMENT BUILDING ≤ 42'	6.6
APARTMENT BUILDING > 42'	4.2
MANUFACTURED HOME	5.0
RETIREMENT COMMUNITY	
DETACHED HOUSING	3.7
ATTACHED HOUSING	3.5
ASSISTED LIVING	2.7
CONTINUOUS-CARE VILLAGE	2.8
SINGLE-FAMILY DETACHED IN RPC	7.4

NOTES:

- REFER TO DETAIL R-2.11 FOR A DIAGRAM OF LEFT TURN AND RIGHT TURN INTERSECTION SIGHT DISTANCES AND CLEAR ZONES. FOR ADDITIONAL INFORMATION ON SIGHT DISTANCE, REFER TO CHAPTER 3 OF THE DEL DOT ROAD DESIGN MANUAL.
- TRIP GENERATION DATA IS BASED ON VALUES PROVIDED IN THE INSTITUTE OF TRANSPORTATION ENGINEERS' TRIP GENERATION HANDBOOK. REFER TO THIS SOURCE FOR ADDITIONAL INFORMATION IF COMMERCIAL AND INDUSTRIAL DEVELOPMENTS ARE PLANNED.



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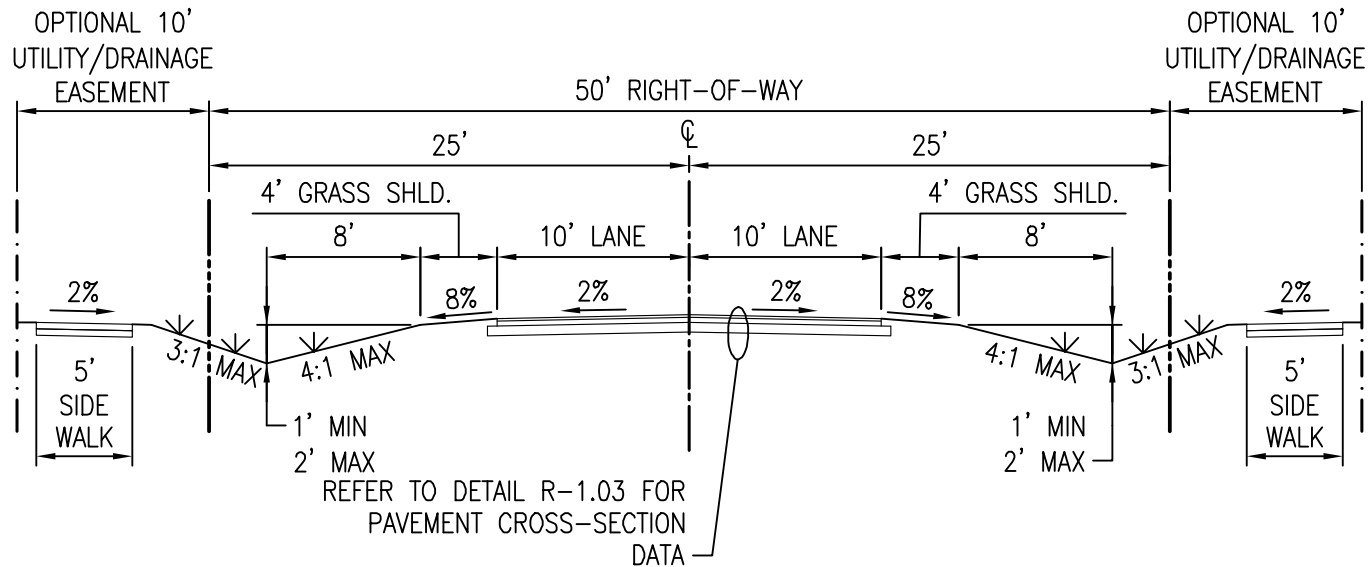
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Engineering Department

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Sussex County Engineer

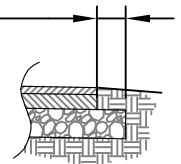
Design Criteria

Detail

R-1.03



EXTEND GABC 6"
BEYOND EDGE OF
PAVEMENT



NOTES:

1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SIDEWALKS ARE NOT REQUIRED UNLESS SPECIFIED BY THE COUNTY. REFER TO DETAIL R-5.01 FOR SIDEWALK INFORMATION.
3. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
4. SWALE DEPTH MAY BE INCREASED TO 2.5' AT ROADWAY CROSSINGS TO ACHIEVE ADEQUATE CULVERT COVER.



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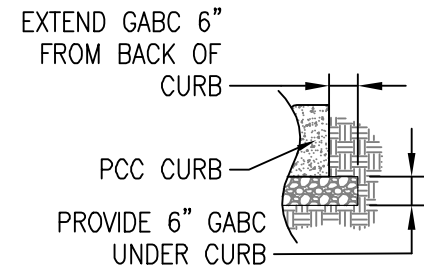
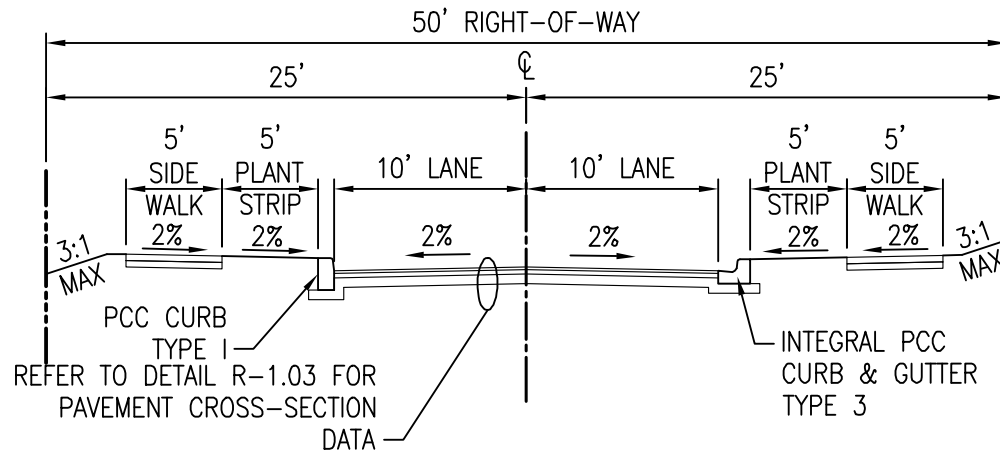
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Engineering Department

Approved: *Michael J. Joffe*
Sussex County Engineer

Type I Residential Street
Open Drainage
(ADT ≤ 500)

Detail

R-2.01



NOTES:

1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SIDEWALKS ARE NOT REQUIRED UNLESS SPECIFIED BY THE COUNTY. REFER TO DETAIL R-5.01 FOR SIDEWALK INFORMATION.
3. ROADWAY WIDTH SHALL BE WIDENED IF ON-STREET PARKING IS DESIRED. REFER TO DETAILS R-2.12 AND R-2.13 FOR ON-STREET PARKING OPTIONS.
4. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.



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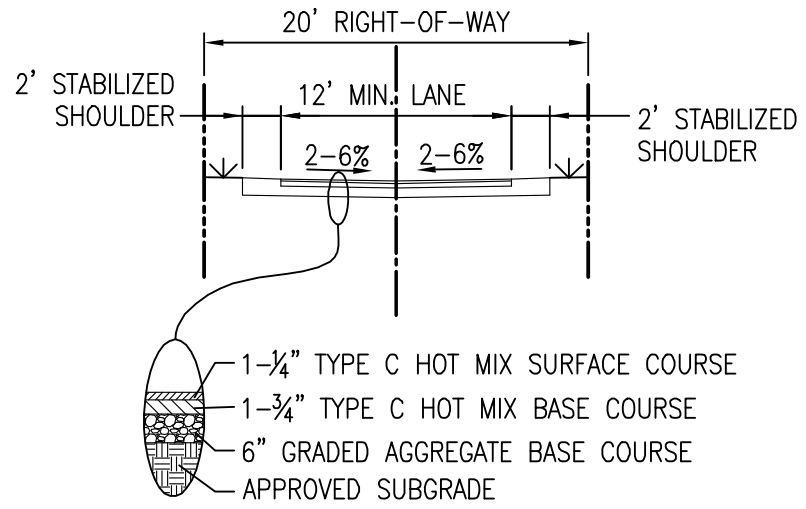
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 Engineering Department

Approved: *Michael J. Joffe*
 Sussex County Engineer

Type I Residential Street
 Closed Drainage
 (ADT ≤ 500)

Detail

R-2.02



NOTES:

1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
3. CURBS SHALL NOT BE PLACED ALONG ALLEYS.
4. 2' STABILIZED SHOULDERS TO BE 8" GRADED AGGREGATE BASE COURSE.
5. A MINIMUM LONGITUDINAL SLOPE OF 0.5% SHALL BE USED.
6. INLETS MAY BE PLACED ALONG THE CENTERLINE OF THE ALLEY AS NECESSARY.



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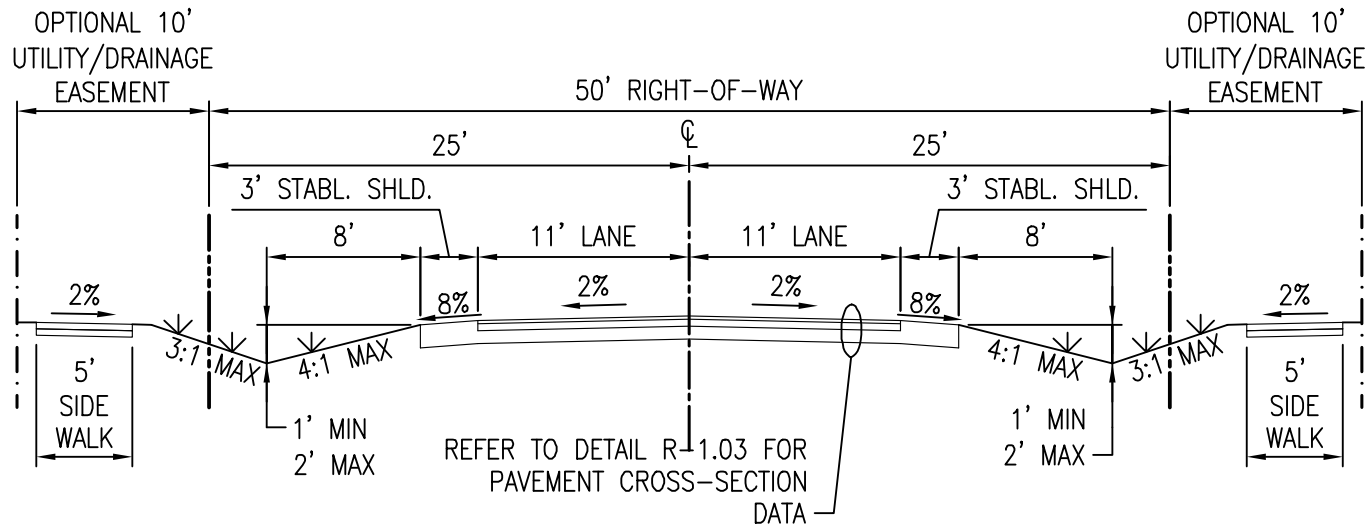
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 Engineering Department

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 Sussex County Engineer

Type I Residential Alley

Detail

R-2.03



NOTES:

1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SIDEWALKS ARE NOT REQUIRED UNLESS SPECIFIED BY THE COUNTY. REFER TO DETAIL R-5.01 FOR SIDEWALK INFORMATION.
3. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD
4. 3' STABILIZED SHOULDERS TO BE 8" GRADED AGGREGATE BASE COURSE.
5. CROSSWALKS SHALL BE INCLUDED AT ALL SIGNALIZED INTERSECTIONS AND WHEN THE TRAFFIC VOLUME EXCEEDS 2,000 ADT'S.
6. SWALE DEPTH MAY BE INCREASED TO 2.5' AT ROADWAY CROSSINGS TO ACHIEVE ADEQUATE CULVERT COVER.



