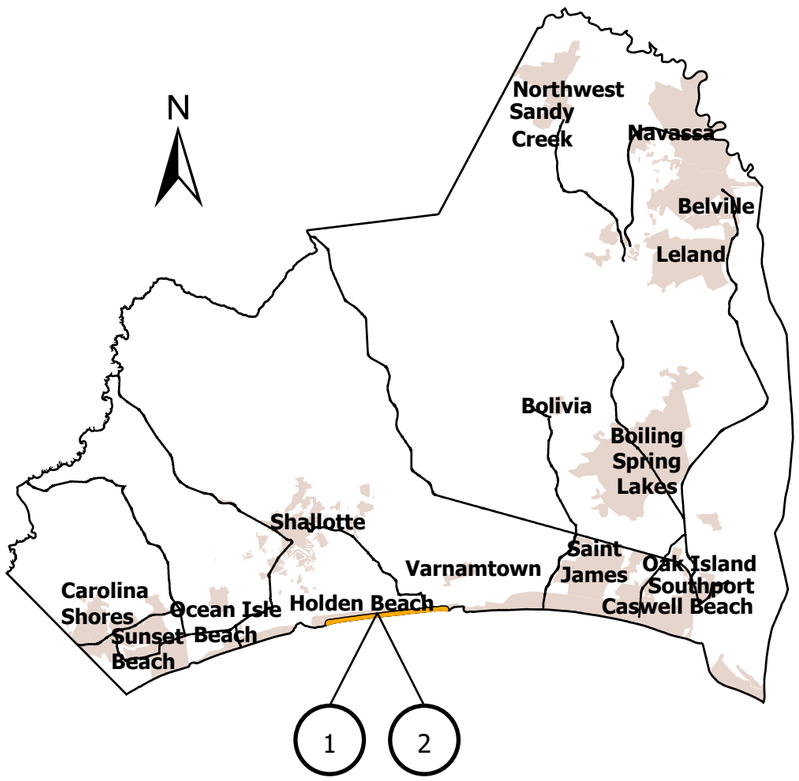
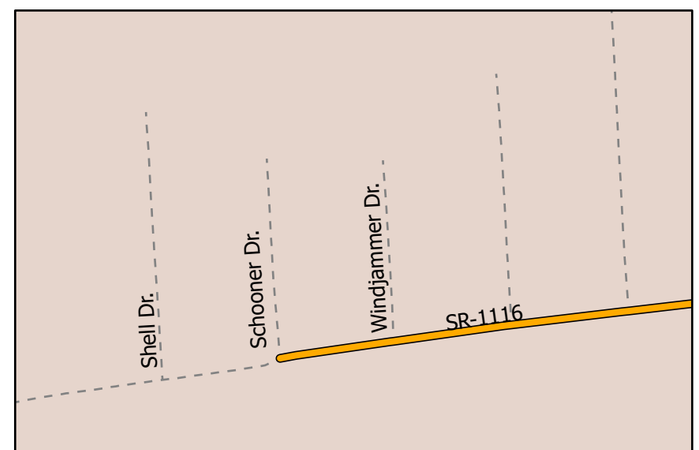
Brunswick County 1 - 2

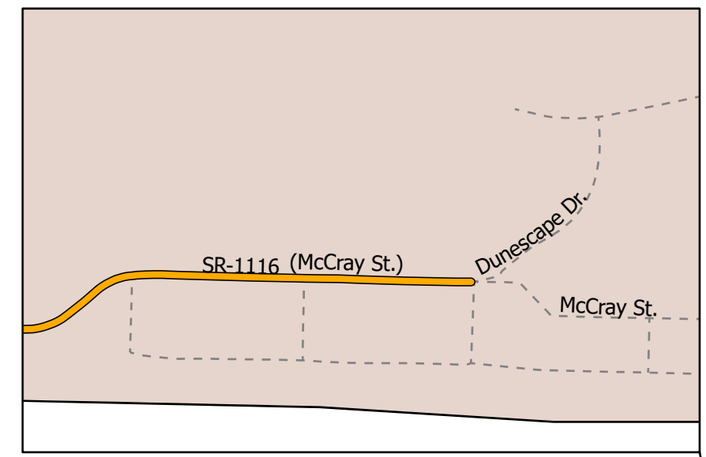
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	1

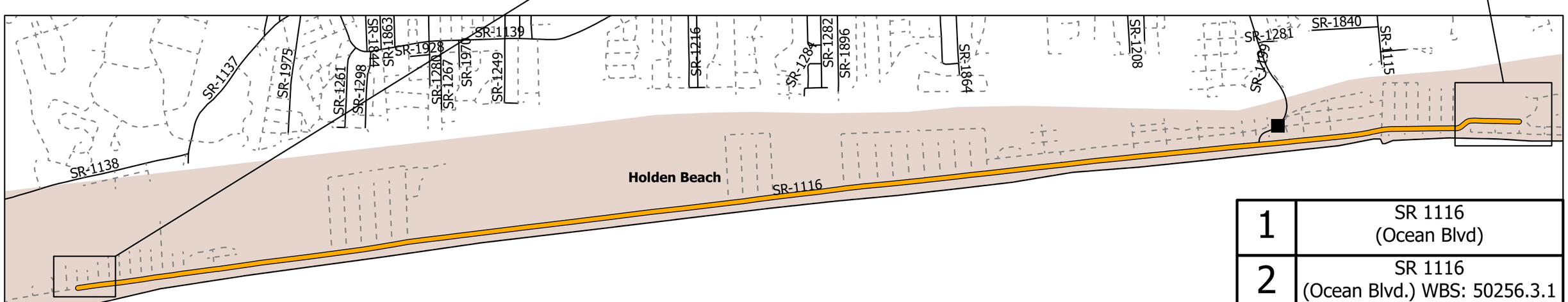


Legend

- SR 1116 Resurfacing
- NCRoutes
- NonSystem
- D3_bridges

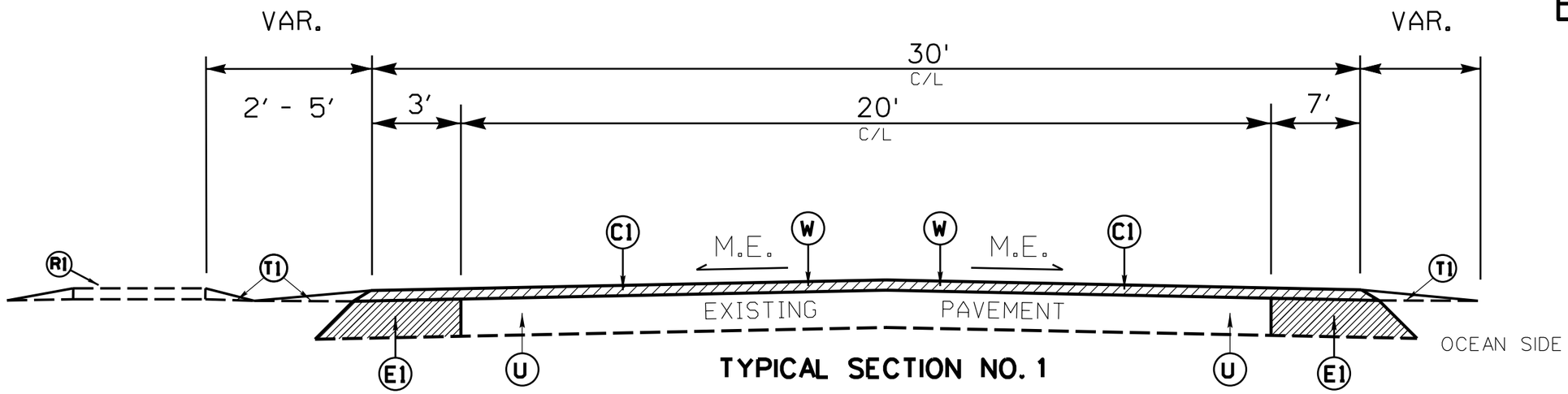






1	SR 1116 (Ocean Blvd)
2	SR 1116 (Ocean Blvd.) WBS: 50256.3.1

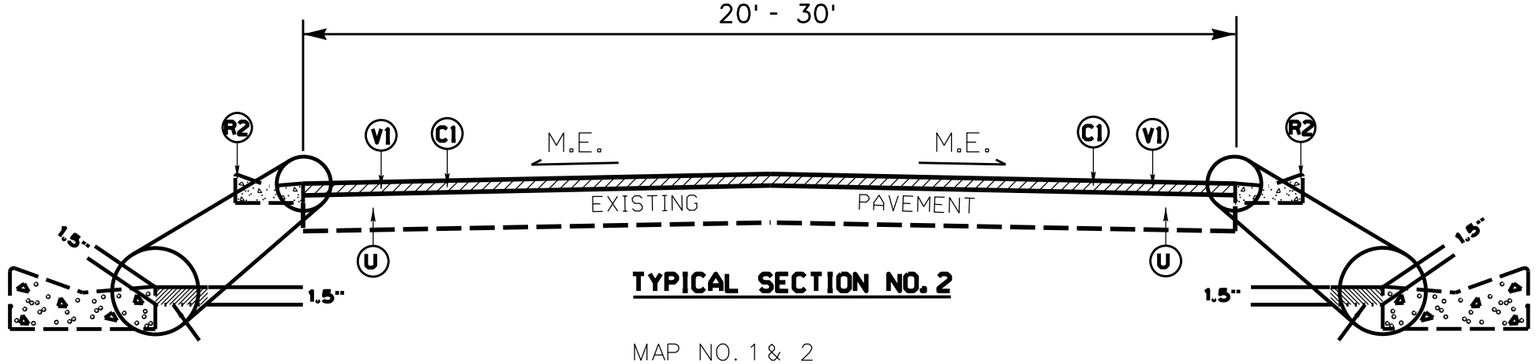
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101	2



TYPICAL SECTION NO. 1

MAP NO. 1 & 2
SR 1116 (OCEAN BLVD,)
MP 0.00 - MP 1.05
MP 1.19 - MP 6.15

*NO WIDENING MP 1.05 - MP 1.19



TYPICAL SECTION NO. 2

MAP NO. 1 & 2
SR 1116 (OCEAN BLVD.)
MP 1.05 - MP 1.19

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ.YD.
E1	PROP. APPROX. 5" DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ.YD.
R1	EXISTING CONCRETE SIDEWALK
R2	EXISTING VALLEY CURB
R3	PROPOSED 5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)
T1	EARTH MATERIAL (SHOULDER RECONSTRUCTION)
U	EXISTING PAVEMENT
V1	FINE MILLING, 1½" DEPTH
W	VARIABLE DEPTH ASPHALT PAVEMENT, S9.5B (SEE NOTES)

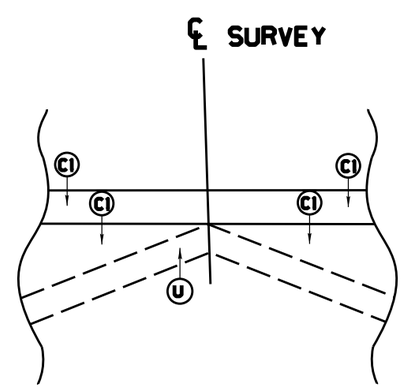
PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE.
SEE SHOULDER WEDGE DETAIL.

EFF. 01-16-2018
REV.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N.C. Department of Transportation - Raleigh, N.C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 8 - INCIDENTALS	
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.02	Driveway Turnout
848.05	Curb Ramp - Proposed Curb & Gutter
848.06	Curb Ramp - Existing Curb & Gutter
852.01	Concrete Islands
DIVISION 12 - PVMT MARKING, MARKERS AND DELINEATION	
1205.08	Pavement Markings - Symbols & Word Messages



DETAIL SHOWING METHOD OF WEDGING

NOTES: SHOULDER WORK ON MAP NO. 1 - 2 AS NEEDED, TO BE DETERMINED BY ENGINEER.

RESURFACE TO END OF RADUIS ON NON SYSTEM STREETS OR AS DIRECTED BY THE ENGINEER.

(R3) MAP NO. 1 & 2 MP 2.69 - MP 2.74
5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED) WILL BE LOCATED BY NCDOT FORCES.

(W) MAP NO. 1 & 2 MP 0.00 - MP 1.05 & MP 1.19 - MP 6.15
WEDGING LOCATIONS/PLACEMENT TO ACHIEVE WIDENING REQUIREMENTS SHALL BE PERFORMED BY CONSTRUCTION SURVEY, OR AS DIRECTED BY ENGINEER.

