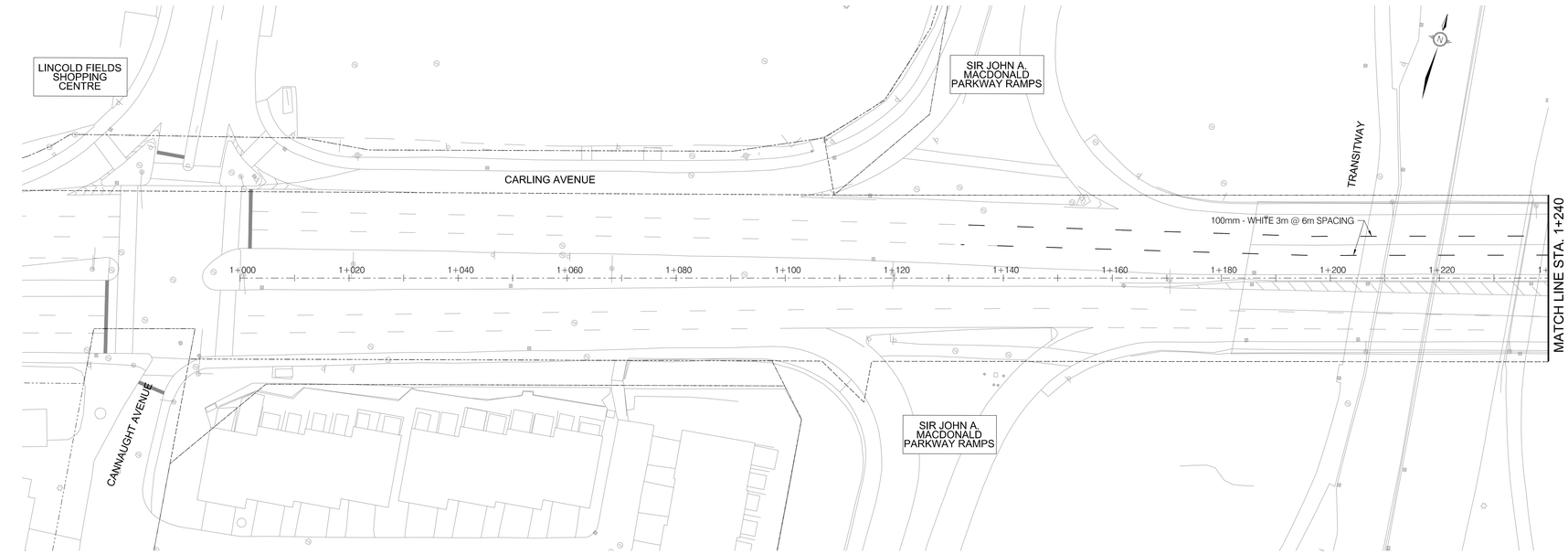
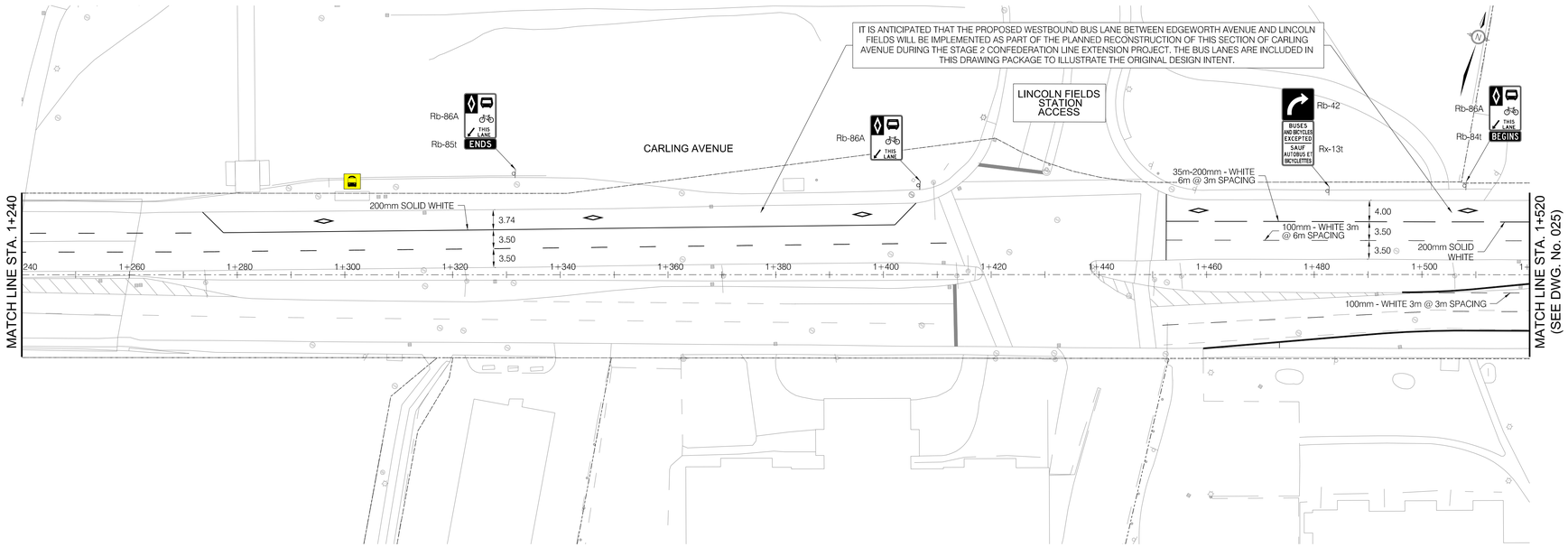
Appendix A:
IBI Interim Carling Avenue Transit Priority Measures

DRAWING FRAME: 790mm x 534mm City of Ottawa 2008

Consultant Drawing Number





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS I

STA. 1+000 TO STA. 1+240
STA. 1+240 TO STA. 1+520

CARINA DUCLOS, P.ENG. *Director*	STACEY RATHWELL, C.E.T. *Project Manager*

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	024

Sheet 24 of 39

Asset No.

Asset Group ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No. --	Index No. --

Const. Inspector --

Scale:
HORIZONTAL 0m 5 10 20
VERTICAL 0m 1 2

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP

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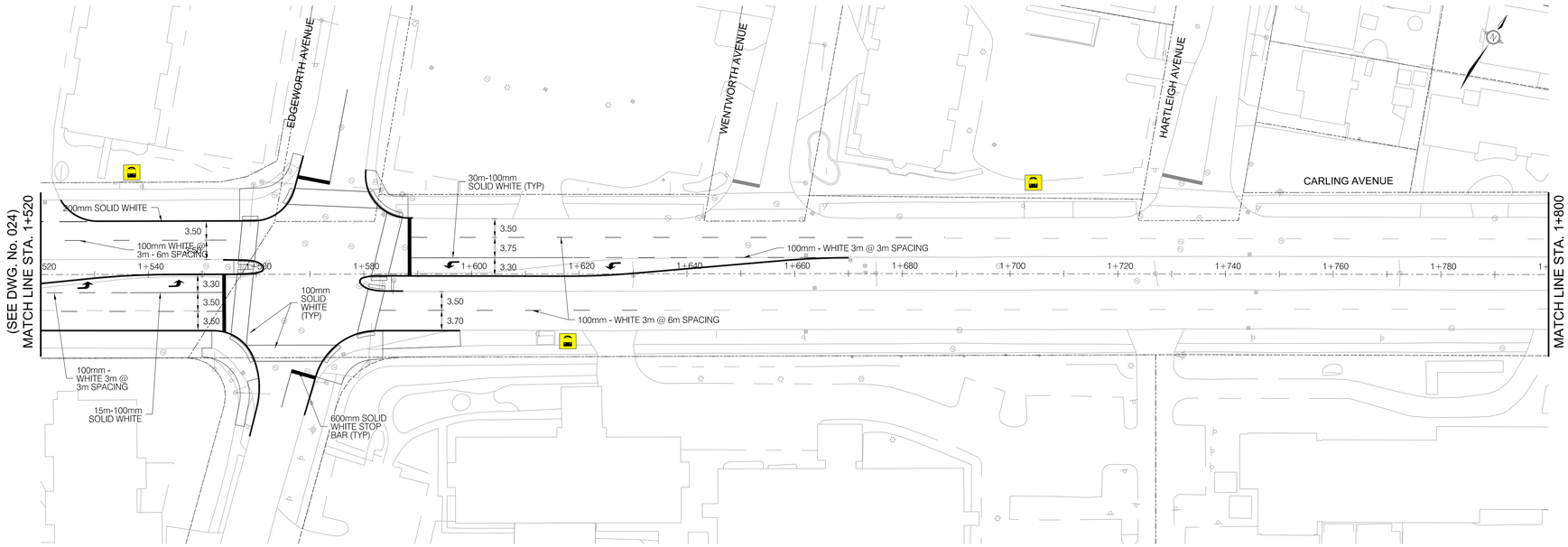
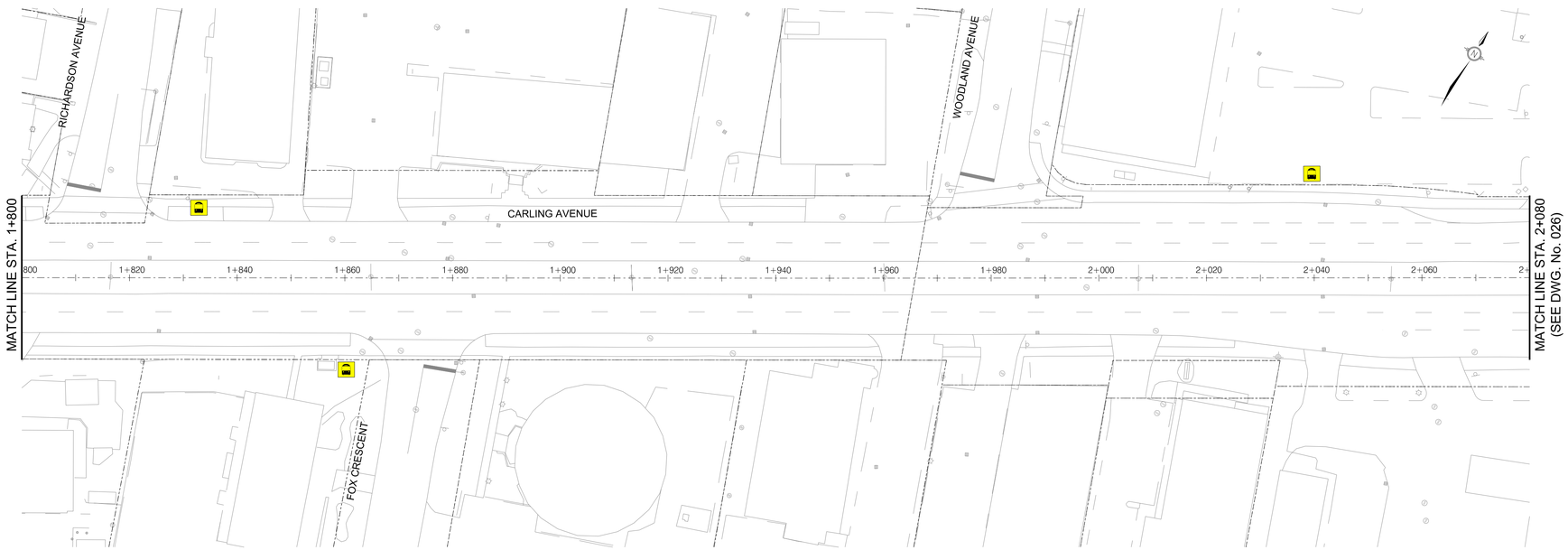




CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS II

STA. 1+520 TO STA. 1+800
STA. 1+800 TO STA. 2+080

CARINA DUCLOS, P.ENG.	STACEY RATHWELL, C.E.T.
Director	*Project Manager*

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	025

Sheet 25 of 39

Asset No.

Asset Group: ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No.: --	Index No.: --

Const. Inspector: --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned, The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

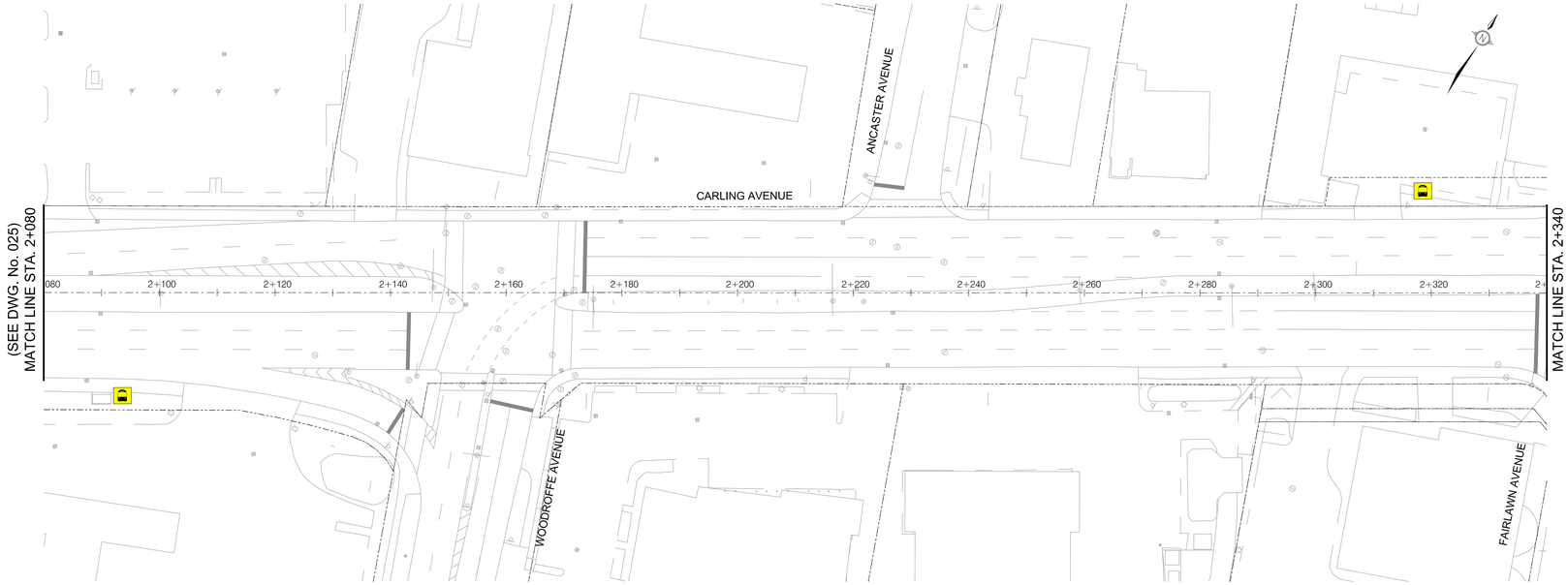
LEGEND:

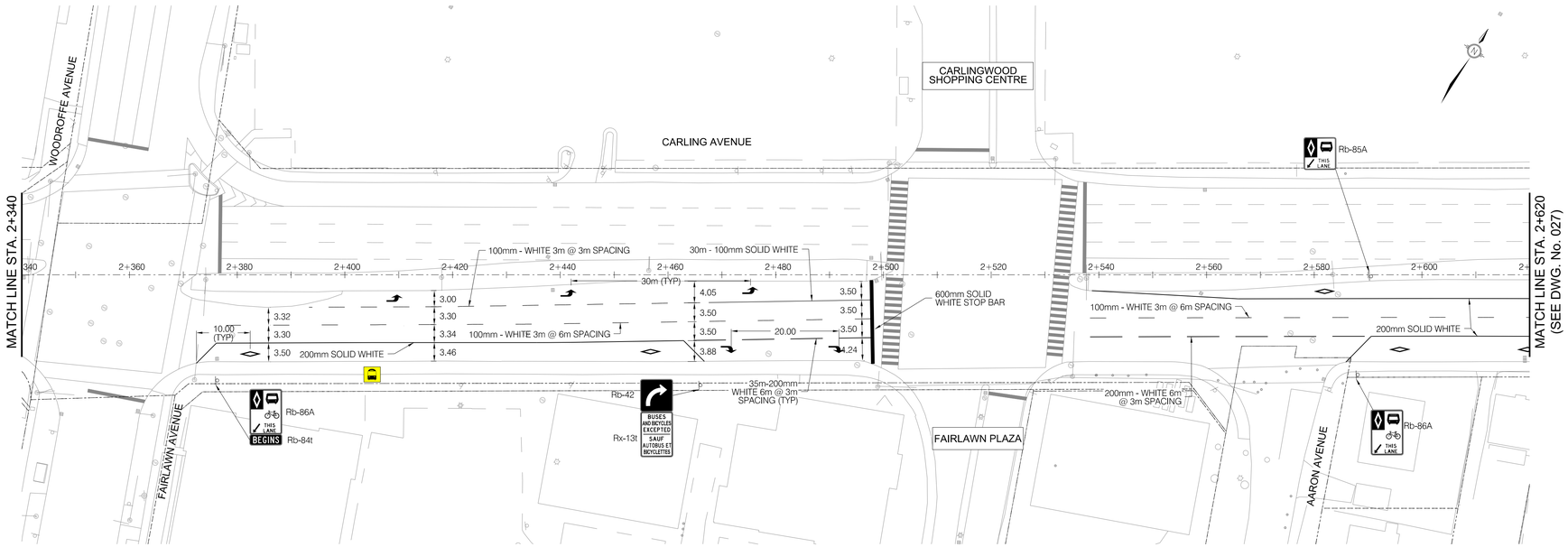
BUS STOP

Consultant Drawing Number

DRAWING FRAME: 790mm x 534mm City of Ottawa 2008

Consultant Drawing Number





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS III

STA. 2+080 TO STA. 2+340
STA. 2+340 TO STA. 2+620

CARINA DUCLOS, P.ENG. *Director*	STACEY RATHWELL, C.E.T. *Project Manager*

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	026

Sheet 26 of 39

Asset No.

