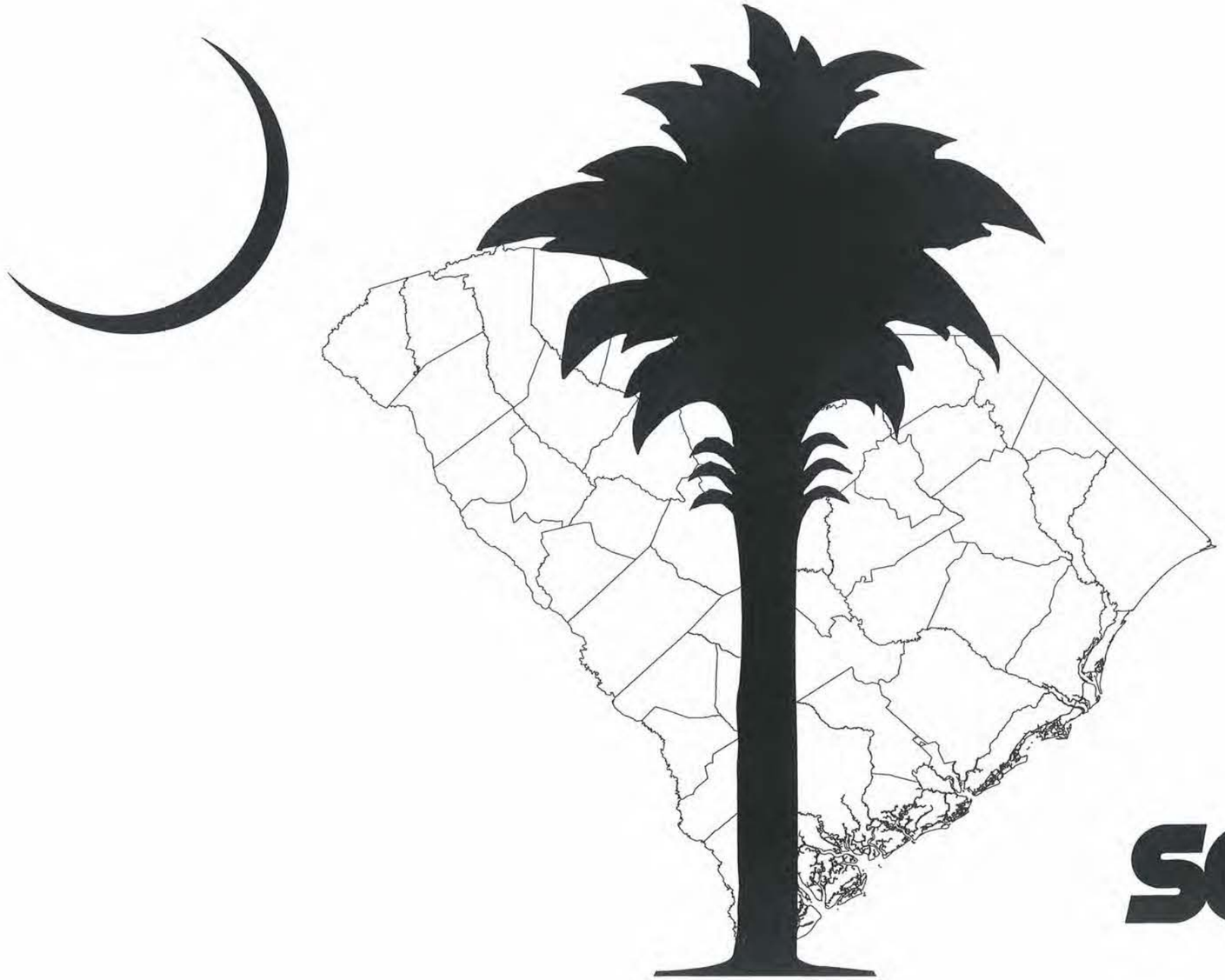

SCDOT

PAVEMENT (ASPHALT)

SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

SECTION
401-000

REFERENCES

SIGNING AND MARKING ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 23845 MARK H. ANTHONY

Mark H. Anthony

SIGNATURE

10/21/10

DATE

#	DATE	CHK	DESCRIPTION
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SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

