

PLANS FOR:

NEBEL STREET SEPARATED BICYCLE FACILITY

MONTGOMERY COUNTY, MARYLAND
RANDOLPH ROAD TO MARINELLI ROAD

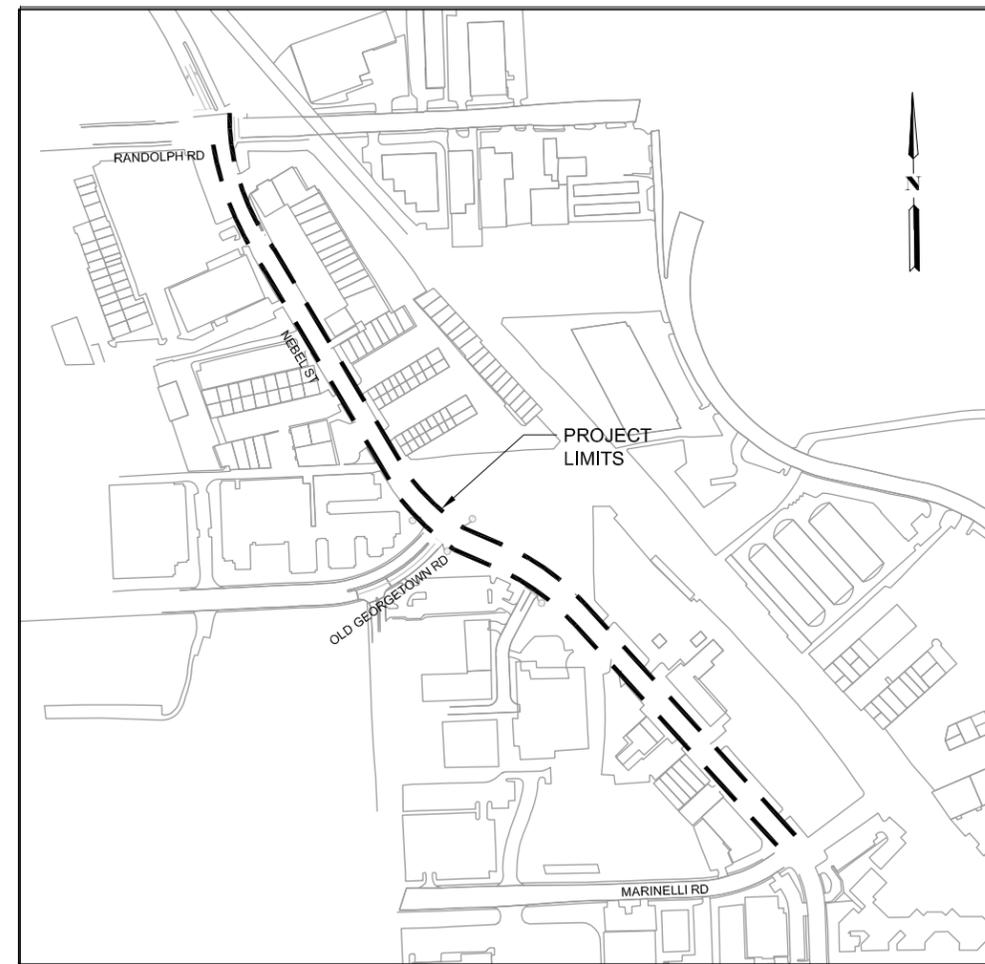
SEPTEMBER 21, 2015 - 90% SUBMITTAL

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LOCATION MAP

1"=250'



CONTACTS

CLIENT:
MONTGOMERY COUNTY DEPARTMENT
OF TRANSPORTATION
100 EDISON PARK, 4TH FLOOR
GAITHERSBURG, MARYLAND
CONTACT: PATRICIA SHEPHERD, AICP

CIVIL ENGINEER:
TOOLE DESIGN GROUP, LLC
8484 GEORGIA AVENUE,
SUITE 800
SILVER SPRING, MARYLAND 20910
TEL: (301) 927-1900
FAX: (301) 927-2800
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NEBEL ST BICYCLE FACILITY
INTERSECTION OPTIONS
NEBEL STREET AT RANDOLPH ROAD
MONTGOMERY COUNTY, MD



PREPARED: ML
CHECKED: MAB
DATE
09/21/2015
REV. 1 -
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COVER SHEET

C0.0

SHEET NUMBER
1 OF 13

GENERAL NOTES

1. BASE MAPPING WAS PREPARED FROM GIS DATA PROVIDED BY MCDOT. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO PLACING STRIPING, SYMBOLS OR SIGNS. WHEN THESE PLANS ARE IN CONFLICT WITH ACTUAL SITE CONDITIONS, PROPOSED STRIPING AND SIGNS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
2. ALL STRIPING AND SIGNS WORK SHALL COMPLY WITH THE LATEST APPLICABLE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL (MDMUTCD) AND MCDOT STANDARDS AND SPECIFICATIONS. SIGNS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH MCDOT AND SHA STANDARDS AND SPECIFICATIONS.
3. ALL EXISTING PAVEMENT MARKINGS MAY NOT BE SHOWN. ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS SHALL BE ERADICATED BY A METHOD APPROVED BY MCDOT.
4. ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL BE GOVERNED BY THE MONTGOMERY COUNTY DIVISION OF TRANSPORTATION ENGINEERING DESIGN STANDARDS.
5. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MISS UTILITY PRIOR TO BEGINNING WORK. ANY DAMAGE TO UTILITIES MUST BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE.
6. THE CONTRACTOR SHALL TAKE ADEQUATE PRECAUTION TO PROTECT ALL GRADING, SIDEWALKS AND FEATURES OUTSIDE THE LIMITS OF WORK AND SHALL REPAIR AND REPLACE OR OTHERWISE MAKE GOOD AS DIRECTED BY THE ENGINEER ANY SUCH OR CAUSED BY THE CONTRACTOR'S OPERATIONS AT NO ADDITIONAL COST TO MCDOT.

