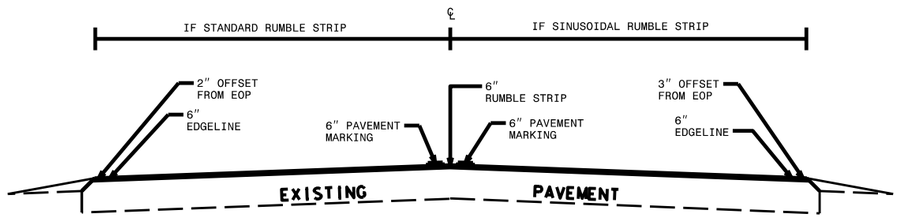
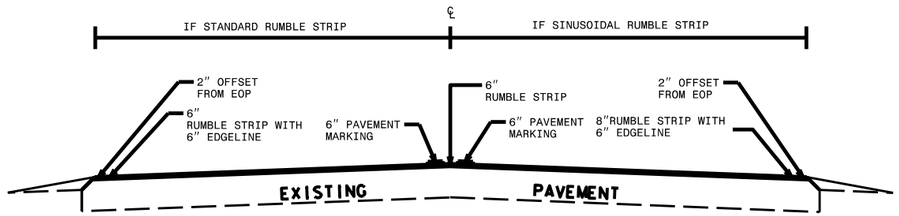
PROJ. REFERENCE NO.	SHEET NO.



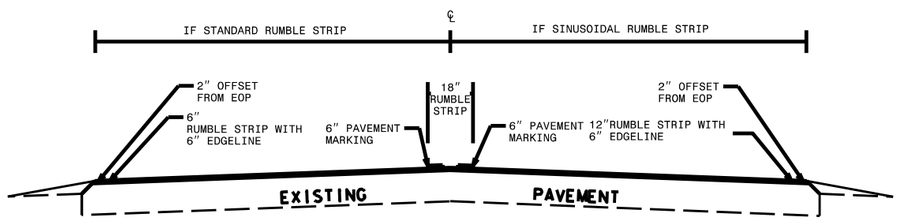
TYPICAL SECTION NO. 1

20' ≤ PAVEMENT WIDTH < 22'



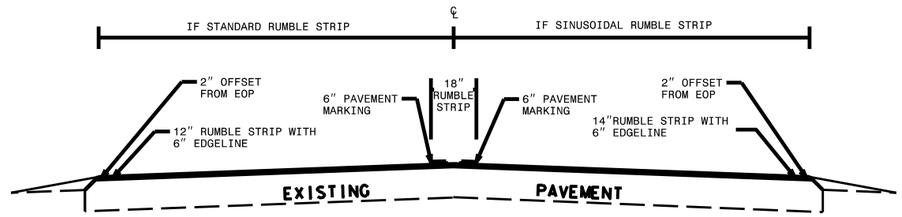
TYPICAL SECTION NO. 2

22' ≤ PAVEMENT WIDTH < 23'



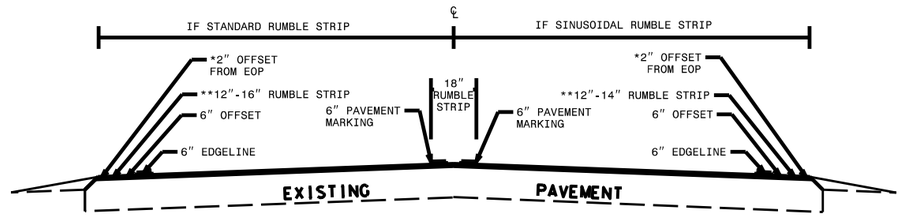
TYPICAL SECTION NO. 3

23' ≤ PAVEMENT WIDTH < 24'



TYPICAL SECTION NO. 4

24' ≤ PAVEMENT WIDTH < 26'



TYPICAL SECTION NO. 5

PAVEMENT WIDTH ≥ 26'

