



BRITISH COLUMBIA ACTIVE TRANSPORTATION DESIGN GUIDE

2019 Edition



Ministry of
Transportation
and Infrastructure

ISBN 978-0-7726-7366-4

Copyright © 2019, Province of British Columbia.

All rights reserved.

This material is owned by the Government of British Columbia and protected by copyright law. It may not be reproduced or redistributed without the prior written permission of the Province of British Columbia.

ACKNOWLEDGMENTS

The British Columbia Active Transportation Design Guide (Design Guide) was developed under the direction of the British Columbia Ministry of Transportation and Infrastructure (MOTI) with support by Urban Systems. Accessibility guidance was provided by Universal Access Design (UAD). Signal guidance was provided by P.K. Consulting, LLC.

The following provincial government staff participated in the creation of the Design Guide:

Engineering

Ian Pilkington, Chief Engineer

Ed Miska, Executive Director, Engineering Services

Kenedee Ludwar, Traffic Engineering Director

Jennifer Hardy, Senior Traffic Standards Engineer

Nini Nytepchuk, Traffic Operations Engineer

Kathryn Weicker, Senior Regional Transportation Planning Engineer

Mark Louttit, Senior Electrical Systems Design Engineer

Ryan Oakley, District Program Engineer

Darren Vagt, Highway Design Supervisor

David Woolford, Senior Bridge Design and Construction Standards Engineer

Consulting Team

Urban Systems: Brian Patterson (Project Manager), PJ Bell, Jonathan Borch, Dan Casey, Barry Fan, Jeremy Finkleman, Sarah Freigang, Kris Gemzik, Beth Hurford, Donna Liu, Gustavo Manzano, Brent McMurtry

Universal Access Design: Stan Leyenhorst

P.K. Consulting LLC: Peter Koonce

Legal/Legislation

Katherine Kirby, Executive Director Policy and Legislation

Programs

Jesse Skulmoski, Director of Strategic Initiatives and BikeBC

Alan Callander, Manager of Active Transportation and Climate Action

Sherry Barnes, BikeBC Program Analyst



Ministry of
Transportation
and Infrastructure





ABOUT THE DESIGN GUIDE

The 2019 Edition of the Design Guide is a living document that will be updated to reflect evolving best practices and feedback from B.C. communities. MOTI encourages stakeholders across the province – including local and regional government staff, representatives of other government agencies, Indigenous communities, advocacy groups, professional associations, and academics – to review the Design Guide, apply it in real life, and provide feedback to help improve its contents. Please visit the MOTI website to provide feedback.

All photos courtesy of Urban Systems unless otherwise indicated.

Cover photo: New Westminster, B.C.

CLEANBC

The Design Guide is an initiative of *CleanBC*, the provincial government's plan for achieving a prosperous, balanced, and sustainable future. *CleanBC* has a number of strategic focuses, including sustainable transportation; cleaner and more efficient technology; the introduction of new clean energy options; reducing and making better use of waste; significantly increasing industrial electrification; reducing emissions from forestry, land use and agriculture; and improving community design and services. More information can be found on-line at: www.cleanbc.gov.bc.ca.



FOREWORD

The Ministry of Transportation and Infrastructure is committed to improving our transportation networks that connect British Columbians from the places they live to the facilities they use daily.

As part of the Province's CleanBC plan to build a better future for all British Columbians, this new Design Guide helps transform how we get around in a way that reduces pollution and leads to better health outcomes for people, while making our communities cleaner and more liveable. Choosing to move under your own power can bring significant quality of life, health, and economic benefits.

The British Columbia Active Transportation Design Guide is a detailed planning and engineering reference that provides practical design guidance and application information for active transportation infrastructure for jurisdictions of all sizes throughout the province.

Building on international best practices, the Ministry of Transportation and Infrastructure initiated a broad review of active transportation infrastructure considerations in the development of this Design Guide. It incorporates theory, recent research, design concepts, best practices, new methodologies, and innovations to maximize the benefits of investing in active transportation infrastructure.