SIGNING AND PAVEMENT MARKINGS

7. ALL PAVEMENT MARKINGS ARE THERMOPLASTIC UNLESS OTHERWISE NOTED.
8. FIRE HYDRANTS - NOT ALL FIRE HYDRANTS HAVE BEEN LOCATED FOR THIS STRIPING PLAN. FIELD VERIFY FIRE HYDRANT LOCATIONS AND STRIPE NO PARKING ZONE FOR 15 FEET ON EITHER SIDE OF FIRE HYDRANT.
9. DRIVEWAYS - NOT ALL DRIVEWAYS HAVE BEEN LOCATED FOR THIS STRIPING PLAN. FIELD VERIFY DRIVEWAY LOCATIONS BEFORE APPLYING STRIPING.
10. ALL SIGNS SHALL BE HIGH INTENSITY REFLECTIVE SHEETING MEETING THE REQUIREMENTS OF AASHTO M268.
11. PROPOSED SIGNS SHALL BE INSTALLED SO THAT NO PORTION OF THE SIGN PANEL OVERHANGS ADJACENT ROADWAY PAVEMENT, I.E. SHALL NOT HANG IN FRONT OF A FACE OF CURB.
12. PROPOSED SIGN POSTS SHALL BE LOCATED A MINIMUM OF 2 FEET BEHIND ANY ADJACENT FACE OF CURB. IF LOCATED IN OR ADJACENT TO SIDEWALKS, A 32" MINIMUM CLEAR AND 48" PREFERRED PASSING SPACE ON EXISTING AND PROPOSED SIDEWALKS SHALL BE MAINTAINED.
13. PROPOSED SIGNS AND RELOCATED EXISTING SIGNS SHALL BE INSTALLED SO THEY DO NOT BLOCK THE VISIBILITY OF ANY EXISTING SIGNS OR SIGNALS, OR OBSTRUCT SIGHT LINES AT INTERSECTIONS.
14. PROPOSED SIGNS AND POSTS SHALL BE CLEAR OF EXISTING FIRE HYDRANTS, SURFACE UTILITY, AND OVERHEAD UTILITY EQUIPMENT A MINIMUM OF 10 FEET.
15. FOR NEW POST INSTALLATION, THE CONTRACTOR SHALL VERIFY THAT THERE ARE NO CONFLICTING UNDERGROUND OR OVERHEAD UTILITIES.
16. NEW POST INSTALLATION SHALL COMPLY WITH MD SHA STANDARD NO. MD 802.04 AND MD 813.08-1.
17. SIGNS MOUNTED TO EXISTING LIGHT, SIGNAL OR UTILITY POLES SHALL BE FASTENED WITH A MANUFACTURED STEEL BANDING SYSTEM PER MD SHA STANDARD NO. MD 813.08. POLES SHALL NOT BE DRILLED DIRECTLY. THE CONTRACTOR SHALL SUBMIT MANUFACTURER INFORMATION ON THE BANDING SYSTEM TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
18. IF SIGN INSTALLATION IS SHOWN ON A POLE THAT IS NOT OWNED BY THE COUNTY, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER (UTILITY COMPANY OR PROPERTY OWNER). THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING REQUIRED PERMISSION.
19. ALL CROSSWALKS SHALL BE INSTALLED CONNECTING THE CURB RAMPS SUCH THAT THE CURB RAMPS FALL WITHIN THE MARKED CROSSWALK. MINIMUM CROSSWALK WIDTH IS 10 FEET. MAXIMUM CROSSWALK WIDTH IS 20 FEET. DIAGONAL CORNER CURB RAMPS SHALL HAVE A CLEAR SPACE OF FOUR FEET WITHIN THE CROSSWALK MARKINGS. CROSSWALK MARKINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO FINAL INSTALLATION.

MARKING LEGEND

EXISTING	PROPOSED	
		SIGN AND POST
		BICYCLE LANE SYMBOL
		SHARED LANE MARKING SYMBOL
	5" SWL	5" SOLID WHITE LANE LINE (E.G. INSIDE BIKE LANE LINE)
	10" SWL	10" SOLID WHITE LANE LINE (E.G. OUTSIDE BIKE LANE LINE)
	5" BWL	5" BROKEN WHITE LANE LINE (10' STRIPE, 30' SKIP)
	5" DWL	5" DOTTED WHITE LANE LINE (2' STRIPE, 4' SKIP)
	10" DWL	10" DOTTED WHITE LANE LINE (2' STRIPE, 4' SKIP)
	5" SYL	5" SOLID YELLOW LANE LINE
	5" SYCL	5" SOLID YELLOW CENTERLINE (CYCLE TRACK)
	5" DAYCL	5" DASHED YELLOW CENTER LINE (CYCLE TRACK - 3' STRIPE, 9' SKIP)
	5" DSYCL	5" DOUBLE SOLID YELLOW CENTERLINE
	5" SBYCL	5" SOLID YELLOW LANE LINE WITH 5" BROKEN YELLOW LANE LINE (10' STRIPE, 30' SKIP)
	8" SWCT	8" SOLID WHITE/BLACK CONTRAST TAPE (SUGGESTED MANUFACTURER: 3M STAMARK OR APPROVE EQUAL)
	10" SWCHL	10" SOLID WHITE CHANNELIZATION LINE (45° TYP.)
	10" SYCHL	10" SOLID YELLOW CHANNELIZATION LINE (45° TYP.)
	16" SL	16" STOP LINE
	24" SL	24" STOP LINE
	HVCW	CROSSWALK WITH 2' SWL - 5' O.C. ALIGNED WITH DIRECTION OF TRAVEL UNLESS OTHERWISE NOTED
		WHITE PAVEMENT ARROW, REFER TO MDMUTCD
		GREEN PREFORMED THERMOPLASTIC PAVEMENT MARKING MATERIAL
		SIGN



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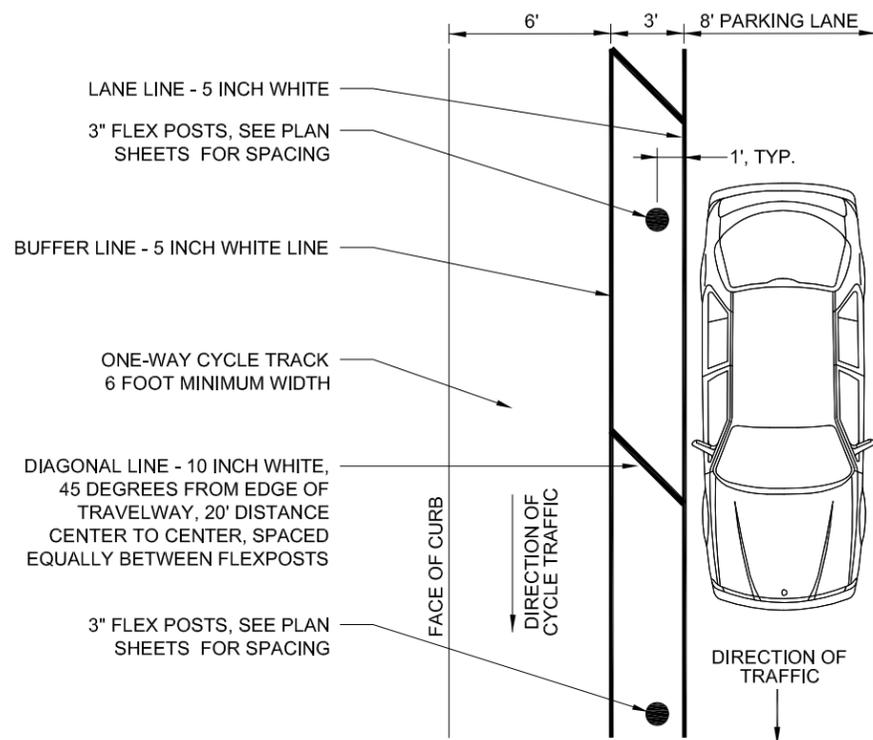
MARKING LEGEND - 1

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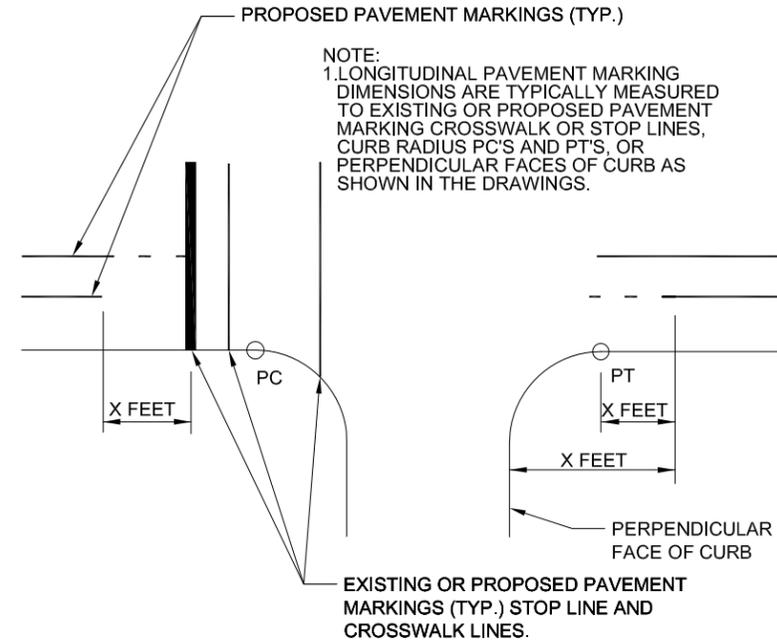
C1.0
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02 OF 13

CYCLE TRACK SYMBOL PLACEMENT NOTES:

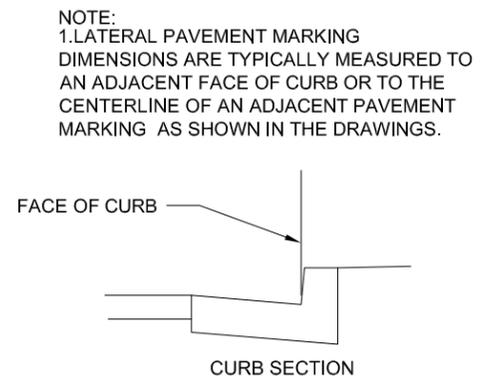
1. DO NOT PLACE SYMBOLS ON LANE LINES.
2. PLACE LANE SYMBOLS WITHIN CENTER OF EACH CYCLE TRACK LANE.
3. SEE PLAN SHEETS FOR SYMBOL LOCATIONS.