** INCREASE THIS DISTANCE FOR PAVEMENT WIDTHS > 30' BASED ON A LANE WIDTH OF 12'*

*** WIDTH OF RUMBLE STRIP IS BASED ON A LANE WIDTH OF 10'-12'*

APPROVED: _____ DATE: _____

SEAL

MILLED/SINUSOIDAL RUMBLE STRIP DETAIL

SCALE:	NONE
DATE:	OCT 2023
DWG. BY:	JCB
DESIGN BY:	WAT
REVIEWED BY:	

DIVISION OF HIGHWAYS

REVISIONS

CADD FILE

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

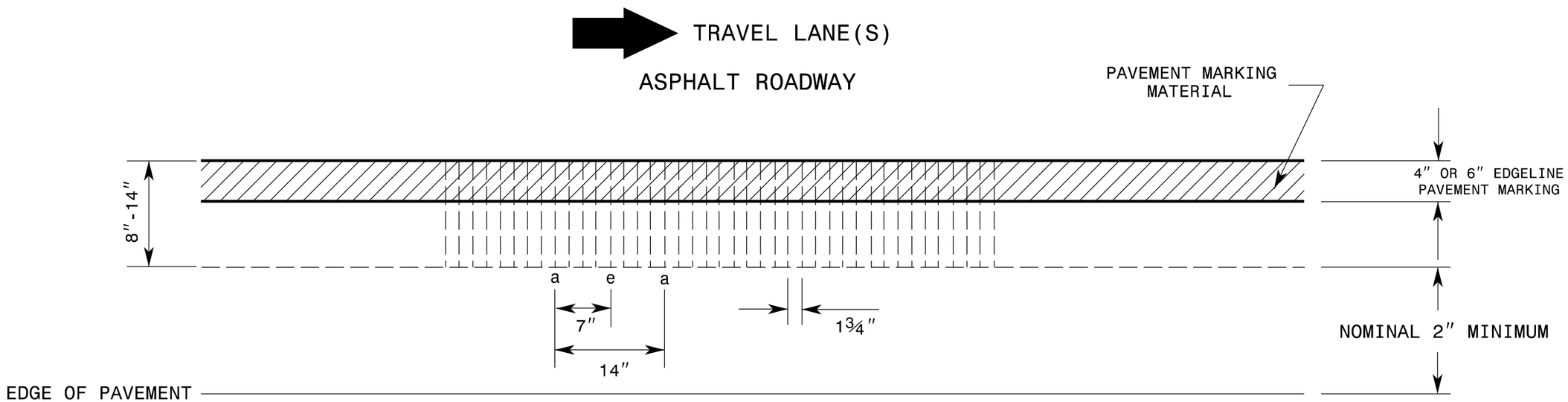
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2-23

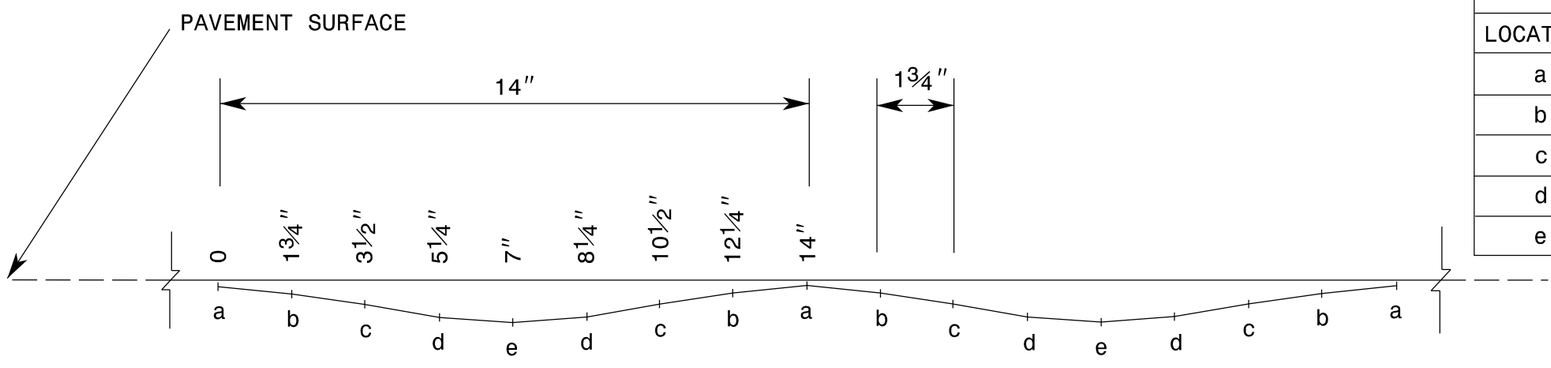
ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
SINUSOIDAL EDGELINE RUMBLE STRIPE