The Province thanks everyone who participated in the shaping of this Design Guide and we look forward to working with all stakeholders across B.C. to design and build infrastructure using this guidance. Working together we can build the best B.C. possible and enable everyone to choose active transportation.

Sincerely,



A handwritten signature in black ink that reads "Ian Pilkington".

Ian Pilkington, P.Eng.

Chief Engineer

Ministry of Transportation and Infrastructure



A handwritten signature in blue ink that reads "Ed Miska".

Ed Miska, P.Eng.

Executive Director, Engineering Services

Ministry of Transportation and Infrastructure



District of Saanich, B.C.

TABLE OF CONTENTS

A. OVERVIEW + CONTEXT	A1	F. CONTEXT SPECIFIC APPLICATIONS	F1
A.1 What is the British Columbia Active Transportation Design Guide?	A4	F.1 Current Practices for Highway Rights-of-Way	F4
B. SETTING THE CONTEXT	B1	G. INTERSECTIONS + CROSSINGS	G1
B.1 What is Active Transportation?	B4	G.1 General Design Guidance	G4
B.2 Planning For Active Transportation	B12	G.2 Signals + Other Traffic Devices	G18
B.3 Universal Design	B32	G.3 Pedestrian Crossings	G42
B.4 Operational and Behavioural Characteristics	B42	G.4 On-Street Bikeway Crossings	G56
C. PEDESTRIAN FACILITIES	C1	G.5 Off-Street Pathway Crossings	G88
C.1 General Design Guidance	C4	G.6 Additional Crossings + Conflict Areas	G104
C.2 Pedestrian Through Zone	C12	H. AMENITIES + INTEGRATION	H1
C.3 Frontage, Furnishing, and Ancillary Zones	C24	H.1 Multi-Modal Integration	H4
C.4 Rural Pedestrian Design Considerations	C38	H.2 End-Point Facilities	H28
D. CYCLING FACILITIES	D1	H.3 Wayfinding	H54
D.1 General Design Guidance	D4	H.4 Lighting	H70
D.2 Neighbourhood Bikeways	D12	H.5 New Mobility Integration	H82
D.3 Protected Bicycle Lanes	D30	I. POST IMPLEMENTATION	I1
D.4 Painted + Buffered Bicycle Lanes	D56	I.1 Celebrating + Launching	I4
D.5 Advisory Bicycle Lanes	D70	I.2 Monitoring + Reporting	I16
D.6 Rural Cycling Design Considerations	D80	I.3 Maintenance	I30
E. MULTI-USE FACILITIES	E1	APPENDICES	
E.1 General Design Guidance	E4	Acronyms	XI
E.2 Multi-Use Pathways	E10	Glossary	XII
E.3 Separated Bicycle + Pedestrian Pathways	E26	References	XVII
E.4 Shared Spaces	E34	A. Project Participants	XXVII
		B. Signage + Pavement Markings	XXX
		C. Types of Traffic Calming Devices	LIV