Asset Group: ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No. --	Index No. --

Const. Inspector: --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

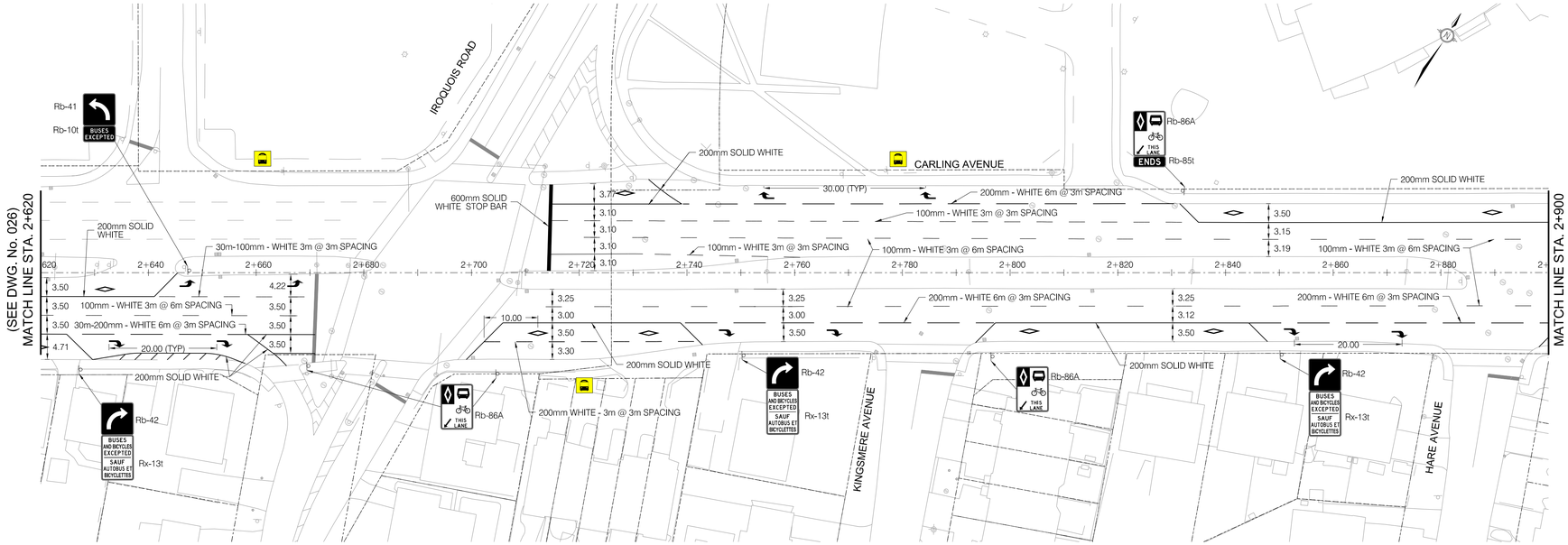
NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

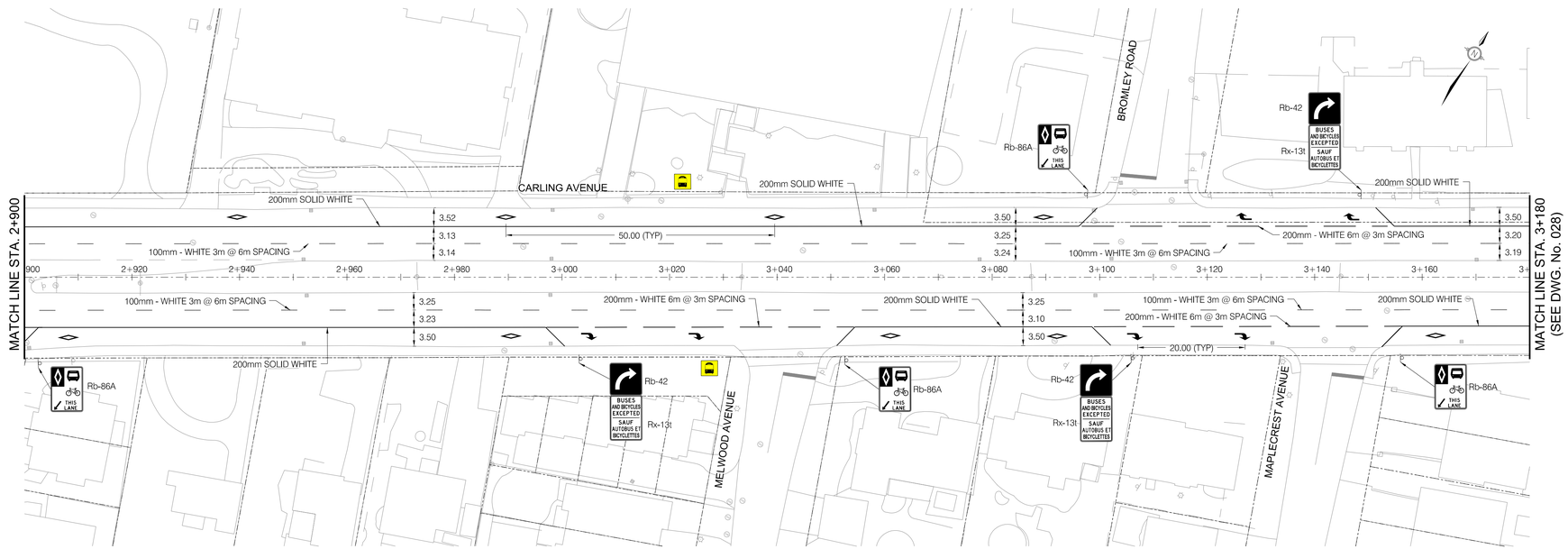
REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS IV
STA. 2+620 TO STA. 2+900
STA. 2+900 TO STA. 3+180

CARINA DUCLOS, P.ENG. *Director*	STACEY RATHWELL, C.E.T. *Project Manager*

IBI

Ottawa

Contract No. CP000439	Dwg. No. 027
Sheet 27 of 39	
Asset No.	
Asset Group ---	
Des. L.Y.	Chk'd. J.D.
Dwn. C.R.Q.	Chk'd. L.Y.
Utility Circ. No. --	Index No. --
Const. Inspector --	

Scale:
HORIZONTAL 0m 5 10 20
VERTICAL 0m 1 2

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned, The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

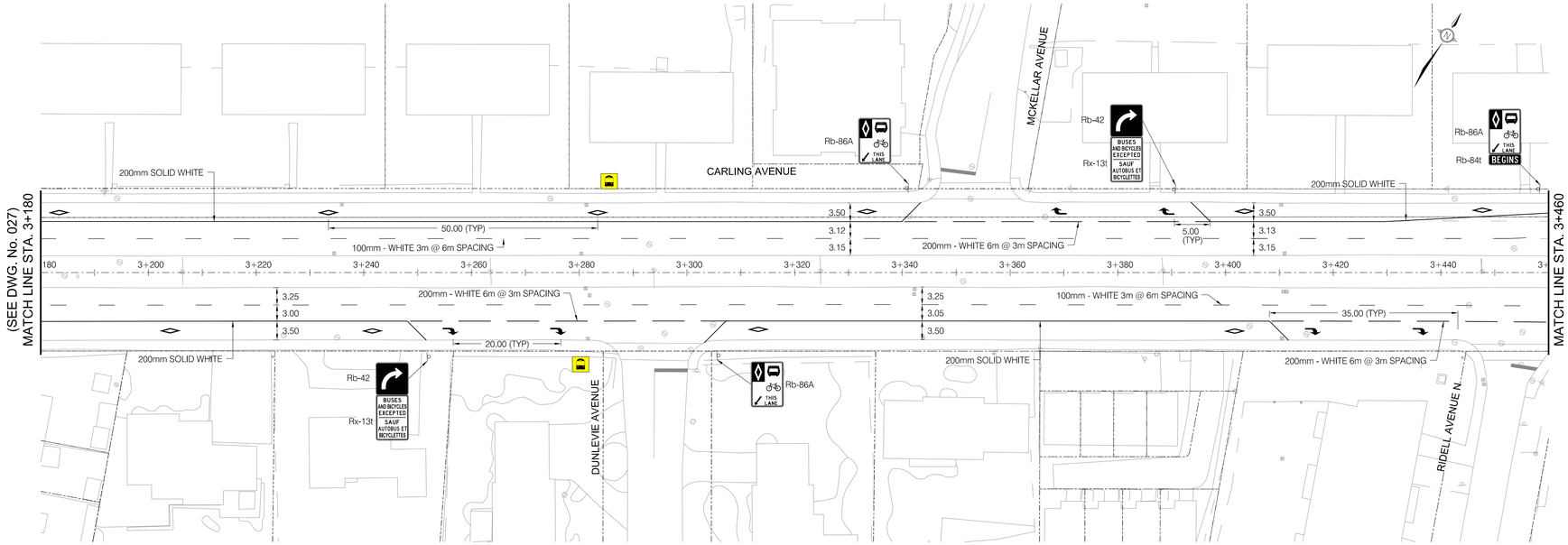
REVISIONS

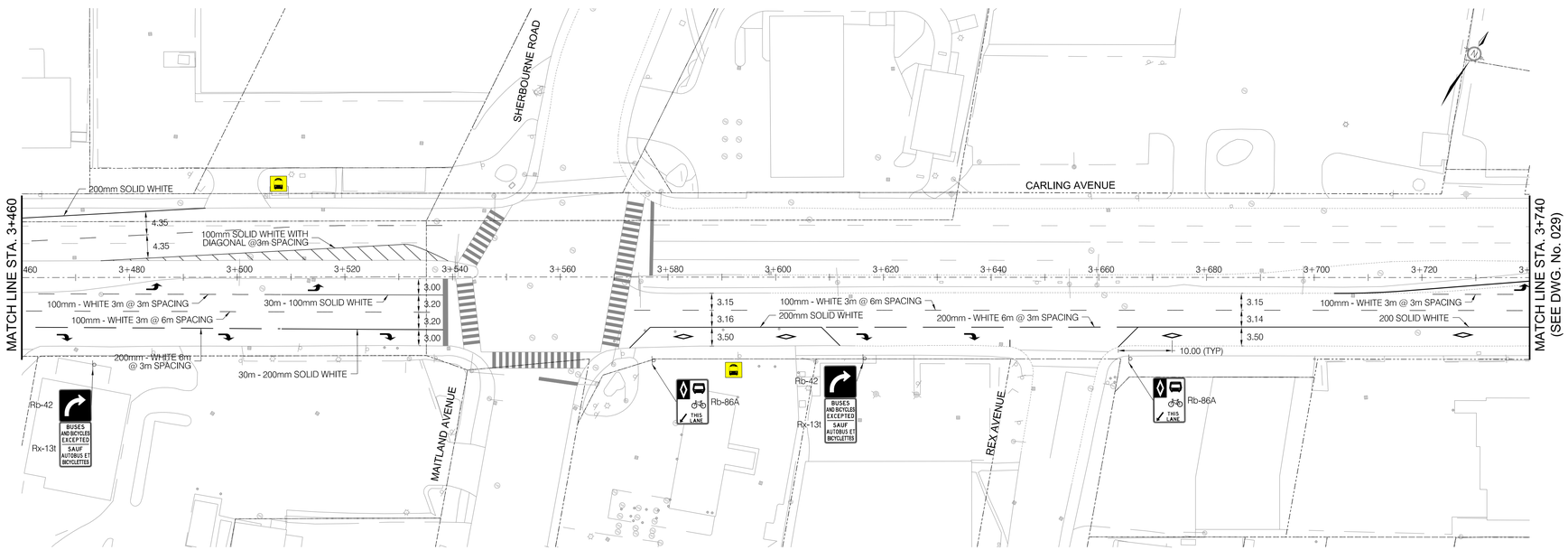
No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP

Consultant Drawing Number





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS V
STA. 3+180 TO STA. 3+460
STA. 3+460 TO STA. 3+740

CARINA DUCLOS, P.ENG.	STACEY RATHWELL, C.E.T.
Director	*Project Manager*

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	028

Sheet 28 of 39

Asset No.

Asset Group: ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No.	Index No.
--	--

Const. Inspector: --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned, The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

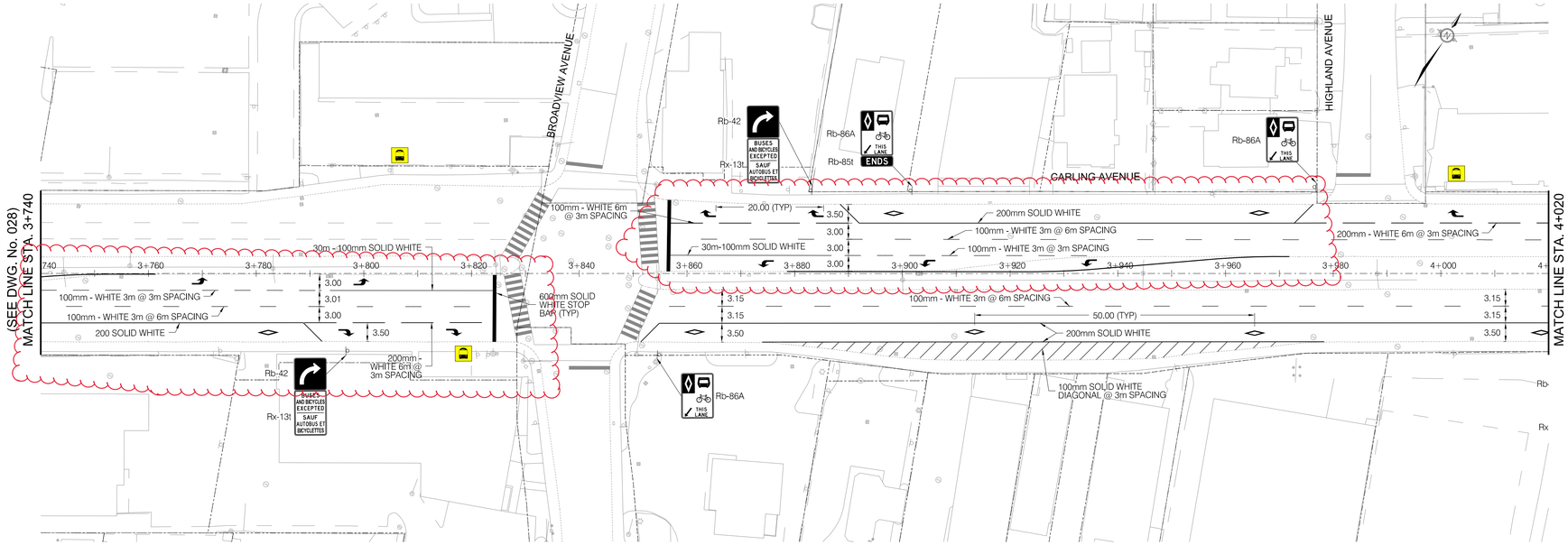
REVISIONS

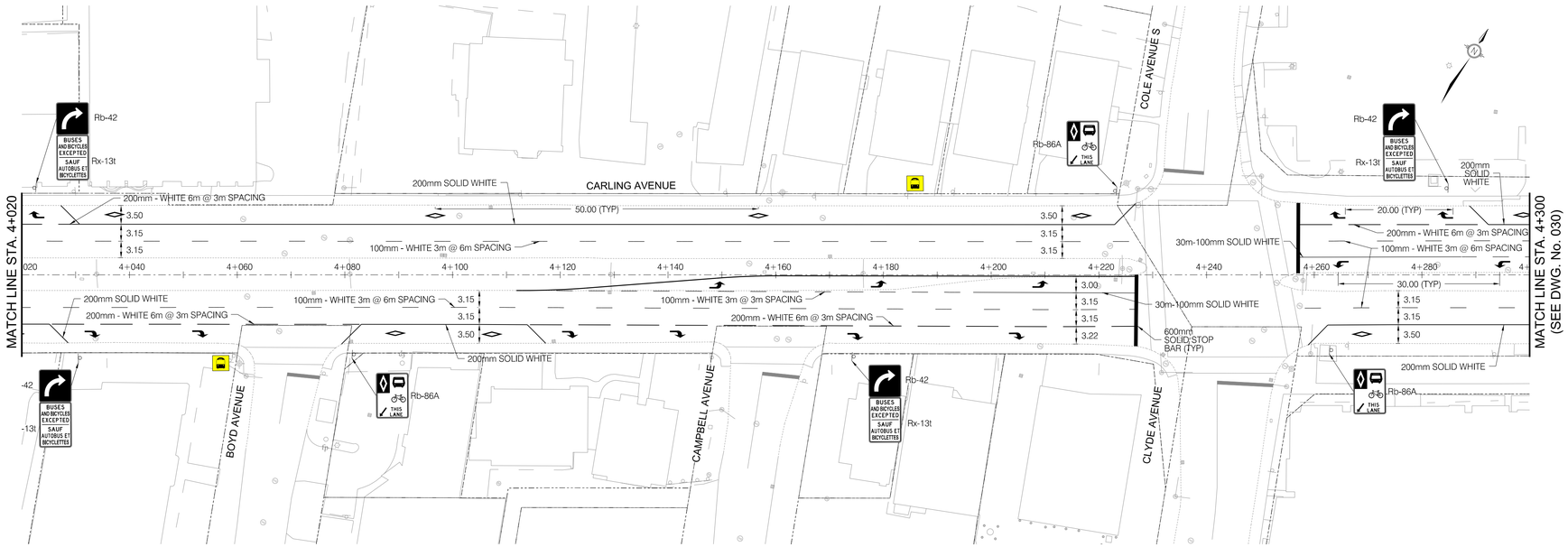
No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP

Consultant Drawing Number





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS VI
STA. 3+740 TO STA. 4+020
STA. 4+020 TO STA. 4+300

CARINA DUCLOS, P.ENG. *Director*	STACEY RATHWELL, C.E.T. *Project Manager*

IBI

Ottawa

Contract No. CP000439	Dwg. No. 029
Sheet 29 of 39	
Asset No.	
Asset Group ---	
Des. L.Y.	Chk'd. J.D.
Dwn. C.R.Q.	Chk'd. L.Y.
Utility Circ. No. --	Index No. --
Const. Inspector --	

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

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REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
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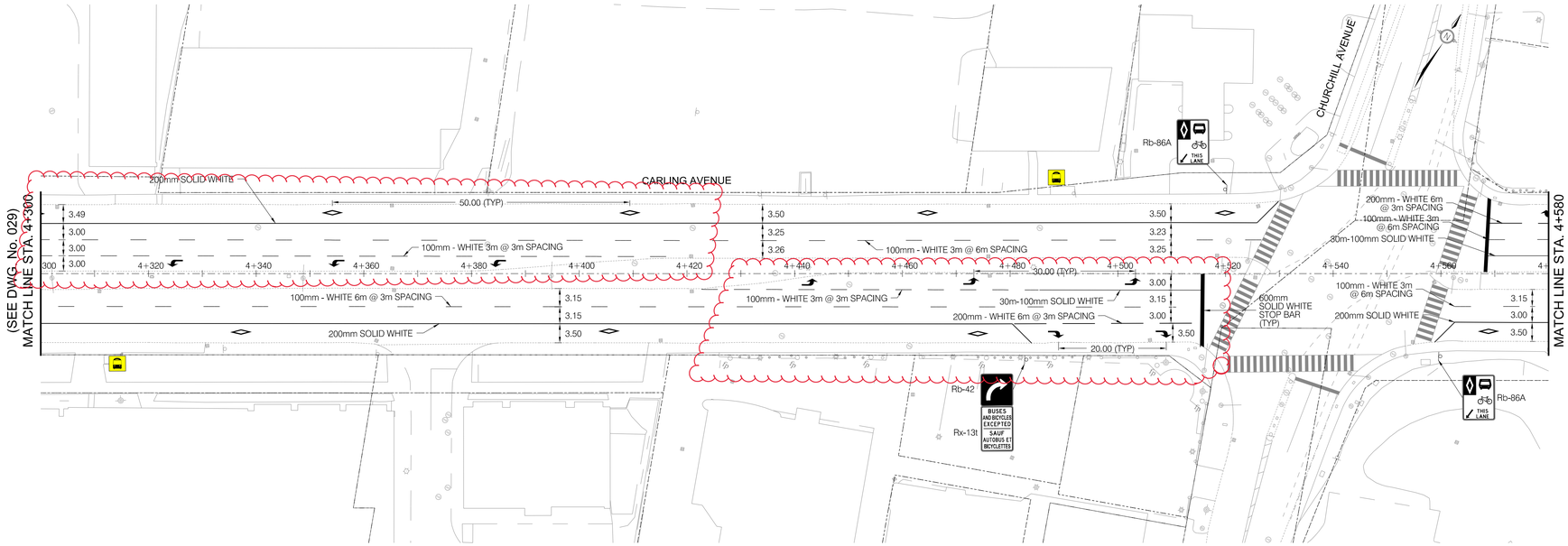
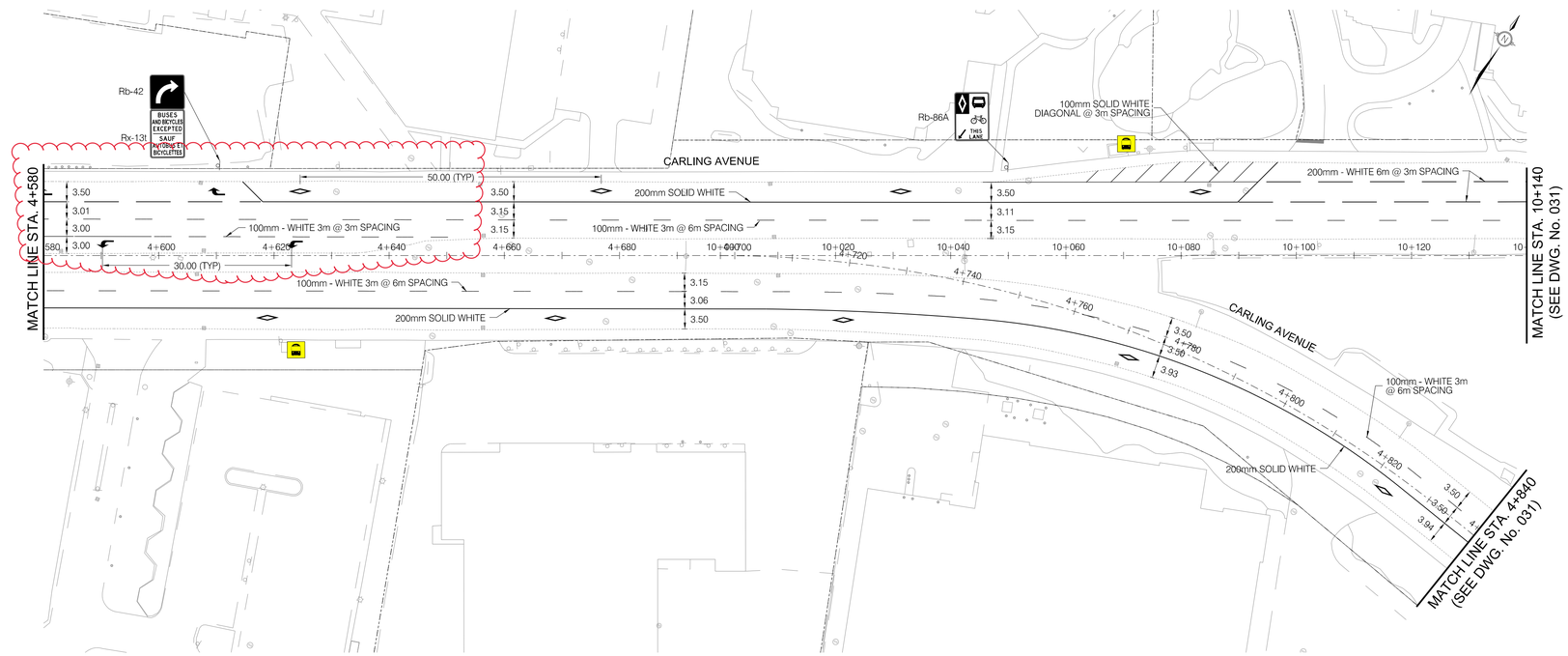
LEGEND:

BUS STOP

Consultant Drawing Number





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS VII
STA. 4+300 TO STA. 4+580
STA. 4+580 TO STA. 4+840
STA. 10+000 TO STA. 10+140

CARINA DUCLOS, P.ENG.
Director

STACEY RATHWELL, C.E.T.
Project Manager

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	030

Sheet 30 of 39

Asset No.