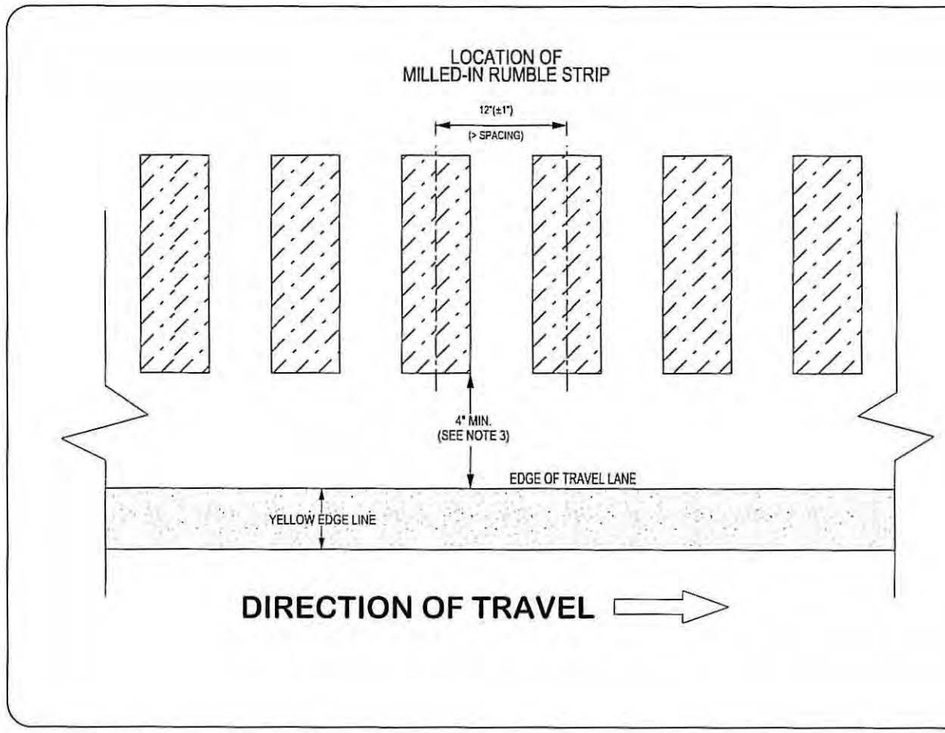
STANDARD DRAWING

16" RUMBLE STRIPS FOR CONTROLLED ACCESS FACILITIES

401-205-01

EFFECTIVE LETTING DATE | JANUARY 2011

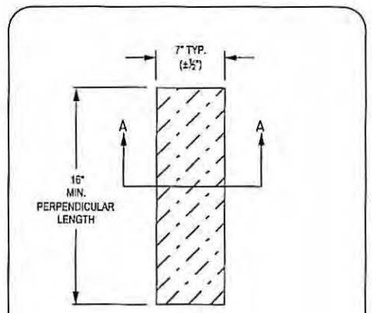
THIS DRAWING IS NOT TO SCALE



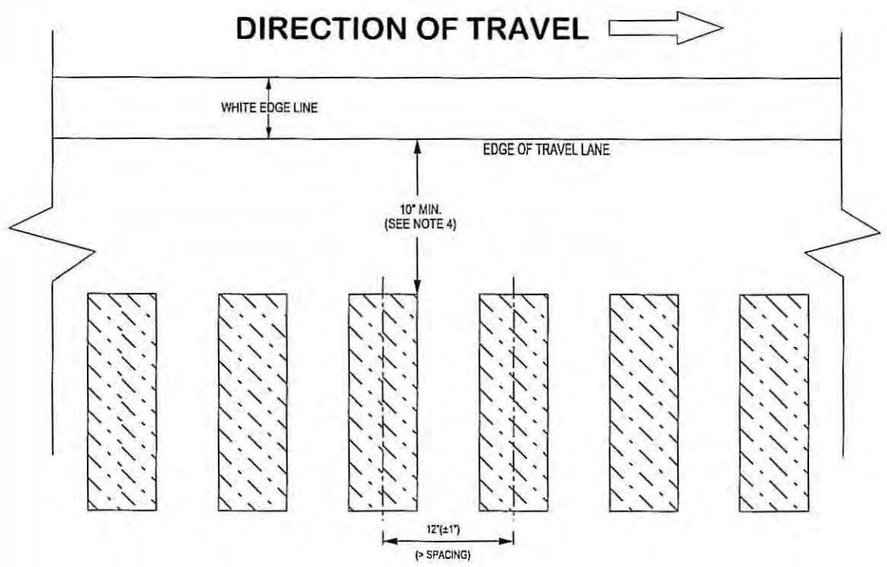
NOTES:

1. RUMBLE STRIPS ARE TO BE USED WHEN INCLUDED IN THE PLAN QUANTITIES.
2. THE CUTTING TOOL SHALL PROVIDE CONSISTENT ALIGNMENT OF EACH CUT IN RELATION TO THE ROADWAY AND SHOULDER SLOPE TO PROVIDE UNIFORMITY AND CONSISTENCY THROUGHOUT THE PROJECT. THE ½" MIN. DEPTH SHALL APPLY FOR THE FULL PERPENDICULAR LENGTH.
3. WHEN SPECIFIED ON THE MEDIAN SHOULDER, THE MILLED AREA SHALL BE A MINIMUM OF 4" FROM EDGE OF TRAVELWAY.
4. WHEN RUMBLE STRIPS ARE PLACED ON THE OUTSIDE SHOULDER. THEY SHOULD BE MILLED-IN A MINIMUM OF 10" FROM THE EDGE OF TRAVELWAY.
5. MILLED-IN RUMBLE STRIPS MAY BE CONSTRUCTED WITH OPEN GRADED FRICTION COURSE (OGFC), BUT ONLY WHEN THE ENTIRE RUMBLE STRIP IS EITHER ENTIRELY INSIDE OR ENTIRELY OUTSIDE THE OGFC COVERED AREA.
6. NO MILLED-IN RUMBLE STRIPS WILL BE PLACED ON RAMP SHOULDERS OR SHOULDERS ON ACCELERATION AND DECELERATION LANES.
7. THE PAY ITEMS SHALL BE:

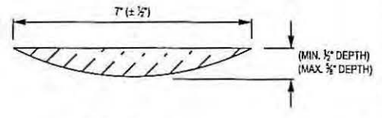
16" MILLED IN RUMBLE STRIP_____MILE



MILLED-IN DETAIL

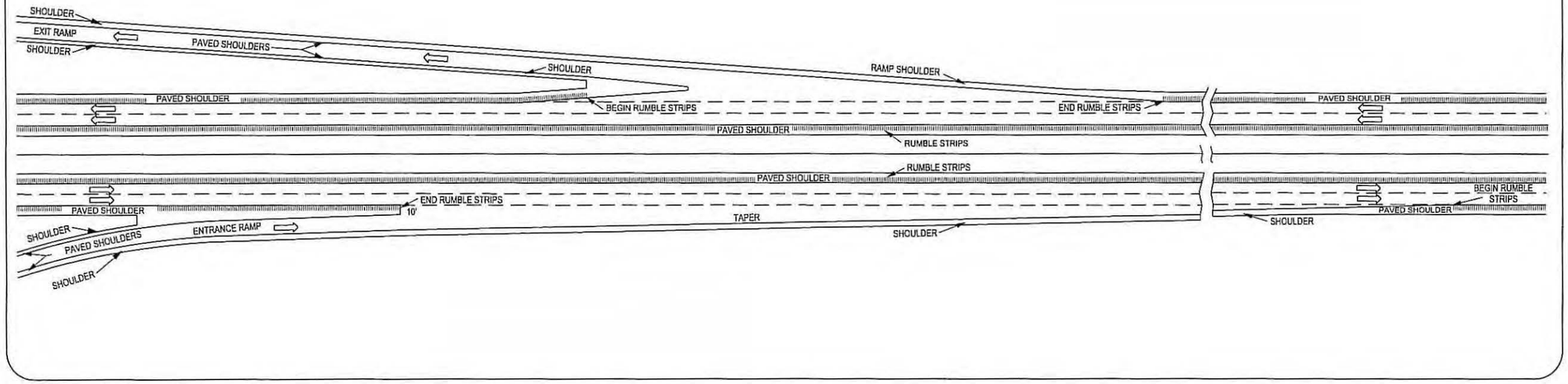


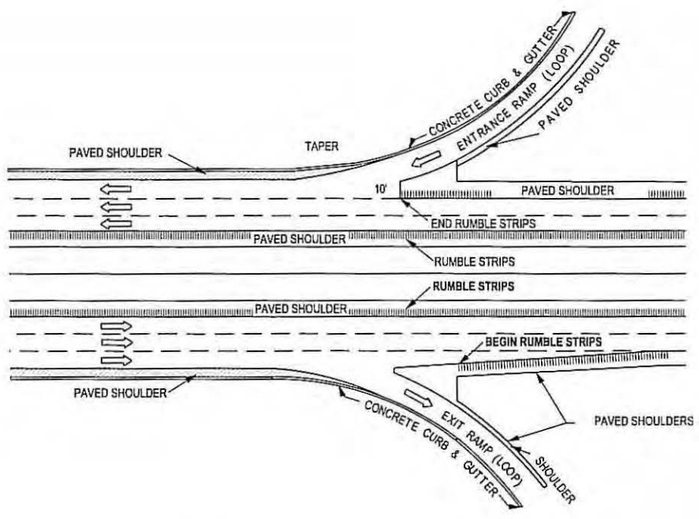
LOCATION OF
MILLED-IN RUMBLE STRIP



SECTION A-A

NOTES:
1. LANE AND SHOULDER WIDTHS MAY VARY. SEE PLANS FOR EXACT WIDTHS.
2. RUMBLE STRIPS ARE TO BE USED WHEN INCLUDED IN THE PLAN QUANTITIES.





DETAIL OF ACCELERATION/DECELERATION LANES

THIS DRAWING IS NOT TO SCALE

REFERENCES

SIGNING AND MARKING ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 23845 MARK H. ANTHONY

SIGNATURE

10/21/10
DATE

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DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

16" RUMBLE STRIPS
FOR CONTROLLED ACCESS
FACILITIES

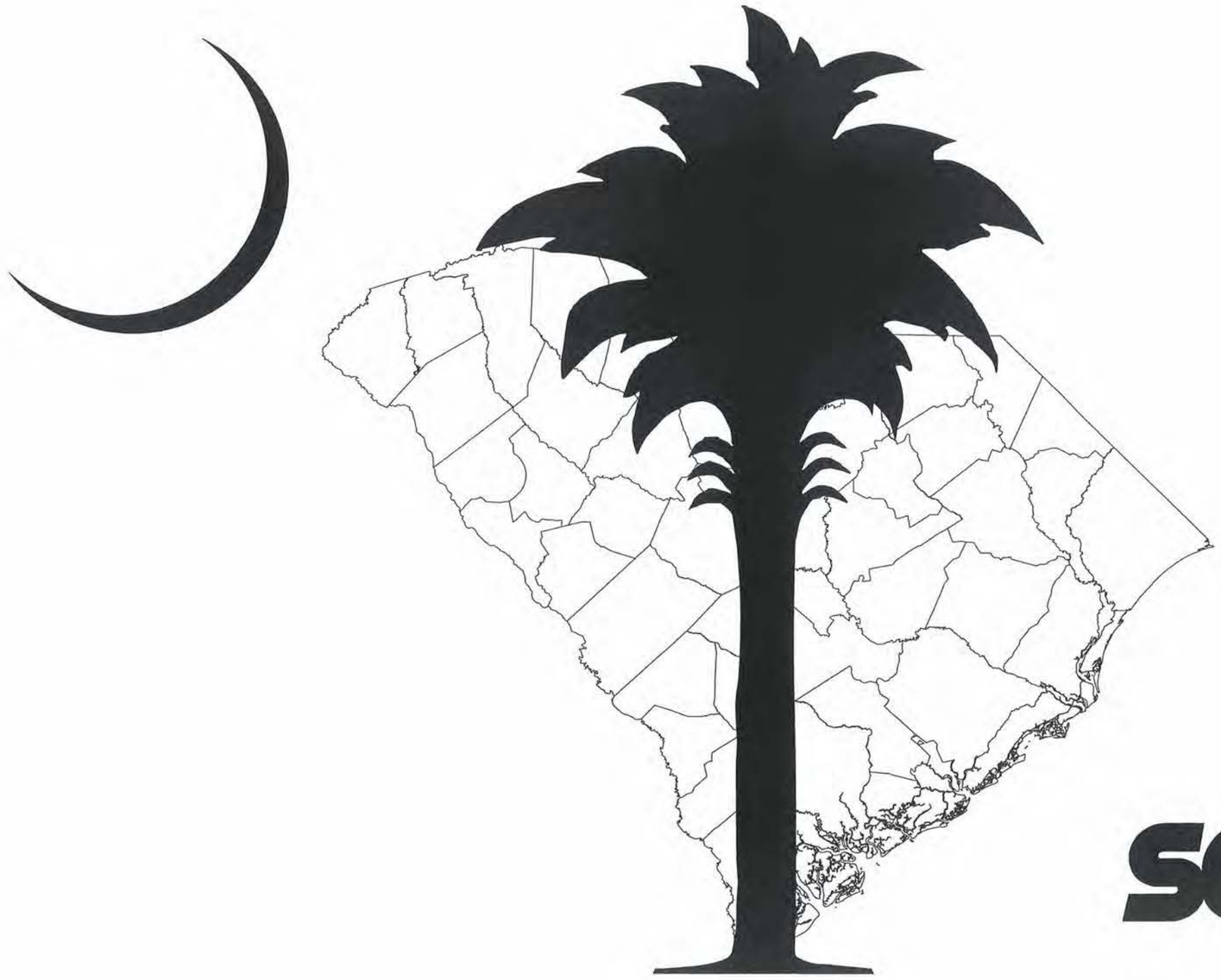
401-205-02

EFFECTIVE LETTING DATE | JANUARY 2011

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

NOTES

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION



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PAVEMENT
(HMA SURFACE COURSE)

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SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

SECTION
403-000

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

RELATED DRAWINGS & KEYWORDS

720-205-00|ALTERNATE|

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 8858 EDWIN SYLVESTER EAGLE, II

SIGNATURE

MARCH 3, 2008

DATE

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955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