LIST OF FIGURES

FIGURE B-1 // CONCEPTUAL RURAL CLASSIFICATIONS – ENDERBY, ARMSTRONG, AND SPALLUMCHEEN AREA.....	B15
FIGURE B-2 // URBAN STREET ZONES	B19
FIGURE B-3 // RURAL ROAD ZONES	B19
FIGURE B-4 // BICYCLE RIDER SPECTRUM	B22
FIGURE B-5 // NEIGHBOURHOOD DESIGN AND CONNECTIVITY.....	B25
FIGURE B-6 // RELATIONSHIP BETWEEN MOTOR VEHICLE SPEED AND PEDESTRIAN FATALITY RISK IN A COLLISION	B44
FIGURE B-7 // TYPICAL DIMENSIONS OF AN ADULT PEDESTRIAN.....	B45
FIGURE B-8 // TYPICAL PEDESTRIAN OPERATING SPACE REQUIREMENT.....	B46
FIGURE B-9 // SPACE REQUIRED FOR TWO WHEELCHAIRS SIDE-BY-SIDE.....	B47
FIGURE B-10 // TYPICAL WHEELCHAIR TURNING DIAMETRES.....	B47
FIGURE B-11 // TYPICAL BICYCLE DESIGNS AND DIMENSIONS.....	B48
FIGURE B-12 // TYPICAL BICYCLE OPERATING SPACE REQUIREMENTS.....	B49
FIGURE B-13 // CLEARANCE FROM OBSTRUCTIONS FOR PEOPLE WALKING	B50
FIGURE B-14 // CLEARANCE FROM OBSTRUCTIONS FOR PEOPLE CYCLING	B50
FIGURE B-15 // TYPICAL ACTIVE TRANSPORTATION USER SPEEDS.....	B52
FIGURE B-16 // CALCULATING MEASUREMENTS.....	B53
FIGURE C-17 // PEDESTRIAN ZONES IN URBAN CONTEXT	C6
FIGURE C-18 // PEDESTRIAN ZONES IN RURAL CONTEXT.....	C6
FIGURE C-19 // PEDESTRIAN FACILITY TYPE SPECTRUM.....	C7
FIGURE C-20 // PEDESTRIAN FACILITY SELECTION DECISION SUPPORT TOOL.....	C10
FIGURE C-21 // DRIVEWAY CROSSING OF SEPARATED SIDEWALK	C20
FIGURE C-22 // DRIVEWAY CROSSING OF Non-SEPARATED SIDEWALK	C20
FIGURE C-23 // DRIVEWAY CROSSING OF NON-SEPARATED SIDEWALK (WRAPPED AROUND DRIVEWAY).....	C20
FIGURE C-24 // ALLEYWAY CROSSING OF SEPARATED SIDEWALK WITH DIFFERENT SURFACE TREATMENT	C21
FIGURE C-25 // DEDICATED FACILITY VS. MIXED CONDITIONS	C39
FIGURE C-26 // PHYSICAL SEPARATION VS. NO SEPARATION	C40
FIGURE C-27 // OFF-ROAD PATHWAY VS. NO SEPARATION.....	C40
FIGURE D-28 // CONCEPTUAL BICYCLE FACILITY SELECTION DIAGRAM	D8
FIGURE D-29 // BICYCLE FACILITY SELECTION DECISION SUPPORT TOOL - URBAN / SUBURBAN / DEVELOPED URBAN CORE CONTEXT	D9
FIGURE D-30 // BICYCLE FACILITY SELECTION DECISION SUPPORT TOOL - RURAL CONTEXT	D10
FIGURE D-31 // KEY FEATURES OF NEIGHBOURHOOD BIKEWAYS	D13
FIGURE D-32 // LEVEL OF TREATMENTS.....	D17
FIGURE D-33 // NEIGHBOURHOOD BIKEWAY CLEAR WIDTHS.....	D20
FIGURE D-34 // NEIGHBOURHOOD BIKEWAY CROSSING AT OFF-SET INTERSECTION USING BICYCLE PATHWAY.....	D22
FIGURE D-35 // NEIGHBOURHOOD BIKEWAY CROSSING AT OFF-SET INTERSECTION USING TRAFFIC SIGNAL.....	D22
FIGURE D-36 // NEIGHBOURHOOD BIKEWAY CROSSING AT OFF-SET INTERSECTION USING BICYCLE LEFT TURN LANE	D22
FIGURE D-37 // PROTECTED BICYCLE LANE ZONES	D32