Asset Group: ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No.	Index No.
--	--

Const. Inspector: --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

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REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP

CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS VIII
STA. 10+140 TO STA. 10+420
STA. 4+840 TO STA. 5+120

CARINA DUCLOS, P.ENG. — *Director*
STACEY RATHWELL, C.E.T. — *Project Manager*
IBI

Ottawa

Contract No. CP000439	Dwg. No. 031
Sheet 31 of 39	
Asset No.	
Asset Group ---	
Des. L.Y. / Chk'd. J.D.	
Dwn. C.R.Q. / Chk'd. L.Y.	
Utility Circ. No. -- / Index No. --	
Const. Inspector --	

Scale: HORIZONTAL 0m 5 10 20 / 0m 1 2 VERTICAL

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
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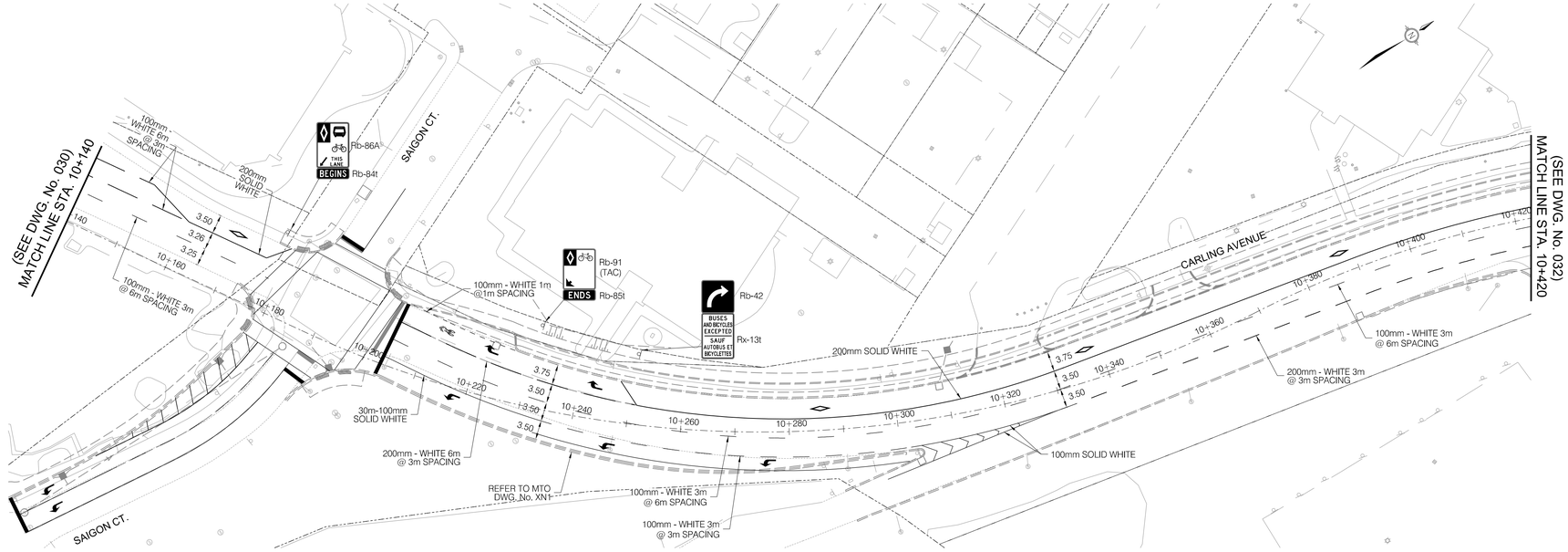

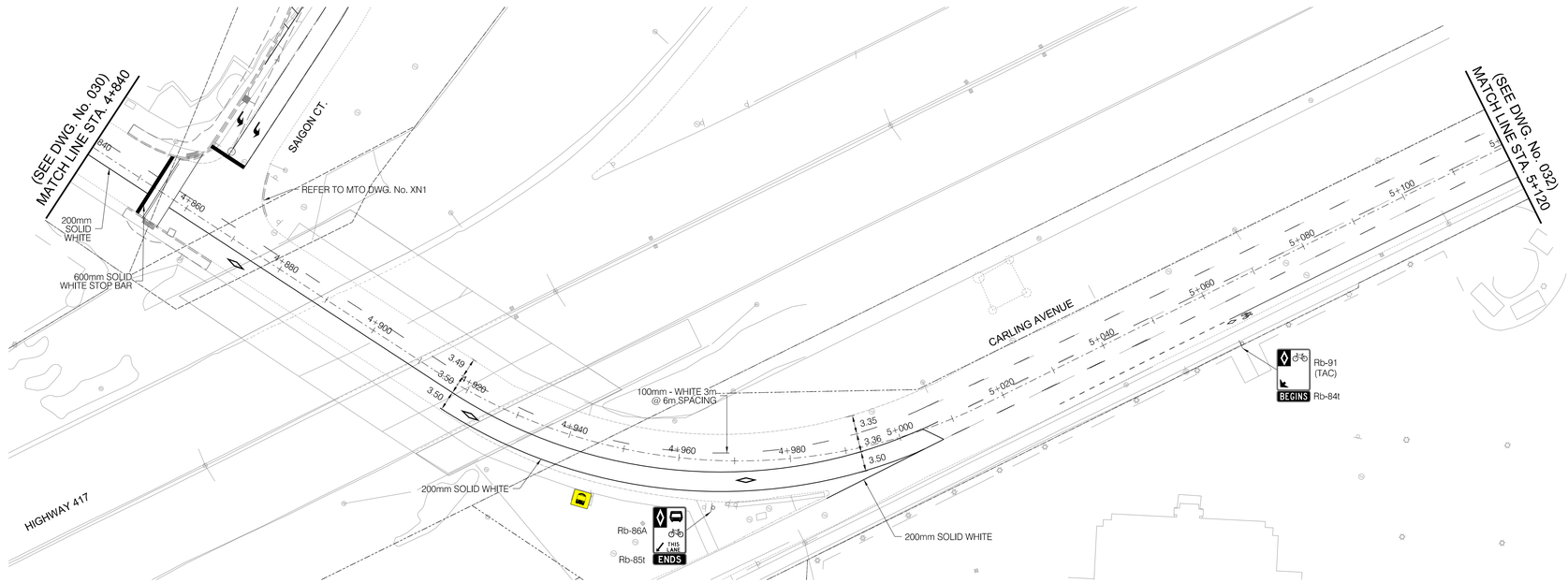

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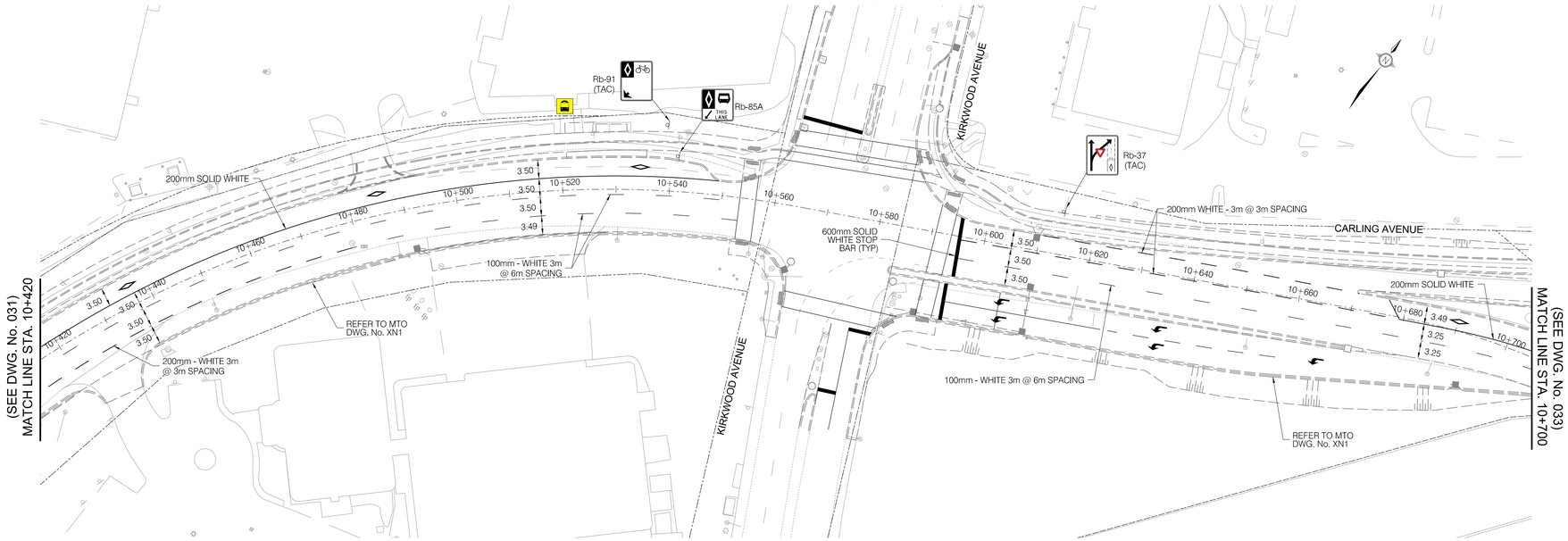

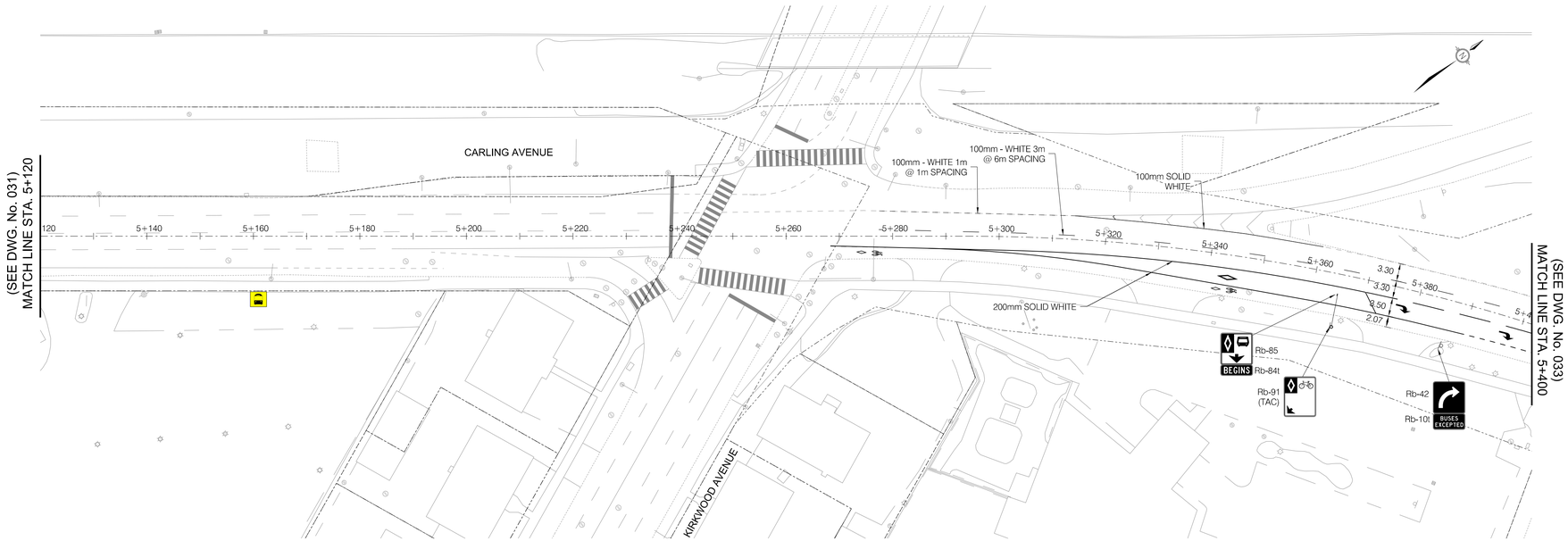

CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS IX

STA. 10+420 TO STA. 10+700
STA. 5+120 TO STA. 5+400

CARINA DUCLOS, P.ENG.
Director

STACEY RATHWELL, C.E.T.
Project Manager

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	032

Sheet 32 of 39

Asset No.

Asset Group: ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No. --	Index No. --

Const. Inspector: --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

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REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP

DRAWING FRAME: 790mm x 534mm City of Ottawa 2008

Consultant Drawing Number

CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS X

STA. 10+420 TO STA. 10+980
STA. 5+400 TO STA. 5+660

CARINA DUCLOS, P.ENG. *Director*	STACEY RATHWELL, C.E.T. *Project Manager*

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	033

Sheet 33 of 39

Asset No.

Asset Group ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No. --	Index No. --

Const. Inspector --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

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REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
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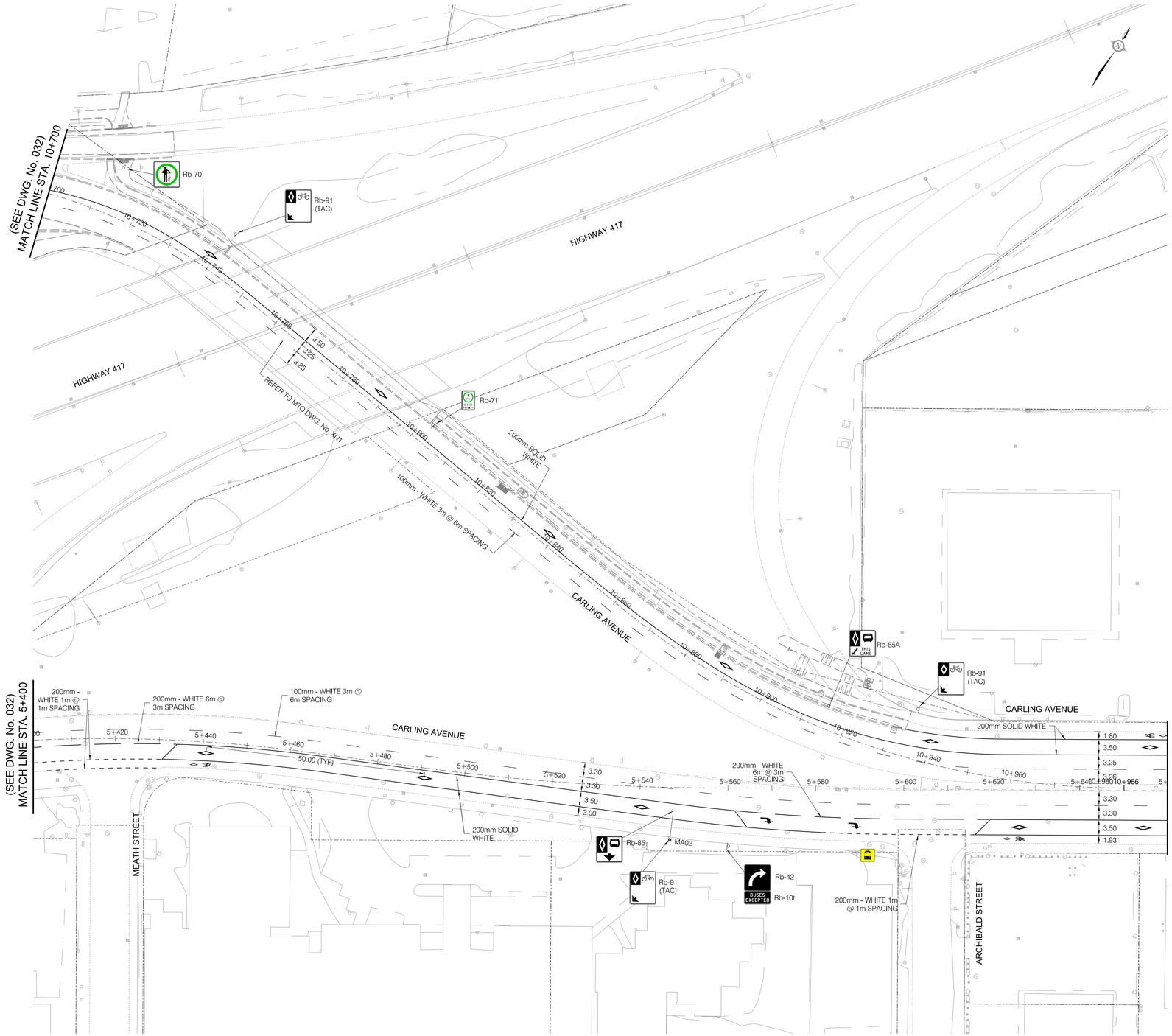

