Pavement Markings Guidelines for the Urban Service Area (Sherwood Park)

January 2022

STRATHCONA COUNTY

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DOCUMENT SIGN-OFF

The signatures below indicate that the contents of the January 2022 Pavement Markings Guidelines have been reviewed and accepted for use on a go-forward basis.

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AUTHENTICATION AND VALIDATION

This document entitled "Pavement Markings Guidelines for the Urban Service Area (Sherwood Park)" has been prepared by Strathcona County for use by developers, developers' representatives, contractors, consultants, and Strathcona County's departments on projects within Strathcona County. The information contained herein has been established based on an assessment of current and future needs with the best knowledge available to the date of their preparation to meet legal and engineering best practices and requirements.

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PERMIT TO PRACTICE
STRATHCONA COUNTY
RM SIGNATURE:
RM APEGA ID #: 70383
DATE: Feb. 5, 2022
PERMIT NUMBER: P004539
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Ryan Anders, P.Eng.

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1.0 INTRODUCTION

The Strathcona County Pavement Marking Guidelines (the "Guidelines") summarize and illustrate pavement marking requirements throughout the County. **At this time, the Guidelines have been written for the Urban Service Area (Sherwood Park) only and do not include the Rural Service Area or Hamlets, unless expressly specified or applicable**. The Guidelines have been prepared to assist developers, developers' representatives, contractors, consultants, and the County's departments with designing, installing and maintaining pavement markings in a legal and consistent manner. As such, the Guidelines are applicable both to County contracts and to private development projects for all roadways under the County's control, or roadways which will be transferred to the County's control. For roadways outside of the County's control, such as provincial highways and private developments, pavement markings must be coordinated with the presiding roadway authority.

The Guidelines have been established based on an assessment of current and future needs with the best knowledge available to the date of their preparation to meet legal and engineering best practices and requirements. The County recognizes that this document will require review and updates from time to time based on new technologies and best practices. While these situations may often be addressed on a case-by-case basis, additions to the Guidelines and reference to the County's Design and Construction Standards may be necessary to ensure that the issues are addressed consistently for future applications. In consideration, the County reserves the right to alter or revise the Guidelines as deemed necessary. The Guidelines and any updates thereto are available on the County's website at www.strathcona.ca. Hard copies are not available and updates will not be expressly communicated.

The Guidelines represent the County's typical expectations and indicate the County's preference when there are alternative options available. In general, if there is a conflict between the Guidelines and any other standard, what is written in the Guidelines will prevail. If, due to an amendment of statutory requirements, conflicts or inconsistencies with the Guidelines arise, the County reserves the right to review the issue and make the final decision. Nothing in the Guidelines relieves the County or any developer from the obligations contained in the Development Agreement.

Where the Guidelines refer to bylaws, policies, acts, regulations or other standards, this shall mean the most recent version or amendments of the referenced item. The County is not responsible for providing any developer, consultant, contractor, or private party with copies of the documents mentioned below. In general, the Guidelines are established in reference to the following (in no particular order):

- Alberta *Engineering and Geoscience Professions Act*
- Alberta *Highways Development and Protection Act*
- Alberta *Traffic Safety Act*
- Alberta *Traffic Safety Act* – Use of Highway and Rules of the Road Regulation
- Alberta Transportation Highway Pavement Marking Guide
- City of Edmonton Design and Construction Standards, Volume 8, Pavement Marking
- Lane Use Signs and Pavement Markings at Multi-Lane Roundabouts, Technical Bulletin TE-2005-5, Ministry of Transportation British Columbia
- Manual of Uniform Traffic Control Devices for Highways and Streets (2009), Federal Highway Administration
- National Building Codes – 2019 Alberta Edition
- Roundabouts: An Informational Guide, Second Edition, U.S. Department of Transportation, Federal Highway Administration, Publication No. NCHRP-672
- Strathcona County Design and Construction Standards
- Strathcona County Land Use Bylaw 6-2015
- Strathcona County Municipal Policy SER-009-017, Traffic Control Devices
- Strathcona County Traffic Bylaw 16-2015
- Strathcona County Transportation System Bylaw 2-2017
- Transportation Association of Canada Manual of Uniform Traffic Control Devices for Canada (MUTCDC)
- Transportation Association of Canada Pedestrian Crossing Control Guide

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2.0 APPROVAL PROCESS

All pavement markings on roadways under the County's control, or on roadways which will be transferred to the County's control, must conform to these Guidelines. In some cases where an increased safety improvement (for motorists or pedestrians) has been identified, the requirements written in the Guidelines may be exceeded upon review and approval by the County.

2.1. Design Drawings

For every roadway project, whether Developer-owned or County-owned (capital projects and rehabs/overlays), ensure design drawings, authenticated by a qualified Professional Engineer, Professional Licensee (Engineering) or Professional Technologist (Engineering), are submitted to the County, and any concerns are resolved to the satisfaction of the County. The County reserves the right to the final decision regarding the interpretation of the intent of the design and the acceptability of the proposed changes but shall remain flexible and open-minded to new or innovative solutions. Refer to the County's Design and Construction Standards, Volume 1, Section 3, for drawing submission requirements; Sub-section 3.4.23 includes additional details for pavement markings.

2.2. Pre-Marking

Prior to pre-marking for permanent pavement markings, the contractor must arrange a meeting with the Contract Manager/Developer Representative to review the pavement marking drawings. Ensure that all appropriate site preparations are complete, as set out in the County's Design and Construction Standards, Volume 2, Section 701, Sub-section 3.4. Note that additional requirements for thermoplastic "inlaid" material are set out in the County's Design and Construction Standards, Volume 2, Section 706, Sub-section 3.2. Also note that the Contract Manager/ Developer Representative must inspect and approve pre-marking prior to installation.

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3.0 INSTALLATION

All pavement markings must be installed before any new roadway (temporary or permanent) is open to traffic. Ensure that markings do not overlap one another and that each marking has good adhesion to the pavement surface. For more detailed information refer to the most recent versions of the following sections from the County's Design and Construction Standards, Volume 2:

- Section 701, Pavement Marking – General
- Section 702, Pavement Surface Cleaning Marking Removal
- Section 703, MMA Spray Plastic Pavement Markings
- Section 704, Cold Plastic Pavement Markings
- Section 705, Painted Pavement Markings
- Section 706, Thermoplastic Pavement Markings

3.1. Materials

Pavement markings in the County shall be either plastic (thermoplastic, spray plastic, or cold plastic) or paint. Glass beads shall conform to CGSB 1-GP-74M requirements. Refer to the County's Design and Construction Standards, Volume 2, Section 701 to determine acceptable pavement marking materials for the various roadway classifications. Alternate materials may be required at the County's discretion.

Note that plastic pavement marking materials must be approved by the County prior to installation based on the criteria set out in the County's Design and Construction Standards, Volume 2, Section 701, Sub-section 2.2.1.

3.2. Warranty Period

Upon initial installation by the Contractor, all pavement markings shall be warranted against failure due to poor adhesion and defective materials. Plastic pavement markings shall also be warranted against failure due to improper installation. The guarantee shall be subject to traffic and normal summer and winter roadway maintenance procedures. Refer to the County's Design and Construction Standards, Volume 2, Section 701 for the warranty period for each type of material.

3.3. Removal

Where removal of pavement markings is necessary, refer to the County's Design and Construction Standards, Volume 2, Section 702 to ensure all applicable requirements are met.

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4.0 PRINCIPLES

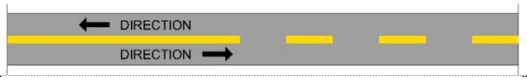
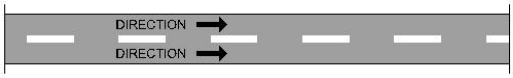
Well-chosen and well-designed pavement markings provide guidance and legal responsibility to transportation network users. As with all other traffic control devices, pavement markings must be uniform in design, position and application so that they can be easily recognized and understood. Pavement markings are one element of traffic control and can serve a variety of functions, including:

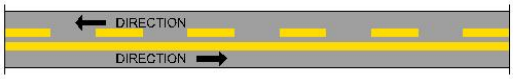
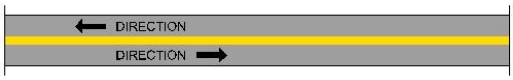
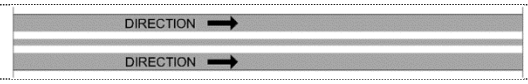
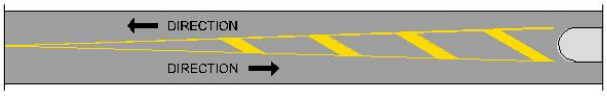
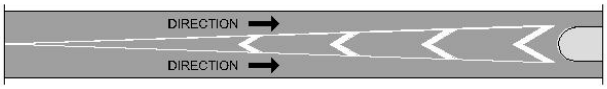
- Enabling observance of the law
- Lane definition
- Separation of opposing flows
- Passing control
- Lane usage and designation
- Pedestrian crosswalks
- Stop lines

Pavement markings should always be designed in conjunction with appropriate signage and legal traffic control. Generally, signs are installed on the right side of the road. In some circumstances, signs may be placed on channelizing islands, overhead, or, in the case of sharp curves to the right, on the left shoulder of the road (directly in the line of sight of approaching vehicles). Refer to the County's Design and Construction Standards and to the MUTCDC for additional guidance.

In general, pavement markings in the County shall conform to the following basic principles:

4.1. Markings Between Two Travel Lanes

DESCRIPTION	DIAGRAM	USE
General Principles		
Yellow Line		• Separates traffic in opposing directions
White Line		• Separates traffic in the same direction
Broken Line – permissive traffic regulation		
Broken Yellow		• For both directions, adequate sight distance is available, overtaking is permitted by law
Broken White		• For both directions, lane changes are permitted by law
Solid Line – restrictive traffic regulation		
Double Solid Yellow		• For either direction, adequate sight distance is not available, overtaking is prohibited by law • In urban areas, crossing (for example, to turn left) is prohibited by law • In rural areas, crossing (for example, to turn left) is permitted by law

DESCRIPTION	DIAGRAM	USE
Simultaneous Solid and Broken Yellow		• For the direction closest to the solid line, adequate sight distance is not available, overtaking is prohibited by law • For the direction closest to the broken line, adequate sight distance is available, overtaking is permitted by law
Single Solid Yellow		• In urban areas, overtaking is discouraged, but is permitted by law • In rural areas, overtaking is prohibited by law
Double Solid White		• Lane changes are unsafe and are prohibited by law
Single Solid White		• In urban areas, lane changes are discouraged, but are permitted by law • In rural areas, lane changes are prohibited by law
Gore Area and Diagonal Lines		
Solid Yellow		• Separates traffic in opposing directions
Solid White		• Separates traffic in the same direction

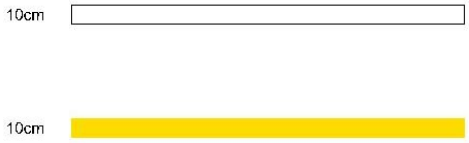
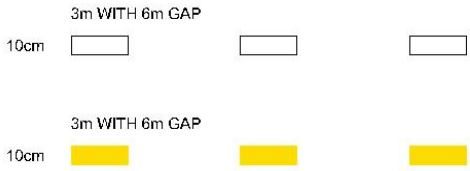
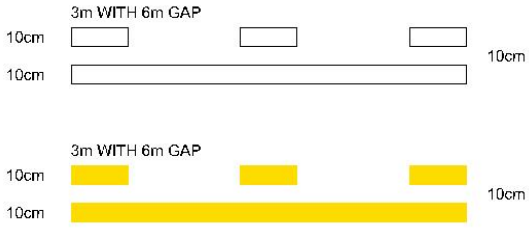
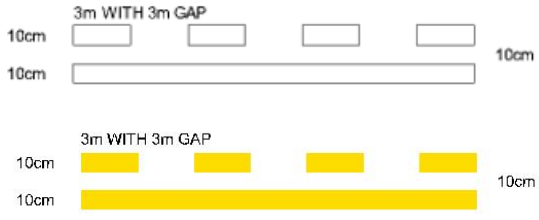
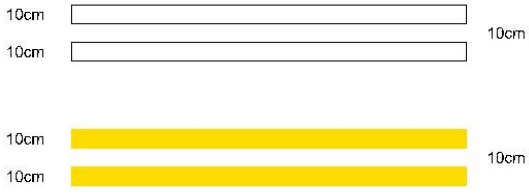
4.2. Markings Between Travel Lane and Shoulder

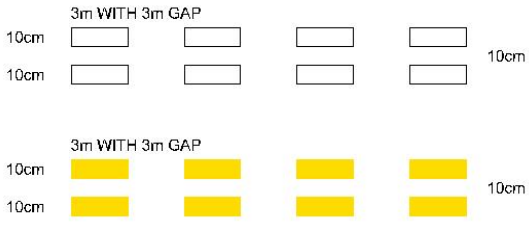
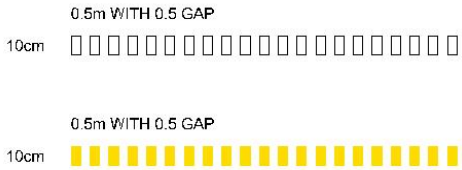
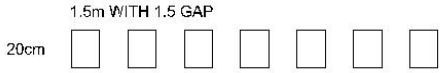
DESCRIPTION	DIAGRAM	USE
Solid Yellow		• When shoulder is to the left of the traffic lane
Solid White		• When shoulder is to the right of the traffic lane • In merging/diverging areas, depending on configuration, can be used when shoulder is to the left of the traffic lane

5.0 PAVEMENT MARKING LIBRARY

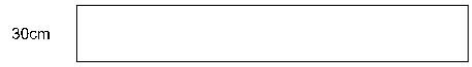
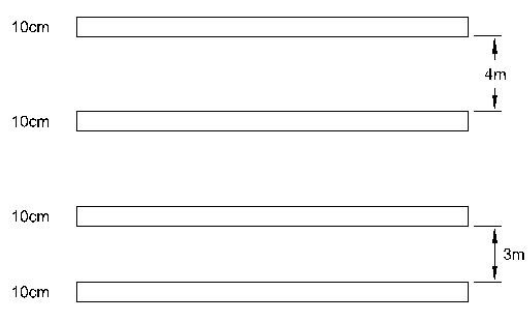
The tables below summarize the principles, colours, widths, patterns and applications for longitudinal and transverse pavement markings.

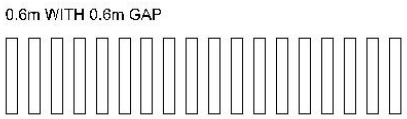
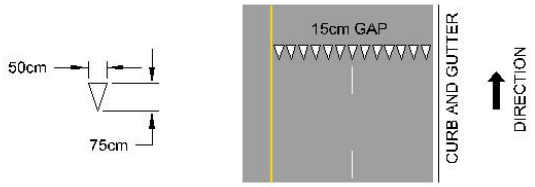
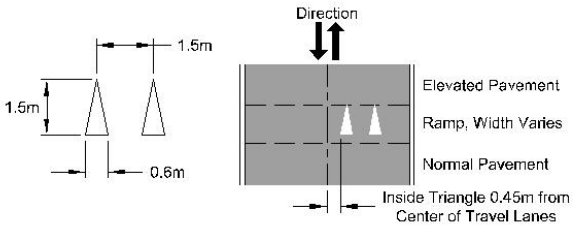
5.1. Longitudinal Pavement Marking Library

NAME	DIAGRAM	USE
7.5cm Solid		• Directional dividing lines for multi-use trail (yellow)
10cm Solid		• Edge lines (white on right or yellow on left) • Edge lines in gore area (white for the same direction and yellow for opposing directions) • Lane lines – discouraged lane changes (white) • Straight edge line for channelized islands (white) • Directional dividing lines – discouraged passing (yellow)
10cm 3:6 Broken		• Lane lines – permitted lane changes (white) • Directional dividing lines – permitted lane changes in both directions (yellow)
Simultaneous 10cm Solid and 3:6 Broken		• Lane lines – prohibited lane changes from one side (white) • Directional dividing lines – permitted passing from one side (yellow)
Simultaneous 10cm Solid and 3:3 Broken		• Unused road space (white) • Two-way left turn lanes (yellow)
10cm Double Solid		• Lane lines – prohibited lane changes (white) • Directional dividing lines – prohibited lane changes (yellow)

NAME	DIAGRAM	USE
10cm Double 3:3 Broken		• Lane lines – "with-flow part-time" reserved lane (white) • Reversible lane (yellow)
10cm 0.5:0.5 Broken		• Guiding lines on the right (white) • Guiding lines on the left (yellow)
10cm 1:1 Broken		• Guiding lines for the circulatory lanes of a multi-lane roundabout (white)
20cm Solid		• Continuity lines in turning lanes or merging and diverging areas – discouraged lane changes (white) • Curved edge line for channelized islands (white)
20cm 1:1 Broken		• Indicates the outside edge of the outer circulatory lane of a roundabout (white)
20cm 1.5:1.5 Broken		• Mid-block transit bus bay (white)
20cm 3:3 Broken		• Continuity lines in turning lanes or merging and diverging areas, including tapers (white)

5.2. Transverse Pavement Marking Library

NAME	DIAGRAM	USE
25cm Stop Line		• Multi-use trail stop lines (yellow)
30cm Stop Line		• Intersection stop lines (white)
Parallel Crosswalk Lines		• Crosswalks at fully signalized intersections and at pedestrian signals (white) • Crosswalks at unsignalized road approaches with a channelizing island on one or both sides (special treatment) (white) • Refer to Section 7.1 for spacing requirements

NAME	DIAGRAM	USE
Zebra Bars		• Midblock pedestrian crossing (white) • Refer to Section 7.6 for length requirements
Shark's Teeth (Yield Lines)		• In advance of midblock pedestrian crossings and circulatory roundabout lanes where more than one lane of traffic is required to yield (white)
Triangular Warning Markings		• In advance of speed humps (with or without crosswalks) and speed tables (white) • In advance of raised table intersections as directed by the County (white)

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6.0 LONGITUDINAL PAVEMENT MARKINGS

Longitudinal pavement markings are applied parallel to the direction of vehicle travel along roadways and multi-use trails.

6.1. Continuity Lines

Continuity lines are used to separate through lanes from other movements and are required on any roadway classification where the following situations exist:

Acceleration Lane (see Figure 1, Figure 2, Figure 3)
Continuity lines shall be:

- 20cm wide white
- Solid for 25m where lane changes are discouraged, measured from the stop line or gore area
- 3m long with 3m gap for remainder of length where lane changes are permitted

Dual Turning Lanes (see Figure 4)
Outside Turning Lane
Continuity lines are used on the right side of the outside turning lane and shall be:

- 20cm wide white
- Solid for 50m where lane changes are discouraged, measured from the stop line or gore area
- 3m long with 3m gap for remainder of length where lane changes are permitted

Inside Turning Lane(s)
Lane lines are used on the right side of the inside turning lane(s) and shall be:

- 10cm wide white
- Solid for 25m where lane changes are discouraged, measured from the stop line or gore area
- 3m long with 6m gap for remainder of length where lane changes are permitted (no lane line required within the taper area)

Single Turning Lane (see Figure 5, Figure 6, Figure 7, Figure 8, Figure 9, Figure 10, Figure 11, Figure 12, Figure 13)
Continuity lines shall be:

- 20cm wide white
- Solid for 25m where lane changes are discouraged, measured from the stop line or gore area
- 3m long with 3m gap for remainder of length where lane changes are permitted

Channelized Right Turning Lane Approaching Arterial Road (see Figure 26)
Continuity lines shall be:

- 20cm wide white
- 1m long with 1m gap from the island edge lines to the edge of the curb return on the right-hand side of the turning lane
- Paired with an edge line to maintain consistent lane width where necessary

Drop-Off Turning Lane (see Figure 14, Figure 15, Figure 16)
Continuity lines shall be:

- 20cm wide white
- Solid for 25m where lane changes are discouraged, measured from the stop line or gore area
- 3m long with 3m gap up to the last arrow or until the nearest access, whichever comes first, where lane changes are permitted

For the remainder of the lane, return to using lane lines (typically 10cm wide white, 3m long with 6m gap) and/or other applicable markings as determined throughout these Guidelines.

On Ramp, Off Ramp, On-Off Ramp (see Figure 17)
Continuity lines shall be:

- 20cm wide white
- Solid for 25m where lane changes are discouraged, measured from the gore area(s)
- 3m long with 3m gap for remainder of length where lane changes are permitted

If space is limited, the solid portion of the continuity line can be reduced to 15m, or eliminated entirely and the whole length delineated with broken continuity lines only (refer to Figure 17). Note that for roadways outside of the County's control, such as provincial highways, pavement markings must be coordinated with the presiding roadway authority.

Roadside Turnout (see Figure 18)
Continuity lines shall be:

- 20cm wide white
- 3m long with 3m gap for entire length of turnout where lane changes are permitted

6.2. Directional Dividing Lines (Centre Lines)

Directional dividing lines separate traffic flows in opposing directions. Depending on the layout of the travel lanes on the roadway, directional dividing lines may not always be placed at the geometric centre of the roadway.

Directional dividing lines shall be:

- 10cm wide yellow
- Single 3m long with 6m gap when overtaking is allowed in both directions
- Single solid when overtaking is discouraged in either direction
- Double solid when overtaking is prohibited in either direction, or when intending to prohibit left turns
- Double with combination of solid and broken (3m long with 6m gap) if only one direction is permitted to overtake (broken towards the lane that is permitted to overtake, solid towards the lane that is not)

Directional dividing lines are required:

- On arterial roadways – where there is no concrete median
- On collector roadways – where there is more than one travel lane in one or both directions and there is no concrete median
- On collector roadways with only one travel lane in each direction and with traffic volumes greater than 4,000 vehicles per day:
    - Where the pavement is wider than 7.0m and parking is not permitted
    - Where the pavement is wider than 9.0m and parking is permitted on one side
    - Where the pavement is wider than 11.5m and parking is permitted on both sides
- As directed by the County, on collector and local roadways with only one travel lane in each direction and with traffic volumes less than 4,000 vehicles per day:
    - Where there is a history of sideswipe-opposite-direction or head-on collisions
    - Where the centre of the travel lanes does not align with the geometric centre of the road
    - Where there are other operational concerns or special circumstances identified by the County
- On the approaches to fully signalized intersections and pedestrian signals (half signals) – 120m of single solid, measured from the stop line, or to the nearest intersection, whichever is shorter
- On the approaches to all-way stop intersections – 30m of single solid, measured from the stop line, or to the nearest intersection, whichever is shorter
- At railway crossings on any urban roadway – minimum 30m of single solid, measured from the stop line (refer to the railway crossing section for more details)

Unless otherwise directed by the County, directional dividing lines shall be discontinued at or before the outermost curb line at intersections/accesses (see Figure 50) depending on the type of connection to the marked road:

	Discontinue Directional Dividing Lines?	
Connection to Marked Road	**Double Lines**	**Single Line**
Another Road (any number of intersecting legs)	Yes	Yes
Single Access/Driveway	Yes, unless intending to prohibit left turns	No
Two Directly Opposing Accesses/Driveways	Yes, unless intending to prohibit left turns	No

6.3. Gore Area Markings

Gore area markings indicate when traffic flows diverge and converge, discourage drivers from driving or parking in the area, and help maintain appropriate lane width/geometry. Gore edge lines mark the perimeter of the gore area; diagonal lines may be used to fill in the gore area. Note that diagonal lines are generally not required on the roadway shoulder.

Diagonal lines are required:

- Where the gore area is longer than 30m and wider than 2m, or where the gore area is greater than 30m^2 (see Figure 19)
- Around channelizing islands ("pork chops") – where the pavement edge line is more than 2.0m away from the lip of gutter (or face of curb where there is no gutter) (see Figure 25)
- At the end of a channelized right turning lane approaching an arterial road – where the pavement edge line is more than 2.5m away from the lip of gutter (or face of curb where there is no gutter) (see Figure 26)

With Diagonal Lines

Gore edge lines shall be:

- 10cm wide solid
- White if separating traffic in the same direction
- Yellow if separating traffic in opposing directions

Diagonal lines shall be:

- 30cm wide solid with 6m gap; white in a "V" pattern (60°) if separating traffic in the same direction
- 60cm wide solid with 6m gap; yellow in slanting straight lines (30°) if separating traffic in opposing directions

Without Diagonal Lines

Gore edge lines form the perimeter of the gore area and shall be:

- 10cm wide solid
- White if separating traffic in the same direction
- Yellow if separating traffic in opposing directions

6.4. Guiding Lines

Guiding lines are the lane lines through intersections. In general, guiding lines shall not be used for through/straight or single turning lanes. Guiding lines may be required for a single turning lane or through lane where the geometry is obscure and/or additional driver guidance is required, as directed by the County.

Guiding lines shall be:

- 10cm wide white where used between two travel lanes in the same direction
- 10cm wide yellow where used on the left-hand side of a leftmost lane (inner lane)
- 0.5m long with 0.5m gap

Guiding lines are required **on the left-hand side** of:

- The outside turning lane for dual turning lanes (white) (see Figure 20)
- The two outside turning lanes for triple turning lanes (white) (see Figure 20)
- A single turning lane where the through movement is prohibited by an island (yellow) (see Figure 21)

6.5. Lane Lines

Lane lines separate traffic flows in the same direction and are used to maintain an appropriate lane width. Refer to the County's Design and Construction Standards for standard lane widths. Minimum lane width shall be 3.30m. On-street parking lanes shall not be delineated except for in the CITP area or unless otherwise directed by the County.

Lane lines shall be:

- 10cm wide white
- 3m long with 6m gap when lane changes are allowed
- Single solid when lane changes are discouraged
- Double solid when lane changes are prohibited

Lane lines are required on:

- All roadways when there is more than one lane in that direction (see Figure 22)

Unless otherwise directed by the County, lane lines shall be discontinued at or before the outermost curb line at intersections/accesses (see Figure 50) depending on the type of connection to the marked road:

Connection to Marked Road	Discontinue Lane Lines?
Another Road (any number of intersecting legs)	Yes
Single Access/Driveway	No
Two Directly Opposing Accesses/Driveways	No

6.6. Pavement Edge Lines

Pavement edge lines mark the right edge of the right travelled lane or the left edge of left travelled lane and are used to maintain an appropriate lane width. Refer to the County's Design and Construction Standards for standard lane widths. Minimum lane width shall be 3.30m. On-street parking lanes shall not be delineated except for in the CITP area or unless otherwise directed by the County.

Pavement edge lines shall be:

- 10cm wide
- Solid white or solid yellow, depending on configuration (refer to figures)

Pavement edge lines are required on:

- Arterial and collector roadways when there is no curb (see Figure 22)
- On any roadway when the shoulder (with or without curb) is greater than 2.0m (see Figure 22, Figure 23, Figure 24, Figure 25)
- On the right-hand side of a channelized right turning lane approaching an arterial road, where required to maintain consistent lane width (see Figure 26)

Unless otherwise directed by the County, pavement edge lines shall be discontinued at or before the outermost curb line at intersections/accesses (see Figure 50) depending on the type of connection to the marked road:

Connection to Marked Road	Discontinue Pavement Edge Lines?
Another Road (any number of intersecting legs)	Yes
Single Access/Driveway	Yes
Two Directly Opposing Accesses/Driveways	Yes

6.7. School Bus Bay Lines

School bus bay lines are not required, unless otherwise directed by the County.

6.8. Transit Bus Bay Lines

Transit bus bay lines mark dedicated transit bus bays. Appropriate signage should be installed, but words or other pavement markings are not required, unless otherwise directed by the County.

Transit bus bay lines shall be:

- 10cm wide white
- 1.5m long with 1.5m gap for the length of the bus bay

Transit bus bay lines are required on:

- All dedicated transit bus bays, regardless of roadway classification (not where the transit bus stops in a regular lane or an auxiliary lane) (see Figure 27)

6.9. Two-Way Left Turn Lane (TWLTL) Lines

TWLTL lines mark a TWLTL, also referred to as a centre left turn lane, where left turning traffic of both directions share a left turn lane.

TWLTL lines shall be:

- 10cm wide double yellow with 10cm gap
- 3m long with 3m gap on the inside of the lane
- Solid on the outside of the lane

TWLTL lines are required:

- Along the full length of all TWLTLs (see Figure 28)

6.10. Unused Road Space Lines

Unused road space lines mark an area where vehicles should not enter (for example, abandoned or future transit bus bays).

Unused road space lines shall be:

- 10cm wide double white with 10cm gap
- 3m long with 3m gap on the inside of the unused space
- Solid on the outside of the unused space

Unused road space lines are required:

- Along the perimeter of the unused road space (see Figure 29)

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7.0 TRANSVERSE PAVEMENT MARKINGS

Transverse pavement markings are applied perpendicular to the direction of travel along roadways and multi-use trails.

7.1. Parallel Crosswalk Lines

Parallel crosswalk lines mark the pedestrian crossing location at intersections controlled by pedestrian signals or full signals. Parallel crosswalk lines are not required at unsignalized intersections, except as noted below.

Parallel crosswalk lines shall be:

- 10cm wide white
- Parallel solid over the entire width of all travel lanes approaching the intersection from curb to curb
- Aligned with and centred over the pedestrian ramps on both sides of the roadway, extending entirely across the pavement (not necessarily perpendicular to the direction of vehicle travel); ensure markings do not overlap the gutter pan
- The same distance apart on each leg of the intersection that warrants parallel crosswalk lines
- 3.0m or 4.0m apart based on traffic control device and road classification, as follows:

Parallel Crosswalk Lines Spacing (m)						
	Traffic Control Device					
Road Class.	Traffic Signal	Pedestrian Signal	Pedestrian Flasher	RFB	Crosswalk (intersection/ midblock)	Roundabout/ Traffic Circle
Arterial (incl. Emerald Dr and Granada Blvd)	4.0	4.0	4.0	4.0	4.0	4.0
Collector (eg. Glenbrook Blvd and Main Blvd)	4.0	4.0	4.0	3.0*	3.0*	3.0*
Local	4.0	4.0	4.0	3.0*	3.0*	3.0*
* Where warranted by pedestrian volumes (such as near schools), as determined by the County, the spacing/length may be increased to 4.0m.						

Parallel crosswalk lines are required:

- At fully signalized intersections (see Figure 51, Figure 52)
- At pedestrian signals (only for the signalized pedestrian crosswalks) (see Figure 53)
- At an intersection with all-way stop control (see Figure 55, Figure 56)
- At unsignalized road approaches with a channelizing island on one or both sides as a special treatment to address pedestrian safety concerns (see Figure 57)
- At the stop-controlled leg of an intersection, where a pedestrian crossing is warranted as directed by the County (see Figure 59 and Figure 60 for sample layouts)

7.2. Parking Lines

Parking lines mark parking stalls, where the driver would park their vehicle in a parallel, angle, or perpendicular fashion on a roadway or in a parking lot. Parking stalls must be provided in accordance with the County's Land Use Bylaw and the Alberta Building Code. On-street parking lanes shall not be delineated except for in the CITP area or unless otherwise directed by the County.

Parking Lot (see Figure 30, Figure 31)

Parking lines are required for all parking stalls in County-owned parking lots. Refer to the County's Land Use Bylaw for additional parking and loading standards.