LIST OF FIGURES

FIGURE D-38 // UNI-DIRECTIONAL PROTECTED BICYCLE LANE CROSS-SECTION -NO ON-STREET PARKING (DESIRED WIDTH)	D35
FIGURE D-39 // UNI-DIRECTIONAL PROTECTED BICYCLE LANE CROSS-SECTION - WITH ON-STREET PARKING (DESIRED WIDTH)	D35
FIGURE D-40 // BI-DIRECTIONAL PROTECTED BICYCLE LANE CROSS-SECTION - NO ON-STREET PARKING (DESIRED WIDTH).....	D36
FIGURE D-41 // BI-DIRECTIONAL PROTECTED BICYCLE LANE CROSS-SECTION WITH ON-STREET PARKING (DESIRED WIDTH)	D37
FIGURE D-42 // TYPES OF SEPARATION USED IN THE STREET BUFFER ZONE.....	D39
FIGURE D-43 // SIDEWALK LEVEL PROTECTED BICYCLE LANES (WITH STREET BUFFER ZONE)	D49
FIGURE D-44 // SIDEWALK LEVEL PROTECTED BICYCLE LANES (WITHOUT STREET BUFFER ZONE)	D49
FIGURE D-45 // INTERMEDIATE LEVEL PROTECTED BICYCLE LANES.....	D50
FIGURE D-46 // STREET LEVEL PROTECTED BICYCLE LANES.....	D51
FIGURE D-47 // CURBSIDE BICYCLE LANE CROSS-SECTION - DESIRED WIDTHS AND KEY FEATURES	D59
FIGURE D-48 // BUFFER SPACE OPTIONS FOR BICYCLE LANE ADJACENT TO PARALLEL PARKING.....	D61
FIGURE D-49 // BICYCLE LANE ADJACENT TO BACK-IN ANGLED PARKING - DESIRED WIDTHS AND KEY FEATURES	D63
FIGURE D-50 // LEFT SIDE BICYCLE LANE CROSS-SECTION - DESIRED WIDTH	D64
FIGURE D-51 // CONTRAFLOW BICYCLE LANE CROSS-SECTION - DESIRED WIDTHS.....	D65
FIGURE D-52 // ADVISORY BICYCLE LANE	D71
FIGURE D-53 // PASSING ON AN ADVISORY BICYCLE LANE	D73
FIGURE D-54 // ADVISORY BICYCLE LANE CROSS-SECTION - DESIRED WIDTHS AND KEY FEATURES.....	D75
FIGURE D-55 // ADVISORY BICYCLE LANE CROSS-SECTION, POSSIBLE CONFIGURATIONS	D76
FIGURE D-56 // BICYCLE ACCESSIBLE SHOULDER – LOW MOTOR VEHICLE SPEED	D83
FIGURE D-57 // BICYCLE ACCESSIBLE SHOULDER – HIGH MOTOR VEHICLE SPEED	D83
FIGURE E-58 // MULTI-USE PATHWAY CROSS-SECTION - DESIRED WIDTHS AND KEY FEATURES	E16
FIGURE E-59 // SIDE SLOPE OF GREATER THAN 1:1 AND A DROP OFF GREATER THAN OR EQUAL TO 0.3 METRES	E19
FIGURE E-60 // SIDE SLOPE OF GREATER THAN 1:2 AND A DROP OFF GREATER THAN OR EQUAL TO 1.2 METRES	E19
FIGURE E-61 // SIDE SLOPE OF GREATER THAN 1:3 AND A DROP OFF GREATER THAN OR EQUAL TO 1.8 METRES, OR TO A HAZARD (SUCH AS A WATER BODY)	E20
FIGURE E-62 // HORIZONTAL SIGHTLINE OFFSET FOR OFF-STREET PATHWAYS.....	E21
FIGURE E-63 // TYPES OF PATHWAY SEPARATION BETWEEN PEOPLE WALKING AND CYCLING.....	E30
FIGURE E-64 // SHARED SPACE CONCEPTUAL LAYOUT AND KEY FEATURES	E36
FIGURE F-65 // MULTI-USE PATHWAY (URBAN CONTEXT)	F13
FIGURE F-66 // MULTI-USE PATHWAY (RURAL CONTEXT)	F13
FIGURE F-67 // PROTECTED MULTI-USE PATHWAY (CONSTRAINED CONDITION).....	F13
FIGURE F-68 // MILLED RUMBLE STRIP DESIGN	F18
FIGURE F-69 // SRS INTERRUPTIONS AT SHOULDER CONSTRAINTS (SOURCE: B.C. SUPPLEMENT TO TAC GEOMETRIC DESIGN GUIDE 2019 FIGURE 650.D).....	F19
FIGURE F-70 // FENCING ALONG A HIGH VOLUME HIGHWAY (SOURCE: B.C. SUPPLEMENT TO TAC 2019 FIGURE 660.E)	F20
FIGURE G-71 // APPROACH SIGHT TRIANGLE	G11
FIGURE G-72 // DEPARTURE SIGHT TRIANGLE.....	G11
FIGURE G-73 // CORNER RADIUS AND EFFECTIVE TURN RADIUS	G14
FIGURE G-74 // BICYCLE TRAFFIC SIGNAL HEAD DISPLAY	G22