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BUS STOP

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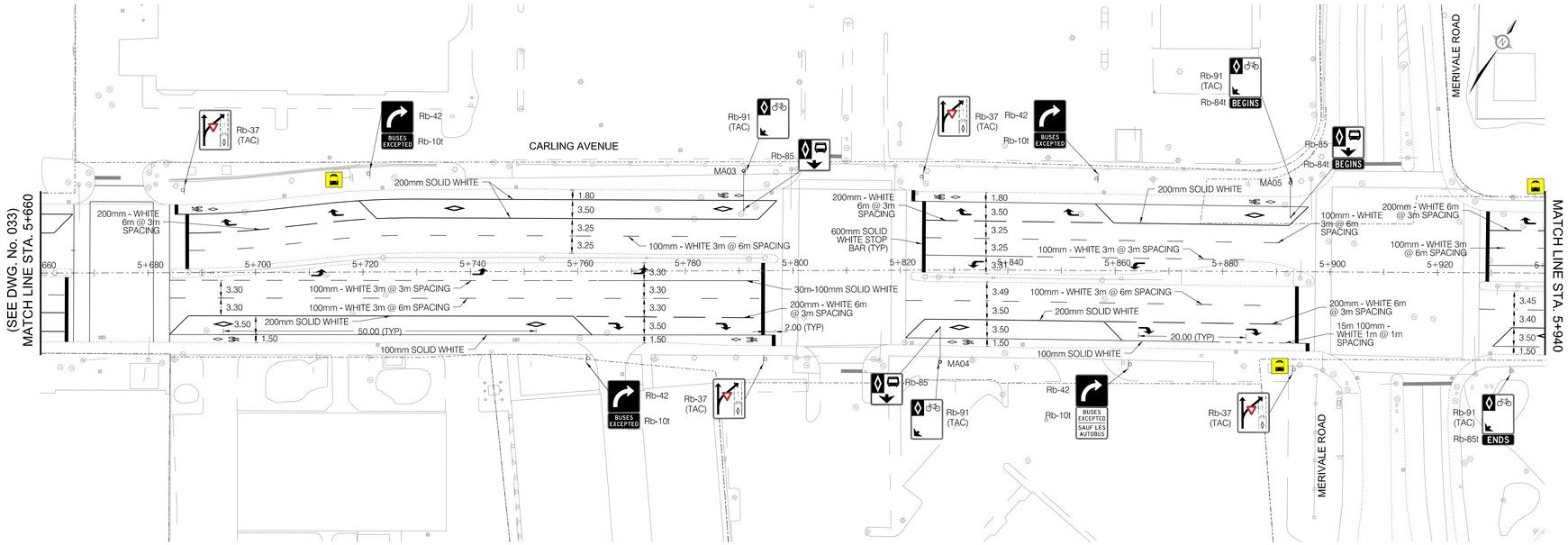
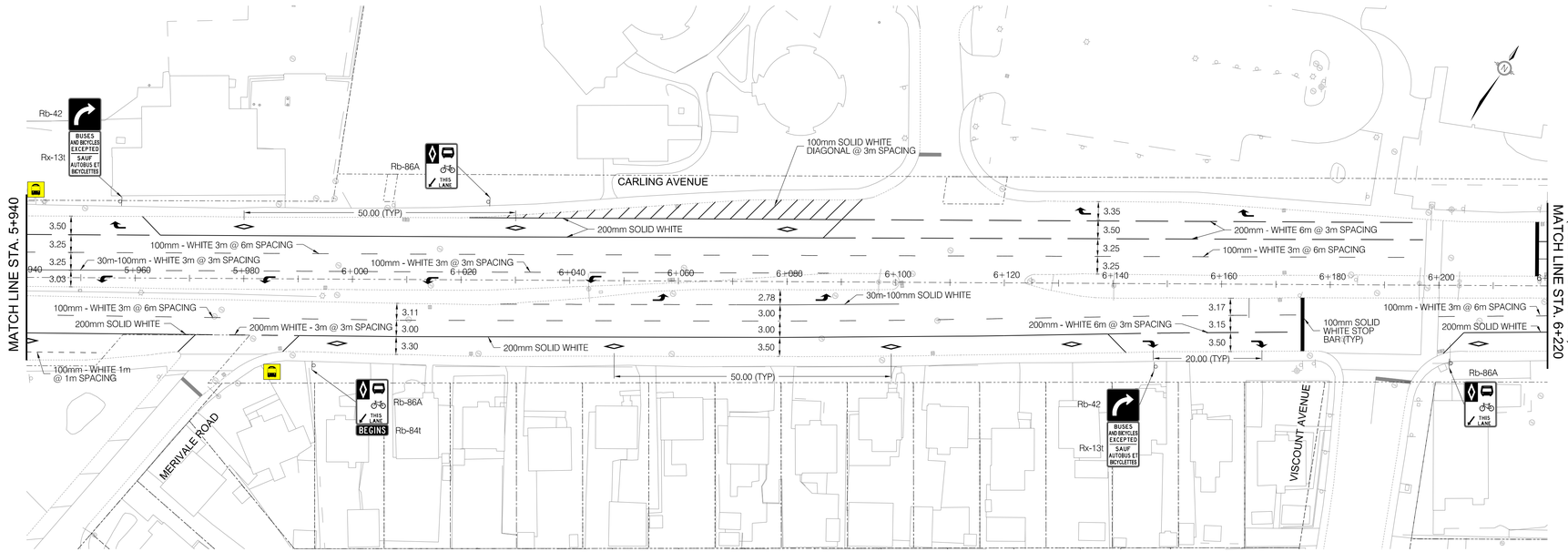




CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS XI
STA. 5+660 TO STA. 5+940
STA. 5+940 TO STA. 6+220

CARINA DUCLOS, P.ENG. — *Director*

STACEY RATHWELL, C.E.T. — *Project Manager*

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	034

Sheet 34 of 39

Asset No.

Asset Group: ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No.	Index No.
--	--

Const. Inspector: --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

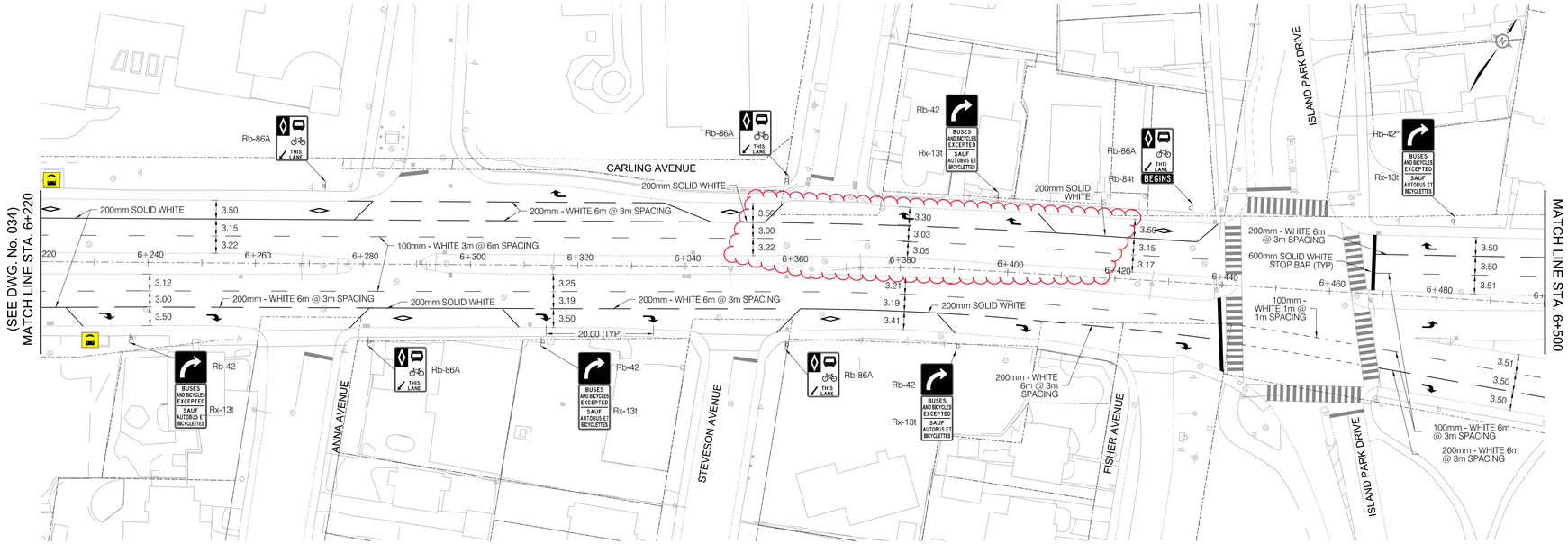
NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned, The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

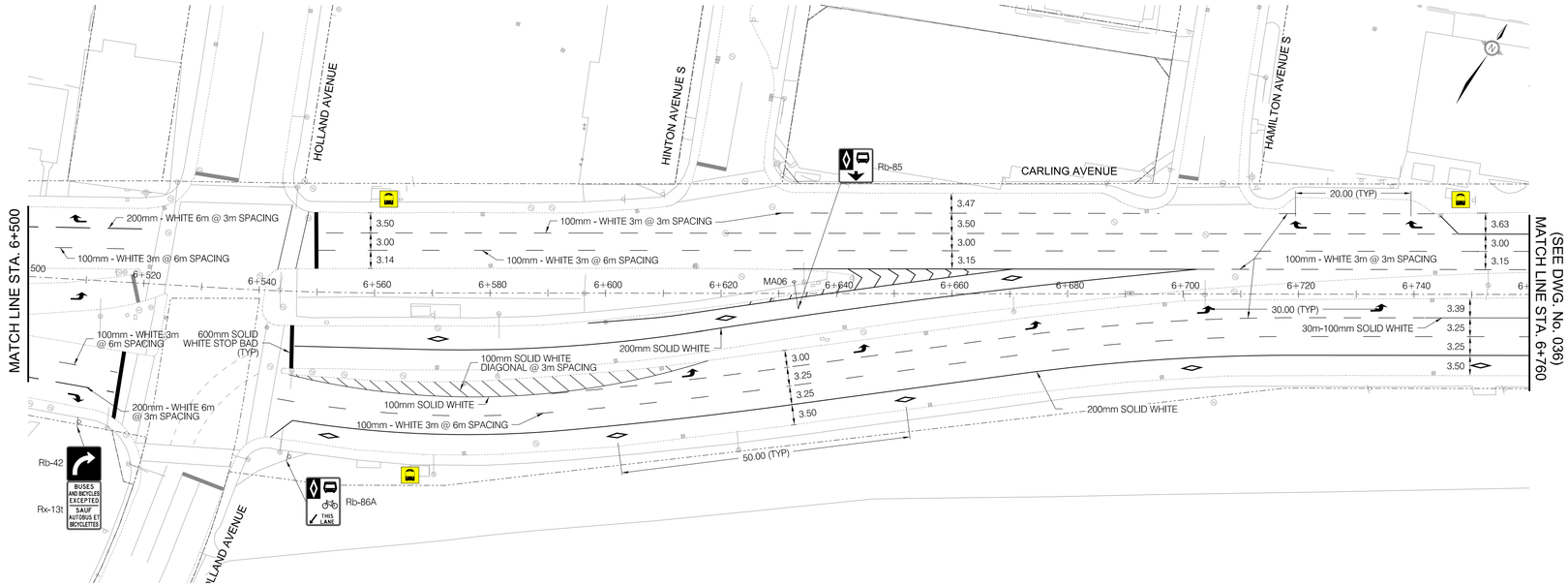
REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS XII

STA. 6+220 TO STA. 6+500
STA. 6+500 TO STA. 6+760

CARINA DUCLOS, P.ENG. *Director*	STACEY RATHWELL, C.E.T. *Project Manager*

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	035

Sheet 35 of 39

Asset No.

Asset Group ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No. --	Index No. --
Const. Inspector --	

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

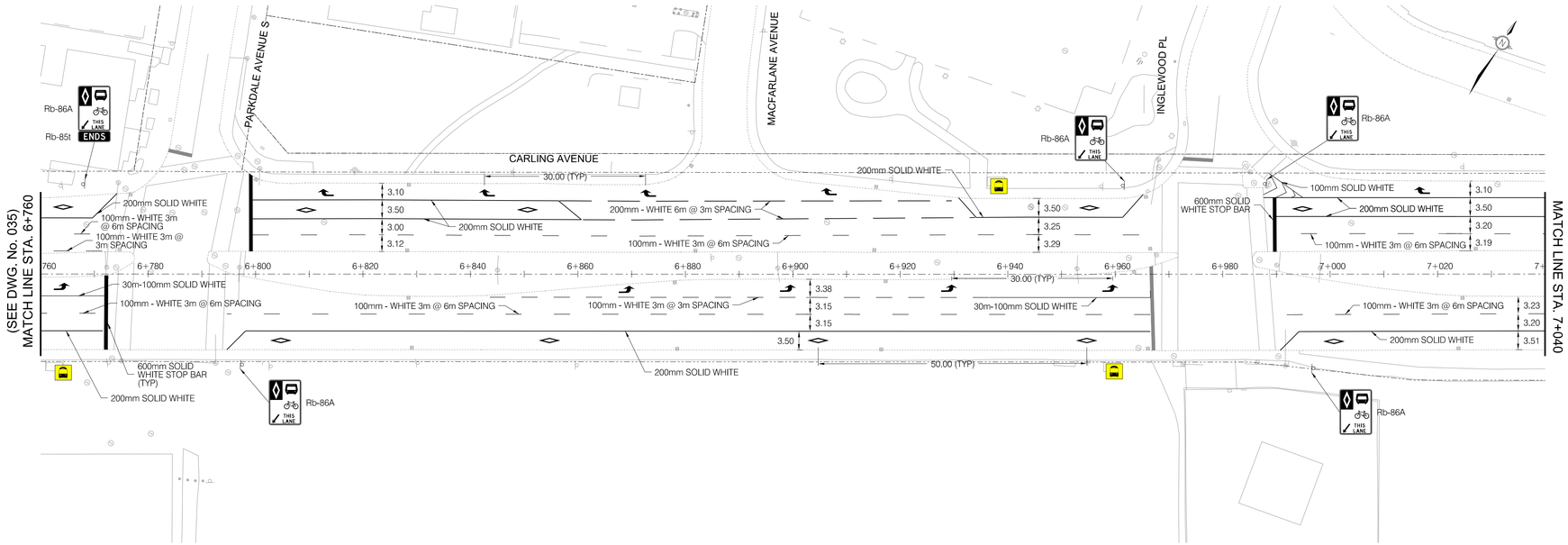
NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned, The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

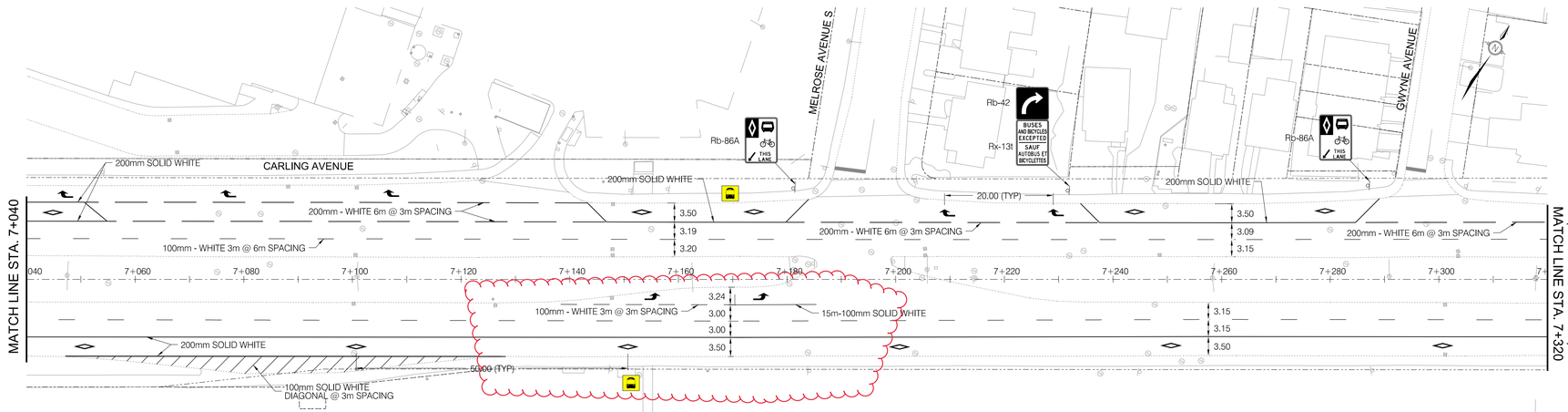
REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS XIII

STA. 6+760 TO STA. 7+040
STA. 7+040 TO STA. 7+320

CARINA DUCLOS, P.ENG.
Director

STACEY RATHWELL, C.E.T.
Project Manager

IBI

Ottawa

Contract No.	Dwg. No.
CP000439	036

Sheet 36 of 39

Asset No.

Asset Group: ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No.	Index No.
--	--

Const. Inspector: --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

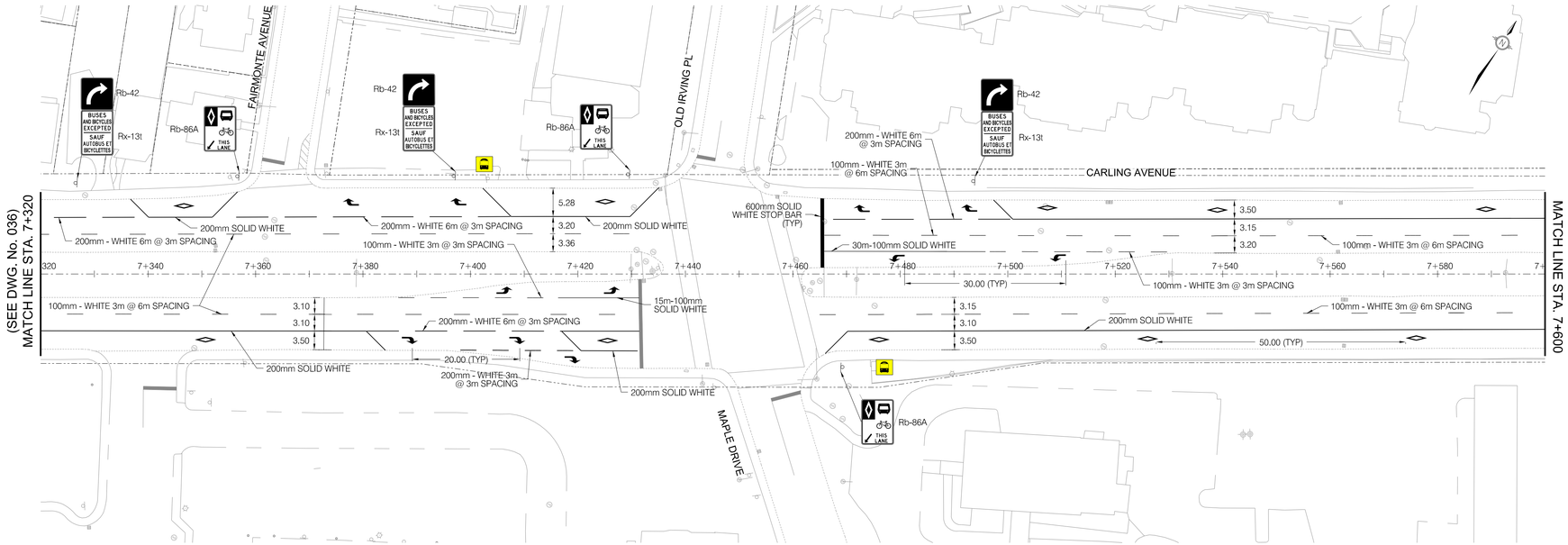
REVISIONS

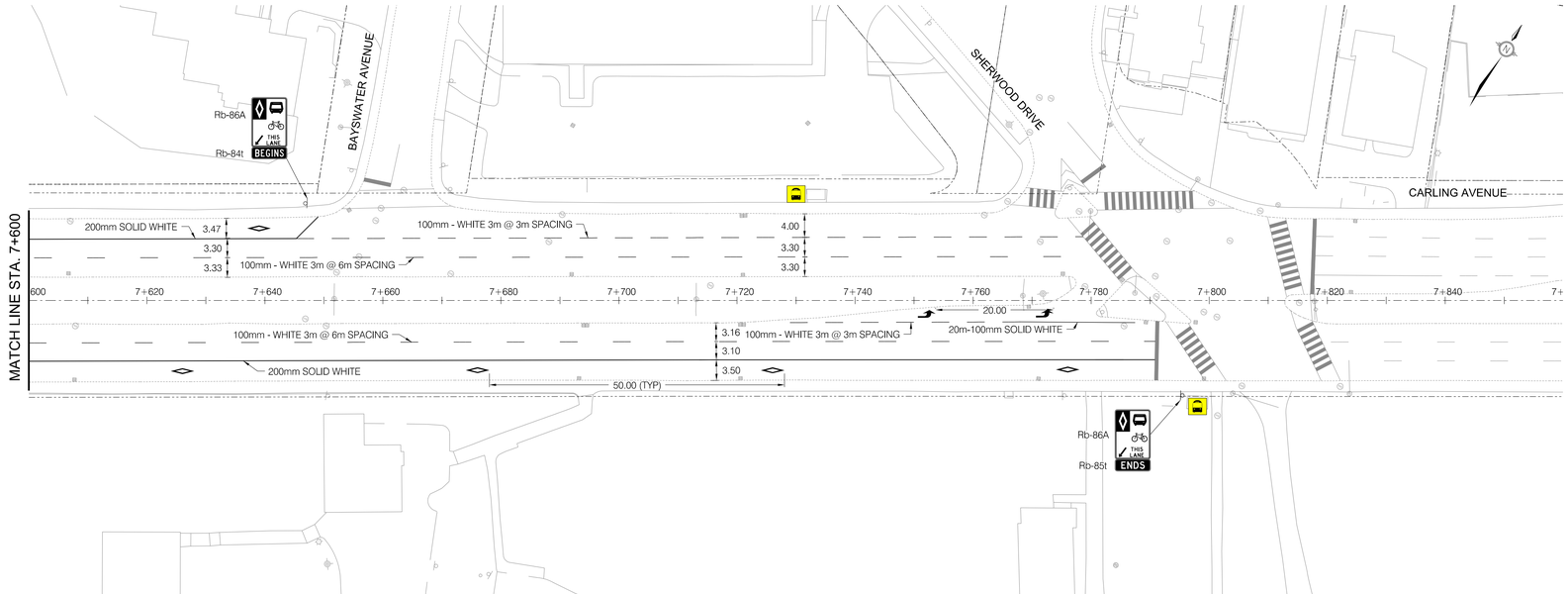
No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

LEGEND:

BUS STOP

Consultant Drawing Number





CARLING AVENUE
TRANSIT PRIORITY MEASURES
LINCOLN FIELDS TO BAYSWATER AVENUE
PAVEMENT MARKINGS AND SIGNS XIV
STA. 7+320 TO STA. 7+600
STA. 7+600 TO STA. 7+860

CARINA DUCLOS, P.ENG. — Director
STACEY RATHWELL, C.E.T. — Project Manager
IBI

Ottawa

Contract No.	Dwg. No.
CP000439	037

Sheet 37 of 39

Asset No.