CYCLE TRACK STRIPING
N.T.S.

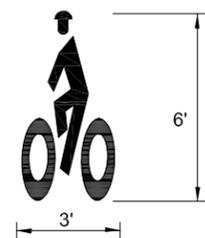


TYPICAL LONGITUDINAL STRIPING METHOD OF DIMENSIONING
N.T.S.

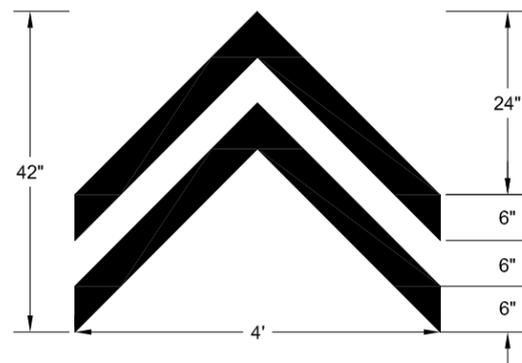


TYPICAL LATERAL STRIPING METHOD OF DIMENSIONING
N.T.S.

NOTE:
1. SEE THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD) FOR MORE DETAILS. (BICYCLE LANE SYMBOL WITHOUT ARROW)



6' CYCLIST SYMBOL WITHIN DRIVEWAYS
N.T.S.



CHEVRONS
N.T.S.

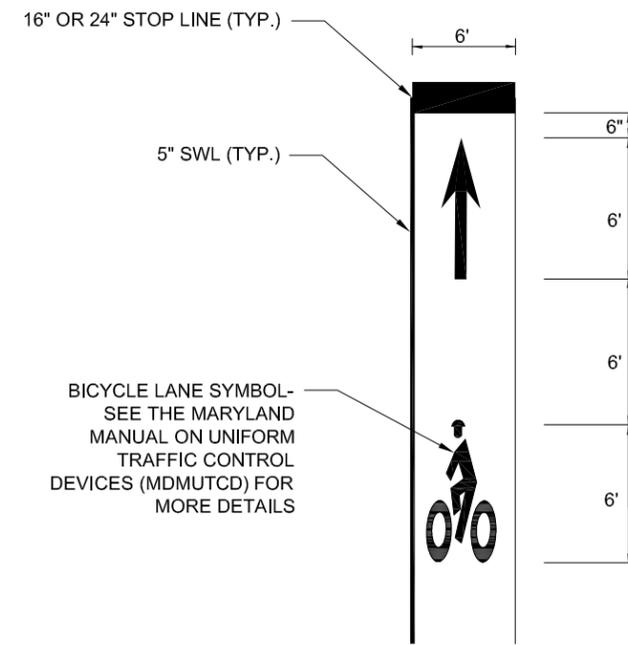
RIGHT PAVEMENT ARROW AT 50% SCALE, SEE THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD) FOR MORE DETAILS



BICYCLE LANE SYMBOL- SEE THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD) FOR MORE DETAILS



"TURNING BICYCLE LANE" SYMBOL
N.T.S.



TYPICAL CYCLE TRACK LANE SYMBOL AT INTERSECTIONS
N.T.S.