See Table 1 within Rumble Strip Policy for Design Guidance

PLAN VIEW



PROFILE VIEW



	DEPTH	
LOCATION	MIL	INCHES
a	62.5	1/16″
b	125	1/8″
c	219	7/32″
d	344	11/32″
e	375	3/8″

REFERENCE DRAWING ID: Sin.Stripe

NOTES:

1) Specification in table taken from MNDOT Research Project Final Report 2016-23: *Sinusoidal Rumble Strip Design Optimization Study By: Terhaar et. al, June 2016*
2) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
3) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.

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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2-23

ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
SINUSOIDAL EDGELINE RUMBLE STRIPE

SHEET 4 OF 7

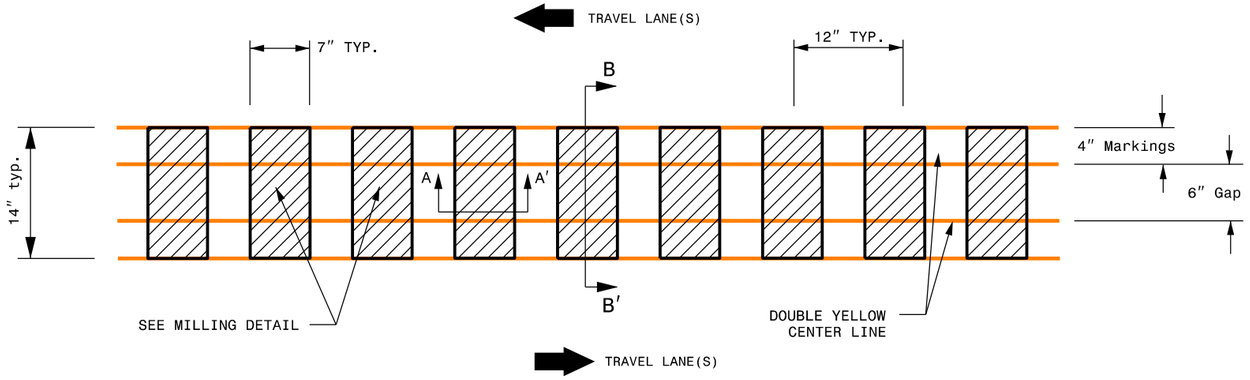
ENGLISH DETAIL DRAWING FOR

RUMBLE STRIPS / STRIPES

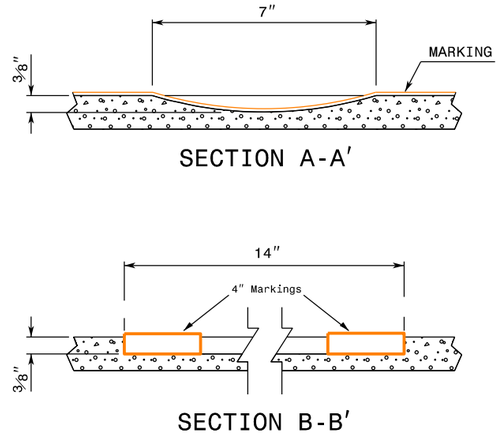
TRADITIONAL CENTERLINE RUMBLE STRIPE

See Table 2 within Rumble Strip Policy for Design Guidance

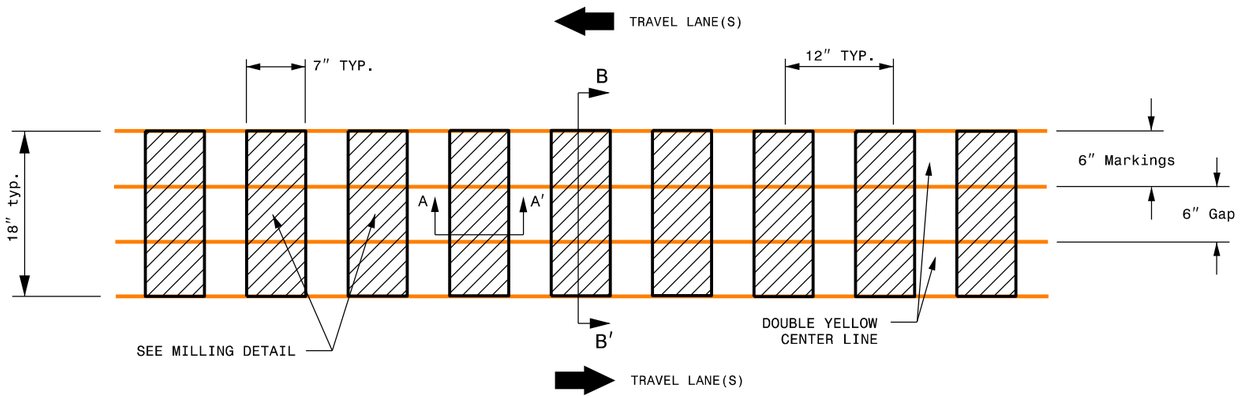
If 4″ Markings will be used:



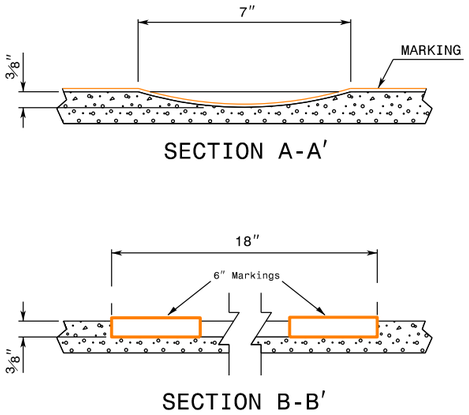
MILLING DETAIL - 4″ Markings



If 6″ Markings will be used:



MILLING DETAIL - 6″ Markings



REFERENCE DRAWING ID: Trad.CL

NOTES:

1) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.

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RALEIGH, N.C.
2-23
ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
TRADITIONAL CENTERLINE RUMBLE STRIPE
SHEET 5 OF 7