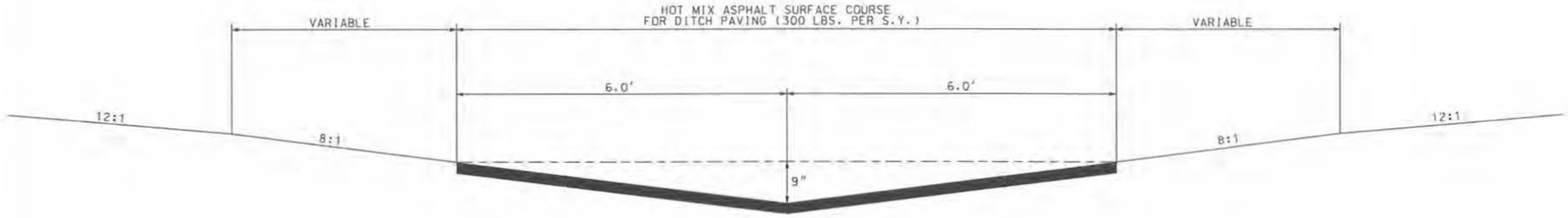
STANDARD DRAWING

HMA SURFACE COURSE (DITCH PAVING)

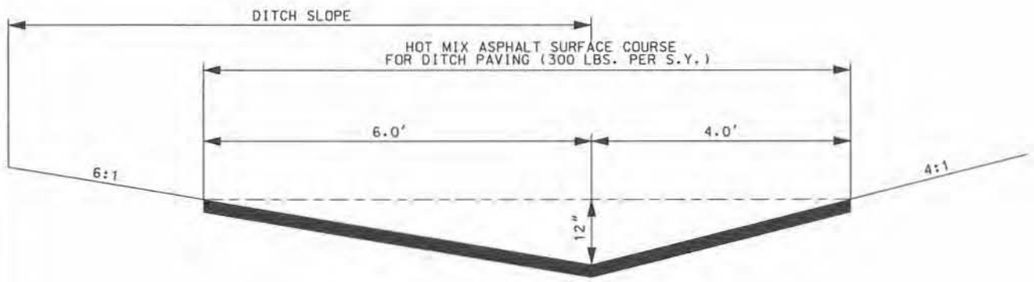
403-105-00

EFFECTIVE LETTING DATE | MAY 2008

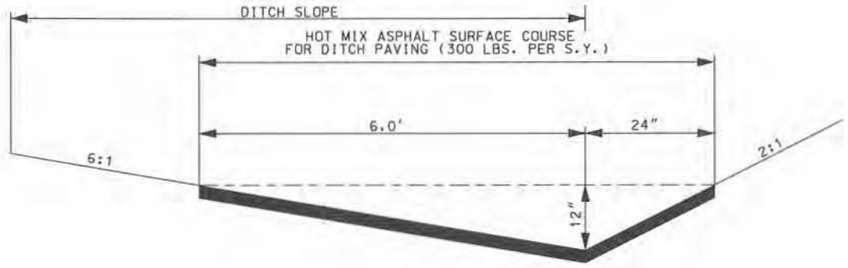
THIS DRAWING IS NOT TO SCALE



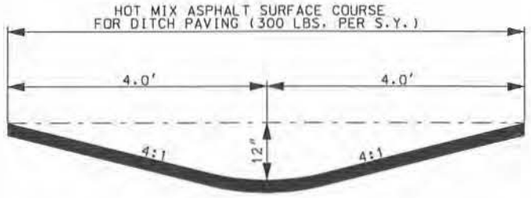
DETAIL OF PAVED MEDIAN DITCH



DETAIL OF PAVED SIDE DITCH WITH 4:1 BACK SLOPE



DETAIL OF PAVED SIDE DITCH WITH 2:1 BACK SLOPE



DETAIL OF PAVED INTERCEPTING DITCH

NOTE:

THE PAY ITEM SHALL BE:
HOT MIX ASPHALT SURFACE COURSE FOR DITCH PAVING_____TON

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

NOTES

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

RELATED DRAWINGS & KEYWORDS

403-205-02, 403-210-00(ALTERNATE)

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 8858 EDWIN SYLVESTER EAGLE, II

SIGNATURE

MARCH 3, 2008

DATE

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0	3/2008	DSO	GENERAL REVISIONS

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SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS OFFICE
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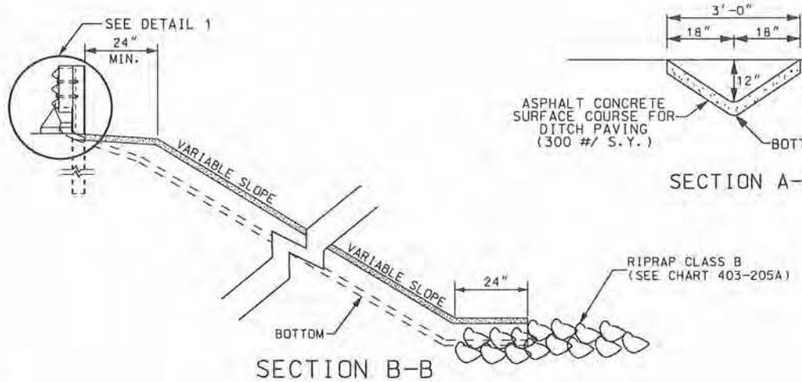
STANDARD DRAWING

HMA SURFACE COURSE(DITCH PAVING & FLUME AT SAFETY SHAPE WITH CONCRETE TRANSITION CURB)

403-205-01

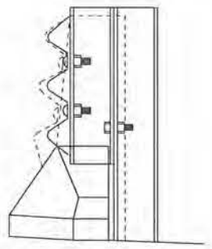
EFFECTIVE LETTING DATE | MAY 2008

THIS DRAWING IS NOT TO SCALE



SECTION B-B

SECTION A-A



DETAIL 1

CHART 403-205A RIPRAP PLACEMENT		
CLASS	D_{50}(FT)	MINIMUM THICKNESS (FT)
A	0.50	1.00
B	0.75	1.50
C	1.30	2.60
D	1.80	3.60
E	2.25	4.50
F	2.85	5.70

NOTES:

1. THE SHOULDER WIDENING FOR BRIDGES SHALL CONSIST OF THE SAME HOT MIX ASPHALT SURFACE COURSE USED ON THE ROADWAY AT AN APPLICATION RATE OF 500 LBS/SY. THESE QUANTITIES SHALL BE COMPUTED AND INCLUDED IN THE ROADWAY QUANTITIES.