Parking lines shall be:

- 10cm wide solid white
- A series of parallel lines used to define perpendicular and/or angle parking

On-Street Parking (see Figure 32)
On-street parking lanes shall not be delineated except for in the CITP area or unless otherwise directed by the County.

On-street parking lines shall be:

- 10cm wide solid white
- A series of parallel lines used to define angle parking
- A series of "T" lines used to define parallel parking

7.3. Shark's Teeth (Yield Lines)

Yield lines are used to discourage drivers from stopping too close to the intended yield zone. Yield lines shall not be used at intersections controlled by pedestrian signals (half signals) or full signals. Where yield lines are required at a pedestrian crossing location (see below), they must be applied across any travel lane that will be affected by the pedestrian movement; they are not required across travel lanes that are not affected by the pedestrian movement.

Yield lines shall be:

- A line of white isosceles triangles pointing in the upstream direction
- 50cm wide, 75cm long with 15cm gap
- Perpendicular to the direction of vehicle travel in all cases (staggered when applicable), not necessarily parallel to the crosswalk lines

Yield lines are required:

- **Only when more than one travel lane is required to yield**, unless otherwise directed by the County
- Minimum 10m upstream of a pedestrian crossing location (controlled by pedestrian signing only, or by pedestrian flashers or rapid flashing beacons), or where stopped vehicles will not interfere with cross traffic, whichever is greater (see Figure 33, Figure 34, Figure 35, Figure 54)
- On the approach lanes of a multi-lane roundabout, minimum 0.5m upstream of the outer circulatory lane (see Figure 63)

7.4. Stop Lines

Stop lines indicate where the driver is required to stop at intersections or railway or pedestrian crossing locations. Stop lines are not required at uncontrolled intersections. **Stop lines shall not be used at approaches to yield signs (or in conjunction with a yield sign)**.

Stop lines shall be:

- 30cm wide white
- Solid over the entire width of all travel lanes approaching the intersection from curb to curb and over the width of any lane lines, if applicable; ensure markings do not overlap the gutter pan or pavement edge lines
- Perpendicular to the direction of vehicle travel (staggered where applicable) — the stop lines shall not be placed parallel to the crosswalk lines if the crosswalk lines are not perpendicular to the direction of vehicle travel
- Placed with a 1.0m gap between the stop line and the upstream edge of any parallel crosswalk lines (where applicable)

- Located an appropriate distance away from the outside curb line/edge of pavement of the intersecting roadway (minimum 2.0m)
    - Line position shall be determined by a vehicle maneuvering analysis that accommodates all appropriate design vehicles
    - Where feasible, the stop line should be within 2.0m of the stop sign
- Located a minimum of 16.0m upstream of the traffic signals to ensure that the driver can see the traffic signals

Stop lines are required:

- On the approaches to fully signalized intersections (see Figure 51, Figure 52)
- On the approaches to pedestrian signals (half signals), only for the signalized approaches (see Figure 53)
- On the approaches to all-way stop controls (see Figure 55, Figure 56)
- On a stop-controlled intersection approach with a channelizing island on one or both sides where parallel crosswalk lines are marked (see Figure 57) (stop lines are not required in this case if parallel crosswalk lines are not marked)
- On the approach to a stop-controlled intersection with multiple lanes (see Figure 60)

7.5. Triangular Warning Markings

Triangular pavement markings are used in advance of raised features such as speed humps, speed cushions, raised crosswalks, and speed tables/raised intersections (see Figure 40).

Triangular pavement markings shall be:

- A pair of white isosceles triangles pointing in the downstream direction on each side of the elevated pavement
- 60cm wide, 1.5m long, with 90cm gap where the typical 2.0m ramp is used; dimensions may vary depending on ramp size or as directed by the County, but the triangle length must be 2.5 times the width
- Perpendicular to the direction of vehicle travel in all cases

Triangular pavement markings are required at or on:

- All raised crosswalks
- All speed humps
- All speed tables
- Raised table intersections, as directed by the County
- All speed cushions

7.6. Zebra Bars

Zebra bars mark a mid-block pedestrian crossing location. Zebra bars are not required at intersections controlled by pedestrian signals or full signals, unless otherwise directed by the County.

Zebra bars shall be:

- 60cm wide white, rectangle only (an irregular polygon is not permitted)
- Centred lengthwise over the crossing location (staggered where applicable)
- Perpendicular to the direction of vehicle travel
- 3.0m or 4.0m long with 60cm gap; bar length based on traffic control device and road classification, as follows (see next page):

Zebra Bars Spacing (m)						
	Traffic Control Device					
Road Class.	Traffic Signal	Pedestrian Signal	Pedestrian Flasher	RFB	Crosswalk (intersection/ midblock)	Roundabout/ Traffic Circle
Arterial (incl. Emerald Dr and Granada Blvd)	4.0	4.0	4.0	4.0	4.0	4.0
Collector (eg. Glenbrook Blvd and Main Blvd)	4.0	4.0	4.0	3.0*	3.0*	3.0*
Local	4.0	4.0	4.0	3.0*	3.0*	3.0*
* Where warranted by pedestrian volumes (such as near schools), as determined by the County, the spacing/length may be increased to 4.0m.						

Zebra bars are required:

- At the uncontrolled or yield-controlled leg of an intersection, where a pedestrian crossing is warranted as directed by the County, a series of bars across all pavement
- In urban areas, on any mid-block pedestrian crossing location that is controlled by pedestrian signing only (see Figure 33, Figure 36, Figure 38, Figure 38, Figure 59, Figure 62, Figure 63), or by pedestrian flashers or rapid flashing beacons (see Figure 34, Figure 54), a series of bars across all pavement
- In urban areas, on any pedestrian crossing location over a channelized right turn lane at a signalized intersection, three bars (see Figure 39)

8.0 OTHER PAVEMENT MARKINGS

8.1. Arrows

Arrows are used to indicate allowable vehicle movements in a lane. All arrows shall be the same size throughout the County (refer to arrow diagrams). Number and spacing of arrows are dependent on the application (refer to turn lane diagrams). In general, straight through and shared lane arrows are not required, unless otherwise directed by the County to address geometry or operational issues, such as lane misalignment.

Arrows shall be:

- Solid white, in the shape and size shown in the diagrams (see Figure 41, Figure 42, Figure 43)
- Centred by width on the lane where they are being applied

8.2. Letters and Numbers

In general, letters and numbers are not required unless otherwise directed by the County.

8.3. Multi-Use Trail (MUT)

Multi-use trail markings consist of centre lines and stop lines (see Figure 44, Figure 45). In general, no additional marking is required.

Trail Centre Lines

Trail centre lines mark the centre of the "through lanes" of an asphalt multi-use trail.

Trail centre lines shall be:

- 75mm wide solid yellow

Trail centre lines are required:

- On all asphalt multi-use trails in both urban and rural areas

Trail Stop Lines

Trail stop lines are used on asphalt multi-use trails to indicate where the user is required to stop or dismount.

Trail stop lines shall be:

- 25cm wide solid yellow

Trail stop lines are required:

- Where a trail stop sign is installed (refer to the County's Design and Construction Standards, Volume 1, Section 6, Sub-section 6.6)

8.4. Railway Crossing

Railway crossing markings warn road users of an upcoming railway crossing and indicate where they are required to stop.

Railway crossing markings shall consist of:

- 10cm wide solid yellow directional dividing line (see Figure 46)
- Two 30cm wide solid white stop lines with 30cm gap (see Figure 47)
- 2.5m by 6.0m, 40cm wide solid white "X" symbol (see Figure 46, Figure 47)

Railway crossing markings are required:

- In advance of all railway crossings on any asphalt roadway

8.5. Roundabout

When designing pavement markings for roundabouts, follow the United States Department of Transportation Federal Highway Administration's (FHWA's) Manual of Uniform Traffic Control Devices for Highways and Streets (2009) and Ministry of Transportation British Columbia's Lane Use Signs and Pavement Markings at Multi-Lane Roundabouts, Technical Bulletin TE-2005-5, as well as current best practices as approved by the County. Refer to Figure 62 for an example of a single-lane roundabout design; refer to Figure 63 for an example of a two-lane roundabout design.

8.6. Stop Box Lines

Stop box lines mark the area where vehicle movement conflicts exist at intersections, as determined by a vehicle maneuvering analysis that accommodates all appropriate design vehicles. The edges of the stop box are usually defined by a curb/median or pavement marking on the left and right, stop line at the front, and pavement marking at the back.

Stop box lines shall be:

- 10cm wide solid white
- Two intersecting diagonal lines inside the stop box

Stop box lines are required:

- Where there is a minimum of 6.0m between the near side of the parallel crosswalk lines and the stop line (staggered where applicable) (see Figure 53)
- Where there is a minimum of 6.0m between the stop lines of adjacent lanes (staggered where applicable) (see Figure 48, Figure 52)

8.7. Symbols

A variety of symbols are used throughout Canada in certain situations; bicycle, International Symbol of Access, reserved lane, and shared-use lane symbols are mentioned here.

Bicycle

The bicycle symbol is not required, unless otherwise directed by the County.

International Symbol of Access

The International Symbol of Access is not required, unless otherwise directed by the County.

Reserved Lane (Diamond)

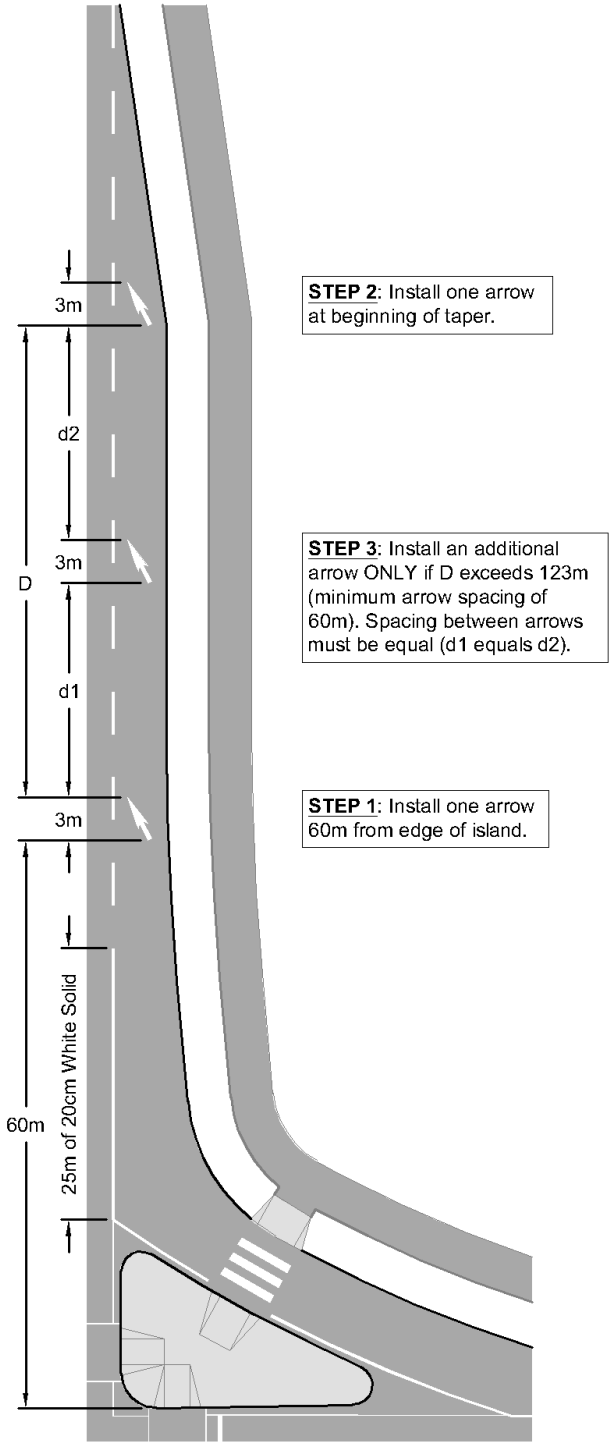
The reserved lane symbol is not required, unless otherwise directed by the County.

Shared-use Lane

The shared-use lane symbol is not required, unless otherwise directed by the County.

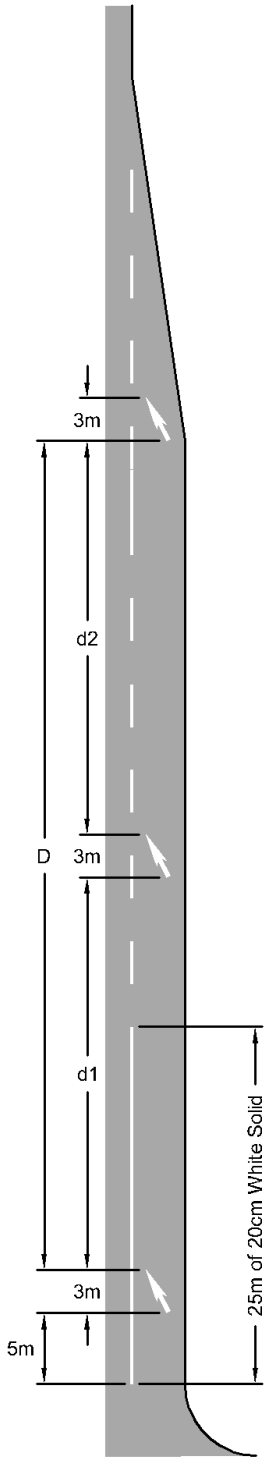
9.0 LONGITUDINAL PAVEMENT MARKINGS DIAGRAMS

Figure 1: Acceleration Lane from the Right (Channelized)



NOTES:
1. WHERE SPACE IS LIMITED, THE DISTANCE TO THE FIRST ARROW FROM THE INTERSECTING ROADWAY CAN BE REDUCED.
2. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
3. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 2: Acceleration Lane from the Right (Unchannelized)



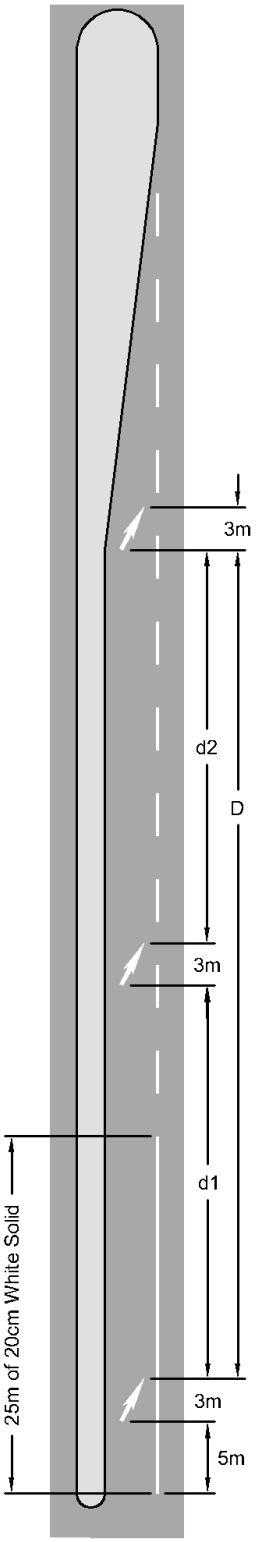
STEP 2: Install one arrow at beginning of taper.

STEP 3: Install an additional arrow ONLY if D exceeds 123m (minimum arrow spacing of 60m). Spacing between arrows must be equal (d1 equals d2).

STEP 1: Install one arrow 5m from curb return.

NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 3: Acceleration Lane from the Left



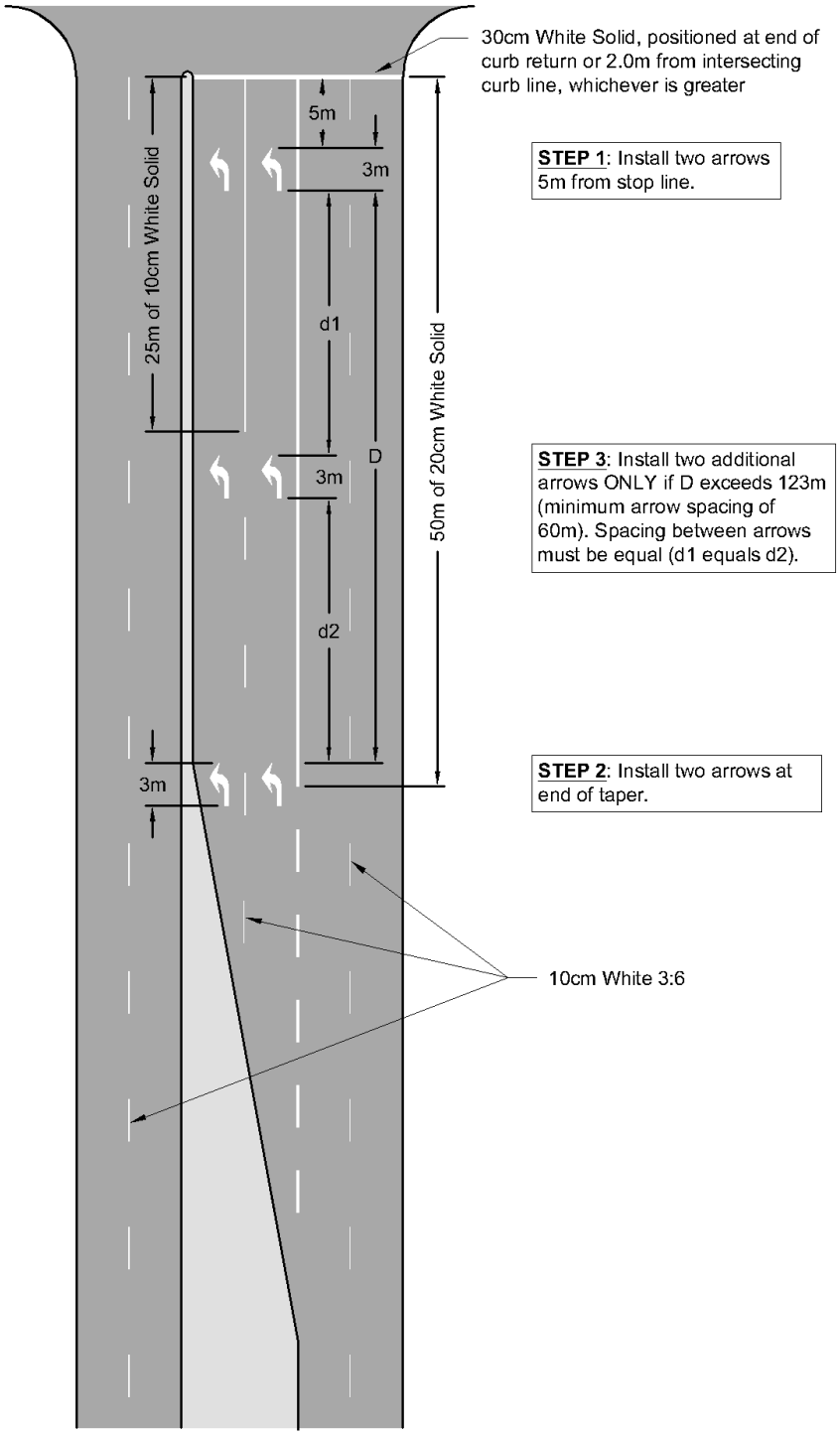
STEP 2: Install one arrow at beginning of taper.

STEP 3: Install an additional arrow ONLY if D exceeds 123m (minimum arrow spacing of 60m). Spacing between arrows must be equal (d1 equals d2).

STEP 1: Install one arrow 5m from curb return of median.

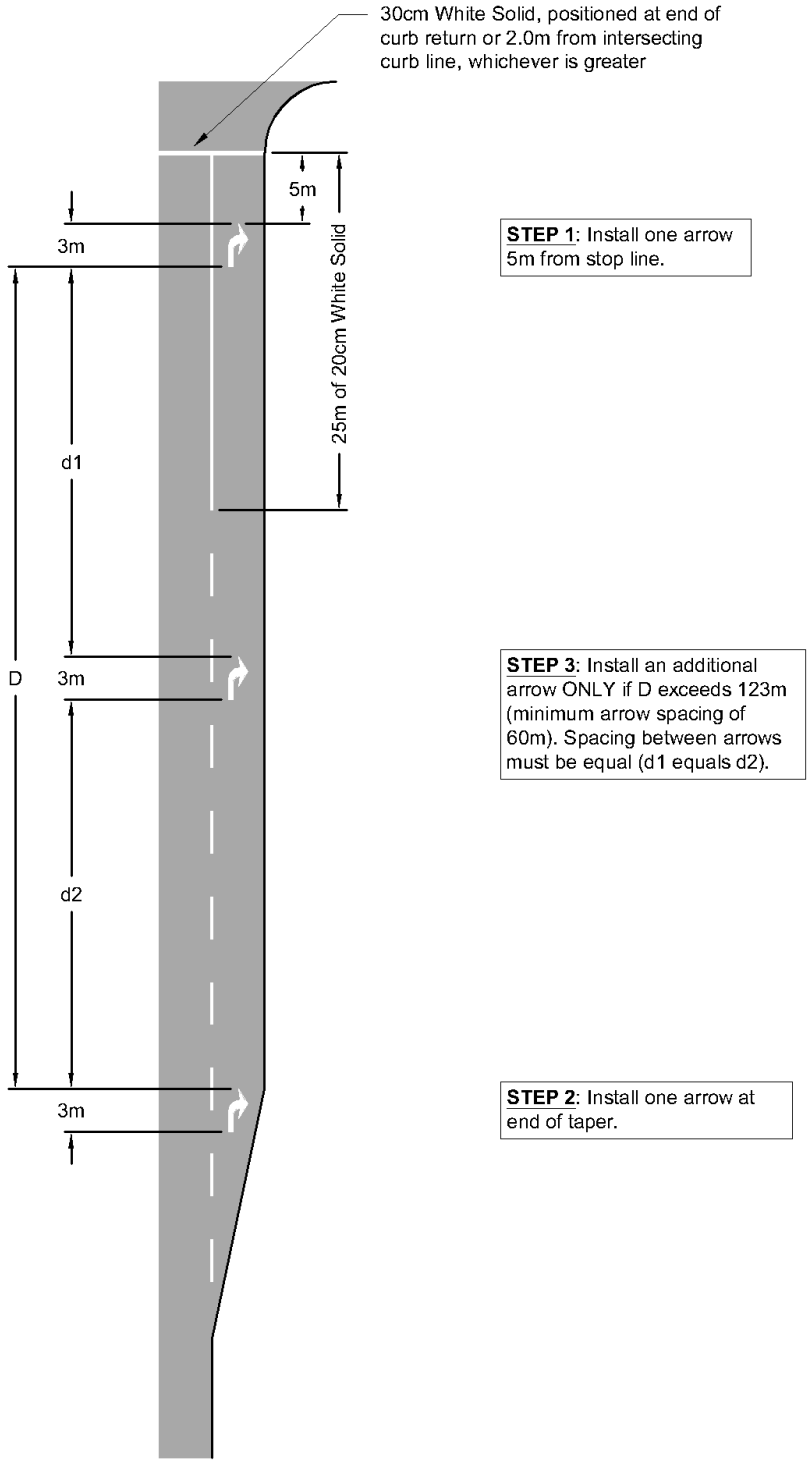
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 4: Dual Left Turning Lanes



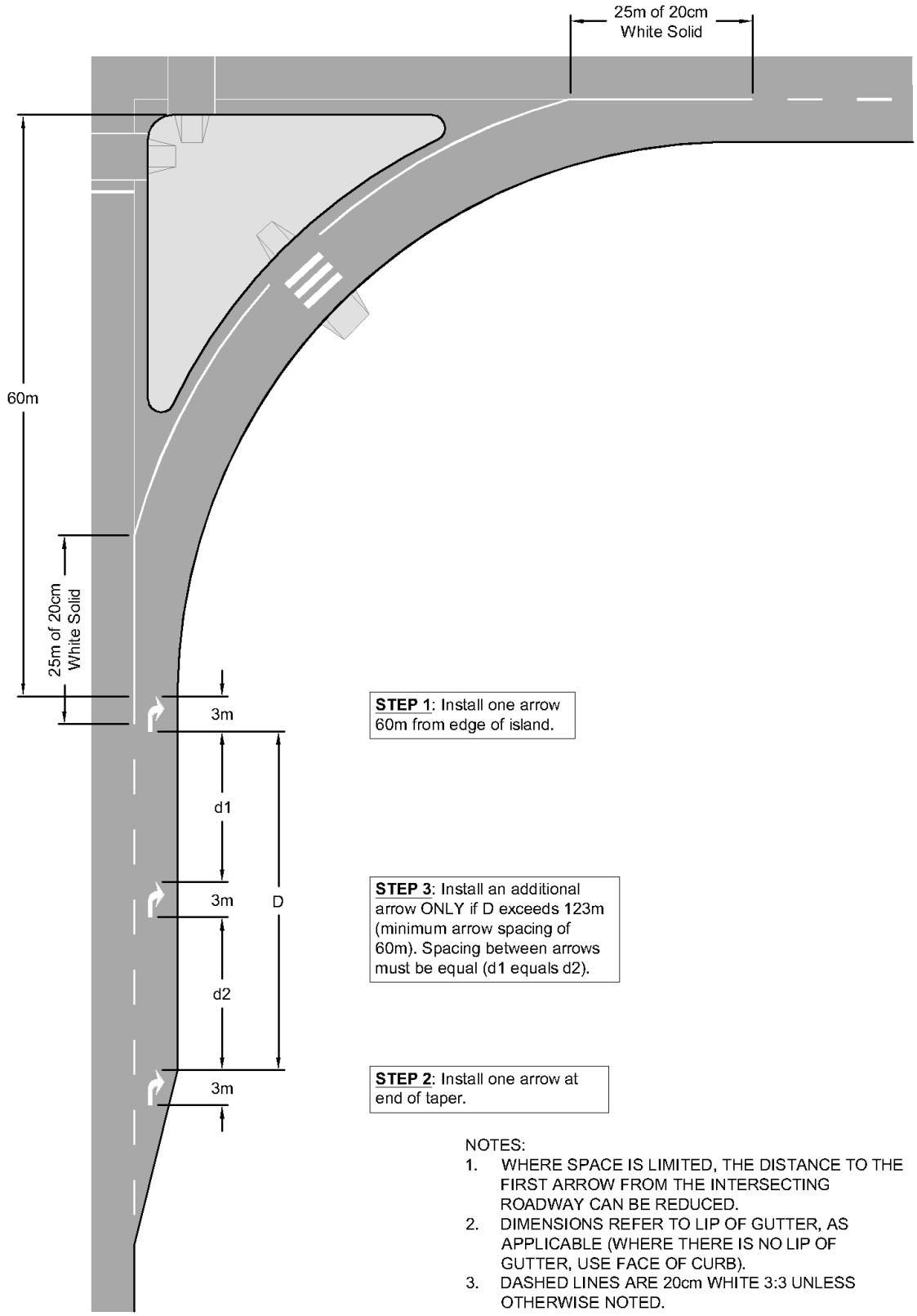
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 5: Single Right Turning Lane (Unchannelized)



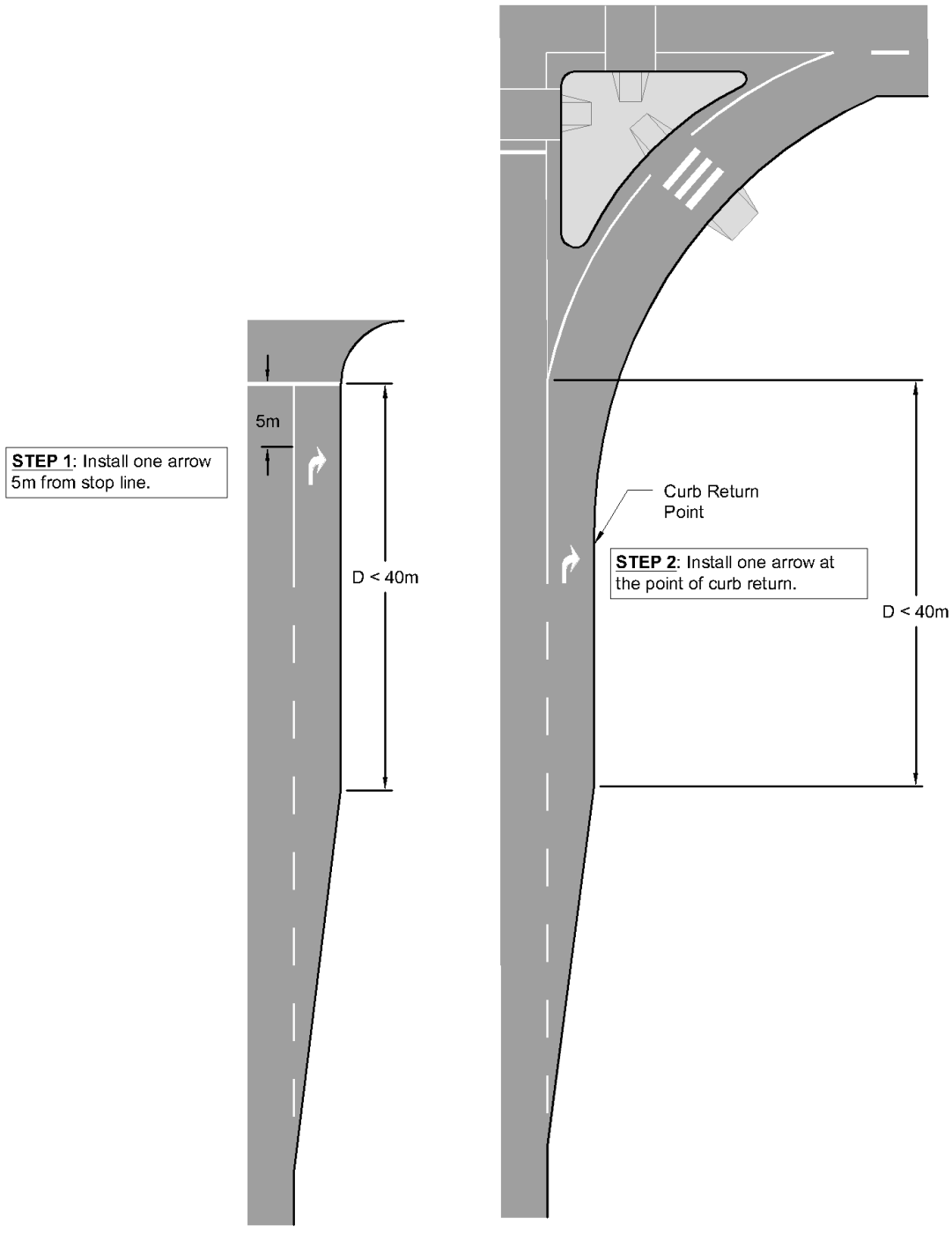
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 6: Single Right Turning Lane (Channelized)