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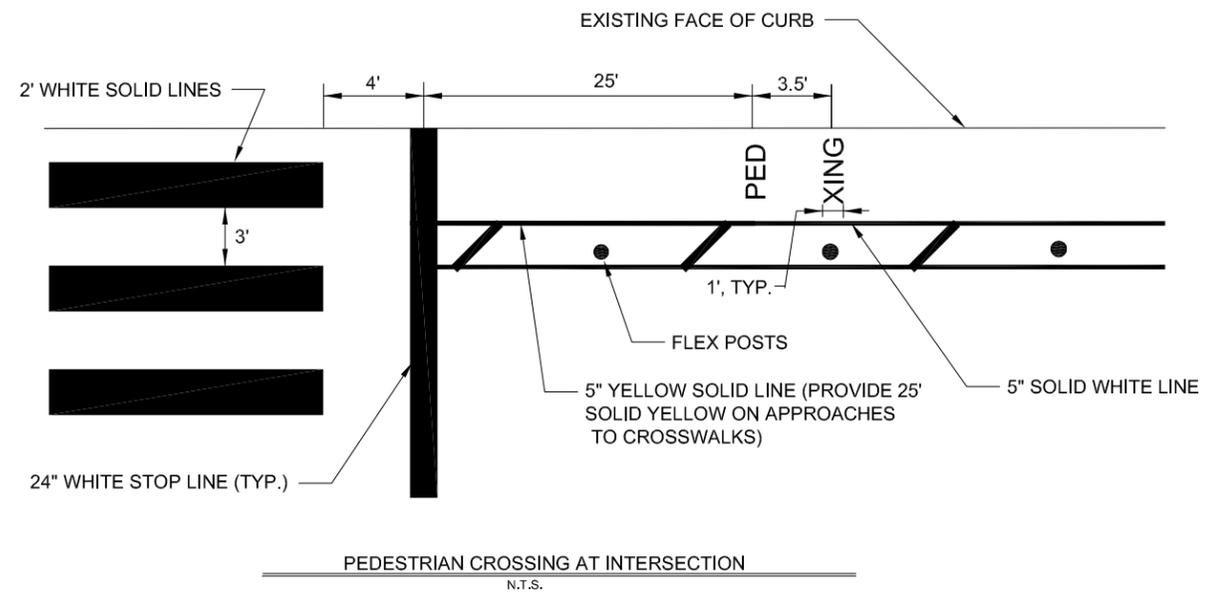
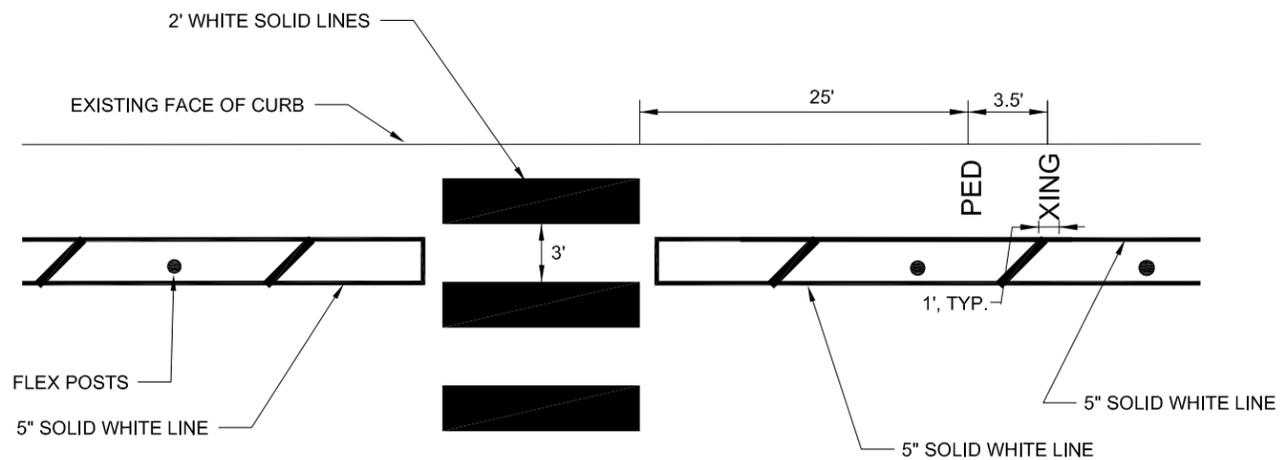
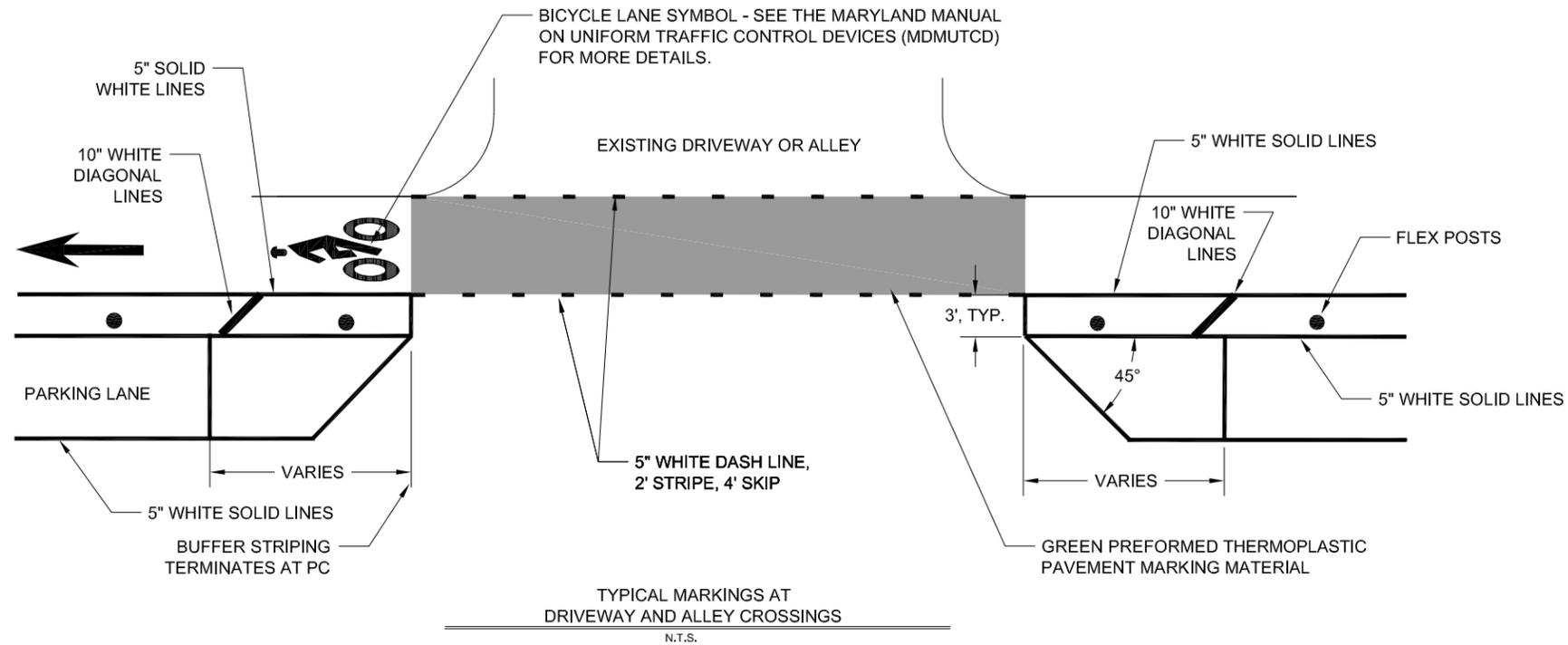


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DETAIL SHEET - 1

C1.1

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03 OF 13



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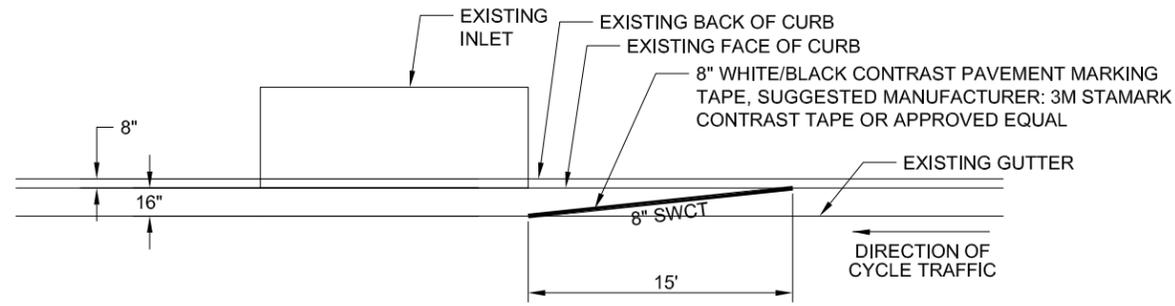
**NEBEL ST BICYCLE FACILITY
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NEBEL STREET AT RANDOLPH ROAD
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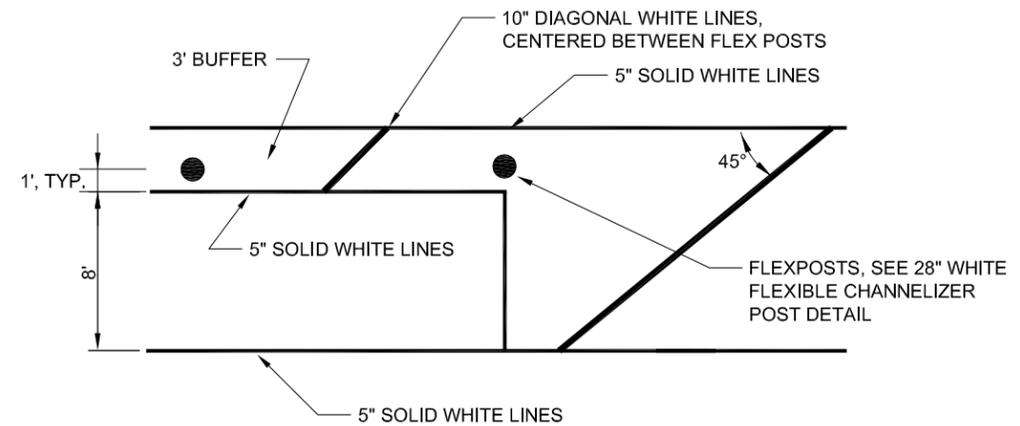
DETAIL SHEET - 2

C1.2
SHEET NUMBER
04 OF 13



TYPICAL HAZARD STRIPING AT INLET

N.T.S.

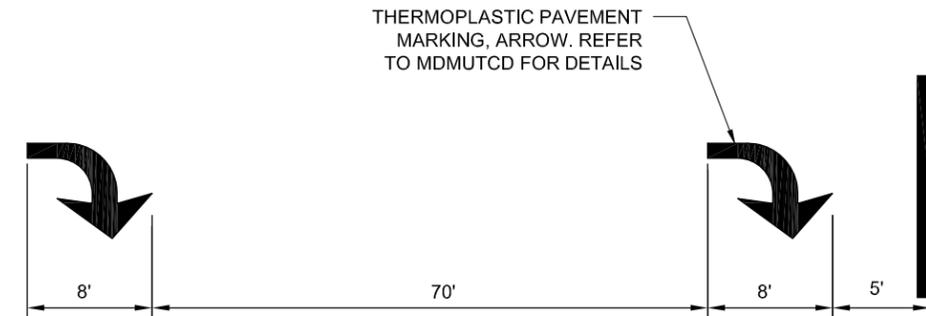


TYPICAL FLEXPOST PLACEMENT AT PARKING TERMINUS

N.T.S.