LIST OF FIGURES

FIGURE G-75 // BICYCLE SIGNAL PLACEMENT	G23
FIGURE G-76 // EXCLUSIVE BICYCLE PHASE (NO DEDICATED RIGHT TURN LANE)	G30
FIGURE G-77 // CONCURRENT PROTECTED BICYCLE PHASE (WITH DEDICATED RIGHT TURN LANE)	G31
FIGURE G-78 // LEADING BICYCLE INTERVAL (WITH DEDICATED RIGHT TURN LANE)	G32
FIGURE G-79 // CONCURRENT BICYCLE PHASE WITH PERMISSIVE VEHICLE TURNS	G33
FIGURE G-80 // CURB RAMP COMPONENTS	G43
FIGURE G-81 // DOUBLE CURB RAMP	G45
FIGURE G-82 // COMBINED CURB RAMP	G45
FIGURE G-83 // OFFSET MIDBLOCK CROSSING	G49
FIGURE G-84 // CURB EXTENSIONS AT CORNER	G50
FIGURE G-85 // HIERARCHY OF CROSSING ENHANCEMENTS BASED ON REDUCED CORNER RADIUS	G51
FIGURE G-86 // PEDESTRIAN REFUGE ISLAND	G52
FIGURE G-87 // RAISED CROSSWALK SPECS	G52
FIGURE G-88 // RECONFIGURED CHANNELIZED INTERSECTION	G53
FIGURE G-89 // CONVENTIONAL CHANNELIZED RIGHT TURN LANE VS. HIGH ENTRY ANGLE RIGHT TURN LANE (SMART CHANNEL)	G53
FIGURE G-90 // PROTECTED INTERSECTION KEY FEATURES	G61
FIGURE G-91 // PROTECTED INTERSECTION WITH UNI-DIRECTIONAL PROTECTED BICYCLE LANES	G63
FIGURE G-92 // BEND-OUT PROTECTED BICYCLE LANE	G67
FIGURE G-93 // PROTECTED BICYCLE LANE ADJACENT TO COMBINED RIGHT THROUGH TURN LANE	G67
FIGURE G-94 // PAINTED BICYCLE LANE ADJACENT TO COMBINED RIGHT THROUGH TURN LANE	G67
FIGURE G-95 // PROTECTED BICYCLE LANE, NO RIGHT TURNS	G68
FIGURE G-96 // BICYCLE LANE WITHOUT RIGHT TURN LANE - DASHED APPROACH	G68
FIGURE G-97 // PROTECTED BICYCLE LANE ADJACENT TO DEDICATED RIGHT TURN LANE	G69
FIGURE G-98 // CONSTRAINED PROTECTED BICYCLE LANE ADJACENT TO RIGHT TURN BAY	G70
FIGURE G-99 // CONTINUOUS BICYCLE LANE WITH DEDICATED TURN LANE	G70
FIGURE G-100 // PROTECTED BICYCLE LANE CROSSING AT CHANNELIZED RIGHT TURN ISLAND	G72
FIGURE G-101 // BICYCLE LANE WITH CHANNELIZED RIGHT TURN ISLAND - THROUGH BICYCLE LANE OPTION	G73
FIGURE G-102 // PAINTED BICYCLE LEFT TURN LANE	G74
FIGURE G-103 // PROTECTED BICYCLE LEFT TURN LANE	G74
FIGURE G-104 // BIKE BOX	G76
FIGURE G-105 // PROTECTED BICYCLE LANE WITH TWO-STAGE LEFT TURN BOX	G77
FIGURE G-106 // PAINTED BICYCLE LANE WITH TWO-STAGE LEFT TURN BOX	G77
FIGURE G-107 // TWO-STAGE LEFT TURN BOX BEHIND CROSSWALK	G79
FIGURE G-108 // JUGHANDLE-STYLE LEFT TURN	G80
FIGURE G-109 // DISCONTINUOUS PROTECTED BICYCLE LANE WITH MIXING ZONE	G81
FIGURE G-110 // DISCONTINUOUS PAINTED BICYCLE LANE WITH MIXING ZONE	G81
FIGURE G-111 // BICYCLE LANE TO NEIGHBOURHOOD BIKEWAY TRANSITION	G83