Asset Group: ---

Des.	Chk'd.
L.Y.	J.D.
Dwn.	Chk'd.
C.R.Q.	L.Y.
Utility Circ. No. --	Index No. --

Const. Inspector: --

Scale:
HORIZONTAL
0m 5 10 20
0m 1 2
VERTICAL

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

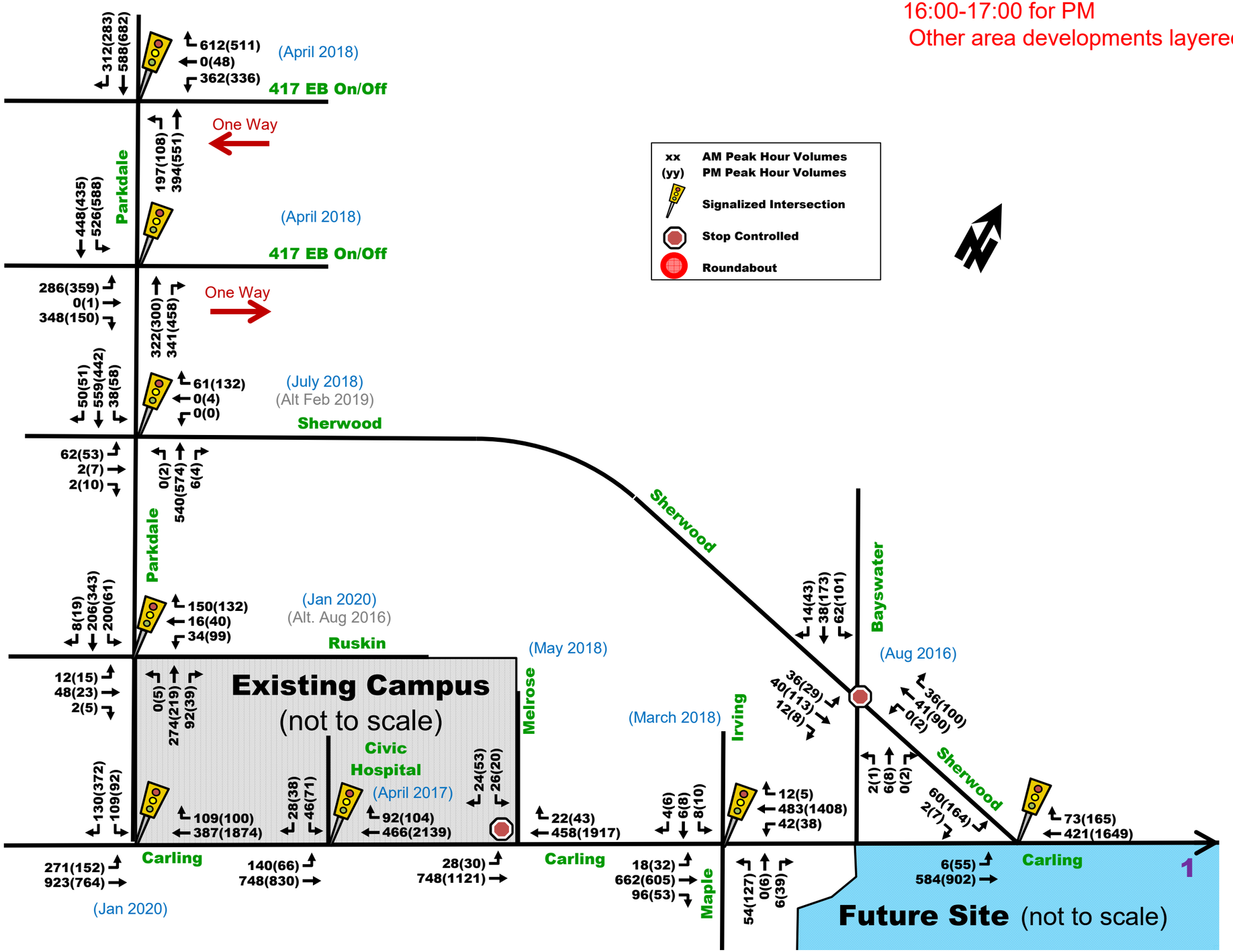
REVISIONS

No.	Description	By	Date (dd/mm/yyyy)
1	ISSUED FOR PRELIMINARY DESIGN CIRCULATION	L.Y.	19/02/2021

Appendix B:
Peak Hour Background Volumes

Background Volumes Part 1/2

Note: uses 7:00-7:30 x2 for AM
16:00-17:00 for PM
Other area developments layered on top



Background Volumes Part 2/2

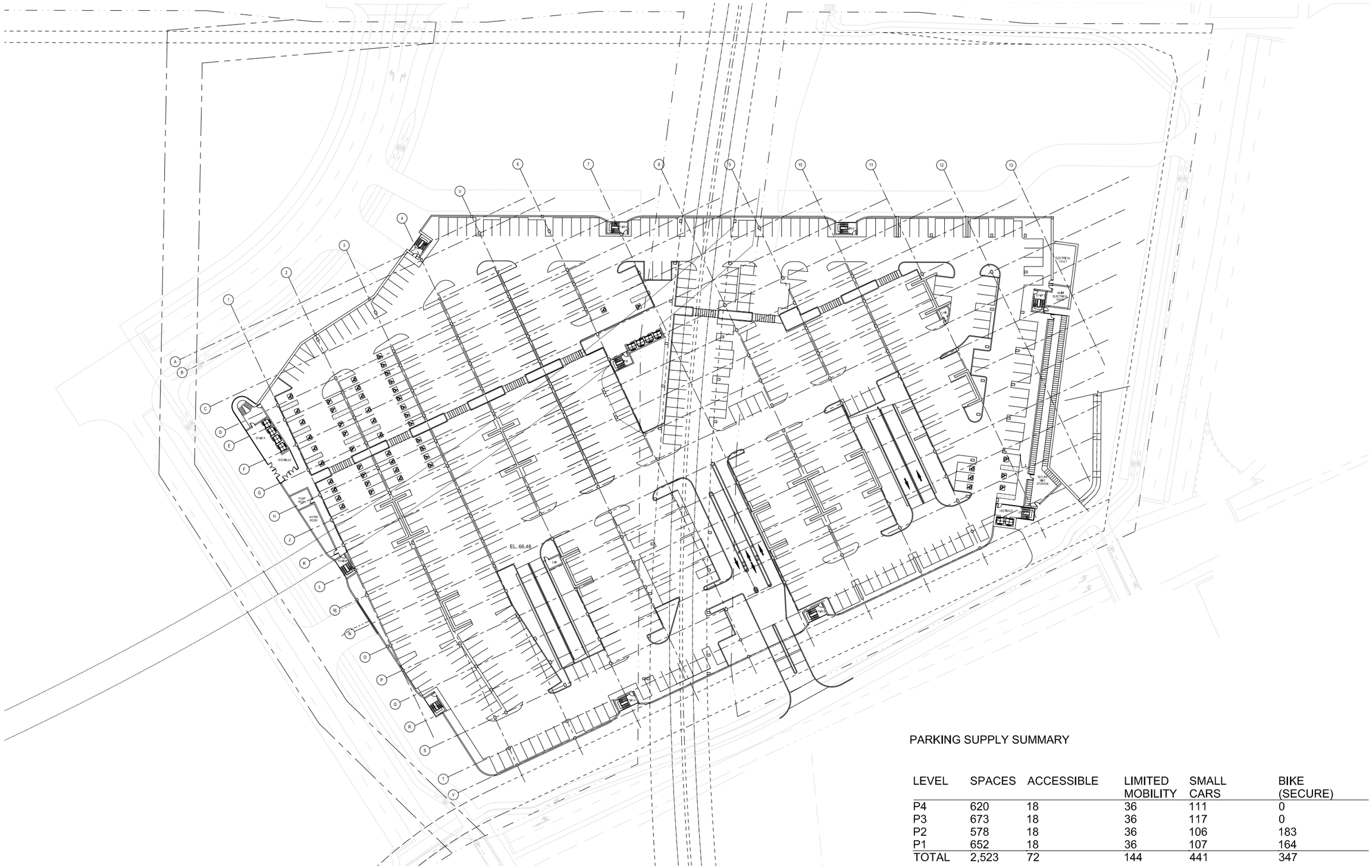
Note: uses 7:00-7:30 x2 for AM
16:00-17:00 for PM
Other area developments layered on top

xx AM Peak Hour Volumes
(yy) PM Peak Hour Volumes
Signalized Intersection
Stop Controlled
Roundabout

Future Site
(not to scale)

Raymond 417 WB (Nov 2016)
Orangeville 417 EB (Nov 2016)
Rochester
Catherine 417 WB (April 2018)
Bronson
417 EB Off (Oct 2016)
Plymouth (April 2018)
Imperial
Champagne (Feb 2016)
Trillium Pathway (July 2016)
Preston (June 2017)
Rochester (June 2016)
Booth (Sept 2019)
Carling
Glebe (Sept 2019)
Navy (June 2016)
Queen Elizabeth (May 2018) (Alt. Jan2018)
Road B
Prince of Wales
Road E
Madawaska (Oct 2016) (Alt. Jan 2018)
Fifth
Driveway (Oct 2016)

Appendix C:
Parking Garage Site Plan (DRAFT)



LEVEL P1

PARKING SUPPLY SUMMARY

LEVEL	SPACES	ACCESSIBLE	LIMITED MOBILITY	SMALL CARS	BIKE (SECURE)
P4	620	18	36	111	0
P3	673	18	36	117	0
P2	578	18	36	106	183
P1	652	18	36	107	164
TOTAL	2,523	72	144	441	347

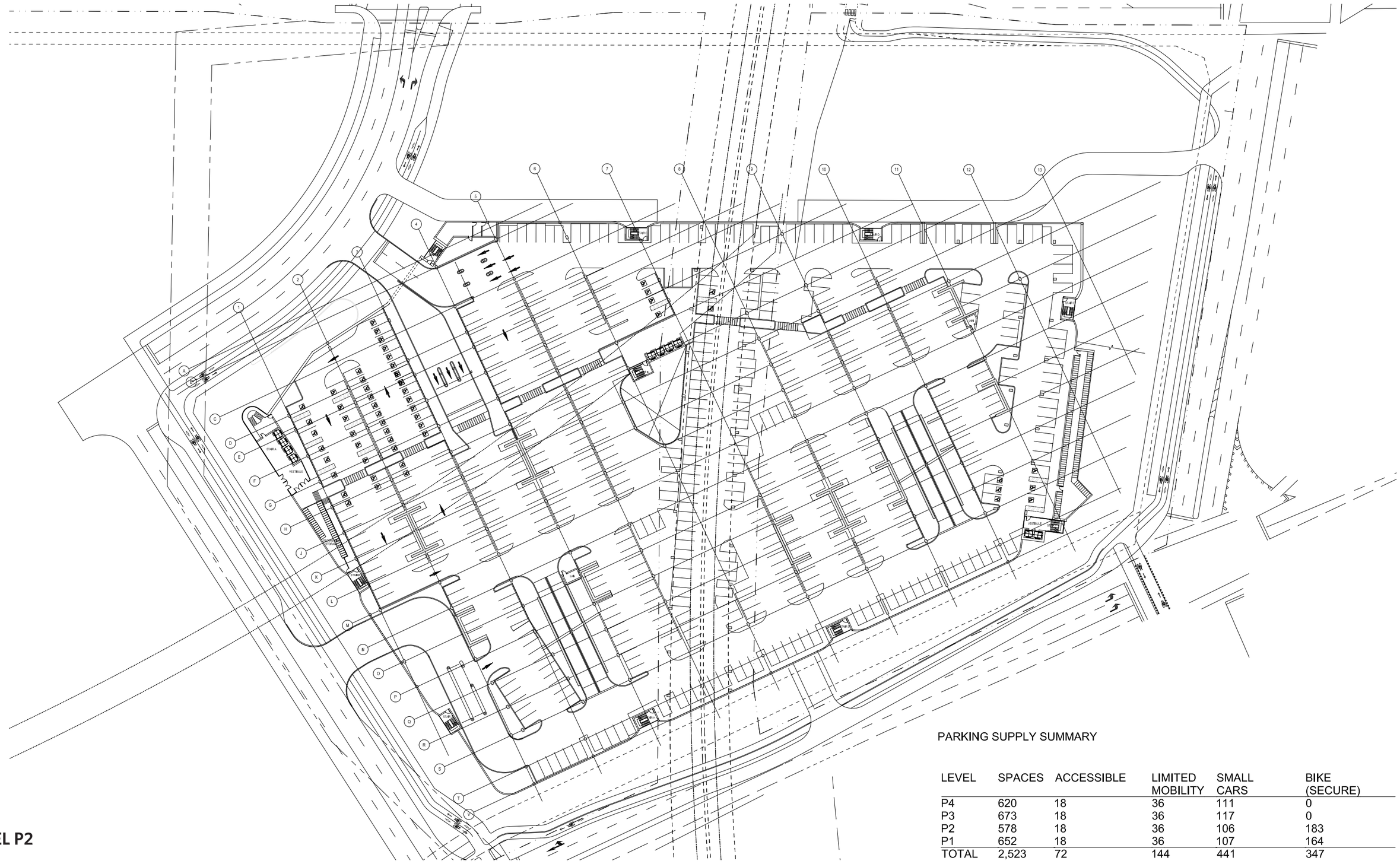
NEW CIVIC DEVELOPMENT FOR THE OTTAWA HOSPITAL

NEW CIVIC DEVELOPMENT FOR THE OTTAWA HOSPITAL
PARKING GARAGE LAYOUT PLANS

SEPTEMBER 22, 2021

0 25 50 100 Meters

True North



LEVEL P2

PARKING SUPPLY SUMMARY

LEVEL	SPACES	ACCESSIBLE	LIMITED MOBILITY	SMALL CARS	BIKE (SECURE)
P4	620	18	36	111	0
P3	673	18	36	117	0
P2	578	18	36	106	183
P1	652	18	36	107	164
TOTAL	2,523	72	144	441	347

NEW CIVIC DEVELOPMENT FOR THE OTTAWA HOSPITAL

NEW CIVIC DEVELOPMENT FOR THE OTTAWA HOSPITAL
PARKING GARAGE LAYOUT PLANS

SEPTEMBER 22, 2021

0 25 50 100 Meters

True North

LEVEL P3

PARKING SUPPLY SUMMARY

LEVEL	SPACES	ACCESSIBLE	LIMITED MOBILITY	SMALL CARS	BIKE (SECURE)
P4	620	18	36	111	0
P3	673	18	36	117	0
P2	578	18	36	106	183
P1	652	18	36	107	164
TOTAL	2,523	72	144	441	347

0 25 50 100 Meters

True North

LEVEL P4

PARKING SUPPLY SUMMARY

LEVEL	SPACES	ACCESSIBLE	LIMITED MOBILITY	SMALL CARS	BIKE (SECURE)
P4	620	18	36	111	0
P3	673	18	36	117	0
P2	578	18	36	106	183
P1	652	18	36	107	164
TOTAL	2,523	72	144	441	347

