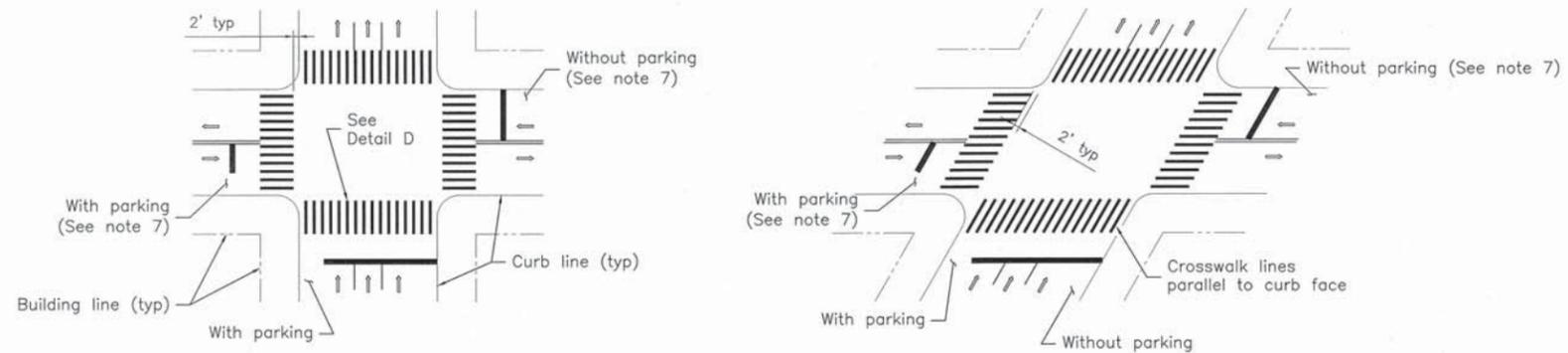
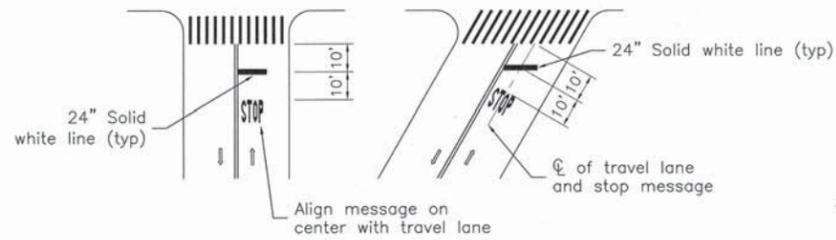


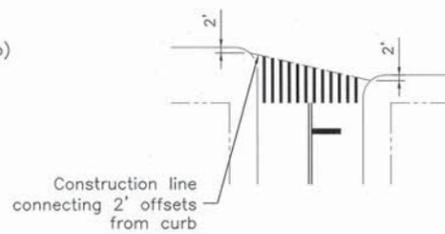
Typical Crosswalks & Stop Bars



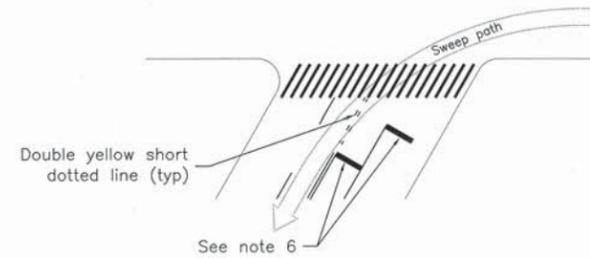
Detail A: Typical Stop Bar & Stop Message Placement



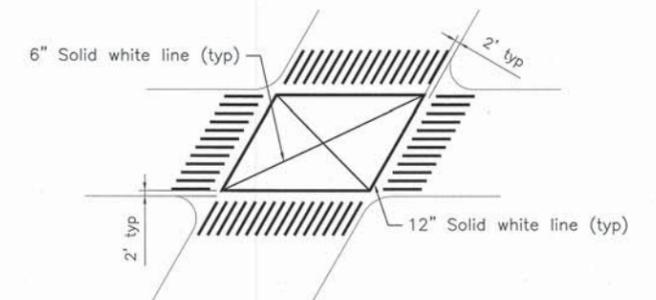
Detail C: Trapezoidal Crosswalks at Offset Curblines



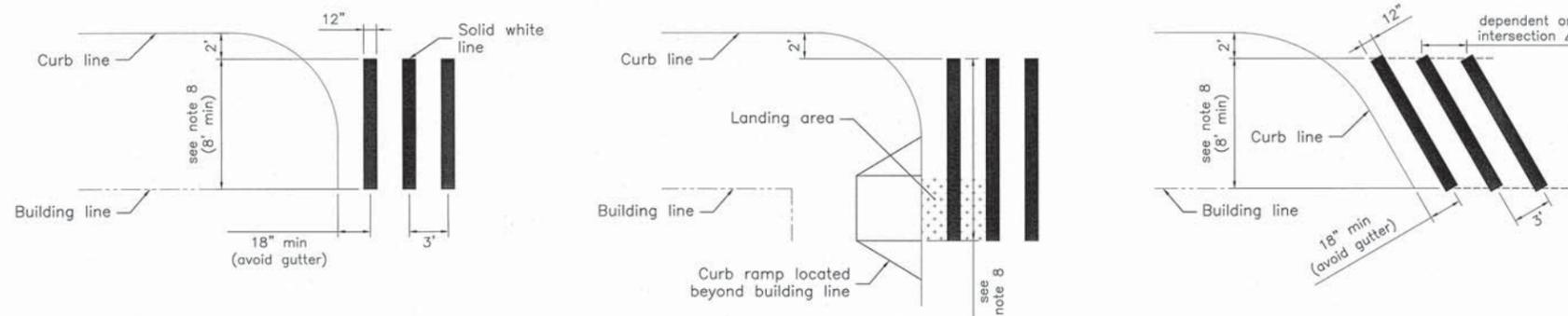
Detail B: Optional Staggered Stop Bar for Constrained Turns



Detail E: Do Not Block Intersection Markings



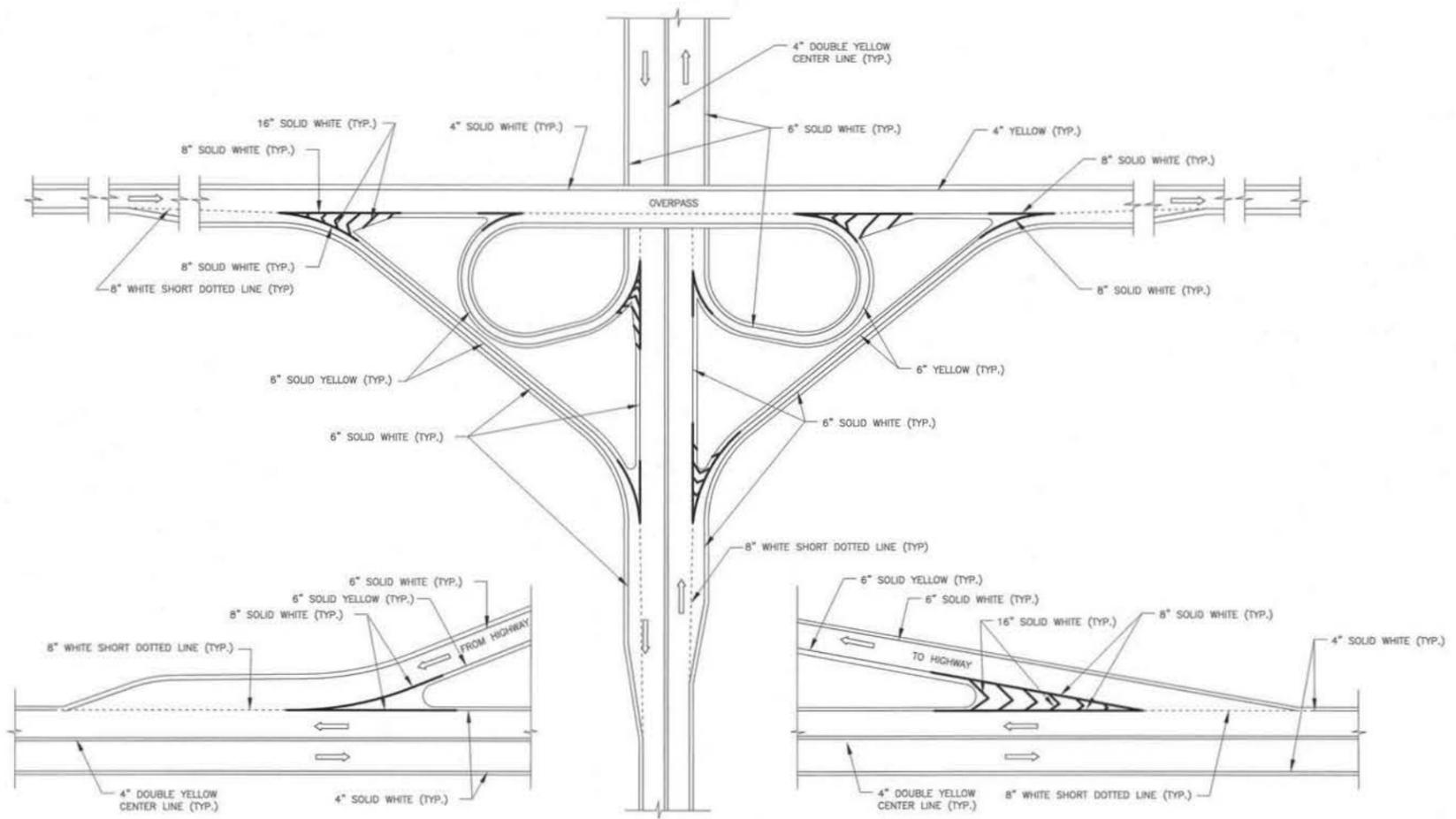
Detail D: Crosswalk Stripe Spacing and Length



NOTES:

1. The front of crosswalk shall be set back 2' from the curb line unless otherwise specified by the engineer or for accessibility (see note 2).
2. At corners with apex pedestrian ramps, the landing area must fall within the crosswalks, in some cases requiring widening of the crosswalk(s) or marking an extension at the corner.
3. Crosswalks shall be installed at any signalized, stop-controlled, or yield-controlled leg of an intersection, unless otherwise specified.
4. Stop bars shall be installed in any signalized or stop controlled travel lane entering the intersection.
5. All stop bars shall be 10' offset from the back of the crosswalk, parallel to the back of crosswalk, unless otherwise specified.
6. Stop bars may be staggered or setback to accommodate large vehicle turns.
7. Presence or absence of curbside parking shown for illustrative purposes only. Stop bars should extend to curb on streets without curbside parking. Stop bars should extend to parking lane stripe on streets with striped curbside parking. Stop bars should extend to 8' from curb, or as determined by engineer, on streets with unstriped curbside parking.
8. Unless otherwise specified by the engineer on a plan or order, the back of crosswalk shall extend to whichever is greatest of the following: the building line (back of sidewalk if adjacent parcel is undeveloped), the full extent of the corresponding curb ramp's landing area, or a minimum width of 8'.

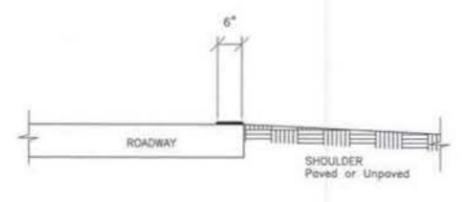




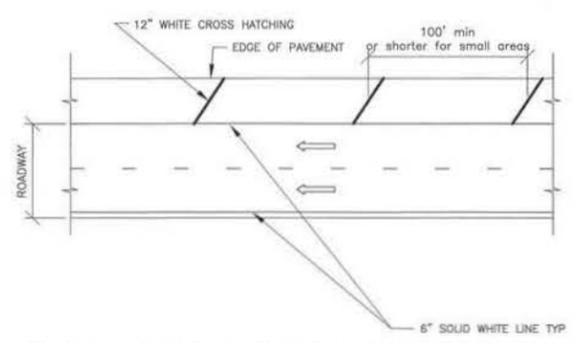
HIGHWAY EXIT GORE

CLOVER LEAF INTERCHANGE

HIGHWAY ENTRANCE GORE



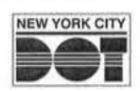
EDGE LINE DETAIL



CROSS HATCHING ADJACENT TO EDGE LINE

NOTES:

1. This drawing replaces DWGS.: MC-89A; MG-443; MG-444.
2. The actual length of the gores and cross sections shall be designed by an engineer based on an actual street layout and traffic conditions according to AASHTO requirements.
3. For city streets see typical drawing TSC-1.



CITY OF NEW YORK DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION PLANNING AND MANAGEMENT (TP&M)
 28-11 Queens Plaza North L.I.C., N.Y. 11101

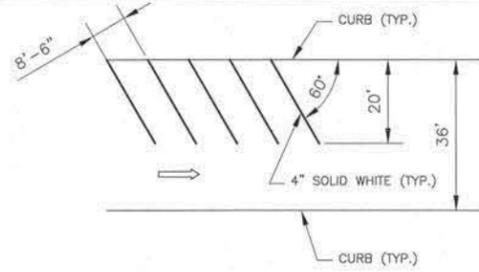
TYPICAL PAVEMENT MARKINGS
 EDGE LINES FOR PARKWAYS & HIGHWAYS



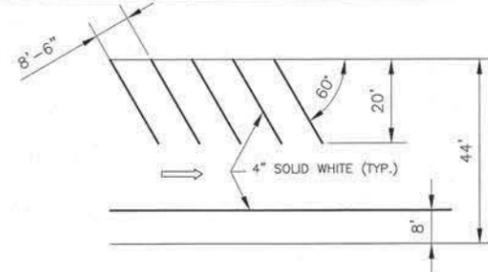
Drawn by D. NELSON
 Checked by S. BARKHO & F. AZER
 Borough ALL
 Scale NOT TO SCALE
 Effective Date 12/01/2015