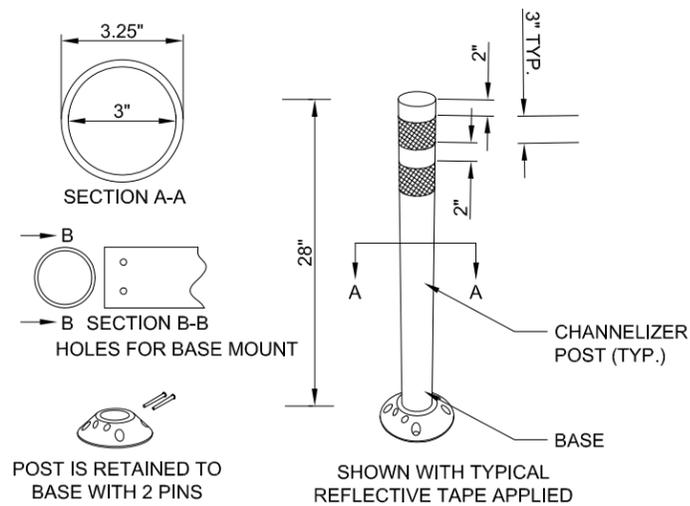
NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DIMENSIONS, MATERIALS, AND ATTACHMENTS MAY VARY BETWEEN MANUFACTURERS.
3. COLOR OF POST SHALL MATCH COLOR OF APPLICABLE EDGE LINE.
4. SUGGESTED MANUFACTURERS INCLUDE: FILTRONA EXTRUSIONS, SAFE-HIT, CARSONITE COMPOSITES, QWICK KURB, BENT MANUFACTURING, & IMPACT RECOVERY SYSTEMS.



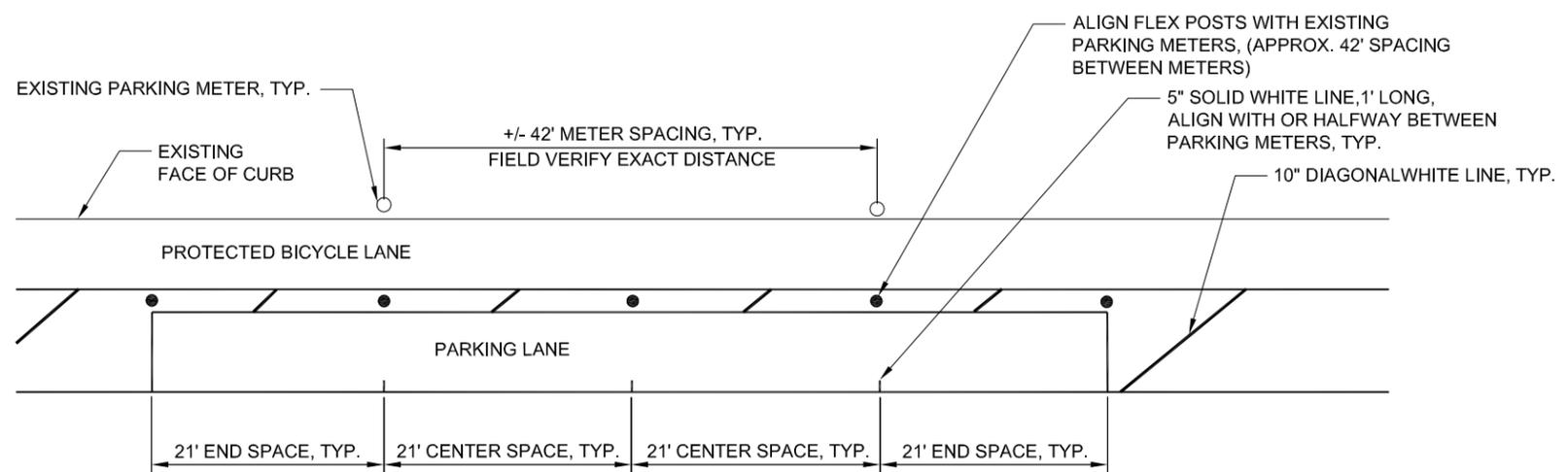
TYPICAL VEHICLE TRAVEL LANE PAVEMENT MARKING ARROW PLACEMENT, UNLESS OTHERWISE NOTED ON PLANS

N.T.S.



28" WHITE FLEXIBLE CHANNELIZER POST DETAIL

N.T.S.



TYPICAL PAVEMENT MARKINGS INDICATING PARKING SPACES

N.T.S.

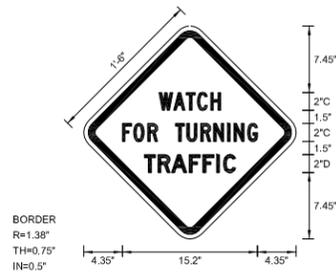


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DETAIL SHEET - 3

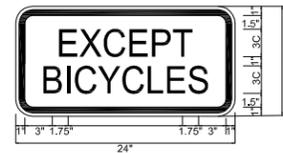
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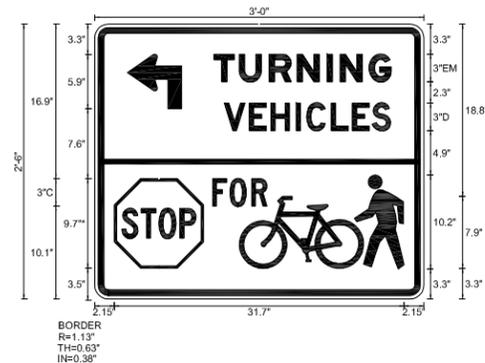
SIGN NUMBER	W23-2 MOD
WIDTH x HGHT.	1'-6" x 1'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	1.38"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Yellow/Black

W23-2 MOD - "WATCH FOR TURNING TRAFFIC" SIGN
N.T.S.



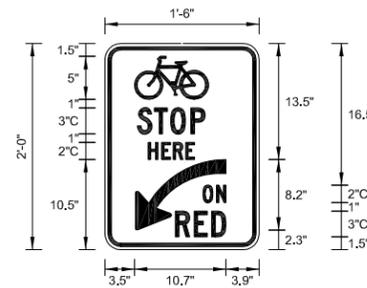
SIGN NUMBER	R3-5iP
FONT	C 2000
WIDTH x HGHT.	24" x 12"
BORDER WIDTH	0.375" / 0.625"
CORNER RADIUS	1.875"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: White
LEGEND/BORDER	TYPE: Reflective COLOR: Black/Black

R3-5iP - "EXCEPT BICYCLES" SIGN
N.T.S.



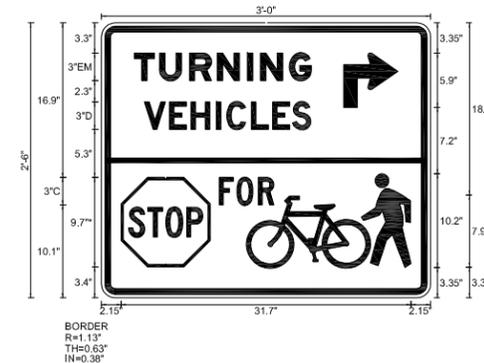
SIGN NUMBER	R10-15L MOD
WIDTH x HGHT.	3'-0" x 2'-6"
BORDER WIDTH	0.63"
CORNER RADIUS	1.13"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: White/Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Black/Black

R10-15L MOD - "TURNING VEHICLES, STOP FOR BIKES AND PEDS" SIGN
N.T.S.