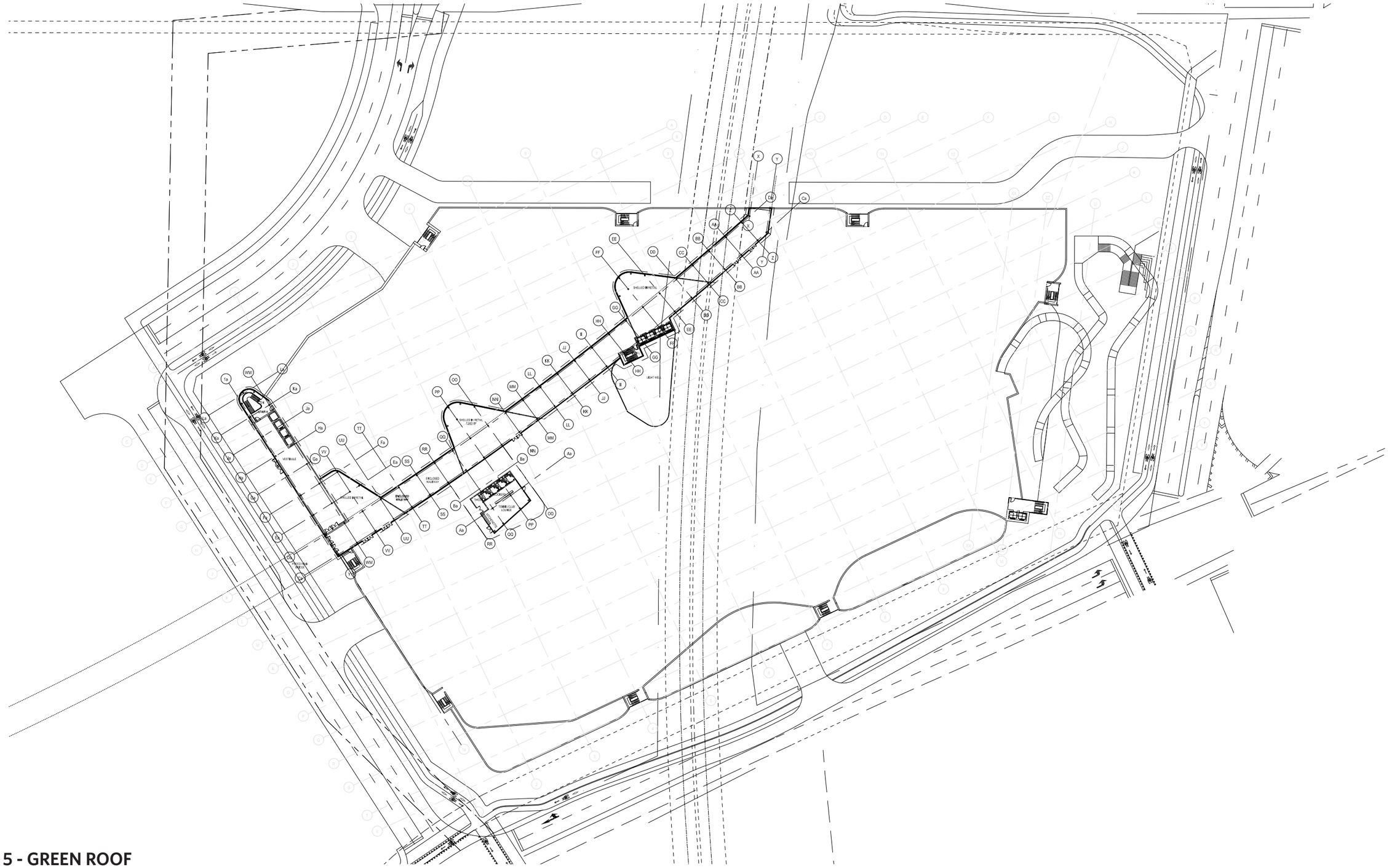
NEW CIVIC DEVELOPMENT FOR THE OTTAWA HOSPITAL

NEW CIVIC DEVELOPMENT FOR THE OTTAWA HOSPITAL
PARKING GARAGE LAYOUT PLANS

SEPTEMBER 22, 2021

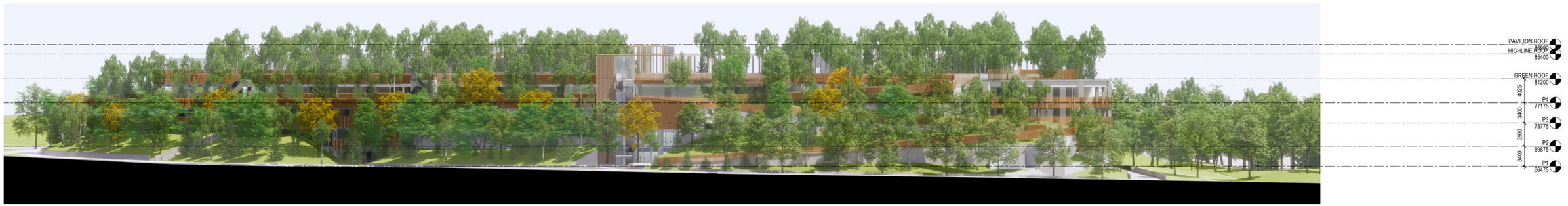
0 25 50 100 Meters

True North

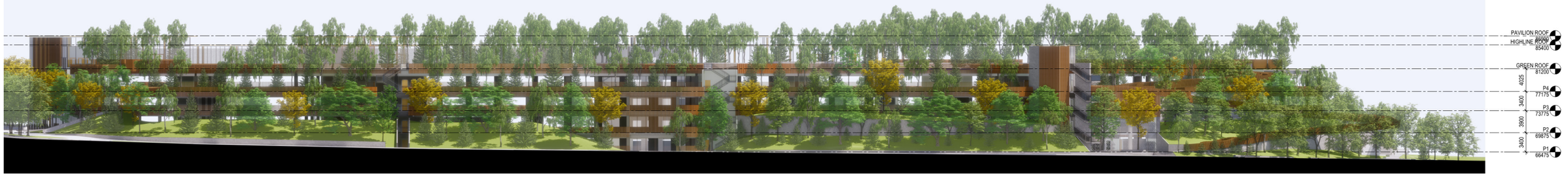


LEVEL 5 - GREEN ROOF

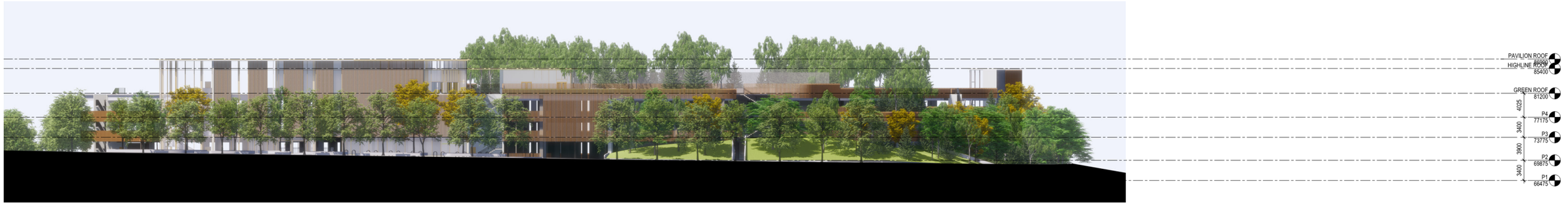
1 - NORTH ELEVATION



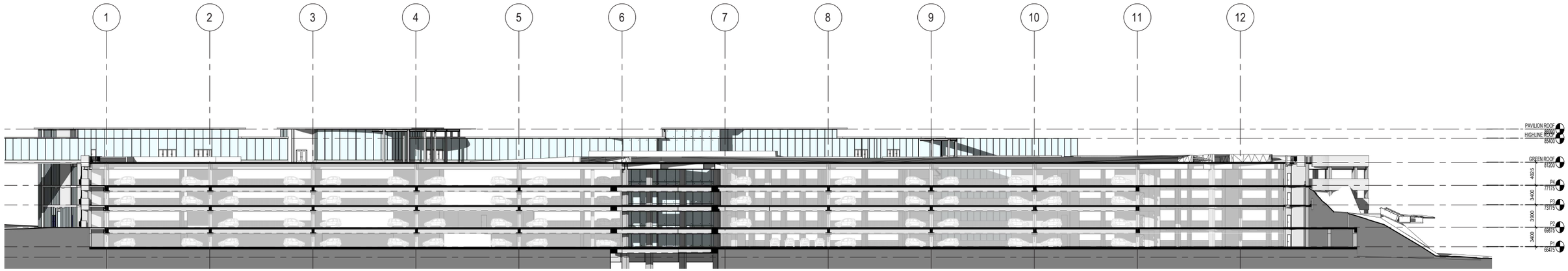
2 - EAST ELEVATION



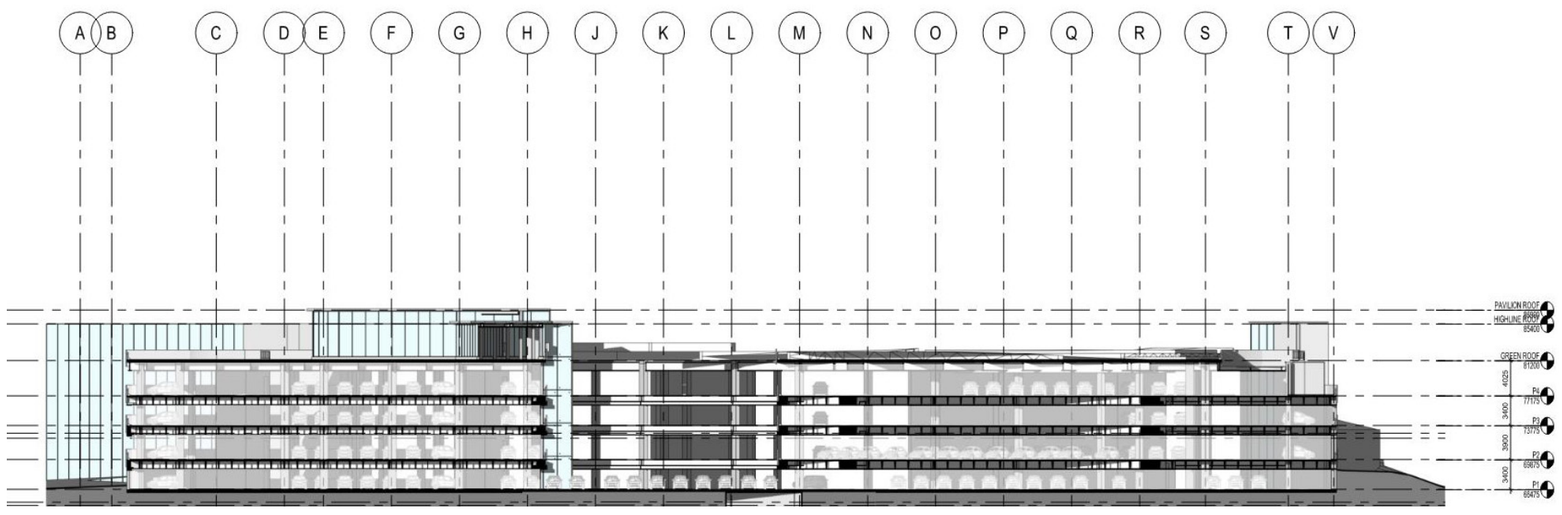
3 - SOUTH ELEVATION



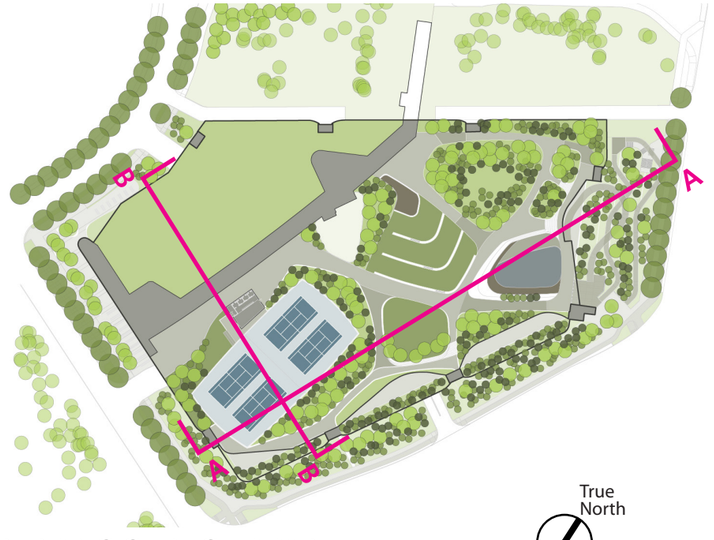
4 - WEST ELEVATION



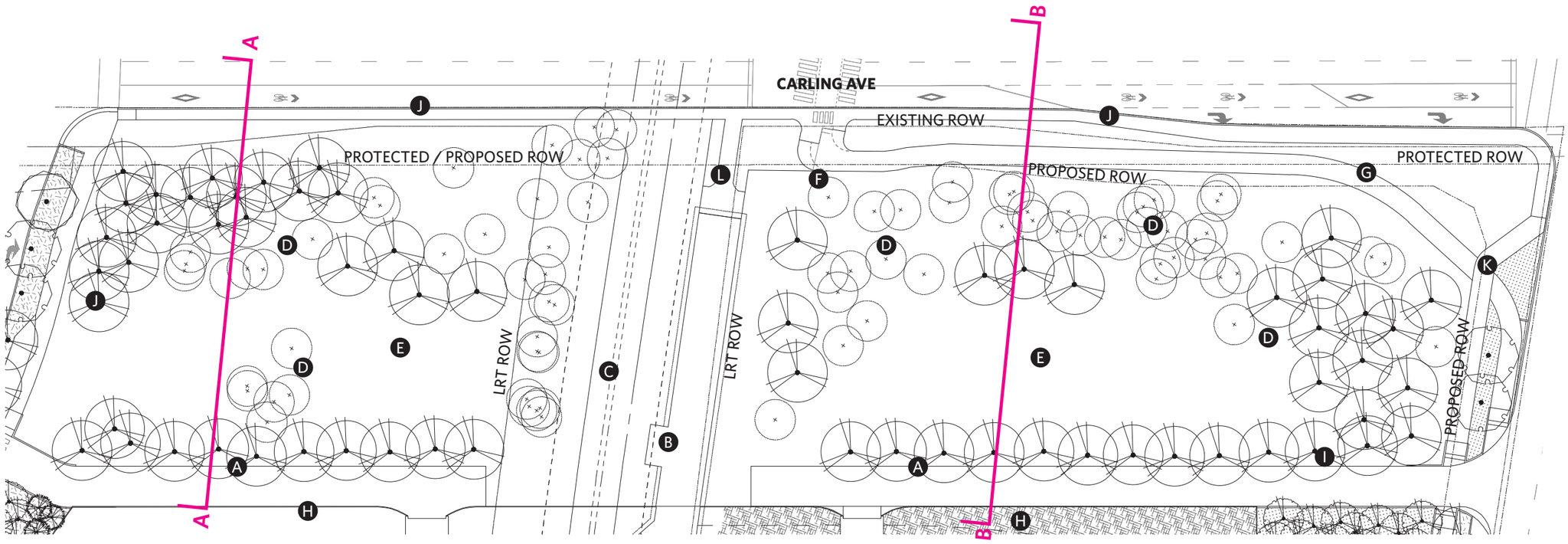
PARKING GARAGE SECTION A



PARKING GARAGE SECTION B



PARKING GARAGE KEY PLAN

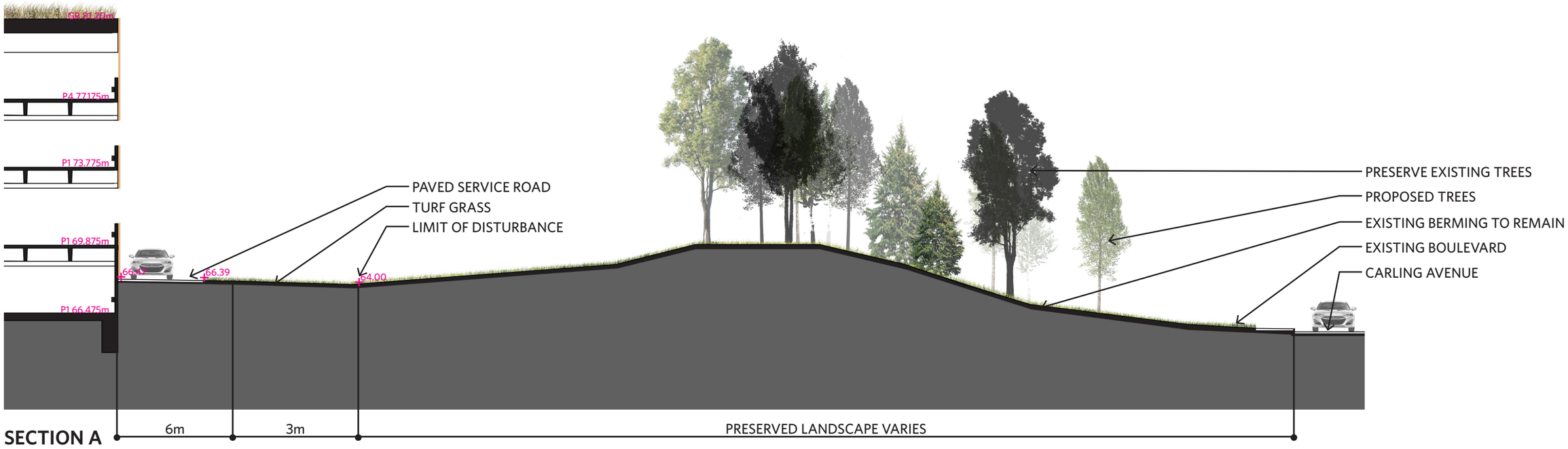


LEGEND

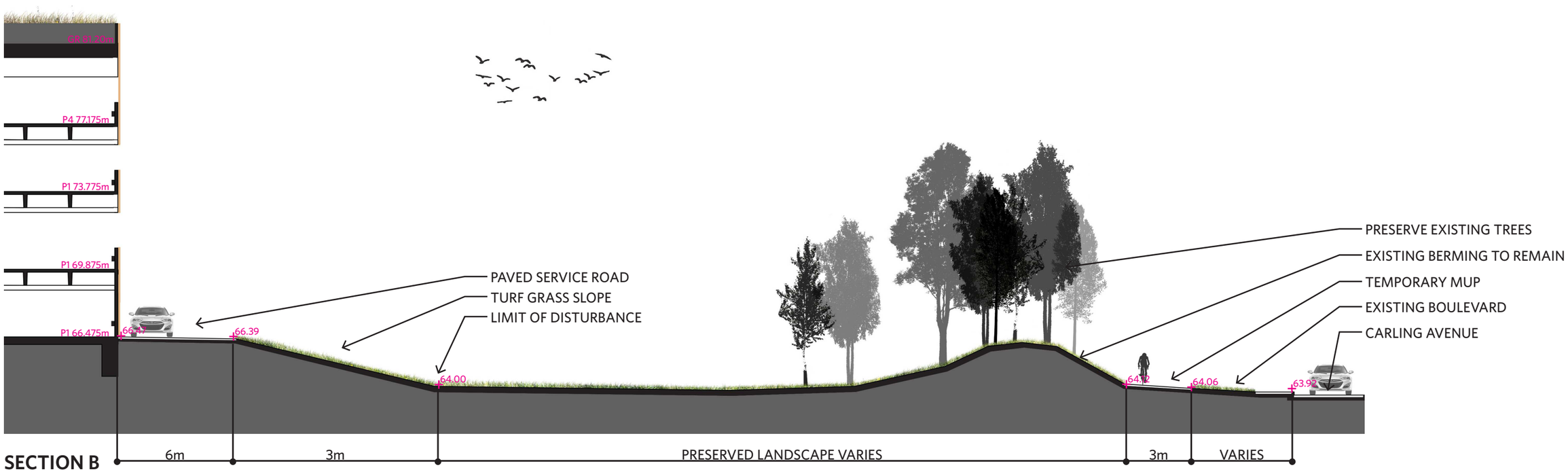
- A SERVICE ROAD
- B VERTICAL TRANSPORTATION
- C LRT ROW
- D EXISTING TREES TO REMAIN
- E PRESERVED LANDSCAPE
- F PEDESTRIAN PLAZA
- G TEMPORARY MUP
- H PARKING GARAGE GREEN ROOF
- I TURF AREA
- J SIDEWALK
- K TEMPORARY MUP TO PERMANENT MUP TRANSITION
- L CONNECTION TO VERTICAL TRANSPORTATION

True North

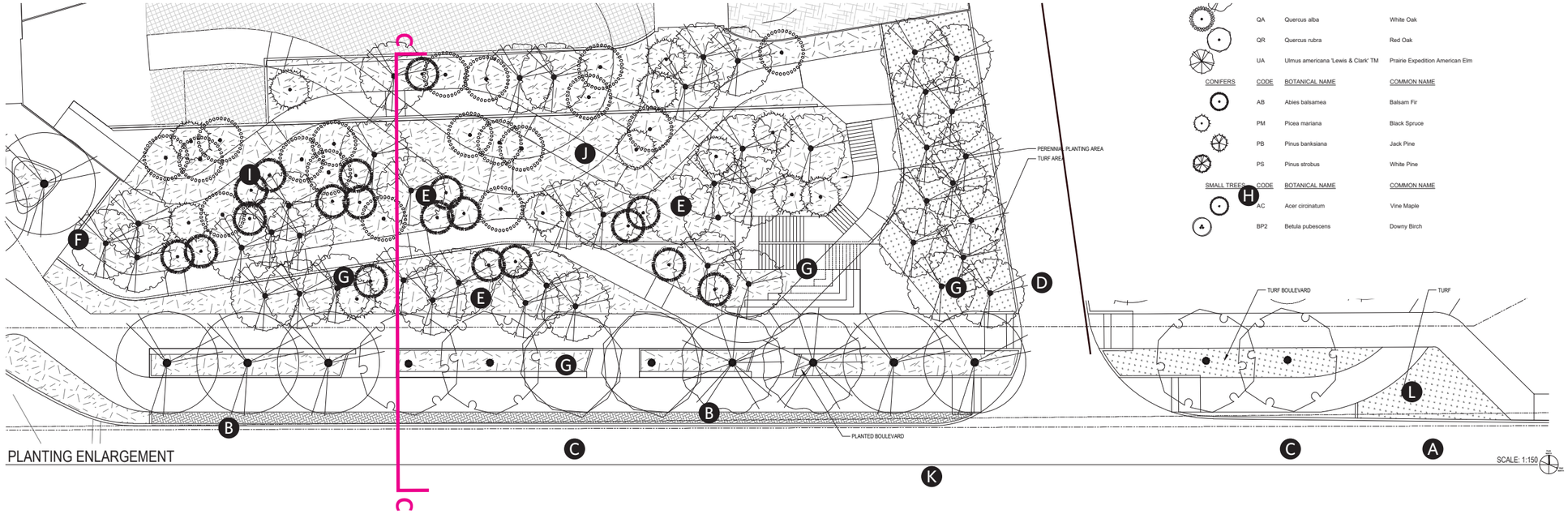
CARLING AVENUE ENLARGEMENT - 1:700 SCALE



SECTION A



SECTION B



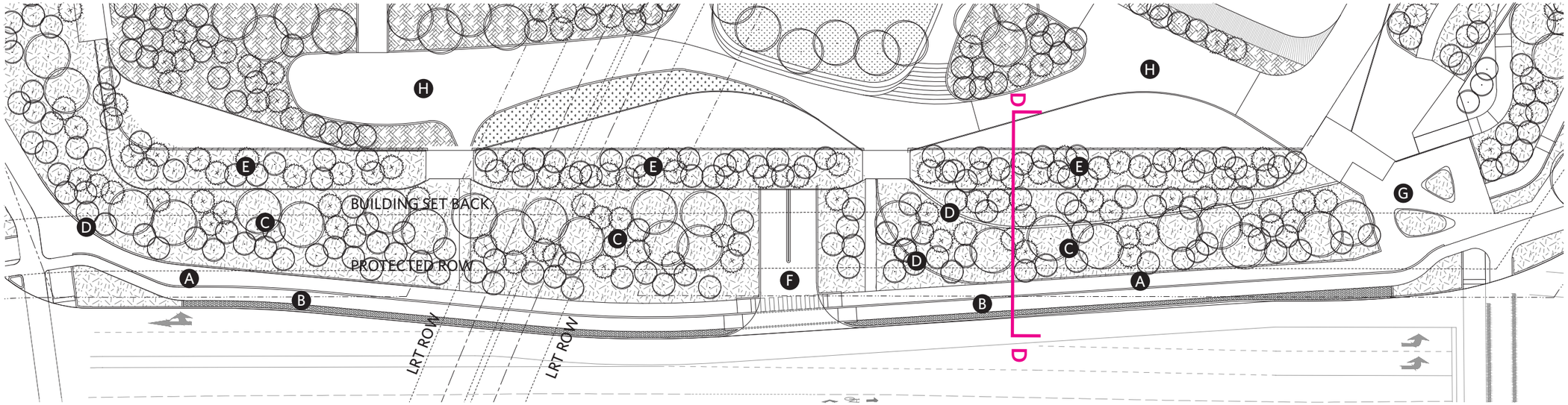
	QA	Quercus alba	White Oak
	QR	Quercus rubra	Red Oak
	UA	Ulmus americana 'Lewis & Clark' TM	Prairie Expedition American Elm
CONIFERS	CODE	BOTANICAL NAME	COMMON NAME
	AB	Abies balsamea	Balsam Fir
	PM	Picea mariana	Black Spruce
	PB	Pinus banksiana	Jack Pine
	PS	Pinus strobus	White Pine
SMALL TREES	CODE	BOTANICAL NAME	COMMON NAME
	AC	Acer circinatum	Vine Maple
	BP2	Betula pubescens	Downy Birch