REVISIONS

8/17/99

$$$$$$$SYSTIME$$$$$$$
$$$$$$$USERNAME$$$$$$$
$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

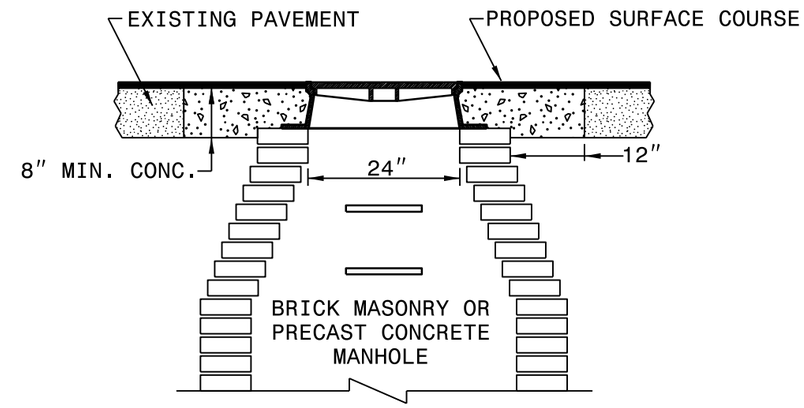
MANHOLE AND VALVE BOX ADJUSTMENTS

SHEET 1 OF 1

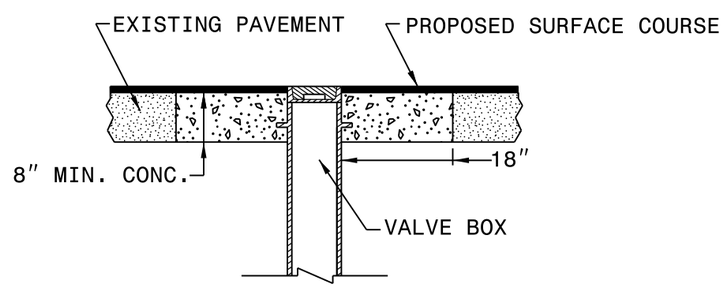
840D55

GENERAL NOTES:

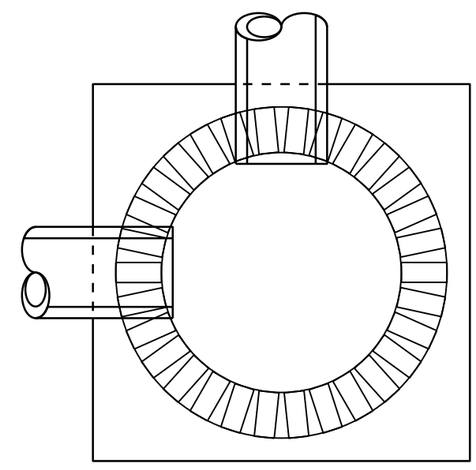
1. USE RAPID SET GROUT, MORTAR, OR CONCRETE THAT WILL TAKE FULL SET AND BECOME LOAD BEARING WITHIN SIXTY MINUTES OF PLACEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
2. REMOVE ALL FAULTY EXISTING BRICKWORK AND REPLACE WITH NEW BRICK MASONRY.
3. SHEER CUT EXCAVATION FOR THE ADJUSTMENT ON ALL SIDES.
4. FILL AREA BELOW 8″ DEPTH WITH 78M OR NO. 57 CLEAN STONE.
5. MIX MORTAR TO NCDOT SPECIFICATIONS.
6. MORTAR JOINTS ½″ +/- ⅛″
7. CONSTRUCT AN ASPHALT RAMP IN ACCORDANCE WITH SECTION 858-3 OF THE 2018 STANDARD SPECIFICATIONS.



MANHOLE CONCRETE ENCASEMENT



VALVE BOX CONCRETE ENCASEMENT



ELEVATION VIEW

PLACE BRICK ACCORDING TO ELEVATION VIEW

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

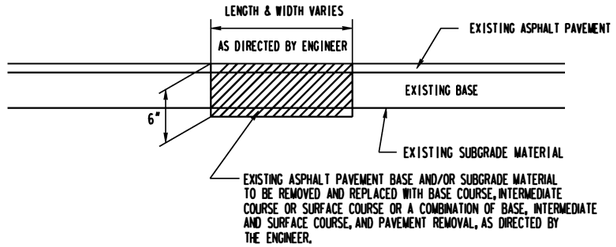
MANHOLE AND VALVE BOX ADJUSTMENTS

SHEET 1 OF 1

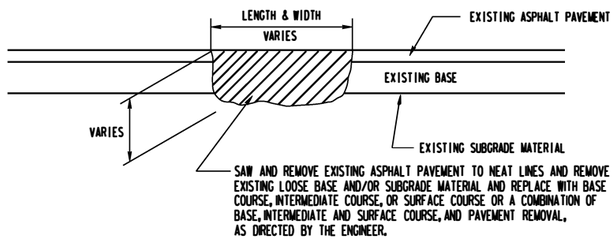
840D55

8/17/99
REVISIONS
CADD\CADD_Spec_Dwg\Typicals_Curb_Etc..dgn
28-NOV-2017 10:19
$$$$USERNAME$$$$

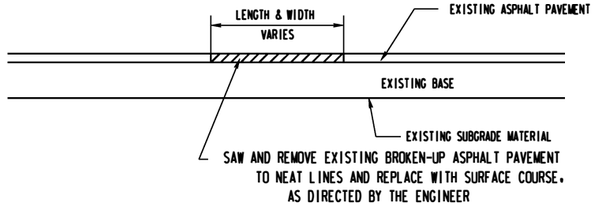
DETAILS OF PATCHING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



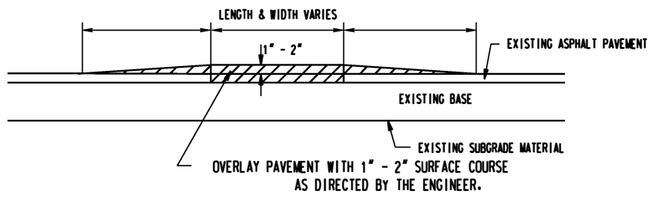
DETAIL NO. 1



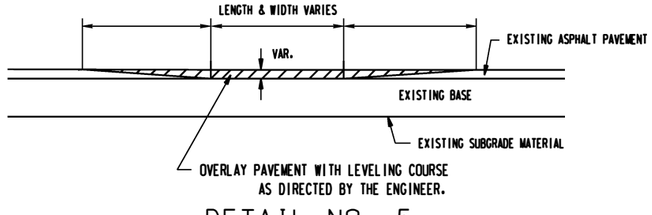
DETAIL NO. 2



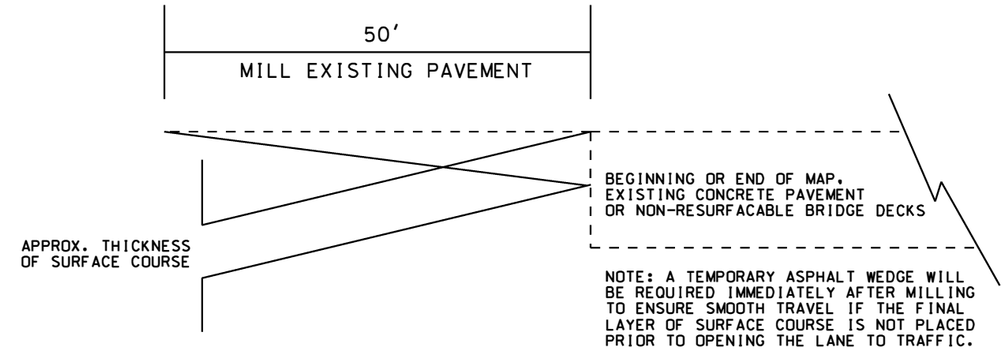
DETAIL NO. 3



DETAIL NO. 4



DETAIL NO. 5

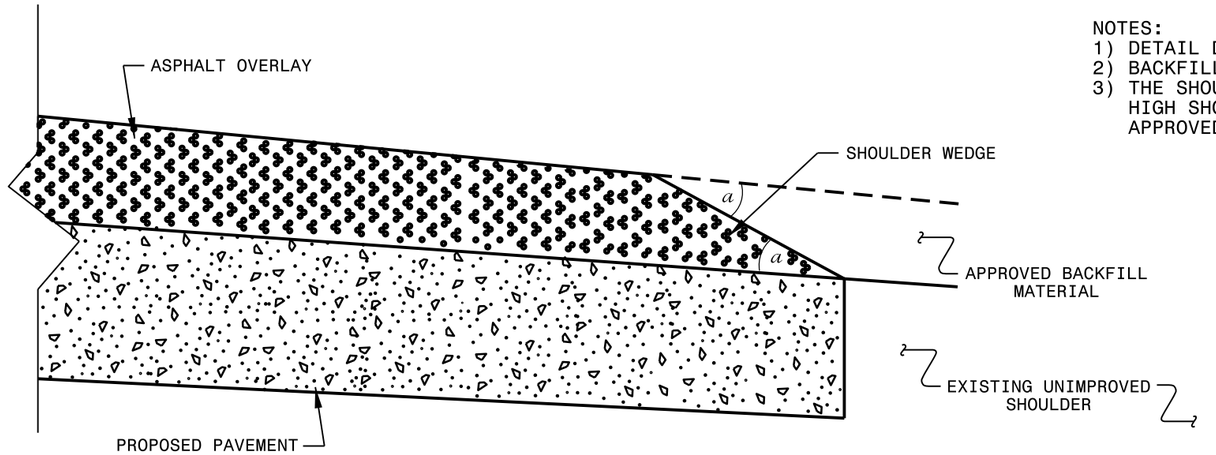


DETAIL FOR MILLING & INCIDENTAL MILLING PAY ITEMS: MAY BE USED AT THE BEGINNING & END OF MAPS AND AT APPROACH & TRAILING ENDS OF BRIDGES

5/14/99
28-SEP-2018 12:50
pgrey Project Sheets\Microstation Files\Rdy_patch.dgn
$$$$USERNAME$$$$

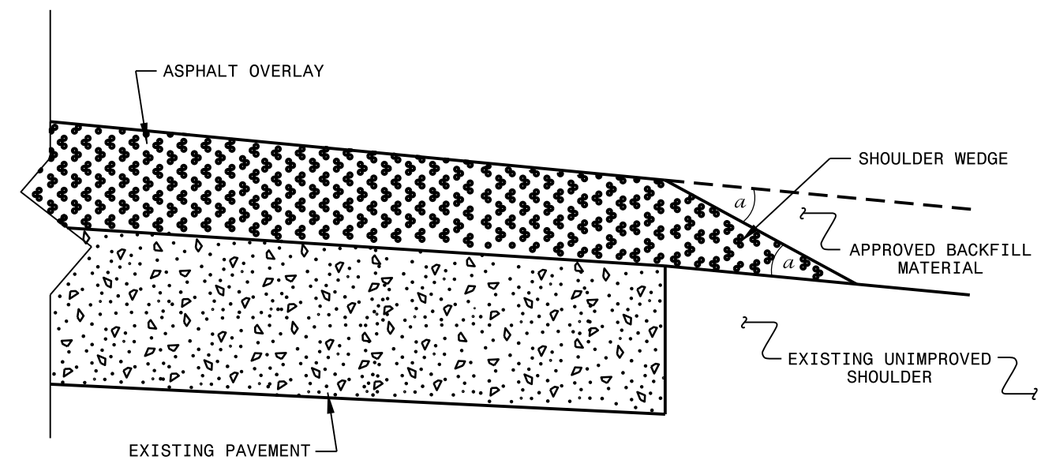
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	5

NOTES:
1) DETAIL DOES NOT APPLY TO OGAFC AND ULTRA-THIN BONDED WEARING COURSE.
2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



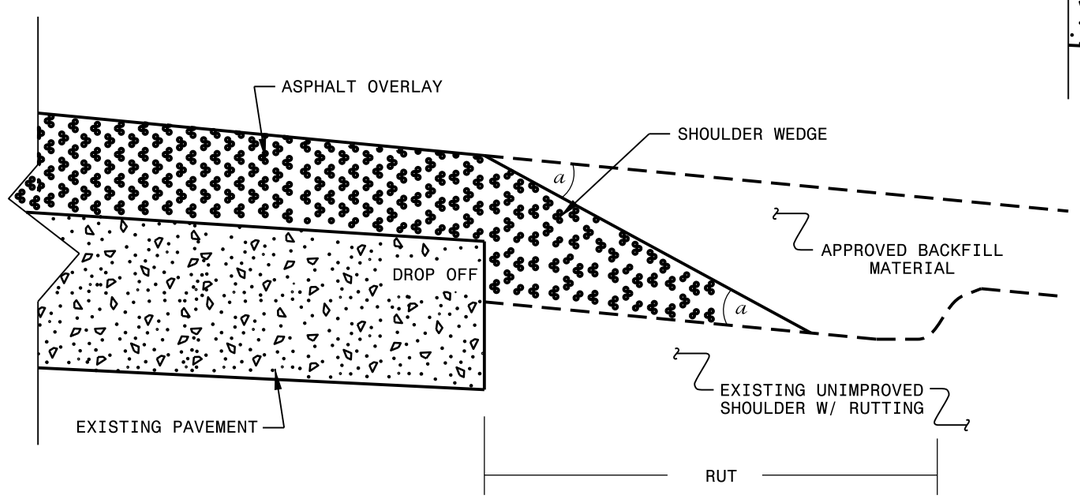
SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ Widening or with Existing Paved Shoulder having no dropoffs)