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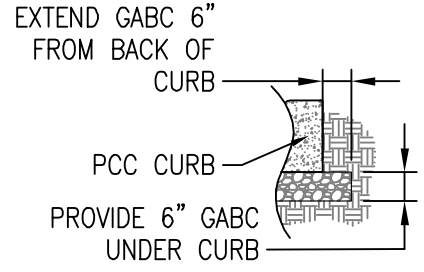
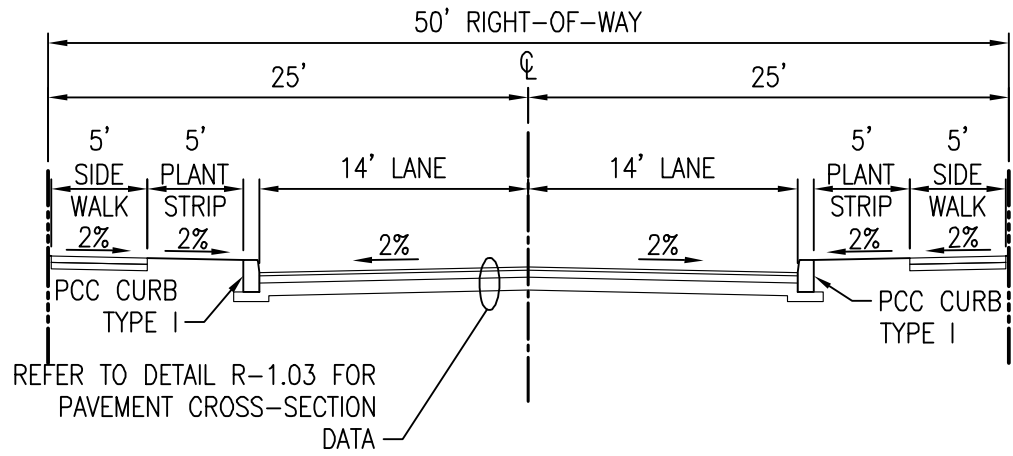
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Sussex County Engineer

Type II Residential Street
Open Drainage
(500 < ADT ≤ 3,000)

Detail

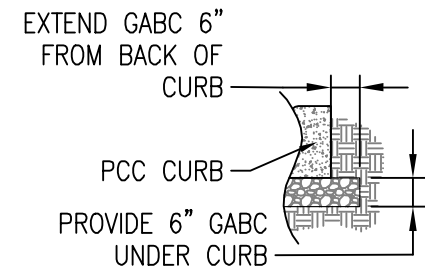
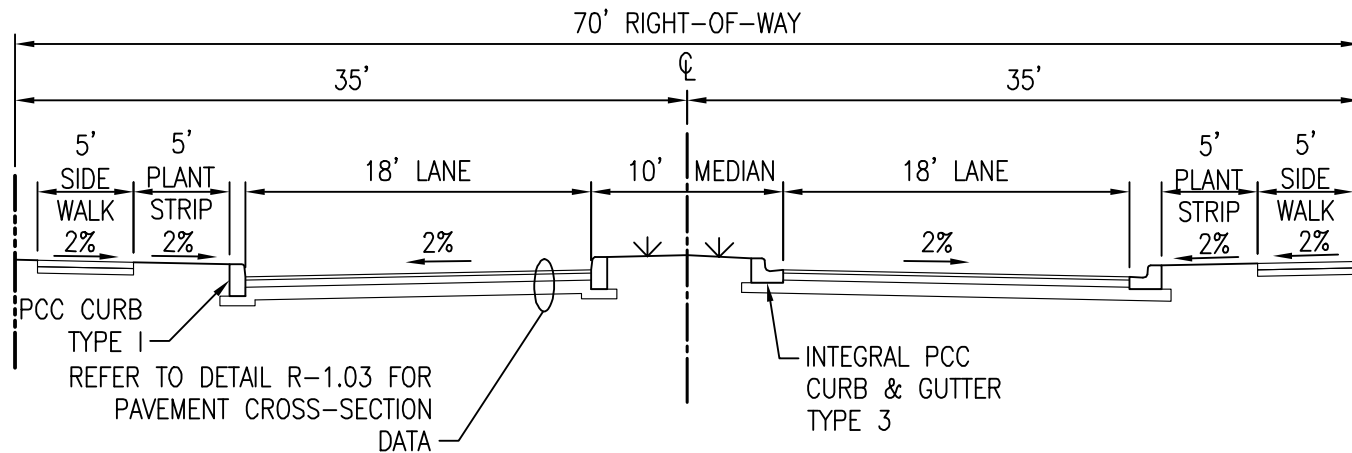
R-2.04



NOTES:

1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SIDEWALKS ARE NOT REQUIRED UNLESS SPECIFIED BY THE COUNTY. REFER TO DETAIL R-5.01 FOR SIDEWALK INFORMATION.
3. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
4. ROADWAY WIDTH IS SUFFICIENT TO ACCOMMODATE ONE 8' LANE OF PARALLEL PARKING OR TWO 4' BICYCLE SHOULDERS. REFER TO DETAILS R-2.12 AND R-2.13 FOR ON-STREET PARKING OPTIONS.
5. CROSSWALKS SHALL BE INCLUDED AT ALL SIGNALIZED INTERSECTIONS AND WHEN THE TRAFFIC VOLUME EXCEEDS 2,000 ADT'S.
6. IF INTEGRAL P.C.C. CURB & GUTTER ARE USED THE GUTTER SHALL NOT BE INCLUDED AS PART OF THE 14' TRAVEL LANE AND THE RIGHT-OF-WAY WIDTH SHALL BE EXTENDED AS NECESSARY.

	Revised	Sussex County, Delaware Engineering Department Approved: <i>Michael J. Joffe</i> Sussex County Engineer	Type II Residential Street Closed Drainage (500 < ADT ≤ 3,000)	Detail R-2.05
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NOTES:

1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SIDEWALKS ARE NOT REQUIRED UNLESS SPECIFIED BY THE COUNTY. REFER TO DETAIL R-5.01 FOR SIDEWALK INFORMATION.
3. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
4. EACH 18' LANE IS SUFFICIENT TO ACCOMMODATE ONE 8' LANE OF PARALLEL PARKING. REFER TO DETAILS R-2.12 AND R-2.13 FOR ON-STREET PARKING OPTIONS.
5. CROSSWALKS SHALL BE INCLUDED AT ALL SIGNALIZED INTERSECTIONS AND WHEN THE TRAFFIC VOLUME EXCEEDS 2,000 ADT'S.
6. THE CROSS-SECTION SHOWN IS FOR RESIDENTIAL BOULEVARDS NOT DIVIDED ENTRY/ACCESS ROADS. DIVIDED ENTRY/ACCESS ROADS LESS THAN 300 FEET IN LENGTH SHALL NOT INCLUDE SPACE FOR ON-STREET PARKING.



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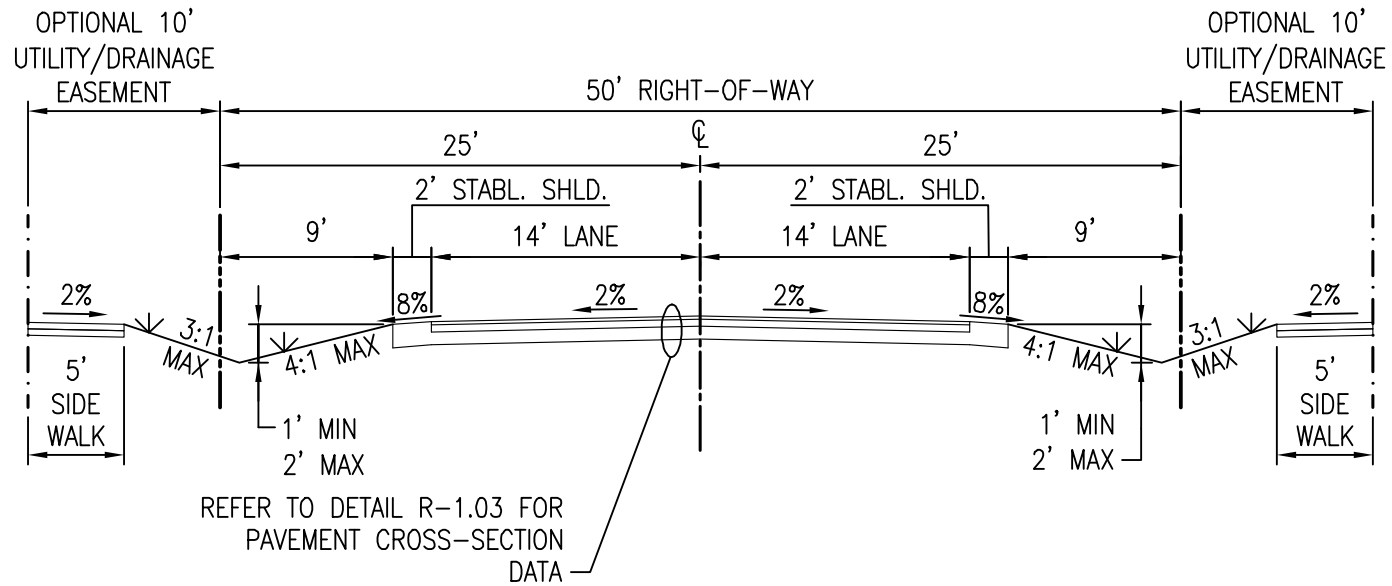
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Engineering Department

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Sussex County Engineer

Type II Residential Boulevard
Closed Drainage
(500 < ADT ≤ 3,000)

Detail

R-2.06



NOTES:

1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
2. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
3. 3' STABILIZED SHOULDERS TO BE 8" GRADED AGGREGATE BASE COURSE.
4. SIDEWALKS ARE NOT REQUIRED UNLESS SPECIFIED BY THE COUNTY. REFER TO DETAIL R-5.01 FOR SIDEWALK INFORMATION.
5. SWALE DEPTH MAY BE INCREASED TO 2.5' AT ROADWAY CROSSINGS TO ACHIEVE ADEQUATE CULVERT COVER.
6. ROADWAY WIDTH IS SUFFICIENT TO ACCOMODATE TWO 4' BICYCLE SHOULDERS.



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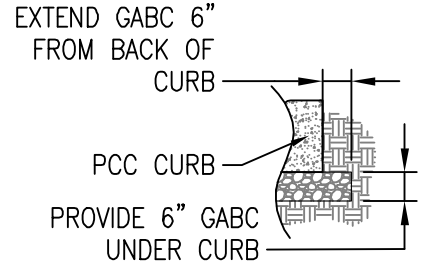
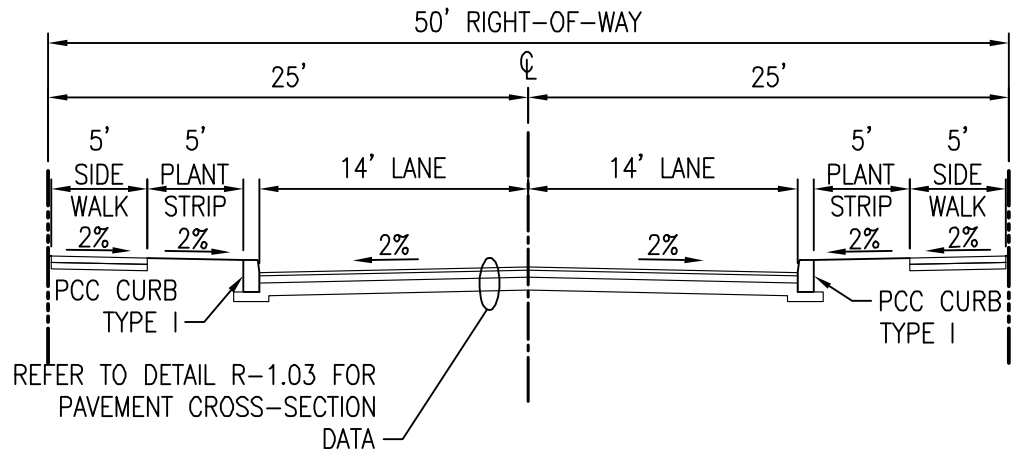
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Sussex County Engineer


Type III Residential/Commercial/Industrial/Service or Frontage Street
Open Drainage
(ADT > 3,000)

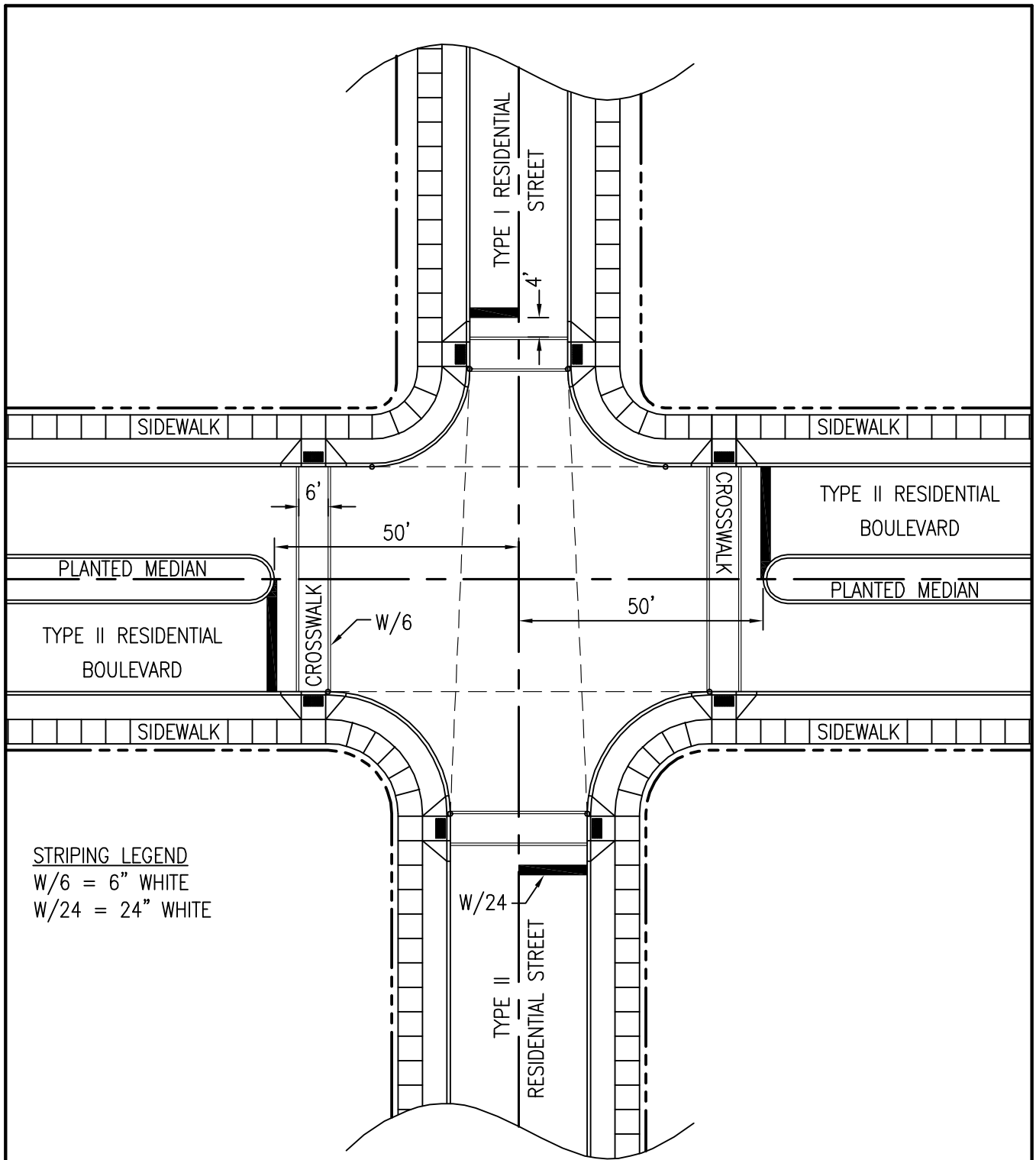
Detail

R-2.07



- NOTES:
1. PROVIDE 4" OF TOPSOIL COVERED WITH SEED AND MULCH ON PROPOSED GRASS AREAS.
 2. SIDEWALKS ARE NOT REQUIRED UNLESS SPECIFIED BY THE COUNTY. REFER TO DETAIL R-5.01 FOR SIDEWALK INFORMATION.
 3. SUBBASE AND SUBGRADE SHALL BE COMPACTED TO 95% OF ASTM D1557, MODIFIED PROCTOR METHOD.
 4. ROADWAY WIDTH IS SUFFICIENT TO ACCOMODATE TWO 4' BICYCLE SHOULDERS.
 5. ROADWAY WIDTH SHALL BE WIDENED IF ON-STREET PARKING IS DESIRED. REFER TO DETAILS R-2.12 AND R-2.13 FOR ON-STREET PARKING OPTIONS.
 6. IF INTEGRAL P.C.C. CURB & GUTTER ARE USED THE GUTTER SHALL NOT BE INCLUDED AS PART OF THE 14' TRAVEL LANE AND THE RIGHT-OF-WAY WIDTH SHALL BE EXTENDED AS NECESSARY.