LIST OF FIGURES

FIGURE G-112 // PAINTED BICYCLE LANE TO PROTECTED BICYCLE LANE TRANSITION.....	G84
FIGURE G-113 // BICYCLE LANE TRANSITIONING TO PROTECTED CORNER.....	G85
FIGURE G-114 // BI-DIRECTIONAL TO UNI-DIRECTIONAL PROTECTED BICYCLE LANE.....	G85
FIGURE G-115 // MULTI-USE BEND-IN CROSSING	G94
FIGURE G-116 // SEPARATED BICYCLE AND PEDESTRIAN BEND-IN CROSSING	G94
FIGURE G-117 // MULTI-USE BEND-OUT CROSSING	G95
FIGURE G-118 // SEPARATED BICYCLE AND PEDESTRIAN BEND-OUT CROSSING	G95
FIGURE G-119 // MULTI-USE CROSSING OF A MINOR STREET.....	G96
FIGURE G-120 // SEPARATED CROSSING OF A MINOR STREET	G96
FIGURE G-121 // MULTI-USE CROSSING OF A DRIVEWAY.....	G97
FIGURE G-122 // MINIMUM SIGHT DISTANCE FOR MID-BLOCK CROSSING (SOURCE: TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS, CHAPTER 5, SECTION 5.6.3.2, FIGURE 5.6.12).....	G100
FIGURE G-123 // MID-BLOCK CROSSING WITH CURB EXTENSIONS.....	G101
FIGURE G-124 // SIGNALIED MID-BLOCK SEPARATED CROSSING	G101
FIGURE G-125 // COMBINED CROSSING PAVEMENT MARKINGS	G102
FIGURE G-126 // SEPARATED CROSSING PAVEMENT MARKINGS.....	G102
FIGURE G-127 // BICYCLE FACILITY CROSSING OF RAILWAY (SOURCE: TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS).....	G106
FIGURE H-134 // TRANSIT STOP ZONE.....	H12
FIGURE H-135 // TRANSIT STOP LOCATIONS.....	H12
FIGURE H-136 // TRANSIT STOP ELEMENTS	H14
FIGURE H-137 // PROTECTED BICYCLE LANE FLOATING TRANSIT STOP	H18
FIGURE H-138 // CURBSIDE PAINTED BICYCLE LANE FLOATING TRANSIT STOP.....	H19
FIGURE H-139 // PARKING PROTECTED PAINTED BICYCLE LANE FLOATING TRANSIT STOP.....	H19
FIGURE H-140 // MID-BLOCK FLOATING TRANSIT STOP	H20
FIGURE H-141 // URBAN BASIC CURBSIDE ACCESSIBLE TRANSIT STOP.....	H22
FIGURE H-142 // RURAL ACCESSIBLE TRANSIT STOP	H22
FIGURE H-143 // BICYCLE RACK DIMENSIONS.....	H39
FIGURE H-144 // BICYCLE RACK PLACEMENT ON SIDEWALKS	H40
FIGURE H-145 // BICYCLE CORRAL ADJACENT TO PROTECTED BICYCLE LANE	H42
FIGURE H-146 // OFF-STREET BICYCLE PARKING LAYOUT	H48
FIGURE H-147 // TYPES OF BICYCLE WAYFINDING SIGNAGE (ROADWAYS UNDER PROVINCIAL JURISDICTION).....	H61
FIGURE H-148 // CYCLING GUIDE SIGN LAYOUT AT DECISION POINT.....	H64
FIGURE H-149 // MATERIAL, LABOUR AND OVERHEAD COSTS FOR BATTERY PRODUCTION 2015 TO 2030 (SOURCE: CB INSIGHTS 2019).....	H85
FIGURE H-150 // SMALL SHARED VEHICLE PARKING ZONE (DEMARCATED BY PAVEMENT MARKINGS)	H97
FIGURE I-151 // EXAMPLE OF SELF-REPORTED DATA THAT CAN BE COLLECTED THROUGH BIKEMAPS.ORG (SOURCE: BIKEMAPS.ORG).....	I20
FIGURE I-152 // UNDESIRABLE DESIGNS FOR SNOW STORAGE	I33
FIGURE I-153 // DESIRABLE DESIGN FOR SNOW STORAGE - PAINTED BICYCLE LANE.....	I33
FIGURE I-154 // DESIRABLE DESIGN FOR SNOW STORAGE - PROTECTED BICYCLE LANE.....	I33