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: DATE: 2/2/16
CHECKED BY: DATE:
FILE SPEC.: sjusr/details/stand/shoulderwedgedetail.dgn

27-JUN-2018 13:52
S:\Contracts\Contracts\Resurfacing Projects\Division 3\Sampson August 2018\Revised Shoulder Wedge Detail.dgn
pjporter ATT CSD 24,26,42

PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	EC-1

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

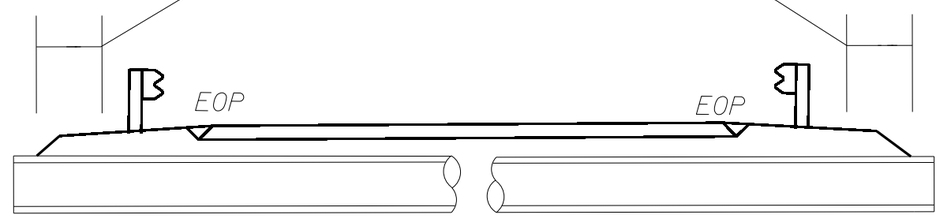
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101, Etc	EC-2

EROSION CONTROL DETAIL

NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

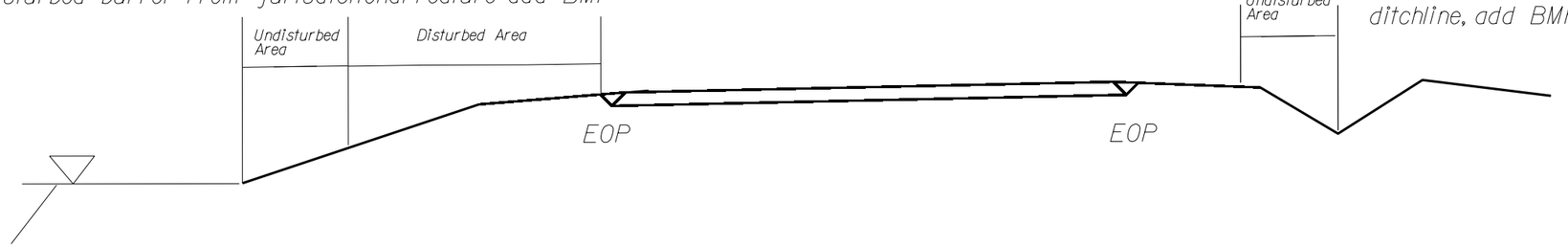
< 5' - 10' Undisturbed buffer add BMP



Pipe/Culvert

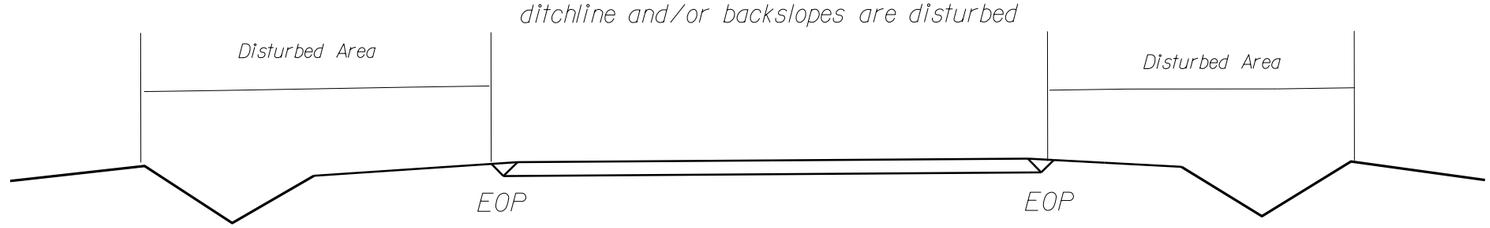
< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP

< 5' - 10' Undisturbed buffer from ditchline, add BMP

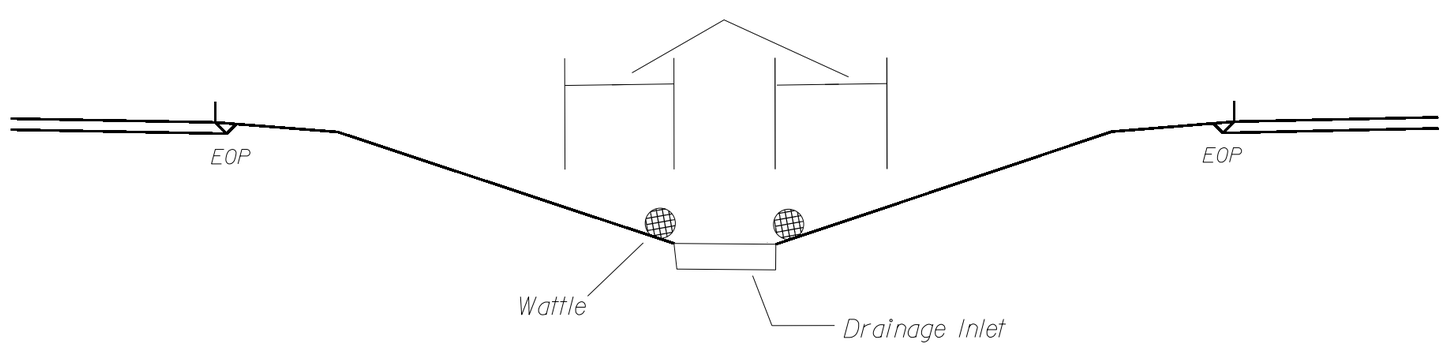


Jurisdictional Feature

Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed

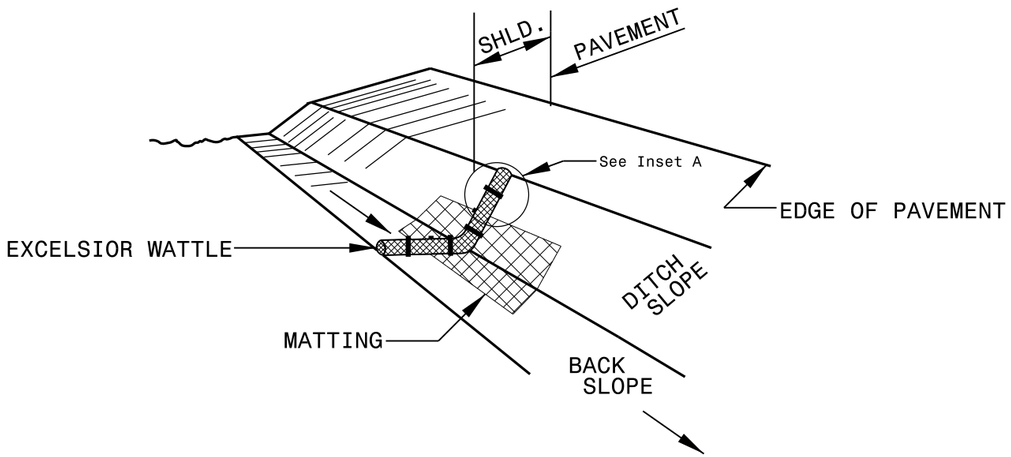


< 5' - 10' Undisturbed buffer from inlet, add wattle

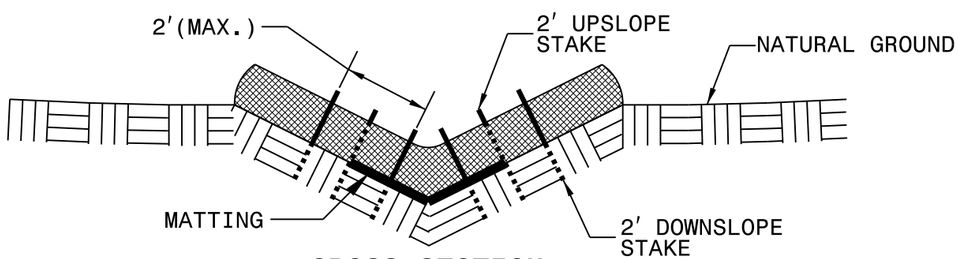


NOT TO SCALE

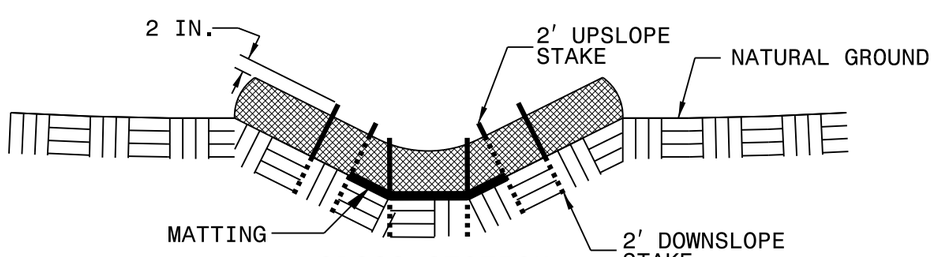
WATTLE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

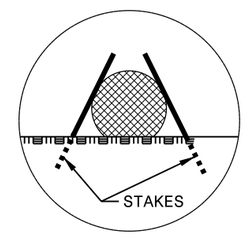
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

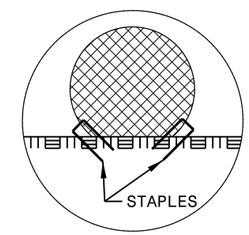
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

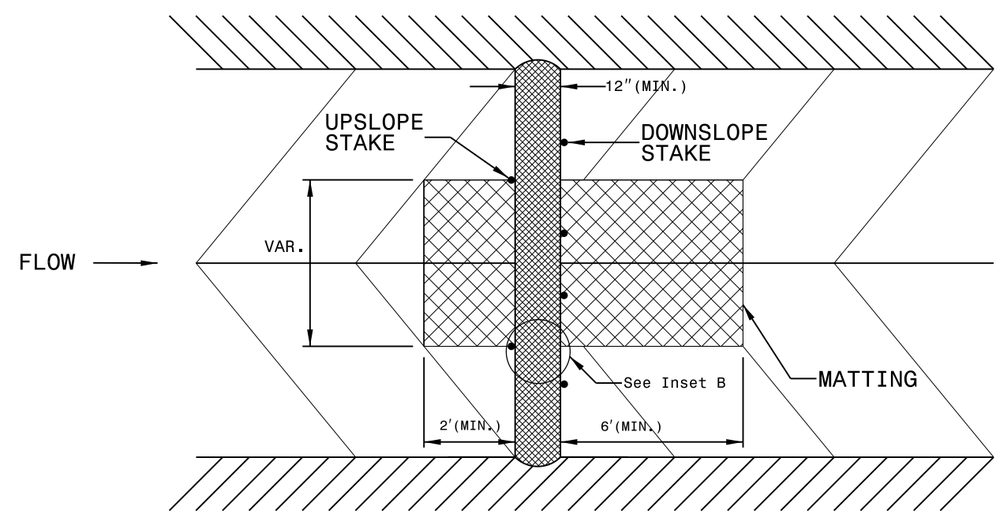
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



INSET A



INSET B



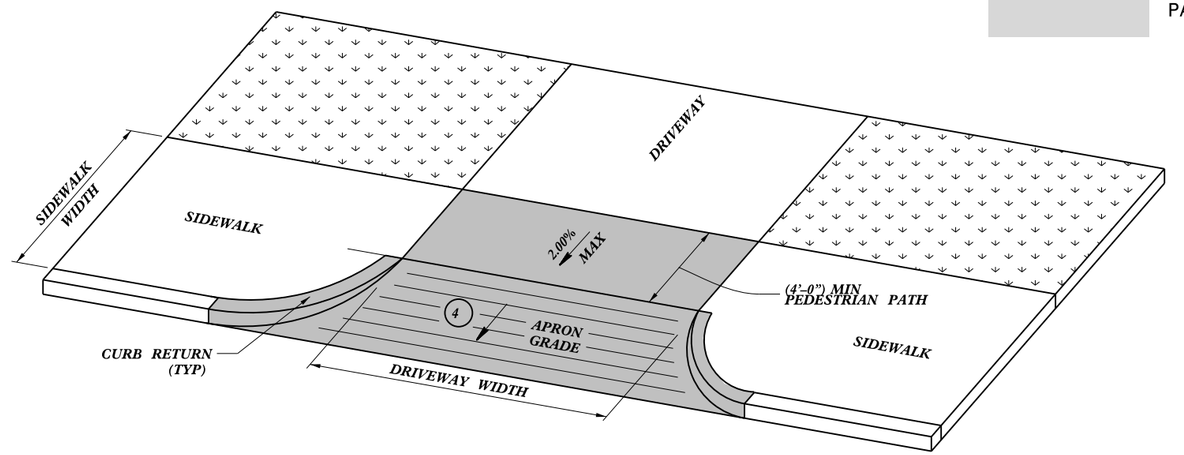
TOP VIEW

11-FEB-2015 11:41
O:\Resurfacing_Data\2015 Resurfacing\Pender County\Plan Sheets\3CR.20711.173. EC RESURF.2015.dgn