	Revised	Sussex County, Delaware Engineering Department Approved: <i>Michael J. [Signature]</i> Sussex County Engineer	Type III Residential/Commercial/Industrial/Service or Frontage Street Closed Drainage (ADT > 3,000)	Detail R-2.08
	Revised			
	08/19/2008 Approved			



STRIPING LEGEND
W/6 = 6" WHITE
W/24 = 24" WHITE

- NOTES:
1. CROSSWALKS SHALL BE INCLUDED AT ALL SIGNALIZED INTERSECTIONS AND WHEN THE TRAFFIC VOLUME EXCEEDS 2,000 ADT'S.
 2. REFER TO DEL DOT STANDARD CONSTRUCTION DETAIL C-2 FOR CURB RAMP DESIGN.

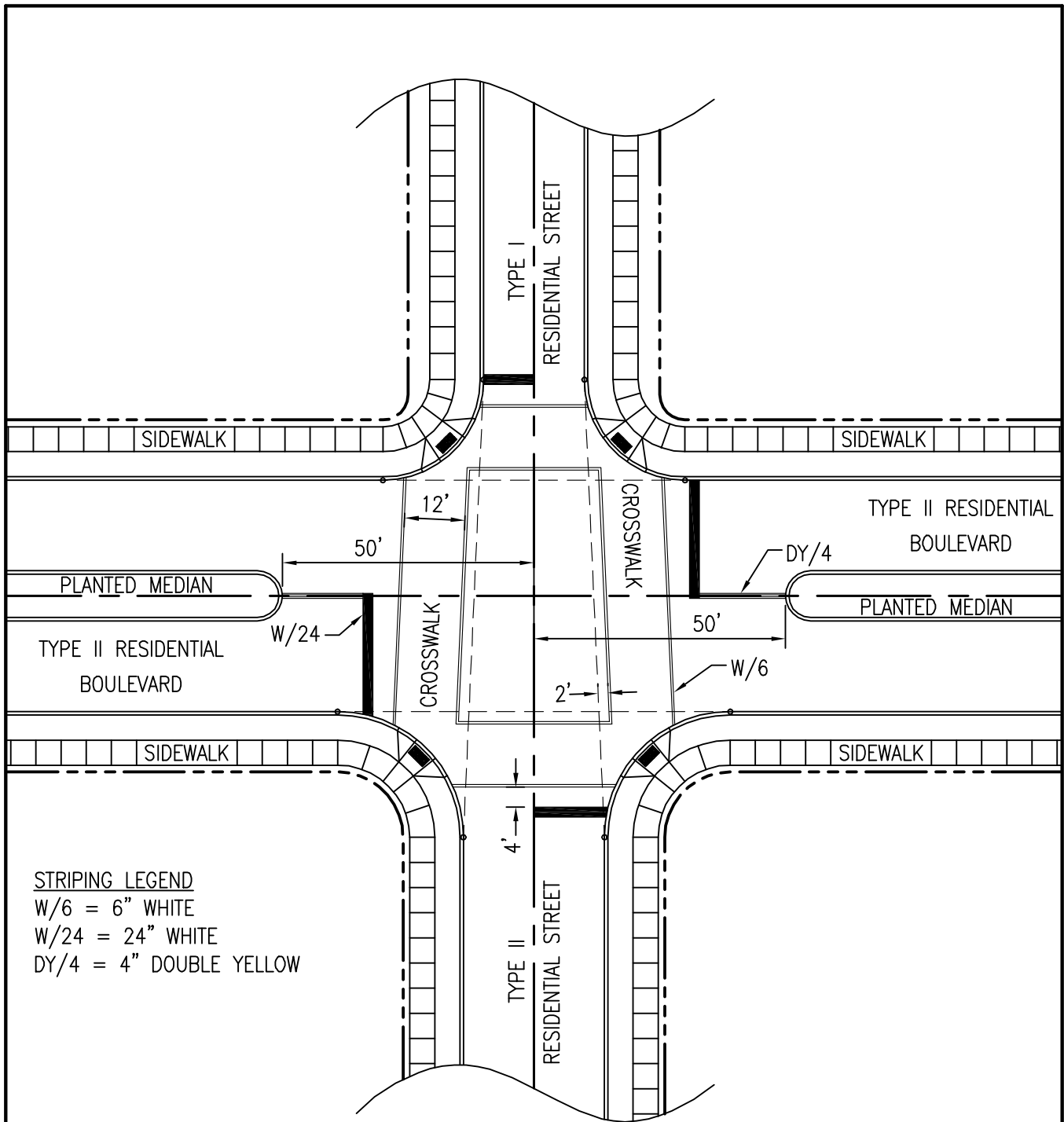


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Sussex County Engineer

Typical Residential
Intersection With
Perpendicular Curb Ramps

Detail
R-2.09



STRIPING LEGEND

W/6 = 6" WHITE

W/24 = 24" WHITE

DY/4 = 4" DOUBLE YELLOW

NOTES:

1. CROSSWALKS SHALL BE INCLUDED AT ALL SIGNALIZED INTERSECTIONS AND WHEN THE TRAFFIC VOLUME EXCEEDS 2,000 ADT'S.
2. REFER TO DEL DOT STANDARD CONSTRUCTION DETAIL C-2 FOR CURB RAMP DESIGN.

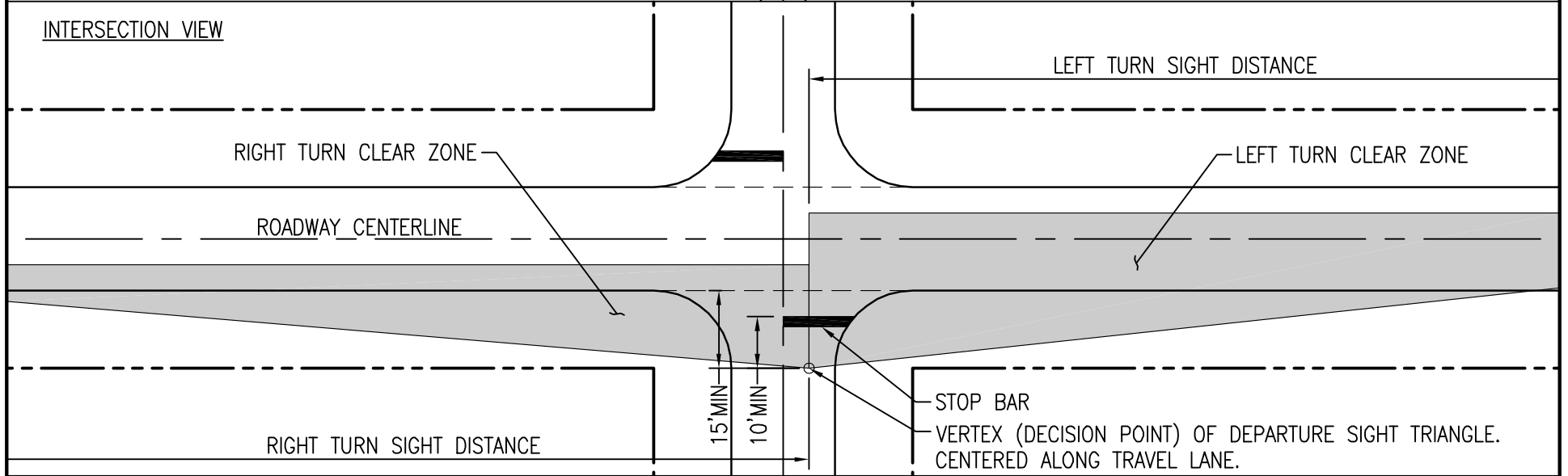
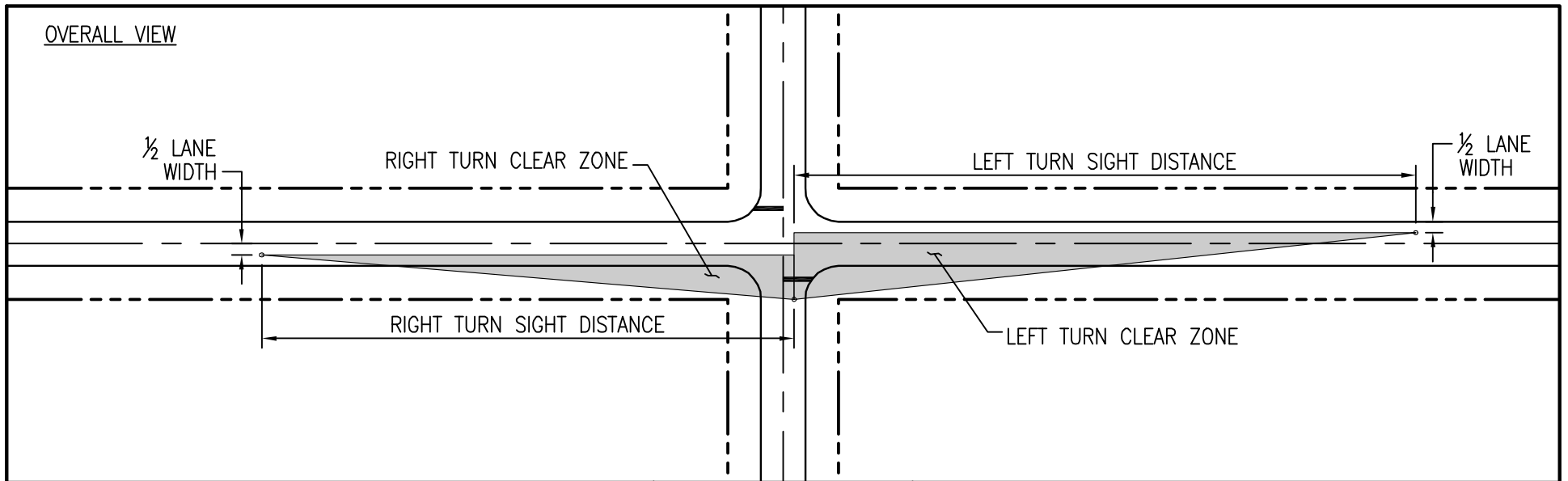


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 Sussex County Engineer

Typical Residential
 Intersection With Diagonal
 Curb Ramps

Detail
 R-2.10



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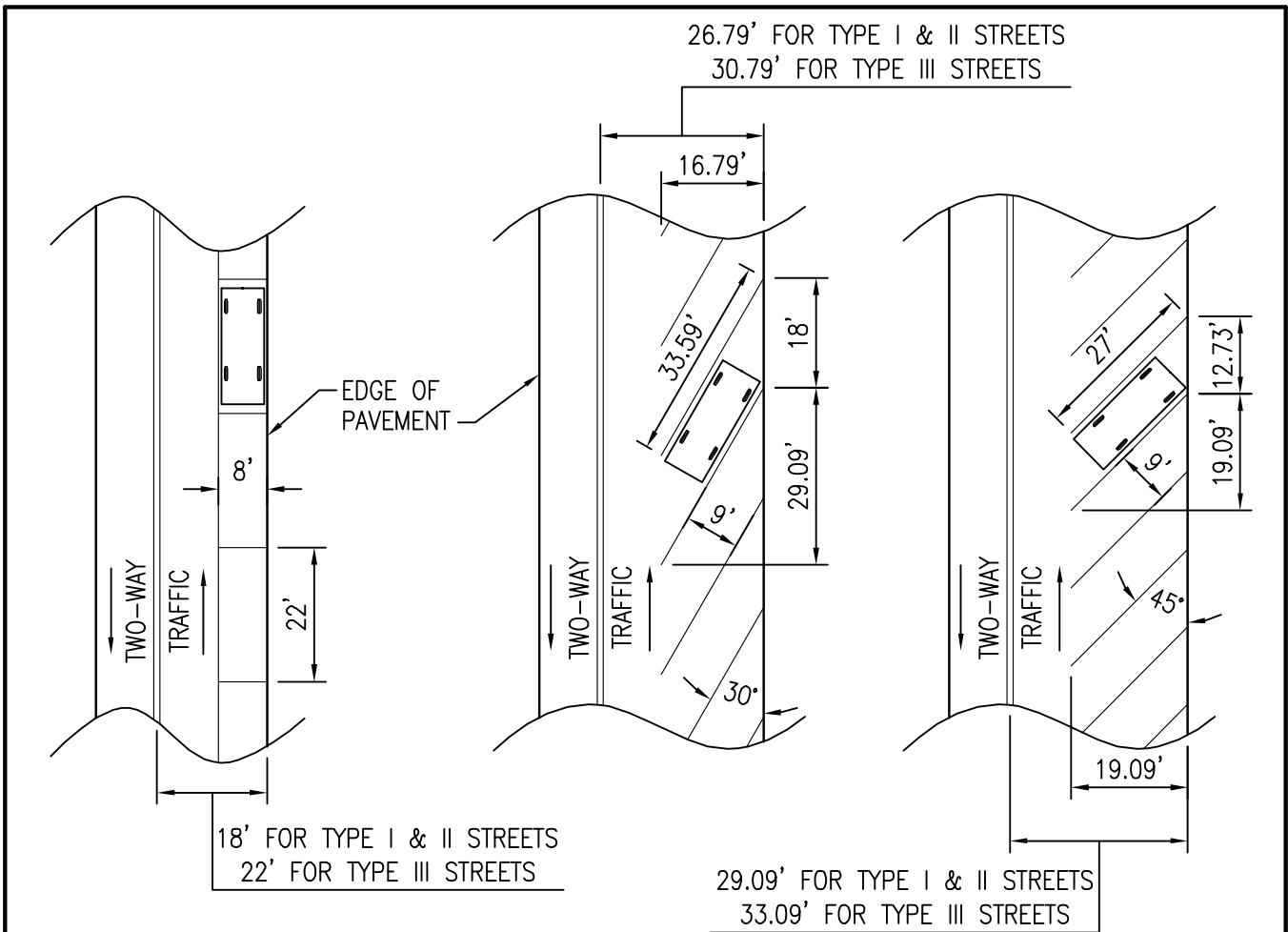
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 Engineering Department