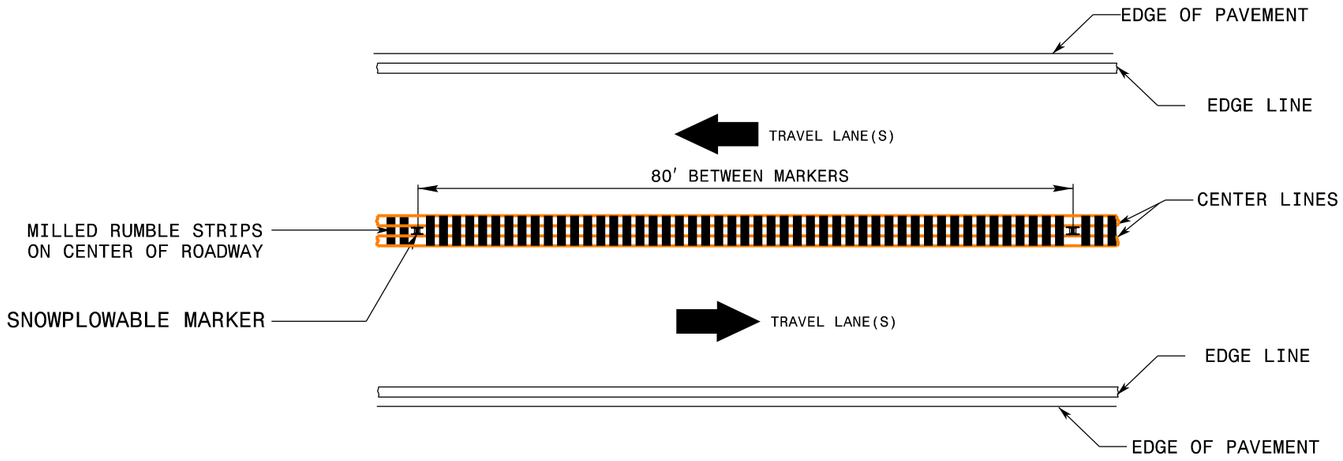
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
2-23

ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
TRADITIONAL CENTERLINE RUMBLE STRIPE WITH SNOWPLOWABLE MARKERS

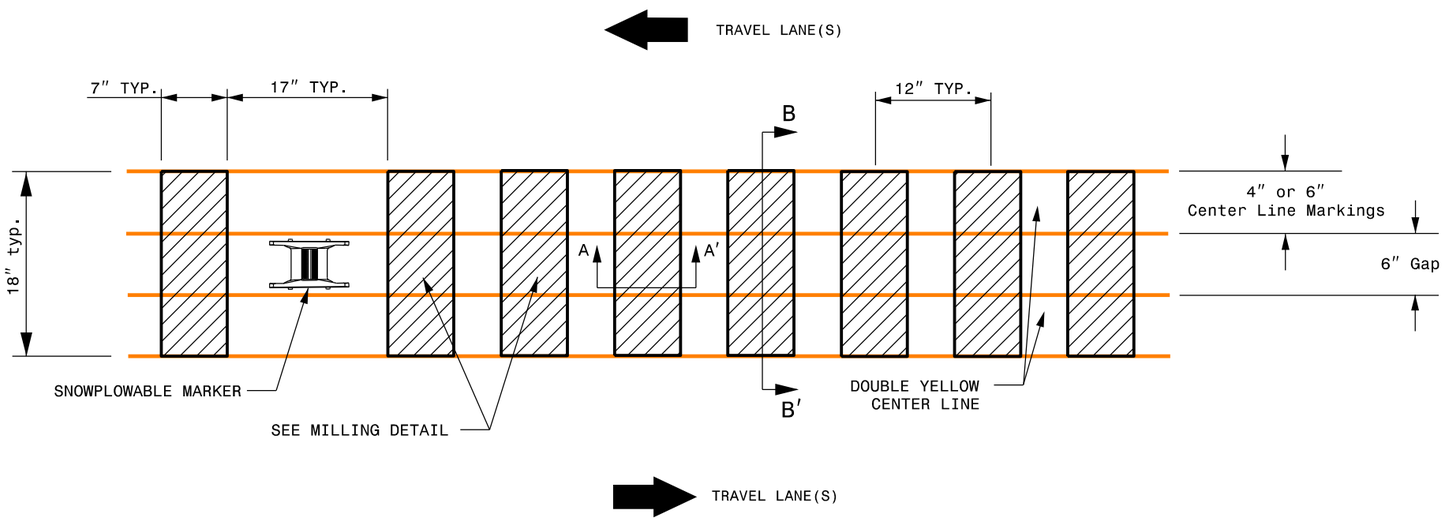
ENGLISH DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
TRADITIONAL CENTERLINE RUMBLE STRIPE WITH SNOWPLOWABLE MARKERS