SHEET 2 OF 18
 DRAWING
 NO. TEL-1

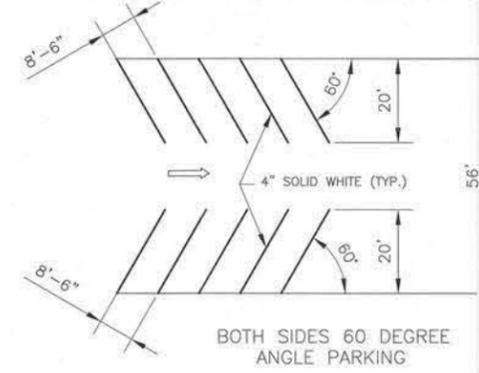
ONE WAY
TRAFFIC



ONE SIDE 60 DEGREE ANGLE PARKING

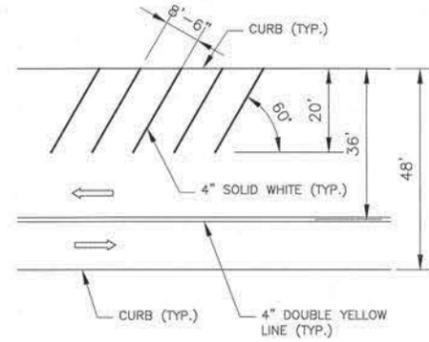


ONE SIDE 60 DEGREE ANGLE PARKING
OTHER SIDE PARALLEL PARKING

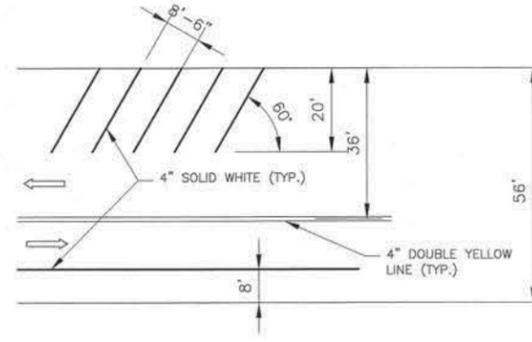


BOTH SIDES 60 DEGREE
ANGLE PARKING

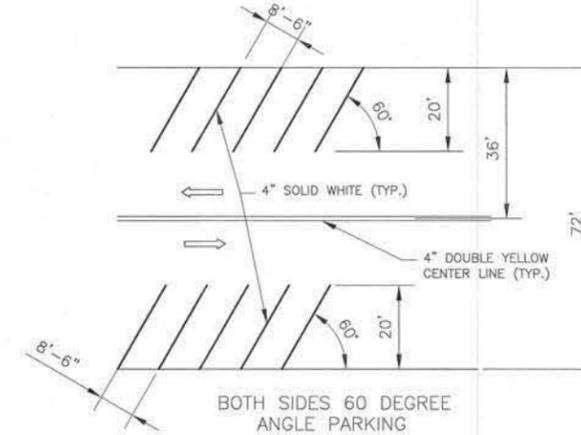
TWO WAY
TRAFFIC



ONE SIDE 60 DEGREE ANGLE PARKING

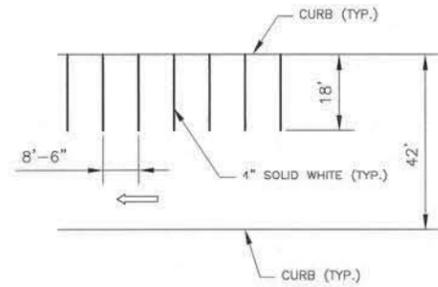


ONE SIDE 60 DEGREE ANGLE PARKING
OTHER SIDE PARALLEL PARKING

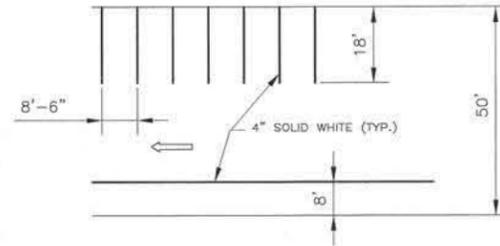


BOTH SIDES 60 DEGREE
ANGLE PARKING

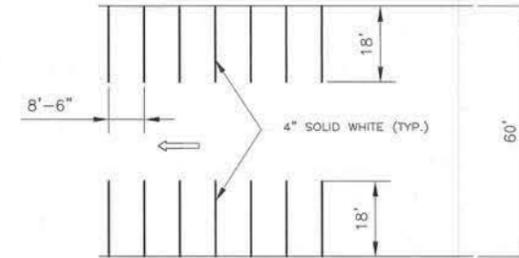
ONE WAY
TRAFFIC



ONE SIDE 90 DEGREE ANGLE PARKING

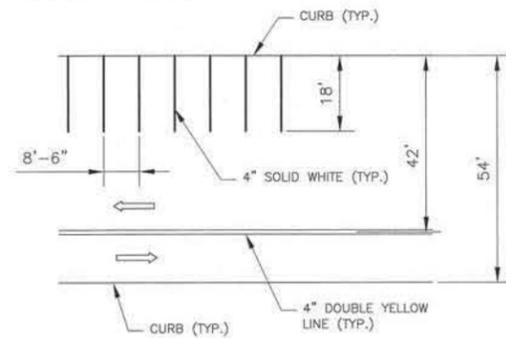


ONE SIDE 90 DEGREE ANGLE PARKING
OTHER SIDE PARALLEL PARKING

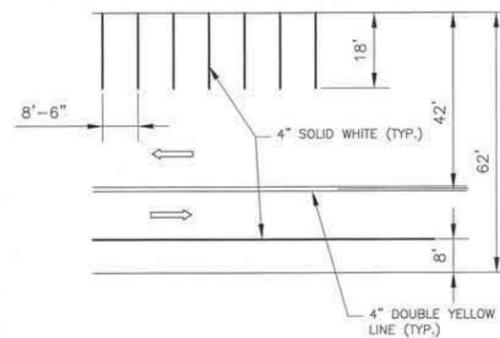


BOTH SIDES 90 DEGREE
ANGLE PARKING

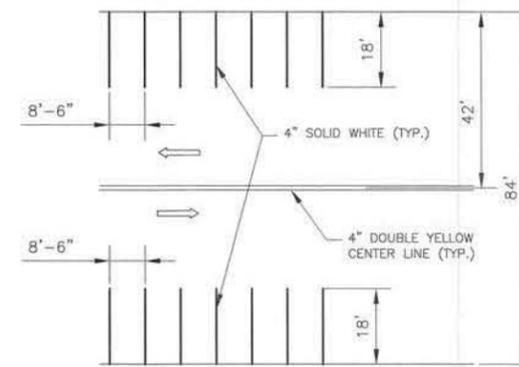
TWO WAY
TRAFFIC



ONE SIDE 90 DEGREE ANGLE PARKING



ONE SIDE 90 DEGREE ANGLE PARKING
OTHER SIDE PARALLEL PARKING



BOTH SIDES 90 DEGREE
ANGLE PARKING

NOTES:

- For 60' parking, if the parking stall width is increased from 8'-6" to 9', the minimum required parking stall depth shall be 18' instead of 20'.



CITY OF NEW YORK DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING AND MANAGEMENT (TP&M)
28-11 Queens Plaza North L.I.C., N.Y. 11101

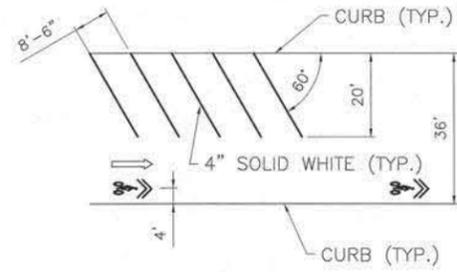
TYPICAL PAVEMENT MARKINGS
ANGLE PARKING



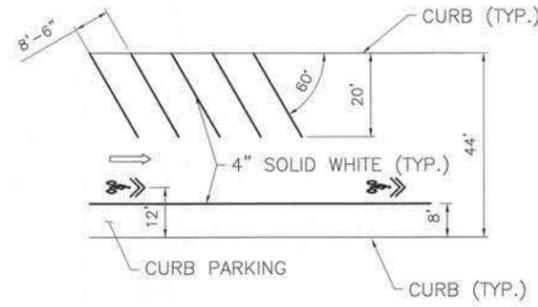
Drawn by D. AMIN
Checked by S. BARKHO & F. AZER
Borough ALL
Scale NOT TO SCALE
Effective Date 12/01/2015

SHEET 3 OF 18
DRAWING
NO. TPK-1

BIKE ROUTE

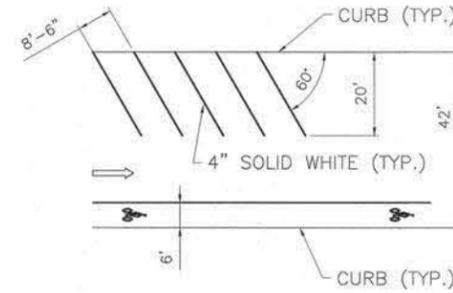


ONE SIDE ANGLE PARKING
OTHER SIDE NO PARKING

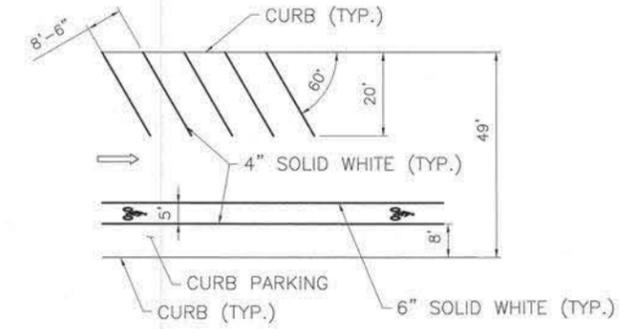


ONE SIDE ANGLE PARKING
OTHER SIDE PARALLEL PARKING

BIKE LANE

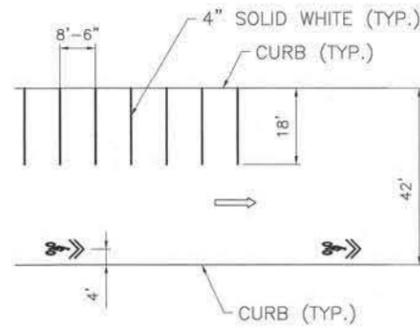


ONE SIDE ANGLE PARKING
OTHER SIDE NO PARKING

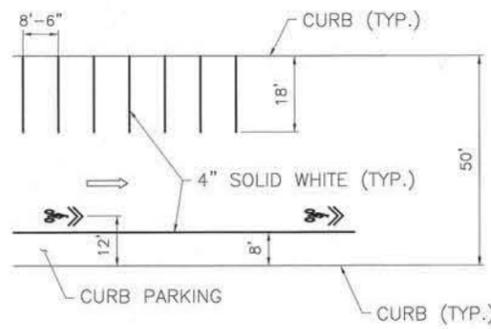


ONE SIDE ANGLE PARKING
OTHER SIDE PARALLEL PARKING

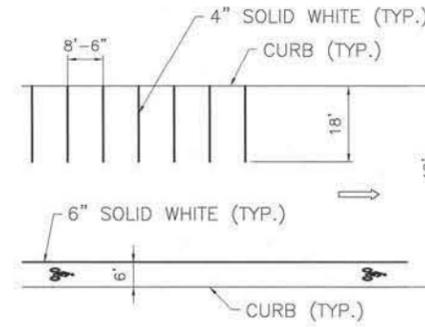
60 DEGREE BACK-IN ANGLE PARKING



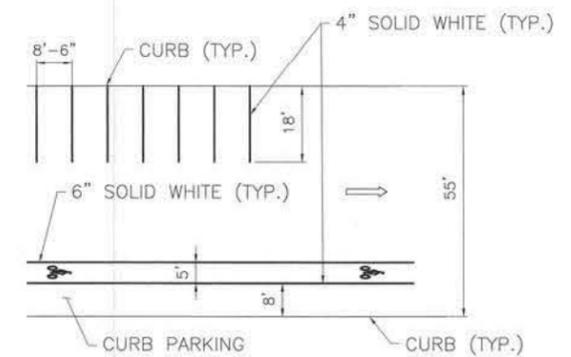
ONE SIDE ANGLE PARKING
OTHER SIDE NO PARKING



ONE SIDE ANGLE PARKING
OTHER SIDE PARALLEL PARKING



ONE SIDE ANGLE PARKING
OTHER SIDE NO PARKING



ONE SIDE ANGLE PARKING
OTHER SIDE PARALLEL PARKING

90 DEGREE BACK-IN ANGLE PARKING

NOTES:

- For 60° parking, if the parking stall width is increased from 8'-6" to 9', the minimum required parking stall depth shall be 18' instead of 20'.



CITY OF NEW YORK DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING AND MANAGEMENT (TP&M)
28-11 Queens Plaza North L.I.C., N.Y. 11101

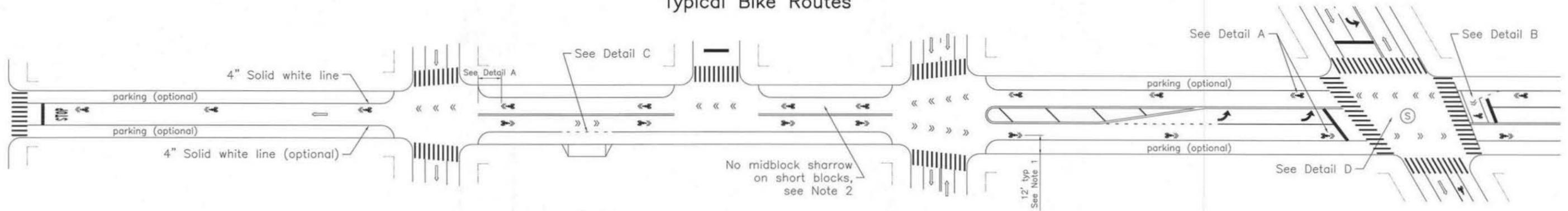
TYPICAL PAVEMENT MARKINGS
BIKE ROUTES & BIKE LANES ALONG ANGLE PARKING



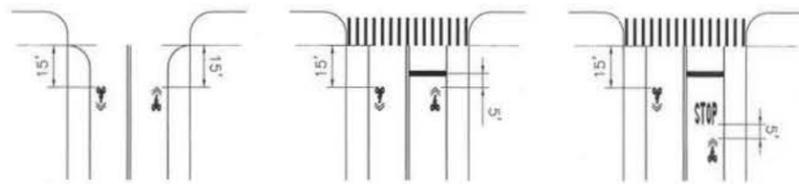
Drawn by D. AMIN
Checked by S. BARKHO & F. AZER
Borough ALL
Scale NOT TO SCALE
Effective Date 12/01/2015

SHEET 4 OF 18
DRAWING
NO. TBAP-1

Typical Bike Routes

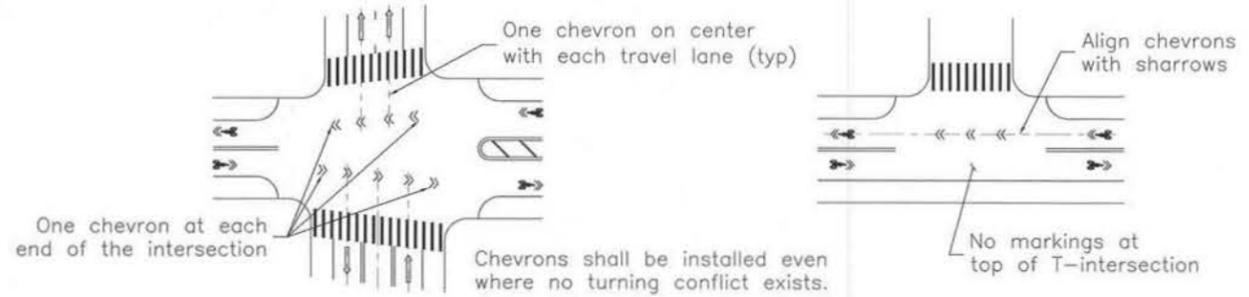


Detail A: Longitudinal Placement at Approaches



Sharrows should be placed 15' from the crosswalk or property line. Where a STOP message or other marking would obstruct the normal placement of the sharrow, the sharrow should be placed 5' from that marking.