Approved: *Michael J. [Signature]*
 Sussex County Engineer

Intersection Sight Distance & Clear Zone Triangles

Detail

R-2.11



NOTES:

1. SIDEWALKS MAY BE OFFSET 3' FROM THE BACK OF CURB WHEN ON-STREET PARKING IS PROVIDED
2. 45° SHALL BE THE MAXIMUM ALLOWABLE ANGLE FOR ON-STREET PARKING.
3. THE STALL LAYOUTS PROVIDED ARE ACCEPTABLE ON A SINGLE SIDE OR ON BOTH SIDES OF THE STREET.
4. RIGHT-OF-WAY WIDTHS SHALL BE ADJUSTED TO ACCOMMODATE ON-STREET PARKING.
5. ON-STREET PARKING SHALL BE PROHIBITED WITHIN THE FOLLOWING LOCATIONS:
 - A. 15' OF A FIRE HYDRANT.
 - B. 20' OF A TRAFFIC CONTROL DEVICE, SUCH AS A STOP SIGN OR TRAFFIC LIGHT.
 - C. 20' OF A CROSSWALK AT AN INTERSECTION.
 - D. 10' OF A CROSSWALK NOT AT AN INTERSECTION.
 - E. 50' OF A RAILROAD CROSSING.
 - F. 20' OF A FIRE STATION ENTRANCE.
 - G. 75' OF A FIRE STATION ON THE OPPOSITE SIDE OF THE STREET.
 - H. 10' OF A DRIVEWAY.
 - I. ADJACENT TO A SCHOOL.
 - J. IN AN ALLEY.
 - K. ON ANY BRIDGE OR ELEVATED STRUCTURE.
 - L. IN ANY AREA THAT PROHIBITS THE REQUIRED SIGHT DISTANCE FROM BEING ACHIEVED.



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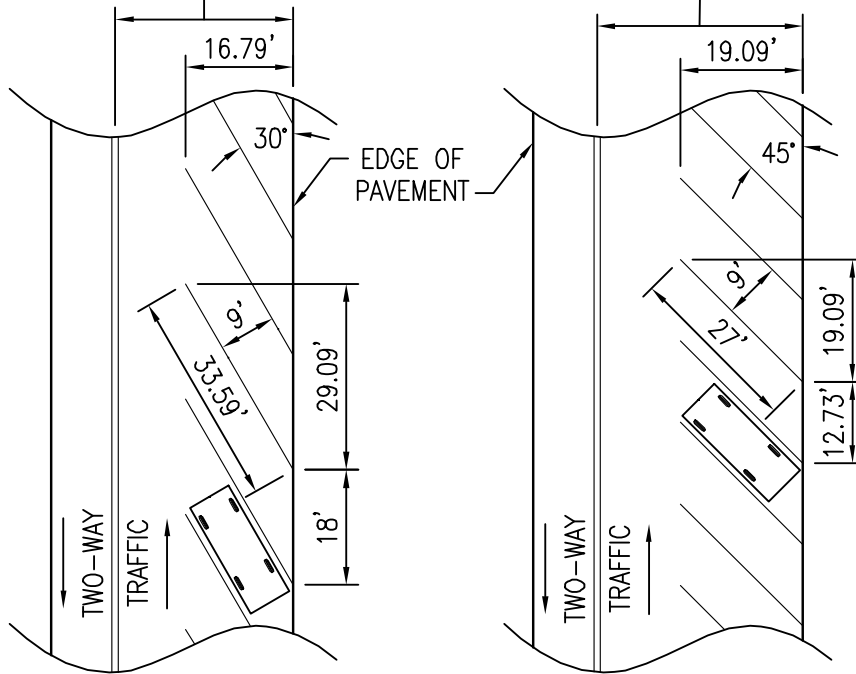
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Approved: *Michael J. Izzo*
Sussex County Engineer

On-Street Head-In Parking
Layout

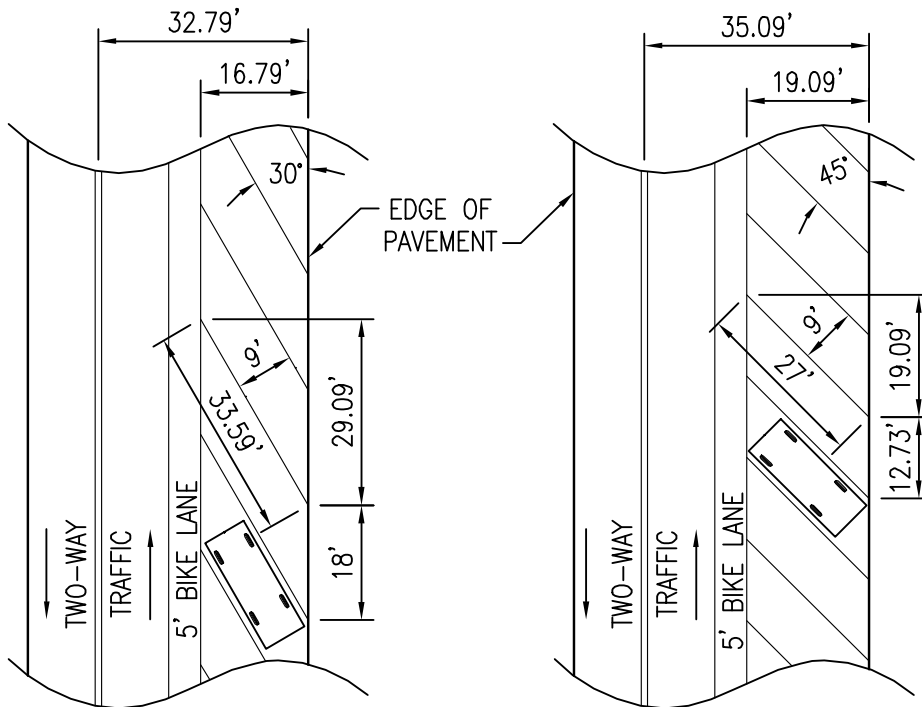
Detail
R-2.12

27.79' FOR TYPE I & II STREETS
 30.79' FOR TYPE III STREETS

32.09' FOR TYPE I & II STREETS
 33.09' FOR TYPE III STREETS



WITHOUT A BIKE LANE



WITH A BIKE LANE

REFER TO R-2.12 FOR OFF-STREET PARKING NOTES.

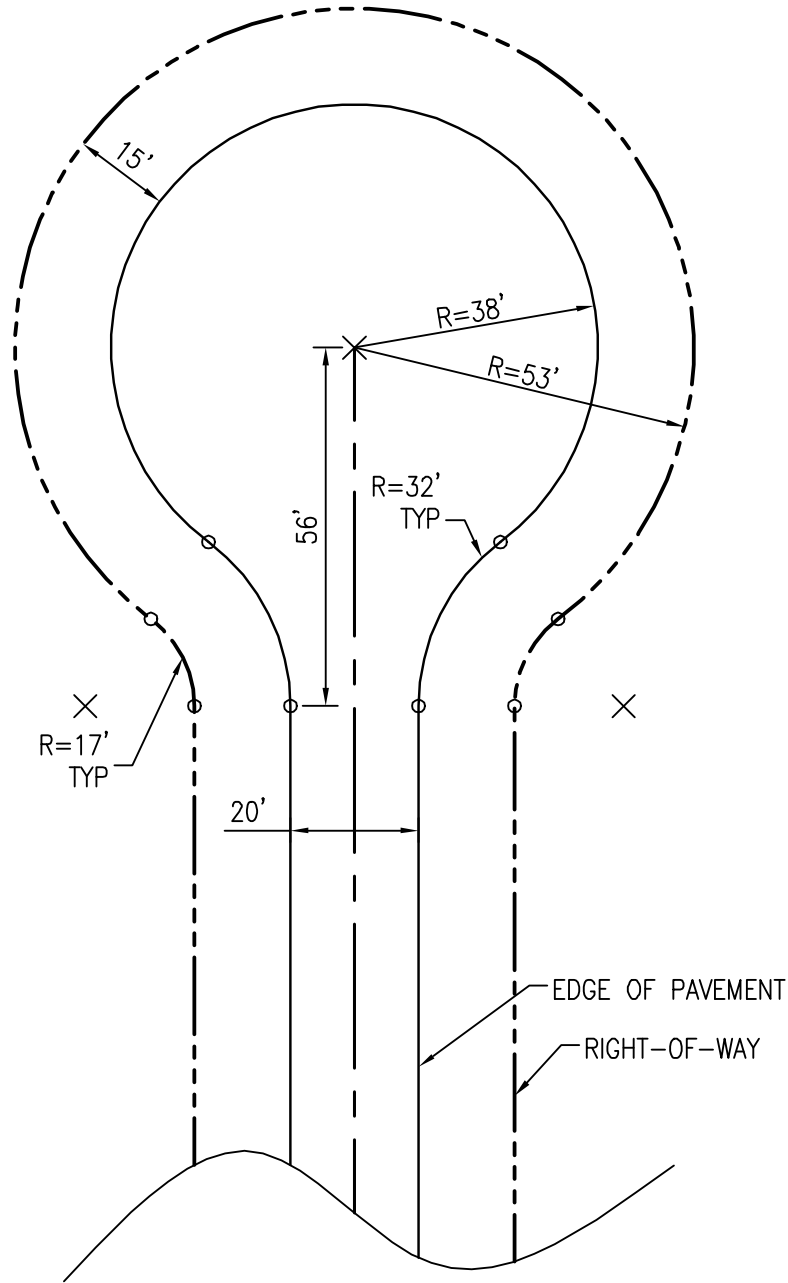


Revised
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 08/19/2008
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Sussex County, Delaware
 Engineering Department
 Approved: *Michael J. Izzo*
 Sussex County Engineer

On-Street Back-In Parking
 Layout

Detail
R-2.13



NOTES:

1. CUL-DE-SACS AND OTHER SINGLE-ACCESS STREETS ARE LIMITED TO SERVING NO MORE THAN 300 ADT'S ON ROADS NO LONGER THAN 1,000 FEET IN LENGTH.
2. ON-STREET PARKING IS PROHIBITED WITHIN THE CUL-DE-SAC BULB.

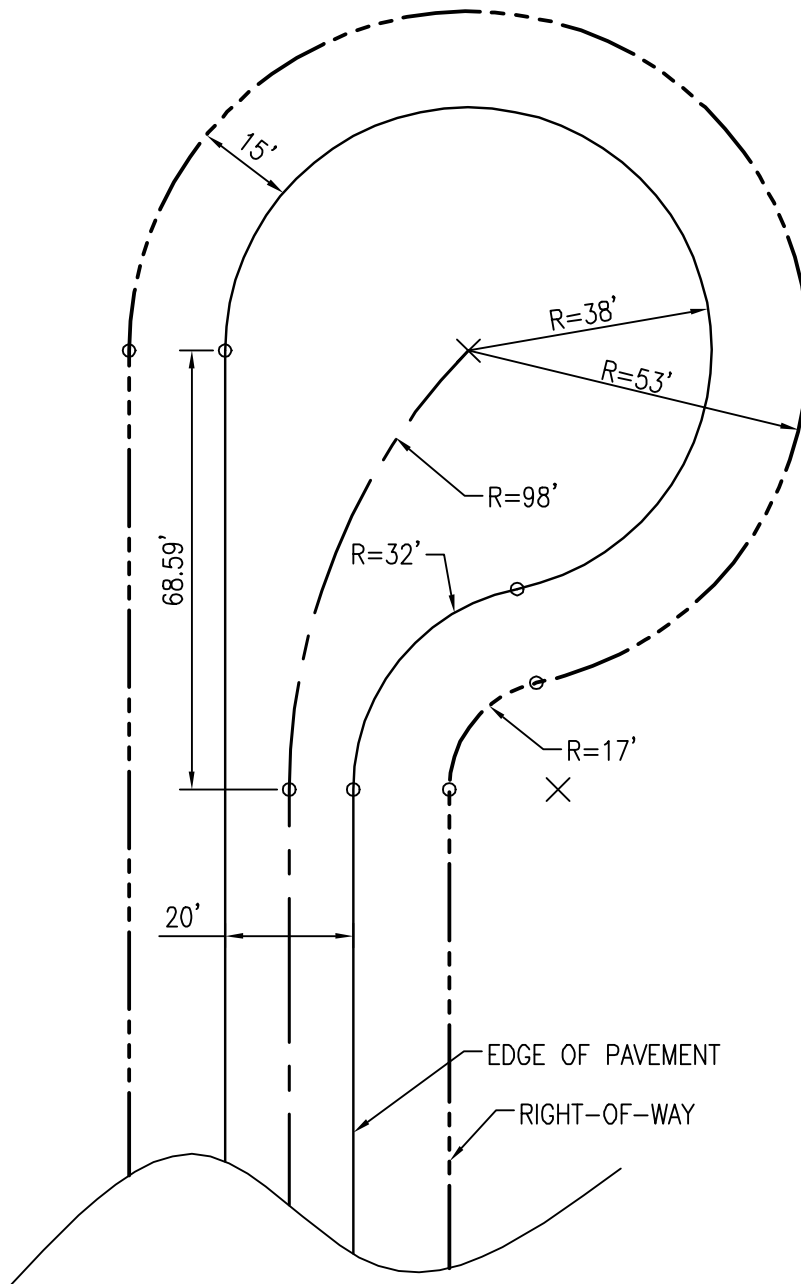


Revised
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08/19/2008
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Sussex County, Delaware
 Engineering Department
 Approved: *Michael J. Jago*
 Sussex County Engineer

Cul-De-Sac
 Without Island

Detail
 R-3.01



NOTES:

1. CUL-DE-SACS AND OTHER SINGLE-ACCESS STREETS ARE LIMITED TO SERVING NO MORE THAN 300 ADT'S ON ROADS NO LONGER THAN 1,000 FEET IN LENGTH.
2. ON-STREET PARKING IS PROHIBITED WITHIN THE CUL-DE-SAC BULB.