2. PLACE GUARDRAIL POSTS BEFORE CONSTRUCTING FLUME.

3. RIPRAP AND FLUME TO BE OMITTED ON HIGH SIDE OF SUPERELEVATED SECTIONS.

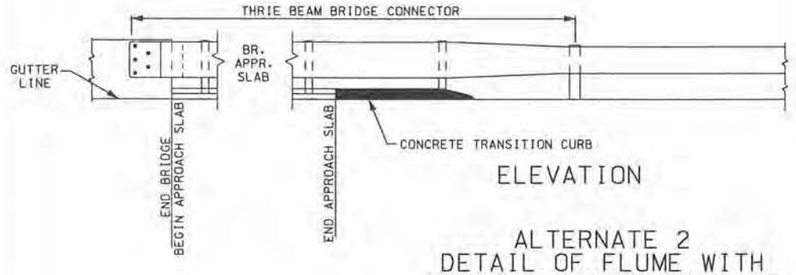
4. FOR EACH CORNER OF BRIDGES USING CONCRETE TRANSITION CURBS, THREE LINEAR FEET OF 9"X15" CURB SHALL BE PLACED IN THE INCLUSIONS TO BE USED AS DETERMINED BY THE ENGINEER.

5. WHERE FLUME IS CONSTRUCTED INTO MEDIAN, DITCH RIPRAP IS TO BE OMITTED AND FLUME TIED TO ASPHALT MEDIAN DITCH PAVING AS DIRECTED BY THE ENGINEER.

6. SEE PLANS FOR VARIABLE WIDTHS OF APPROACH SLAB ON PAVED SHOULDERS.

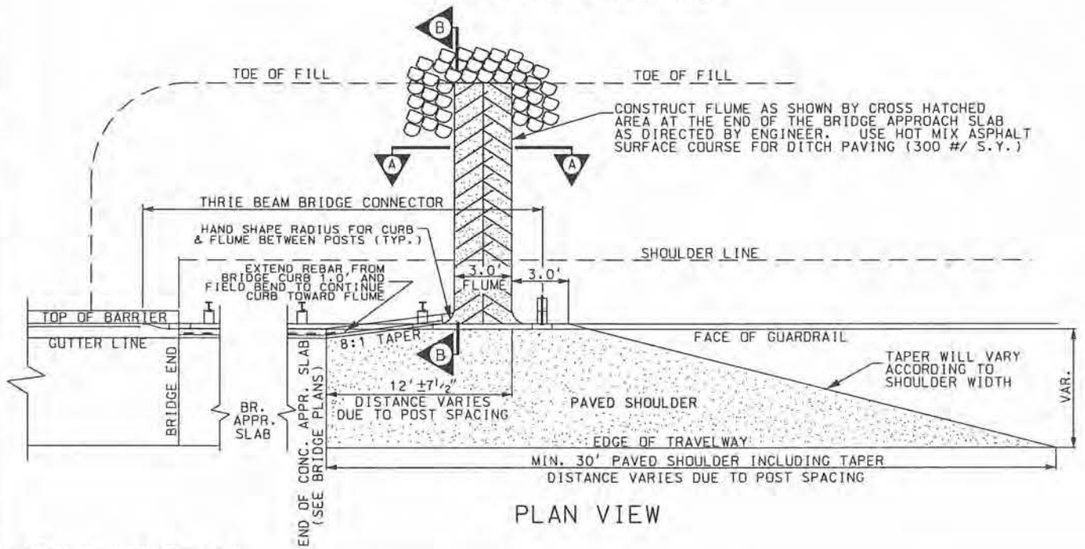
7. THRIE BEAM BRIDGE CONNECTOR WILL CONNECT TO BRIDGE PARAPET AT EITHER BEGINNING OF APPROACH SLAB WHEN APPLICABLE OR TO BEGINNING OF BRIDGE WHEN APPLICABLE.

8. THE PAY ITEMS SHALL BE:
CONCRETE TRANSITION CURB_____L.F.
RIPRAP CLASS-B_____TON
HOT MIX ASPHALT SURFACE COURSE FOR DITCH PAVING_____TON
GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP(CLASS 2) TYPE_____S.Y.