Detail D: Bike Route Intersection Markings

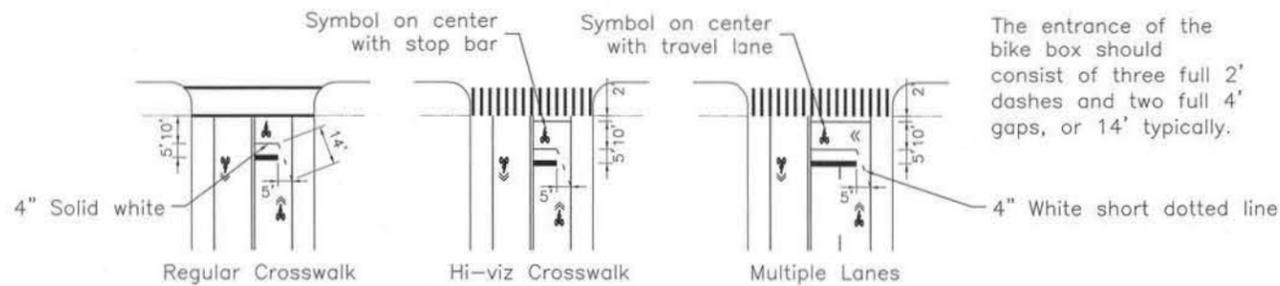


One chevron at each end of the intersection

Chevrons shall be installed even where no turning conflict exists.

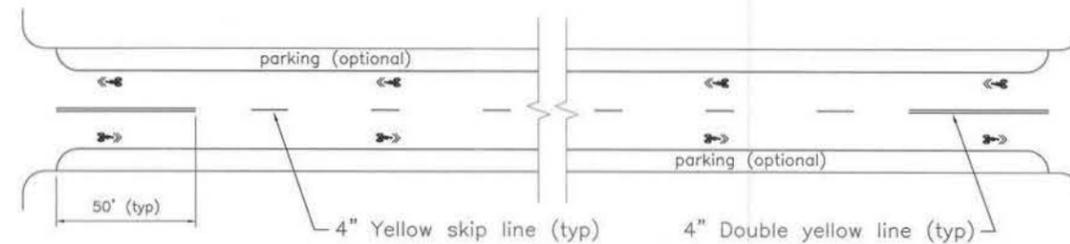
No markings at top of T-intersection

Detail B: Bike Boxes along Bike Routes



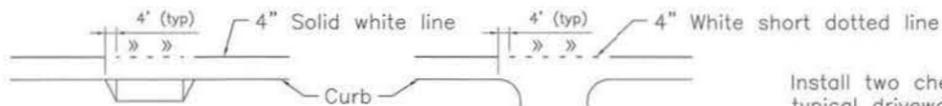
The entrance of the bike box should consist of three full 2' dashes and two full 4' gaps, or 14' typically.

Typical Passing Permitted Shared Lanes



Treatment shall only be installed on blocks >550' with low volumes permitting a two-direction passing zone marking.

Detail C: Treatments across Driveways & Alleys



At driveways with frequent ingress/egress, break parking lane line with short dotted line across curb cut, including flares.

At alleyways, break parking lane line with short dotted line across alley, including curb returns.

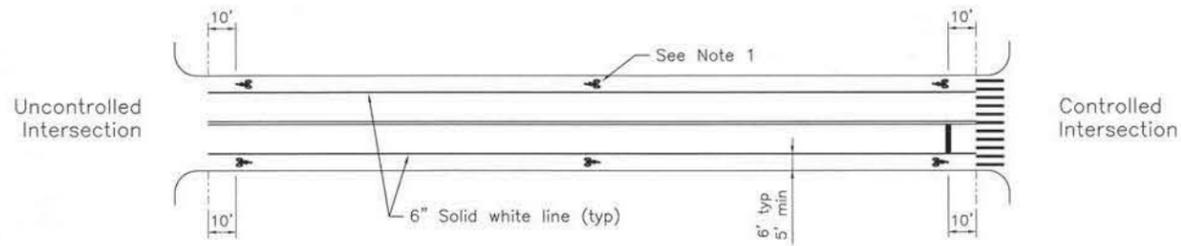
Install two chevrons for a typical driveway or alley 10'-24' wide. More chevrons may be installed for wider driveways.

NOTES:

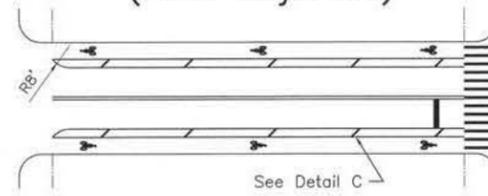
1. Sharrows should be 12' offset from the curb where there is curbside parking lane. In most other cases sharrows should be 4' offset from the curb or lane line.
2. In addition to the sharrows placed at the ends of the block in accordance with Detail A, a sharrow shall be placed at least every 100'.
3. Bike symbols, sharrows, and chevron shall be installed as per typical drawing TAR-1.
4. Some design features not annotated or dimensioned are provided for illustrative purposes.



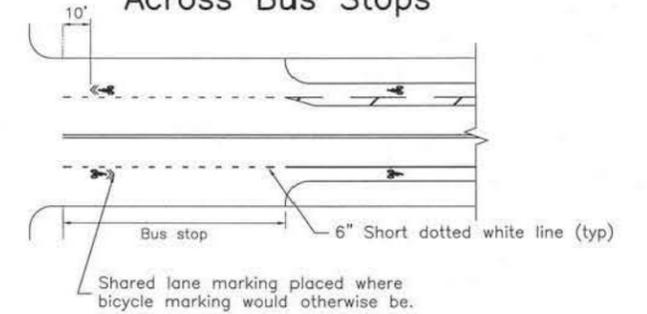
Typical Bike Lanes Adjacent to Curb



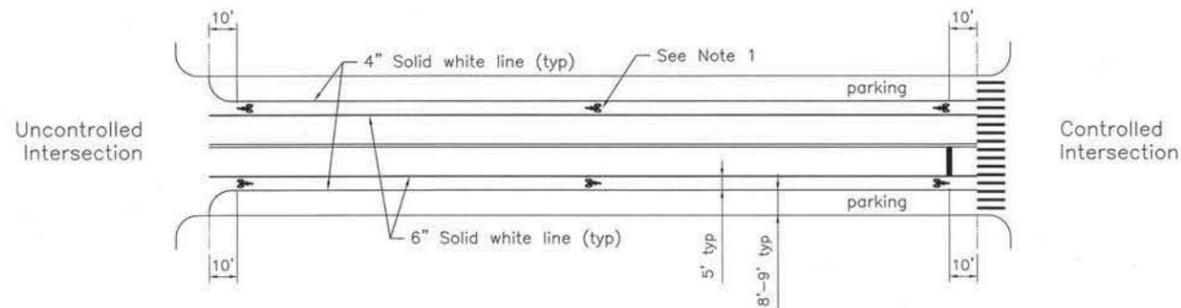
Typical Buffered Bike Lanes (Curb Adjacent)



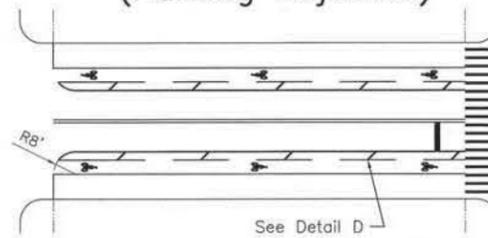
Detail E: Treatments Across Bus Stops



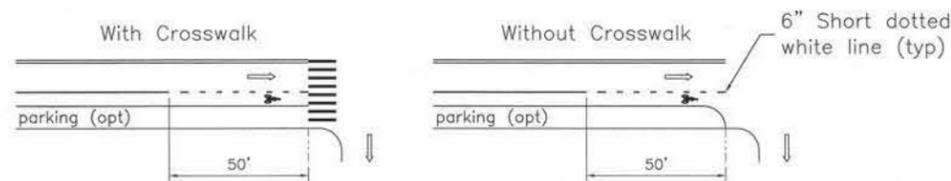
Typical Bike Lanes Adjacent to Parking



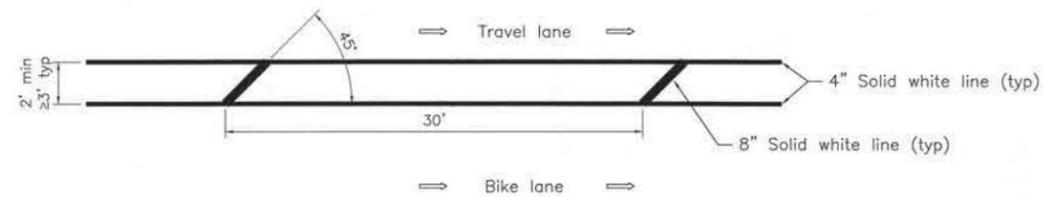
Typical Buffered Bike Lanes (Parking Adjacent)



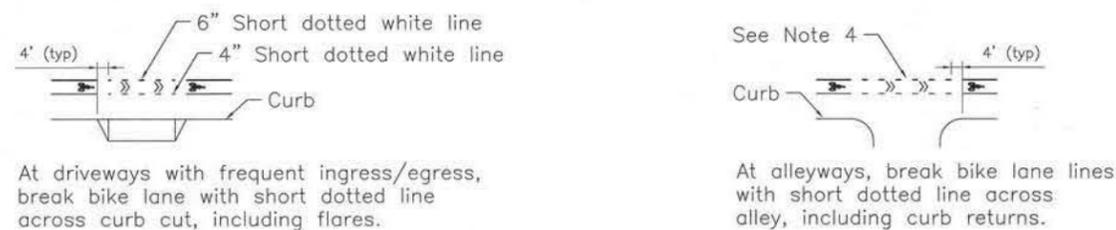
Detail A: Treatment at Right Turn Conflicts



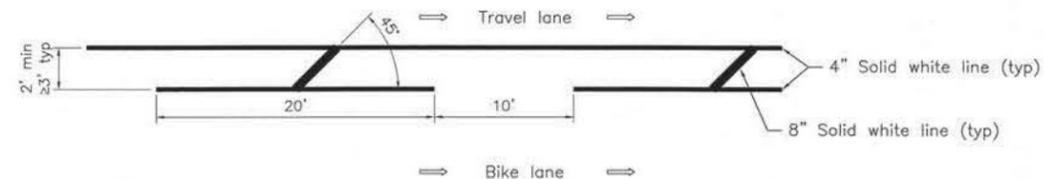
Detail C: Bike Lane Buffer (Parking Prohibited)



Detail B: Treatments Across Driveways and Alleys



Detail D: Bike Lane Buffer (Parking Permitted)

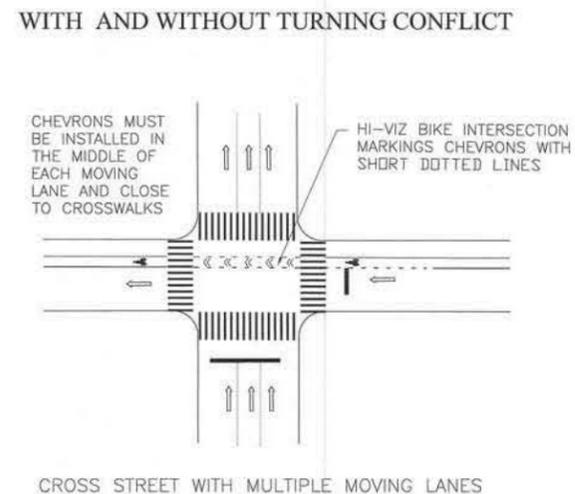
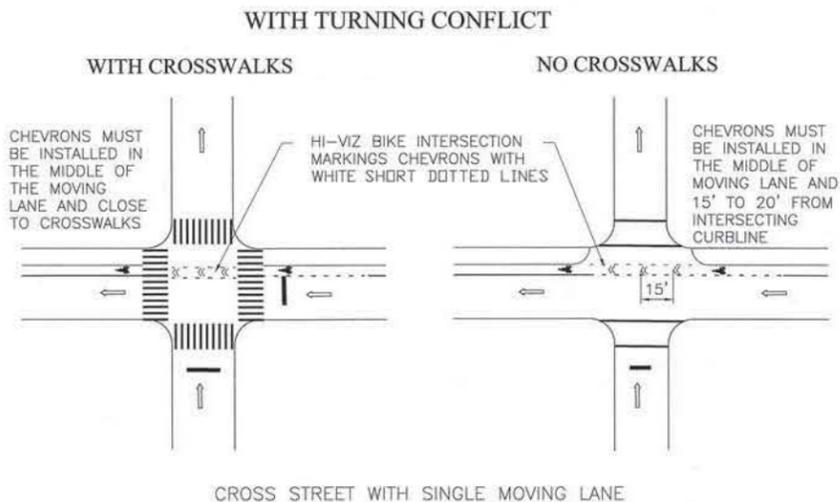
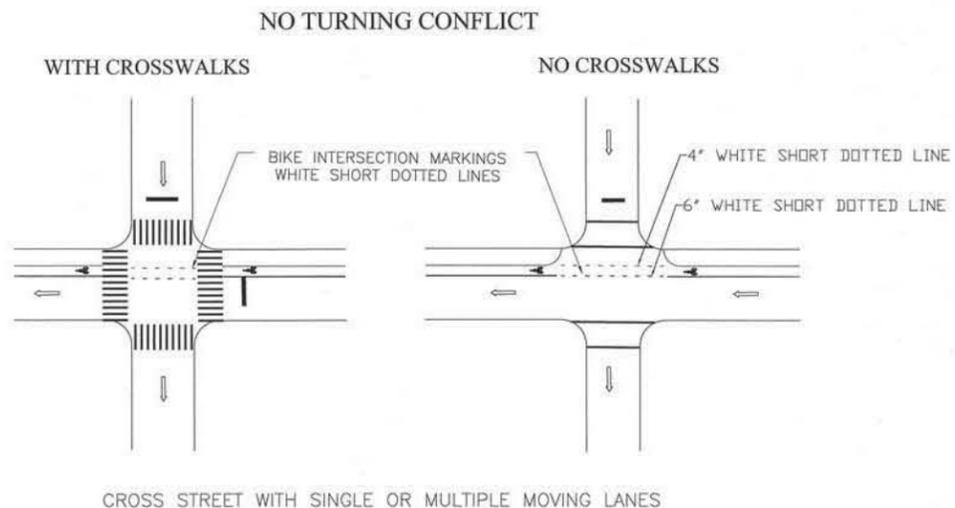


NOTES:

1. Bicycle symbols shall be installed at each end each block with additional symbols at least every 200'. For typical blocks of 450' or less, a single midblock symbol is typical.
2. Bicycle symbols, sharrows, and chevrons shall be installed as per typical drawing TAR-1.
3. Some design features not annotated or dimensioned are provided for illustrative purposes.
4. Install two chevrons for a typical driveway or alley 10'-24' wide. More chevrons may be installed for wider driveways or alleys.
5. Unpaved area shall extend out approx. 3" from all four sides of a symbol. Green point may be omitted where the bike lane is not wide enough to accommodate at least 4' of green point between the unpaved area and the lane stripe.
6. This drawings replaces TBB-1.