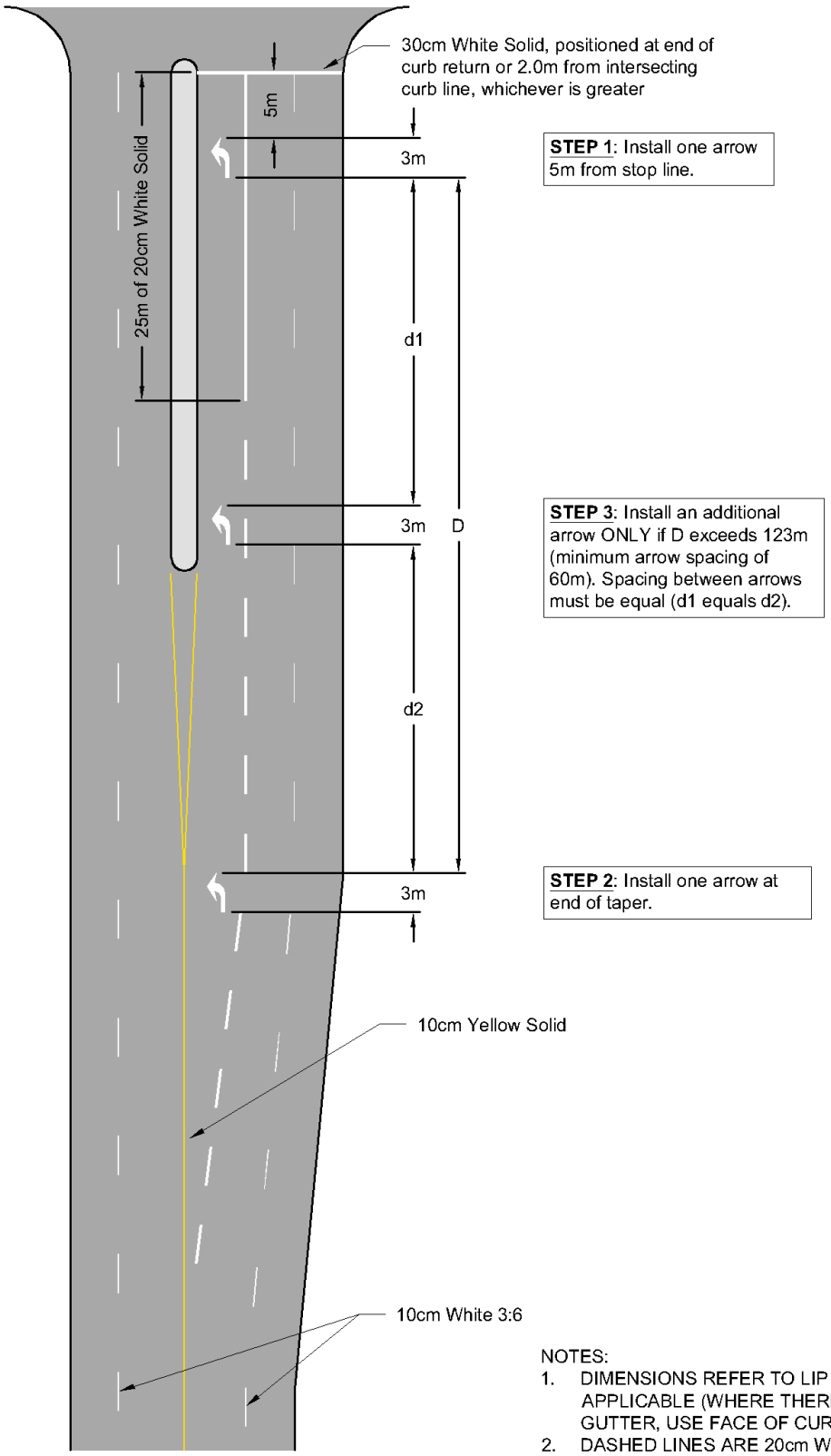
NOTES:
1. WHERE SPACE IS LIMITED, THE DISTANCE TO THE FIRST ARROW FROM THE INTERSECTING ROADWAY CAN BE REDUCED.
2. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
3. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 7: Single Right Turning Lane with Extra Short Turning Bay



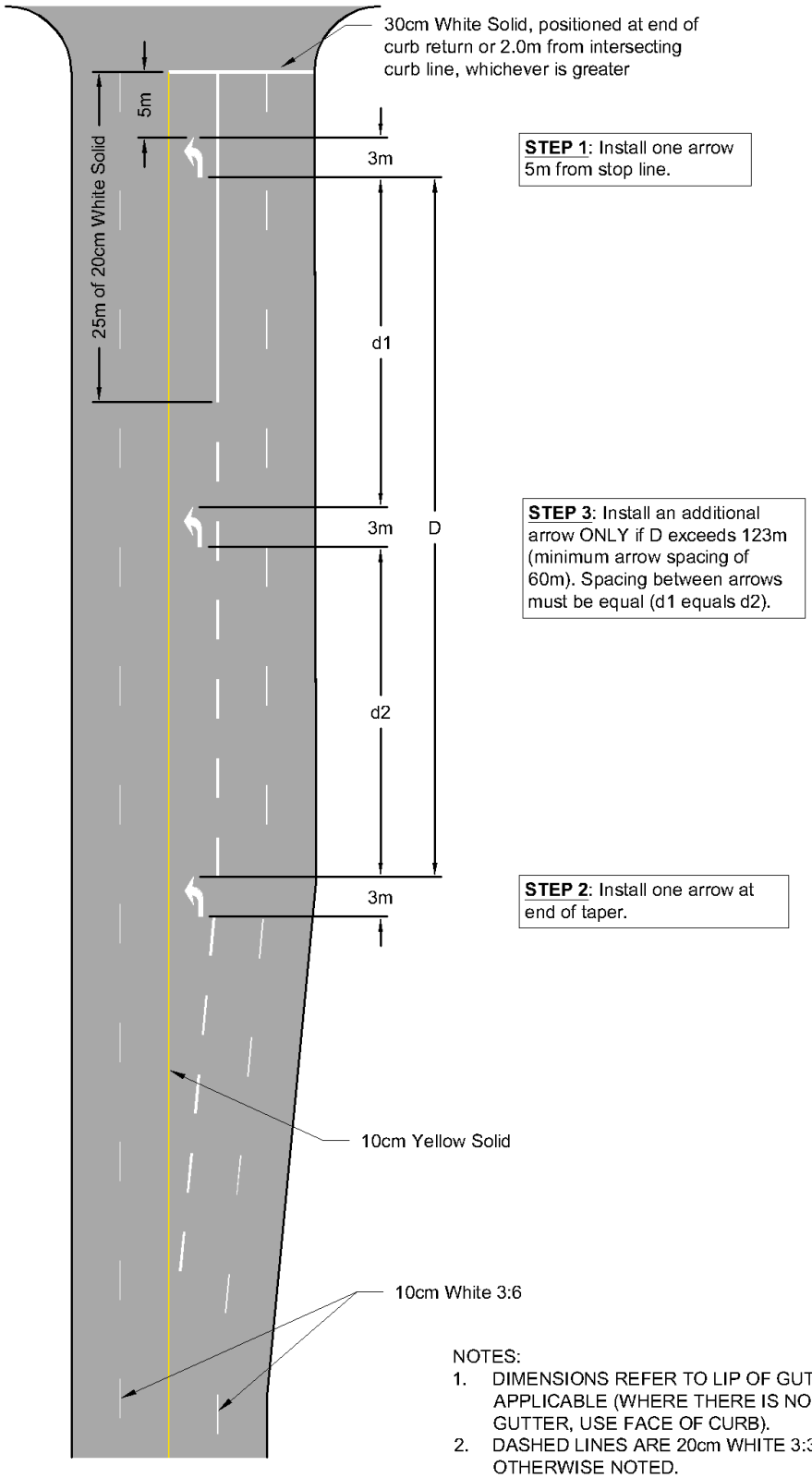
NOTES:
1. D IS THE TOTAL LENGTH OF THE TURNING BAY.
2. IF D IS LESS THAN 40m, PLACE ONLY ONE ARROW.

Figure 8: Single Left Turning Lane with Median



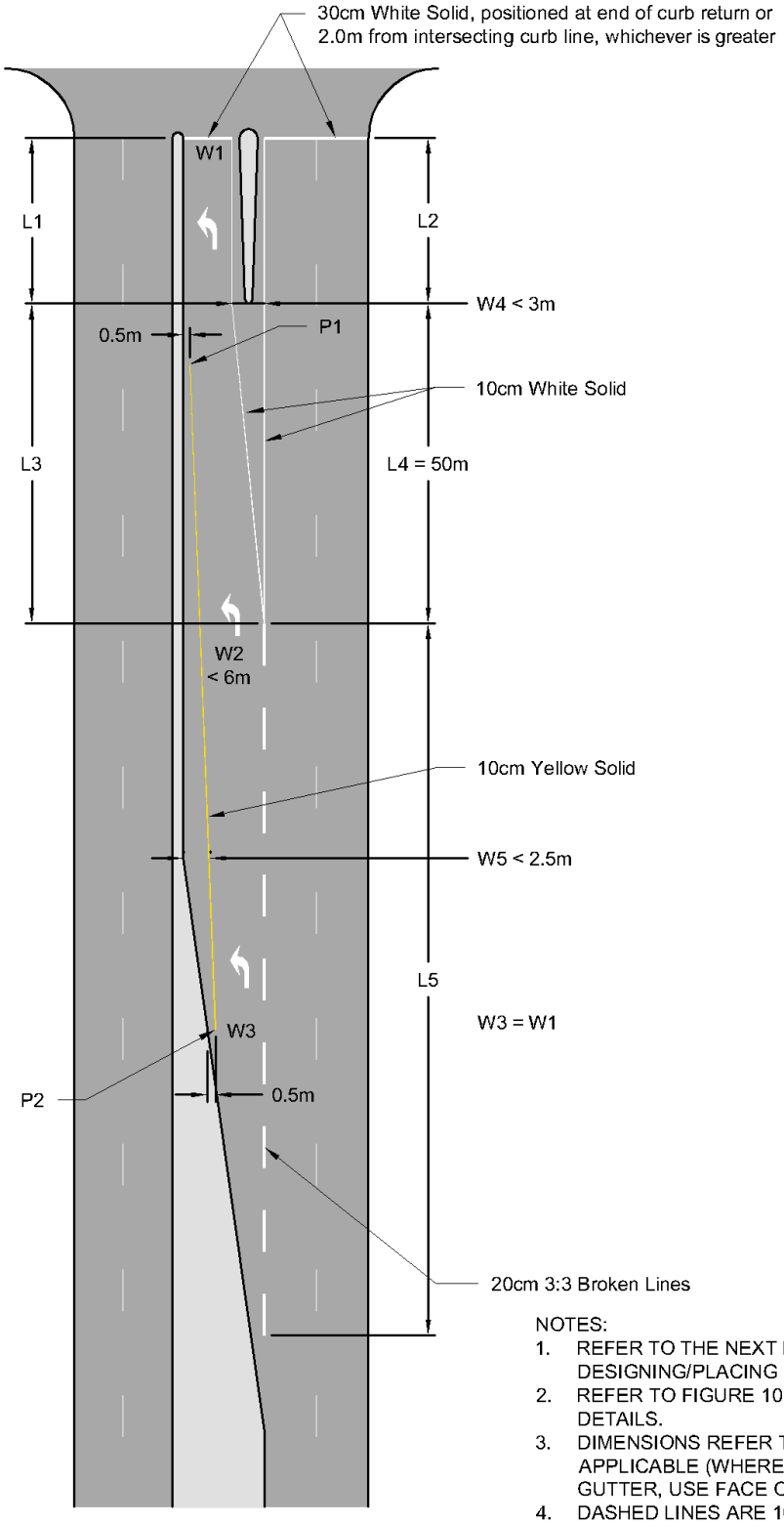
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 9: Single Left Turning Lane without Median



NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 10: Single Left Turning Lane Exceeding Typical Width (Lane Line Details)



NOTES:
1. REFER TO THE NEXT PAGE FOR DETAILS ON DESIGNING/PLACING LANE LINES.
2. REFER TO FIGURE 10 FOR ARROW PLACEMENT DETAILS.
3. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
4. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Details for designing/placing the lane lines for a single left turning lane exceeding typical width

1. Given the roadway/intersection configuration, determine the desired stop bar location.
2. Draw a 30cm stop bar from the LOG of the median to the LOG of the island at the desired location. The stop bar must be perpendicular to the lane.
3. Draw a 10cm white solid edge line, L1, on the left side of the island.
    a. Where possible, the position of this line should be the position of the future lane line when the bay is upgraded to a dual left turn.
    b. Determine the desired width, W1', of the turn lane (typically 3.5m). Offset the LOG of the median to the right by width, W1', to determine the position of L1.
    c. L1 must be at least 0.5m from the LOG of the island wherever possible (width W1' may need to be adjusted to accomplish this).
    d. Trim the length of the stop bar to L1 to determine the actual width, W1.
4. Draw a 10cm white solid edge line, L2, on the right side of the island.
    a. Where possible, the position of this line should be the position of the future lane line when the bay is upgraded to a dual left turn.
    b. L2 must be parallel to the through lanes and at least 0.5m from the LOG of the island wherever possible.
5. L1 and L2 length is measured from the respective stop bar to the upstream nose of the island. If required, trim or extend L1 and L2 to achieve this.
6. Extend L2 by 50m from the nose of the island to form the edge line, L4.
7. Draw a 10cm white solid edge line from the end of L1 to the end of L4 to form the edge line, L3. This closes the triangle to form the gore area with a width, W4, at the upstream nose of the island.
8. Offset the LOG of the median to the right by 0.5m.
9. Draw a 20cm white 3:3 lane line, L5, from the end of L4 to wherever it intersects with the 0.5m median offset line.
    a. Do not use partial markings—delete the last line if it is less than 3.0m long.
    b. L5 should be parallel to the through lanes.
10. Define Points P1 and P2 for the yellow dividing line within the bay.
    a. Offset L3 and L5 to the left by width, W1.
    b. The intersection of the 0.5m median offset line and the L3/L5 offset lines are Points P1 and P2.

11. The width of the turning lane at the end of the yellow dividing line, W3, should be the same as W1.

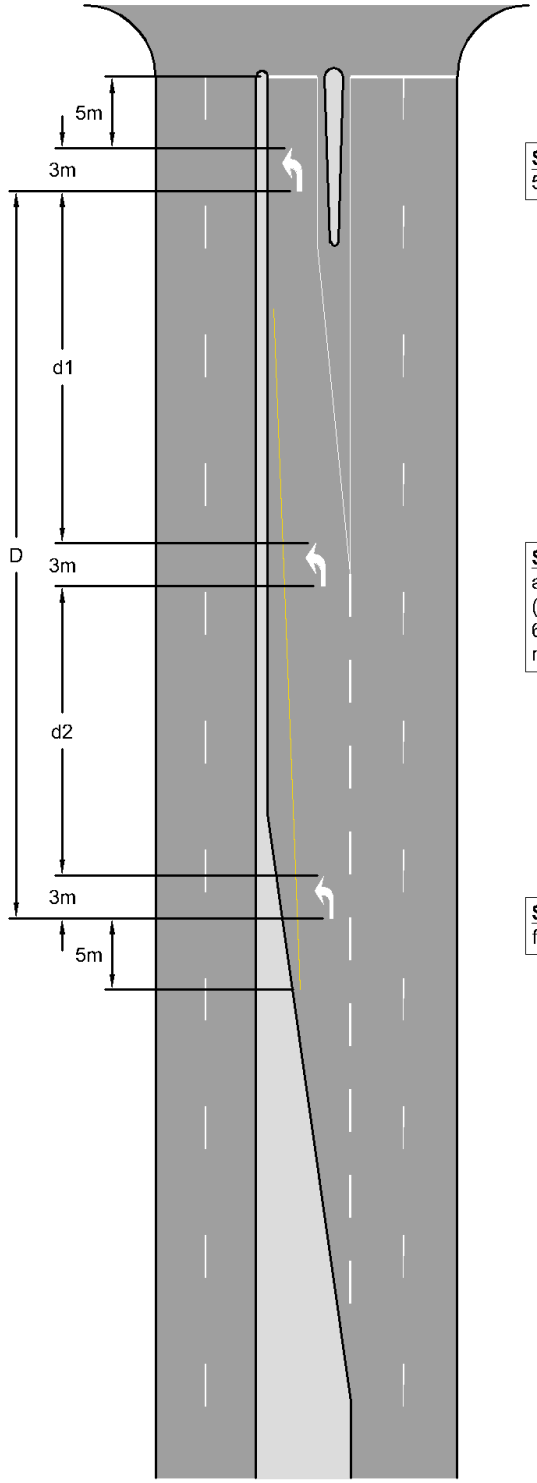
12. The widest section of the bay, W2, should not be greater than 6.0m. The widest distance between the LOG of the median and the yellow dividing line, W5, should not be greater than 2.5m. Adjust the yellow line to achieve this where possible.

13. Install diagonal gore lines if the width of the gore area at the upstream nose of the island, W4, is greater than 3.0m.

14. Install diagonal gore lines if the distance between the LOG of the median and the yellow line, W5, is greater than 2.5m.

NOTE: Where there is no gutter, replace LOG with FOC in the steps above.

Figure 11: Single Left Turning Lane Exceeding Typical Width (Arrow Placement Details)



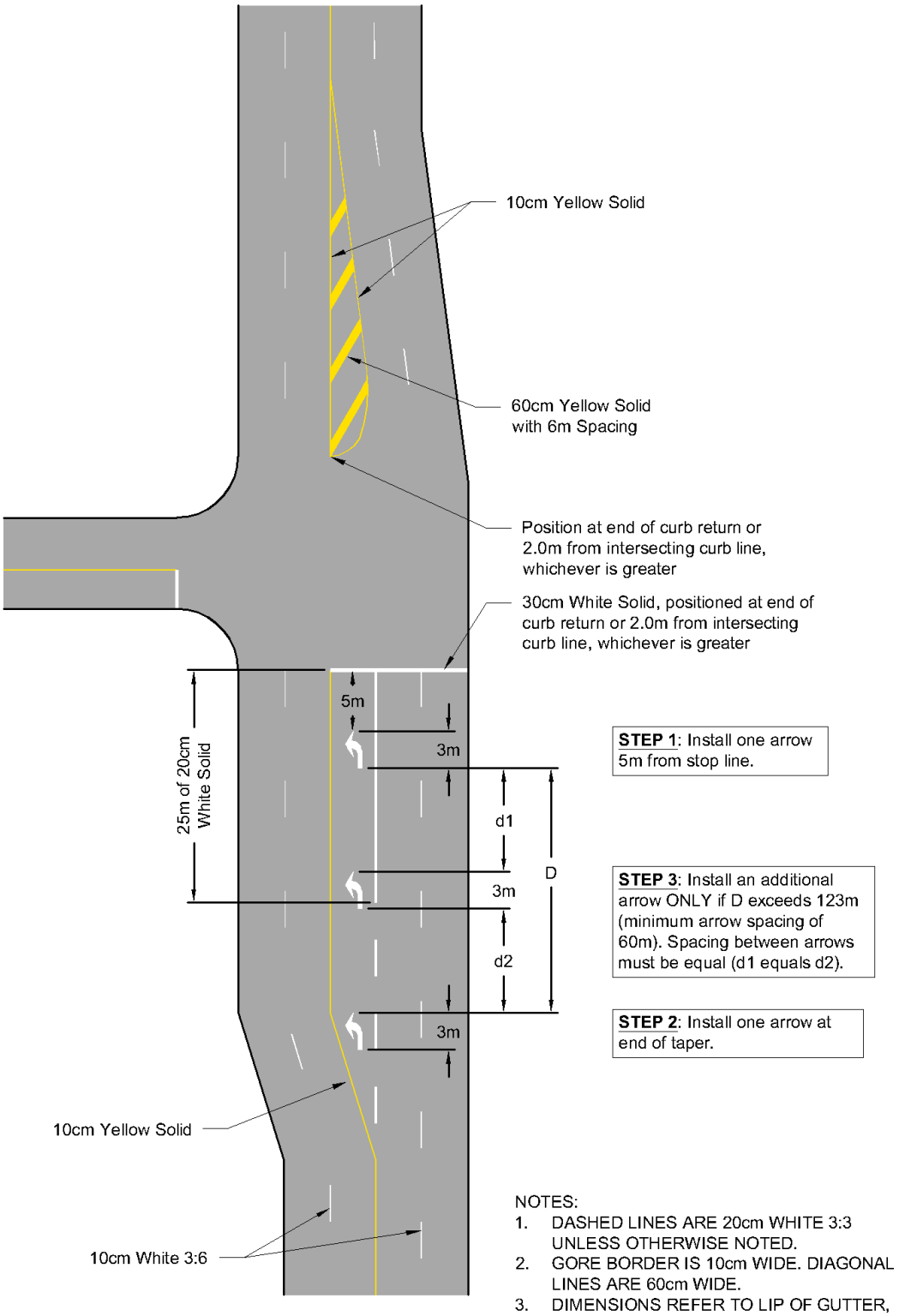
STEP 1: Install one arrow 5m from stop line.

STEP 3: Install an additional arrow ONLY if D exceeds 123m (minimum arrow spacing of 60m). Spacing between arrows must be equal (d1 equals d2).

STEP 2: Install one arrow 5m from the end of the yellow line

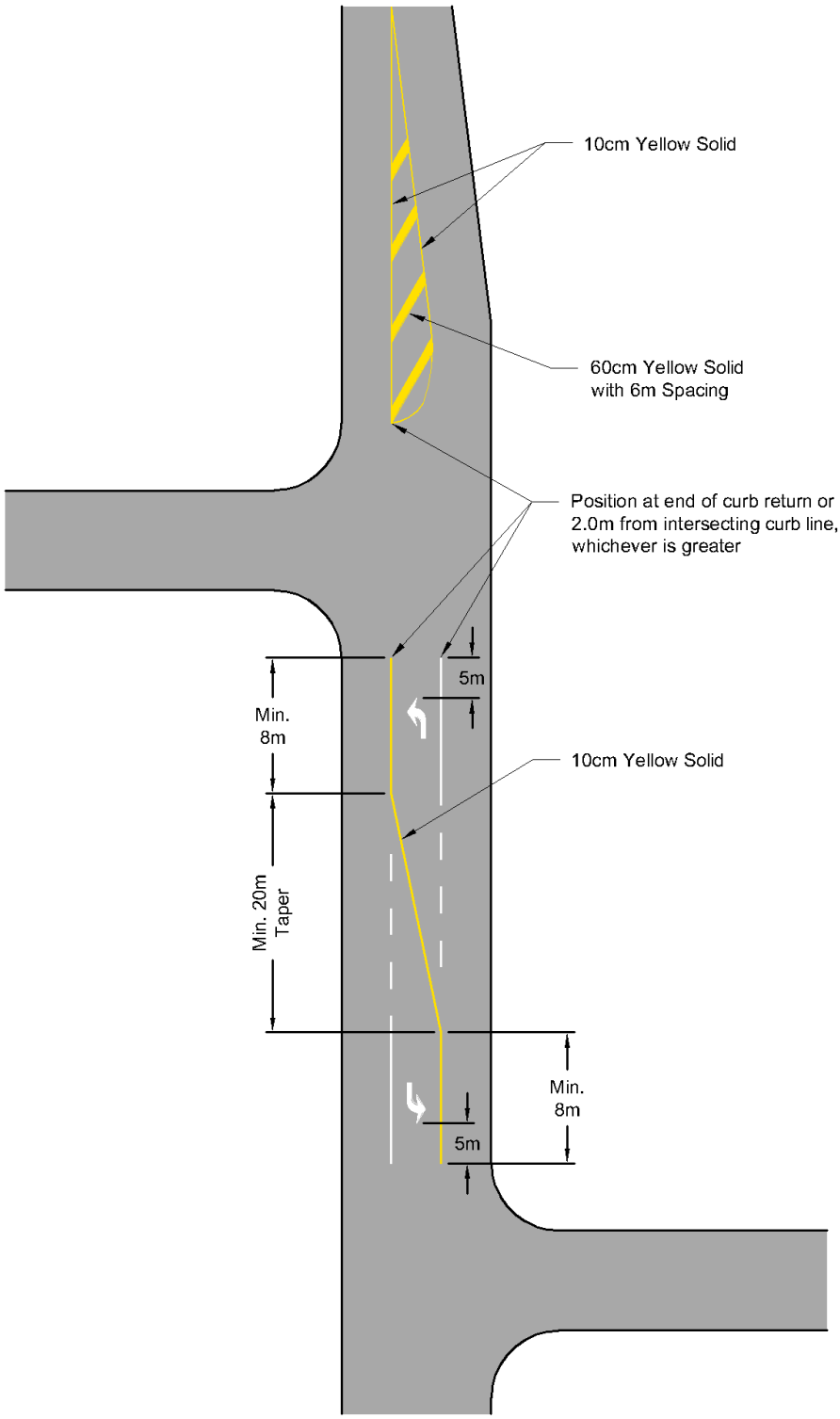
NOTES:
1. REFER TO FIGURE 9 FOR LANE LINE AND EDGE LINE DETAILS FOR THE TURNING LANE.
2. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 12: One Direction Left Turning Lane at Signalized Intersection



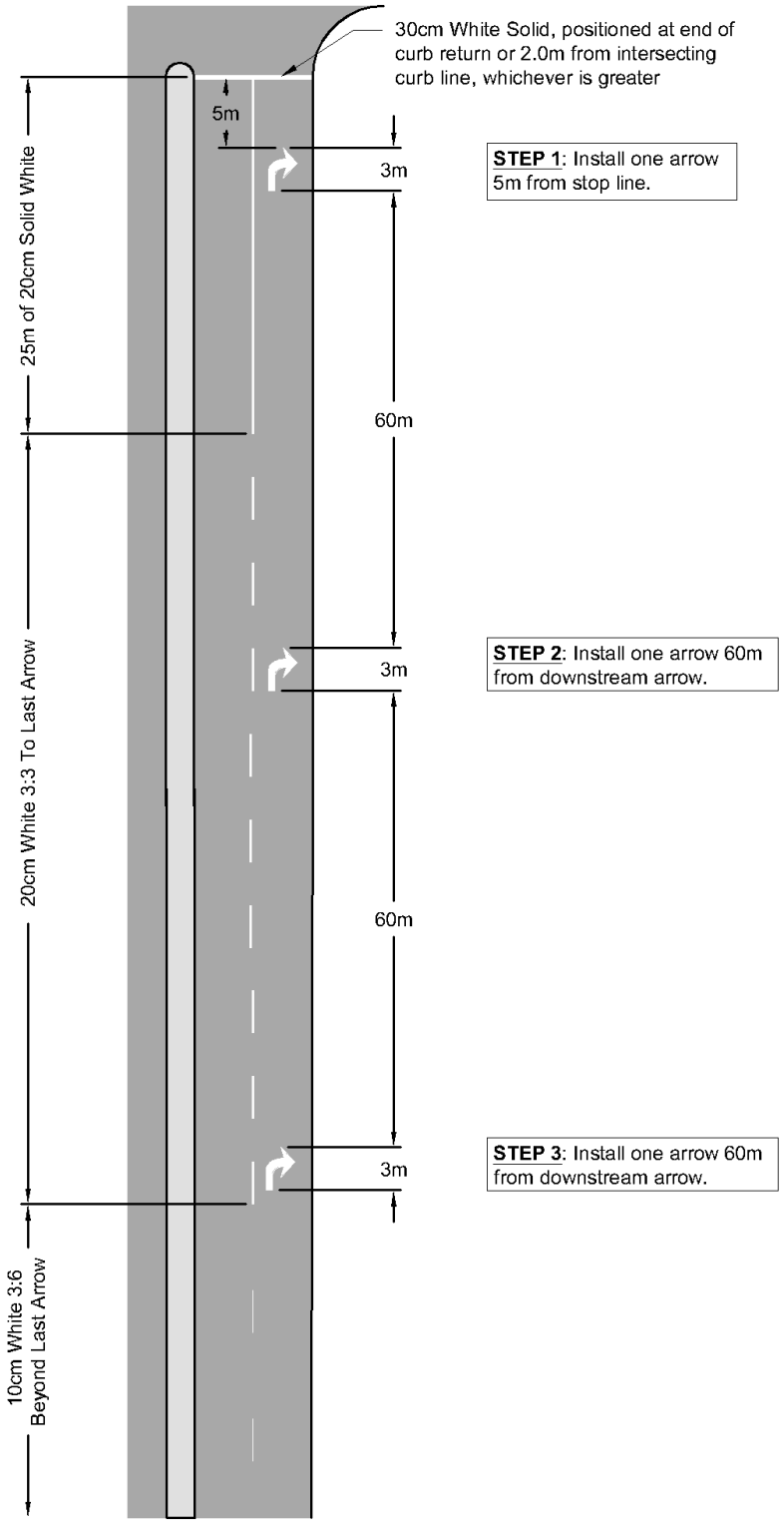
NOTES:
1. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.
2. GORE BORDER IS 10cm WIDE. DIAGONAL LINES ARE 60cm WIDE.
3. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 13: Single-Direction and Back-to-Back Left Turning Lanes



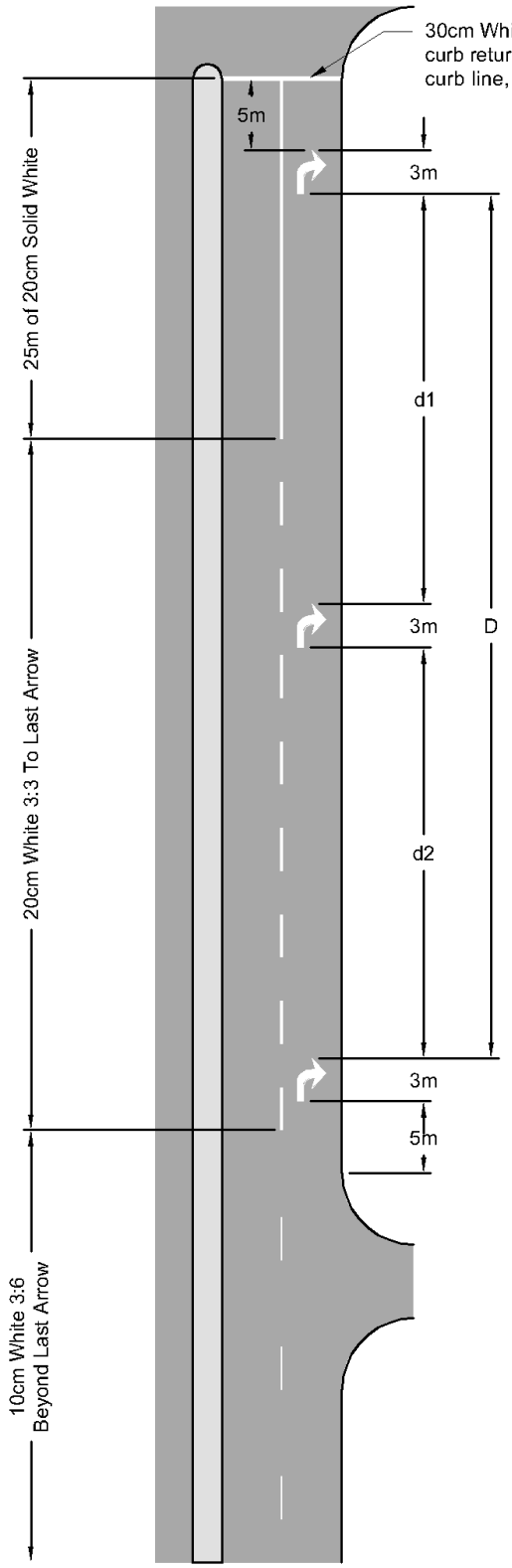
NOTES:
1. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.
2. GORE BORDER IS 10cm WIDE. DIAGONAL LINES ARE 60cm WIDE.
3. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 14: Drop-Off Turning Lane (Unchannelized)



NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 15: Drop-Off Turning Lane (Unchannelized, Following an Access)



STEP 1: Install one arrow 5m from stop line.