LIST OF TABLES

TABLE B-1 // TYPICAL ACTIVE TRANSPORTATION USER CHARACTERISTICS	B23
TABLE B-2 // UNIVERSAL DESIGN PRINCIPLES.....	B34
TABLE B-3 // TYPICAL WALKING DISTANCES BETWEEN RESTING SPOTS.....	B36
TABLE B-4 // BICYCLE OPERATING VERTICAL CLEARANCE	B51
TABLE C-5 // PEDESTRIAN THROUGH ZONE RECOMMENDED WIDTHS.....	C14
TABLE C-6 // LONGITUDINAL GRADE	C16
TABLE C-7 // FURNISHING ZONE RECOMMENDED WIDTHS.....	C26
TABLE C-8 // PEDESTRIAN AMENITIES TOOLKIT – FURNISHING ZONE	C29
TABLE D-9 // NEIGHBOURHOOD BIKEWAY TREATMENTS BY MOTOR VEHICLE SPEED AND VOLUME.....	D19
TABLE D-10 // NEIGHBOURHOOD BIKEWAY DESIRABLE + CONSTRAINED WIDTH	D20
TABLE D-11 // PROTECTED BICYCLE LANE WIDTH GUIDANCE	D34
TABLE D-12 // PREFERRED SEPARATION ELEMENT BASED ON MOTOR VEHICLE SPEED	D39
TABLE D-13 // COMPARISON OF SEPARATION TYPES FOR STREET BUFFER ZONE	D40
TABLE D-14 // PROTECTED BICYCLE LANE CONFIGURATIONS ON ONE-WAY ROADS.....	D45
TABLE D-15 // PROTECTED BICYCLE LANE CONFIGURATIONS ON TWO-WAY ROADS.....	D46
TABLE D-16 // CURBSIDE BICYCLE LANE WIDTH GUIDANCE	D59
TABLE D-17 // CONTRAFLOW BICYCLE LANE WIDTH GUIDANCE.....	D66
TABLE D-18 // ADVISORY BICYCLE LANE WIDTH, DESIRABLE AND CONSTRAINED LIMIT	D75
TABLE D-19 // BICYCLE ACCESSIBLE SHOULDER WIDTH GUIDANCE	D82
TABLE E-20 // MULTI-USE PATHWAY WIDTH GUIDANCE	E15
TABLE E-21 // CALCULATION GUIDANCE FOR SEPARATING PATHWAY USERS.....	E17
TABLE E-22 // CREST VERTICAL CURVES FOR BICYCLES (PAVED SURFACE, WET CONDITIONS).....	E20
TABLE E-23 // BICYCLE PATHWAY WIDTH GUIDANCE	E28
TABLE E-24 // PEDESTRIAN PATHWAY WIDTH GUIDANCE	E29
TABLE F-25 // MOTI DESIGN STANDARDS (SOURCE: MOTI BC SUPPLEMENT TO TAC GEOMETRIC DESIGN GUIDE, TABLE 430.A).....	F7
TABLE F-26 // FACILITY TYPES THAT MAY BE CONSIDERED BASED ON LAND USE*	F10
TABLE F-27 // RECOMMENDED ACTIVE TRANSPORTATION FACILITY WIDTH BASED ON ROAD CLASSIFICATION	F11
TABLE F-28 // SUGGESTED(¥) DESIGN CLEAR ZONE DISTANCES IN METRES FOR NEW CONSTRUCTION AND RECONSTRUCTION PROJECTS ON RURAL HIGHWAYS (¥¥) (SOURCE: B.C. SUPPLEMENT TO TAC GEOMETRIC DESIGN GUIDE, TABLE 20.A).....	F14
TABLE F-29 // DESIGN WIDTHS FOR PEDESTRIAN AND BICYCLE ACCESSIBLE SHOULDERS ON ROADWAYS UNDER PROVINCIAL JURISDICTION (SOURCE: MOTI B.C. SUPPLEMENT TO TAC GEOMETRIC DESIGN GUIDE, TABLES 530.B).....	F17
TABLE G-30 // MINIMUM STOPPING SIGHT DISTANCE FOR BICYCLES (PAVED SURFACE, WET CONDITIONS).....	G13
TABLE G-31 // ADVANTAGES AND DISADVANTAGES OF SIGNALIZED CROSSING SYSTEMS	G20
TABLE G-32 // CONSIDERATIONS FOR TIME-SEPARATED BICYCLE MOVEMENTS - LOW SPEED STREETS (50KM/HR AND BELOW)	G27
TABLE G-33 // CONSIDERATIONS FOR TIME-SEPARATED BICYCLE MOVEMENTS – HIGH SPEED STREETS (>50 KM/HR).....	G27
TABLE G-34 // ADVANTAGES AND DISADVANTAGES OF PEDESTRIAN SCRAMBLES	G37