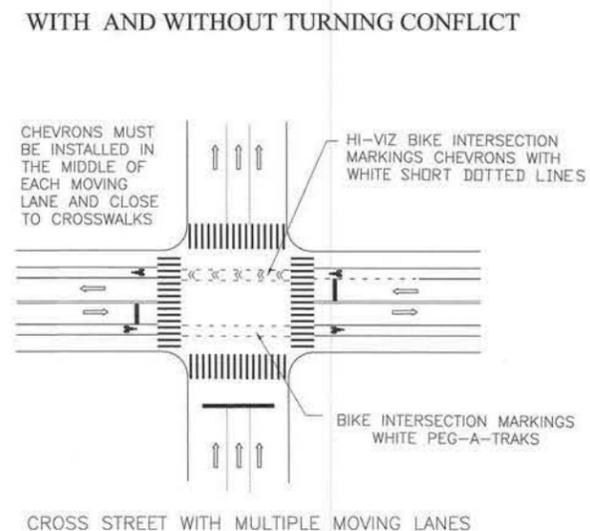
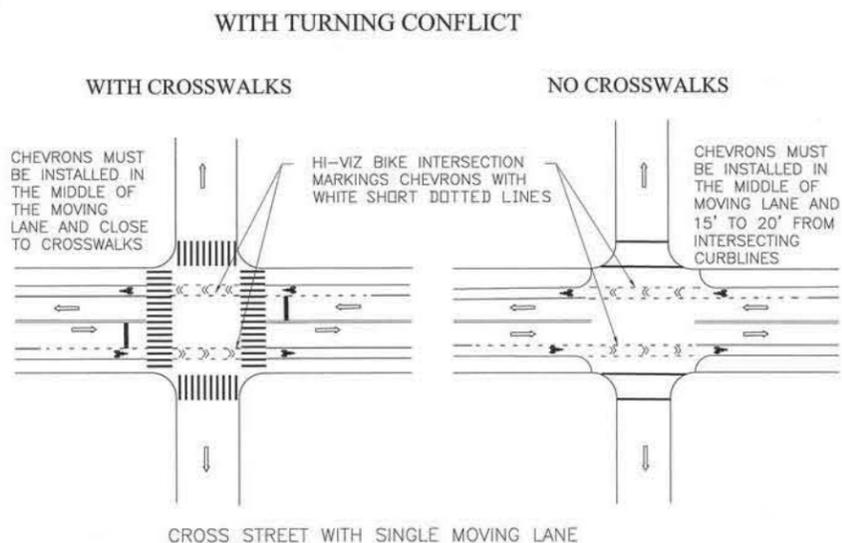
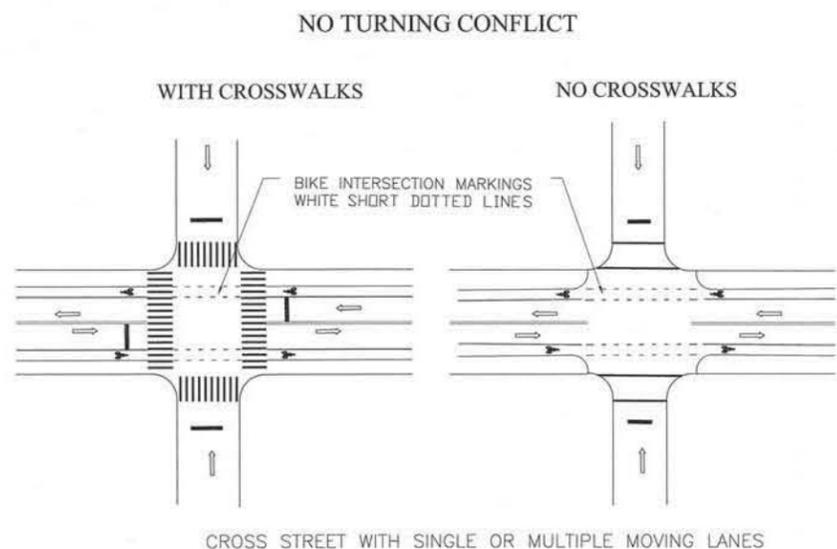
STREETS WITH ONE-WAY BICYCLE LANE DIRECTION



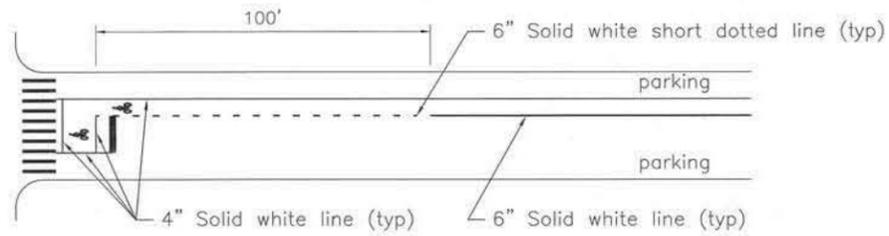
NOTES:

1. In non-typical cases with complex street geometry, design shall be done by engineer with implementation of the principles diagrammed on this drawing.
2. For intersection markings along bike routes, see typical drawing TBL-2.
3. For intersections where bike lanes transition to bike routes, chevrons should be placed across intersection regardless of whether a turning conflict exists. Additionally, the bike lane may extend into the intersection as two short dotted lines as determined by the engineer.

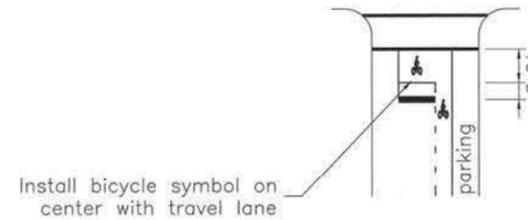
STREETS WITH TWO-WAY BICYCLE LANE DIRECTIONS



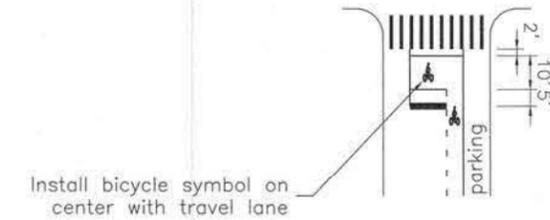
Typical Bike Box on a One-Way Street



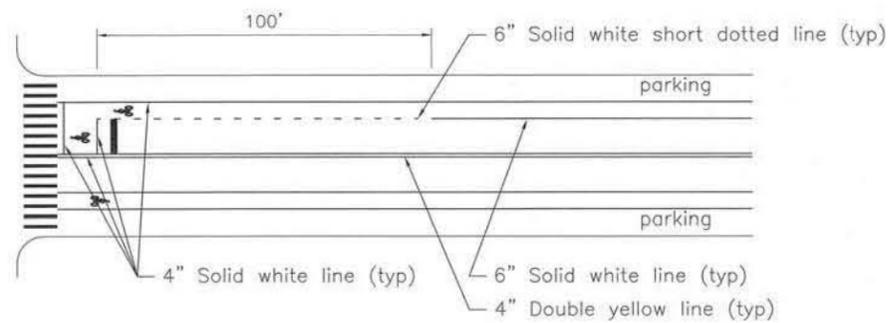
Detail A: Bike Box at Std Xwalks



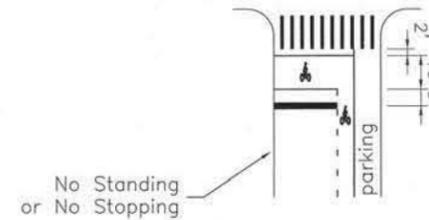
Detail B: Bike Box at Hi-Viz Xwalks



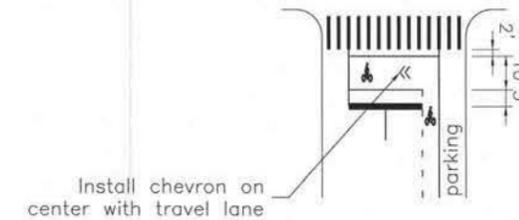
Typical Bike Box on a Two-Way Street



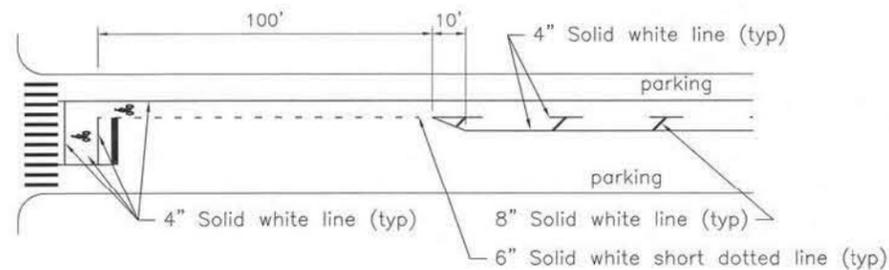
Detail D: Bike Box w/o Parking on Opposite Side



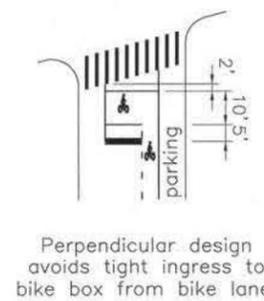
Detail C: Bike Box across Multiple Lanes



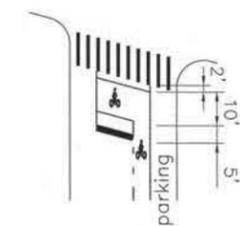
Typical Bike Box w/ a Buffered Bike Lane



Detail E: Bike Box at Crosswalk Angled Backwards



Detail F: Bike Box at Crosswalks Angled Forwards

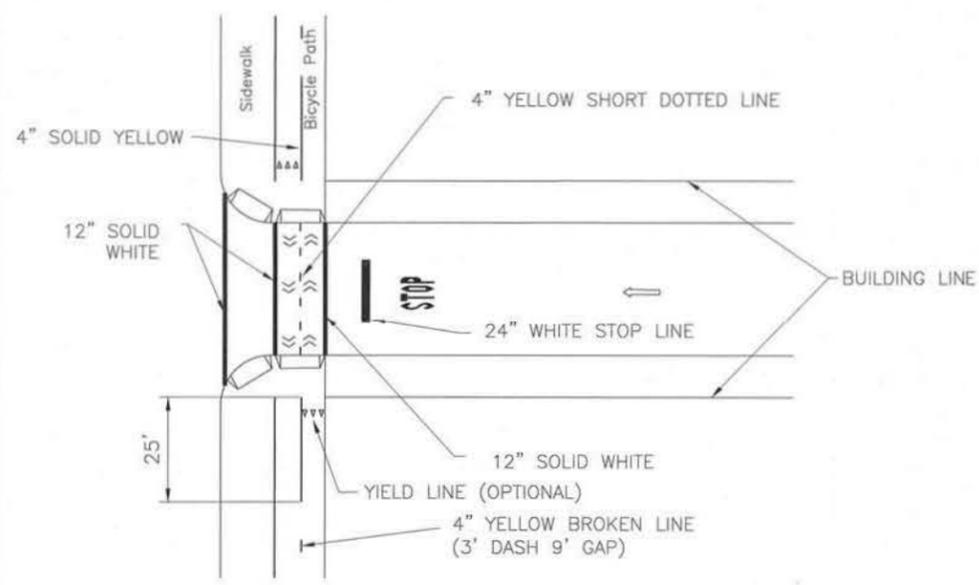


NOTES:

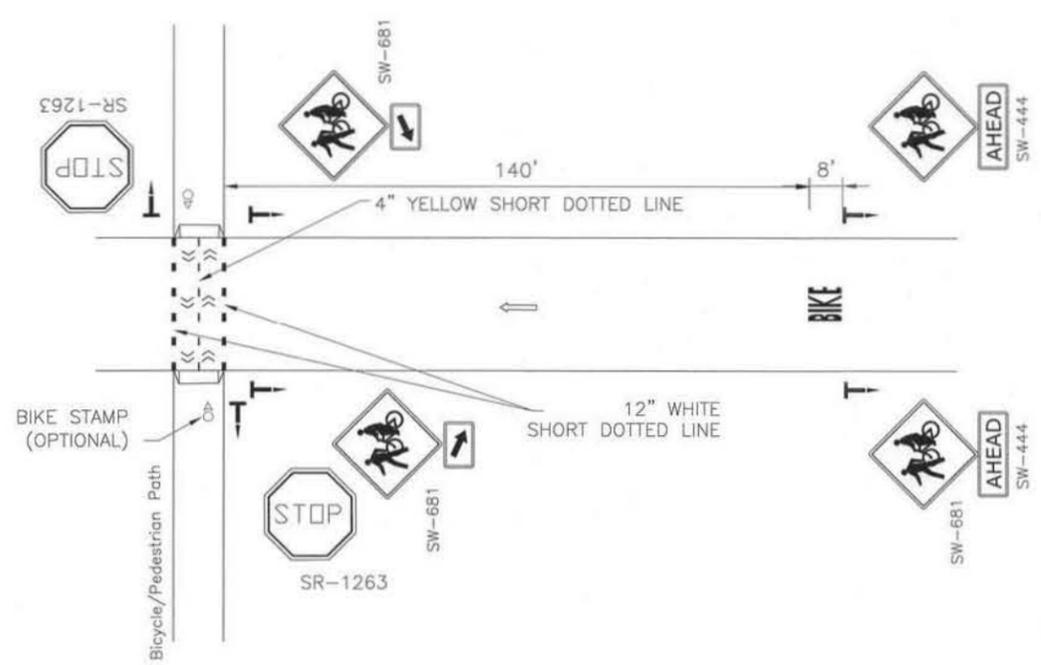
- Class III bike boxes are not shown here and shall be installed as per typical drawing TBL-2.