STEP 3: Install an additional arrow ONLY if D exceeds 123m (minimum arrow spacing of 60m). Spacing between arrows must be equal (d1 equals d2).

STEP 2: Install one arrow 5m from curb return.

NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 16: Drop-Off Turning Lane (Channelized, Following an Access)

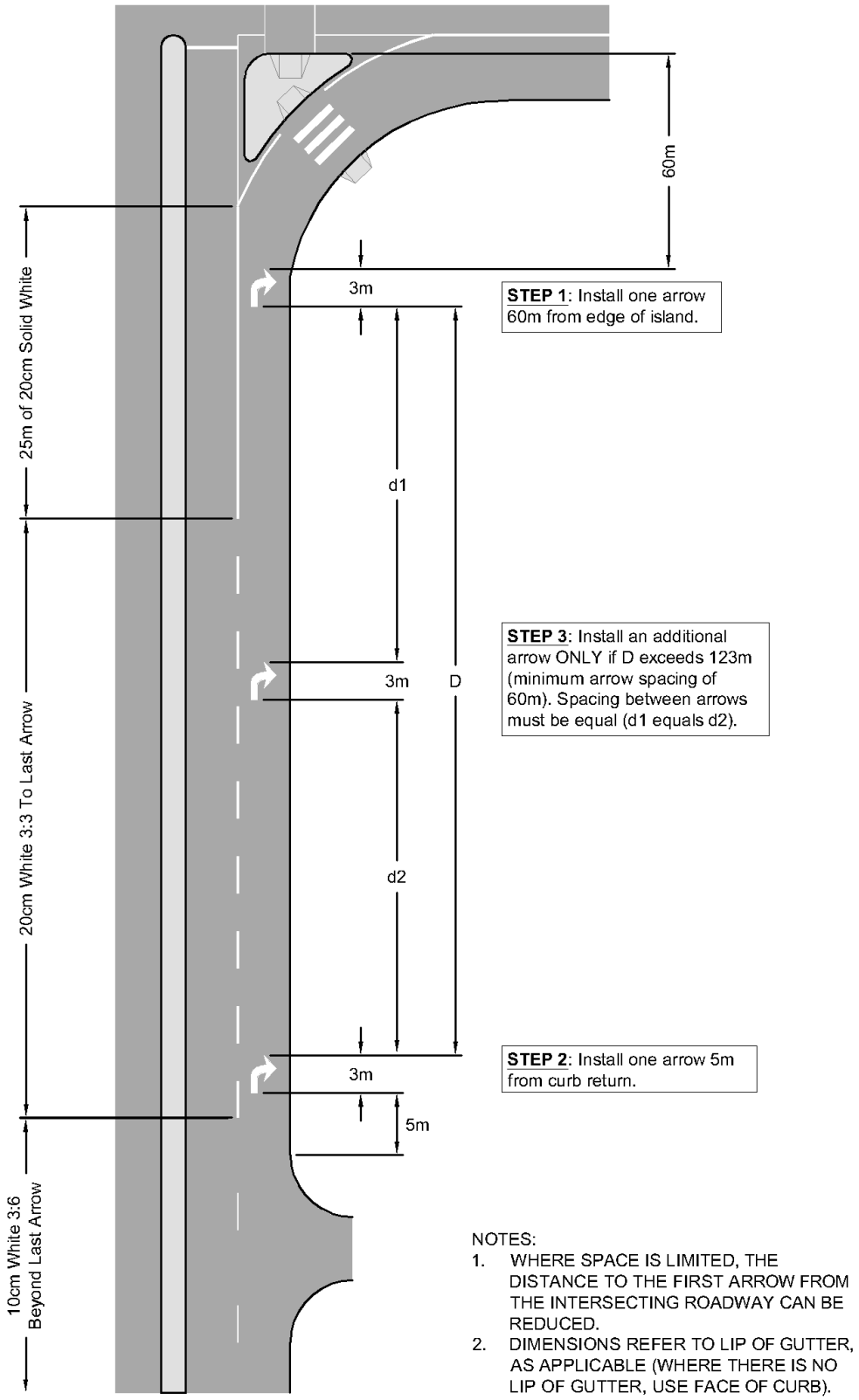
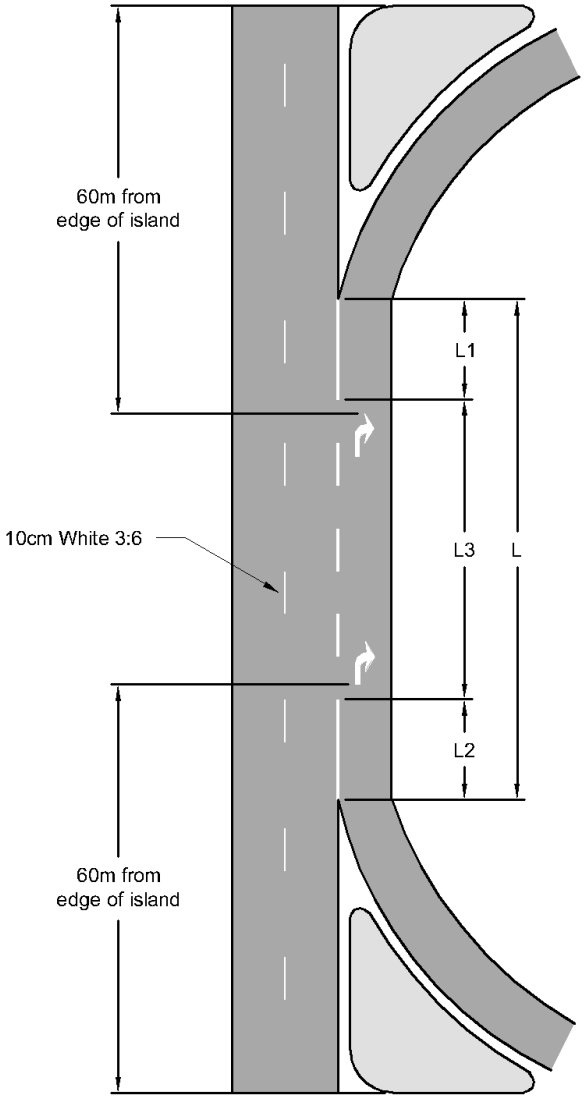


Figure 17: On-Off Ramp (Urban)

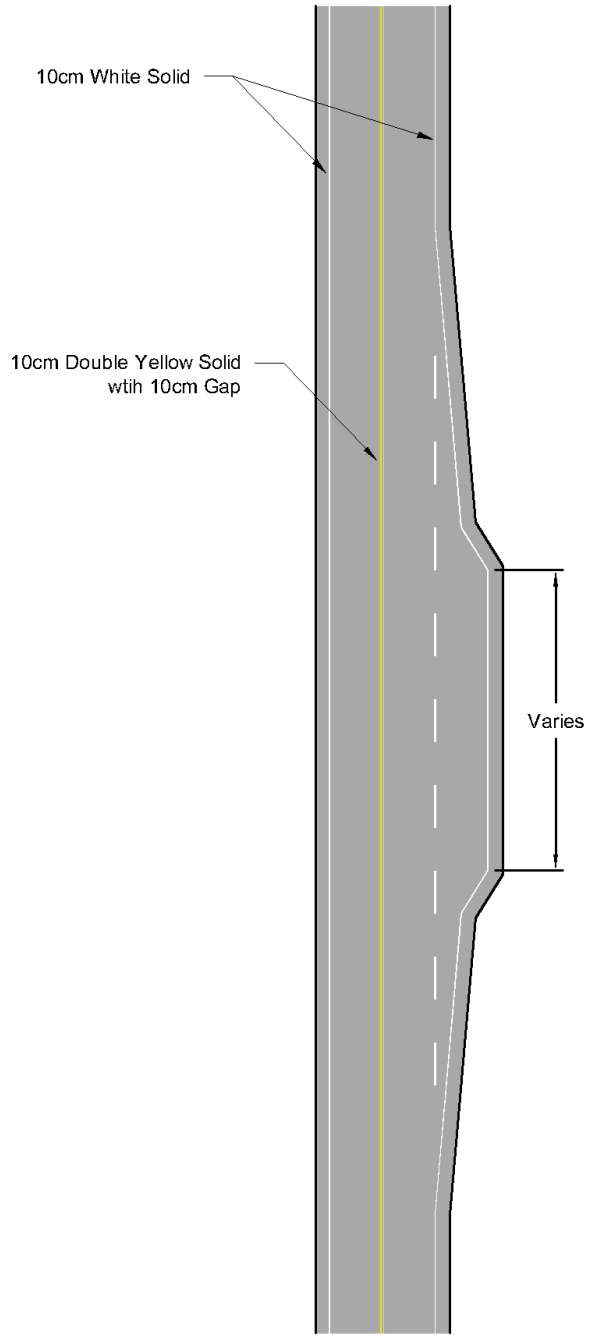


NOTES:
1. WHERE SPACE IS LIMITED, THE DISTANCES TO THE ARROWS FROM THE EDGE OF ISLAND CAN BE REDUCED.
2. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
3. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

TOTAL LENGTH (L)	20cm SOLID (L1)	20cm SOLID (L2)	3:3 BROKEN (L3)
L ≥ 95m	25m	25m	L3 ≥ 45m
57m ≤ L < 95m	15m	15m	27m ≤ L3 < 65m
42m ≤ L <57m	0m	15m	27m ≤ L3 < 42m
L < 42m *	0m	0m	L3 < 42m

* Where the total length, L, is less than 42m, only use 3:3 broken line (no solid line).

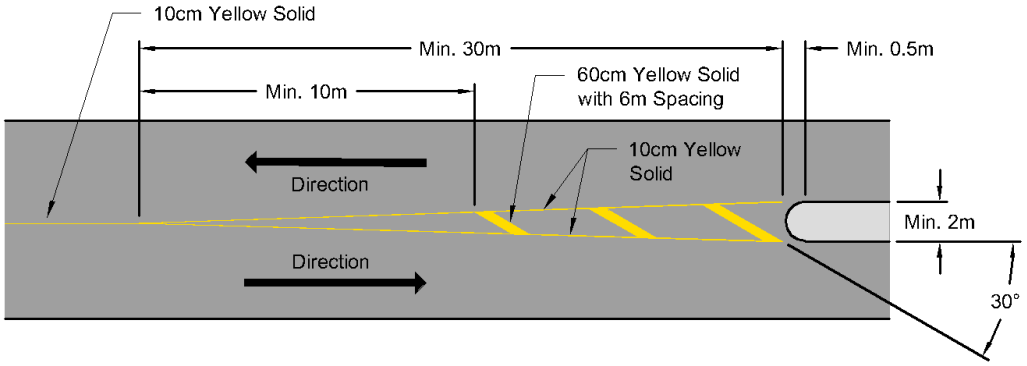
Figure 18: Roadside Turnout



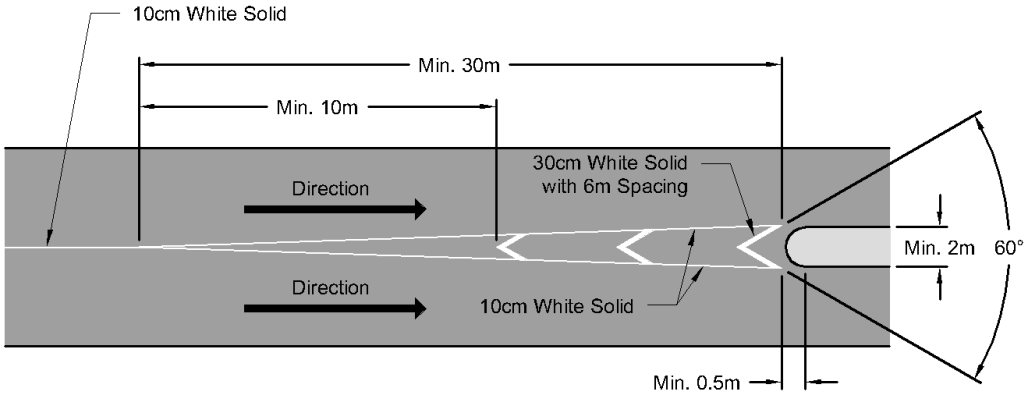
NOTES:
1. 10cm WHITE SOLID LINES USED TO DELINEATE EDGE OF PAVEMENT. NOT REQUIRED WHEN CURBS ARE USED, UNLESS LANE(S) EXCEED TYPICAL WIDTH BY 2.0m OR MORE.
2. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
3. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 19: Gore Area Markings

Yellow Gore Area
(Between Two Traffic Directions)



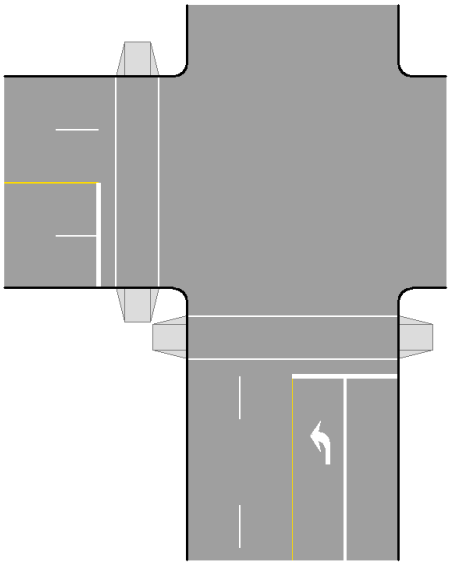
White Gore Area
(Between One Traffic Direction)



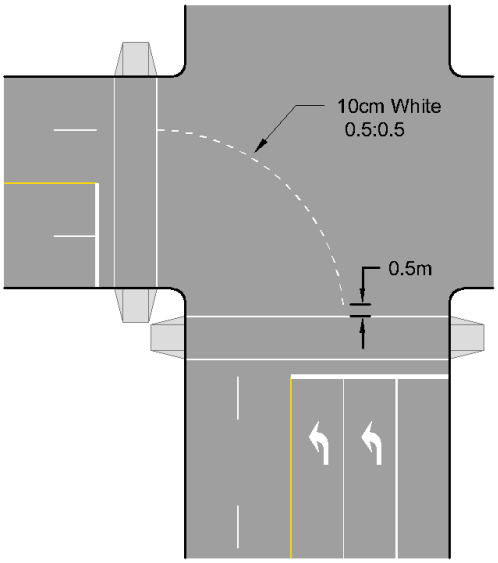
NOTES:
1. DIAGONAL LINES TO BE INCLUDED IF THE WIDTH AND LENGTH OF THE GORE AREA IS 2m AND 30m OR GREATER RESPECTIVELY.
2. ALIGN THE EDGE LINES WITH LIP OF GUTTER (MAINTAIN CONSISTENT LANE WIDTH) AND START AT 0.5m FROM THE MEDIAN.
3. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 20: Guiding Lines at Typical Intersection

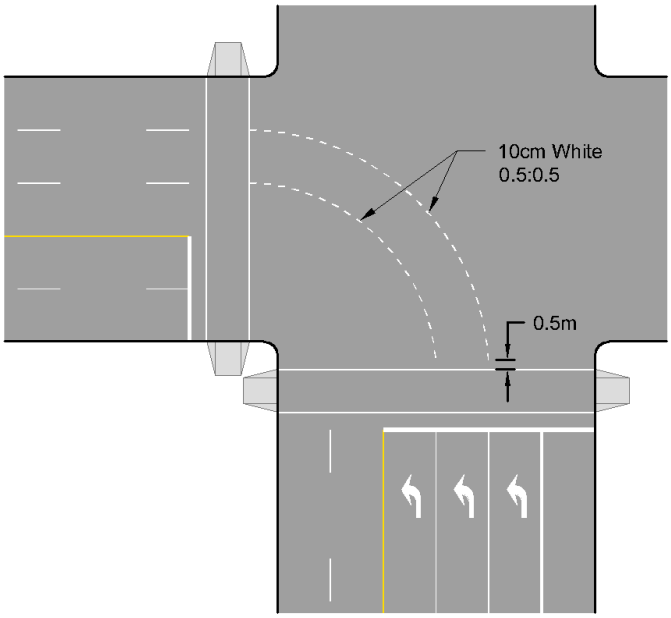
Single Left Turn Lane
No Guiding Lines



Dual Left Turn Lanes
Single Guiding Line

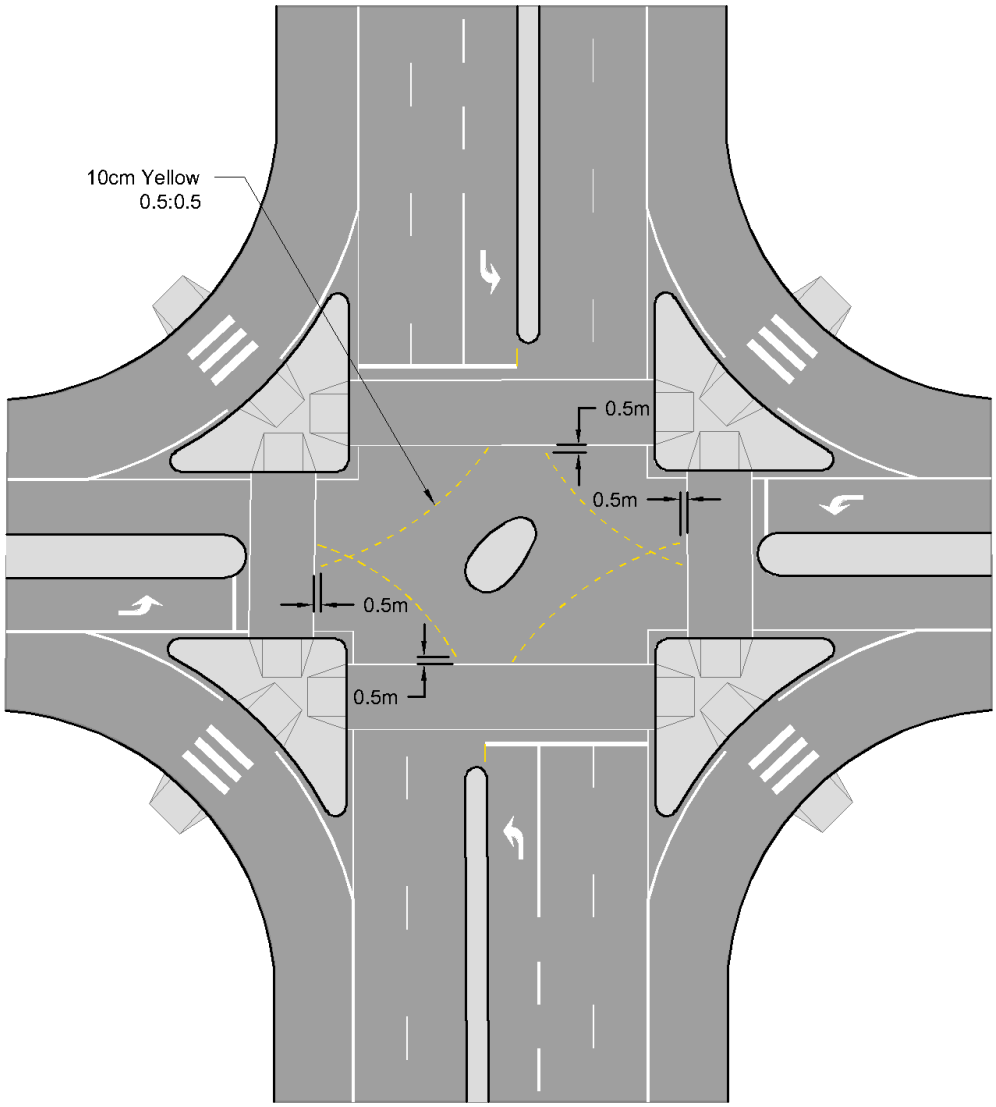


Triple Left Turn Lanes
Double Guiding Lines



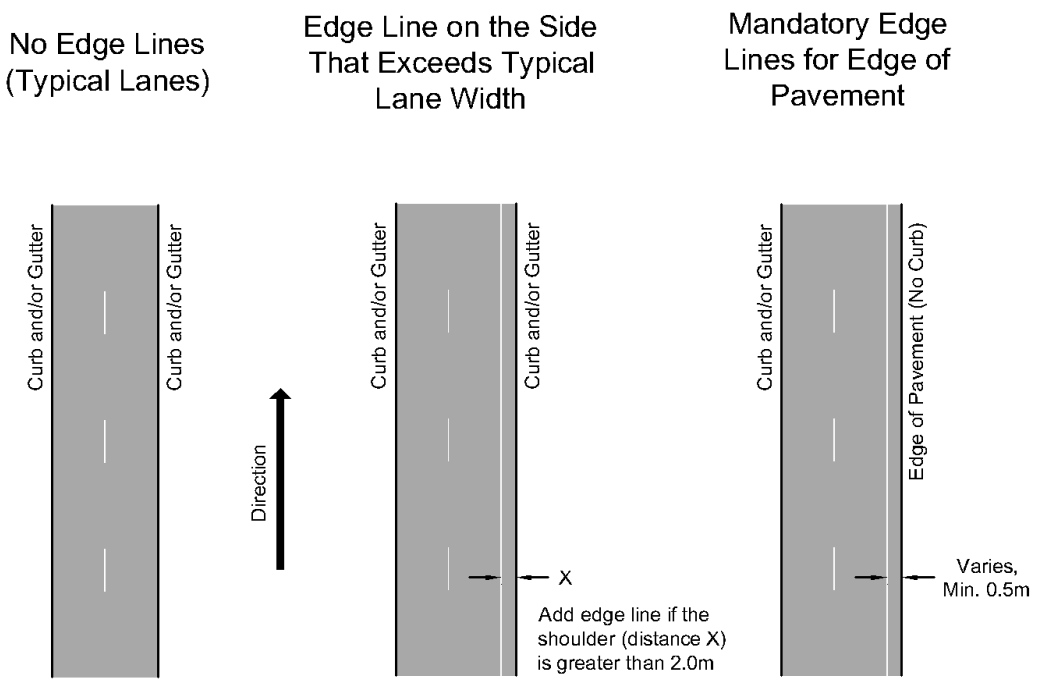
NOTES:
1. ENSURE GUIDING LINES DO NOT OVERLAP PARALLEL CROSSWALK LINES.
2. START GUIDING LINES 0.5m FROM THE UPSTREAM END (FROM THE APPROACHING SIDE).
3. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 21: Guiding Lines at Intersection – Through Movement Restricted on Minor Road



NOTES:
1. ENSURE GUIDING LINES DO NOT OVERLAP PARALLEL CROSSWALK LINES.
2. START THE GUIDING LINES 0.5m FROM THE UPSTREAM END (FROM THE APPROACHING SIDE).
3. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

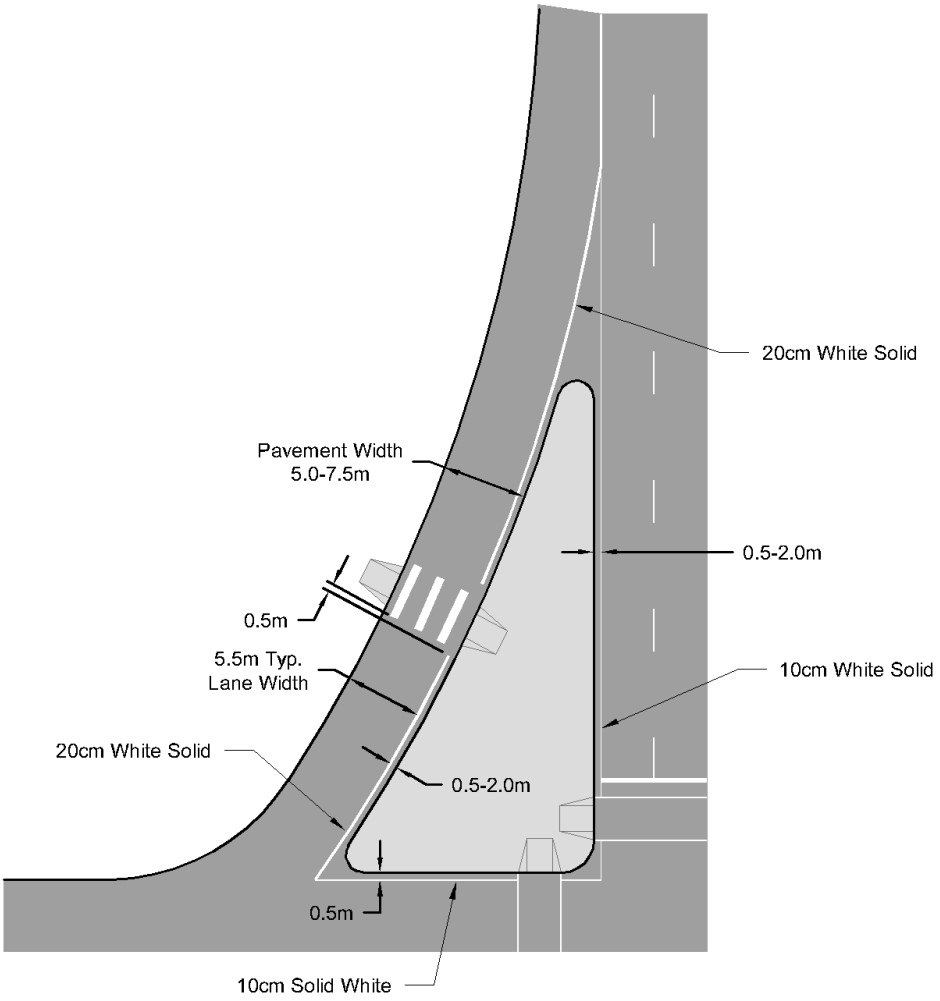
Figure 22: Lane Lines and Pavement Edge Lines



NOTES:

1. REFER TO STRATHCONA COUNTY'S DESIGN AND CONSTRUCTION STANDARDS FOR STANDARD LANE WIDTHS. THE MINIMUM LANE WIDTH SHALL BE 3.3m.
2. GORE LINES (DIAGONAL LINES) ARE NOT REQUIRED ON SHOULDERS, UNLESS OTHERWISE INDICATED IN THE GUIDELINES OR SPECIFIED BY STRATHCONA COUNTY.
3. EDGE LINES ARE INTENDED TO CLARIFY THE TRAVEL LANE WIDTH AND IDENTIFY AN AREA THAT DRIVERS SHOULD NOT BE ENTERING UNDER NORMAL CIRCUMSTANCES. FOR EXAMPLE, TO CLARIFY THAT THERE ARE ONLY TWO TRAVEL LANES AND NOT THREE. ROADS THAT ARE BUILT EXTRA WIDE TO ACCOMMODATE PARKING LANES DO NOT REQUIRE EDGE LINES, SINCE DRIVERS ARE EXPECTED TO ENTER THE PARKING LANE REGULARLY.
4. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
5. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.
6. SOLID LINES ARE 10cm WHITE UNLESS OTHERWISE NOTED.