LEGEND

- A TURF AREA
- B PLANTED BOULEVARD
- C BI-DIRECTIONAL CYCLE TRACK
- D SERVICE ROAD
- E ROOF TOP ACCESS RAMP
- F ELEVATOR PLAZA
- G SLOPED PLANTING AREA
- H PRESERVED CARLING LANDSCAPE
- I P4 PLAZA
- J ON -STRUCTURE PLANTING AREAS
- K PAVER SHOULDER
- L TEMPORARY MUP TO PERMANENT MUP TRANSITION

True North

PRESTON STREET ENLARGEMENT - 1:500 SCALE

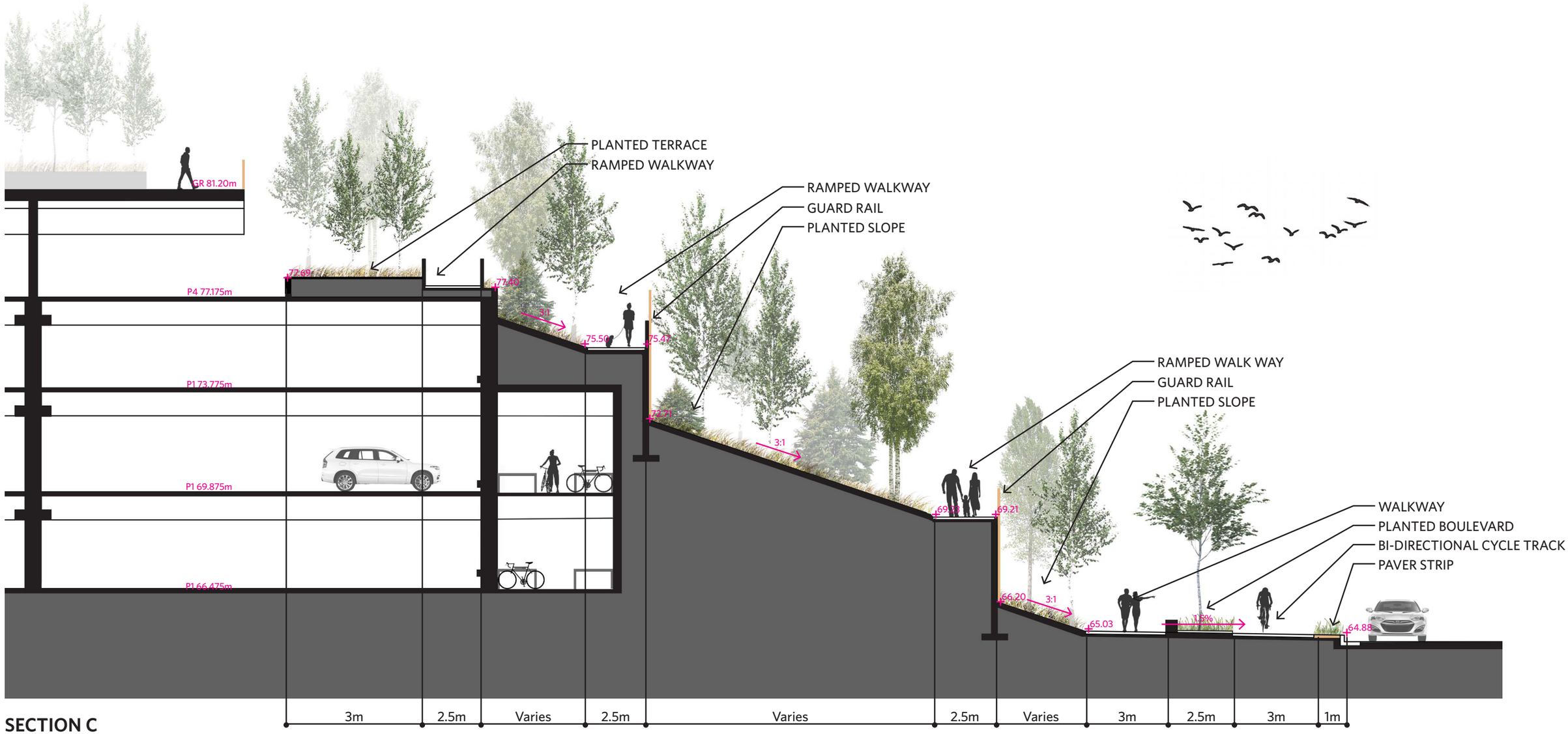


LEGEND

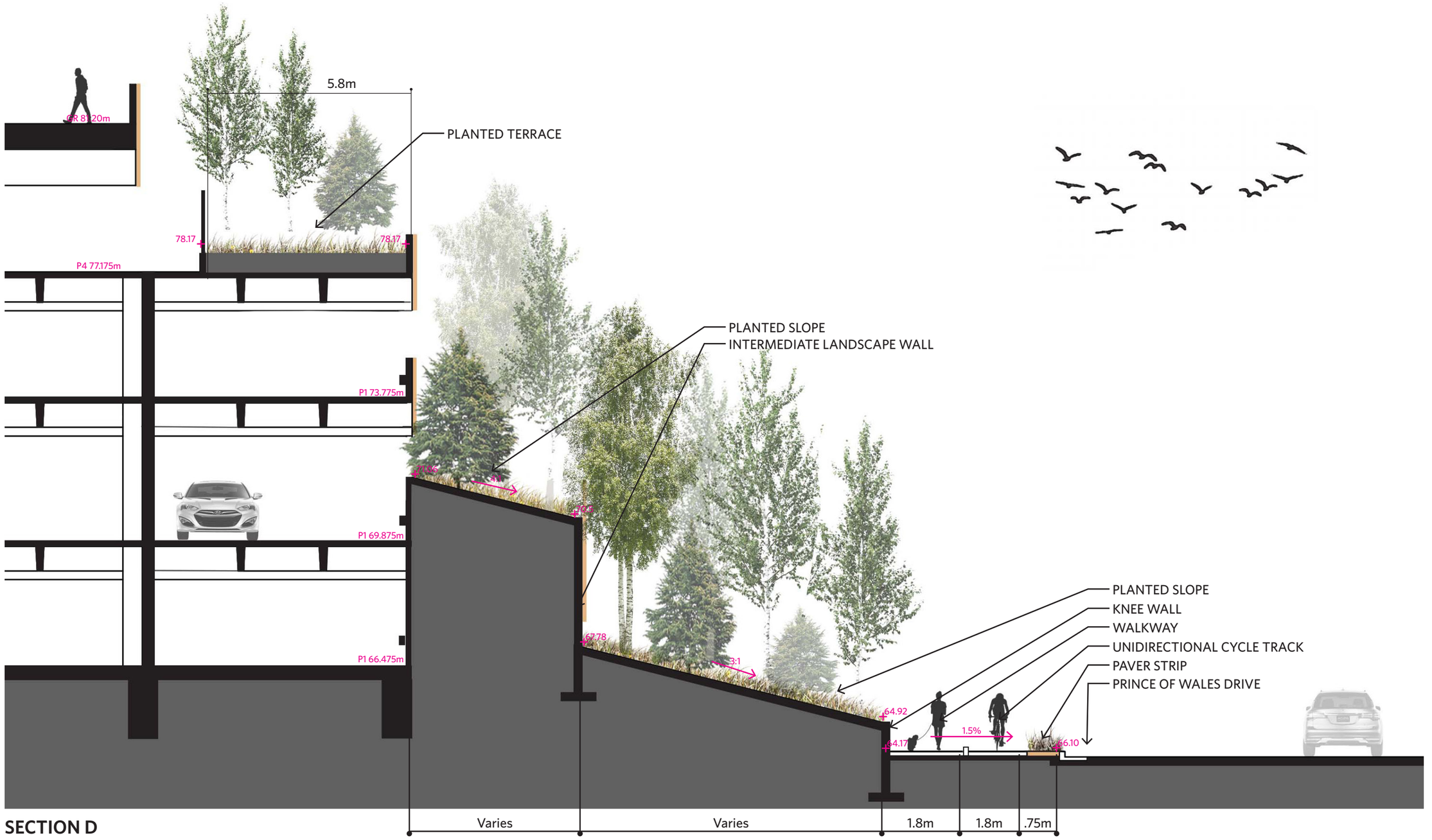
- A SIDEWALK
- B UNI-DIRECTIONAL BIKE LANE
- C SLOPED PLANTING AREA
- D LANDSCAPE WALL
- E P4 PLANTING AREA
- F P1 GARAGE ENTRANCE
- G ELEVATOR PLAZA
- H GREEN ROOF LANDSCAPE

True North

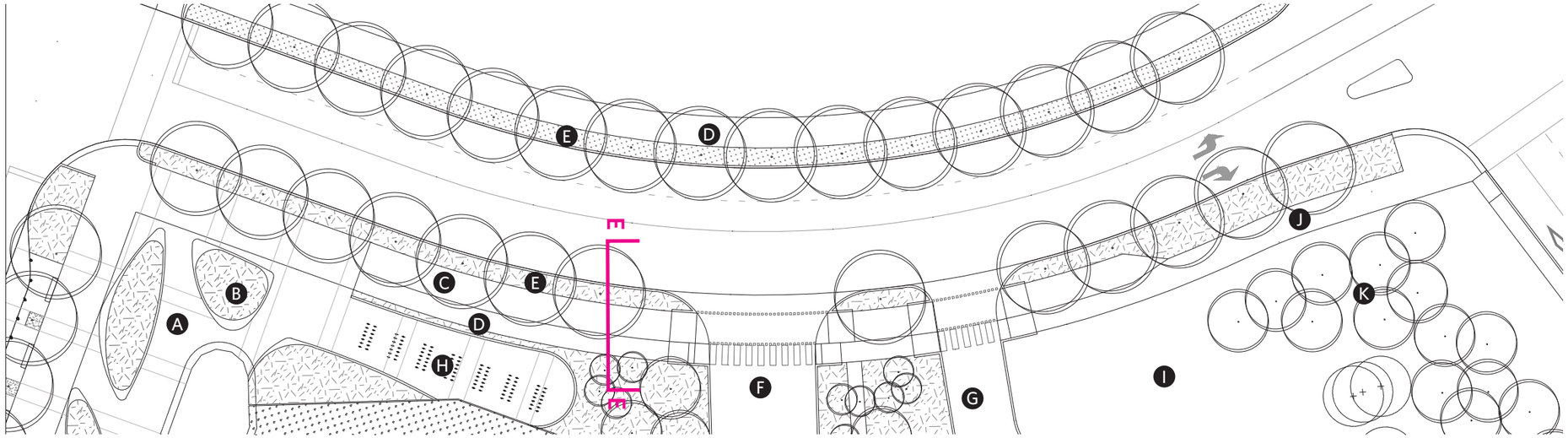
PRINCE OF WALES DRIVE ENLARGEMENT - 1:600 SCALE


PLANTED TERRACE
RAMPED WALKWAY
RAMPED WALKWAY
GUARD RAIL
PLANTED SLOPE
RAMPED WALK WAY
GUARD RAIL
PLANTED SLOPE
WALKWAY
PLANTED BOULEVARD
BI-DIRECTIONAL CYCLE TRACK
PAVER STRIP
GR 81.20m
P4 77.175m
P1 73.775m
P1 69.875m
P1 66.475m
77.69
77.40
75.50
75.47
72.21
69.13
69.21
66.20
65.03
64.88
3:1
3:1
3:1
1.5%
3m
2.5m
Varies
2.5m
Varies
2.5m
Varies
3m
2.5m
3m
1m

SECTION C


5.8m
PLANTED TERRACE
78.17
78.17
P4 77.175m
P1 73.775m
P1 69.875m
P1 66.475m
PLANTED SLOPE
INTERMEDIATE LANDSCAPE WALL
67.78
3:1
PLANTED SLOPE
KNEE WALL
WALKWAY
UNIDIRECTIONAL CYCLE TRACK
PAVER STRIP
PRINCE OF WALES DRIVE
64.92
64.17
1.5%
66.10
Varies
Varies
1.8m
1.8m
.75m

SECTION D

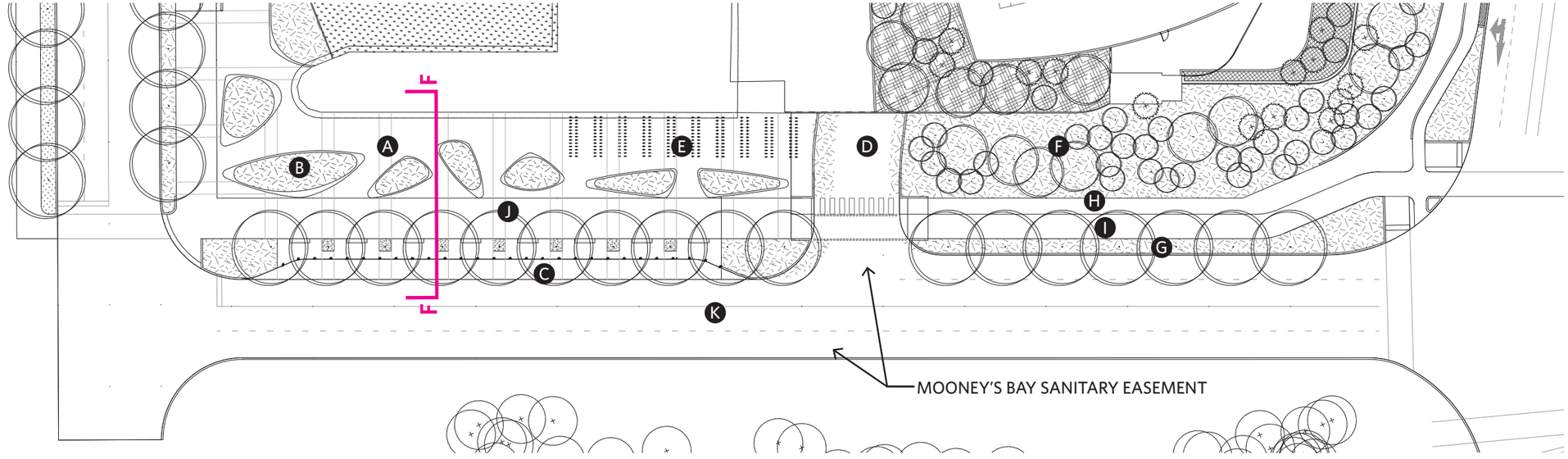


LEGEND

- A PARKING GARAGE PLAZA
- B RAISED PLANTING BEDS
- C BI-DIRECTIONAL CYCLE TRACK
- D SIDE WALK
- E PLANTED BOULEVARD
- F ROAD A P2 GARAGE ENTRANCE
- G SERVICE ROAD ACCESS
- H EXTERIOR COVERED BIKE PARKING
- I PRESERVED LANDSCAPE
- J TEMPORARY MUP
- K PROPOSED TREES