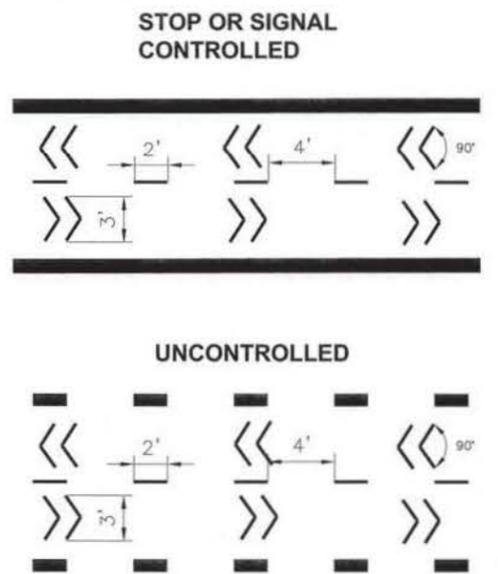
STOP CONTROLLED BIKE PATH WITH STANDARD CROSSWALK



UNCONTROLLED SHARED BICYCLE / PEDESTRIAN PATH

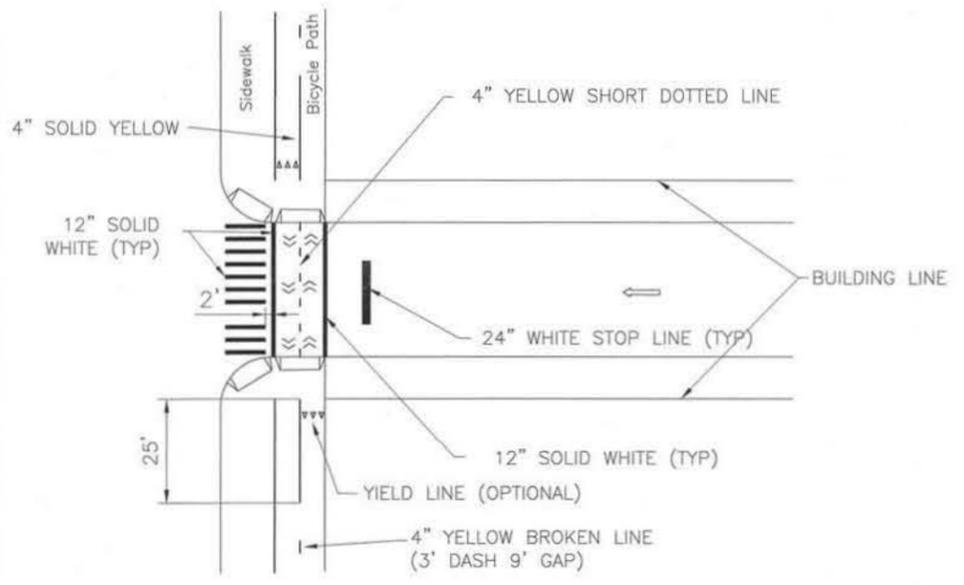


CROSSING MARKINGS DETAILS

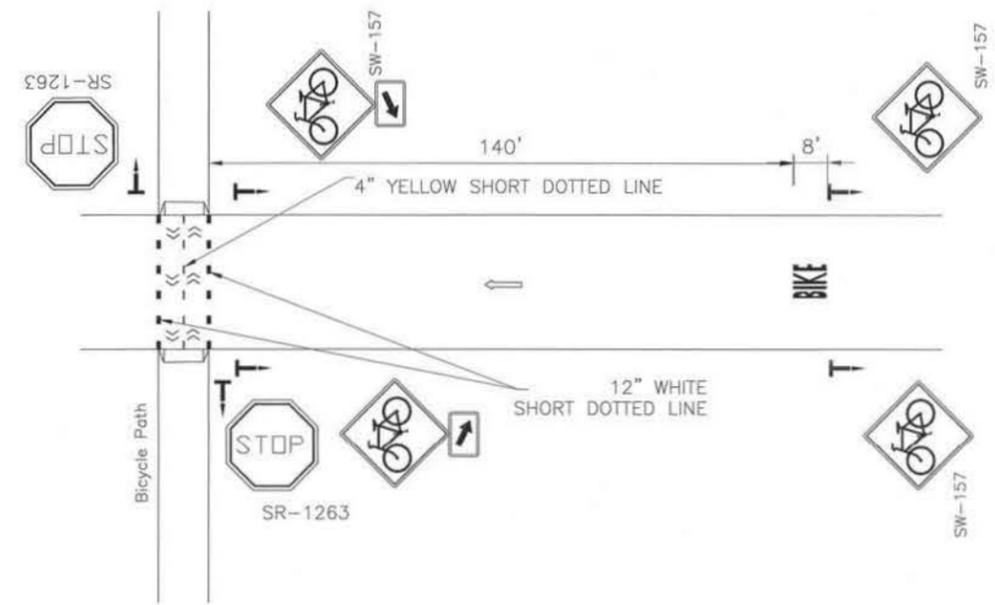


- One pair of chevrons must be added for each additional moving lane positioned at the center of the lane
- For crosswalk detail see typical drawing TCW-1

STOP CONTROLLED OR SIGNALIZED BIKE PATH WITH HI-VIS CROSSWALK



UNCONTROLLED BICYCLE PATH



TYPICAL PAVEMENT MARKINGS
BIKE PATH CROSSINGS



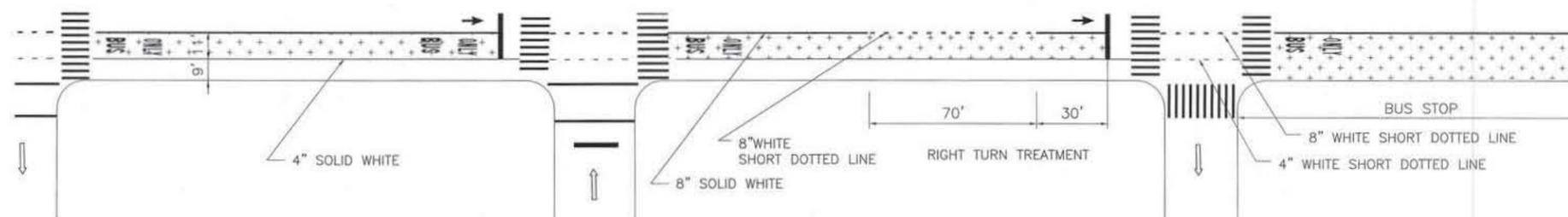
CITY OF NEW YORK DEPARTMENT OF TRANSPORTATION
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28-11 Queens Plaza North L.I.C., N.Y. 11101



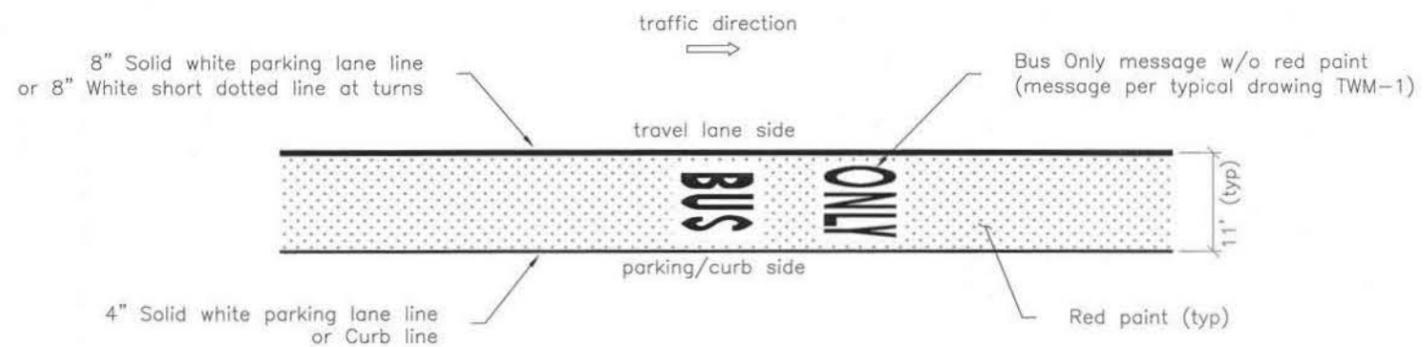
Drawn by D. AMIN
Checked by S. BARKHO & F. AZER
Borough ALL
Scale NOT TO SCALE
Effective Date 12/01/2015

SHEET 9 OF 18
DRAWING
NO. TBP-1

TYPICAL BUS LANE



BUS LANE DETAIL



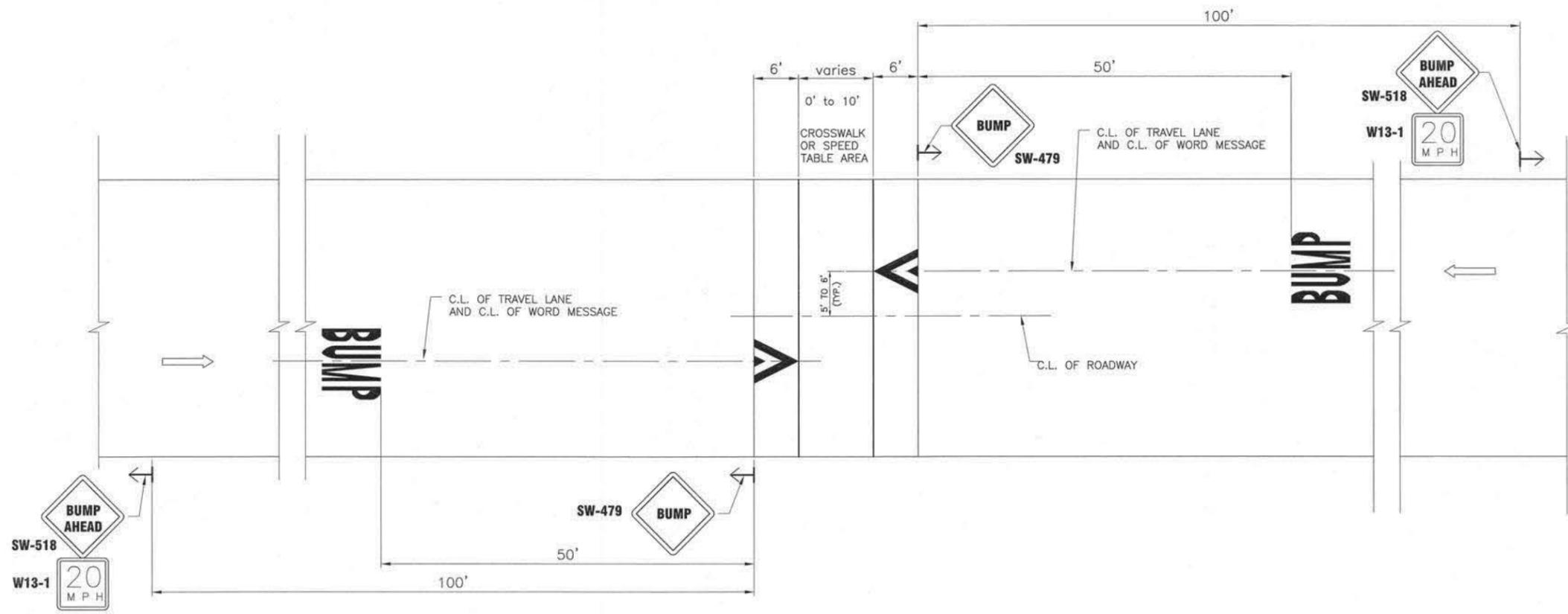
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TYPICAL PAVEMENT MARKINGS
 BUS LANES

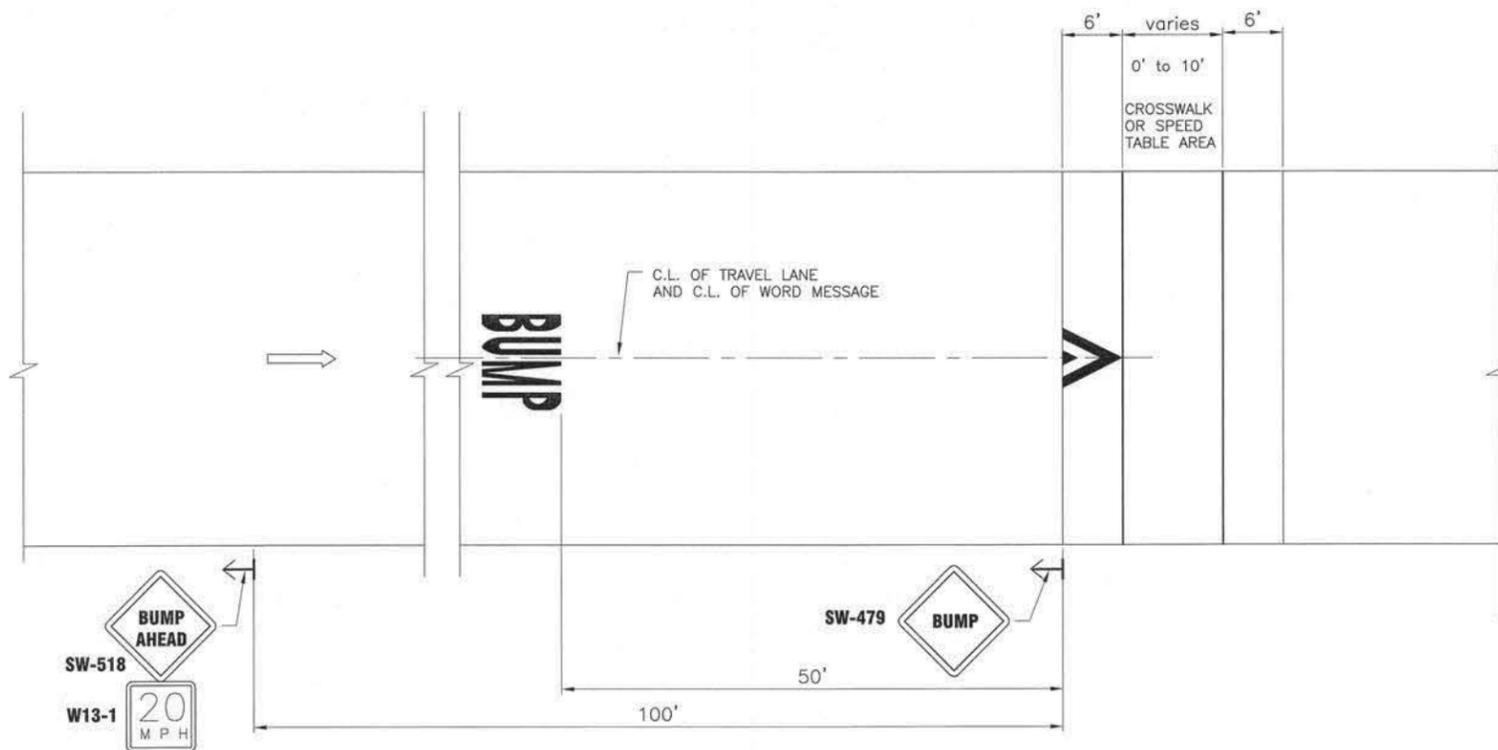


Drawn by D. NELSON & F. AZER
 Checked by S. BARKHO & F. AZER
 Borough ALL
 Scale NOT TO SCALE
 Effective Date 12/01/2015

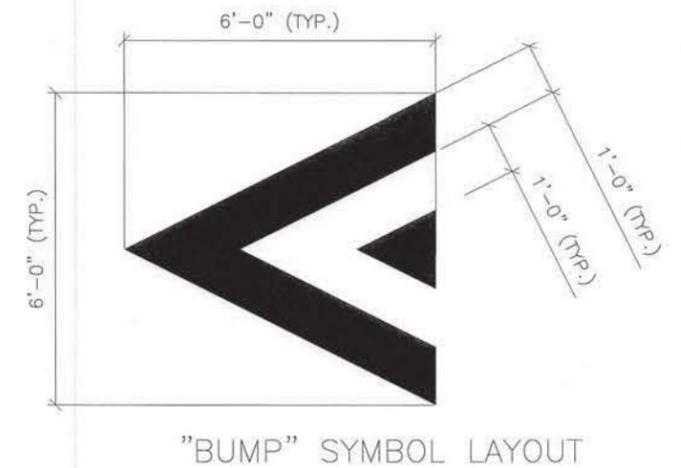
SHEET 10 OF 18
 DRAWING
 NO. TBUS-1



SPEED BUMP SYMBOL AND WORD MESSAGE INSTALLATION FOR TWO-WAY STREETS



SPEED BUMP SYMBOL AND WORD MESSAGE INSTALLATION FOR ONE-WAY STREETS



NOTES:

1. On multilane roadways one bump symbol and one word message shall be installed for each travel lane.
2. For bump message detail see typical drawing TWM-1.
3. For streets with bike lanes see typical drawing TSR-1.