Figure 23: Pavement Edge Lines for Channelizing Island (Typical)

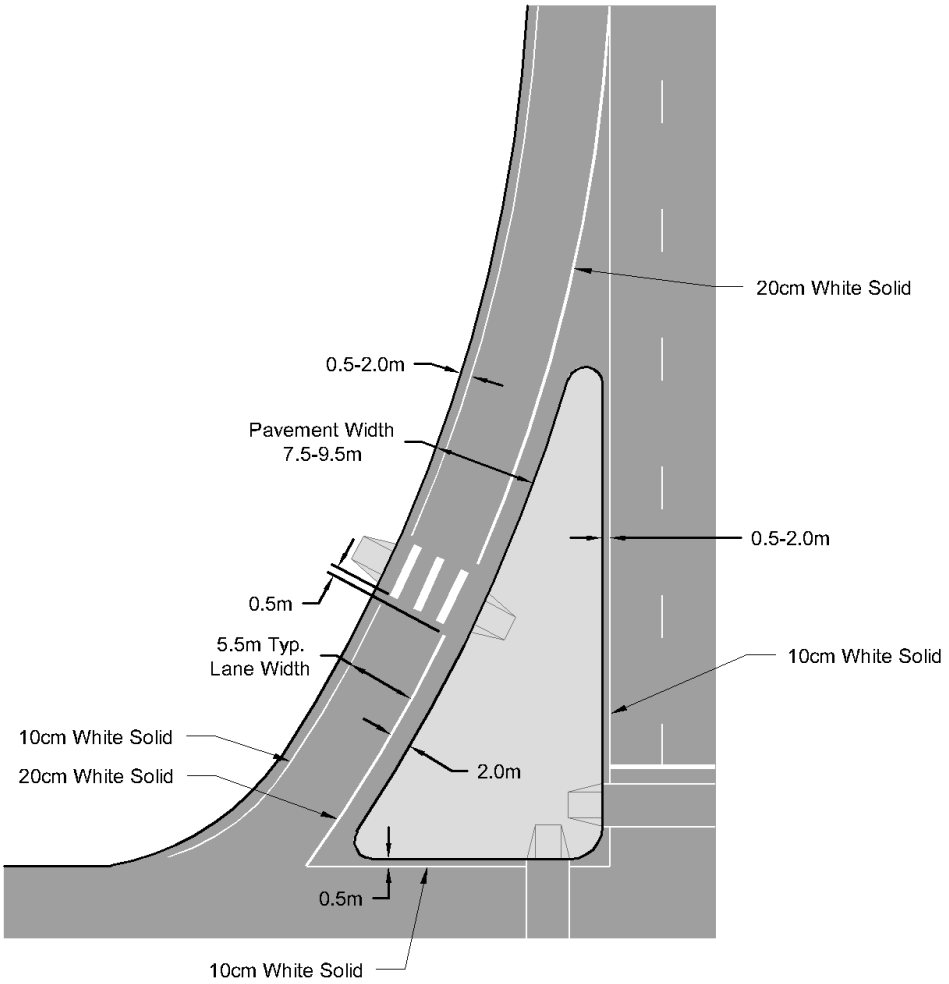


Adjust edge lines to maintain typical 5.5m channelized right turn lane width as follows:

FIGURE NO.	PAVEMENT WIDTH (m)	LEFT EDGE LINE DISTANCE (m)	RIGHT EDGE LINE DISTANCE (m)	DIAGONAL GORE MARKINGS
23	< 7.5	0.5 - 2	No	No
24	7.5 - 9.5	2	0.5 - 2	No
25	> 9.5	> 2	2	Yes

NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 24: Pavement Edge Lines for Channelizing Island (Wide)

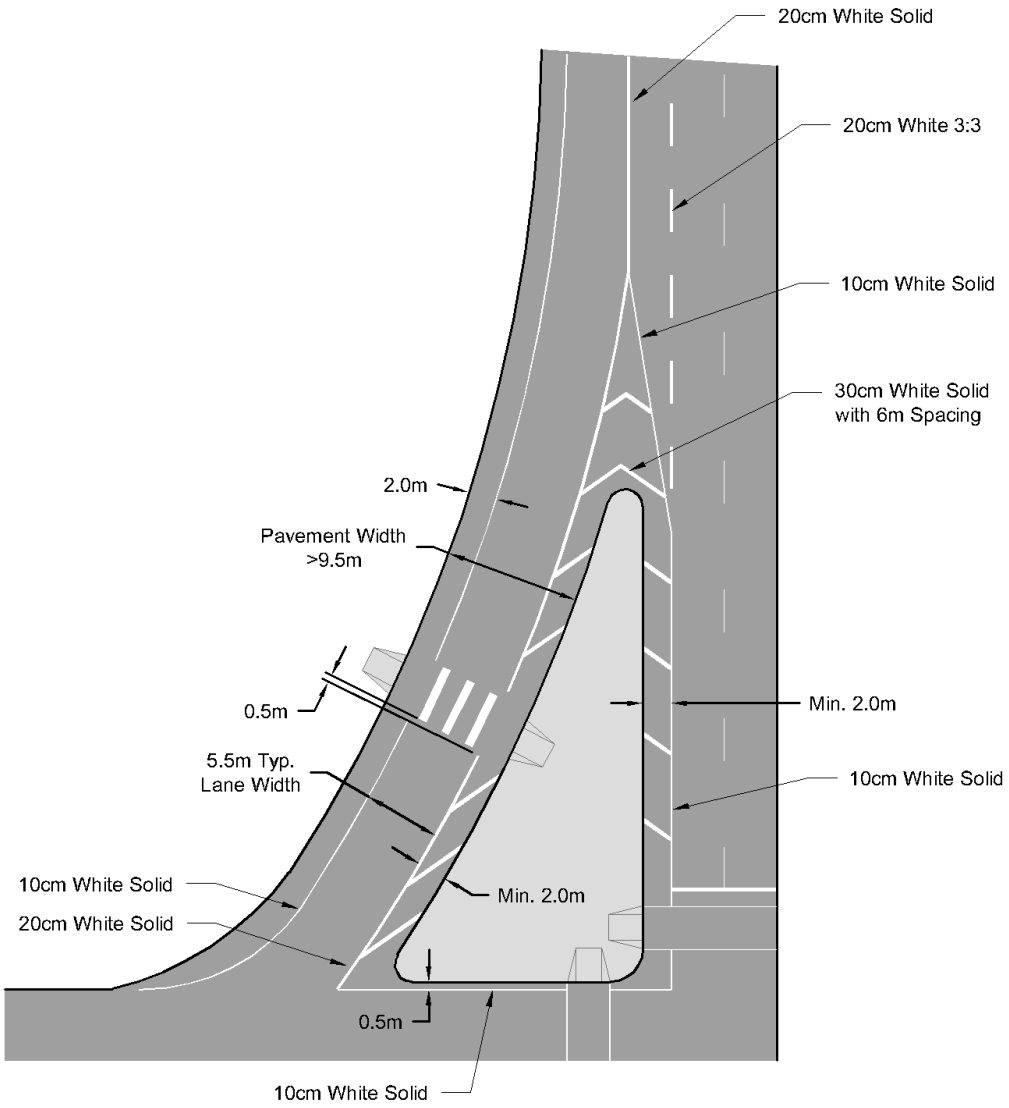


Adjust edge lines to maintain typical 5.5m channelized right turn lane width as follows:

FIGURE NO.	PAVEMENT WIDTH (m)	LEFT EDGE LINE DISTANCE (m)	RIGHT EDGE LINE DISTANCE (m)	DIAGONAL GORE MARKINGS
23	< 7.5	0.5 - 2	No	No
24	7.5 - 9.5	2	0.5 - 2	No
25	> 9.5	> 2	2	Yes

NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 25: Pavement Edge Lines for Channelizing Island (Extra Wide)



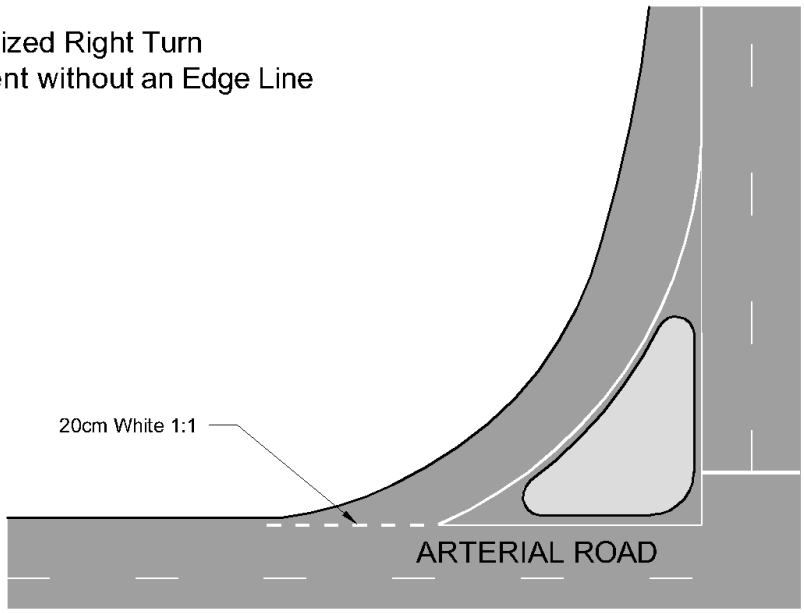
Adjust edge lines to maintain typical 5.5m channelized right turn lane width as follows:

FIGURE NO.	PAVEMENT WIDTH (m)	LEFT EDGE LINE DISTANCE (m)	RIGHT EDGE LINE DISTANCE (m)	DIAGONAL GORE MARKINGS
23	< 7.5	0.5 - 2	No	No
24	7.5 - 9.5	2	0.5 - 2	No
25	> 9.5	> 2	2	Yes

NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 26: Channelized Right Turning Lane Approaching Arterial Roads

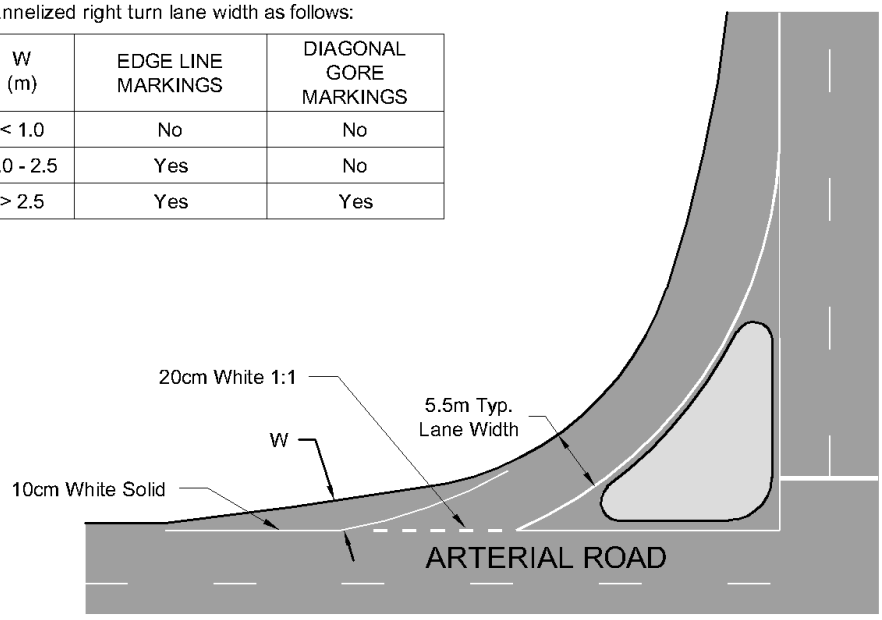
Channelized Right Turn
Treatment without an Edge Line



Channelized Right Turn
Treatment with an Edge Line

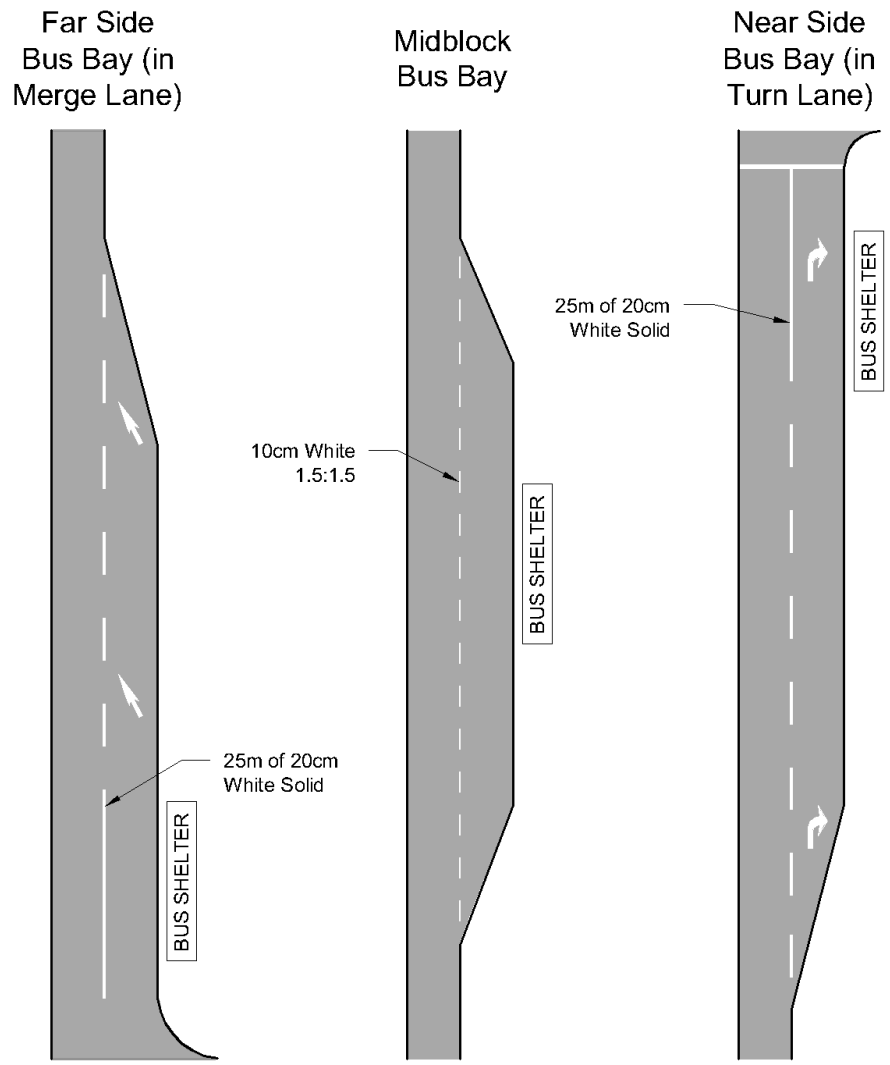
Adjust edge lines to maintain typical 5.5m channelized right turn lane width as follows:

W (m)	EDGE LINE MARKINGS	DIAGONAL GORE MARKINGS
< 1.0	No	No
1.0 - 2.5	Yes	No
> 2.5	Yes	Yes



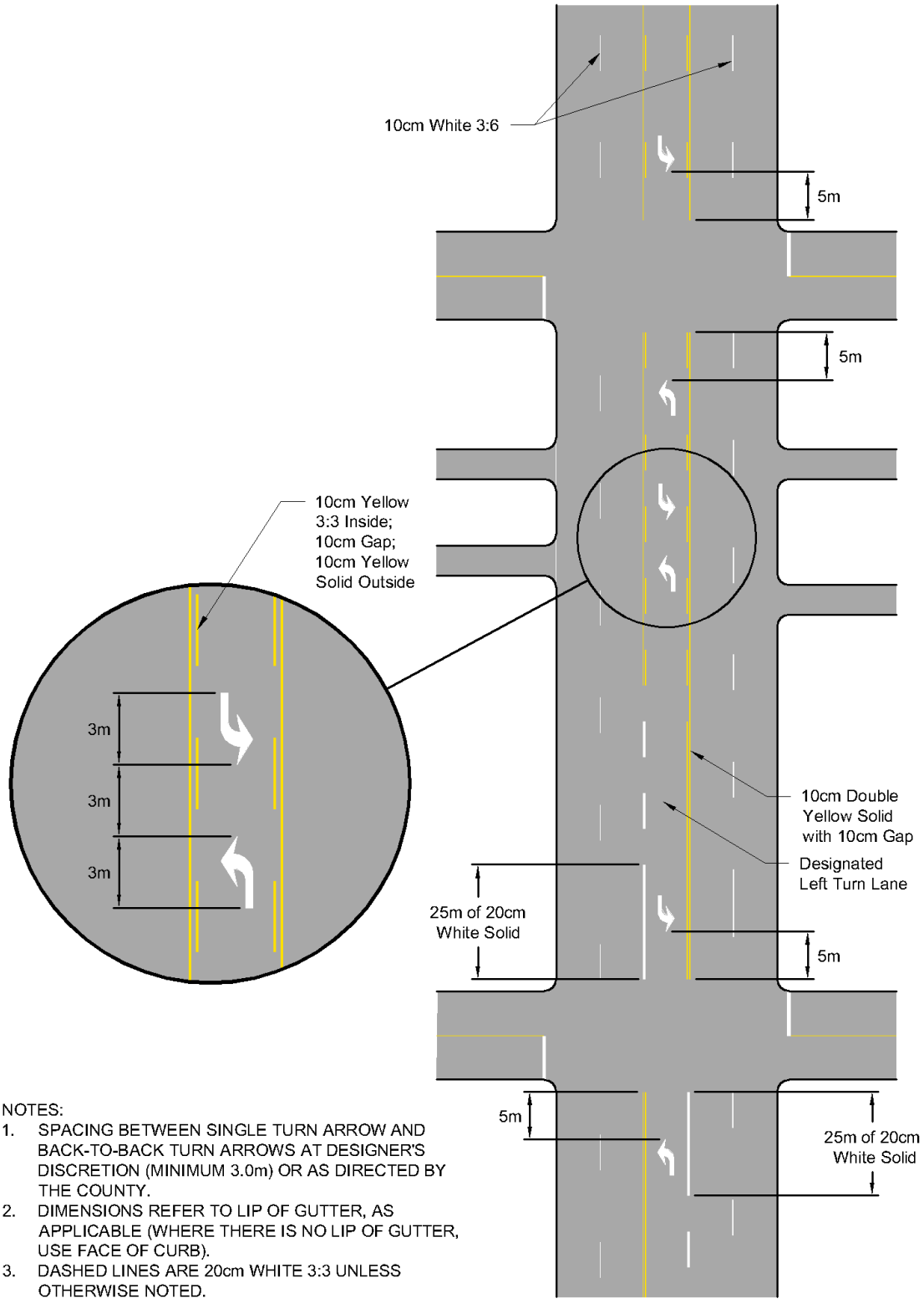
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 27: Transit Bus Bay Lines



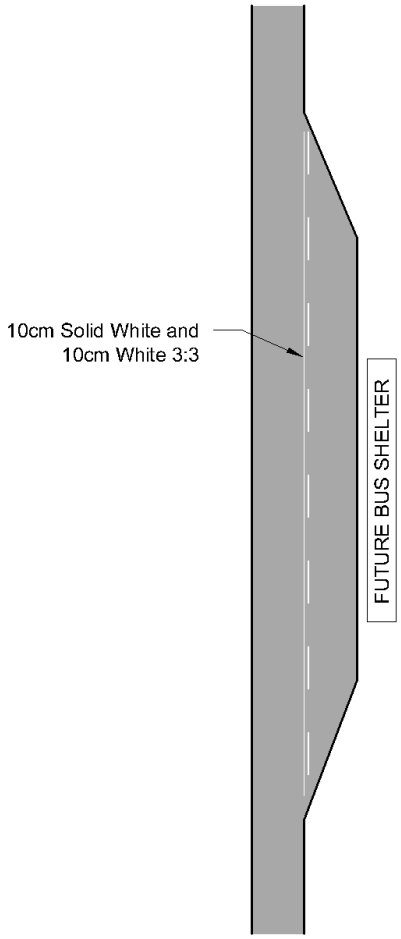
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.
3. SOLID LINES ARE 20cm WHITE UNLESS OTHERWISE NOTED.

Figure 28: Two-Way Left Turn Lane (TWLTL) Lines



NOTES:
1. SPACING BETWEEN SINGLE TURN ARROW AND BACK-TO-BACK TURN ARROWS AT DESIGNER'S DISCRETION (MINIMUM 3.0m) OR AS DIRECTED BY THE COUNTY.
2. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
3. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

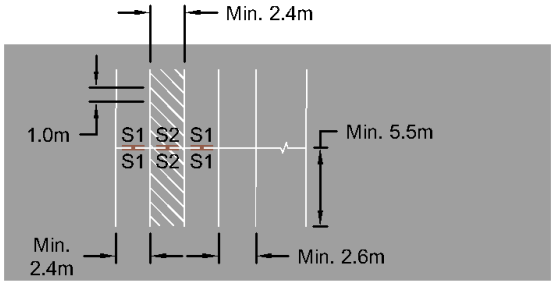
Figure 29: Unused Road Space Lines



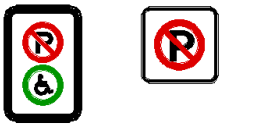
10.0 TRANSVERSE PAVEMENT MARKINGS DIAGRAMS

Figure 30: Parking Lot – Accessible Parking Stalls on Both Sides

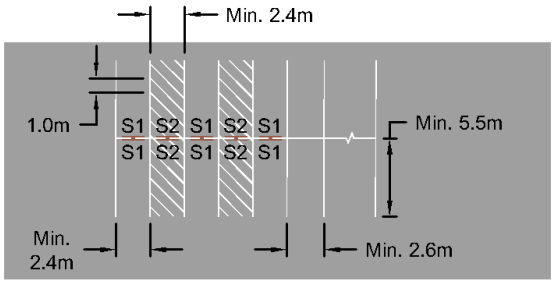
Two Accessible Parking Stalls



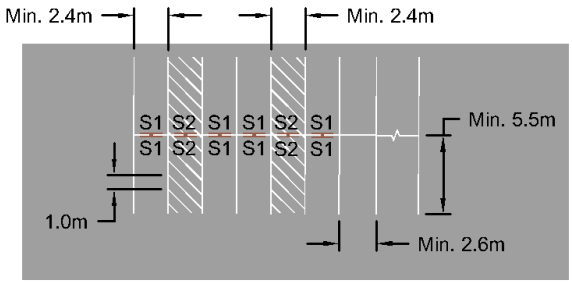
Customized Signs



Three Accessible Parking Stalls



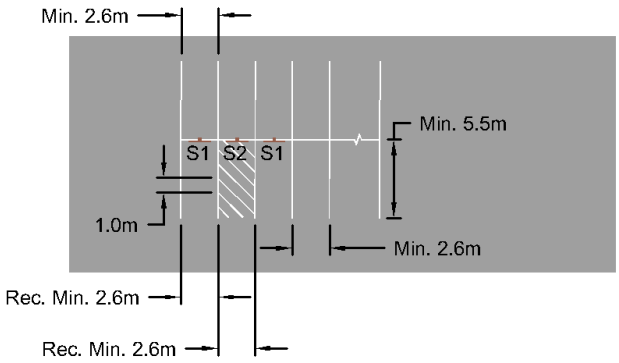
Four Accessbile Parking Stalls



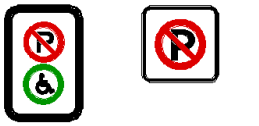
NOTES:
1. REFER TO THE LATEST VERSION OF THE COUNTY'S LAND USE BYLAW FOR MORE INFORMATION.
2. ALL LINES ARE 10cm WHITE SOLID UNLESS OTHERWISE NOTED.

Figure 31: Parking Lot – Accessible Parking Stalls on One Side

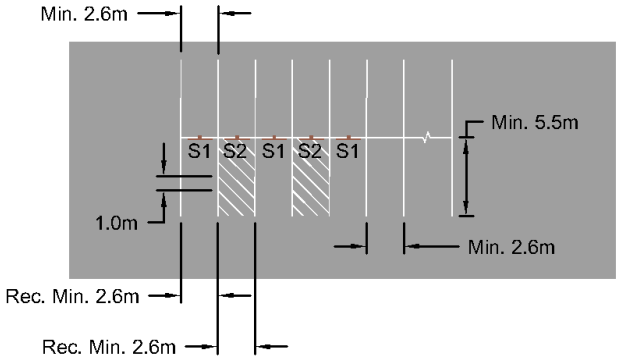
Two Accessible Parking Stalls



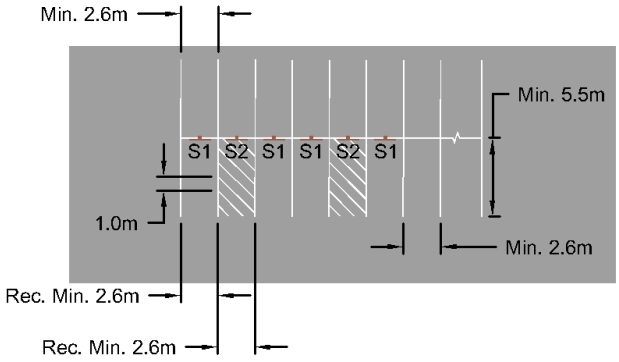
Customized Signs



Three Accessible Parking Stalls



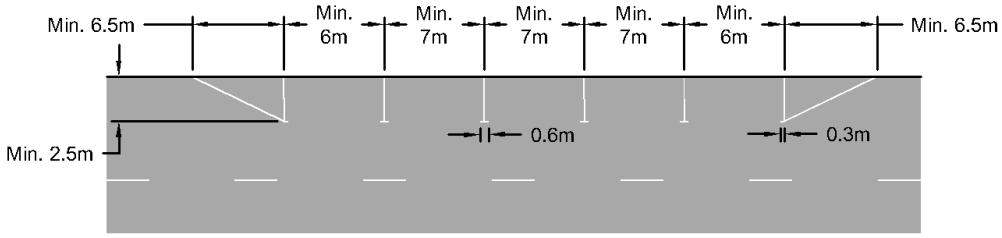
Four Accessbile Parking Stalls



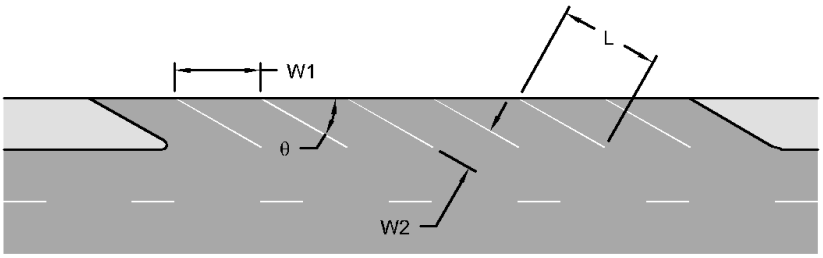
NOTES:
1. REFER TO THE LATEST VERSION OF THE COUNTY'S LAND USE BYLAW FOR MORE INFORMATION.
2. ALL LINES ARE 10cm WHITE SOLID UNLESS OTHERWISE NOTED.

Figure 32: On-Street Parking

Parallel Parking

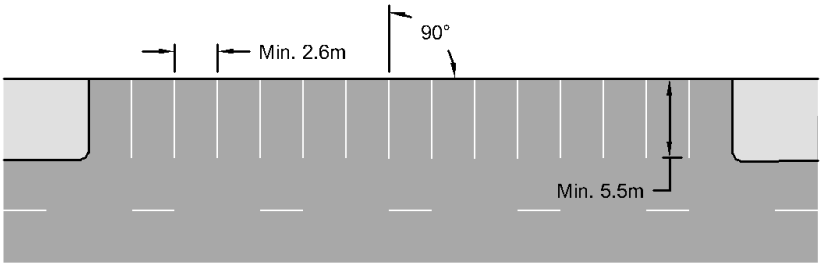


Angled Parking



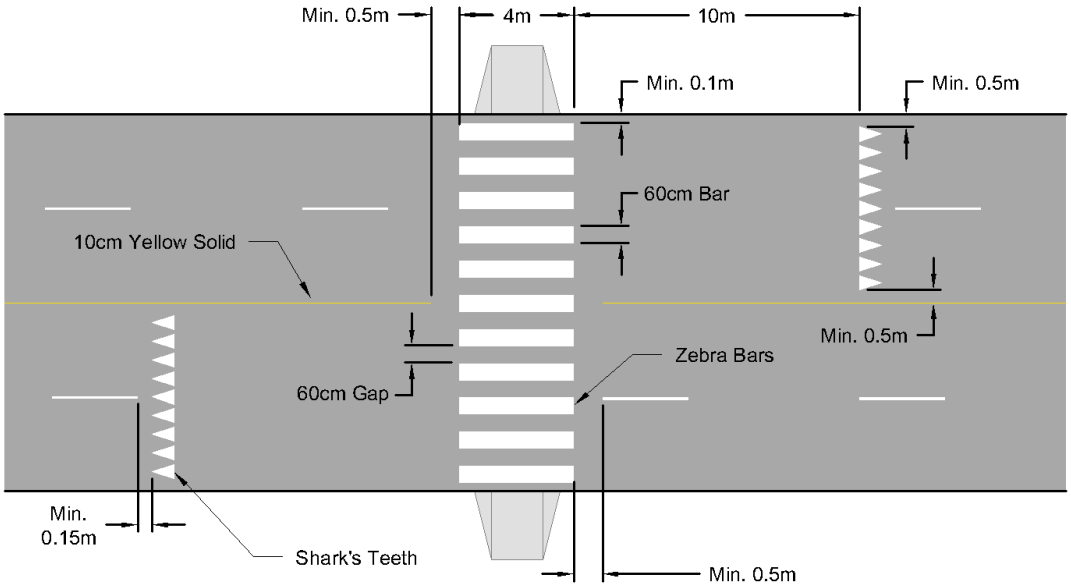
ANGLE (θ)	MIN. LENGTH (L)	MIN. WIDTH (W1)	MIN. WIDTH (W2)
30°	10.0m	5.2m	2.6m
45°	8.0m	3.7m	2.6m
60°	7.0m	3.0m	2.6m

Perpendicular Parking



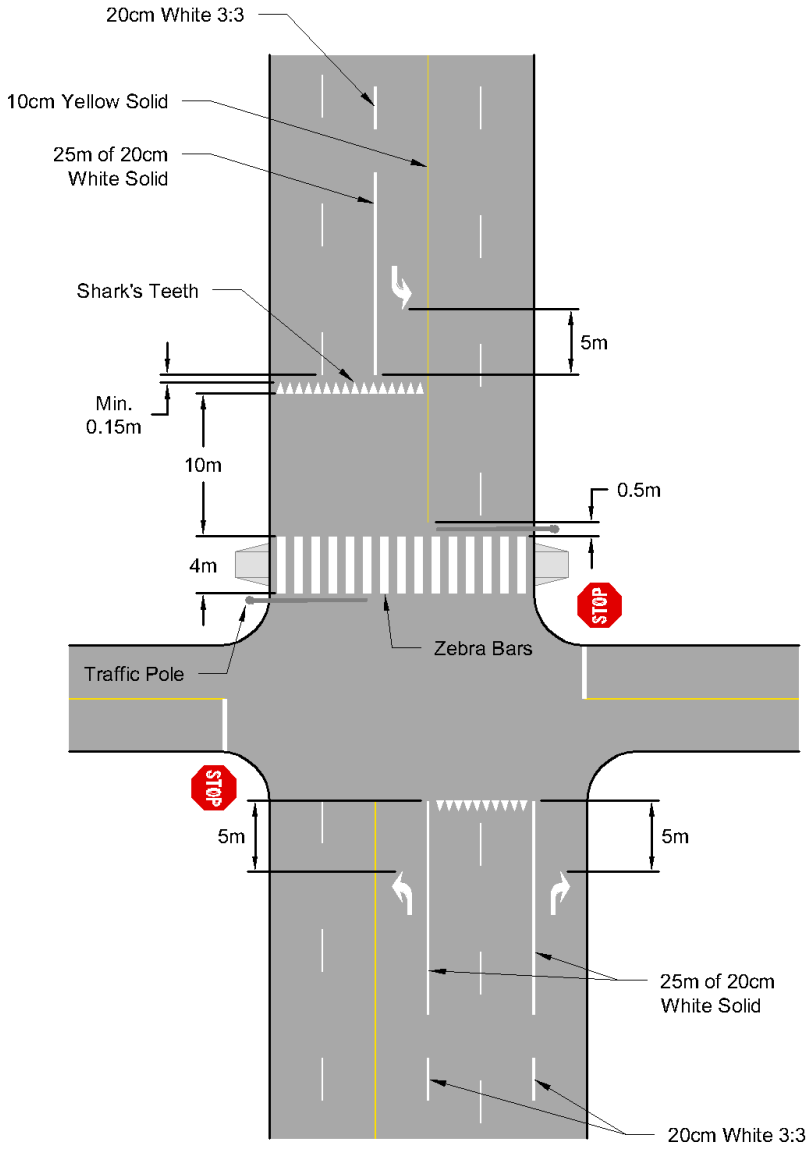
NOTES:
1. REFER TO THE LATEST VERSION OF THE COUNTY'S LAND USE BYLAW FOR MORE INFORMATION.
2. SOLID LINES ARE 10cm WHITE UNLESS OTHERWISE NOTED.
3. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 33: Zebra Bars and Shark's Teeth for Multiple-Lane Midblock Crossing on Arterial Roads



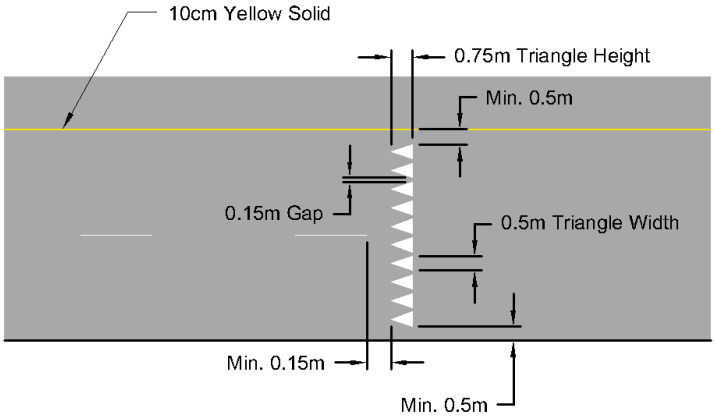
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 34: Zebra Bars and Shark's Teeth for Multiple-Lane Intersection on Arterial Roads



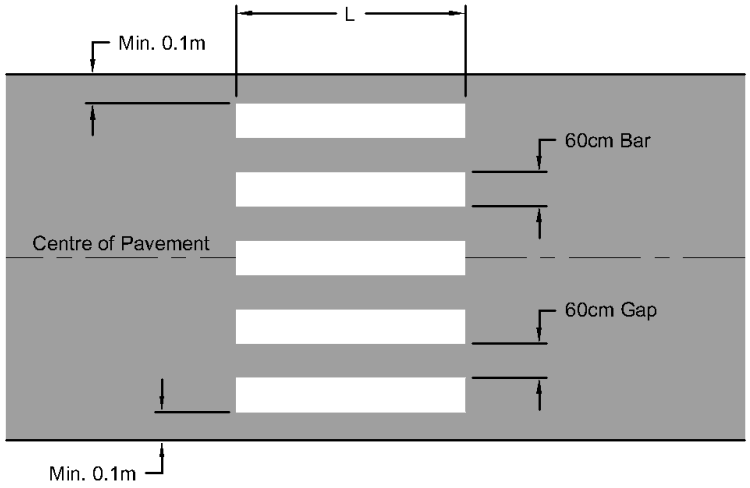
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