LIST OF TABLES

TABLE G-35 // MINIMUM SIGHT DISTANCE FOR MULTI-USE PATHWAY CROSSING (SOURCE: TAC GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS, CHAPTER 5, SECTION 5.6.3.2, TABLE 5.6.1).....	G99
TABLE H-36 // BICYCLE RACKS FOR ALL APPLICATIONS.....	H33
TABLE H-37 // BICYCLE RACKS FOR NON-STANDARD BICYCLES.....	H34
TABLE H-38 // BICYCLE RACKS TO AVOID.....	H35
TABLE H-39 // BICYCLE RACK PLACEMENT DIMENSIONS.....	H39
TABLE H-40 // HIGH DENSITY BICYCLE RACKS.....	H47
TABLE H-41 // OFF-STREET PATHWAY SIGNAGE TYPES.....	H66
TABLE H-42 // RECOMMENDED ILLUMINANCE LEVELS FOR WALKWAYS AND BIKEWAYS (TAC GUIDE FOR THE DESIGN OF ROADWAY LIGHTING – VOLUME 2 – CHAPTER 16 – TABLE 16.1).....	H76
TABLE H-43 // RECOMMENDED ILLUMINANCE LEVELS FOR PEDESTRIANS (SOURCE: TAC GUIDE FOR THE DESIGN OF ROADWAY LIGHTING – VOLUME 2 – CHAPTER 9 – TABLE 9.3).....	H77
TABLE H-44 // RECOMMENDED ILLUMINANCE LEVELS FOR PEDESTRIANS (SOURCE: RP-8 (2014) - TABLES 4, 5 AND 6).....	H78
TABLE H-45 // TYPES OF ELECTRIC BICYCLE ALLOWED UNDER THE B.C. MVA.....	H86
TABLE H-46 // COMPARISON OF BIKE SHARE SERVICE MODELS.....	H94
TABLE I-47 // ACTIVE TRANSPORTATION COUNT TECHNOLOGIES.....	I25