SIGN NUMBER	R10-6b
WIDTH x HGHT.	1'-6" x 2'-0"
BORDER WIDTH	0.38"
CORNER RADIUS	1.5"
MOUNTING	Overhead
BACKGROUND	TYPE: Reflective COLOR: White
LEGEND/BORDER	TYPE: Reflective COLOR: Black/Black

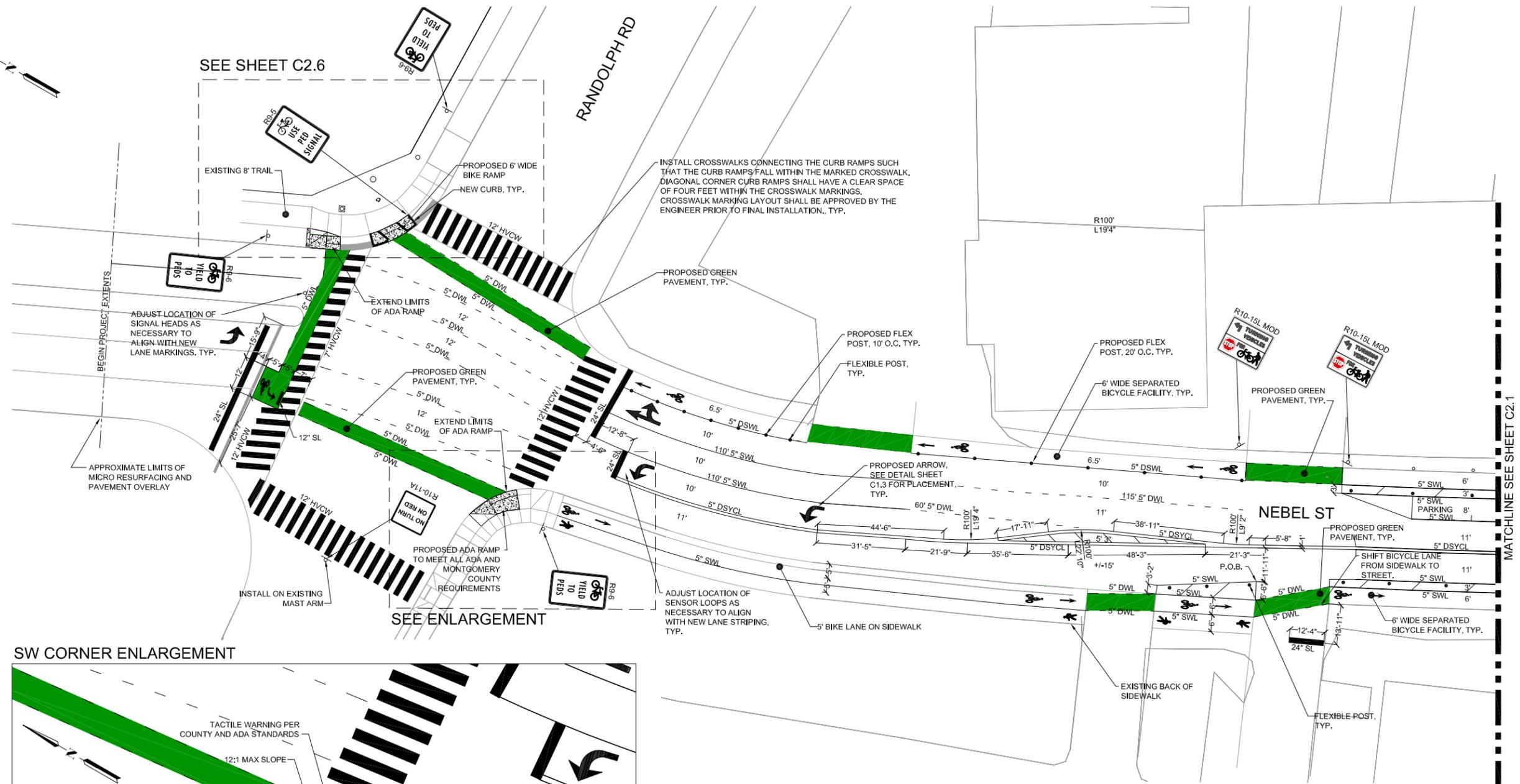
R10-6B - "BIKES STOP HERE ON RED" SIGN
N.T.S.



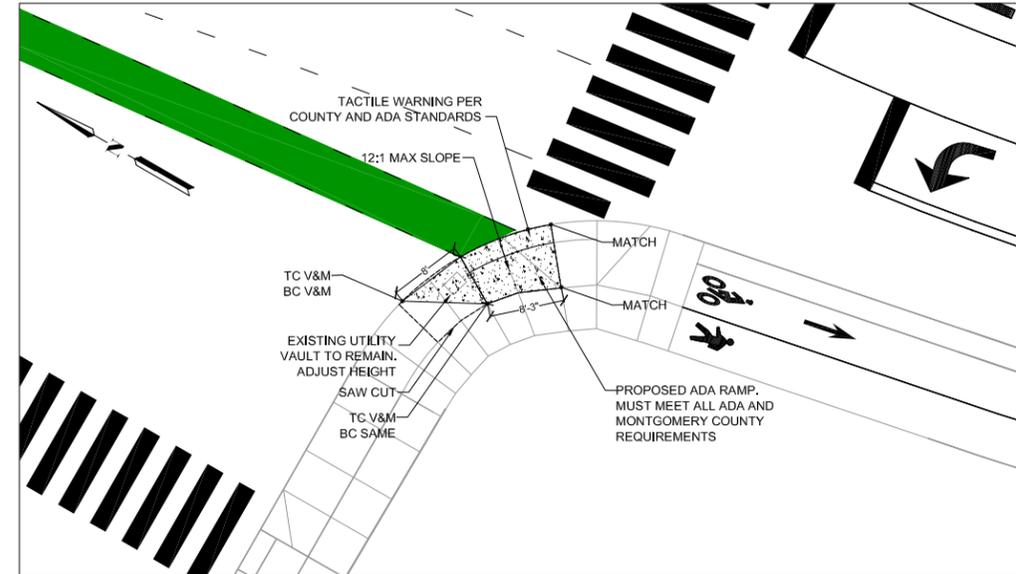
SIGN NUMBER	R10-15R MOD
WIDTH x HGHT.	3'-0" x 2'-6"
BORDER WIDTH	0.63"
CORNER RADIUS	1.13"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective COLOR: White/Yellow
LEGEND/BORDER	TYPE: Reflective COLOR: Black/Black

R10-15R MOD - "TURNING VEHICLES, STOP FOR BIKES AND PEDS" SIGN
N.T.S.