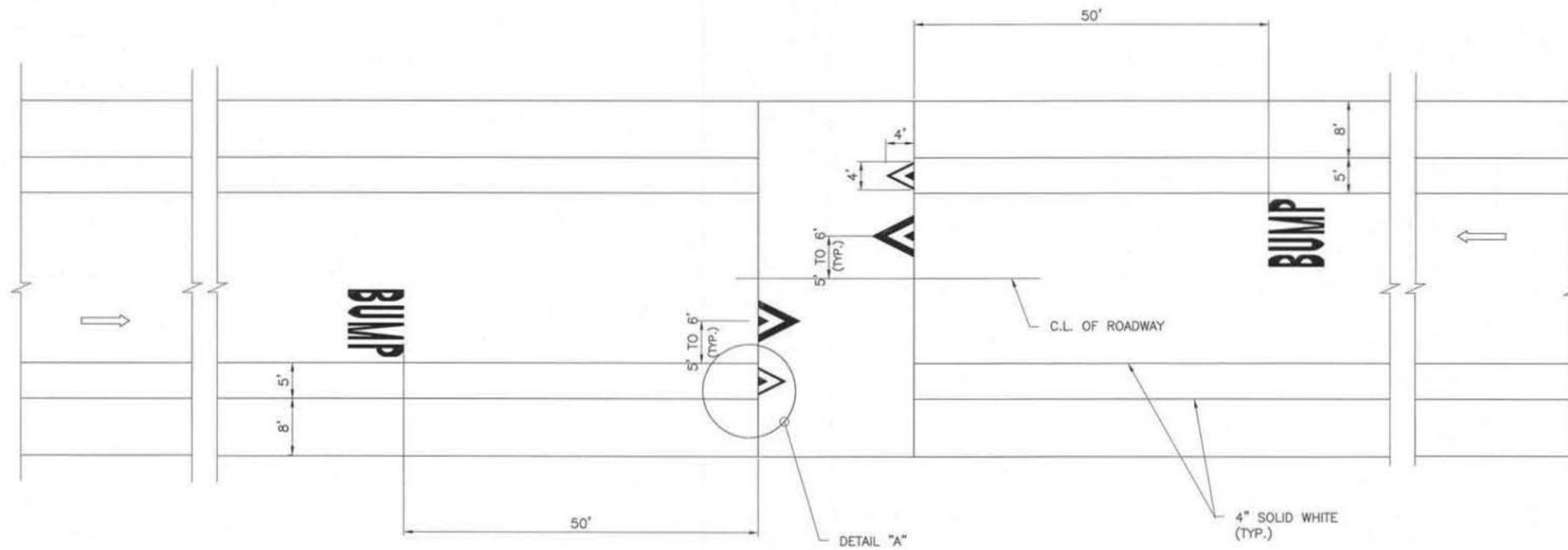
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TYPICAL PAVEMENT MARKINGS
 SPEED BUMP MARKINGS

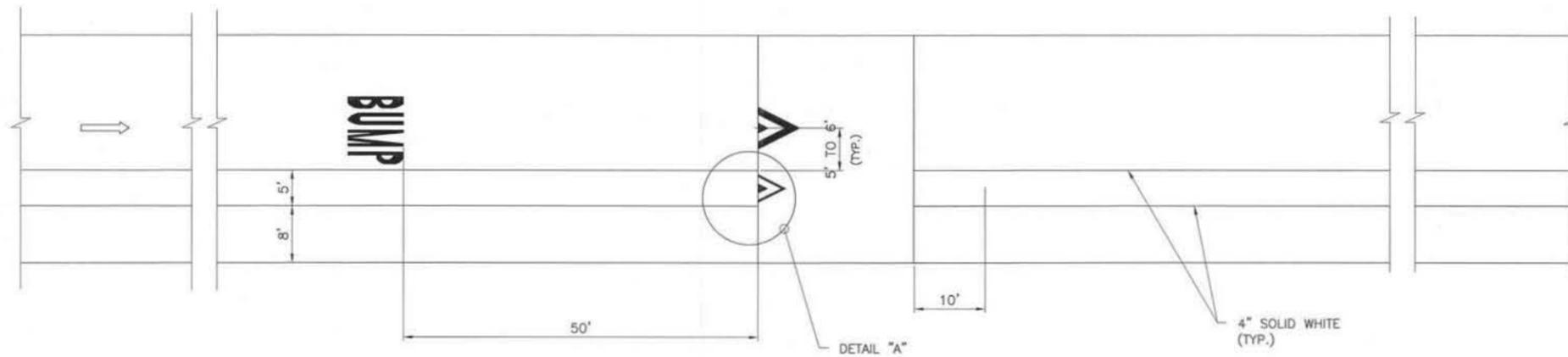
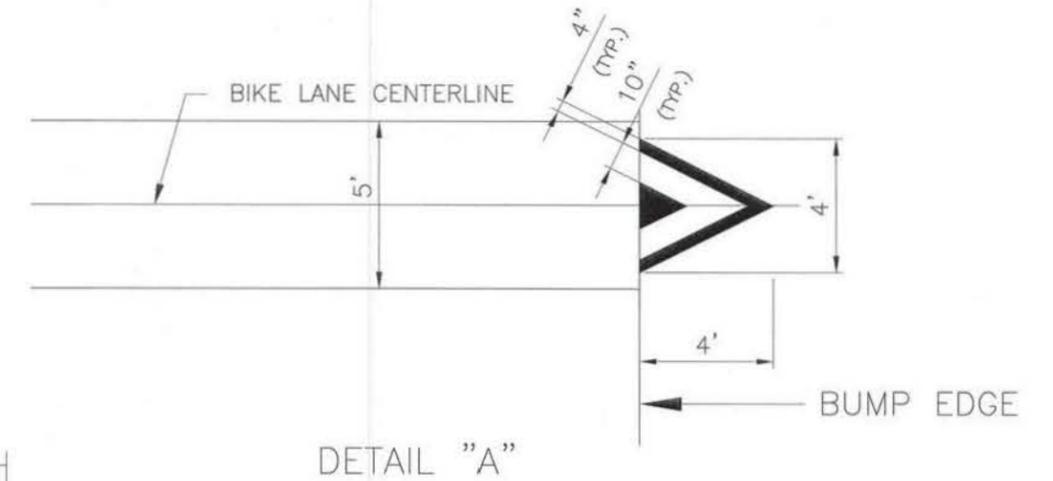


Drawn by _____ M.F.
 Checked by S. BARKHO & F. AZER
 Borough _____ ALL
 Scale NOT TO SCALE
 Effective Date 12/01/2015

SHEET 12 OF 18
 DRAWING
 NO. TSB-1



INSTALLATION FOR TWO-WAY STREETS



INSTALLATION FOR ONE-WAY STREETS

NOTES:

1. For speed bump markings installation see typical drawing TSB-1.



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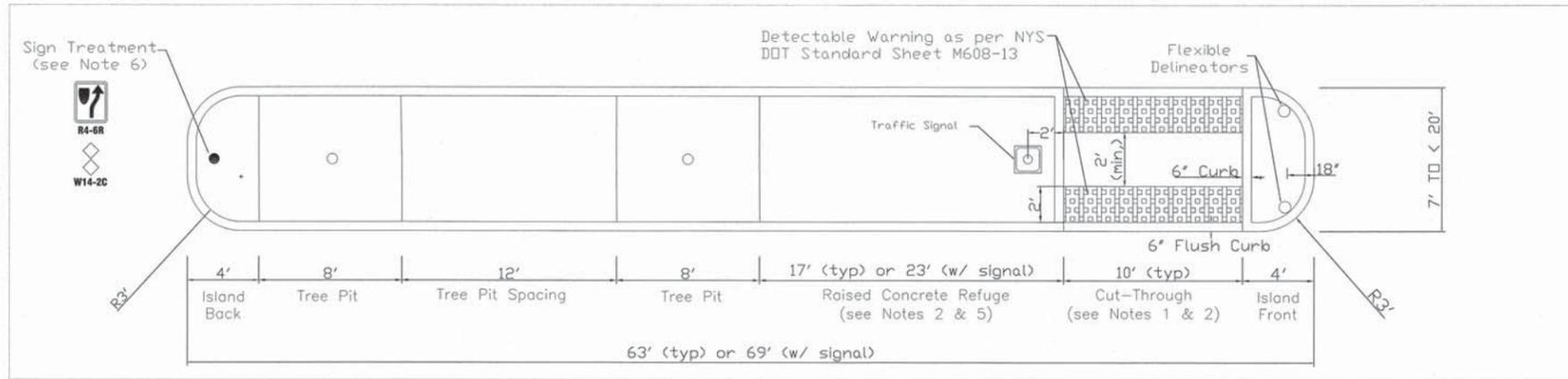
TYPICAL PAVEMENT MARKINGS
 SPEED REDUCERS FOR BIKE LANES AT SPEED BUMPS



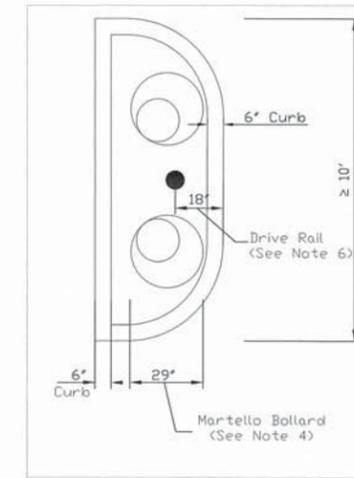
Drawn by D. AMIN
 Checked by S. BARKHO & F. AZER
 Borough ALL
 Scale NOT TO SCALE
 Effective Date 12/01/2015

SHEET 13 OF 18
 DRAWING
 NO. TSR-1

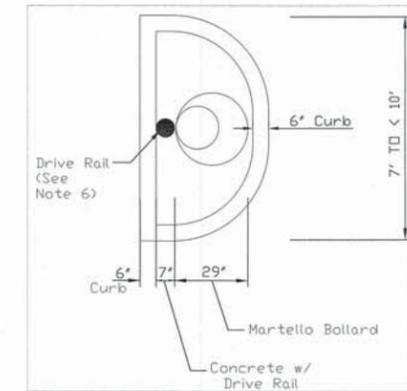
Typical 7' to <20' Width Island (Plan)



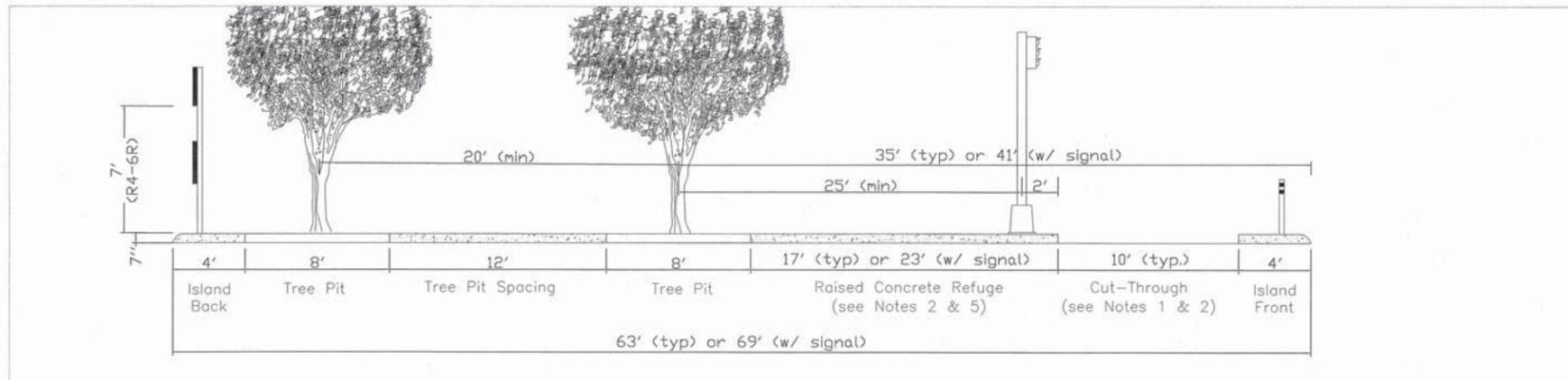
Detail 1: $\geq 10'$ Island Front w/ Double Bollards



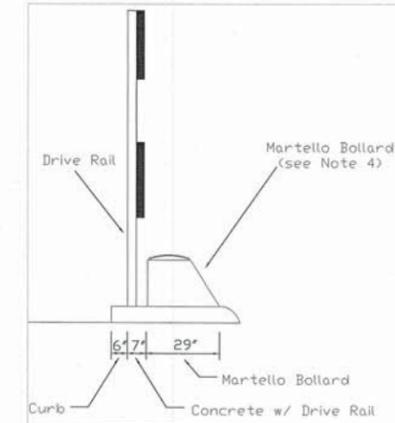
Detail 2: 7' to <10' Island Front w/ Single Bollard (Plan)



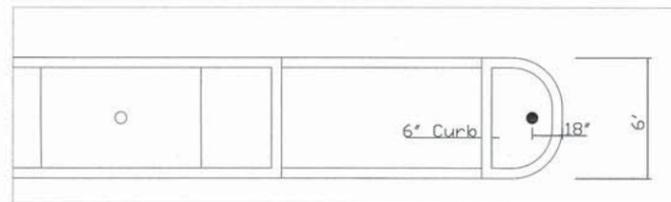
Typical 7' to <20' Width Island (Side Elevation)



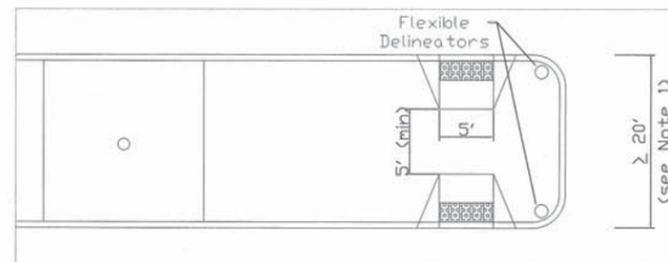
Detail 3: 7' to <10' Island Front w/ Single Bollard (Elevation)



Detail 4: 6' Width Island Plan w/o Detectable Warning Mat



Detail 5: $\geq 20'$ Width Island Plan w/ Ped Ramps (see Note 1)