5/14/99

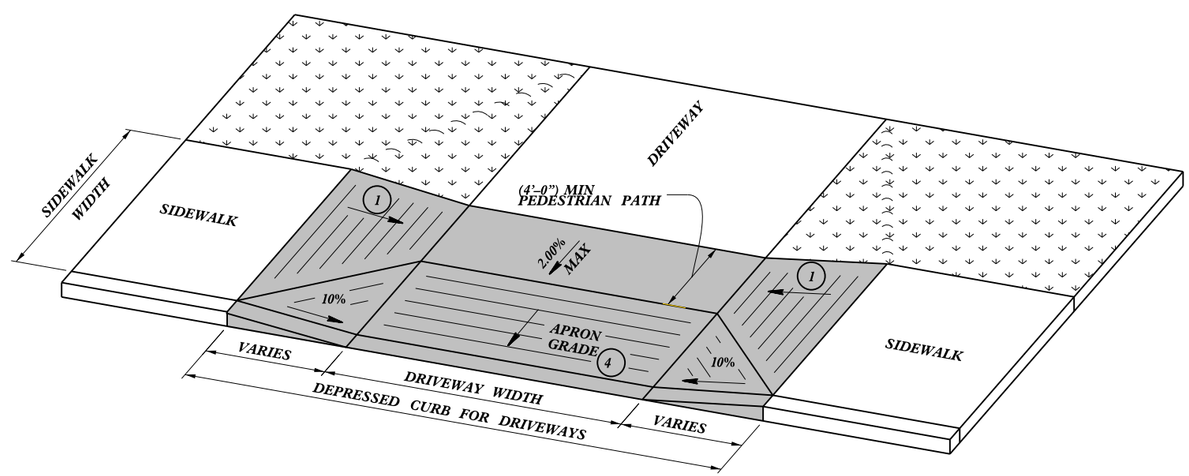
1. 8.33% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.00%
4. 8.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY

PAY LIMITS FOR 1 CURB RAMP



DRIVEWAY APRON

OPTION 1



-SEE ROADWAY DETAIL DRAWING 848.05 FOR DETECTABLE WARNING SURFACE AND FOR RAMP NOTES.

-SEE ROADWAY STANDARD DRAWING 848.02 FOR CONCRETE DRIVEWAYS.

DRIVEWAY APRON

OPTION 2

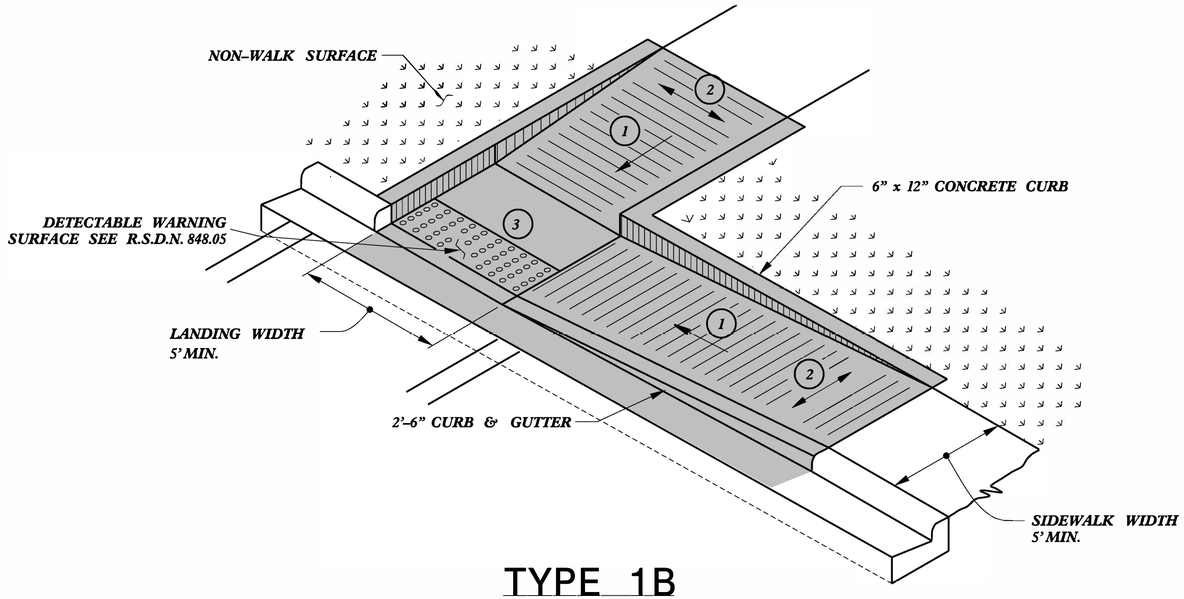
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

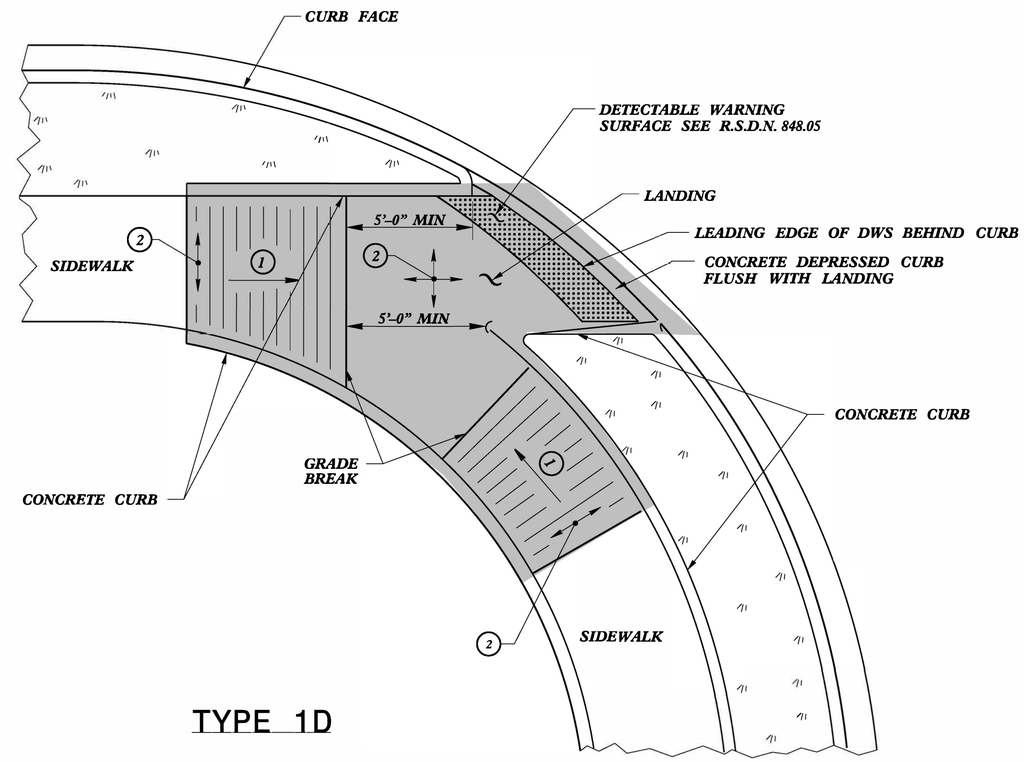
@ DRIVEWAY OPENINGS

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

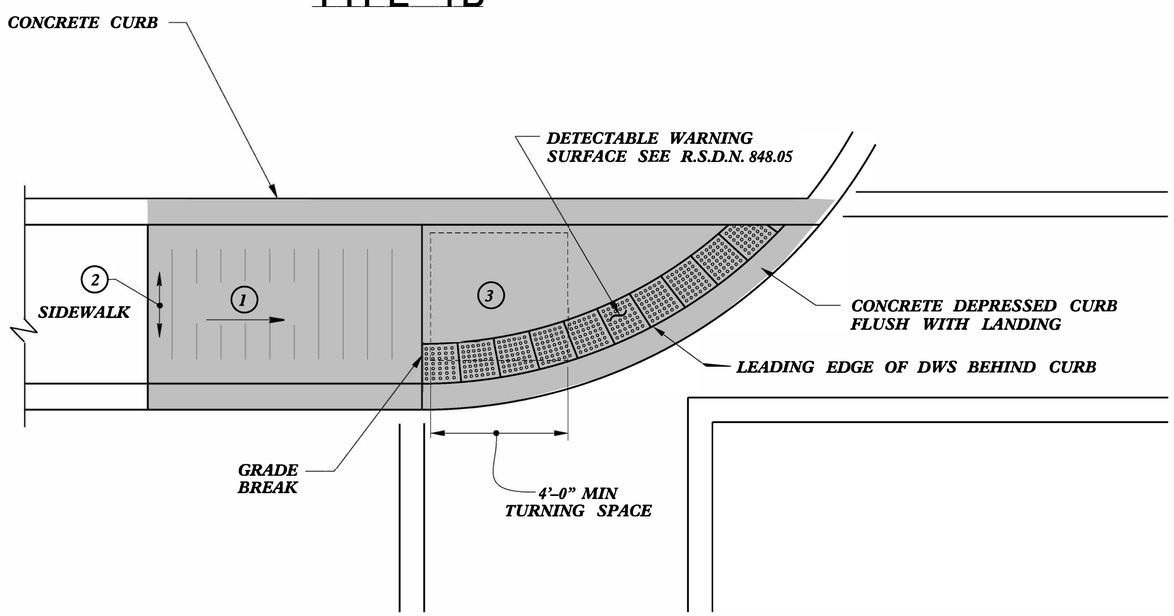
$$$$$SYSTIME$$$$$
$$$$$DGNS$$$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$



TYPE 1B



TYPE 1D



TYPE 1C

(1) 8.33% (12:1) MAX RAMP SLOPE

(2) CROSS SLOPE: 2.00%

(3) CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

PAY LIMITS FOR 1 CURB RAMP

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

NORTH CAROLINA PROFESSIONAL SEAL 33144 ENGINEER

DocuSigned by: Nicole M. Hechler 5884323D34164C5...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

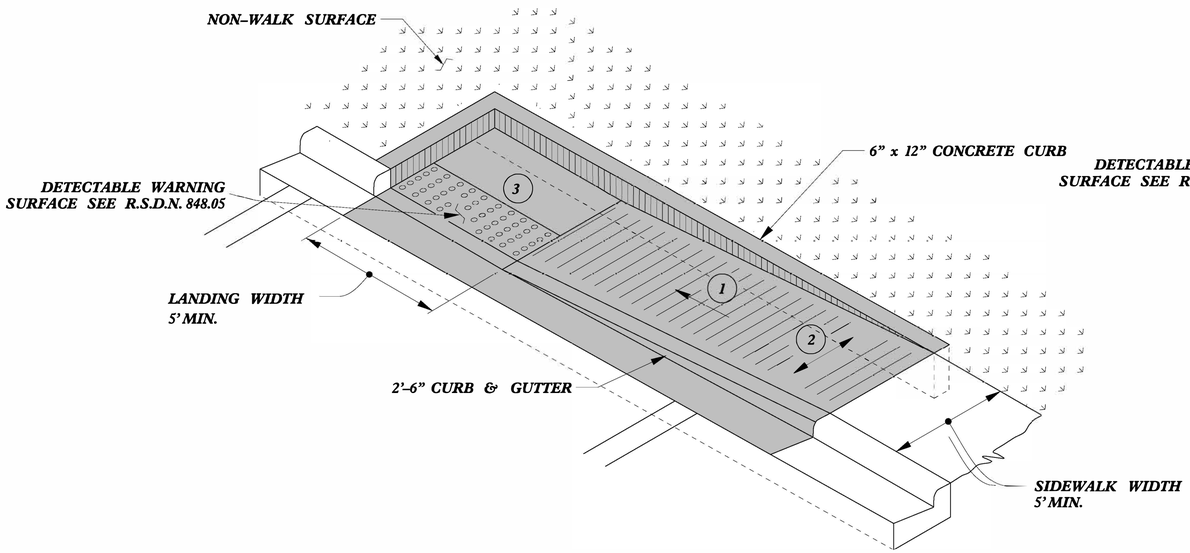
CURB RAMPS

Directional Ramps

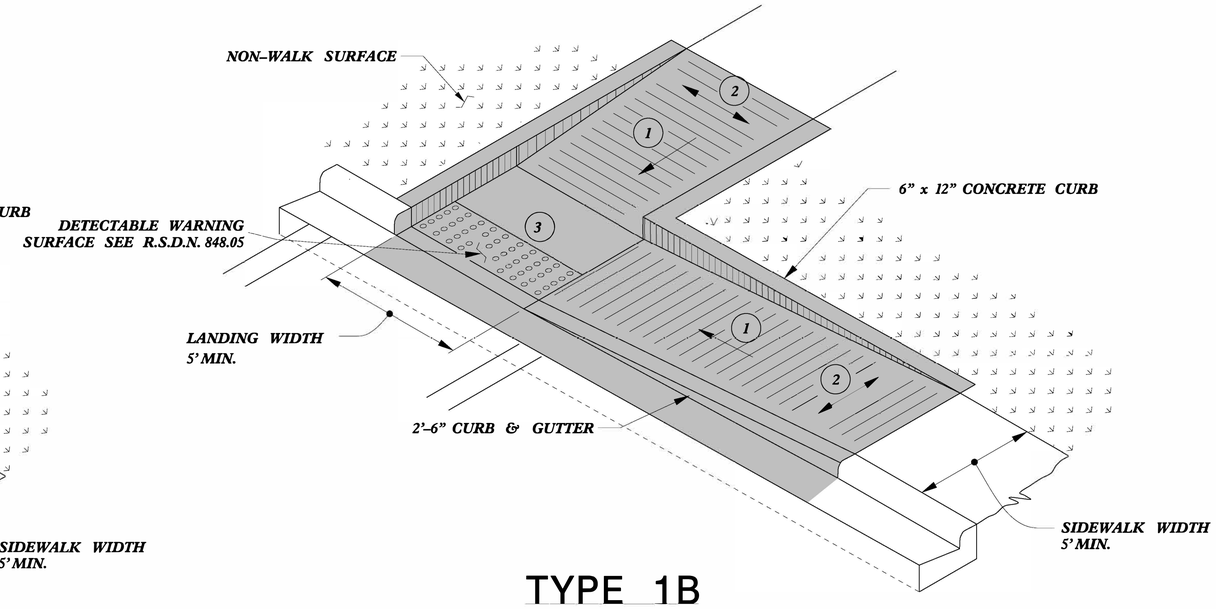
ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