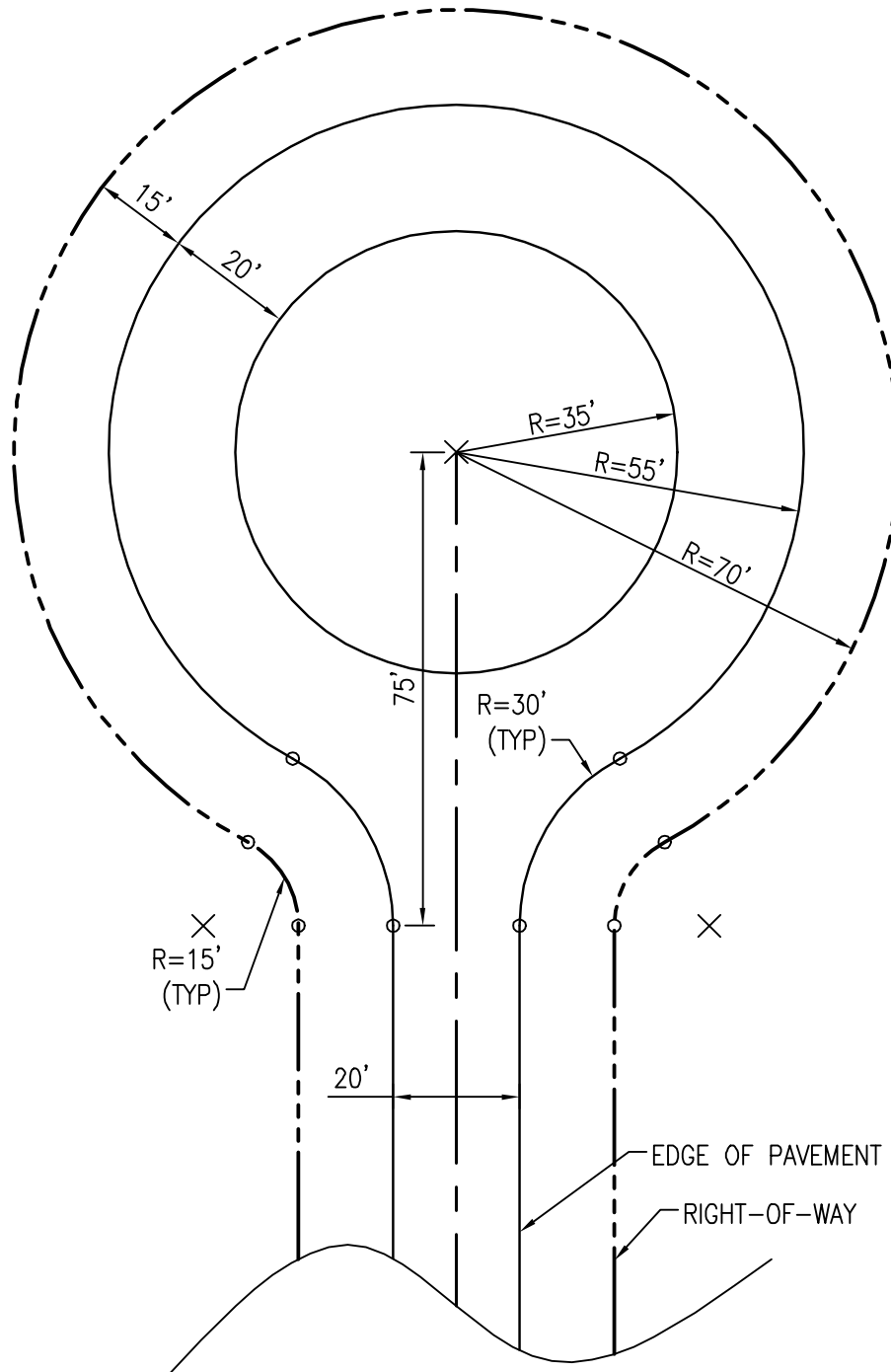


Revised
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Approved

Sussex County, Delaware
 Engineering Department
 Approved: *Michael J. Jago*
 Sussex County Engineer

Cul-De-Sac Eyebrow
 Without Island

Detail
R-3.02



NOTES:

1. CUL-DE-SACS AND OTHER SINGLE-ACCESS STREETS ARE LIMITED TO SERVING NO MORE THAN 300 ADT'S ON ROADS NO LONGER THAN 1,000 FEET IN LENGTH.
2. ON-STREET PARKING IS PROHIBITED WITHIN THE CUL-DE-SAC BULB.

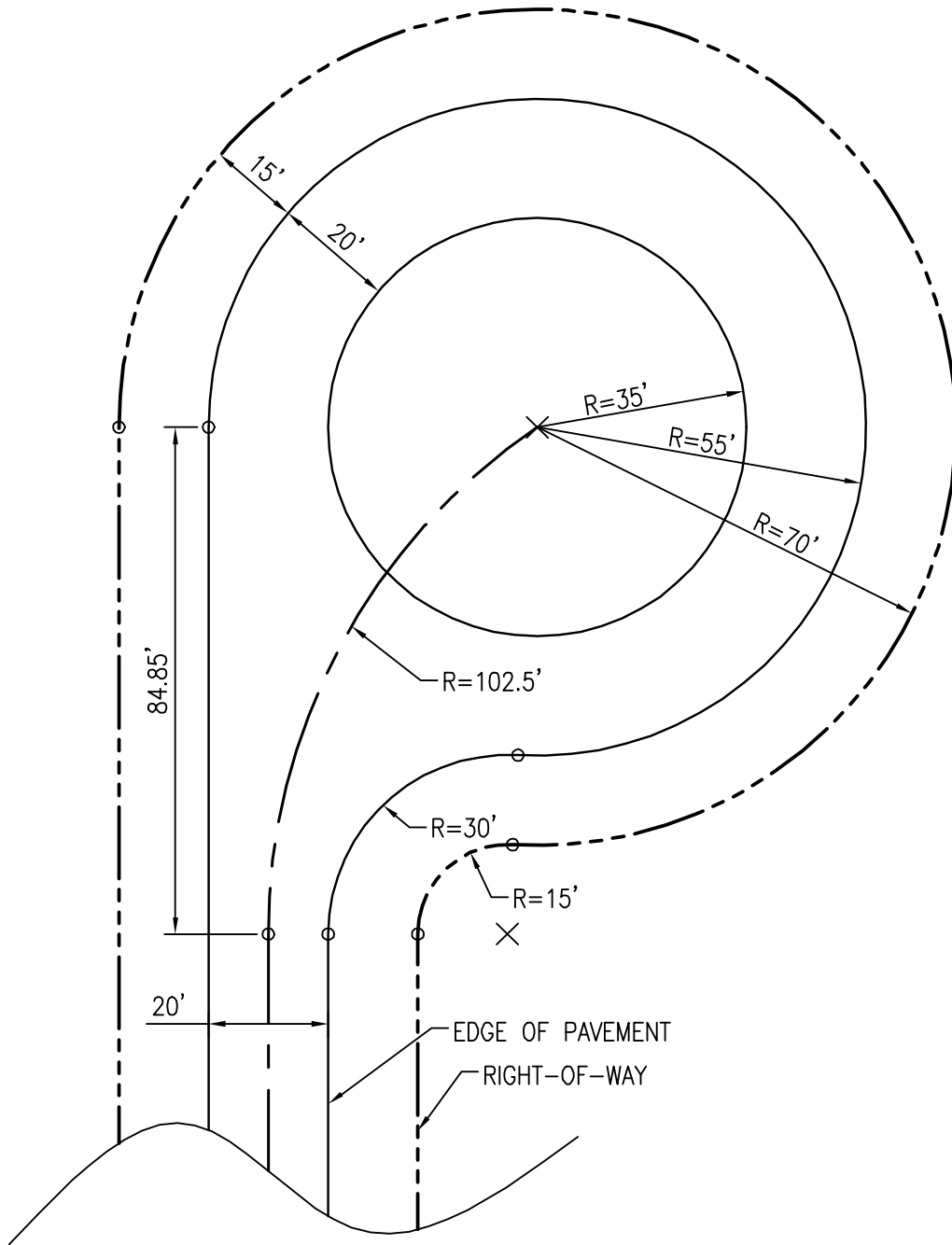


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Sussex County, Delaware
 Engineering Department
 Approved: *Michael J. Jago*
 Sussex County Engineer

Cul-De-Sac
 With Island

Detail
 R-3.03



NOTES:

1. CUL-DE-SACS AND OTHER SINGLE-ACCESS STREETS ARE LIMITED TO SERVING NO MORE THAN 300 ADT'S ON ROADS NO LONGER THAN 1,000 FEET IN LENGTH.
2. ON-STREET PARKING IS PROHIBITED WITHIN THE CUL-DE-SAC BULB.

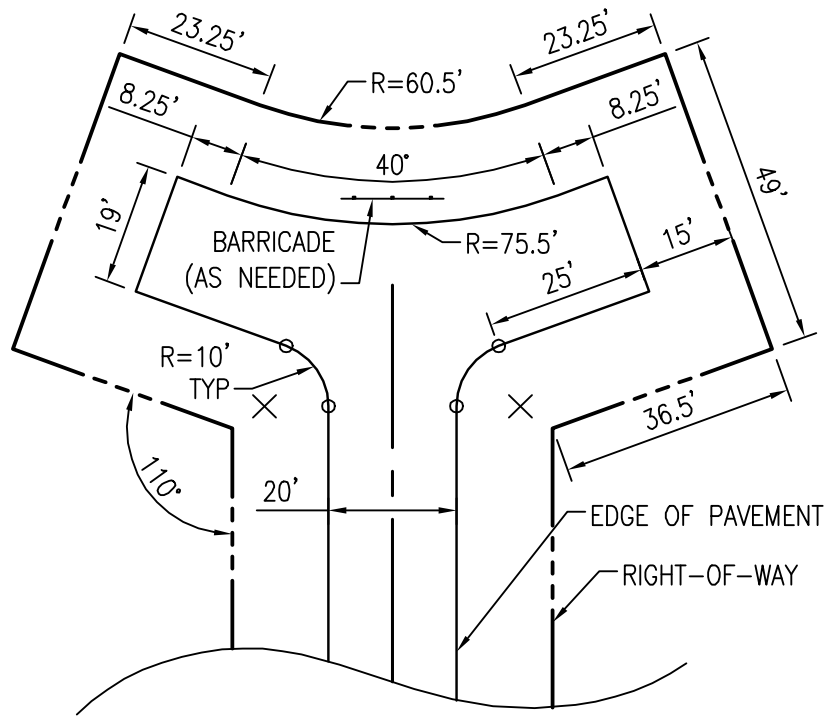
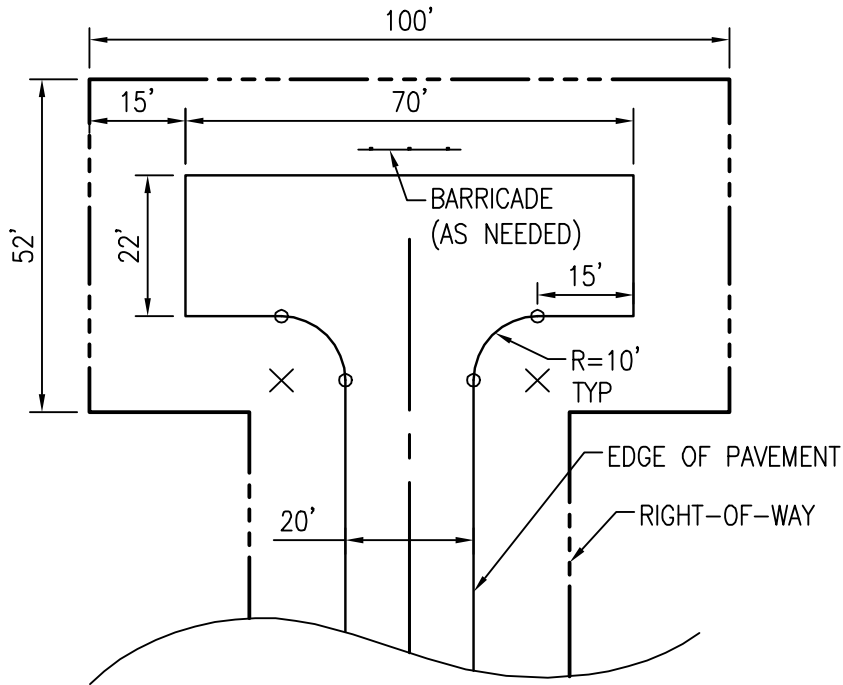


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Sussex County, Delaware
 Engineering Department
 Approved: *Michael J. Jago*
 Sussex County Engineer

Cul-De-Sac Eyebrow
 With Island

Detail
R-3.04



NOTES:

1. TEE TURN-AROUNDS ARE LIMITED TO SERVING NO MORE THAN 300 ADT'S ON ROADS NO LONGER THAN 1,000 FEET IN LENGTH.
2. ON-STREET PARKING IS PROHIBITED WITHIN THE TEE TURN-AROUND HEAD.
3. BARRICADES ARE NOT NECESSARY UNLESS AN APPARENT SAFETY HAZARD EXISTS.