See Table 2 within Rumble Strip Policy for Design Guidance

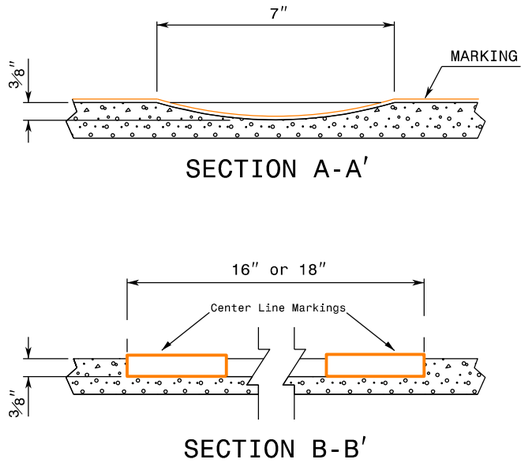
LANE TREATMENT



CENTER LINE



MILLING DETAIL



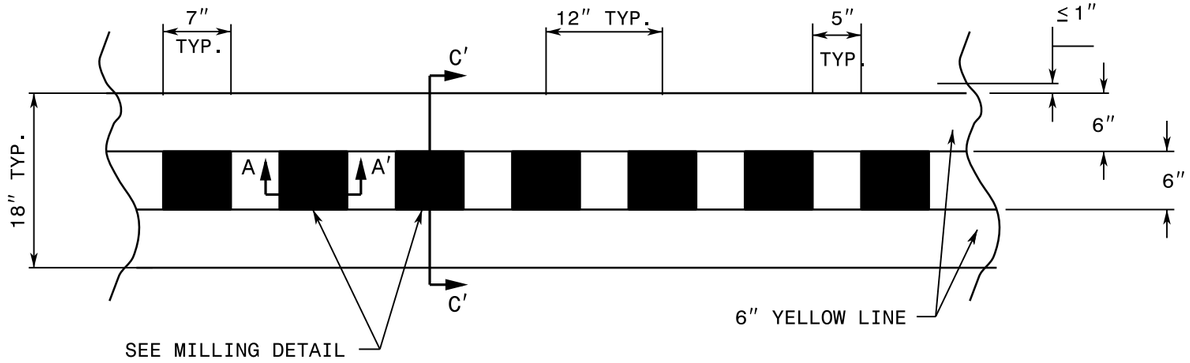
REFERENCE DRAWING ID: Trad.CL with Snowplowable Markers

NOTES:

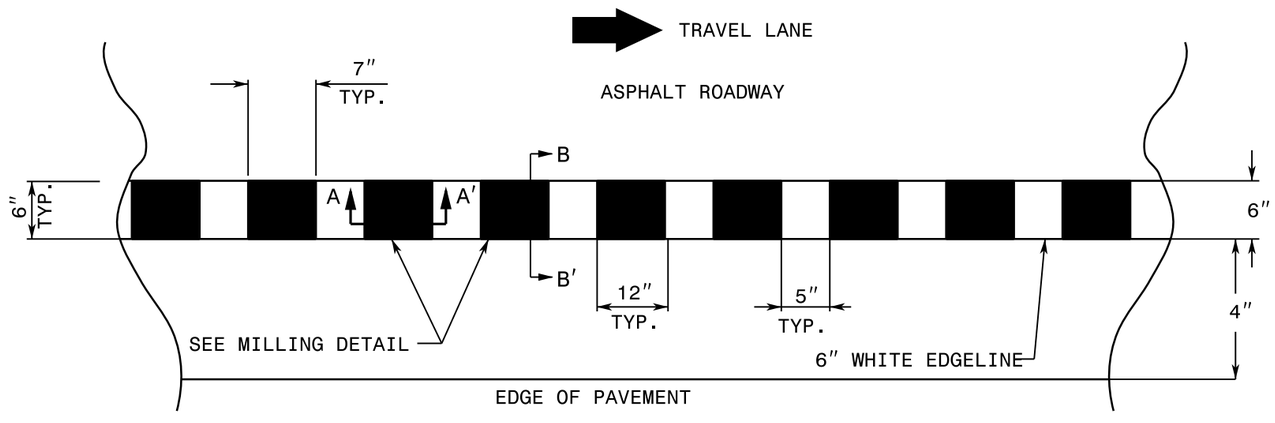
1) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.
3) INSTALL SNOWPLOWABLE MARKERS AT APPROXIMATELY 80′ INCREMENTS. DO NOT MILL RUMBLE STRIPS IN SECTION WHERE SNOWPLOWABLE MARKERS ARE INSTALLED.