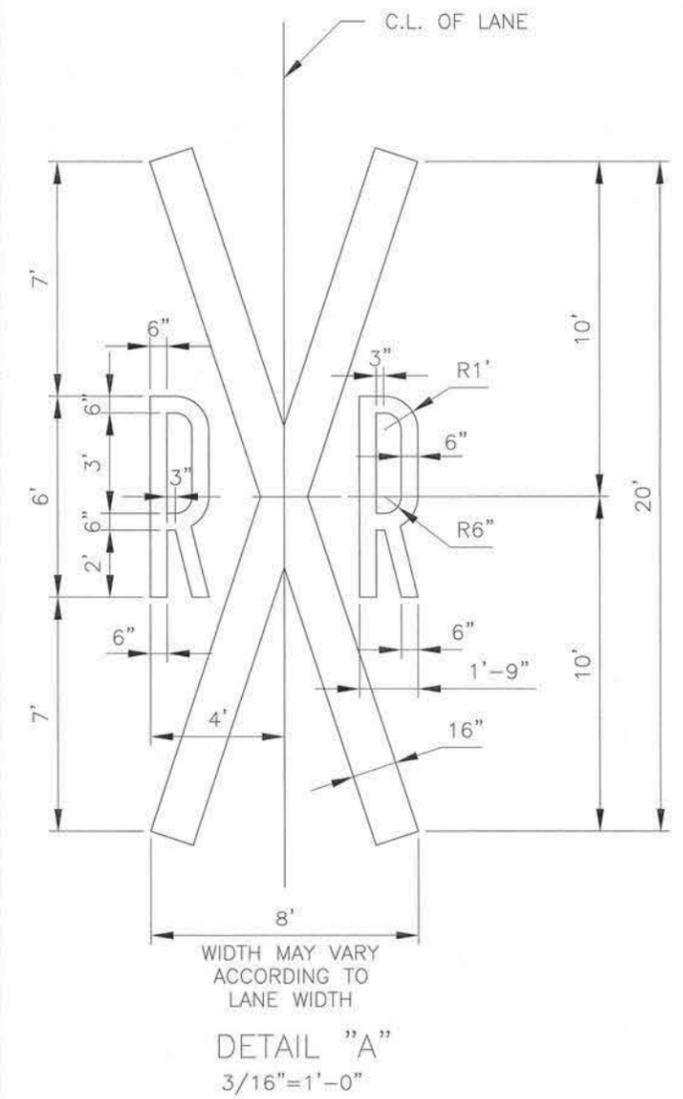
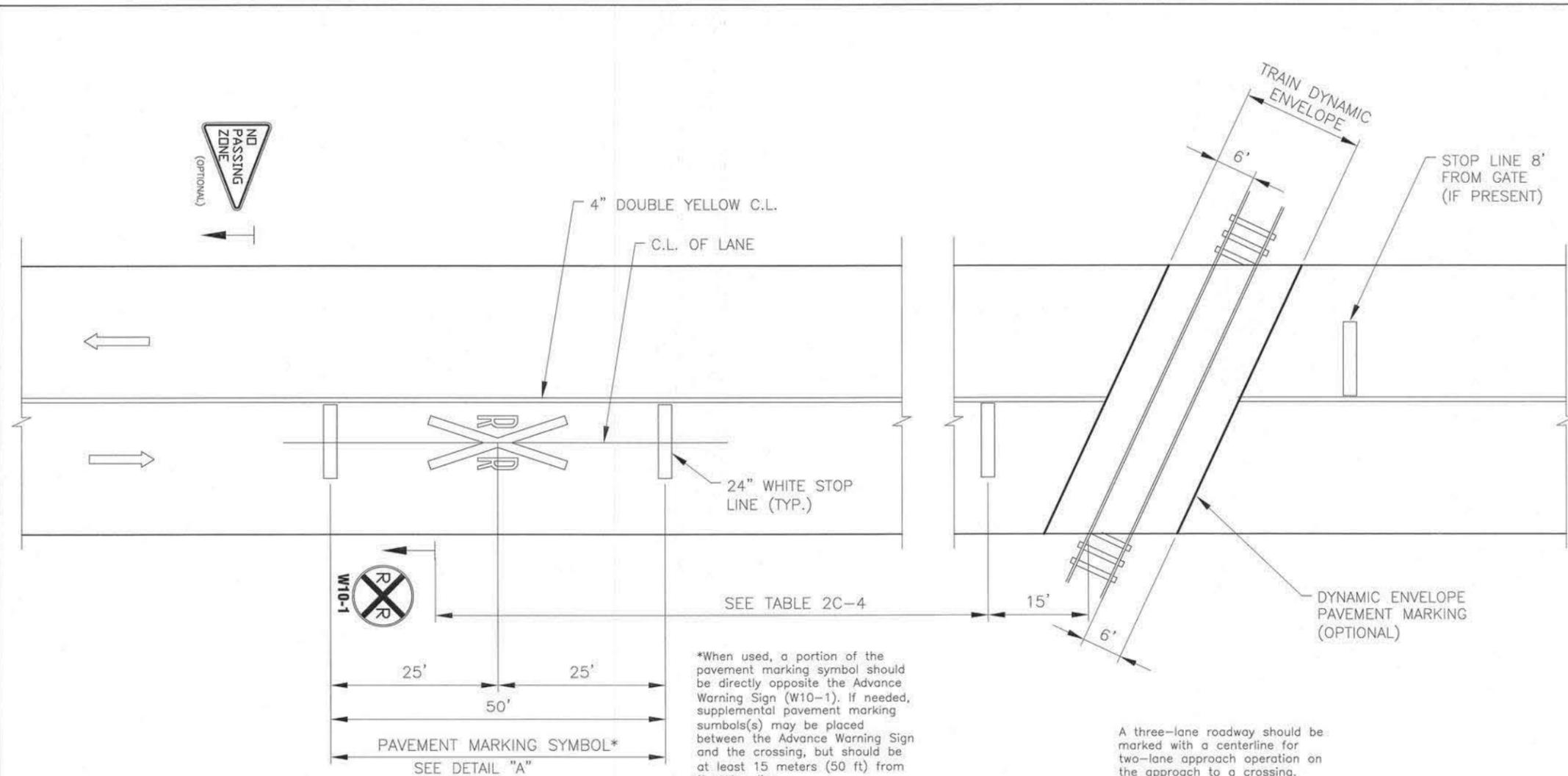
NOTES:

- For islands 20' and wider, instead of a cut-through, pedestrian ramps with 1:12 max. grade and 5' min. landing area shall be used (as per NYS DOT Standard Sheet M808-13). For islands 16' to <20', pedestrian ramps can be considered if and only if the curb height is lowered to accommodate the 1:12 required ramp grade while maintain the 5' min landing area.
- Cut-through and raised concrete refuge widths shall be based on width of sidewalk approaching the island according to the following table:

Sidewalk width	12'	13'	$\geq 14'$
Cut-through	8' min	9'	10' max
Raised cnrt refuge w/o signal	19' max	18'	17' min
Raised cnrt refuge w/ signal	25' max	24'	23' min

- Engineering judgement shall be used to determine the size of raised refuge and cut-through for islands with special conditions.
- Based on engineering judgement, Martello Bollard(s) with approved reflective elements may be included where left-hand turn movement is made towards the island in the receiving leg of an intersection, or otherwise determined to be necessary based on traffic conditions and analyses.
- Any tree (measured from center) must be at least 25' from any signal head or street light. A tree can not be included if it obstructs the sight line to a pole mounted traffic signal face.
- Signs are subject to engineering judgement. Signs should be used where it is not readily apparent that traffic is required to keep to the right.
- A vertical reflective element shall be provided at the front and back of each island. Examples of vertical reflective elements include Martello Bollards, flexible delineators, and signs. Flexible delineators shall be installed at locations where no Martello Bollards or signs are provided. However, at trailing ends, without approaching traffic, a vertical reflective element is not required.
- No island should be less than 6'. A 6' minimum island should only be considered in locations where no alternatives exist to provide necessary horizontal geometry. For 6' islands, detectable warning surface shall not be installed.





*When used, a portion of the pavement marking symbol should be directly opposite the Advance Warning Sign (W10-1). If needed, supplemental pavement marking symbols(s) may be placed between the Advance Warning Sign and the crossing, but should be at least 15 meters (50 ft) from the stop line.

A three-lane roadway should be marked with a centerline for two-lane approach operation on the approach to a crossing.

On multi-lane roads, the transverse bands should extend across all approach lanes, and individual RXR symbols should be used in each approach lane.

Table 2C-4. Guidelines for Advance Placement of Warning Signs

Posted or 85th-Percentile Speed	Advance Placement Distance ¹								
	Condition A: Speed reduction and lane changing in heavy traffic ²	Condition B: Deceleration to the listed advisory speed (mph) for the condition							
		0 ³	10 ⁴	20 ⁴	30 ⁴	40 ⁴	50 ⁴	60 ⁴	70 ⁴
20 mph	225 ft	100 ft ⁵	N/A ⁶	—	—	—	—	—	—
25 mph	325 ft	100 ft ⁵	N/A ⁶	N/A ⁶	—	—	—	—	—
30 mph	460 ft	100 ft ⁵	N/A ⁶	N/A ⁶	—	—	—	—	—
35 mph	565 ft	100 ft ⁵	N/A ⁶	N/A ⁶	N/A ⁶	—	—	—	—
40 mph	670 ft	125 ft	100 ft ⁵	100 ft ⁵	N/A ⁶	—	—	—	—
45 mph	775 ft	175 ft	125 ft	100 ft ⁵	100 ft ⁵	N/A ⁶	—	—	—
50 mph	885 ft	250 ft	200 ft	175 ft	125 ft	100 ft ⁵	—	—	—
55 mph	990 ft	325 ft	275 ft	225 ft	200 ft	125 ft	N/A ⁶	—	—
60 mph	1,100 ft	400 ft	350 ft	325 ft	275 ft	200 ft	100 ft ⁵	—	—
65 mph	1,200 ft	475 ft	450 ft	400 ft	350 ft	275 ft	200 ft	100 ft ⁵	—
70 mph	1,250 ft	550 ft	525 ft	500 ft	450 ft	375 ft	275 ft	150 ft	—
75 mph	1,350 ft	650 ft	625 ft	600 ft	550 ft	475 ft	375 ft	250 ft	100 ft ⁵

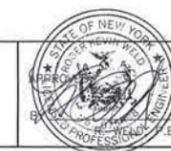
NOTES:

- The distances are adjusted for a sign legibility distance of 180 feet for Condition A. The distances for Condition B have been adjusted for a sign legibility distance of 250 feet, which is appropriate for an alignment warning symbol sign. For Conditions A and B, warning signs with less than 6-inch legend or more than four words, a minimum of 100 feet should be added to the advance placement distance to provide adequate legibility of the warning sign.
- Typical conditions are locations where the road user must use extra time to adjust speed and change lanes in heavy traffic because of a complex driving situation. Typical signs are Merge and Right Lane Ends. The distances are determined by providing the driver a PRT of 14.0 to 14.5 seconds for vehicle maneuvers (2005 AASHTO Policy, Exhibit 3-3, Decision Sight Distance, Avoidance Maneuver E) minus the legibility distance of 180 feet for the appropriate sign.
- Typical condition is the warning of a potential stop situation. Typical signs are Stop Ahead, Yield Ahead, Signal Ahead, and Intersection Warning signs. The distances are based on the 2005 AASHTO Policy, Exhibit 3-1, Stopping Sight Distance, providing a PRT of 2.5 seconds, a deceleration rate of 11.2 feet/second², minus the sign legibility distance of 180 feet.
- Typical conditions are locations where the road user must decrease speed to maneuver through the warned condition. Typical signs are Turn, Curve, Reverse Turn, or Reverse Curve. The distance is determined by providing a 2.5 second PRT, a vehicle deceleration rate of 10 feet/second², minus the sign legibility distance of 250 feet.
- No suggested distances are provided for these speeds, as the placement location is dependent on site conditions and other signing. An alignment warning sign may be placed anywhere from the point of curvature up to 100 feet in advance of the curve. However, the alignment warning sign should be installed in advance of the curve and at least 100 feet from any other signs.
- The minimum advance placement distance is listed as 100 feet to provide adequate spacing between signs.

TYPICAL PAVEMENT MARKINGS
HIGHWAY-RAIL GRADE CROSSINGS



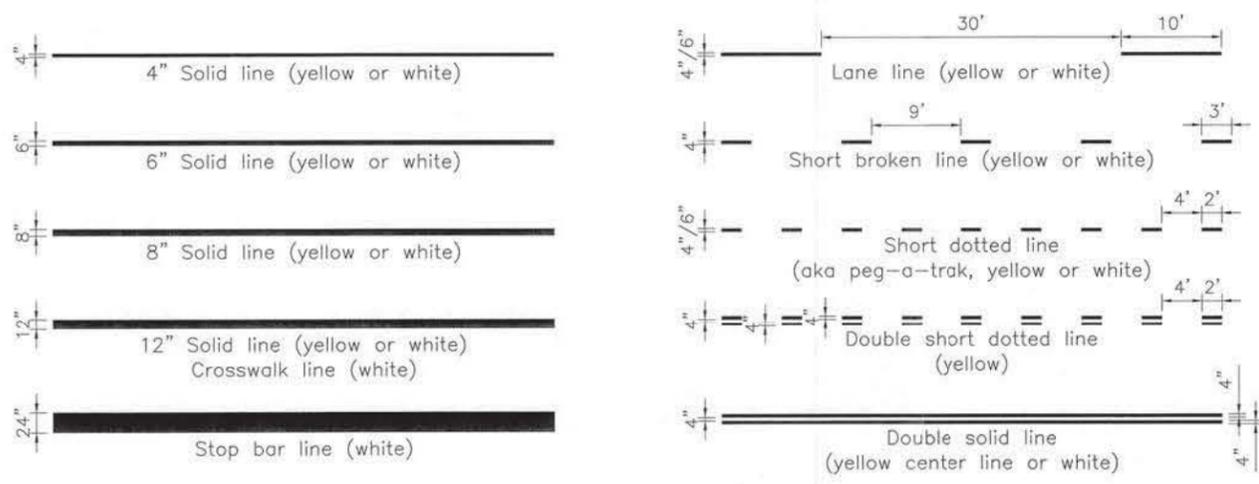
CITY OF NEW YORK DEPARTMENT OF TRANSPORTATION
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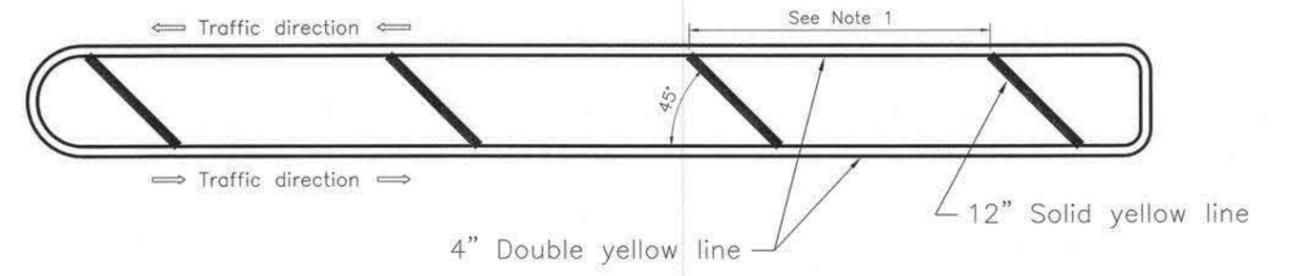
Drawn by _____ M.F.
Checked by S. BARKHO & F. AZER
Borough _____ ALL
Scale NOT TO SCALE
Effective Date 12/01/2015