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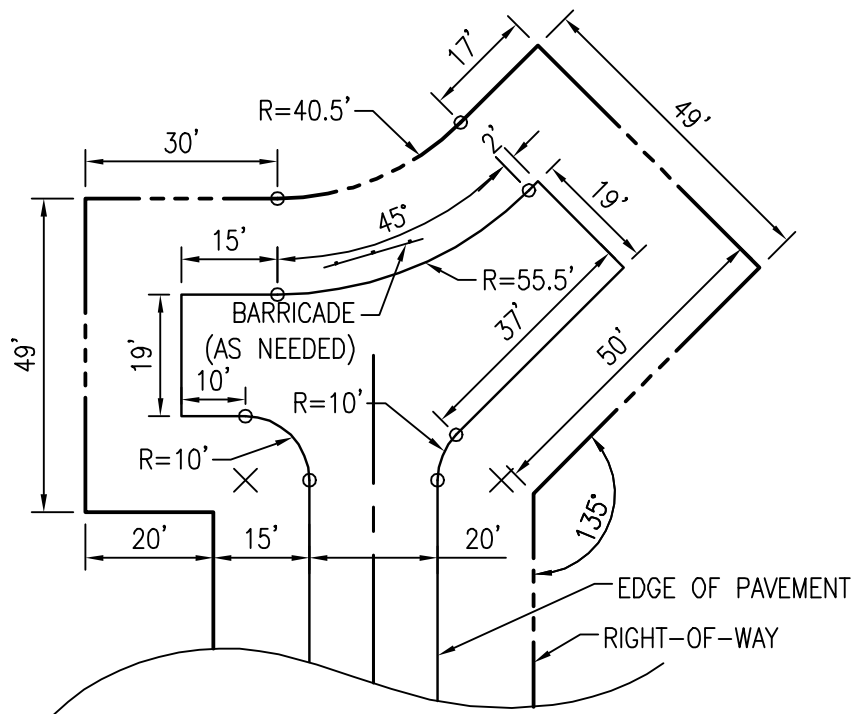
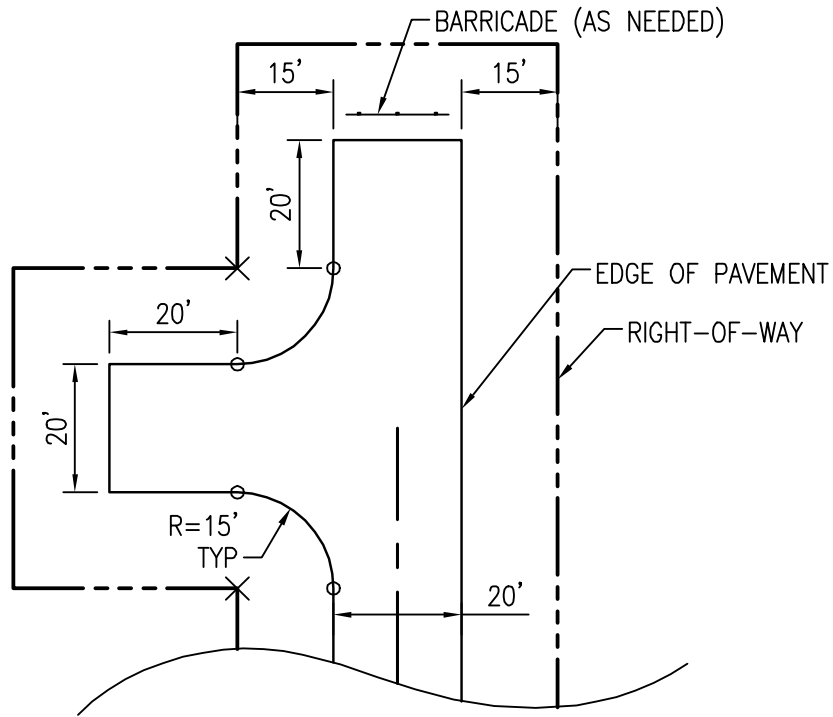
Sussex County, Delaware
Engineering Department

Approved: *Michael J. Izzo*
Sussex County Engineer

Tee Turn-Arounds
(1 of 2)

Detail

R-3.05



NOTES:

1. TEE TURN-AROUNDS ARE LIMITED TO SERVING NO MORE THAN 300 ADT'S ON ROADS NO LONGER THAN 1,000 FEET IN LENGTH.
2. ON-STREET PARKING IS PROHIBITED WITHIN THE TEE TURN-AROUND HEAD.
3. BARRICADES ARE NOT NECESSARY UNLESS AN APPARENT SAFETY HAZARD EXISTS.

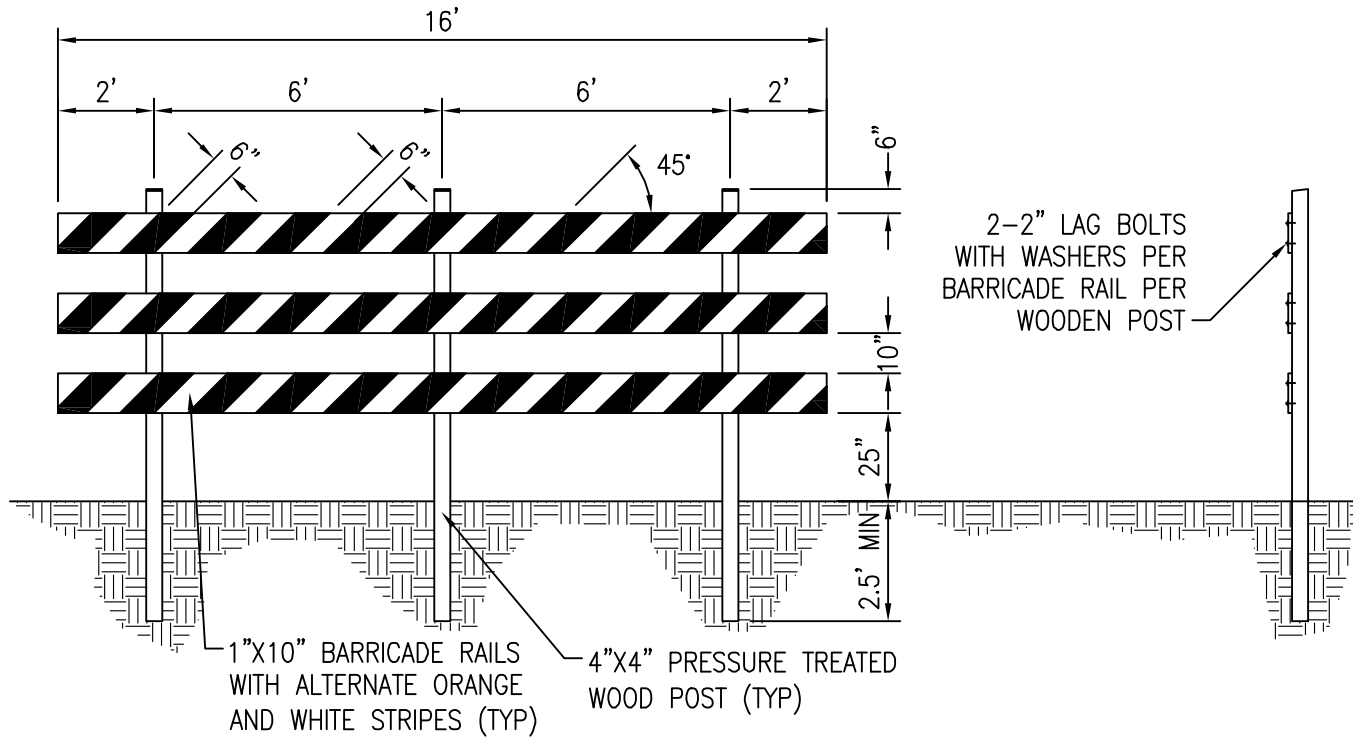


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 Approved: *Michael J. [Signature]*
 Sussex County Engineer

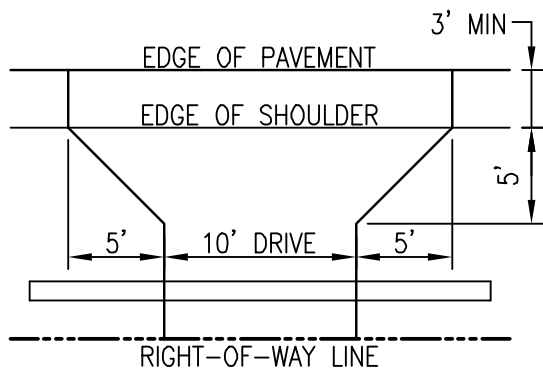
Tee Turn-arounds
 (2 of 2)

Detail
 R-3.06

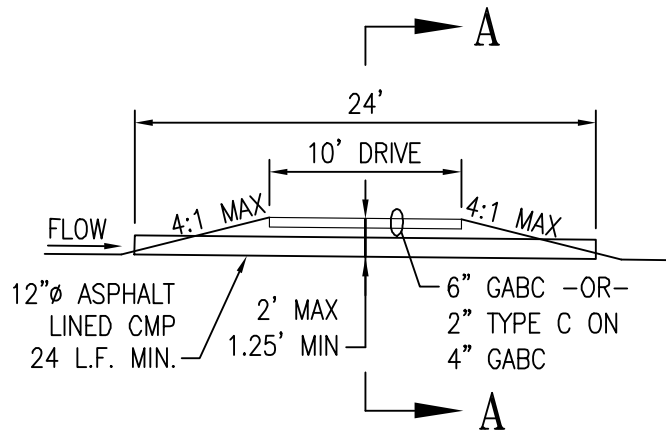


NOTE:
BARRICADES ARE NOT NECESSARY UNLESS AN APPARENT SAFETY HAZARD EXISTS.

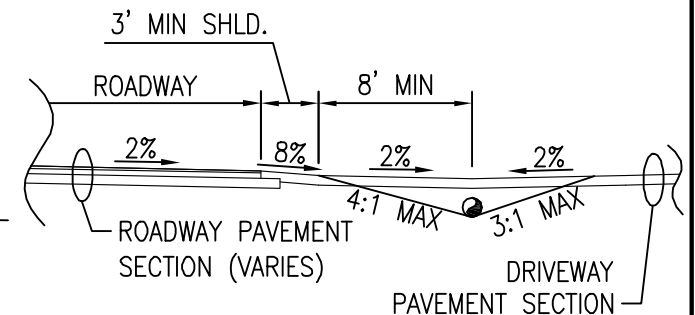
	Revised	Sussex County, Delaware Engineering Department Approved: <i>Michael J. Jzbo</i> Sussex County Engineer	Barricade	Detail R-3.07
	Revised			
	08/19/2008 Approved			



PLAN
WITH DRAIN PIPE



ELEVATION



SECTION A-A

NOTES:

1. A 12"Ø CLASS III REINFORCED CONCRETE PIPE SHALL BE USED WHEN THE DIFFERENCE BETWEEN THE PIPE INVERT AND THE FINISHED GRADE IS LESS THAN 1.25' MEASURED ALONG THE CENTERLINE OF THE DRIVEWAY.



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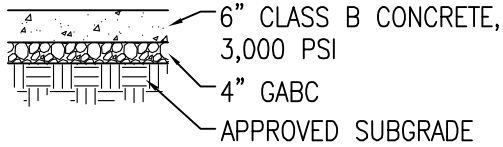
Approved: *Michael J. Jozzo*
Sussex County Engineer