SHEET 7 OF 7

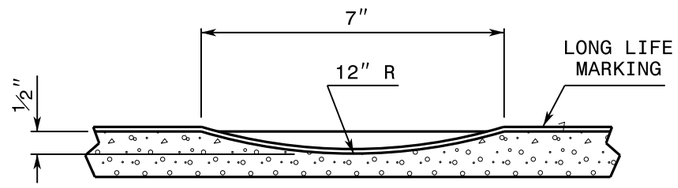
PROJ. REFERENCE NO.	SHEET NO.



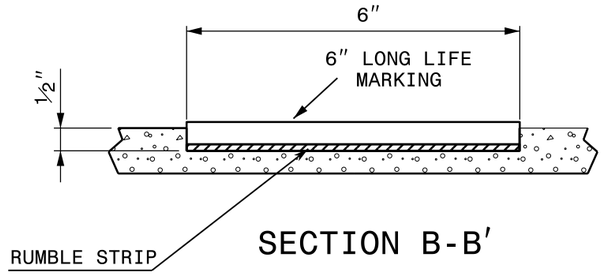
CENTERLINE



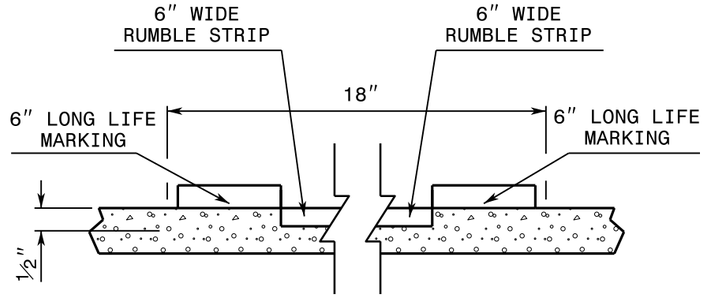
MILLING DETAIL



SECTION A-A′



SECTION B-B′



SECTION C-C′

NOTE:

1) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.

2) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.