5/14/99

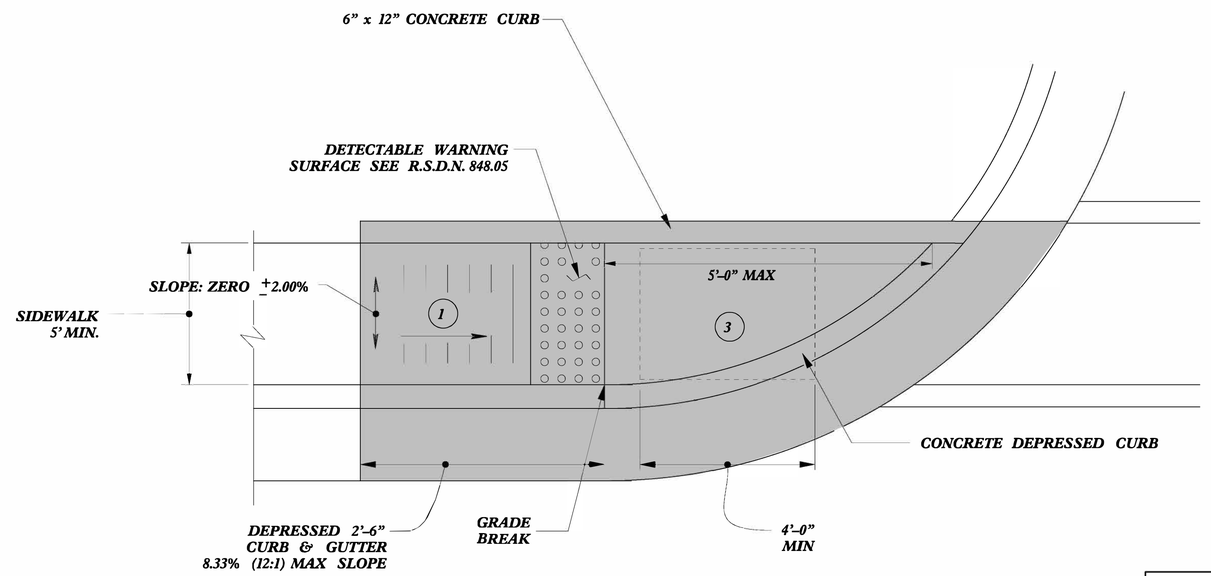
$$SYSTIME$$
$$DGNS$$
$$USERNAME$$



TYPE 1A



TYPE 1B



TYPE 1

PAY LIMITS FOR 1 CURB RAMP

1. 8.33% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.00%
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

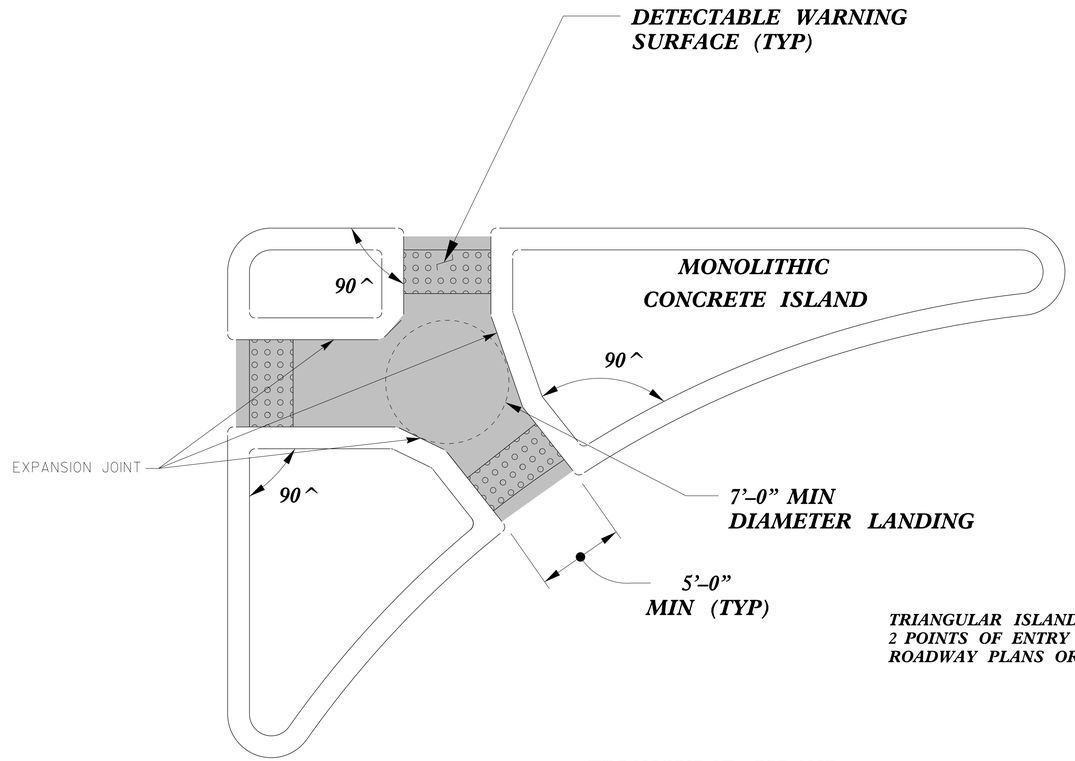
Directional Ramps

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC. stds/2012CurbRamp/CurbRampDetails.dgn

5/14/96
SYMF$$$$ $$$$ $$$$ $

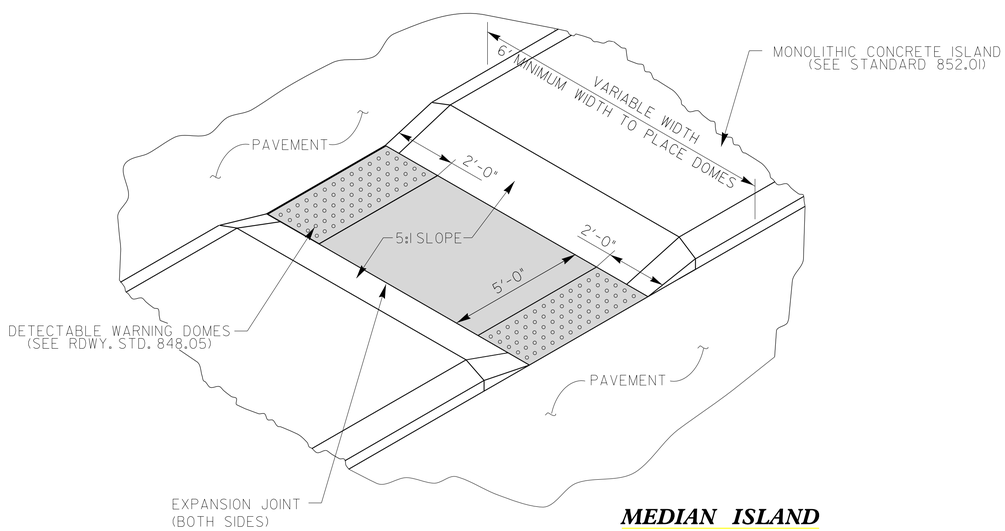
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	9

PAY LIMITS FOR 2 OR 3 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF TRUNCATED DOMES)

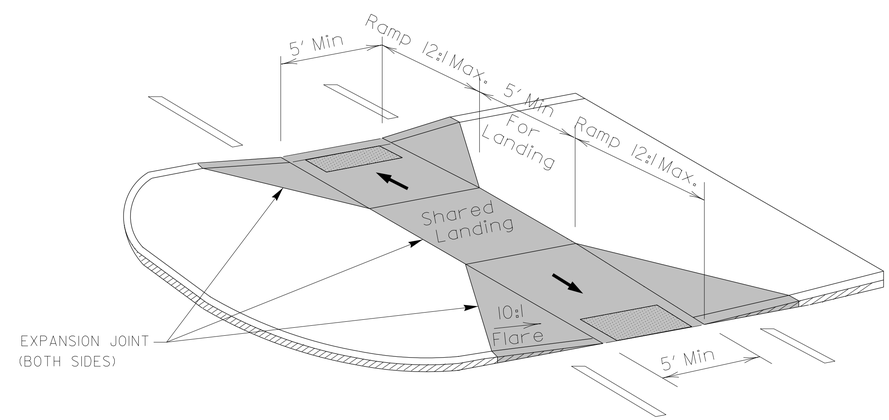


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY 2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

TRIANGULAR ISLAND WITH CUT THROUGH



MEDIAN ISLAND WITH CUT THROUGH



MEDIAN ISLAND CURB RAMPS

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

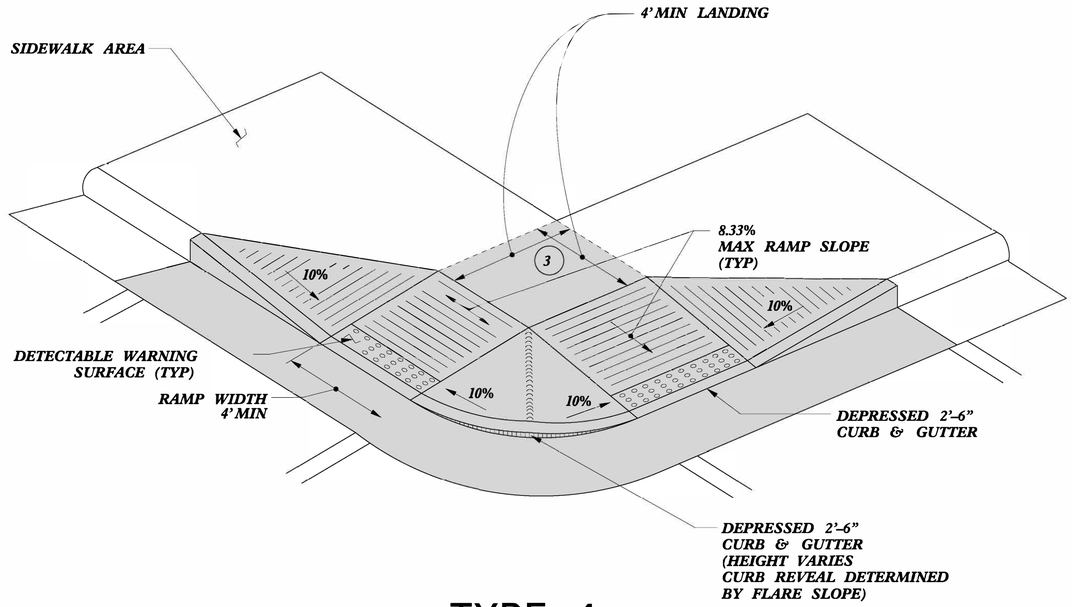
Median or Turn Lane Islands

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC. :stds/2012CurbRamp/CurbRampDetails.dgn