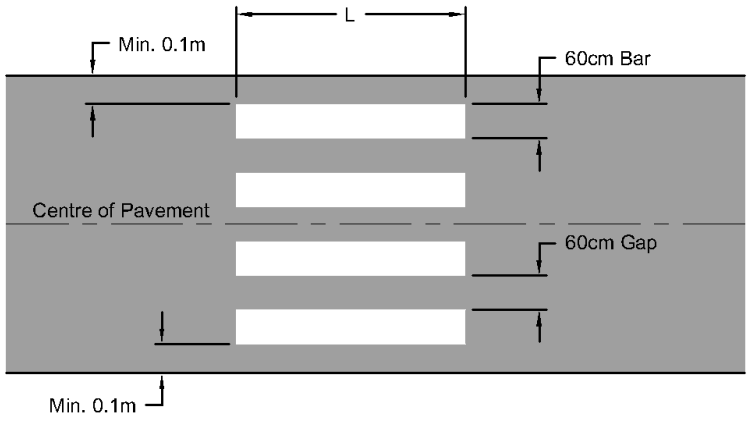
Figure 35: Shark's Teeth Details



NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

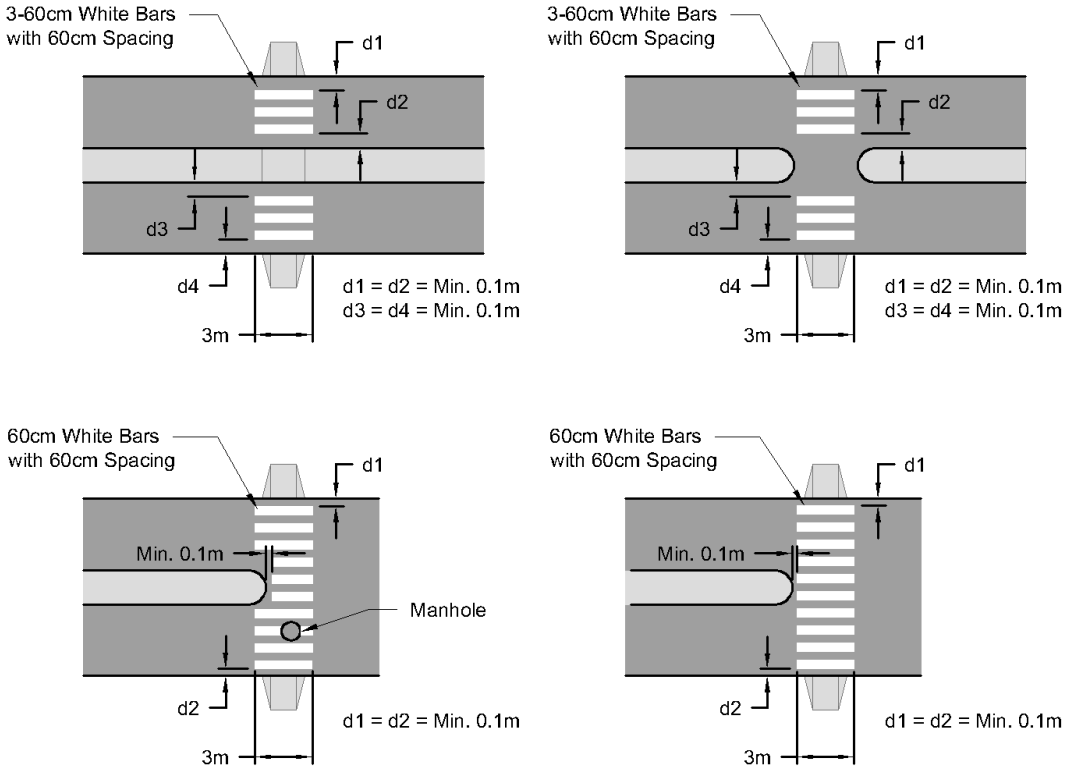
Figure 36: Zebra Bars for Single-Lane Midblock Crossing





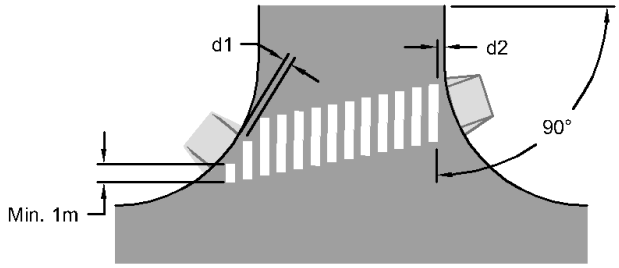
NOTES:
1. DIRECTIONAL DIVIDING LINE (CENTRE LINE) NOT REQUIRED FOR THESE CASES, UNLESS ALREADY REQUIRED ALONG THE REMAINDER OF THE ROADWAY, AS INDICATED IN THE GUIDELINES OR SPECIFIED BY STRATHCONA COUNTY.
2. WHEN LONGITUDINAL PAVEMENT MARKINGS ARE REQUIRED, AS INDICATED IN THE GUIDELINES OR SPECIFIED BY STRATHCONA COUNTY, THOSE MARKINGS SHALL START/END MIN. 0.5m UPSTREAM AND DOWNSTREAM FROM THE ZEBRA BARS.
3. FOR MID-BLOCK CROSSINGS, L IS 4m FOR ARTERIAL ROADS AND 3m FOR COLLECTOR/LOCAL ROADS.
4. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 37: Zebra Bars for Mid-Block Crossing with Median on Collector/Local Roads



NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

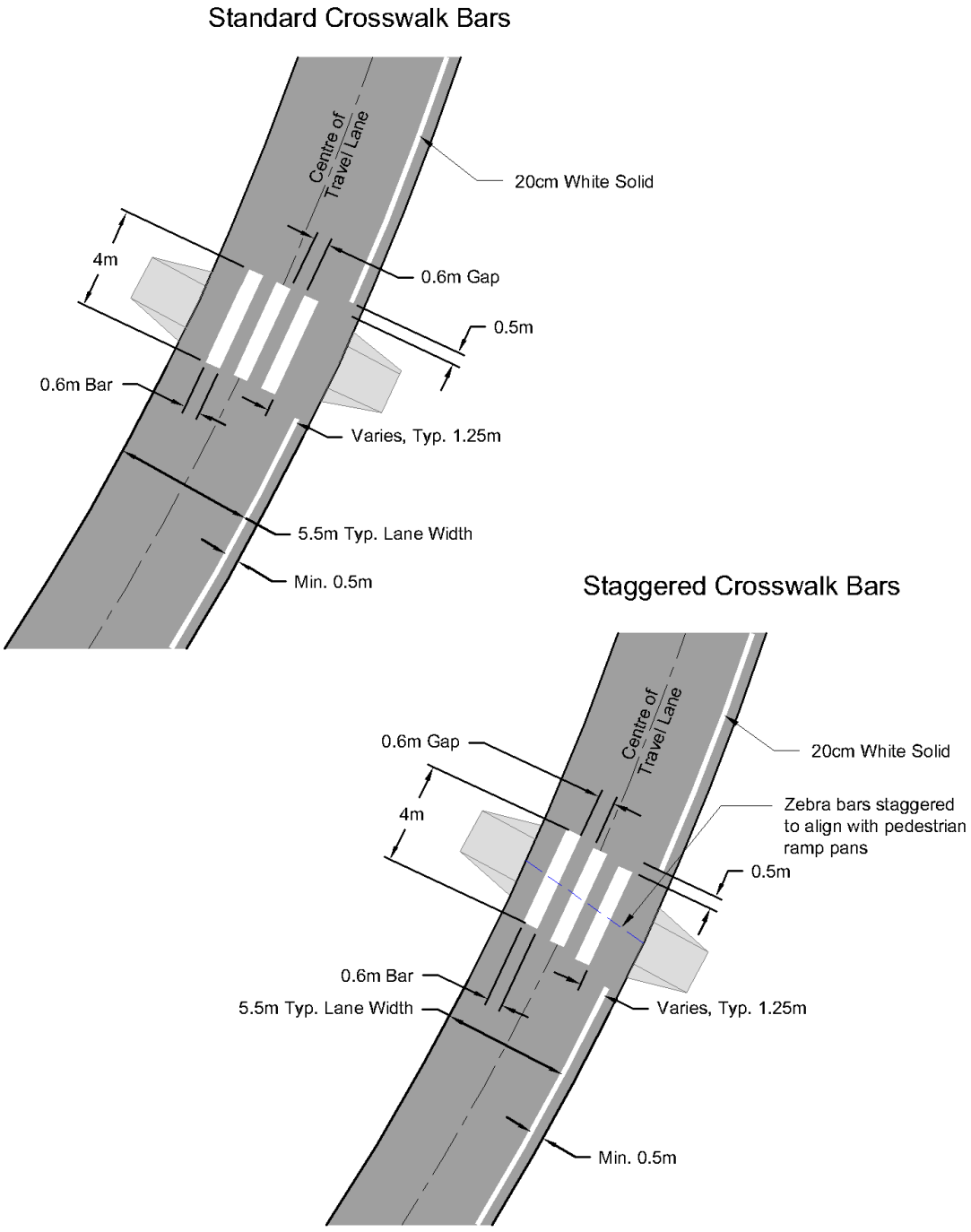
Figure 38: Zebra Bars for Staggered Pedestrian Ramps



d1 = d2 = Min. 0.1m

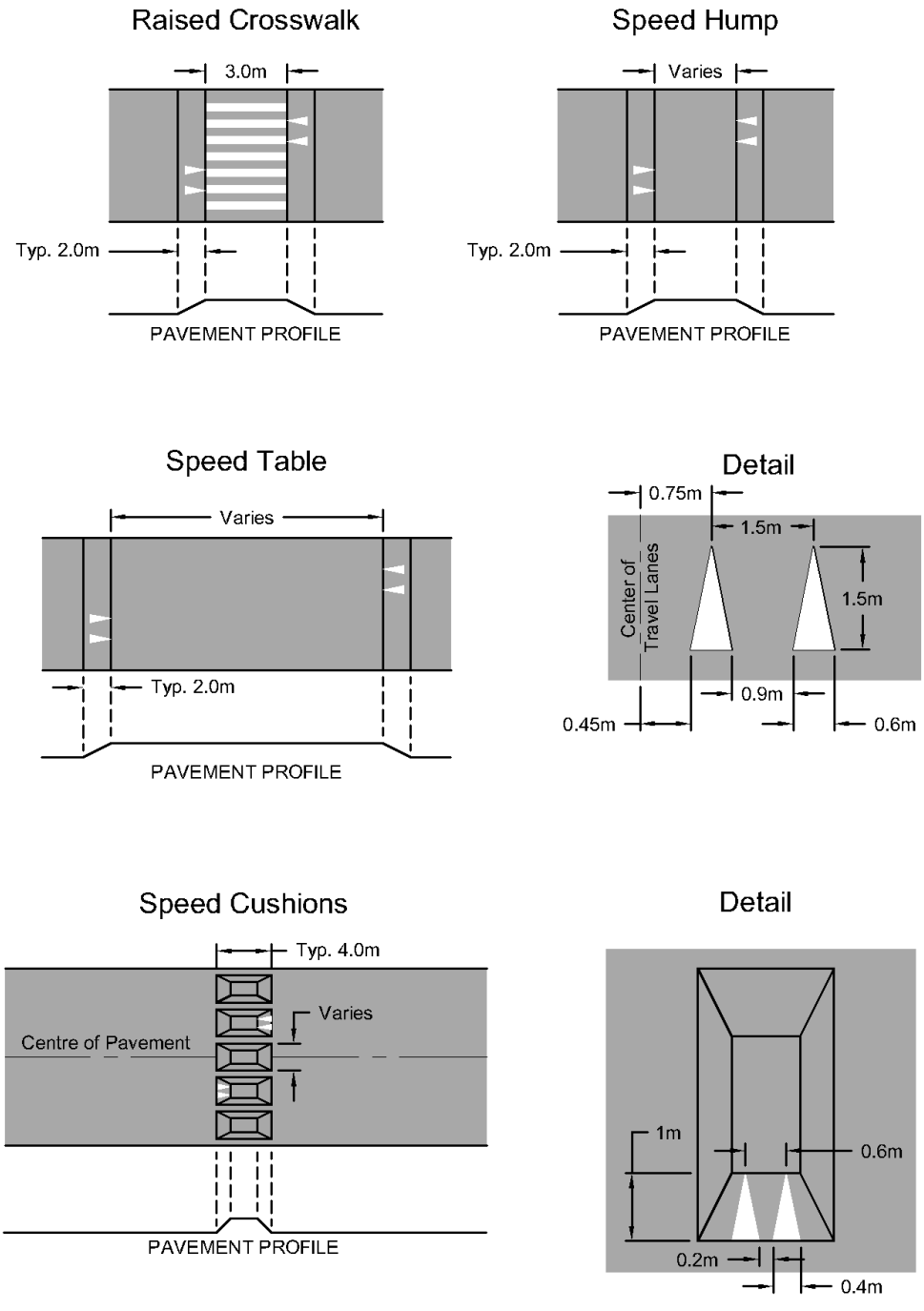
NOTES:
1. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
2. MARK FOR WARRANTED CROSSWALKS ONLY, AS INDICATED IN THE GUIDELINES OR SPECIFIED BY STRATHCONA COUNTY.

Figure 39: Zebra Bars for Channelized Right Turn Lane on Arterial Roads



NOTES:
1. ENSURE ZEBRA BARS ARE PERPENDICULAR TO THE DIRECTION OF TRAVEL AND ALIGNED WITH PEDESTRIAN RAMPS. IF THE RAMPS ARE OFFSET, ZEBRA BARS CAN BE STAGGERED AT DESIGNER'S DISCRETION, OR AS ADVISED BY THE COUNTY.
2. MIDDLE BAR SHALL BE ALIGNED WITH THE CENTRE OF TRAVEL LANE.
3. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 40: Triangular Warning Markings



NOTES:
1. DIRECTIONAL DIVIDING LINE (CENTRE LINE) NOT REQUIRED FOR THESE CASES, UNLESS ALREADY REQUIRED ALONG THE REMAINDER OF THE ROADWAY, AS INDICATED IN THE GUIDELINES OR SPECIFIED BY STRATHCONA COUNTY.

11.0 OTHER PAVEMENT MARKINGS DIAGRAMS

Figure 41: Regular Arrows

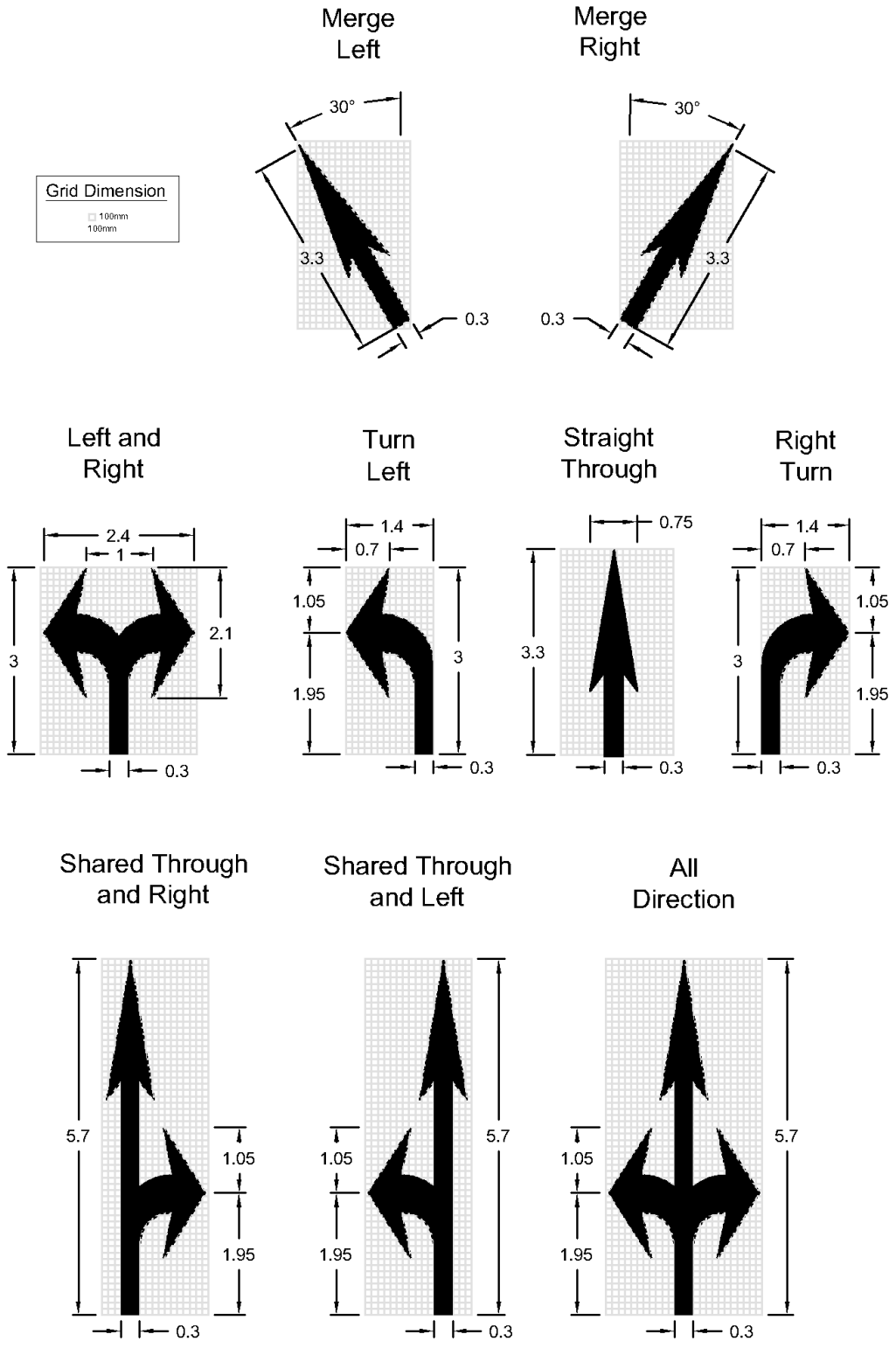
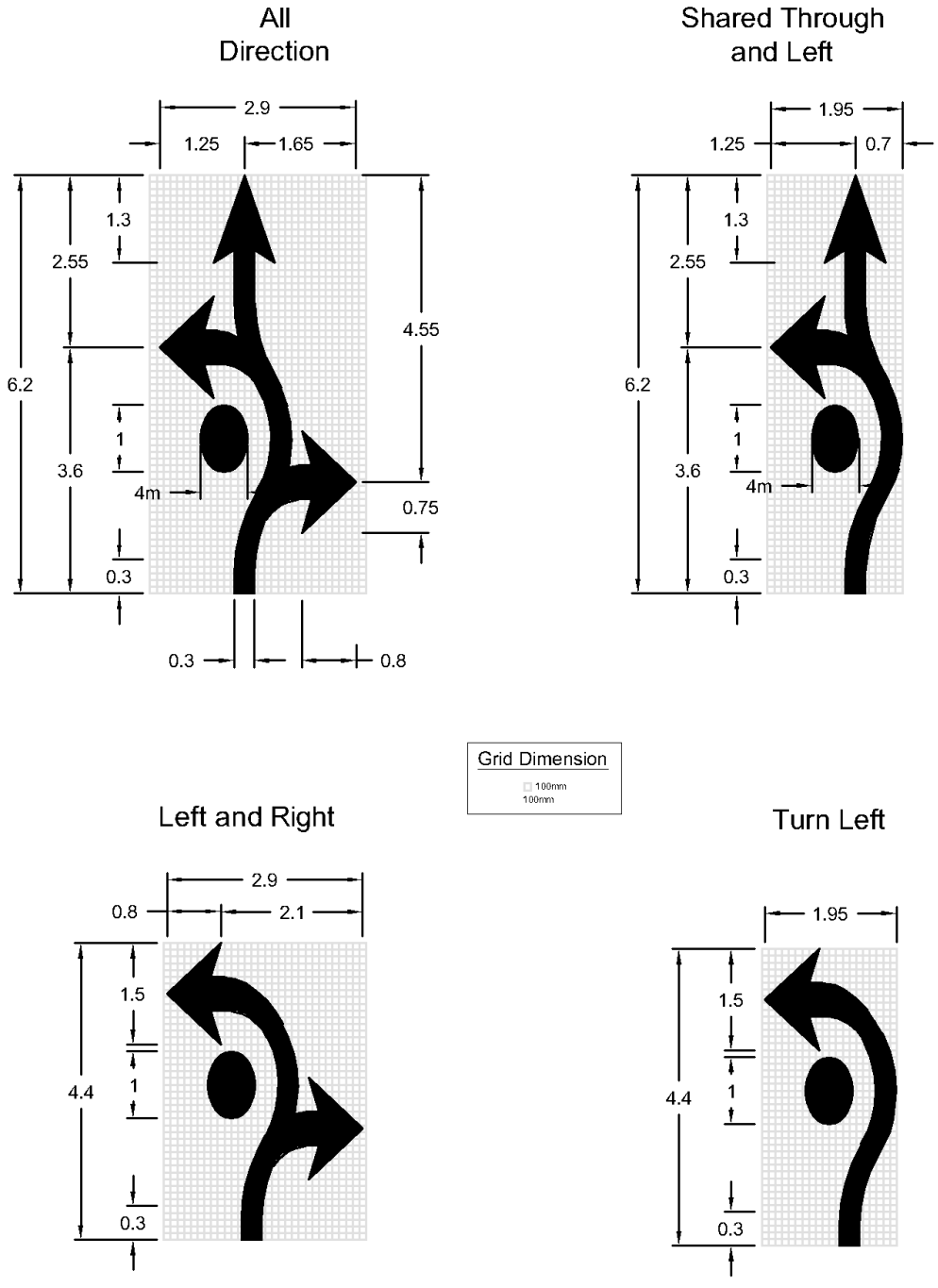
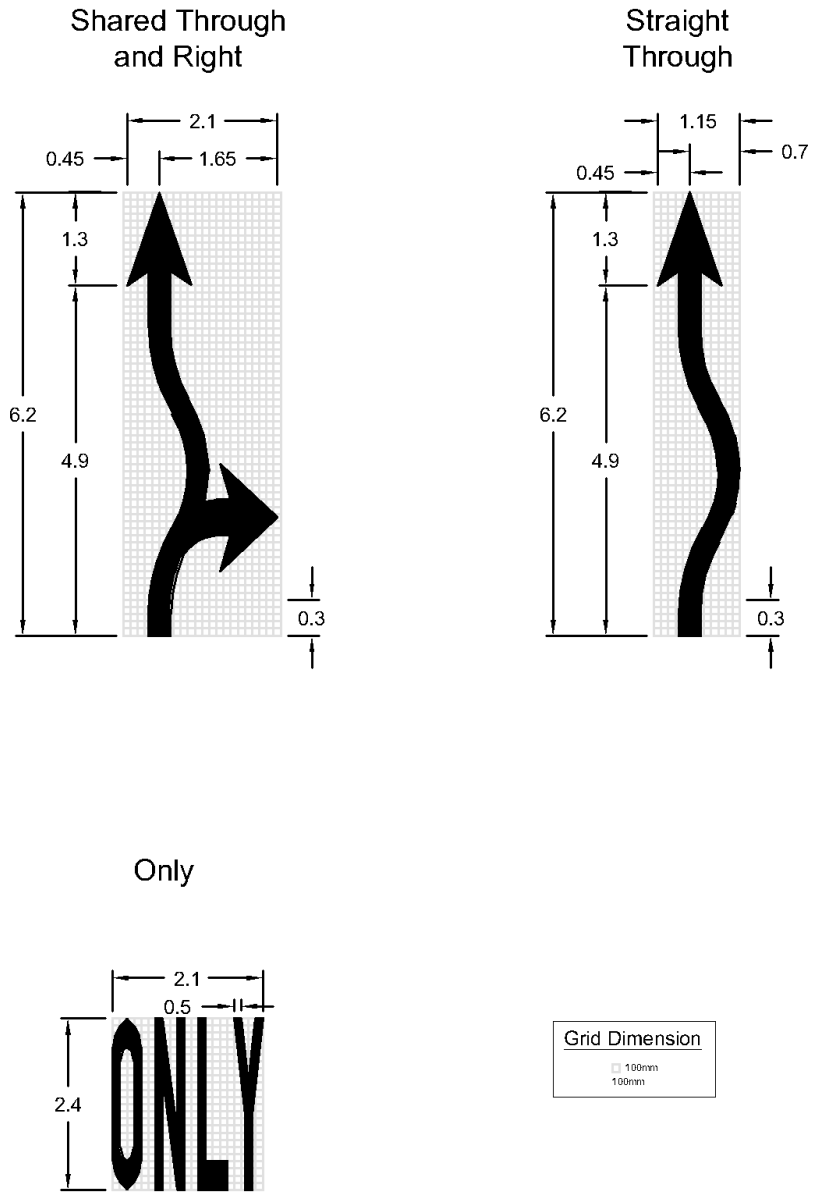


Figure 42: Multi-Lane Roundabout Approach Arrows 1



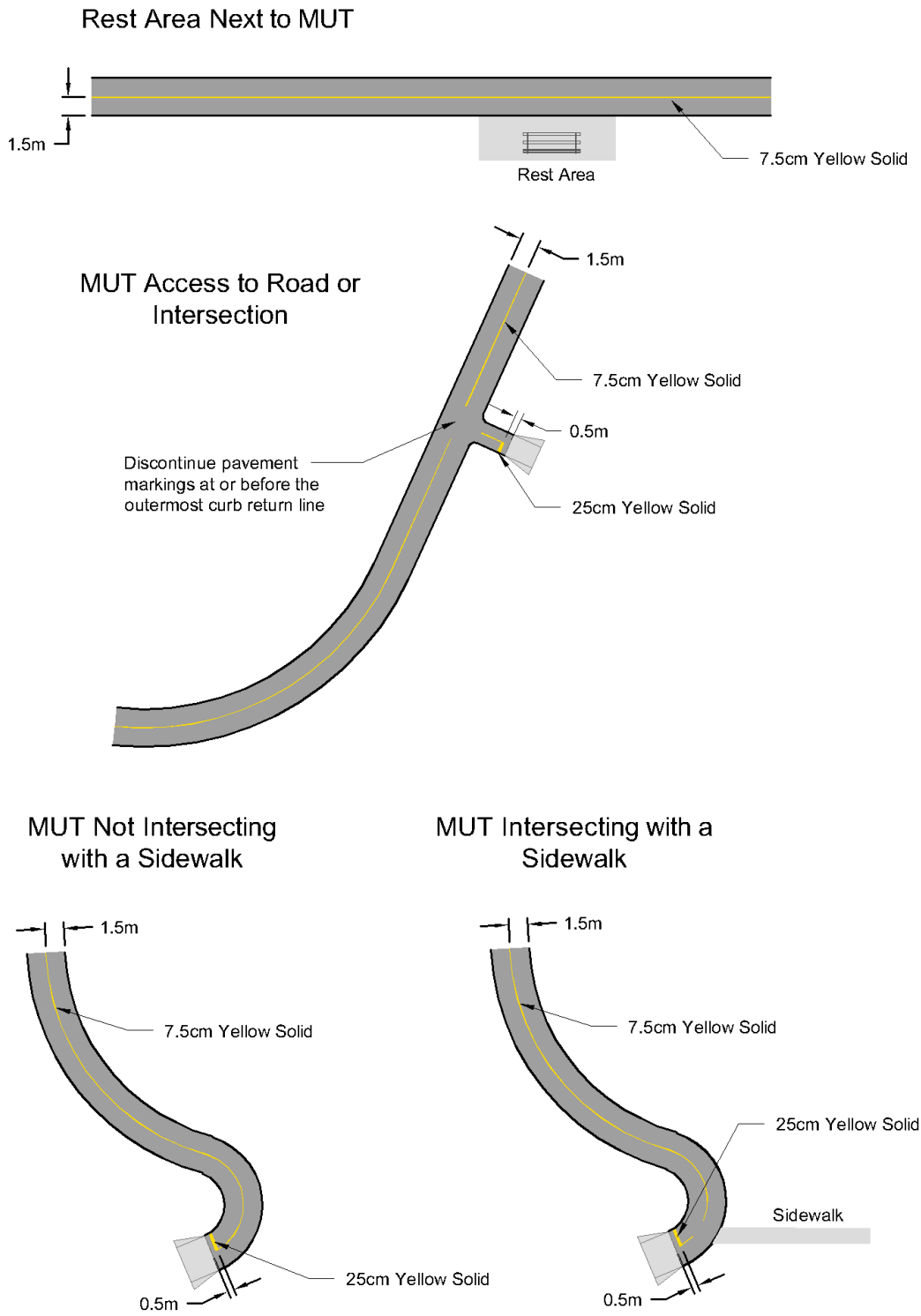
NOTES:
1. THE FORMAT OF SYMBOLS ARE BASED ON "LANE USE SIGNS AND PAVEMENT MARKINGS AT MULTI-LANE ROUNDABOUTS", TECHNICAL BULLETIN TE-2005-5. MINISTRY OF TRANSPORTATION OF BRITISH COLUMBIA. 27 JULY 2005.

Figure 43: Multi-Lane Roundabout Approach Arrows 2



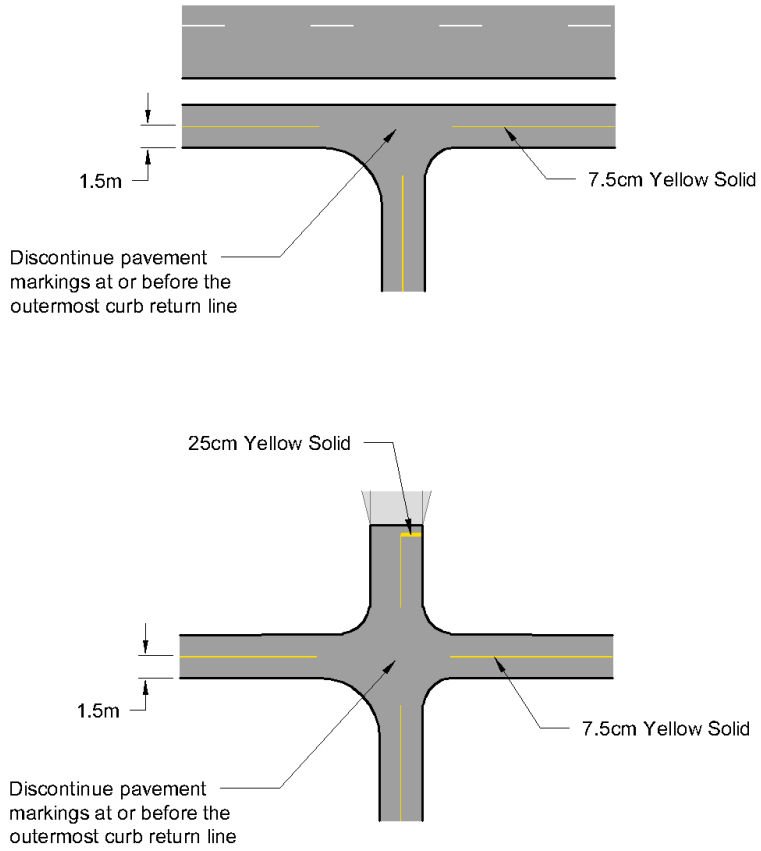
NOTES:
1. THE FORMAT OF SYMBOLS ARE BASED ON "LANE USE SIGNS AND PAVEMENT MARKINGS AT MULTI-LANE ROUNDABOUTS", TECHNICAL BULLETIN TE-2005-5. MINISTRY OF TRANSPORTATION OF BRITISH COLUMBIA. 27 JULY 2005.