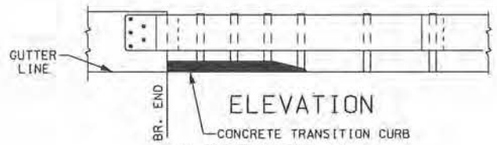


ELEVATION

ALTERNATE 2
DETAIL OF FLUME WITH CONCRETE APPROACH SLAB WITHOUT BARRIER

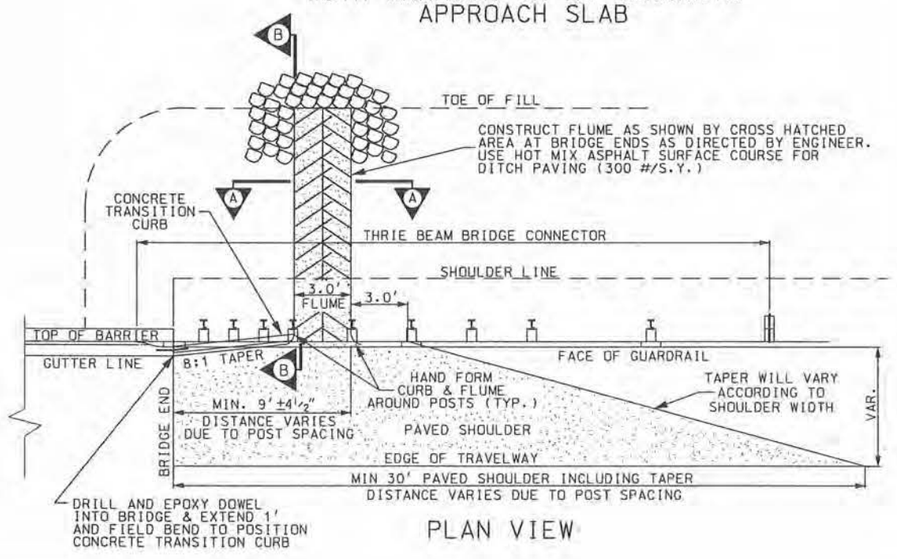


PLAN VIEW

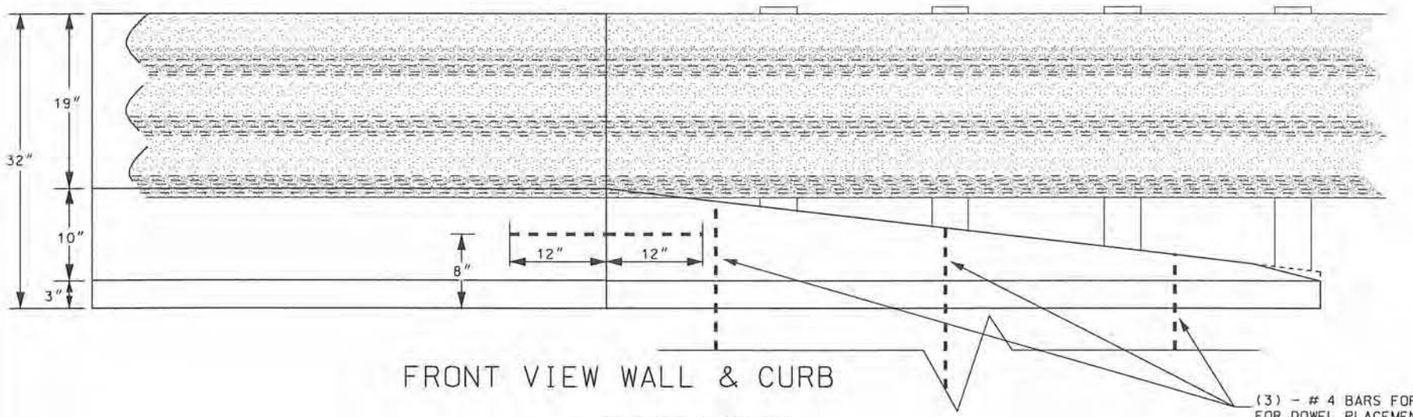


ELEVATION

ALTERNATE 1
DETAIL OF FLUME WITH CONCRETE APPROACH SLAB WITH BARRIER OR NO CONCRETE APPROACH SLAB



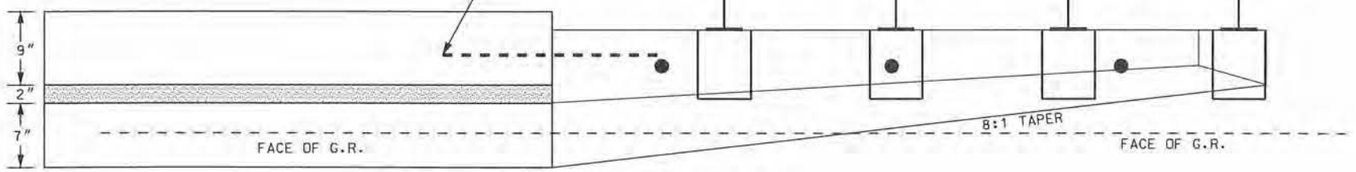
PLAN VIEW



FRONT VIEW WALL & CURB

(3) - # 4 BARS FOR PRECAST CURB. FOR DOWEL PLACEMENT SEE PLAN VIEW OF STEEL DETAIL

(1) - 24"- #4 BAR FOR CAST-IN- PLACE CURB SEE NOTE 3 & FRONT VIEW OF WALL & CURB FOR DETAIL.



TOP VIEW WALL & CURB

NOTES:

1. WHEN A SAFETY SHAPE PARAPET WALL IS PRESENT A CONCRETE TRANSITION CURB MUST BE USED TO PREVENT VEHICLE SNAGGING.

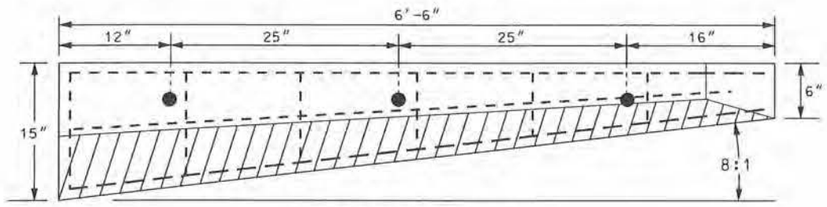
2. CONCRETE TRANSITION CURB SHALL BE PLACED AT ALL BRIDGE APPROACHES AND FLARED BACK UNDER THE GUARDRAIL AT A RATE OF 8:1 TO PREVENT VEHICLE SNAGGING. ONCE CONCRETE TRANSITION CURB IS UNDER GUARDRAIL, IT SHOULD BE TAPERED DOWN FROM 6" TO 2" HIGH (4:1 SLOPE) AND TERMINATED AS DIRECTED BY THE ENGINEER.

3. FOR CAST-IN- PLACE CONCRETE TRANSITION CURB USE A MINIMUM OF CLASS 3000 CONCRETE. TIE CAST-IN- PLACE CURB TO BRIDGE BY DRILLING A HOLE 12 INCHES INTO BRIDGE WALL AND PLACING A 24 INCH NO. 4 BAR 12 INCHES INTO WALL AND EXTEND 12 INCHES BEYOND BRIDGE WALL. FIELD BEND THE EXTENSION INTO POSITION TO CONTINUE TOWARD FLUME.

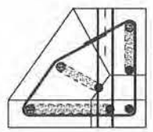
4. FOR PRECAST CONCRETE TRANSITION CURB USE A MINIMUM OF CLASS 4000P CONCRETE. TIE PRECAST CURB DOWN USING THREE 36" LONG NO. 4 BARS AS SHOWN HERE ON.