SW CORNER ENLARGEMENT



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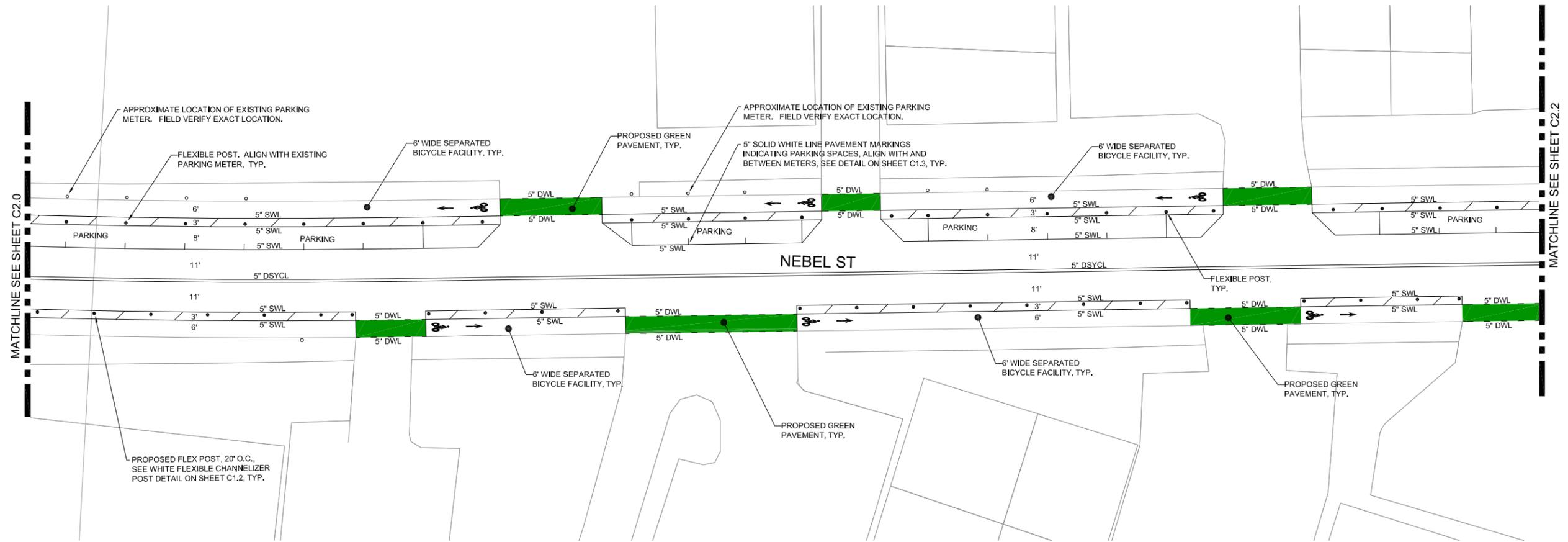
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SIGNING AND MARKING PLAN

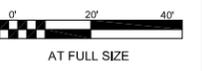
C2.0

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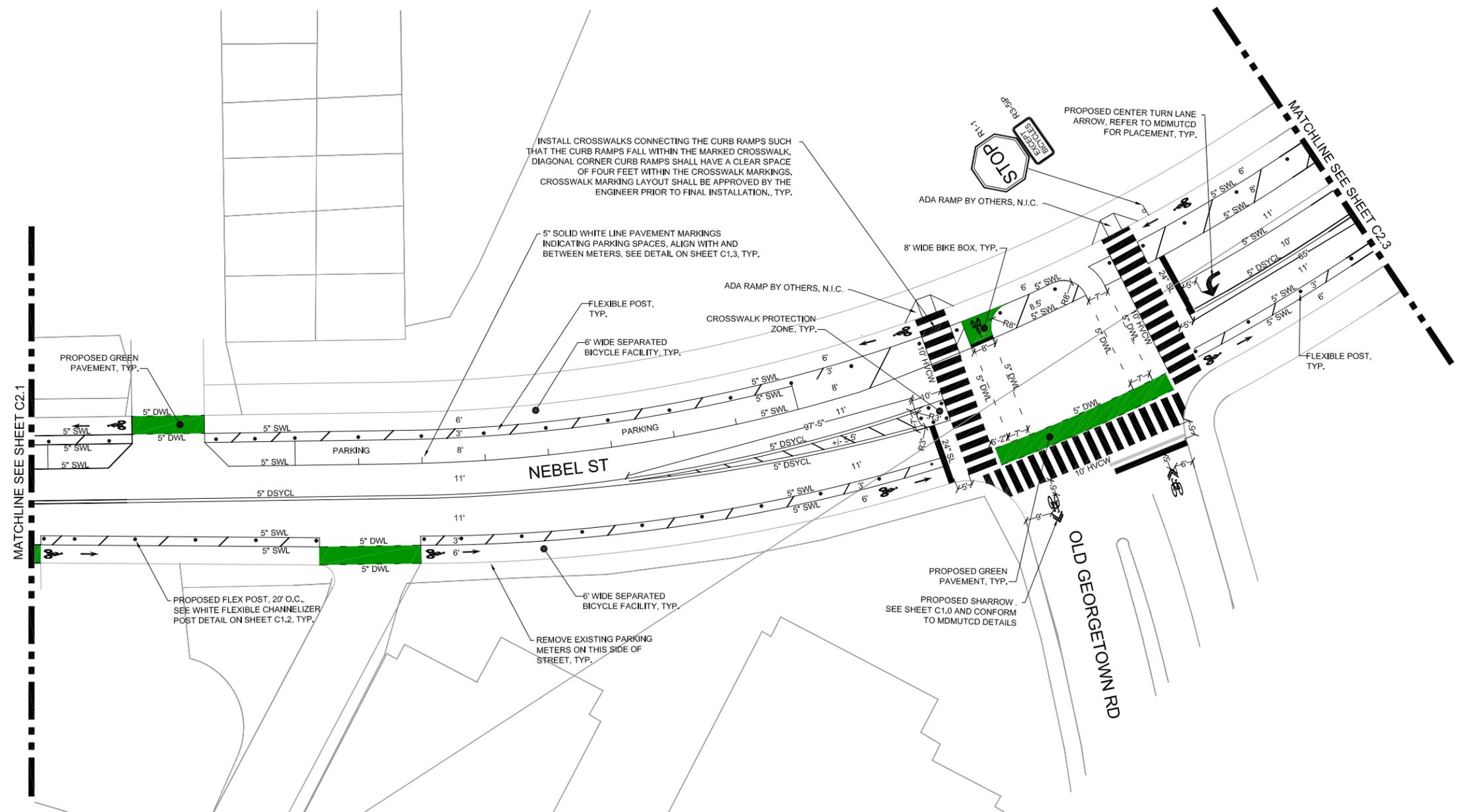


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SIGNING AND
 MARKING PLAN

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C2.1
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INSTALL CROSSWALKS CONNECTING THE CURB RAMP SUCH THAT THE CURB RAMP FALLS WITHIN THE MARKED CROSSWALK. DIAGONAL CORNER CURB RAMP SHALL HAVE A CLEAR SPACE OF FOUR FEET WITHIN THE CROSSWALK MARKINGS. CROSSWALK MARKING LAYOUT SHALL BE APPROVED BY THE ENGINEER PRIOR TO FINAL INSTALLATION., TYP.

5" SOLID WHITE LINE PAVEMENT MARKINGS INDICATING PARKING SPACES, ALIGN WITH AND BETWEEN METERS, SEE DETAIL ON SHEET C1.3, TYP.

FLEXIBLE POST, TYP.

6" WIDE SEPARATED BICYCLE FACILITY, TYP.

CROSSWALK PROTECTION ZONE, TYP.

ADA RAMP BY OTHERS, N.I.C.

8" WIDE BIKE BOX, TYP.

PROPOSED CENTER TURN LANE ARROW, REFER TO MDMUTCD FOR PLACEMENT, TYP.

FLEXIBLE POST, TYP.

PROPOSED FLEX POST, 20" O.C., SEE WHITE FLEXIBLE CHANNELIZER POST DETAIL ON SHEET C1.2, TYP.

6" WIDE SEPARATED BICYCLE FACILITY, TYP.

REMOVE EXISTING PARKING METERS ON THIS SIDE OF STREET, TYP.