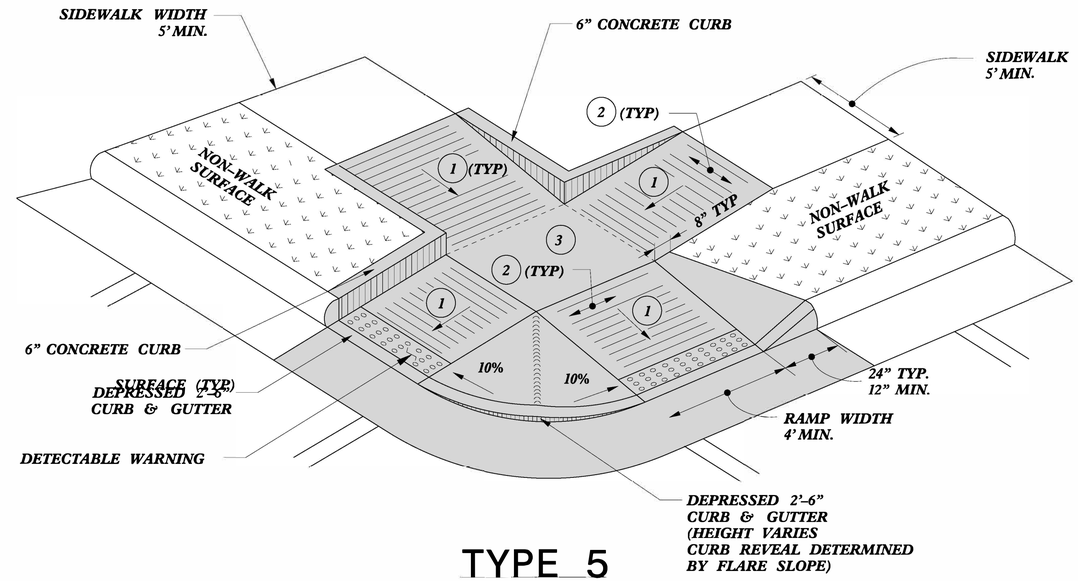
$$$$SYSTIME$$$$
$$$$SCALE$$$$
$$$$USERNAME$$$$

5/14/99

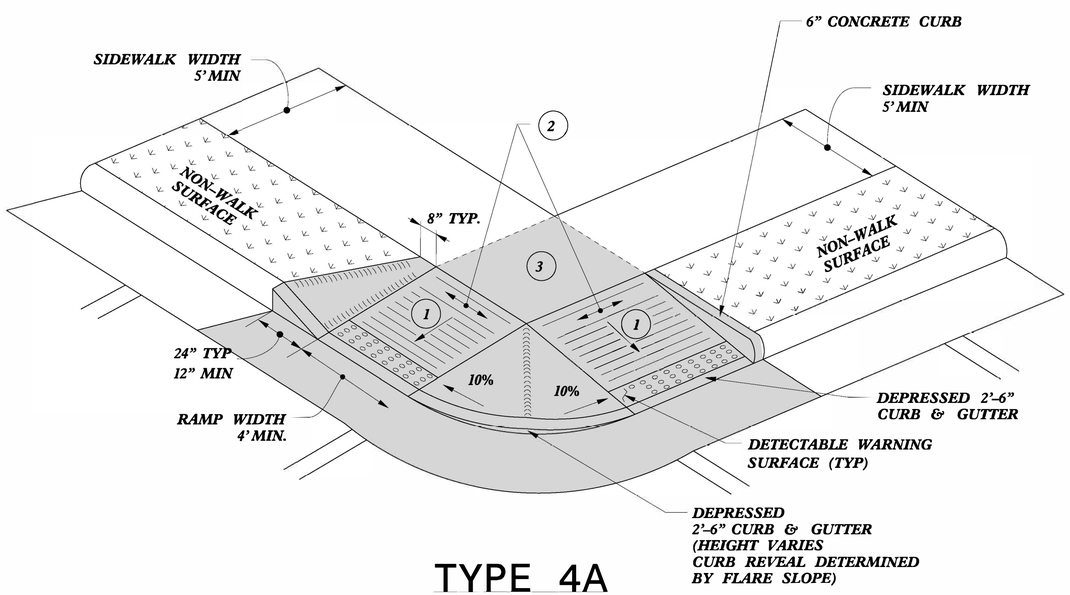
PAY LIMITS FOR 2 CURB RAMPS



TYPE 4



TYPE 5



TYPE 4A

1. 8.33% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.00%
3. CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

CURB RAMPS

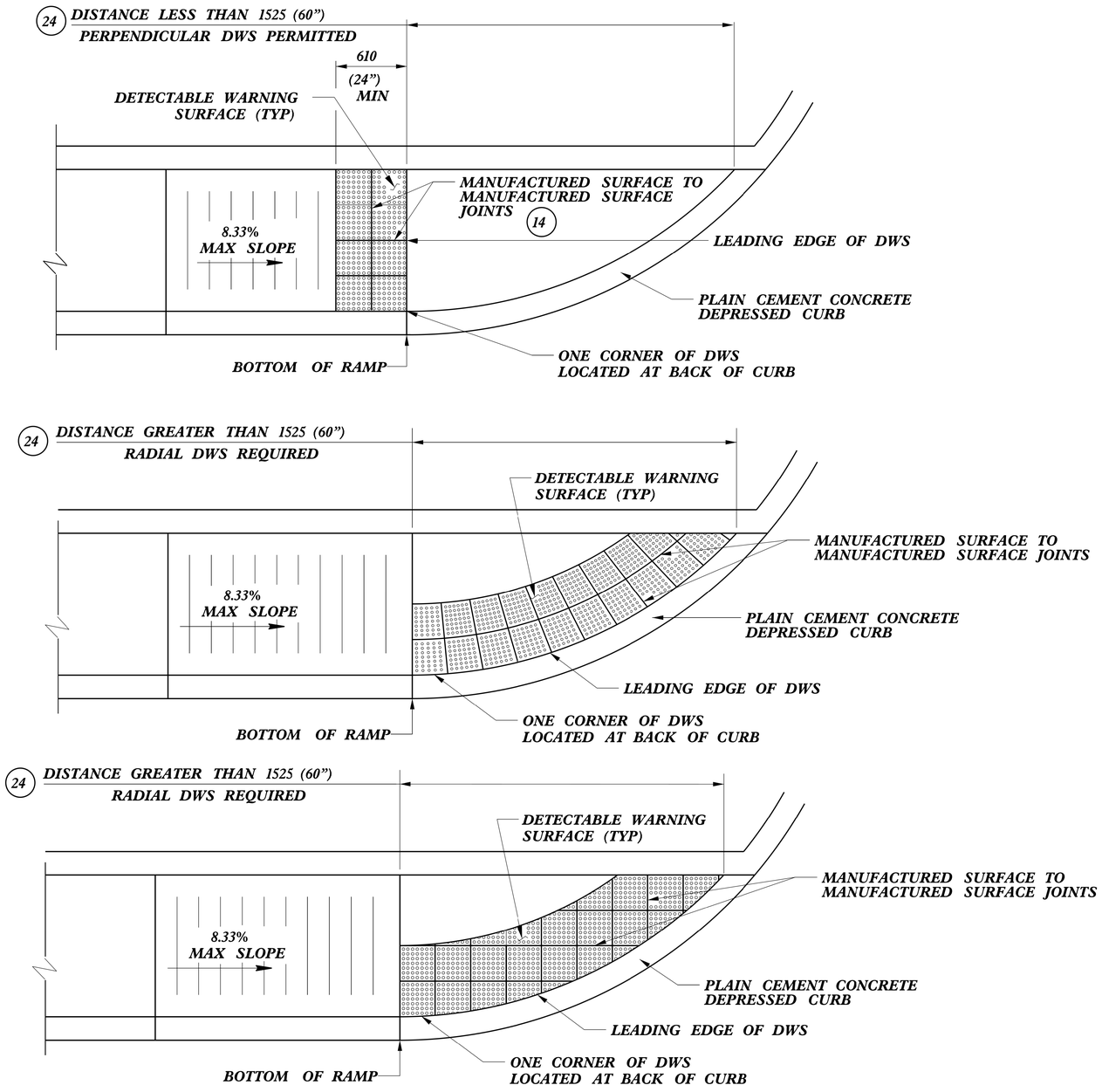
Shared Landing

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC. stds/2012CurbRamp/CurbRampDetails.dgn

SYTINE$$$$
SIGN$$$$$$$$
SERIES$$$$$$$$
USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	11

TRUNCATED DOMES AT RADIUS DETAIL



DETECTABLE WARNING SURFACE (DWS)
ON CURVED SURFACES

REVISIONS

14-DEC-2015 08:46
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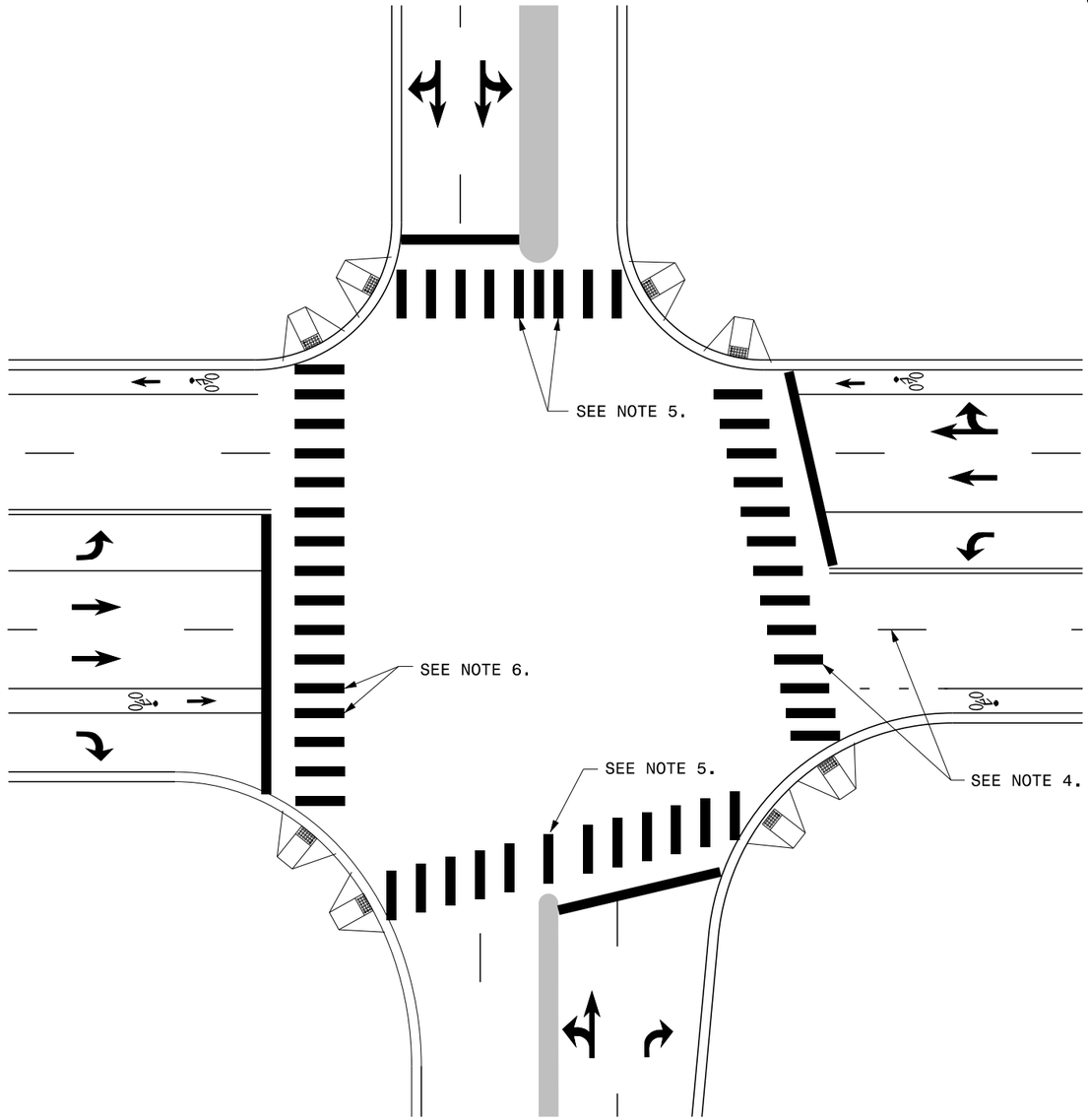
USERNAME = s6946

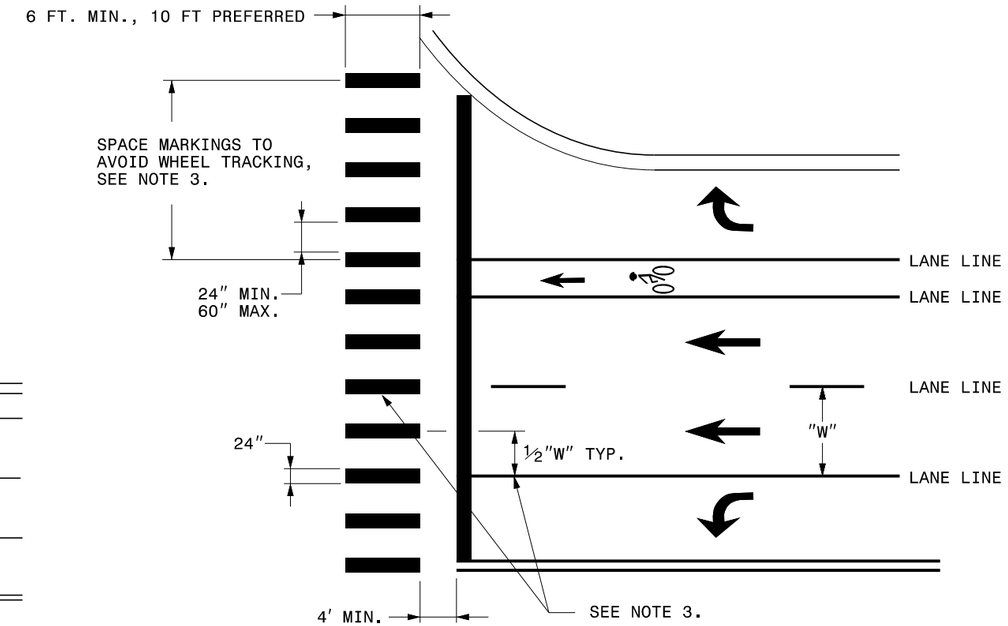
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2-19

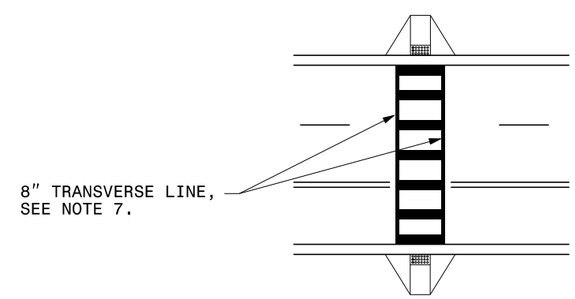
ENGLISH TYPICAL DRAWING FOR
PAVEMENT MARKINGS
HI-VISIBILITY CROSSWALKS
NO-TRACK MARKING GUIDANCE



CROSSWALK INTERSECTION DETAIL



CROSSWALK MARKING DETAIL



MID-BLOCK CROSSWALK DETAIL

GENERAL NOTES:

1- THE GUIDANCE IN THIS DETAIL IS TO BE USED WHEN NO-TRACK SPACING OF HI-VISIBILITY MARKINGS IS REQUESTED.

2- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH PAVEMENT MARKING GUIDANCE SHOWN ON ROADWAY STANDARD DRAWINGS 1205.01 AND 1205.07.

3- PLACE MARKINGS TO AVOID WHEELPATH OF VEHICLES. MARKINGS TYPICALLY WILL BE LOCATED CENTERED AT THE LANE LINES AND EDGE LINES WITH ONE ADDITIONAL MARKING CENTERED IN THE MIDDLE OF THE LANE. AT WIDE LANE WIDTHS DUE TO TAPERS AND LARGE RADII, LOCATE MARKINGS AT BEST SPACING TO AVOID WHEEL TRACKING. THE SPACE BETWEEN MARKINGS SHALL NOT BE LESS THAN 24 INCHES OR GREATER THAN 60 INCHES.

4- WHERE THE CROSSWALK IS SKEWED TO THE LANE LINES, THE MARKINGS SHOULD BE PARALLEL TO THE LANE LINES.

5- PLACE MARKINGS ON BOTH EDGES OF THE NOSE OF A MEDIAN. FOR NARROW MEDIANS LESS THAN 4 FEET, A SINGLE MARKING MAY BE USED. FOR WIDE MEDIANS, INSTALL ADDITIONAL MARKINGS IN THE MEDIAN AREA. THE SPACE BETWEEN THE MARKINGS SHALL NOT TO BE LESS THAN 24 INCHES OR GREATER THAN 60 INCHES.

6- LOCATE MARKINGS CENTERED ON BICYCLE LANE LINES. MARKINGS SHALL NOT BE LOCATED IN THE CENTER OF THE BICYCLE PATH.

7- INCLUDE 8″ TRANSVERSE LINES WITH 24″ LONGITUDINAL MARKINGS AT MID-BLOCK CROSSINGS.

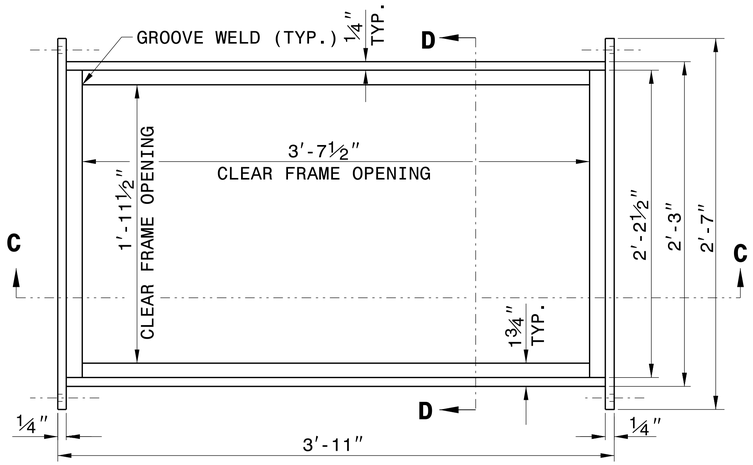
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2-19

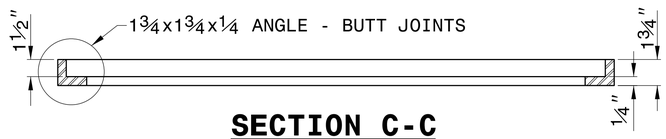
ENGLISH TYPICAL DRAWING FOR
PAVEMENT MARKINGS
HI-VISIBILITY CROSSWALKS
NO-TRACK MARKING GUIDANCE

2-28-19

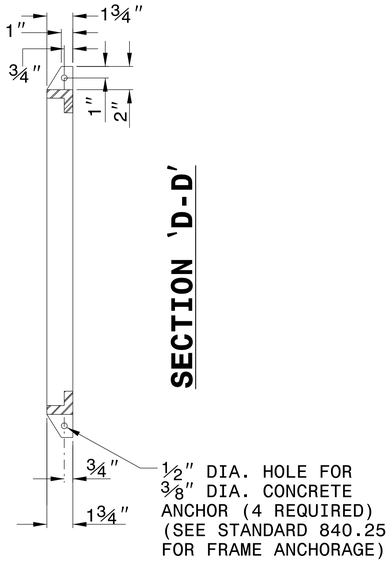
PROJECT REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	13



PLAN VIEW



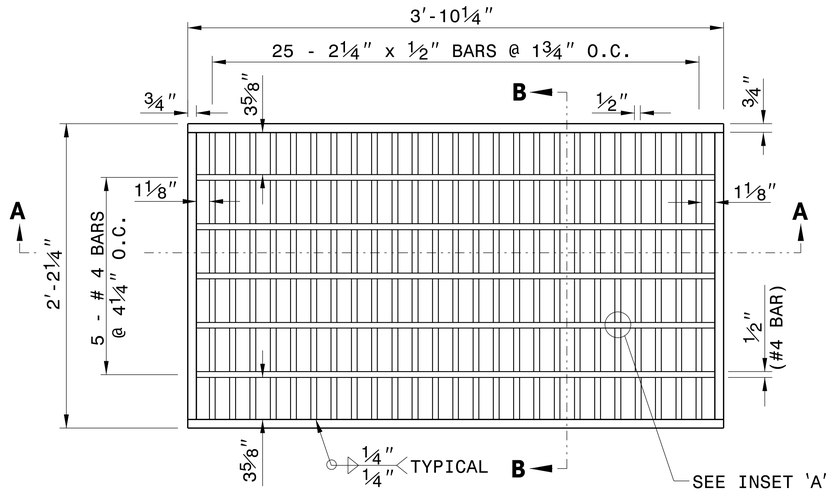
SECTION C-C
FRAME



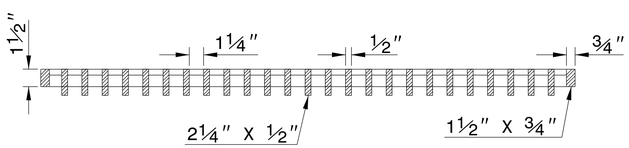
SECTION 'D-D'

NOTES:

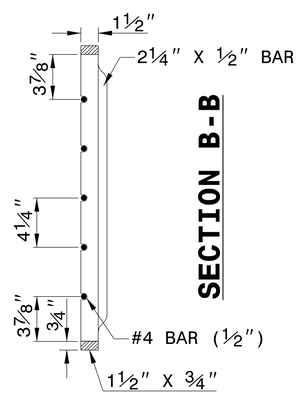
1. HOT DIP GALVANIZE FRAME AND GRATE IN ACCORDANCE WITH ASTM DESIGNATION A-123 AND AASHTO M-111.
2. GRATE SHOULD MEET HS-20 LOADING.
3. PROVIDE STEEL CONFORMING TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-36.
4. WELD IN ACCORDANCE WITH THE ANSI/AASHTO/AWS D1.5 WELDING CODE. SEAL WELD ALL CONNECTIONS ALONG TOP AND BOTTOM HORIZONTAL SEAMS OF CONNECTIONS IN ADDITION TO ANY REQUIRED STRUCTURAL WELDS.
5. SEE STANDARD DRAWING 840.25 FOR FRAME ANCHORAGE.



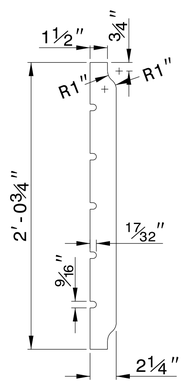
PLAN VIEW



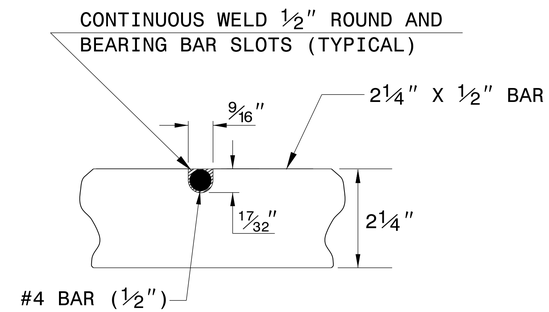
SECTION A-A
GRATE



SECTION B-B



DETAIL OF BEARING BAR



INSET 'A'

(17/32" X 9/16" NOTCH IN 2 1/4" X 1/2" BAR)

REVISED 10-10-02
FOR HS-20 LOADING

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

BICYCLE SAFE STEEL GRATE AND FRAME

ORIGINAL BY: E.E. WARD	DATE: 11-12-98
MODIFIED BY: E.E. WARD	DATE: 10-10-02
CHECKED BY:	DATE:
FILE SPEC.: /usr/stand/details/bicyclesafe.dgn	

$$$$SYSTEM$$$$
$$$$USERNAME$$$$ $$$$DGNS$$$$$$$$$$$$$$$$

PROJECT NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	14

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	0000400000-N CONSTRUCTION SURVEYING	0106000000-E BORROW EXCAVATION	0372000000-E 18" RCP CULVERTS, CL. III	0453000000-E 18" PIPE END SECTION	0995000000-E PIPE REMOVAL	1220000000-E INCIDENTAL STONE BASE	1245000000-E SHOULDER RECONSTRUCTION	1330000000-E INCIDENTAL MILLING	1491000000-E BASE COURSE, B25.0C	1519000000-E SURFACE COURSE, S9.5B	1519000000-E WEDGING COURSE S9.5B	1520000000-E LEVELING COURSE, S9.5B	1575000000-E ASPHALT BINDER FOR PLANT MIX	1705000000-E PATCHING EXISTING PAVEMENT (FULL DEPTH)
										MI	FT	LS	CY	LF	EA	LF	TON	SMI	SY	TONS	TON	TONS	TON	TON	TON
2023CPT.03.04.20101	Brunswick	1	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	6.15	30	1.00	918				1,199	12.00	891		11,757		40	768	72
TOTAL FOR MAP NO. 1										**6.15**		**1.00**	**918**				**1,199**	**12.00**	**891**		**11,757**		**40**	**768**	**72**
TOTAL FOR PROJ NO. 2023CPT.03.04.20101										**6.15**		**1.00**	**918**				**1,199**	**12.00**	**891**		**11,757**		**40**	**768**	**72**
																					11,757				
50256.3.1	Brunswick	2	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	N/A	30			944	1	40	2,029			10,358		1,993		466	
TOTAL FOR MAP NO. 2										**0**				**944**	**1**	**40**	**2,029**			**10,358**		**1,993**		**466**	
TOTAL FOR PROJ NO. 50256.3.1										**0**				**944**	**1**	**40**	**2,029**			**10,358**		**1,993**		**466**	
																					1,993				
GRAND TOTAL										**6.15**		**1.00**	**918**	**944**	**1**	**40**	**3,228**	**12.00**	**891**	**10,358**	**11,757**	**1,993**	**40**	**1,234**	**72**
																					13,750				