3) IF SNOWPLOWABLE MARKERS ARE TO BE INSTALLED IN THE CENTERLINE, SKIP A 18″ SPACE IN THE RUMBLE STRIPS EVERY 80′

APPROVED:_____ DATE:_____

SEAL

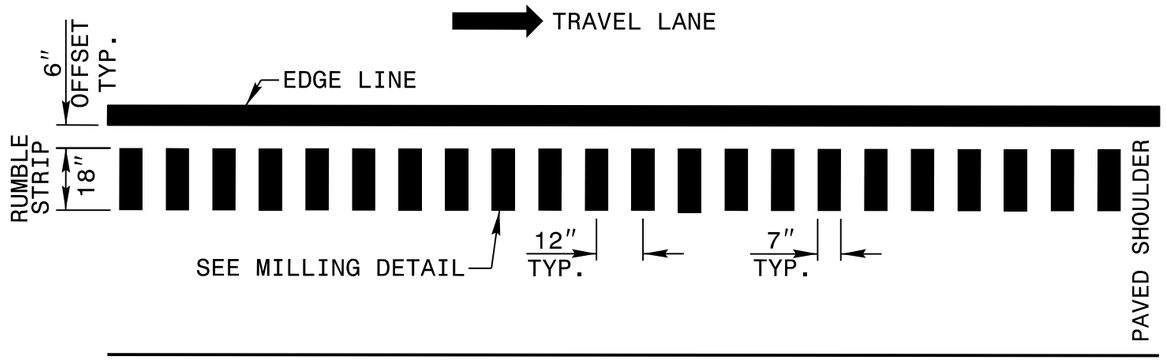
MILLED RUMBLE STRIP DETAIL

SCALE:	NONE
DATE:	JUN 17′
DWG. BY:	TWB
DESIGN BY:	TWB
REVIEWED BY:	

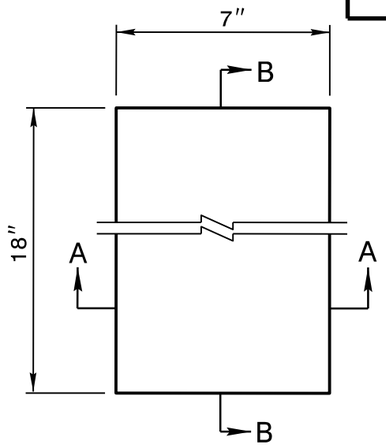
DIVISION OF HIGHWAYS

REVISIONS	
CADD FILE	

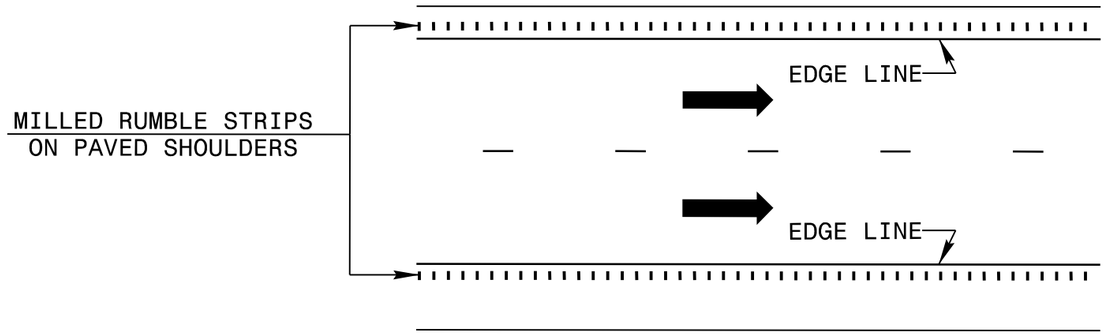
PROJ. REFERENCE NO.	SHEET NO.



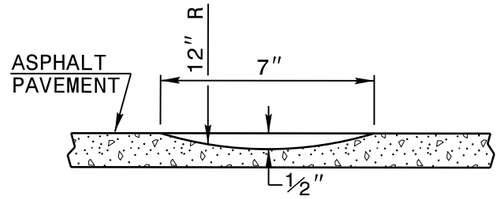
PLAN VIEW
PAVED SHOULDER



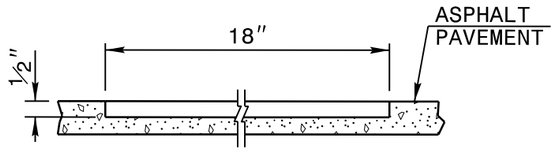
PLAN VIEW
MILLING DETAIL



LANE TREATMENT



SECTION A-A



SECTION B-B

NOTES:

1. THE MILLING OPERATION SHALL MAINTAIN A MINIMUM CLEARANCE OF 3″ FROM CONSTRUCTION JOINTS.

APPROVED:_____ DATE:_____

SEAL

MILLED/SINUSOIDAL RUMBLE STRIP DETAIL

SCALE:	NONE
DATE:	
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	

DIVISION OF HIGHWAYS
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

REVISIONS	
CADD FILE	