Figure 44: Multi-Use Trail Markings 1



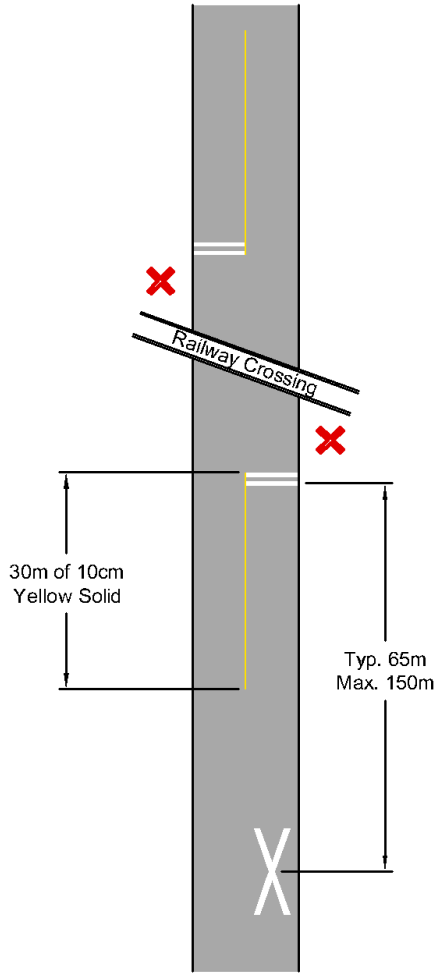
NOTES:
1. TRAIL SIGNS TO BE CHOSEN/PLACED IN ACCORDANCE WITH THE COUNTY'S DESIGN AND CONSTRUCTION STANDARDS.

Figure 45: Multi-Use Trail Markings 2



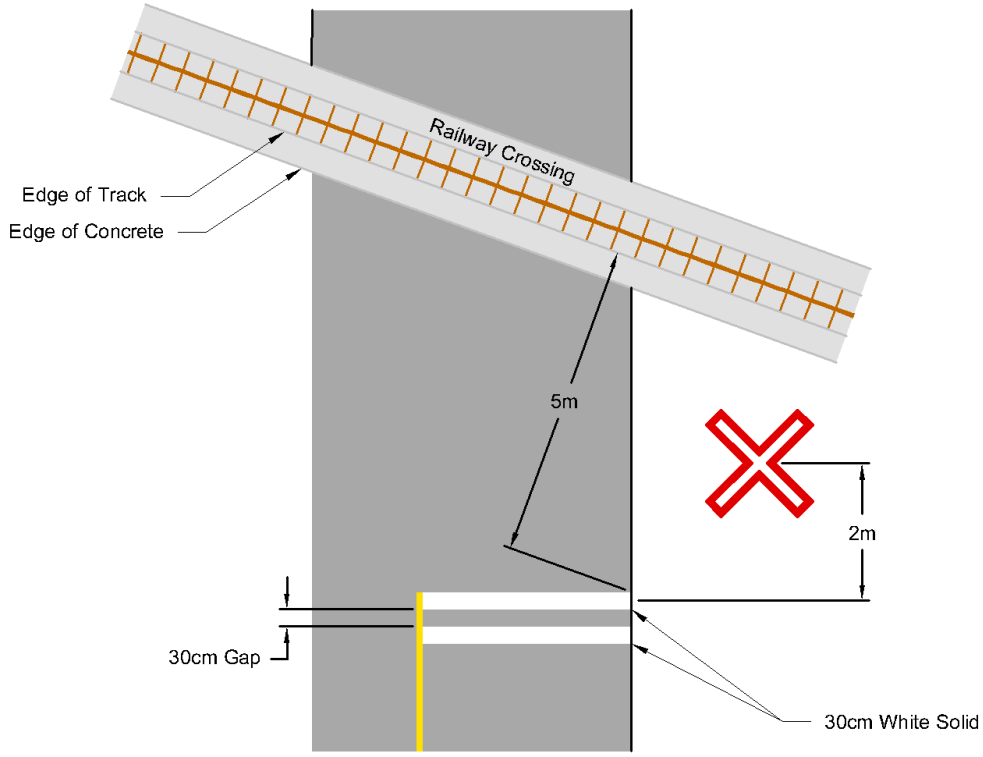
NOTES:
1. TRAIL SIGNS TO BE CHOSEN/PLACED IN ACCORDANCE WITH THE COUNTY'S DESIGN AND CONSTRUCTION STANDARDS.

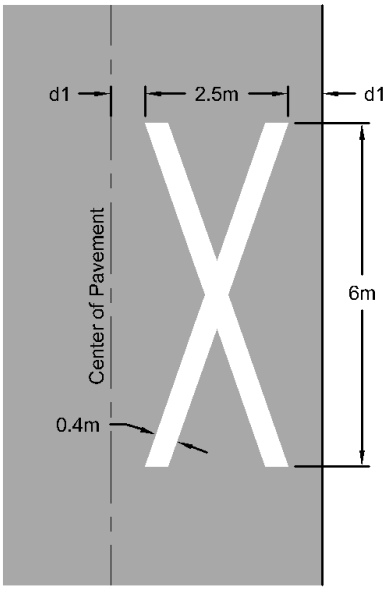
Figure 46: Railway Crossing



See Figure 47 for detailed dimensions.

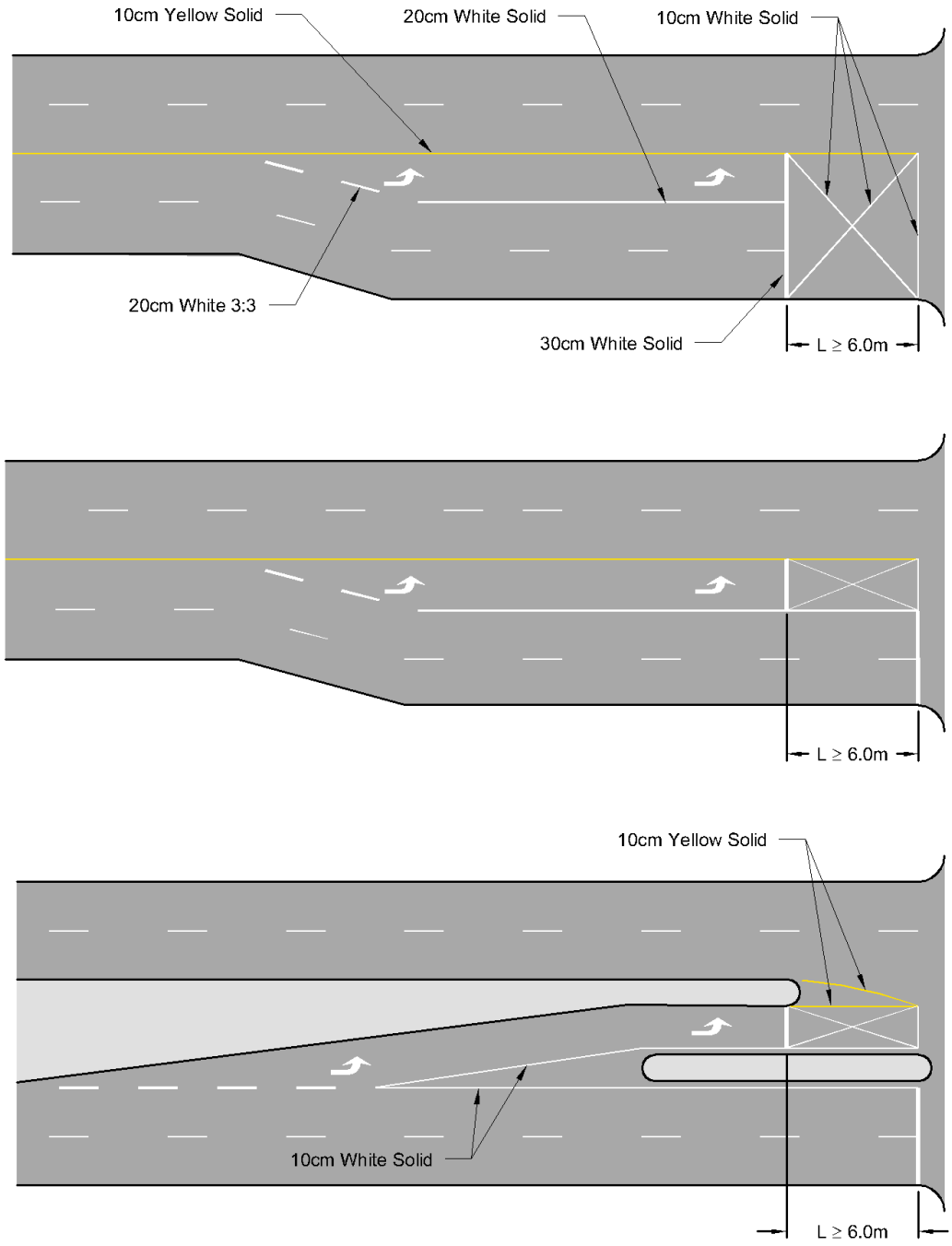
Figure 47: Railway Crossing (Details)





NOTES:
1. THE NEAREST POINT OF THE DOUBLE STOP LINES SHOULD BE 5m FROM FROM THE EDGE OF TRACK .

Figure 48: Stop Box Lines



NOTES:
1. IF THE INTERSECTION HAS PARALLEL CROSSWALK LINES, EXTEND THE STOP BOX TO THE UPSTREAM PARALLEL CROSSWALK LINE.
2. A STOP BOX IS NOT REQUIRED IF L IS LESS THAN 6.0m.
3. STOP LINES TO BE POSITIONED AT END OF CURB RETURN OR 2.0m FROM INTERSECTING CURB LINE, WHICHEVER IS GREATER.
4. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

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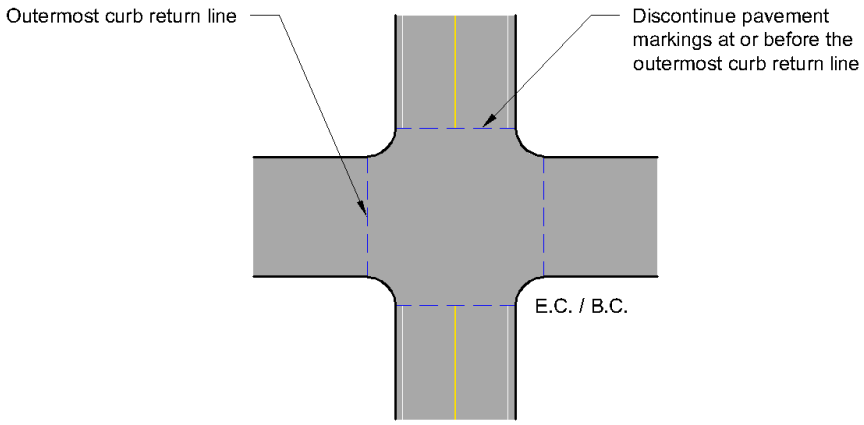
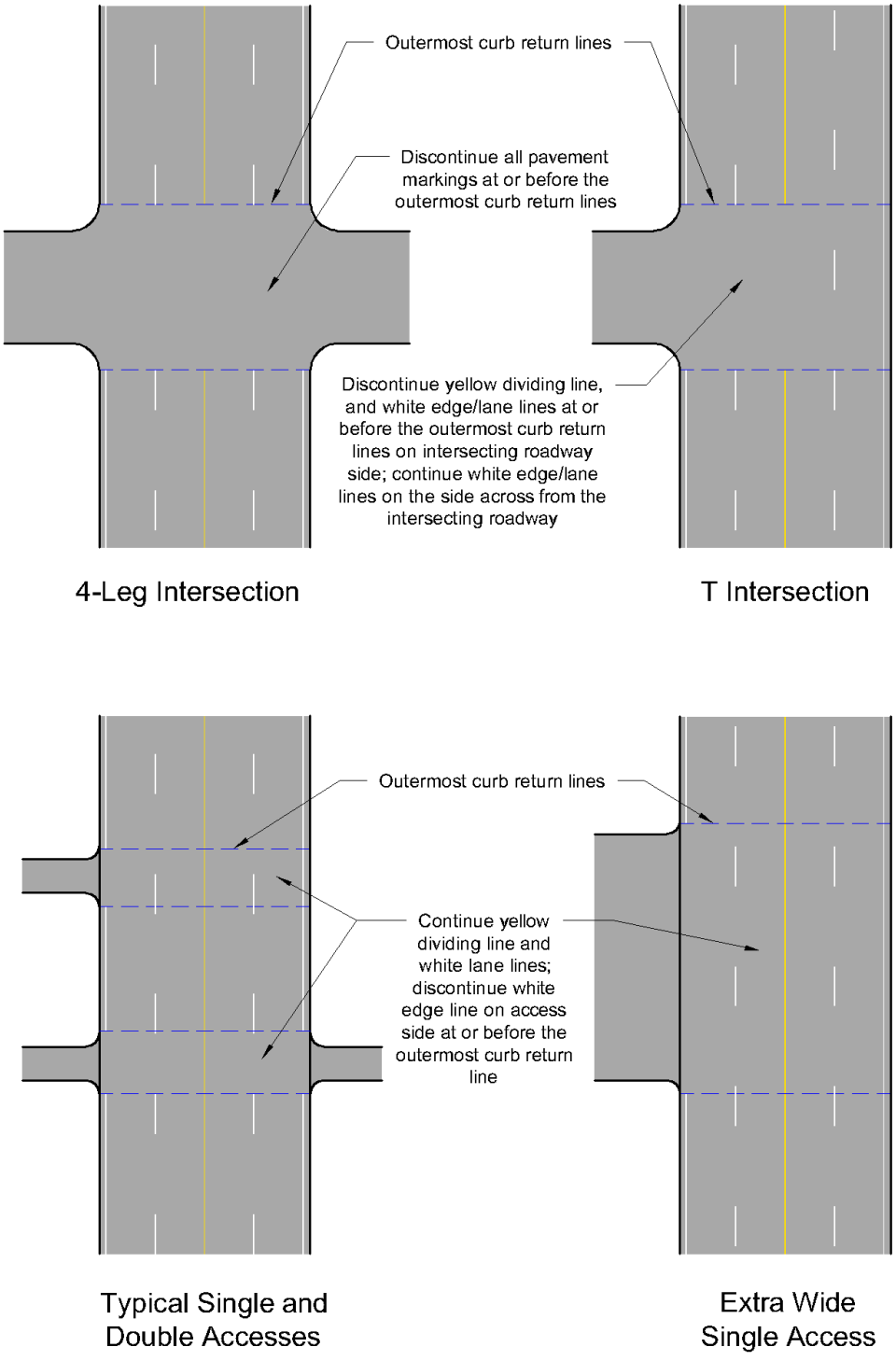
12.0 INTERSECTION/ACCESS DIAGRAMS

Figure 49: Illustration of Outermost Curb Return Line



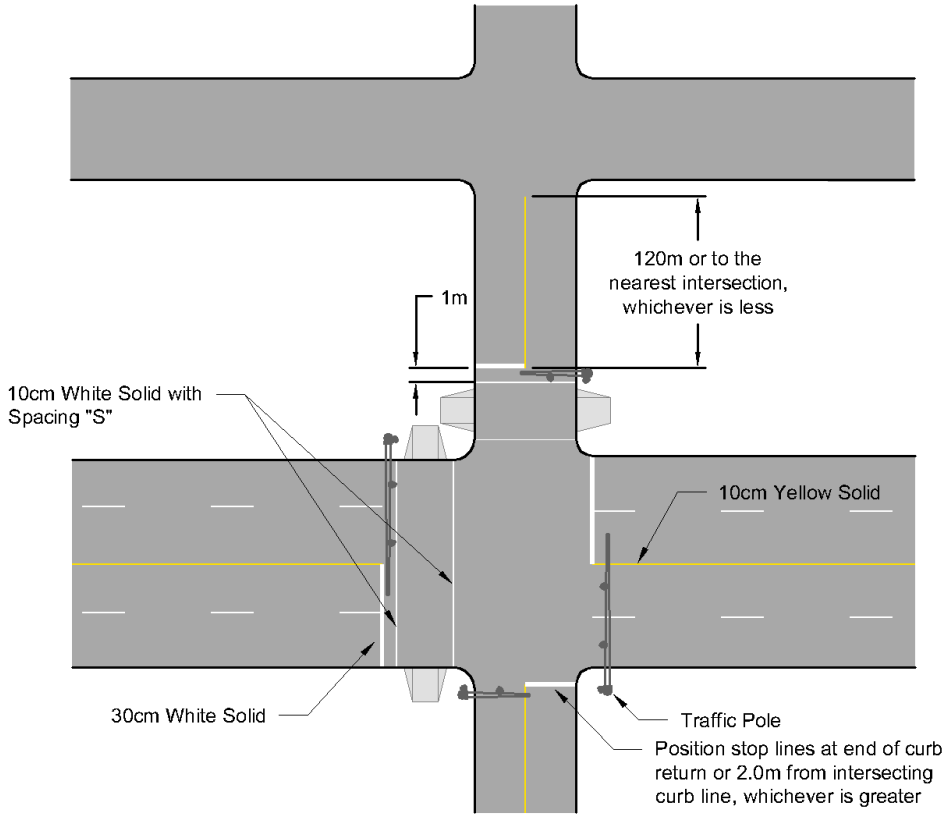
NOTE: When the roadway on both sides of the intersection has pavement edge lines, continue the edge line around the curb return to connect both sides.

Figure 50: Pavement Markings Through an Intersection/Access



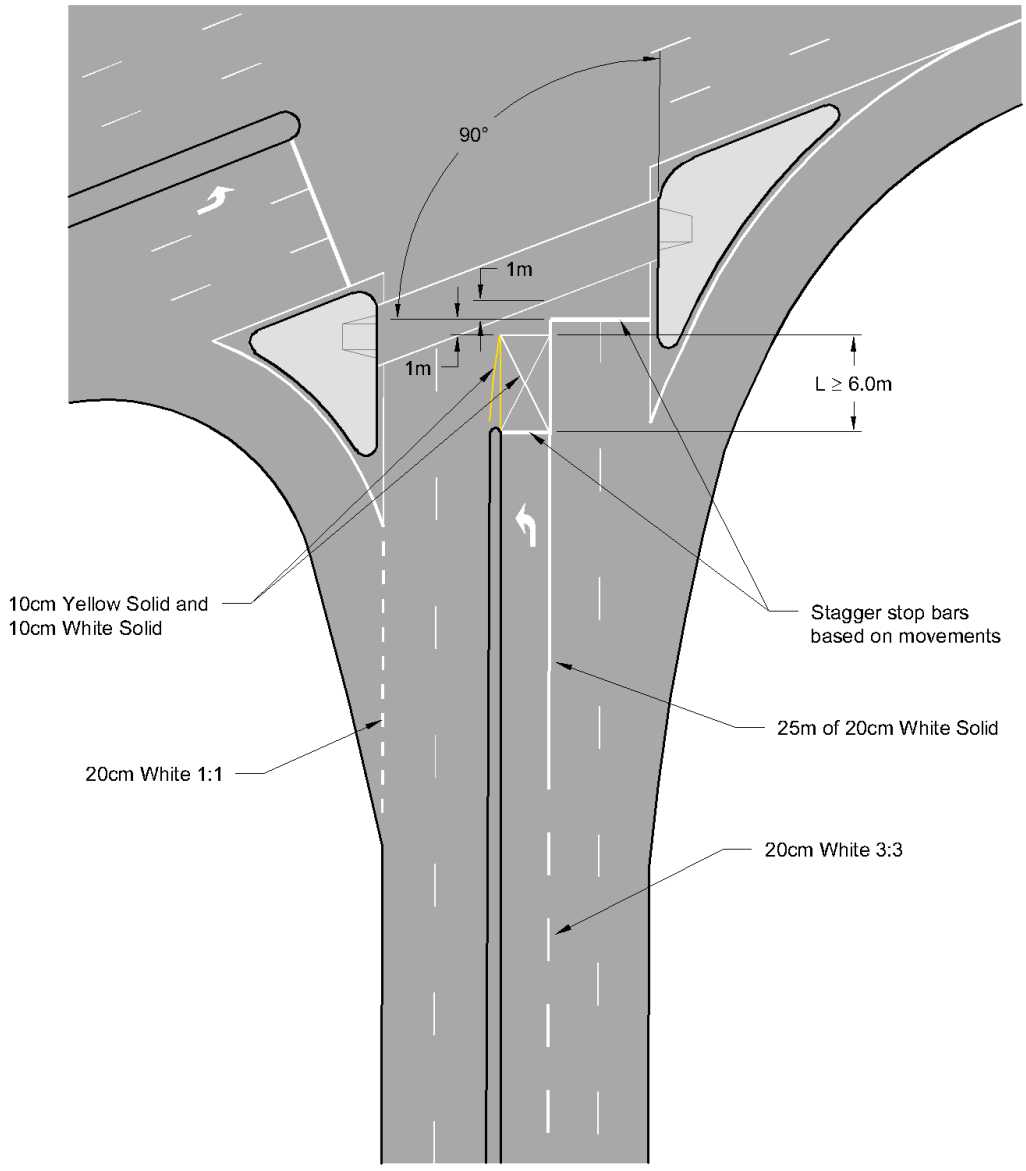
NOTES:
1. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 51: Intersection – Full Signals



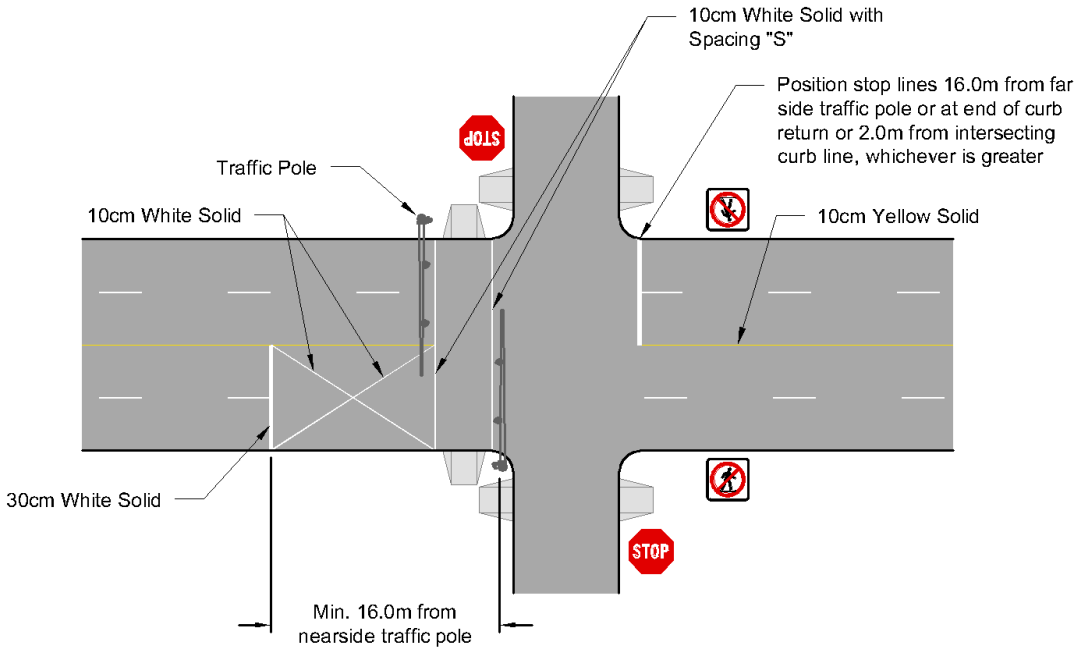
NOTES:
1. PARALLEL CROSSWALK LINES SHALL HAVE SPACING "S" OF 4.0m ON ALL LEGS OF ANY INTERSECTION WITH AN ARTERIAL ROADWAY. SPACING "S" SHALL BE 3.0m ON ALL LEGS OF ANY OTHER INTERSECTION.
2. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).
3. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 52: Intersection – Full Signals with Skewed Approach



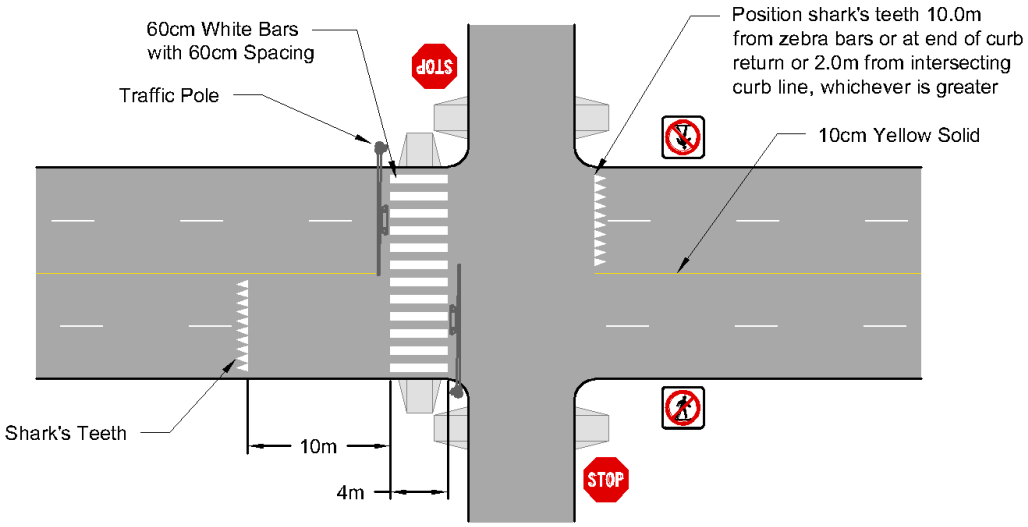
NOTES:
1. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.
2. A STOP BOX IS NOT REQUIRED IF L IS LESS THAN 6.0m.

Figure 53: Intersection – Pedestrian Signals (Half Signals)



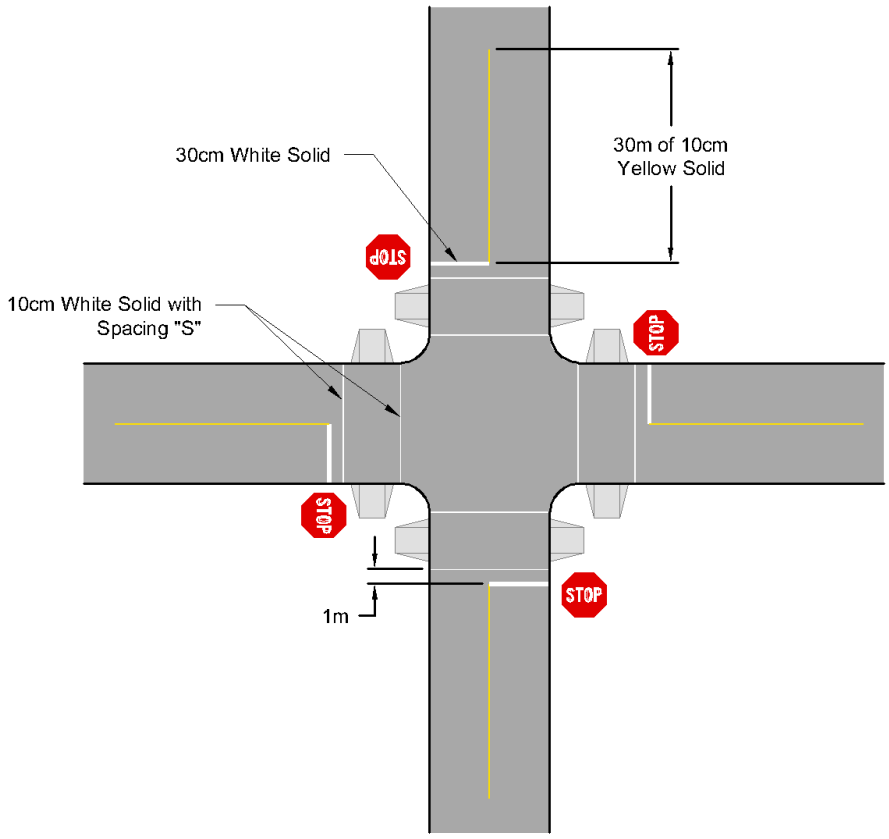
NOTES:
1. PARALLEL CROSSWALK LINES SHALL HAVE SPACING "S" OF 4.0m ON ALL LEGS OF ANY INTERSECTION WITH AN ARTERIAL ROADWAY. SPACING "S" SHALL BE 3.0m ON ALL LEGS OF ANY OTHER INTERSECTION.
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 54: Intersection – Pedestrian Flashers and RFBs on Arterial Roads



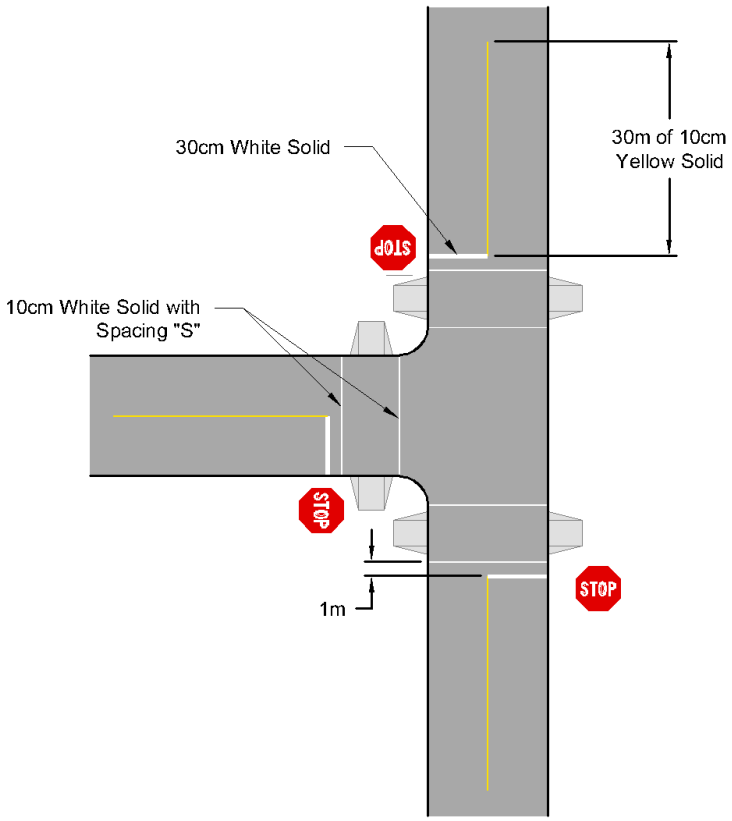
NOTES:
1. REFER TO FIGURE 28 FOR MORE DIMENSIONS.
2. DIRECTIONAL DIVIDING LINE (CENTRE LINE) NOT REQUIRED FOR PEDESTRIAN FLASHERS OR RRFBs, UNLESS ALREADY REQUIRED ALONG THE REMAINDER OF THE ROADWAY, AS INDICATED IN THE GUIDELINES OR SPECIFIED BY STRATHCONA COUNTY.
3. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 55: Intersection – Four-Way Stop Control



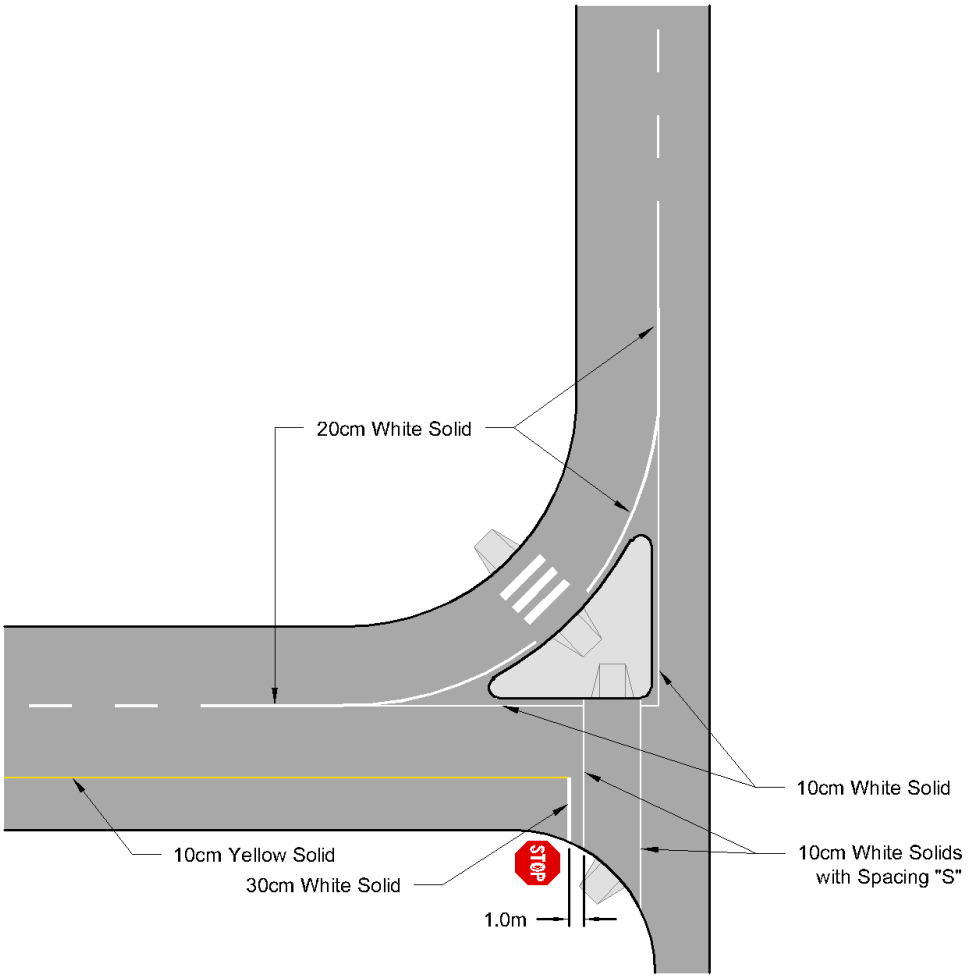
NOTES:
1. PARALLEL CROSSWALK LINES SHALL HAVE SPACING "S" OF 4.0m ON ALL LEGS OF ANY INTERSECTION WITH AN ARTERIAL ROADWAY. SPACING "S" SHALL BE 3.0m ON ALL LEGS OF ANY OTHER INTERSECTION.

