

| Criteria   | Proposed Standard  |                                 | Reference                  |
|--|--|---------------------------------|----------------------------|
|  | Interim Rural Section  | Ultimate Urban Section          |                            |
| <b>Classification</b>                                | RAU100   | UAU80                           | TAC Table 1.3.2.1          |
| <b>Design Speed</b>                                  | 100km/h  | 80km/h                          | TAC Table 1.3.2.1          |
| <b>Posted Speed</b>                                  | 80km/h   | 60km/h                          | Section 8.2 of MMATMP      |
| <b>Right-of-Way (ROW)</b>                            | 7 lanes = 41 m ROW<br>5 lanes = 34 m ROW<br>4 lanes = 29 m ROW<br>3 lanes = 27 m ROW<br>3 lanes = 26 m ROW |                                 | MMATMP Appendix I          |
| <b>ROW Setback from Sidewalk</b>                     | N/A  | 0.5m                            | MMATMP Appendix I          |
| <b>Horizontal Curve, R</b>                           |  |                                 |                            |
| Normal Crown   | 3180m  | 2130m                           | TAC Table 2.1.2.4          |
| Superelevation (e=0.04)                              | 490m   | 280m                            | TAC Table 2.1.2.3          |
| <b>Lane Width<br/>(measured to edge of pavement)</b> |  |                                 |                            |
| Through Lanes  | 3.5m   | 3.5m                            | City of Barrie Std. BSD-07 |
| Right-Turn Lane                                      | 3.5m   | 3.5m                            | Appendix I of MMATMP       |
| Left-Turn Lane                                       | 3.5m   | 3.5m                            | Appendix I of MMATMP       |
| Left-Turn Lane, Adjacent to Median                   | N/A  | 3.0m                            | Appendix I of MMATMP       |
| Continuous Left-Turn Lane                            | N/A  | 4.2m                            | Appendix I of MMATMP       |
| Separated On-Road Bicycle Lane                       | N/A  | 1.5m (with 0.5m striped buffer) | Appendix I of MMATMP       |

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| <b>Raised Median</b>                             | N/A   | 1.2m   | Appendix I of MMATMP       |
| <b>Boulevard Width</b>                           | N/A   | 2.9m <sup>1</sup>  | Appendix I of MMATMP       |
| <b>Sidewalk Width</b>                            | N/A   | 2.0m   | Appendix I of MMATMP       |
| <b>Cross-Section Transition (3- to 5-lane)</b>   |   |  |                            |
| Parallel Length from Intersection                | If 95% Queue Length < 180m<br>Then use 180m<br>If 95% Queue Length >180m<br>Then use 95% Queue Length | If 95% Queue Length < 140m<br>Then use 140m<br>If 95% Queue Length >140m<br>Then use 95% Queue Length                      | TAC Table 2.3.9.1          |
| Merging Taper                                    | 160m  | 130m <sup>`</sup>  | TAC Table 2.3.9.1          |
| Diverging Taper                                  | 80m   | 70m  | TAC Table 2.3.9.1          |
| <b>Taper Ratios</b>                              |   |  |                            |
| Right-Turn Taper With Auxiliary Lane             | 85m<br>(TAC Table 2.4.6.2)  | 17:1<br>(TAC Table 2.3.5.2)  |                            |
| Parallel/Deceleration Portion of Right-Turn Lane | 170m<br>(TAC Table 2.4.6.2 Stop Condition)  | If 95% Queue Length < 60m<br>Then use 60m<br>If 95% Queue Length > 60m<br>Then use 95% Queue Length<br>(TAC Table 2.3.5.2) |                            |
| Right-Turn Taper Without Auxiliary Lane          | N/A   | 24:1 (TAC Table 2.3.5.1)   |                            |
| Left-Turn Taper                                  | 30:1  | 15:1   | TAC Table 2.3.8.1          |
| Left-Turn Storage                                | 95% Queue Length  | 95% Queue Length   |                            |
| <b>Cross-Fall</b>                                | 2.0%  | 2.0%   | City of Barrie Std. BSD-07 |

<sup>1</sup> Boulevard width may be widened to accommodate snow storage requirements.

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|---|---|------------------------|--|
|   | Interim Rural Section   | Ultimate Urban Section |  |
| <b>Vertical Alignment</b>                   |   |                        |  |
| Crest Curve, K<br>(Stopping Sight Distance) | 45  | 24                     | TAC Table 2.1.3.2  |
| Crest Curve, K<br>(Passing Sight Distance)  | 480   | 310                    | TAC Table 2.1.3.3  |
| Sag Curve , K (Comfort)                     | 18  | 12                     | TAC Table 2.1.3.4  |
| Sag Curve , K (Headlight)                   | 37  | 25                     | TAC Table 2.1.3.4  |
| Maximum Grade                               | 3%  | 5%                     | TAC Table 2.1.3.1  |
| Minimum Grade                               | 0.5%  | 0.5%                   | TAC Section 2.1.3.1                                      |
| <b>Intersections</b>                        |   |                        |  |
| Stopping Sight Distance                     | 160m  | 115m                   | TAC Table 1.2.5.3  |
| Decision Sight Distance                     | 315m  | 315m                   | TAC Table 1.2.5.7 & Figure 2.3.3.6                       |
| Curb Radius                                 | Arterial to Arterial – Minimum 15m<br>Semi-Urban Industrial Interim Condition - Minimum R=18m<br>Consider compound curves to accommodate WB-20 within lane. |                        | City of Barrie Std. BSD-12<br>City of Barrie Std. BSD-13 |
| Design Vehicle                              | WB-20   |                        |  |
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