PROPOSED SHARROW, SEE SHEET C1.0 AND CONFORM TO MDMUTCD DETAILS

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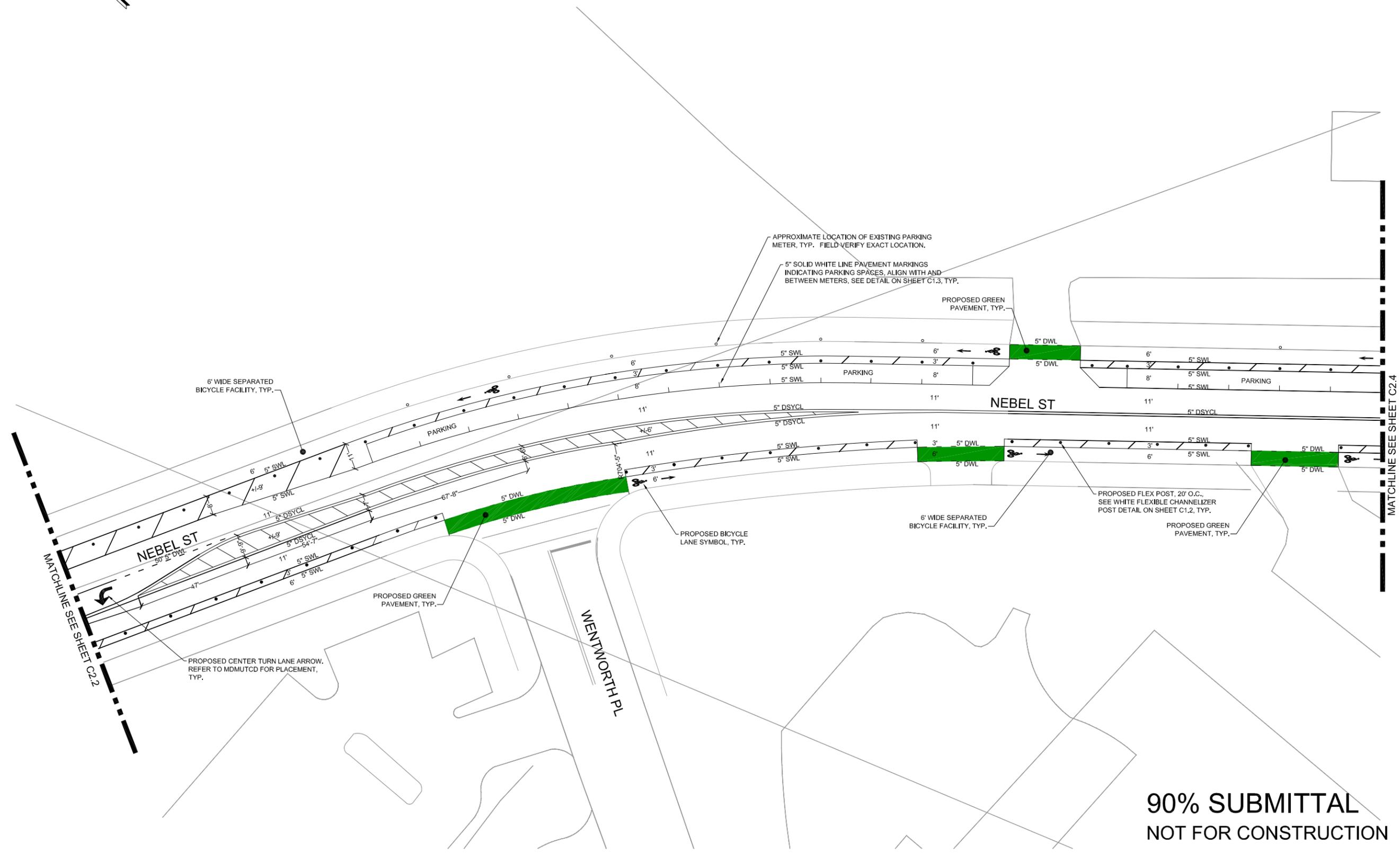


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SIGNING AND MARKING PLAN

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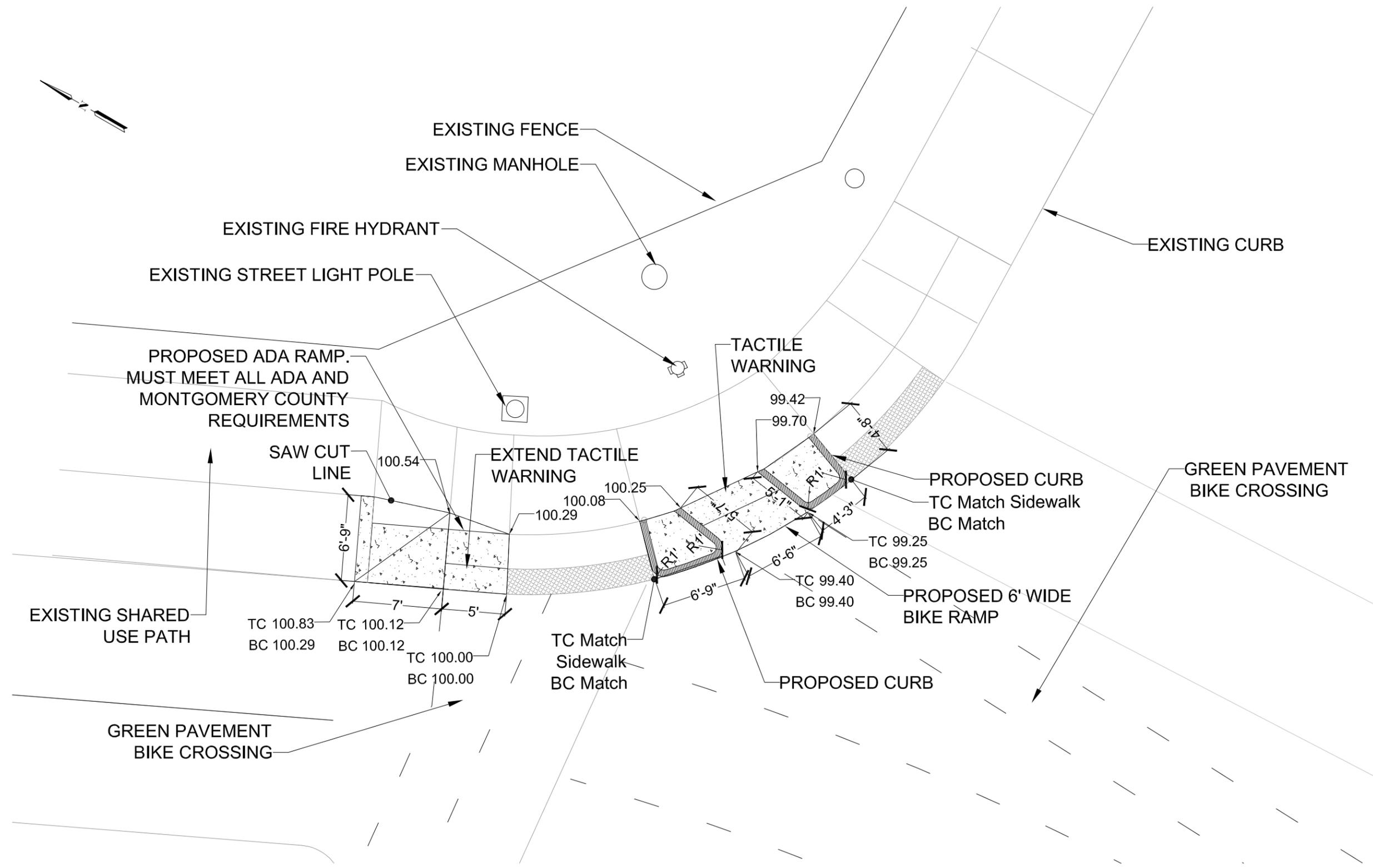


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SIGNING AND MARKING PLAN

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SIDEWALK
 ENLARGEMENT PLAN

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