Figure 56: Intersection – Three-Way Stop Control



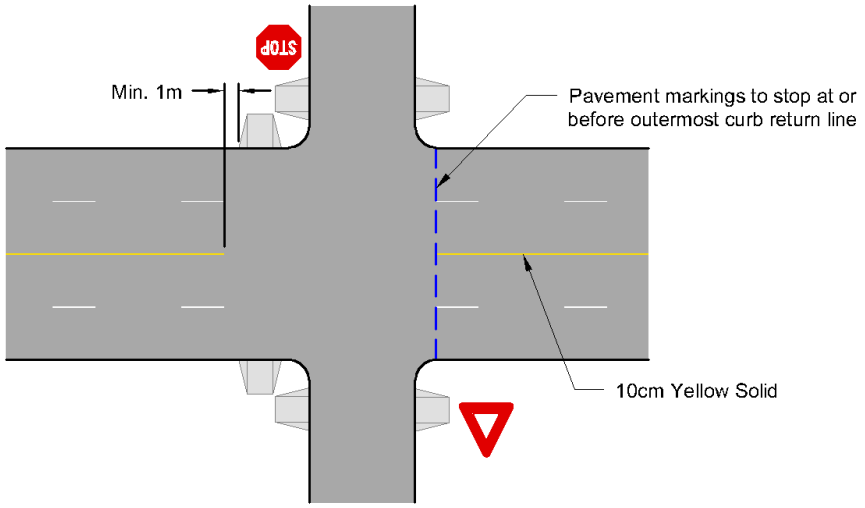
NOTES:
1. PARALLEL CROSSWALK LINES SHALL HAVE SPACING "S" OF 4.0m ON ALL LEGS OF ANY INTERSECTION WITH AN ARTERIAL ROADWAY. SPACING "S" SHALL BE 3.0m ON ALL LEGS OF ANY OTHER INTERSECTION.

Figure 57: Intersection – Approach with One Island



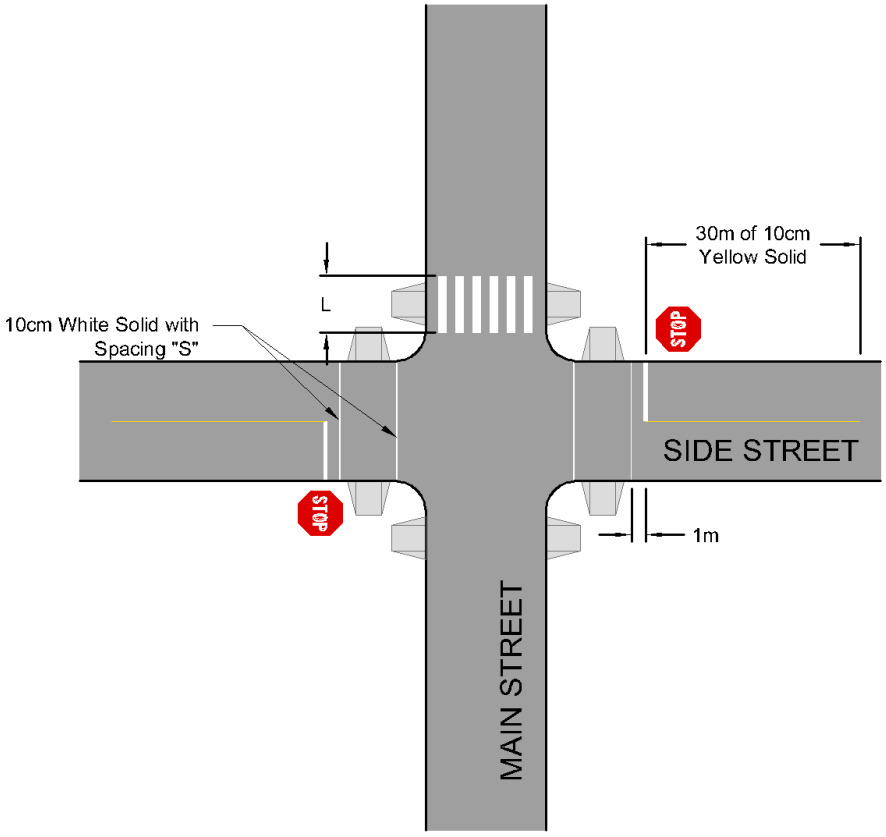
NOTES:
1. PARALLEL CROSSWALK LINES SHALL HAVE SPACING "S" OF 4.0m ON ALL LEGS OF ANY INTERSECTION WITH AN ARTERIAL ROADWAY. SPACING "S" SHALL BE 3.0m ON ALL LEGS OF ANY OTHER INTERSECTION.
2. DASHED LINES ARE 20cm WHITE 3:3 UNLESS OTHERWISE NOTED.

Figure 58: Intersection – Stop or Yield Control on Minor Road (Excluding Class I Roadways)



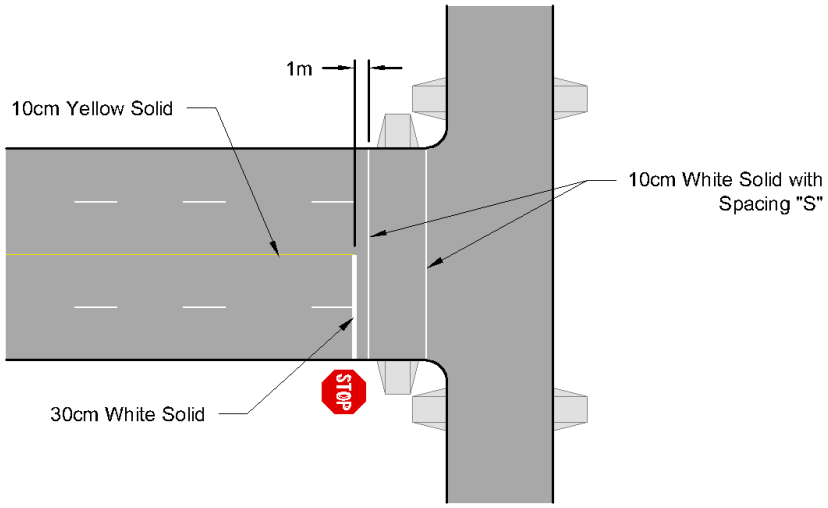
NOTES:
1. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 59: Intersection – Stop Control on Minor Road with Warranted Crosswalks



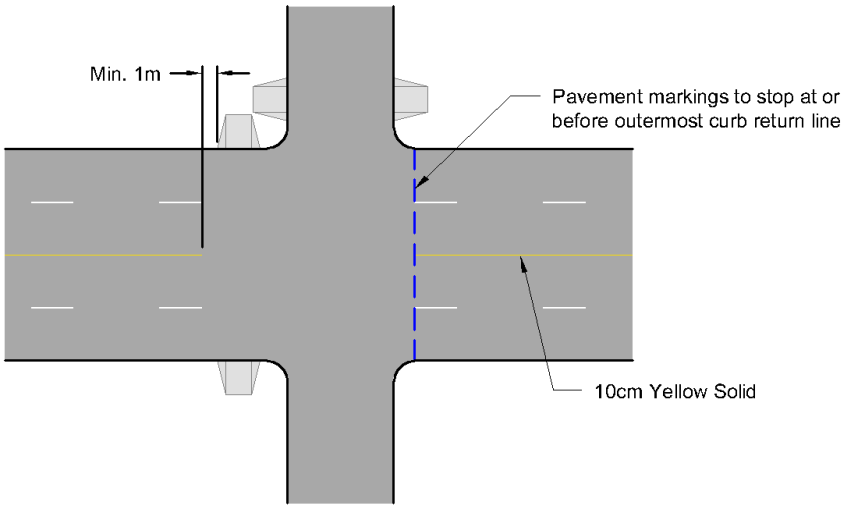
NOTES:
1. PARALLEL CROSSWALK LINES SHALL HAVE SPACING "S" OF 4.0m ON ALL LEGS OF ANY INTERSECTION WITH AN ARTERIAL ROADWAY. SPACING "S" SHALL BE 3.0m ON ALL LEGS OF ANY OTHER INTERSECTION.
2. L IS 4m FOR ARTERIAL ROADS AND 3m FOR COLLECTOR/LOCAL ROADS.
3. MARK FOR WARRANTED CROSSWALKS ONLY, AS INDICATED IN THE GUIDELINES OR SPECIFIED BY STRATHCONA COUNTY.
4. DIMENSIONS REFER TO LIP OF GUTTER, AS APPLICABLE (WHERE THERE IS NO LIP OF GUTTER, USE FACE OF CURB).

Figure 60: Intersection – Stop Control with Multiple Lanes



NOTES:
1. PARALLEL CROSSWALK LINES SHALL HAVE SPACING "S" OF 4.0m ON ALL LEGS OF ANY INTERSECTION WITH AN ARTERIAL ROADWAY. SPACING "S" SHALL BE 3.0m ON ALL LEGS OF ANY OTHER INTERSECTION.
2. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 61: Intersection – Uncontrolled



NOTES:
1. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 62: Intersection – Single-Lane Roundabout

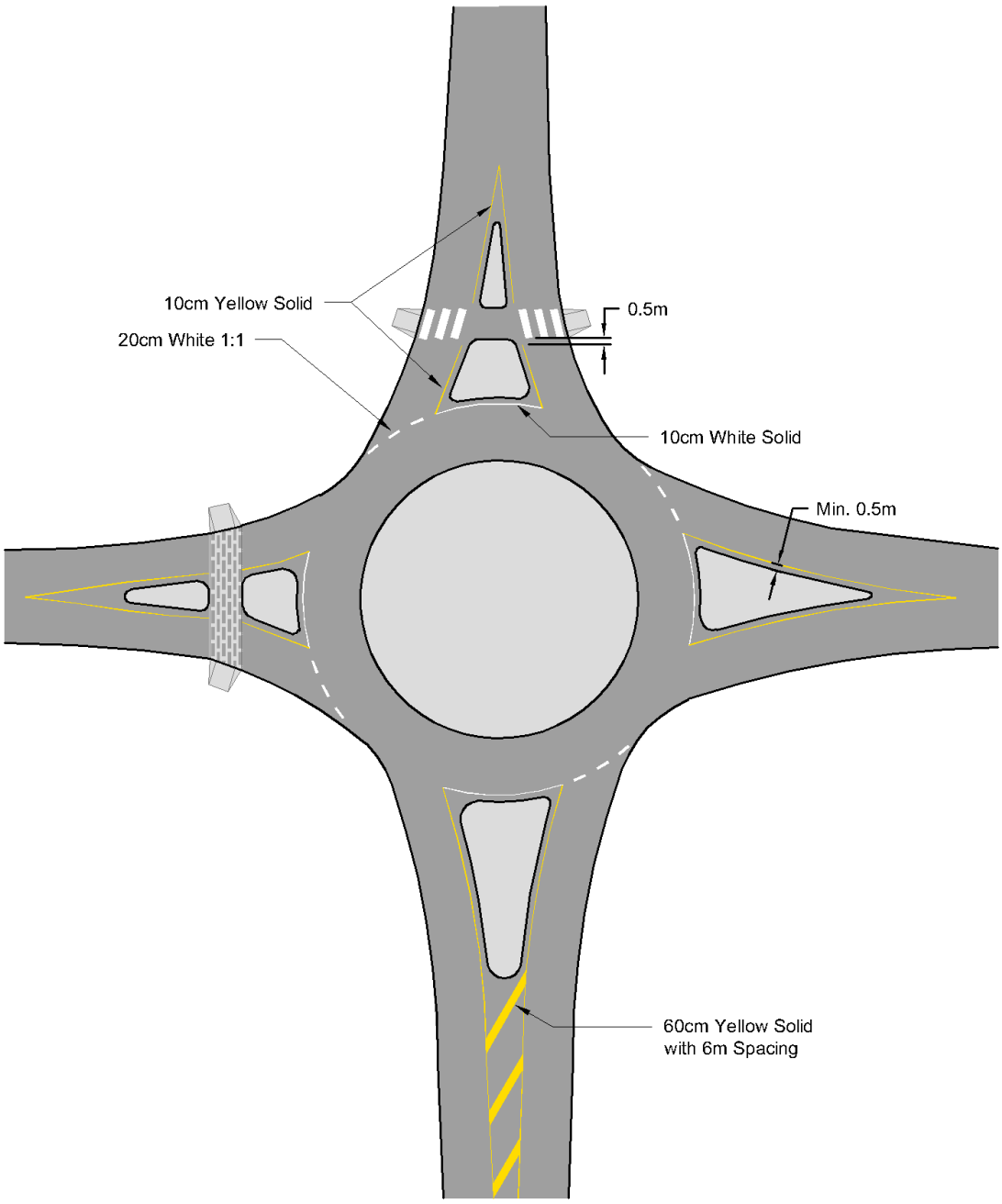
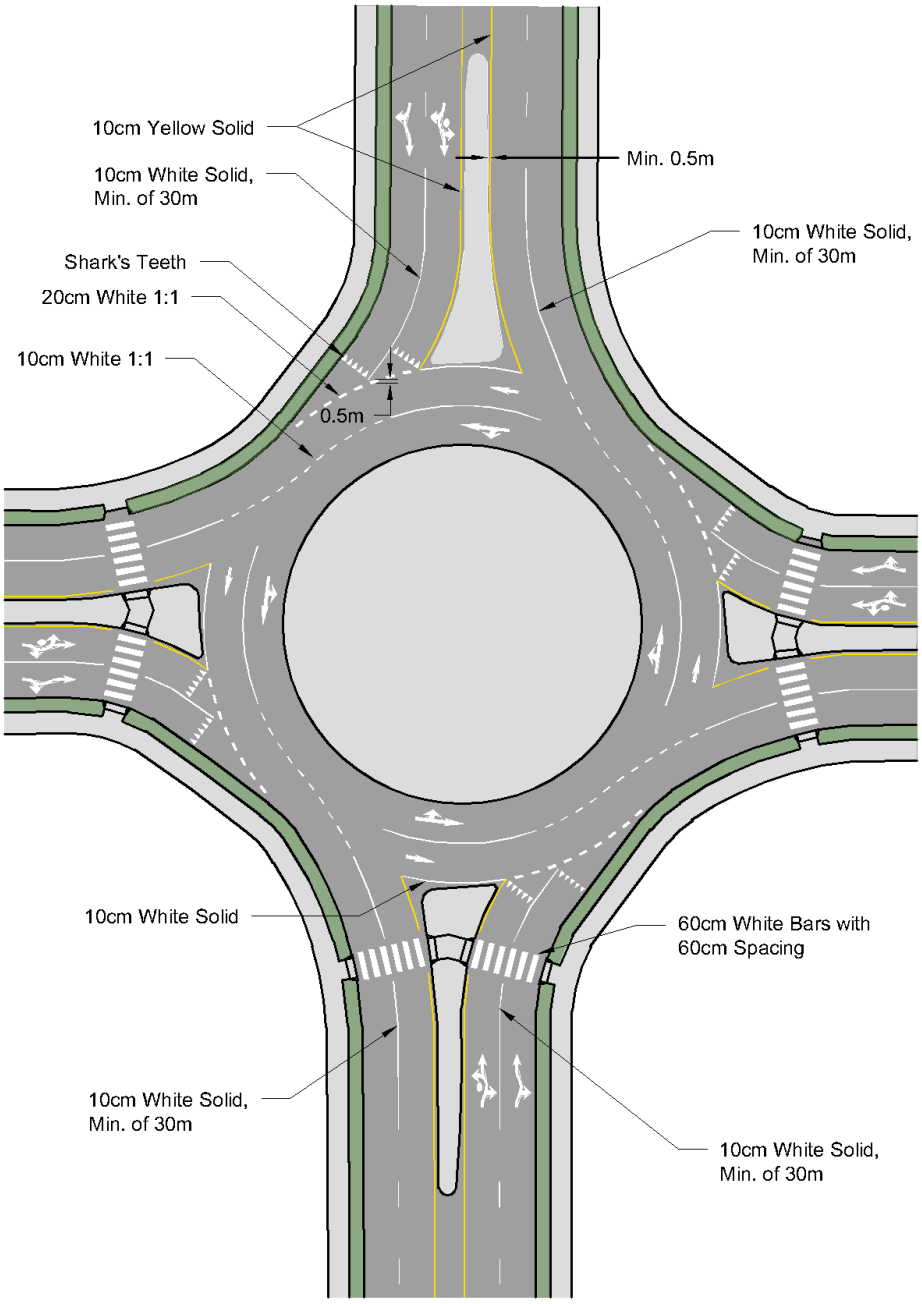
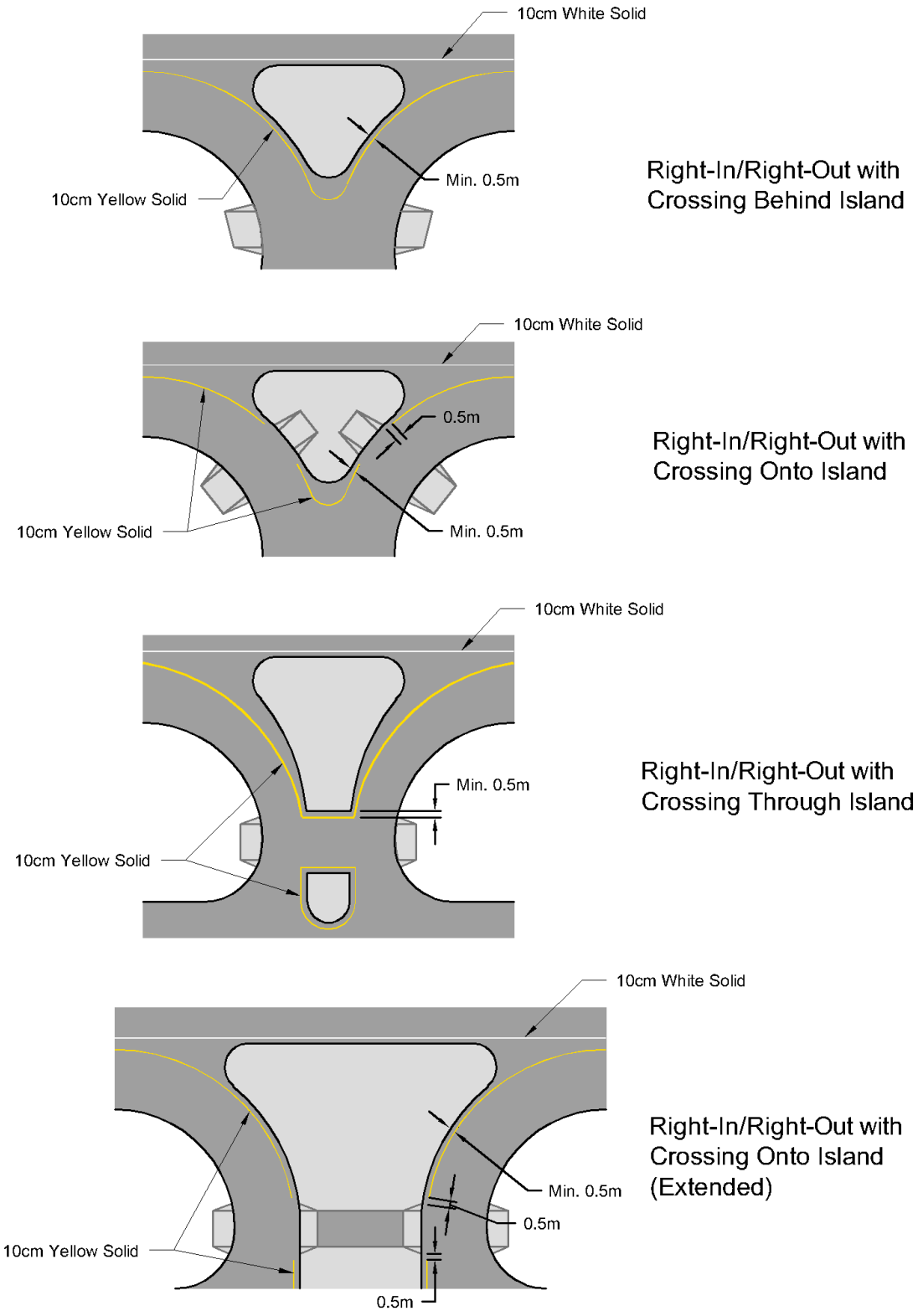


Figure 63: Intersection – Two-Lane Roundabout



NOTES:
1. DASHED LINES ARE 10cm WHITE 3:6 UNLESS OTHERWISE NOTED.

Figure 64: Access – Right-In/Right-Out Crossings



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13.0 GLOSSARY

Accessible Parking Stall	A marked area intended for one vehicle to park in, identified with the International Symbol of Access on the pavement and a sign at the front of the stall. Accompanied by a marked area on one side that prohibits parking.
Arterial Roadway	An urban road primarily for traffic movement. A complete list of arterial roadways within Strathcona County can be found in the most recent version of the County's Transportation System Bylaw.
Centre in the Park (CITP)	A multi-use area being developed within the heart of Sherwood Park. Combines municipal services, local government, residences, retail services and inviting public spaces.
Channelization	The separation and direction of traffic movements and pedestrians into defined paths at an at-grade intersection through the use of geometric features, pavement markings and/or traffic control devices.
Channelizing Islands	An area defined, usually by concrete slab, between traffic lanes for control of vehicle movements or for pedestrian refuge.
Class I Roadway	A rural road primarily for traffic movement. A complete list of Class I roadways within Strathcona County can be found in the most recent version of the County's Transportation System Bylaw.
Class II Roadway	A rural road on which traffic movement and land access have similar importance. A complete list of Class II roadways within Strathcona County can be found in the most recent version of the County's Transportation System Bylaw.
Collector Roadway	An urban road on which traffic movement and land access have similar importance. A complete list of collector roadways within Strathcona County can be found in the most recent version of the County's Transportation System Bylaw.
Construction Completion Certificate (CCC)	The signed and dated document issued by Strathcona County for the accepted completion of municipal improvements, or a portion thereof. These improvements must be constructed and installed in accordance with all provisions of the development agreement or construction contract and to the satisfaction of Strathcona County.
Contract Manager	The person(s) or entity responsible for negotiating and ensuring compliance with the construction contract/development agreement, and agreeing to and documenting any changes to the same. A Contract Manager is required when Strathcona County is both the Owner and the Developer on a project.
County Residential Subdivision Roadway	A rural road with the primary function of providing land access within a rural (country residential) subdivision. A complete list of country residential subdivision roadways within Strathcona County can be found in the most recent version of the County's Transportation System Bylaw.
Cul-de-sac	A local dead-end road, open at one end only, with special provision for turning around.

Curb Return	The curved section of curb used at roadway intersections or driveways in joining straight sections of curb.
Dual Turning Lanes	A pair of adjacent lanes intended for the exclusive use of vehicles about to turn.
Face of Curb (FOC)	The vertical (or near vertical) portion of a concrete curb.
Final Acceptance Certificate (FAC)	The signed and dated document issued by Strathcona County upon final acceptance of the work (when the entire work has been performed to the requirements of the development agreement or construction contract), with the purpose of transferring full responsibility of the municipal improvement to Strathcona County.
Full Signals	All road approaches of an intersection are controlled by a set of traffic signals that is in full red-amber-green operation. The signals may or may not be activated by a pedestrian pushbutton.
Inside Lane	The left-most lane in one direction of a roadway with two or more lanes in that direction (also referred to as an inner lane).
Lane	A part of the travelled way intended for the movement of a single file of vehicles.
Lip of Gutter (LOG)	The edge of a concrete gutter opposite the curb where it meets the paved roadway.
Local Roadway	An urban road with the primary function of providing land access. A complete list of local roadways within Strathcona County can be found in the most recent version of the County's Transportation System Bylaw.
Median	A reserve, excluding shoulders, between lanes carrying traffic in opposite directions.
Outside Lane	The right-most lane in one direction on a roadway with two or more lanes in that direction (also referred to as an outer lane).
Parking Lane	A supplementary lane intended only for parking.
Parking Stall	A marked area intended for one vehicle to park in.
Pedestrian Flashers	A set of amber flashers installed above the roadway that begin flashing upon activation by a pedestrian pushbutton to warn drivers that they must slow down to 30km/hr and stop for any pedestrians present on the crosswalk.
Pedestrian Signals (Half Signals)	A pedestrian signal has a standard red-amber-green operation for drivers on the major roads, stop signs for drivers on the minor roads. This type of traffic signal turns red upon activation by a pedestrian pushbutton.
Professional Engineer	An individual who holds a certificate of registration to engage in the practice of engineering in Alberta with APEGA.
Professional Licensee (Engineering)	An individual who holds a certificate of registration and an annual licence to engage in the practice of engineering in Alberta within the scope of practice specified by APEGA.

Professional Technologist (Engineering)	An individual who holds a certificate of registration and an annual licence to engage in the practice of engineering in Alberta within the scope of practice specified by ASET.
Provincial Highway	A highway designated as a provincial highway pursuant to the *Highways Development and Protection Act*.
Raised Crosswalk	A marked pedestrian crosswalk at an intersection or midblock location constructed at a higher elevation than the adjacent roadway. Typically raised to a minimum height of 80mm for a length of 6.5m (including ramps) to accommodate a minimum 2.5m crosswalk.
Raised Intersection	An intersection (including crosswalks) constructed at a higher elevation than the adjacent roadway. Typically raised to a minimum height of 80mm for the extent of the intersection.
Rapid Flashing Beacons (RFBs)	RFBs system alerts drivers of pedestrian crossings at a marked crosswalk location. It is a set of solar-powered flashing beacons installed at the sides of the roadway that begin flashing rapidly upon activation by a pedestrian pushbutton. See Strathcona County's Standard Drawing 41308 for more information.
Rural Service Area	All land within the County that is not defined in the County's Municipal Development Plan Bylaw 20-2017 as the Urban Service Area. As noted in in the County's Municipal Development Plan Bylaw 20-2017, the Rural Service Area includes the Ardrossan, Josephburg, South Cooking Lake, Antler Lake, Collingwood Cove, Half Moon Lake, Hastings Lake and North Cooking Lake Hamlets.
School Bus Bay	A lane, usually forming part of the normal roadway travel lane, used by school buses to pick up and drop off students.
Shoulder	The part of the roadway adjoining the travelled way that is intended for emergency stopping and/or lateral support of the roadway structure. It may also be configured to be accessible for bicycle travel.
Speed Hump	A speed control device in which the roadway surface is raised over a length of about 4.0m (including ramps), typically to a minimum height of 80mm.
Speed Table	A speed control device in which the roadway surface is raised over a length of about 7.0m (including ramps), typically to a minimum height of 80mm.
Taper	Where an auxiliary lane is being developed or terminated, the transition from the edge of the through lane to the beginning of the full width auxiliary lane.
Transit Bus Bay	A supplementary lane, generally short in length, intended only for transit busses.
Two-Way Left-Turn Lane (TWLTL)	The middle lane on a two-way undivided street intended for the exclusive use of vehicles about to turn left from either direction into property accesses. Also referred to as a centre left turn lane.
Urban Service Area (Bremner)	Defined in the County's Municipal Development Plan Bylaw 20-2017 as all land within the Urban Service Area located east of Highway 21.

Urban Service Area (Sherwood Park)	Defined in the County's Municipal Development Plan Bylaw 20-2017 as all land located within the Urban Service Area west of Highway 21.