SHEET 15 OF 18
DRAWING
NO. TRR-1

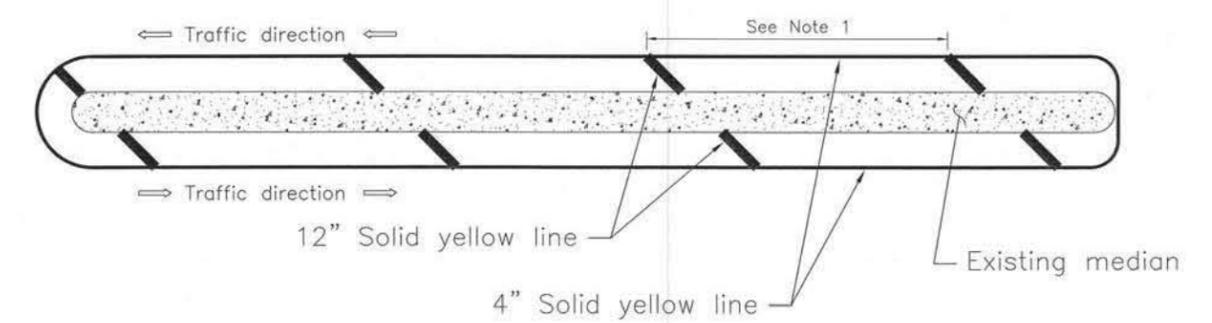
Typical Striping Details



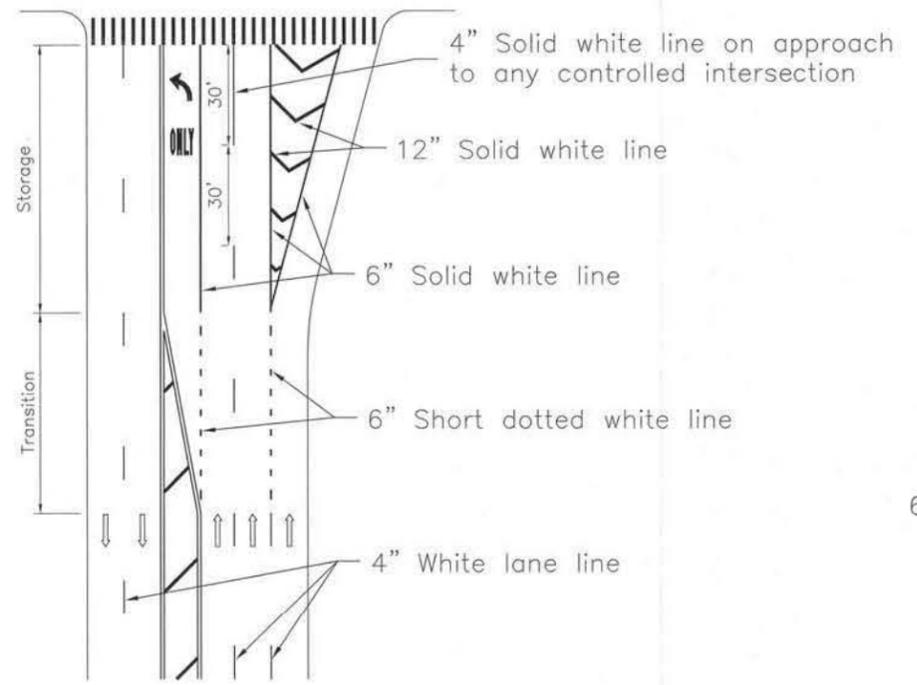
Typical Flush Median Striping



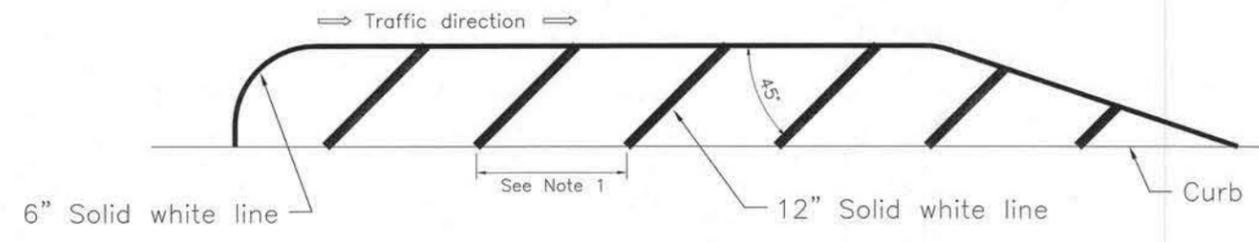
Typical Extended Median Striping



Typical Striping Layout

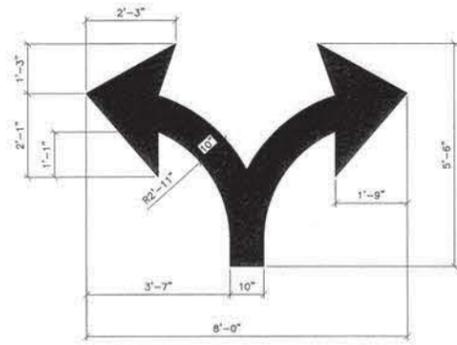


Typical Curbside Channelization Striping

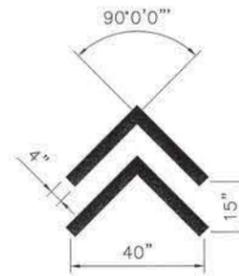


- NOTES:
1. On local streets, the spacing between cross hatch lines shall be specified based on engineering judgement. Spacing of 30' is appropriate for most applications.
 2. On all highways, gores and striping shall be installed as per NYS DOT drawing number 685-01 Pavement Marking Details sheets 3-5 of 9.
 3. The actual length of gores and cross hatching shall be designed by an engineer based on actual street layout and traffic conditions according to AASHTO requirements.
 4. Tapers and returns shown for illustrative purposes only and shall be designed based on engineering judgement.

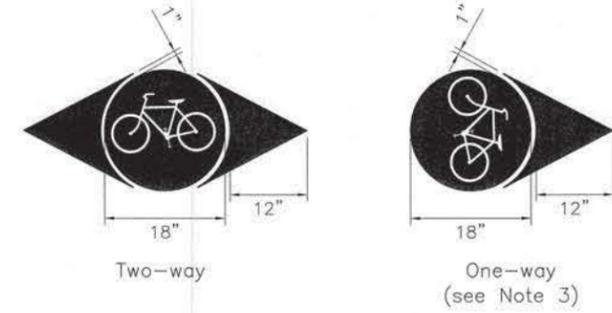
Left & Right Only Arrow



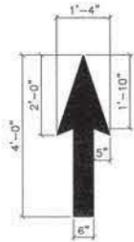
Bicycling Facility Chevron



Bicycling Facility Stamp for Use in Pedestrian Areas



Bicycling Facility Arrow



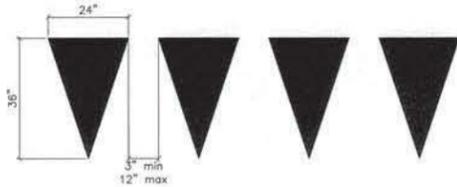
Bicycling Facility Symbol



Walking Facility Symbol



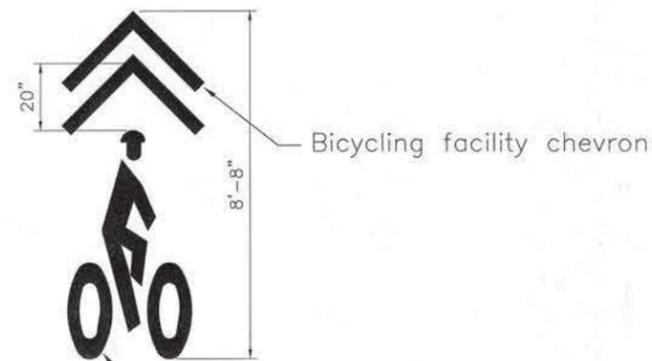
Large Yield Line



Small Yield Line



Shared Lane Marking "Sharrow"

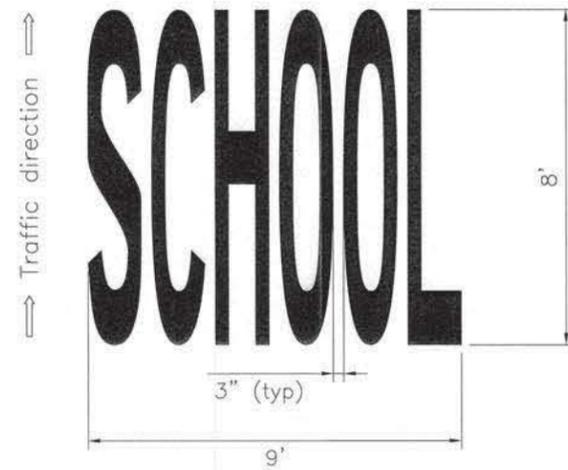


Bicycling facility symbol

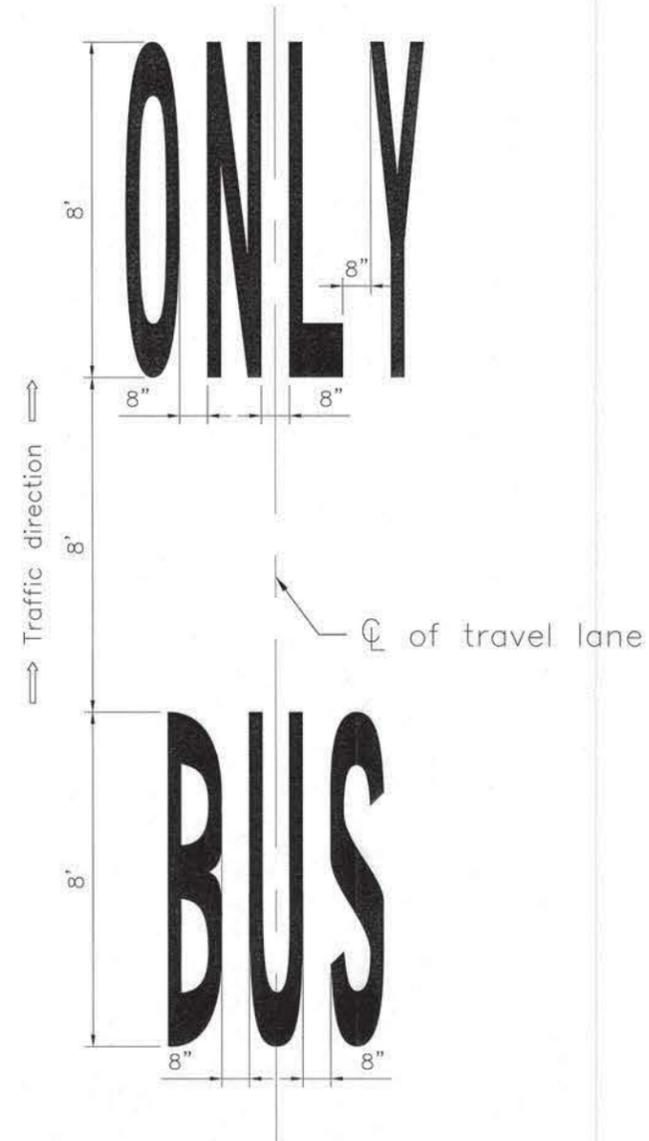
NOTES:

1. All symbols shall conform to the shapes specified in the MUTCD 2004 Standard Highway Signs and Markings (SHSM) Book, Pavement Markings chapter.
2. Preferential Lane Symbols and the following arrows shall be installed as per NYS DOT drawing number 685-01 Pavement Marking Details sheet 8: Turning, Turning/Straight, Straight, Lane Reduction, Diverge, and Ramp Arrows.
3. One of the two pointers of the Bicycle Stamp may be removed to indicate the intended direction of bicycle traffic.

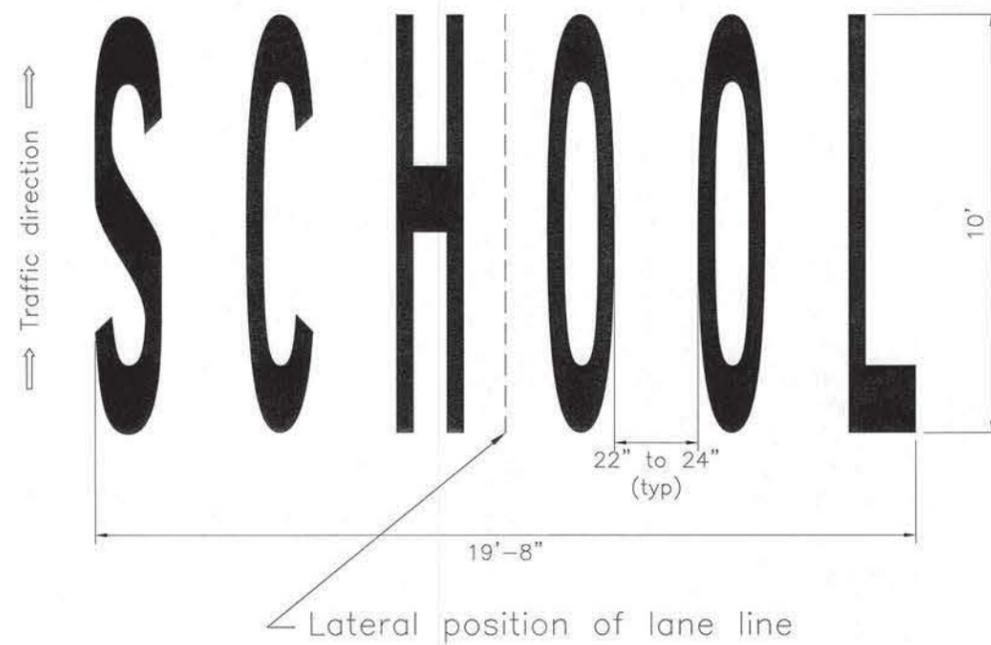
Single Lane School Message



Typical Word Message
(BUS ONLY shown)



Two Lane School Message



NOTES:

1. All messages shall consist of preformed letter shapes as specified in the MUTCD 2004 Standard Highway Signs and Markings (SHSM) Book, Pavement Markings chapter.
2. All messages shall be of an 8' text height, unless otherwise specified. Text height of 2' is typical of messages in bike lanes.
3. All messages consisting of two words or more shall have 8' between words and be laid out such that the first word is closest to an approaching vehicle. Spacing of 3' between words is typical of messages in bike lanes.
4. Spacing between each letter shall be equal for any word. Letter spacing shall be 8" unless otherwise specified or as limited by lane width. All messages shall fit within a single lane and not overlap any striping, unless otherwise specified.
5. All messages shall be aligned on center with travel lane, unless otherwise specified.
6. All letters shall be solid white, unless otherwise specified.
7. This drawing replaces TWM-2 and TWM-3.