5. USE THIS ITEM WITH FLUME SHOWN ON STANDARD DRAWING 403-205-01.

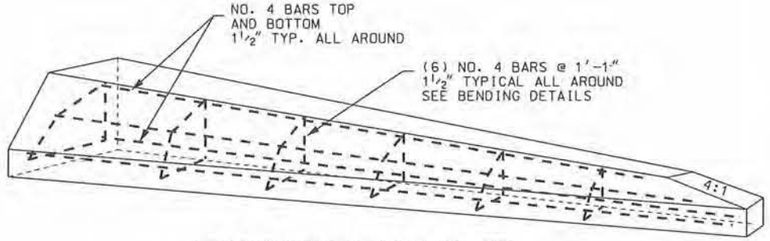
6. PAY ITEM
CONCRETE TRANSITION CURB _____ LF



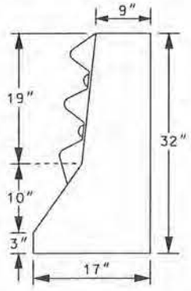
PLAN VIEW OF STEEL DETAIL



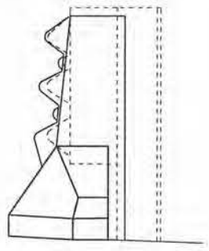
STEEL BENDING DETAIL



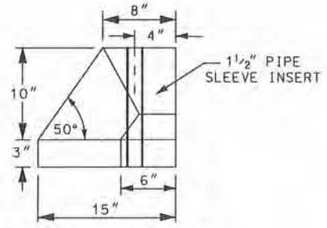
ISOMETRIC VIEW OF STEEL DETAIL



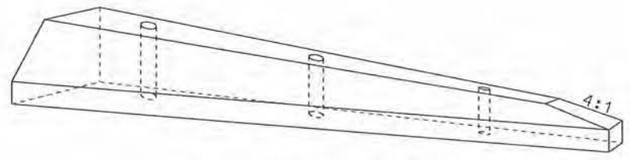
VIEW OF THRIE BEAM ATTACHED TO CONCRETE WALL



TRANSPOSED VIEW OF THRIE BEAM, WALL, POST, & CURB



END VIEW OF TRANSITION CURB



ISOMETRIC VIEW OF TRANSITION CURB

THIS DRAWING IS NOT TO SCALE

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

RELATED DRAWINGS & KEYWORDS

403-205-01

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 8858 EDWIN SYLVESTER EAGLE, II

SIGNATURE

MARCH 3, 2008
DATE

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SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

HMA SURFACE COURSE(DITCH PAVING & FLUME AT SAFETY SHAPE WITH PRECAST TRANSITION CURB)

403-205-02

EFFECTIVE LETTING DATE | MAY 2008

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

RELATED DRAWINGS & KEYWORDS

403-205-01 [ALTERNATE]

PRECONSTRUCTION SUPPORT ENGINEER

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER NO. 8858 EDWIN SYLVESTER EAGLE, II

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SCDOT

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

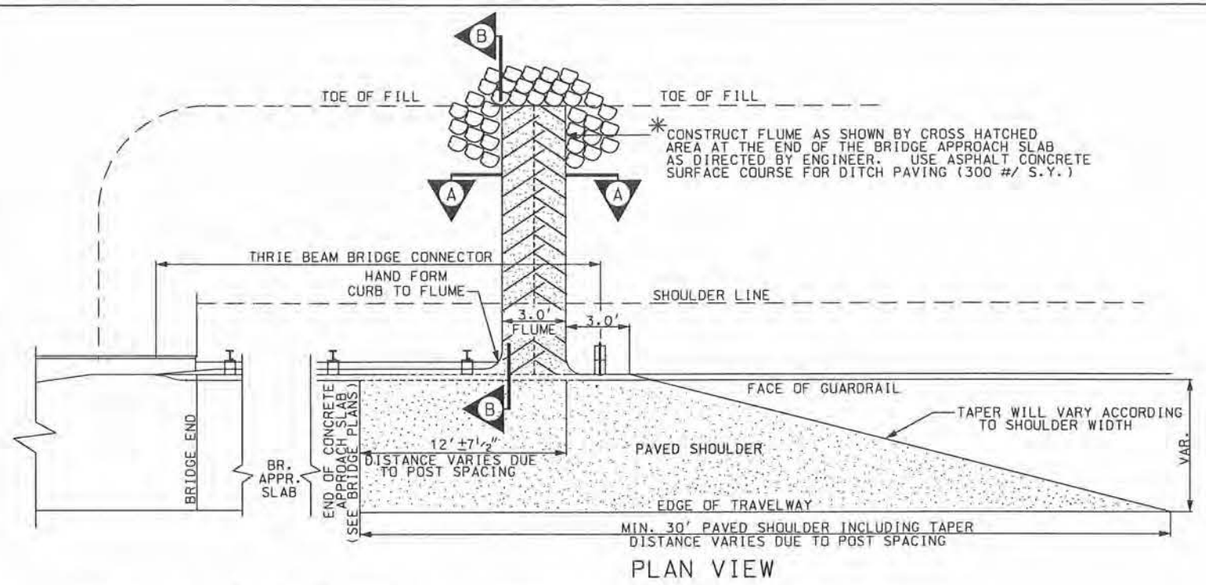
STANDARD DRAWING

HMA SURFACE COURSE (DITCH PAVING & FLUME AT VERTICAL PARAPET ON BRIDGE)