Residential Driveway Entrance
Open Drainage

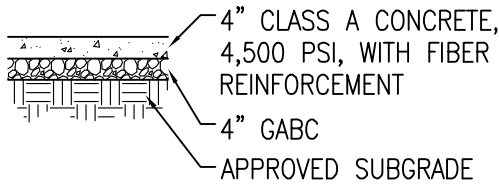
Detail

R-4.01

DRIVEWAY PAVEMENT OPTIONS

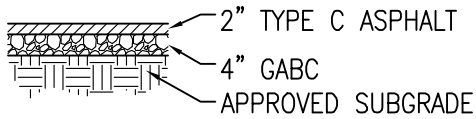


PLAIN CEMENT CONCRETE



1.5 LBS FIBER REINFORCEMENT PER CUBIC YARD OF CONCRETE

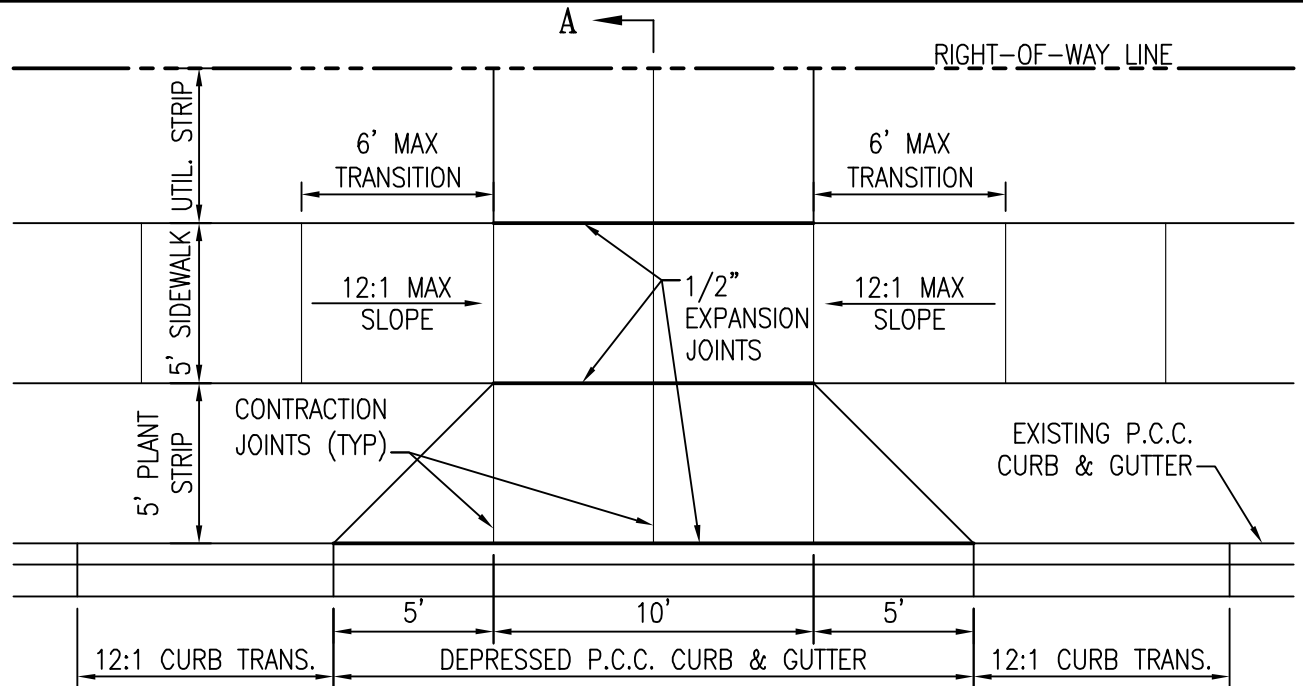
FIBER REINFORCED CEMENT CONCRETE



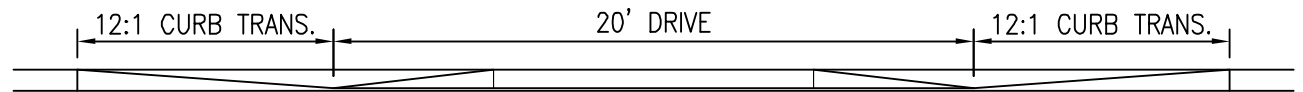
ASPHALT CONCRETE

NOTES:

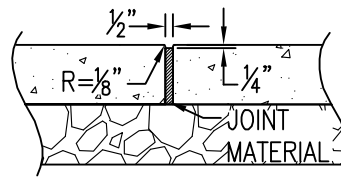
- OTHER DRIVEWAY PAVEMENT MATERIALS MAY BE ACCEPTABLE UPON APPROVAL BY THE COUNTY.



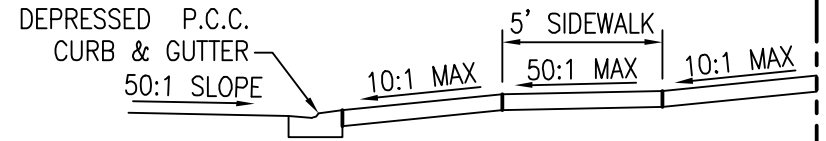
PLAN



ELEVATION



EXPANSION JOINT



SECTION A-A



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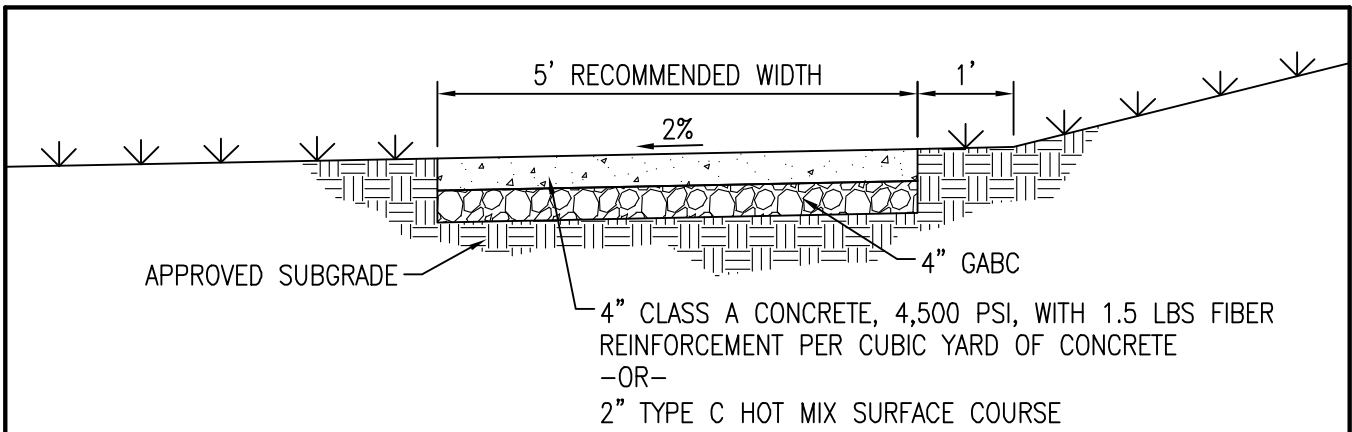
Sussex County, Delaware
Engineering Department

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Sussex County Engineer

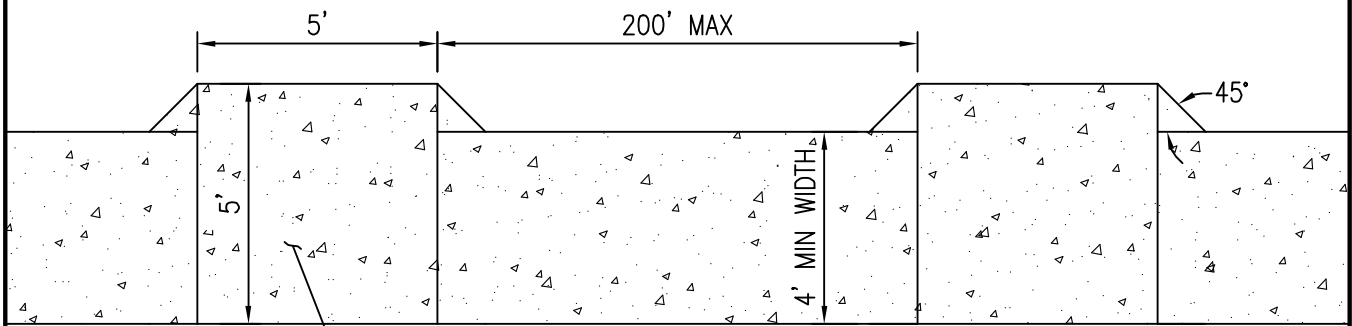
Residential Driveway Entrance
Closed Drainage

Detail

R-4.02

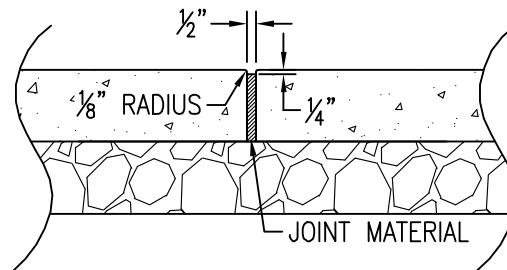


CROSS SECTION VIEW



PASSING AREA (TYP.)
REQUIRED WHEN SIDEWALK IS LESS THAN 5' WIDE

PLAN VIEW



EXPANSION JOINT

NOTES:

1. CONCRETE SIDEWALKS SHALL BE CONTINUOUS AND SHALL NOT BREAK OR STOP AT DRIVEWAY CROSSINGS.
2. CONCRETE SIDEWALKS SHALL BE MARKED INTO RECTANGULAR SLABS 5' LONG BY SCORING WITH APPROVED EDGING TOOLS.
3. EXPANSION JOINTS SHALL BE PLACED ACROSS CONCRETE SIDEWALKS NOT MORE THAN 20' APART.
4. WHEN A 5' WIDE SIDEWALK IS NOT POSSIBLE DUE TO SITE CONSTRAINTS, A 4' WIDE SIDEWALK MAY BE USED WITH 5'x5' PASSING AREAS SPACED AT 200' OR CLOSER INTERVALS. REFER TO THE LATEST ADA AND ABA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES.



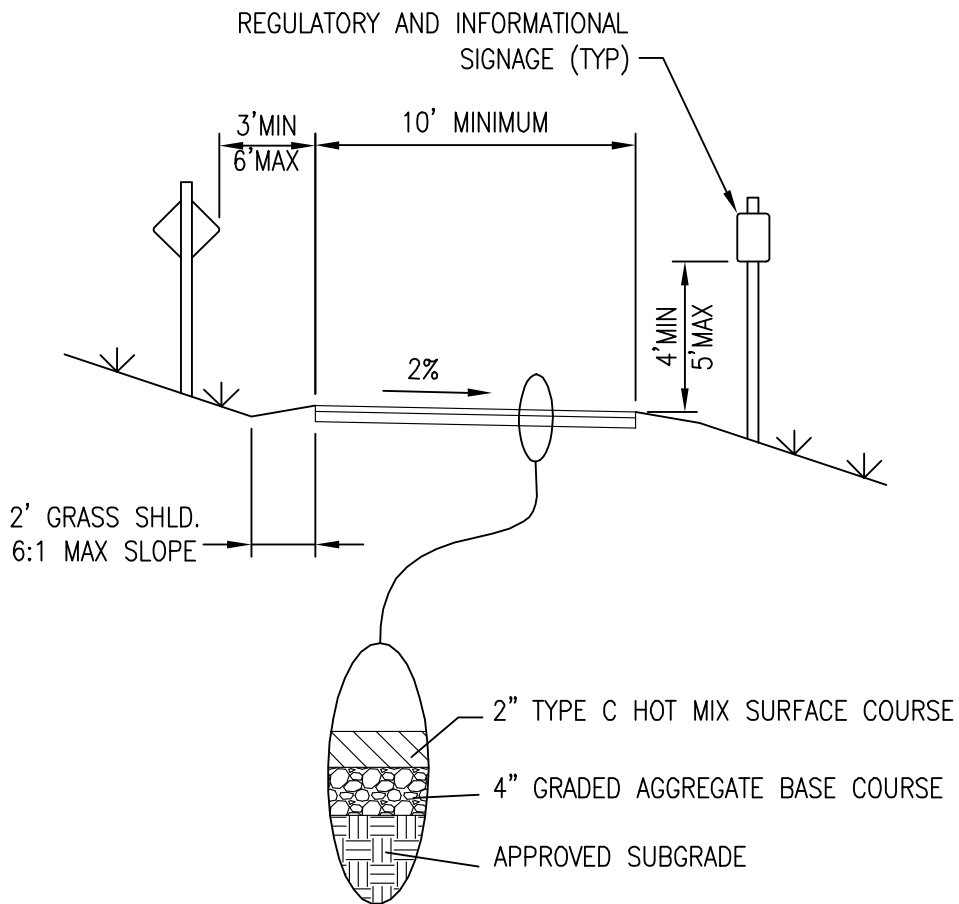
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Sussex County, Delaware
Engineering Department

Approved: *Michael J. Izzo*
Sussex County Engineer

Concrete Sidewalk

Detail
R-5.01

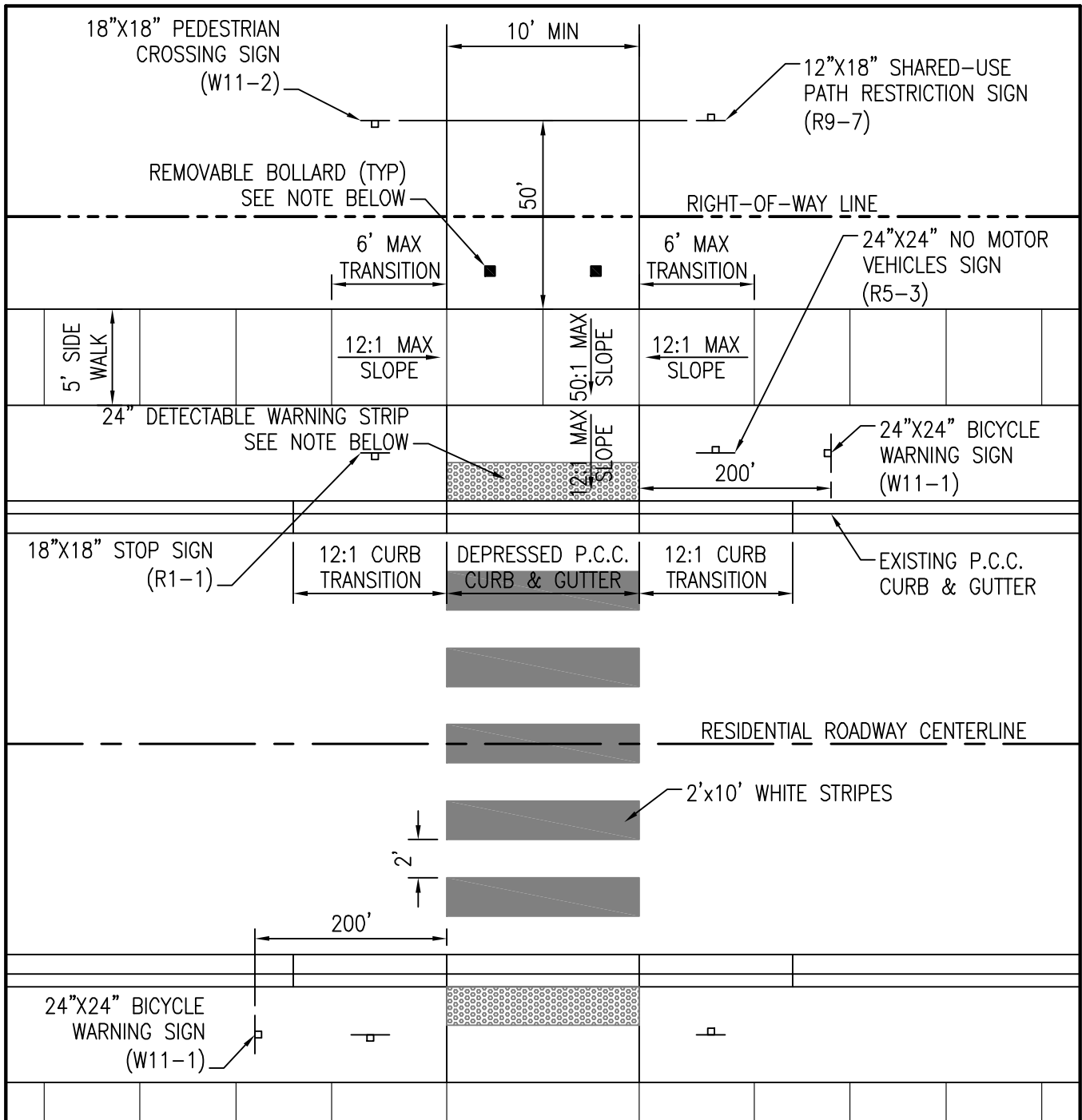


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Sussex County Engineer

Shared-Use Path

Detail
R-5.02



NOTES:

- SIGN CODES PROVIDED IN PARENTHESIS REFER TO THE FHWA'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- SHARED-USE PATH SHALL CONTINUE THROUGH THE RIGHT-OF-WAY AT MINIMUM WIDTH OF 10' OR THE WIDTH USED OUTSIDE OF THE RIGHT-OF-WAY, WHICHEVER IS GREATER.
- REFER TO DEL DOT'S STANDARD CONSTRUCTION DETAIL C-2 FOR TRUNCATED DOME DETECTABLE WARNING STRIP DESIGN.
- REFER TO DEL DOT'S STANDARD CONSTRUCTION DETAIL M-3 FOR BOLLARD DESIGN INFORMATION.

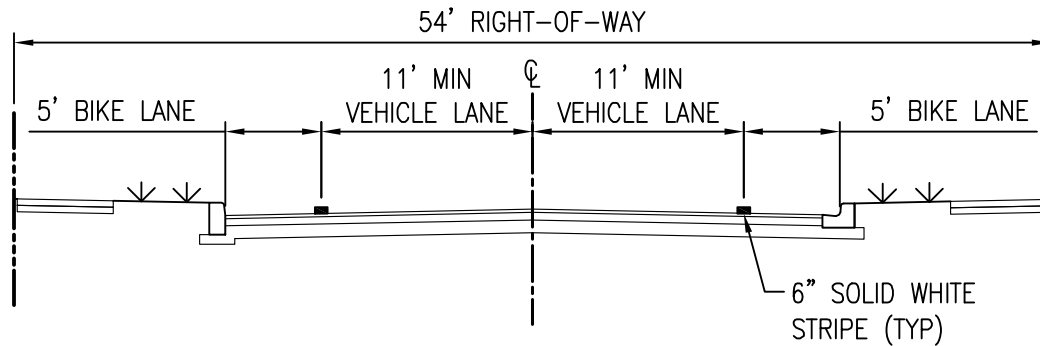


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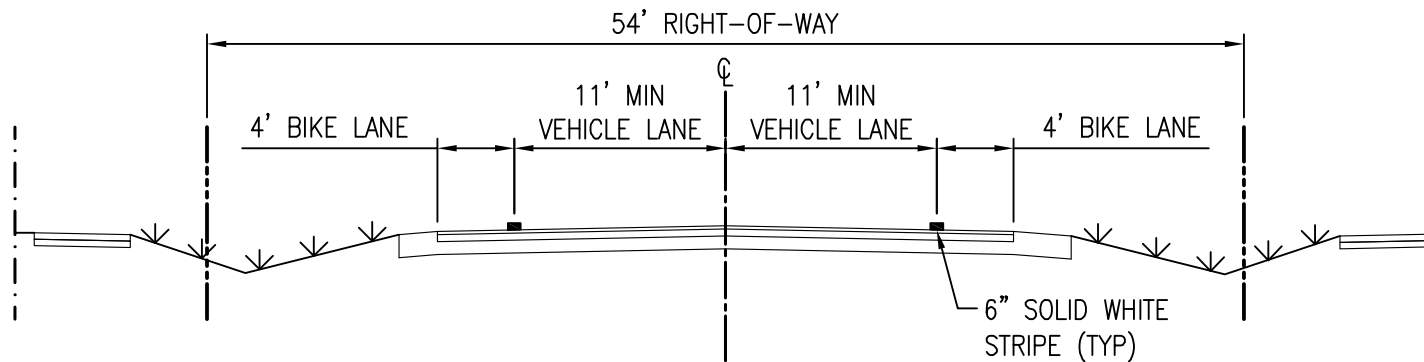
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 Engineering Department
 Approved: *Michael J. Izzo*
 Sussex County Engineer

Shared-Use Path
 Intersection

Detail
 R-5.03



CLOSED DRAINAGE SYSTEM



OPEN DRAINAGE SYSTEM

NOTES:

1. BIKE LANES SHALL BE PROVIDED ON TYPE III ROADWAYS WHEN SIGNIFICANT BIKE TRAFFIC IS ANTICIPATED AND TRAFFIC VOLUME EXCEEDS 8,000 ADT'S.
2. PAVEMENT MARKING AND SIGNAGE SHALL BE PLACED IN ACCORDANCE WITH CHAPTER 9 OF THE FHWA'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).



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Sussex County Engineer

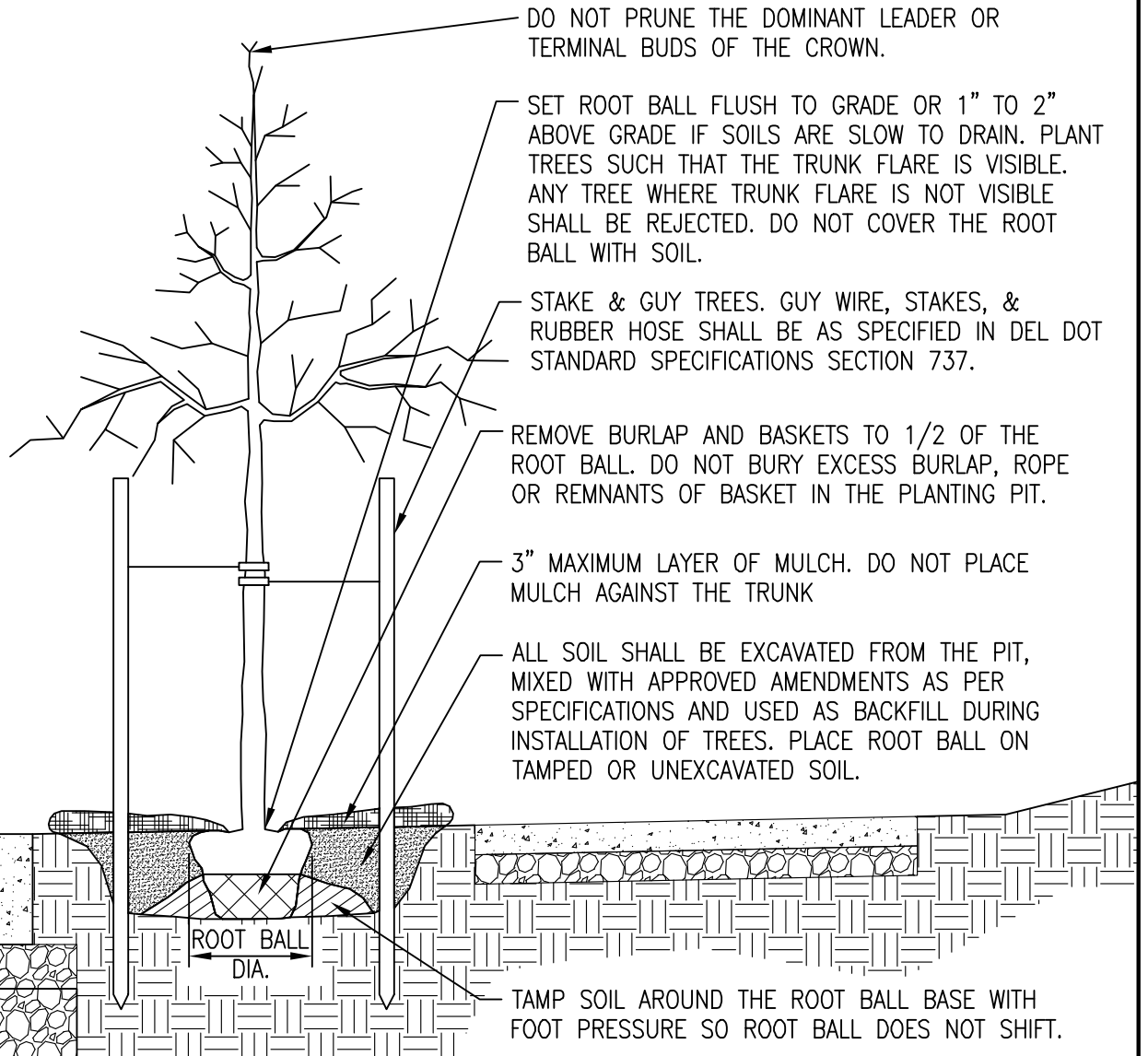
Typical Bike Lane Cross Sections

Detail

R-5.04

NOTES:

1. UTILITIES SHALL NOT BE PLACED WITHIN PLANT STRIP.
2. ALL PRUNING SHALL BE DONE BY OR UNDER THE DIRECTION OF AN I.S.A. CERTIFIED ARBORIST OR CERTIFIED NURSERY PROFESSIONAL. DO NOT HEAVILY PRUNE TREES AT PLANTING.
3. ALL DEAD, BROKEN, & CROSSING BRANCHES SHALL BE PRUNED OFF FOLLOWING INSTALLATION.
4. BASE OF PLANTING PIT SIZE SHALL BE A MINIMUM WIDTH OF TWICE THE ROOT BALL SIZE AND A MAXIMUM OF THREE TIMES THE ROOT BALL SIZE.
5. THE TREE SHALL BE CENTERED BETWEEN THE BACK OF CURB AND EDGE OF SIDEWALK, WHICH SHALL BE NO LESS THAN 5'.
3. TREES MUST BE GROWN WITH A STRUCTURED CANOPY LIMBED TO A 6' MINIMUM CLEARANCE AT TIME OF INSTALLATION. ANNUAL STREET TREE MAINTENANCE MUST INCLUDE STRUCTURAL PRUNING OF THE CANOPY UNTIL A MAXIMUM HEIGHT CLEARANCE OF 10' HAS BEEN ACQUIRED AND MAINTAINED.
4. FOR NON-IRRIGATED SITES, WATER THOROUGHLY IMMEDIATELY AFTER INSTALLATION.
5. TREES SHOULD BE PLANTED AT LEAST 10 FEET FROM FIRE HYDRANTS AND STREET LIGHTS, SEVEN FEET FROM DRIVEWAYS AND STREET SIGNS, SIX FEET FROM UNDERGROUND UTILITY LINE VALVES, AND 35 FEET FROM THE CORNER CURB OF STREET INTERSECTIONS.



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Engineering Department

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Sussex County Engineer

Street Tree Layout

Detail

R-6.01

SCIENTIFIC NAME	COMMON NAME	HEIGHT (FEET)	WIDTH (FEET)	USE UNDER POWER LINES	NOTES
AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	15-25	10-20	YES	WHITE FLOWERS FIRST IN SPRING, FRUIT AND ORANGE FALL COLOR
AMELANCHIER CANADENSIS	SHADBLOW	6-20		YES	WHITE FLOWERS FIRST IN SPRING, FRUIT AND ORANGE FALL COLOR
AMELANCHIER X GRANDIFLORA	APPLE SERVICEBERRY	15-25	10-20	YES	WHITE FLOWERS FIRST IN SPRING, FRUIT AND ORANGE FALL COLOR
AMELANCHIER LAEVIS	ALLEGHENY SERVICEBERRY	15-25	10-20	YES	WHITE FLOWERS FIRST IN SPRING, FRUIT AND ORANGE FALL COLOR
CARPINUS CAROLINIANA	IRONWOOD	20-30	20-30	YES	SMOOTH BARK WITH CLEAN NEAT LEAVES
CERCIS CANADENSIS	EASTERN REDBUD	20-35	20-35	YES	EARLY PINKISH PURPLE COLORS
CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	25	25	YES	WHITE FLEECY FLOWERS IN LATE SPRING
CORNUS FLORIDA	EASTERN FLOWERING DOGWOOD	20-35	20-35	YES	EARLY SPRING FLOWERS
CRATAEGUS VIRIDIS	GREEN HAWTHORN	20-35	20-35	YES	BRIGHT RED BERRIES THROUGHOUT WINTER

NOTES:

1. THE ABOVE LIST HAS BEEN ADOPTED FROM FIGURE 18 OF THE DEL DOT ROADSIDE VEGETATION CONCEPT AND PLANNING MANUAL. IT INCLUDES ONLY NATIVE TREE SPECIES, ADEQUATELY SIZED FOR PLANTING WITHIN A 5' STRIP ALONG A RESIDENTIAL ROADWAY.
2. THIS LIST IS NOT ALL-INCLUSIVE AND SHOULD ONLY BE USED AS A GUIDE FOR PLANTING STREET TREES. OTHER SPECIES MAY BE SPECIFIED TO ACCOMMODATE THE PHYSICAL SETTING OF THE PROJECT.



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Sussex County, Delaware
Engineering Department
Approved: *Michael J. Izzo*
Sussex County Engineer

Street Tree List

Detail

R-6.02