PROJECT NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	15

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	1891000000-E FINE MILLING (1.5") GENERIC	2253000000-E PIPE COLLARS	2286000000-N MASONRY DRAINAGE STRUCTURES	2364000000-N FRAME WITH TWO GRATES, STD 840.16	2472000000-N INSTALL NCDOT PROVIDED BICYCLE SAFE FRAME AND GRATE	2473000000-N CONVERT EXISTING DROP INLET FOR BIKE GRATES	2591000000-E 4" CONCRETE SIDEWALK	2600000000-N RETROFIT EXISTING CURB RAMP	2612000000-E 6" CONCRETE DRIVEWAY	2613000000-N REMOVE & REPLACE CURB RAMPS	2647000000-E 5" MONOLITHIC CONCRETE ISLANDS(SURFACE MOUNTED)	2738000000-E INCIDENTAL CONC (GENERIC)	2752000000-E REMOVE AND REPLACE CONCRETE EXPRESSWAY GUTTER (GENERIC)	2815000000-N ADJUSTMENT OF DROP INLET
										MI	FT	SY	CY	EA	EA	EA	EA	SY	EA	SY	EA	SY	SY	LF	EA
2023CPT.03.04.20101	Brunswick	1	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	6.15	30	4,600					5	27	82		6			21	3
TOTAL FOR MAP NO. 1										**6.15**		**4,600**					**5**	**27**	**82**		**6**			**21**	**3**
TOTAL FOR PROJ NO. 2023CPT.03.04.20101										**6.15**		**4,600**					**5**	**27**	**82**		**6**			**21**	**3**
50256.3.1	Brunswick	2	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	N/A	30		10.72	29	18	22				126	4	116	18		15
TOTAL FOR MAP NO. 2										**0**			**10.72**	**29**	**18**	**22**				**126**	**4**	**116**	**18**		**15**
TOTAL FOR PROJ NO. 50256.3.1										**0**			**10.72**	**29**	**18**	**22**				**126**	**4**	**116**	**18**		**15**
GRAND TOTAL										**6.15**		**4,600**	**10.72**	**29**	**18**	**22**	**5**	**27**	**82**	**126**	**10**	**116**	**18**	**21**	**18**

PROJECT NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	16

SUMMARY OF QUANTITIES

												2830000000-N	2845000000-N	4025000000-E	4072000000-E	4102000000-N	4600000000-N		6000000000-E
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	ADJUSTMENT OF MANHOLES	ADJUSTMENT OF METER OR VALVE BOX	CONTRACTOR FURNISHED, TYPE - E SIGN	SUPPORTS, 3-LB STEEL U-CHANNEL	SIGN ERECTION, TYPE E	AUDIBLE WARNING DEVICE (GENERIC)	TEMPORARY CURB RAMP	TEMPORARY SILT FENCE
										MI	FT	EA	EA	SF	LF	EA	EA	EA	LF
2023CPT.03.04.20101	Brunswick	1	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	6.15	30		37				4	4	700
TOTAL FOR MAP NO. 1										**6.15**			**37**				**4**	**4**	**700**
TOTAL FOR PROJ NO. 2023CPT.03.04.20101										**6.15**			**37**				**4**	**4**	**700**
																	8		
50256.3.1	Brunswick	2	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	N/A	30	11	7	76	120	20			
TOTAL FOR MAP NO. 2										**0**		**11**	**7**	**76**	**120**	**20**			
TOTAL FOR PROJ NO. 50256.3.1										**0**		**11**	**7**	**76**	**120**	**20**			
GRAND TOTAL										**6.15**		**11**	**44**	**76**	**120**	**20**	**4**	**4**	**700**
																	8		

PROJECT NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	17

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	6009000000-E STONE FOR EC CLASS B	6012000000-E SEDIMENT CONTROL STONE	6015000000-E TEMPORARY MULCHING	6018000000-E SEED FOR TEMPORARY SEEDING	6021000000-E FERTILIZER FOR TEMPORARY SEEDING	6029000000-E SAFETY FENCE	6036000000-E MATTING FOR EROSION CONTROL	6042000000-E 1/4" HARDWARE CLOTH	6071010000-E WATTLE	6084000000-E SEED & MULCHING	6090000000-E SEED FOR REPAIR SEEDING
										MI	FT	TON	TON	ACR	LBS	TON	LF	SY	LF	LF	AC	LB
2023CPT.03.04.20101	Brunswick	1	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	6.15	30	154	154	6.15	308	1.54	300	1,621	300	400	5.00	308
TOTAL FOR MAP NO. 1										**6.15**		**154**	**154**	**6.15**	**308**	**1.54**	**300**	**1,621**	**300**	**400**	**5.00**	**308**
TOTAL FOR PROJ NO. 2023CPT.03.04.20101										**6.15**		**154**	**154**	**6.15**	**308**	**1.54**	**300**	**1,621**	**300**	**400**	**5.00**	**308**
50256.3.1	Brunswick	2	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	N/A	30											
TOTAL FOR MAP NO. 1										**0**												
TOTAL FOR PROJ NO. 50256.3.1										**0**												
GRAND TOTAL										**6.15**		**154**	**154**	**6.15**	**308**	**1.54**	**300**	**1,621**	**300**	**400**	**5.00**	**308**

PROJECT NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	18

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	6093000000-E FERTILIZER FOR REPAIR SEEDING	6117000000-N RESPONSE FOR EROSION CONTROL	6117500000-N CONCRETE WASHOUT STRUCTURE
										MI	FT	TON	EA	EA
2023CPT.03.04.20101	Brunswick	1	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	6.15	30	1.54	12	1
TOTAL FOR MAP NO. 1										**6.15**		**1.54**	**12**	**1**
TOTAL FOR PROJ NO. 2023CPT.03.04.20101										**6.15**		**1.54**	**12**	**1**
50256.3.1	Brunswick	2	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	NO	NO	N/A	30			
TOTAL FOR MAP NO. 1										**0**				
TOTAL FOR PROJ NO. 50256.3.1										**0**				
GRAND TOTAL										**6.15**		**1.54**	**12**	**1**

PROJECT NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	19

THERMOPLASTIC AND PAINT QUANTITIES

										4413000000-E	4447000000-E	4457000000-N	4685000000-E		4695000000-E		4709000000-E	4725000000-E		
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	PEDESTRIAN CHANNELIZING DEVICES	TEMPORARY TRAFFIC CONTROL	4" X 90 M YELLOW THERMO	4" X 90 M WHITE THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	24" X 90 M WHITE THERMO	THERMO LT ARROW (90 MIL)	THERMO RT ARROW (90 MIL)	THERMO STR ARROW (90 MIL)
								MI	FT	SF	LF	LS	LF	LF	LF	LF	LF	EA	EA	EA
2023CPT.03.04.20101	Brunswick	1	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	6.15	30	144	120	1.00	43,780	64,889	224	295	316	5	3	5
TOTAL FOR MAP NO. 1								**6.15**		**144**	**120**	**1.00**	**43,780.00**	**64,889**	**224**	**295**	**316**	**5**	**3**	**5**
TOTAL FOR PROJ NO. 2023CPT.03.04.20101								**6.15**		**144**	**120**	**1.00**	**43,780.00**	**64,889**	**224**	**295**	**316**	**5**	**3**	**5**
													108,669.00		**519**			**13**		
50256.3.1	Brunswick	2	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	N/A	30						274		330			
TOTAL FOR MAP NO. 1								**0**							**274**		**330**			
TOTAL FOR PROJ NO. 50256.3.1								**0**							**274**		**330**			
															274					
GRAND TOTAL								**6.15**		**144**	**120**	**1.00**	**43,780.00**	**64,889**	**498**	**295**	**646**	**5**	**3**	**5**
													108,669		**793**			**13**		

PROJECT NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	20

THERMOPLASTIC AND PAINT QUANTITIES

										4726100000-E	4726110000-E	4810000000-E	4900000000-N		4905100000-N	
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	HEATED-IN-PLACE THERMOPLASTIC PAVEMENT MARKING CHARACTER	HEATED-IN-PLACE THERMOPLASTIC PVMT. MARKING SYMBOL	4" YELLOW PAINT	YELLOW & YELLOW MARKERS	CRYSTAL & RED MARKERS	NON CAST IRON SNOWPLOWABLE MARKERS (Y/Y)	NON CAST IRON SNOWPLOWABLE MARKERS (C/R)
								MI	FT	EA	EA	LF	EA	EA	EA	EA
2023CPT.03.04.20101	Brunswick	1	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	6.15	30				94	8	430	7
TOTAL FOR MAP NO. 1								**6.15**					**94**	**8**	**430**	**7**
TOTAL FOR PROJ NO. 2023CPT.03.04.20101								**6.15**					**94**	**8**	**430**	**7**
													102		**437**	
50256.3.1	Brunswick	2	SR 1116 (OCEAN BLVD.)	FROM END OF MAINTENANCE (W. OF SHELL DRIVE) TO END OF MAINTENANCE (DUNESCAPE DR.) [MP 0.00 - MP 6.15]	2,3	2	2WU	N/A	30	18	102	63,484				
TOTAL FOR MAP NO. 1								**0**		**18**	**102**	**63,484**				
TOTAL FOR PROJ NO. 50256.3.1								**0**		**18**	**102**	**63,484**				
GRAND TOTAL								**6.15**		**18**	**102**	**63,484**	**94**	**8**	**430**	**7**
													102		**437**	

Proposed Crosswalk Location

Proposed Crosswalk Location

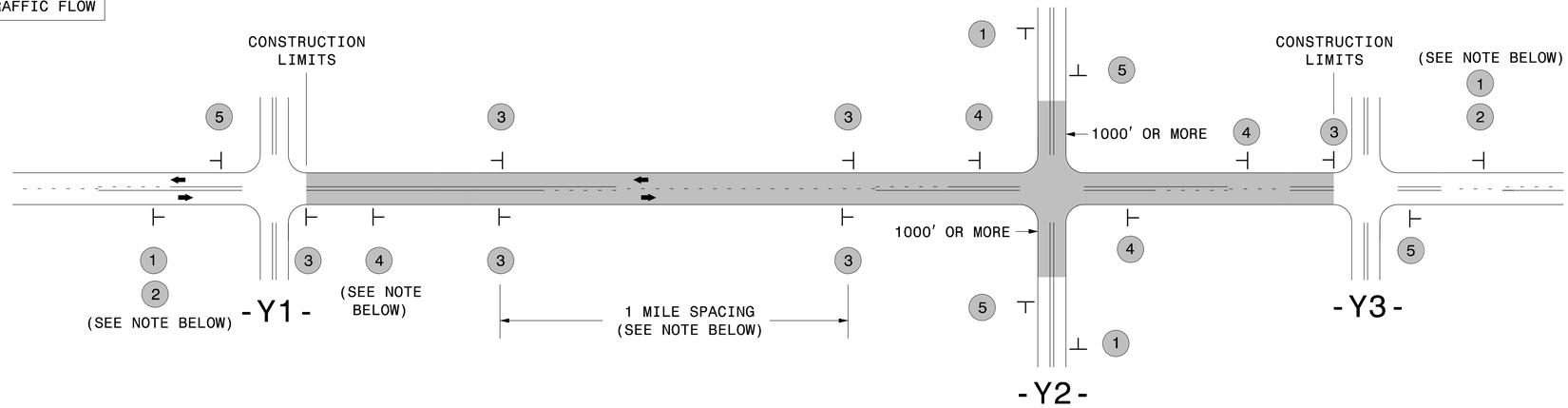
PW360
567 Ocean Boulevard W
SandDollar Dr
Starfish Dr
Lions Paw
Waterway
Tri-Beach VFD Stati
Ocean Blvd W
1116
Heron Now

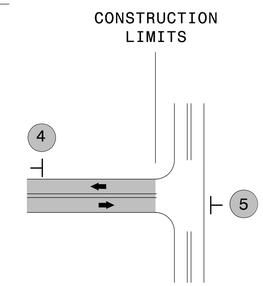
PW440
915 Ocean Boulevard W
Marlin Dr
Ocean Blvd W
1116
Ocean Blvd W
1116

PROJ. REFERENCE NO.	SHEET NO.
2023CPT.03.04.20101, Etc.	TCP-1

SIGNING FOR RESURFACING PROJECTS

LEGEND
- ⊢ STATIONARY SIGN
- ← DIRECTION OF TRAFFIC FLOW





TEE INTERSECTION

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1	ROAD WORK AHEAD — W20-1 48″ X 48″	PLACE 1000′ PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000′ ALONG -Y- LINE.
2	NEXT XX MILES — W7-3aP 24″ X 18″	#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)
3	LOW/SOFT SHOULDER — SP 13107 48″ X 48″	- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY ½ MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.
4	ROAD UNDER CONST — SP 13106 48″ X 48″	- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. - INSTALL 500′ +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500′ OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500′ +/- OF THE INTERSECTION ALONG -L- LINE.
5	END ROAD WORK — G20-2 A 48″ X 24″	PLACE 500′ FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

-Y- LINE SIGNING

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

1) LESS THAN 1000′ OF RESURFACING ALONG -Y- LINE
2) SUBDIVISION ROADS
3) DEAD END ROADS

WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

ROAD WORK AHEAD — W20-1 48″ X 48″
PLACED 500′ IN ADVANCE OF FLAGGER.

W20-7 A 48″ X 48″
PLACED 250′ IN ADVANCE OF FLAGGER.

MAPS LESS THAN 2 MILES

FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

5/15/2017
S:\TMU\WZTC\Resurfacing\2L2W & AST Resurfacing Details\Resurfacing_AdvWarn_2Ln.dgn
User:kedals