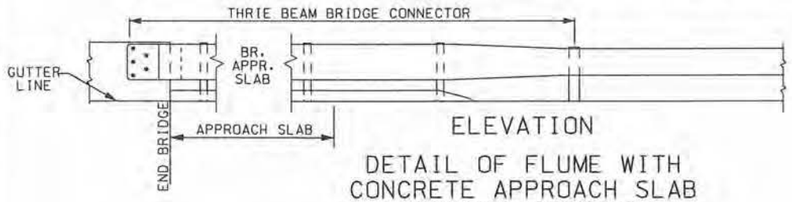
403-210-00

EFFECTIVE LETTING DATE | MAY 2008

THIS DRAWING IS NOT TO SCALE

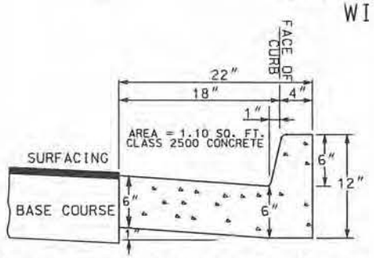


PLAN VIEW

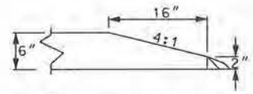


ELEVATION

DETAIL OF FLUME WITH CONCRETE APPROACH SLAB WITHOUT BARRIER

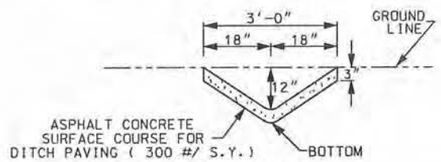


CROSS-SECTION VIEW OF CURB FROM VERTICAL WALL TO FLUME

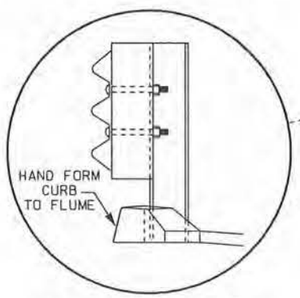


SIDE VIEW OF HAND FORMED CURB

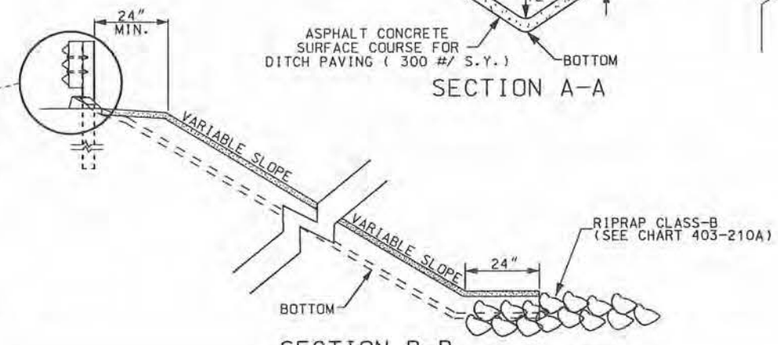
HAND SHAPE RADIUS FOR END OF CURB TO FLUME EITHER BETWEEN OR AROUND THE POSTS (TYP.)



SECTION A-A



END VIEW OF HAND FORMED CURB



SECTION B-B

NOTES:

1. THE SHOULDER WIDENING FOR BRIDGES SHALL CONSIST OF THE SAME HOT MIX ASPHALT SURFACE COURSE USED ON THE ROADWAY AT AN APPLICATION RATE OF500 LBS/SY. THESE QUANTITIES SHALL BE COMPUTED AND INCLUDED IN THE ROADWAY QUANTITIES.

2. RIPRAP AND FLUME TO BE OMITTED ON HIGH SIDE OF SUPERELEVATED SECTIONS.

3. HAND FORMED CURB SHALL BE PLACED AT ALL BRIDGE APPROACHES. ONCE CURB IS UNDER GUARDRAIL, IT SHOULD BE TAPERED DOWN FROM 6" TO 2" HIGH (4:1 SLOPE) AND TERMINATED AS DIRECTED BY THE ENGINEER.

4. WHERE FLUME IS CONSTRUCTED INTO MEDIAN, DITCH RIPRAP IS TO BE OMITTED AND FLUME TIED TO ASPHALT MEDIAN DITCH PAVING AS DIRECTED BY THE ENGINEER.

5. SEE PLANS FOR VARIABLE WIDTHS OF APPROACH SLAB ON PAVED SHOULDERS.

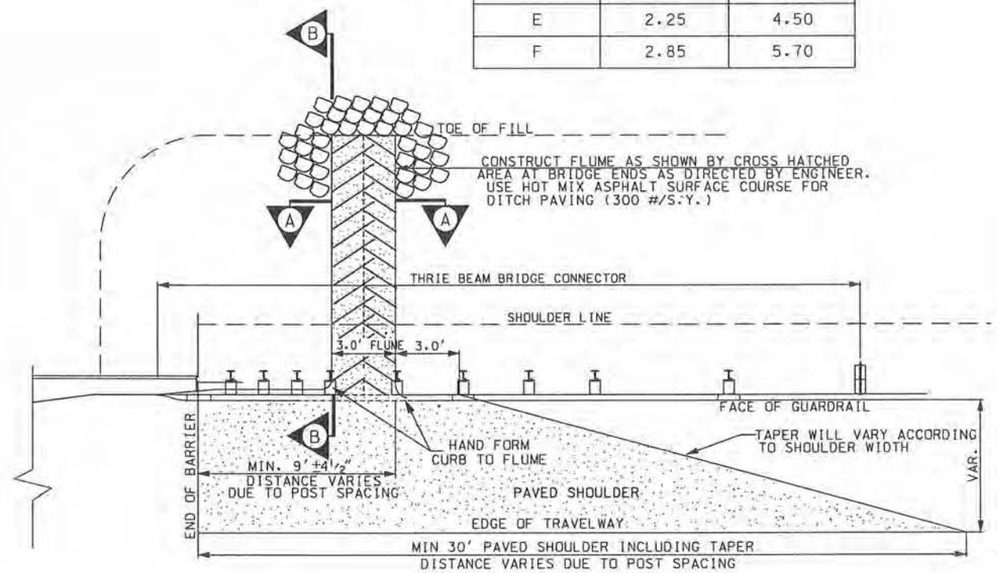
6. THRIE BEAM BRIDGE CONNECTOR WILL CONNECT TO BRIDGE PARAPET AT EITHER BEGINNING OF APPROACH SLAB WHEN APPLICABLE OR TO BEGINNING OF BRIDGE WHEN APPLICABLE.

7. PLACE GUARDRAIL POSTS BEFORE CONSTRUCTING FLUME.

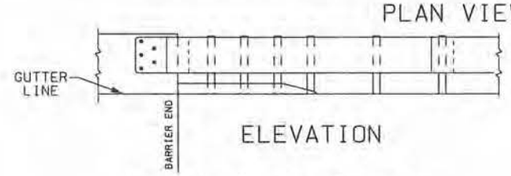
8. THE PAY ITEMS SHALL BE:
   RIPRAP CLASS-B_____TON
   HOT MIX ASPHALT SURFACE COURSE FOR DITCH PAVING_____TON
   GEOTEXTILE FOR EROSION CONTROL UNDER RIPRAP (CLASS 2) TYPE_____S.Y.
   BRIDGE APPROACH CONCRETE CURB AND GUTTER(1'-10")_____L.F.

CHART 403-210A
RIPRAP PLACEMENT

CLASS	D_{50} (FT)	MINIMUM THICKNESS (FT)
A	0.50	1.00
B	0.75	1.50
C	1.30	2.60
D	1.80	3.60
E	2.25	4.50
F	2.85	5.70



PLAN VIEW



ELEVATION

DETAIL OF FLUME WITH CONCRETE APPROACH SLAB WITH BARRIER OR NO CONCRETE APPROACH SLAB