True North

ROAD A ENLARGEMENT - 1:500 SCALE

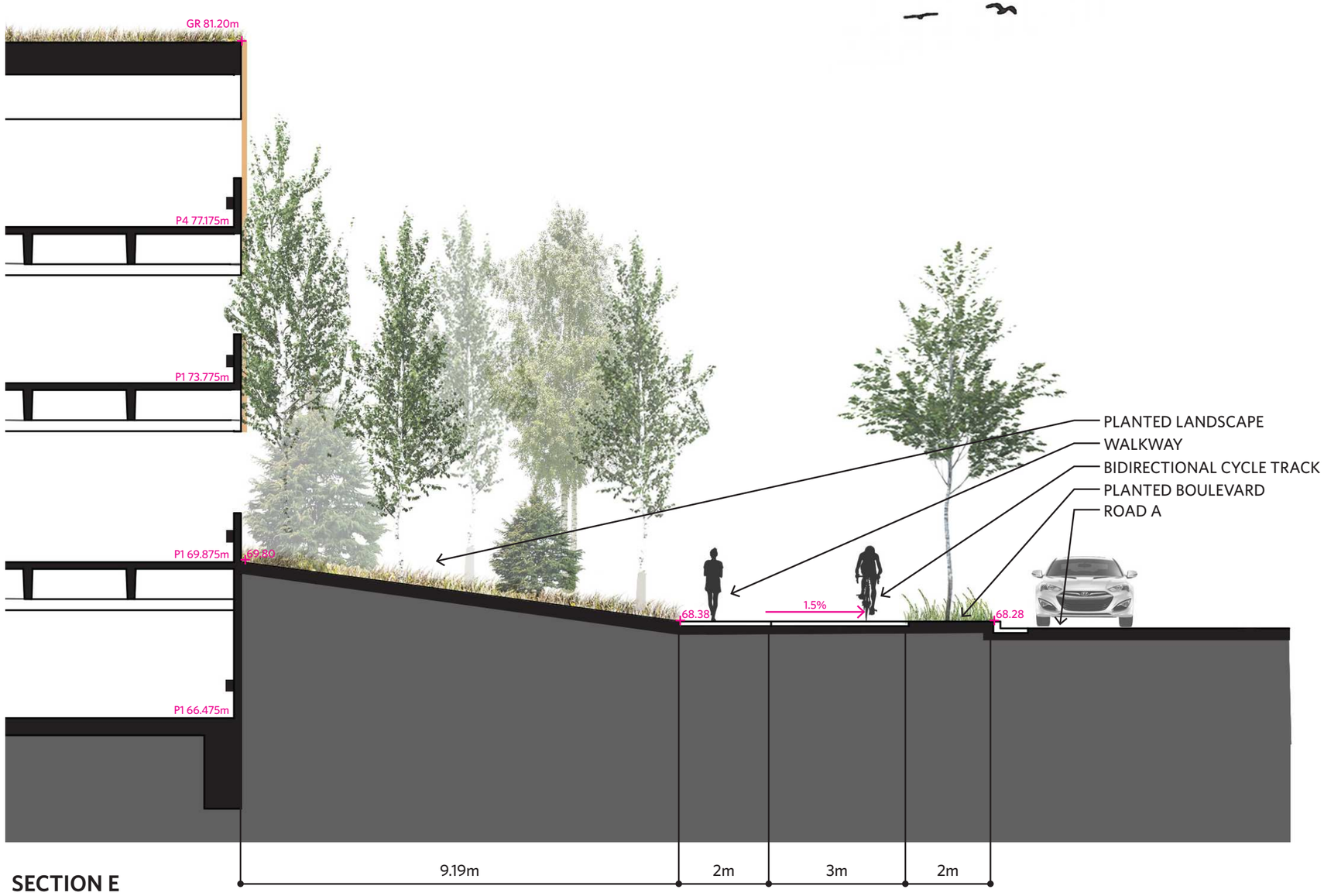


LEGEND

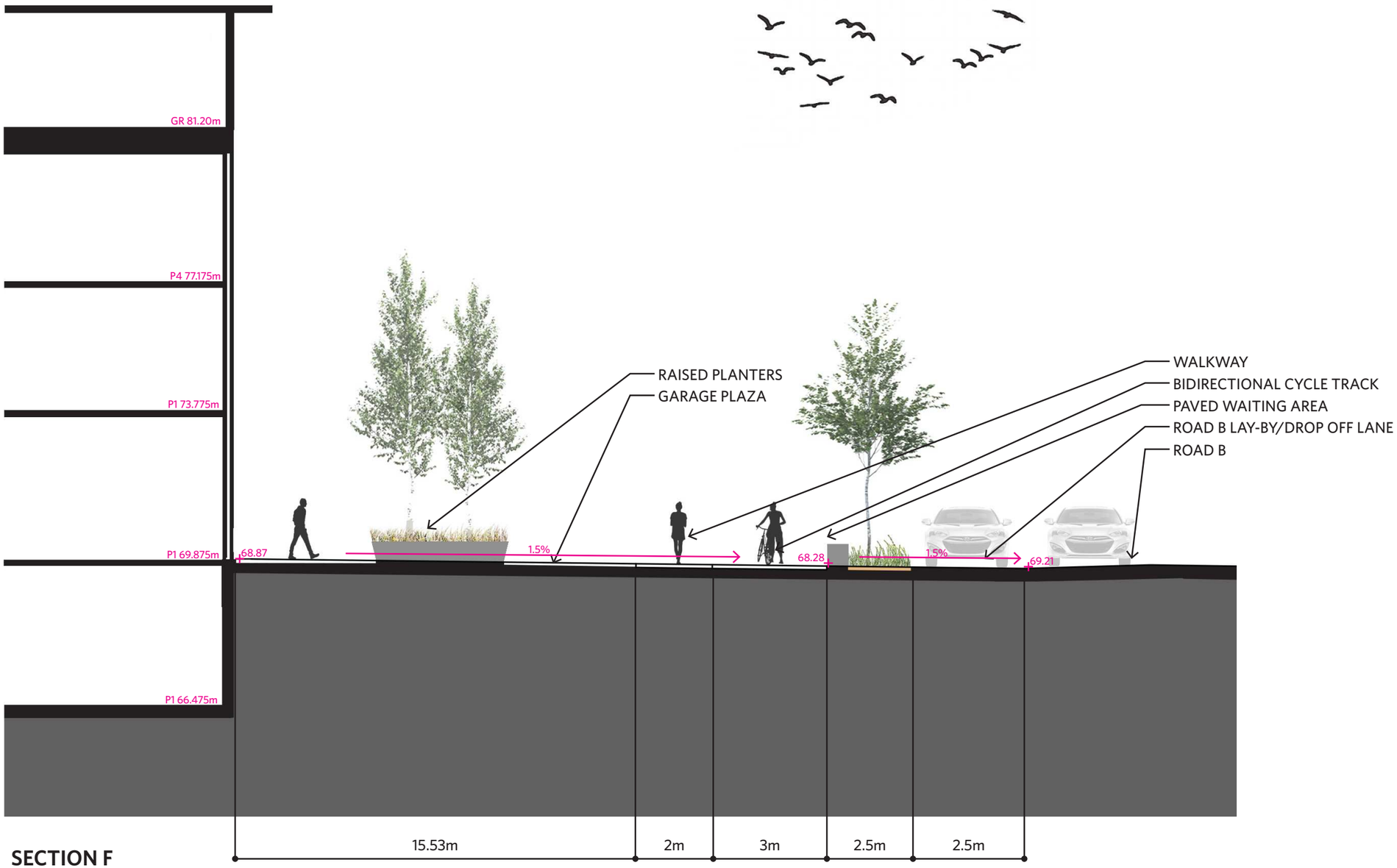
- A PARKING GARAGE PLAZA
- B RAISED PLANTING BEDS
- C PASSENGER DROP OFF LAY-BY
- D P2 GARAGE ENTRANCE
- E EXTERIOR BIKE PARKING
- F SLOPE PLANTING AREA
- G PLANTED BOULEVARD
- H SIDEWALK
- I BI-DIRECTIONAL CYCLE TRACK
- J DISMOUNT BIKE LANE
- K ROAD B

True North

ROAD B ENLARGEMENT - 1:600 SCALE


GR 81.20m
P4 77.175m
P1 73.775m
P1 69.875m
69.80
P1 66.475m
PLANTED LANDSCAPE
WALKWAY
BIDIRECTIONAL CYCLE TRACK
PLANTED BOULEVARD
ROAD A
68.38
1.5%
68.28
9.19m
2m
3m
2m

SECTION E


GR 81.20m
P4 77.175m
P1 73.775m
P1 69.875m
P1 66.475m
68.87
1.5%
68.28
1.5%
69.21
RAISED PLANTERS
GARAGE PLAZA
WALKWAY
BIDIRECTIONAL CYCLE TRACK
PAVED WAITING AREA
ROAD B LAY-BY/DROP OFF LANE
ROAD B
15.53m
2m
3m
2.5m
2.5m

SECTION F

VIEW FROM FUTURE HOSPITAL TOWARDS PARKING GARAGE

OVERALL VIEW FROM THE SOUTHEAST/ DOW'S LAKE

VIEW OF GARAGE AT CORNER OF PRESTON AND PRINCE OF WALES

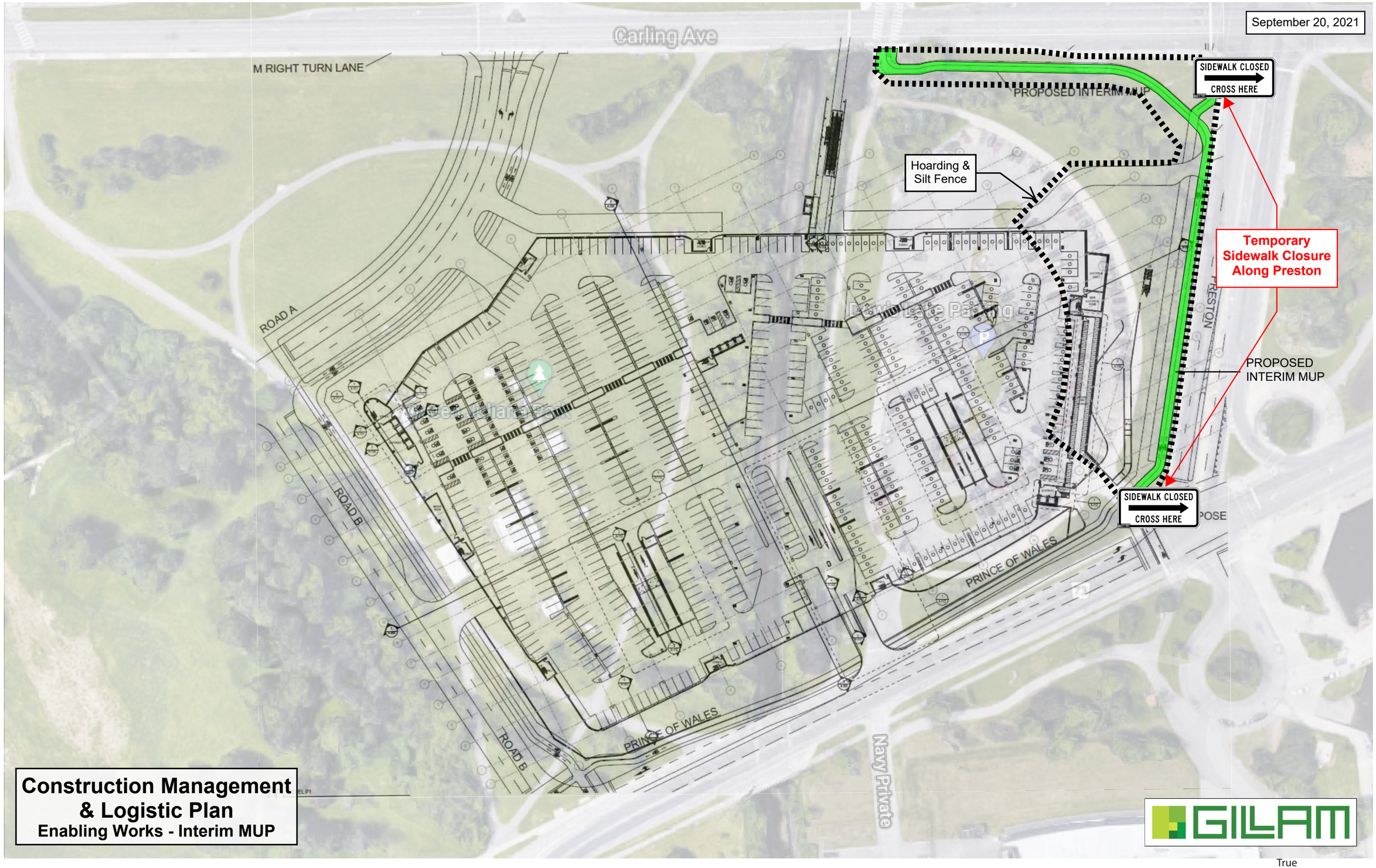
VIEW LOOKING NORTHWEST OF GARAGE AT CORNER OF ROAD B AND PRINCE OF WALES

VIEW LOOKING NORTHWEST OF GARAGE AT CORNER OF ROAD B AND PRINCE OF WALES

VIEW OF GARAGE FROM HOSPITAL AT ROAD B

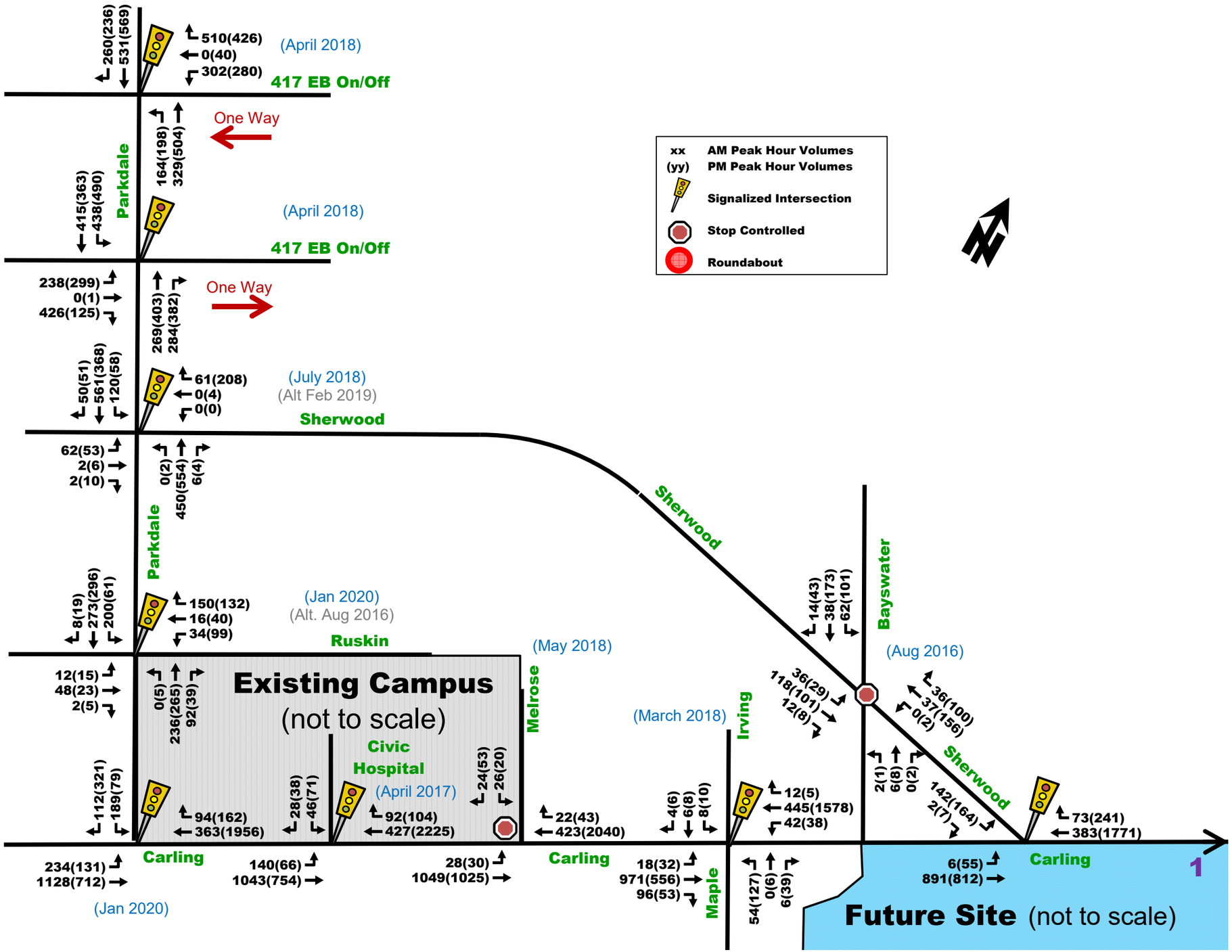
VIEW LOOKING AT ROAD B

VIEW LOOKING GARAGE AT CORNER OF ROAD A AND ROAD B


September 20, 2021
Carling Ave
M RIGHT TURN LANE
ROAD A
ROAD B
PROPOSED INTERIM MUP
SIDEWALK CLOSED
CROSS HERE
Hoarding & Silt Fence
Temporary Sidewalk Closure Along Preston
PRESTON
PROPOSED INTERIM MUP
SIDEWALK CLOSED
CROSS HERE
PRINCE OF WALES
PRINCE OF WALES
Navy Private
Construction Management & Logistic Plan
Enabling Works - Interim MUP
GILLAM

Appendix D:
Intersection Performance Results

Scenario 2 Volumes Part 1/3



Scenario 2 Volumes Part 2/3

xx AM Peak Hour Volumes
(yy) PM Peak Hour Volumes
Signalized Intersection
Stop Controlled
Roundabout

Future Site
(not to scale)

One Way
(Nov 2016)
Raymond 417 WB
166(136)
81(200)
68(133)
120(208)
203(186)

One Way
(Nov 2016)
Orangeville 417 EB
275(338)
4(36)
158(209)
226(238)
316(151)

Rochester
121(237)
258(376)
218(411)
23(99)

(April 2018)
Catherine 417 WB
138(130)
473(743)
Bronson
One Way
360(248)
558(638)
720(746)
424(265)
814(857)

(Oct 2016)
One Way
417 EB Off
1123(1459)
202(122)
400(261)
Bronson
956(963)

(April 2018)
One Way
Plymouth
50(129)
1263(1447)
204(224)
One Way
Imperial
Bronson
2(6)
1052(938)
547(845)

(Sept 2019)
Booth
235(315)
210(310)
188(104)
915(1079)
427(278)
662(1162)
0(0)

(Sept 2019)
One Way
Glebe
649(603)
792(691)
22(17)

(Oct 2016)
(Alt. Jan 2018)
Madawaska
2(4)
1223(1573)
26(19)
38(27)
14(22)
34(107)
4(3)
0(34)
4(68)
Fifth
2(9)
1559(1268)
8(27)

(Feb 2016)
Champagne
52(209)
0(0)
113(183)
225(120)
446(1131)
422(0)

(July 2016)
Trillium Pathway
1051(1623)

(June 2017)
Preston
78(100)
311(331)
132(108)
53(62)
815(1052)
364(346)

(June 2016)
Rochester
259(273)
0(0)
363(87)
1500(1081)

(Sept 2019)
Carling
247(283)
738(1142)
346(708)
58(144)
561(599)

Carling
1453(1277)

Carling
617(1423)
116(82)
558(756)
449(0)
0(370)
0(0)
0(337)
94(172)
472(898)
137(369)

(June 2016)
Navy
144(15)
658(991)
0(1)
0(43)
0(0)
0(0)
660(621)
134(437)
153(357)
347(451)
189(248)
142(465)
162(411)

Queen Elizabeth
573(572)
140(302)
0(2)
0(0)
2(6)
0(0)
705(969)
0(1)

(May 2018)
(Alt. Jan2018)

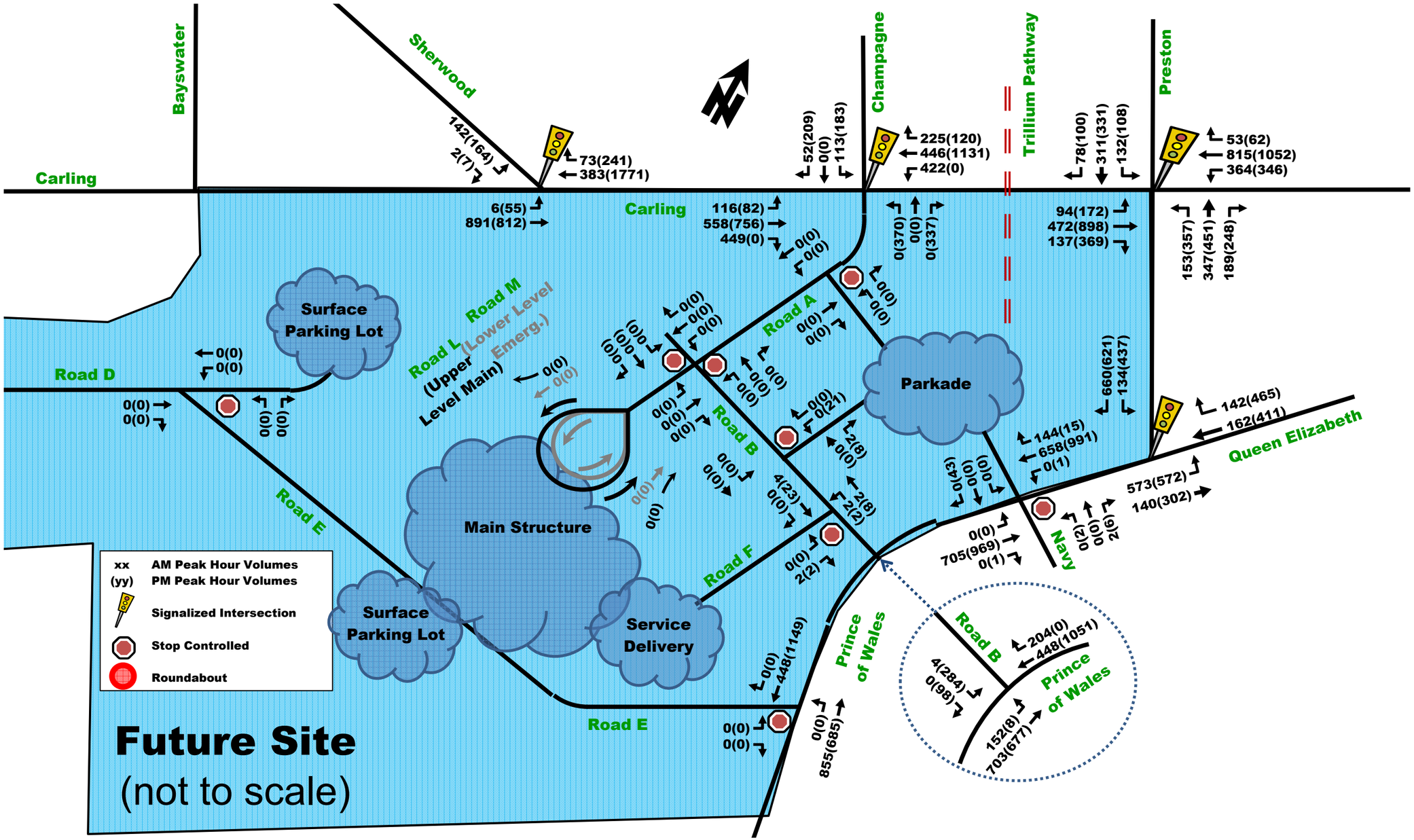
Road B
Prince of Wales
Road E
38(201)
398(975)
6(8)
4(12)
2(3)
0(15)

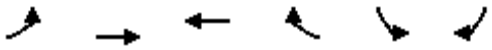
(Oct 2016)
Driveway
22(65)
6(8)
208(276)
214(348)
831(598)
16(8)

Road E
0(0)
448(1149)
0(0)
0(0)
0(0)
855(685)

Road B
204(0)
448(1051)
4(284)
0(98)
Prince of Wales
152(8)
703(677)

Scenario 2 Volumes Part 3/3





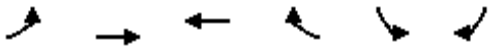
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø10
Lane Configurations							
Traffic Volume (vph)	234	1128	363	94	189	112	
Future Volume (vph)	234	1128	363	94	189	112	
Satd. Flow (prot)	1695	3390	3390	1517	1628	0	
Flt Permitted	0.950				0.970		
Satd. Flow (perm)	1579	3390	3390	1273	1607	0	
Satd. Flow (RTOR)				94	25		
Lane Group Flow (vph)	234	1128	363	94	301	0	
Turn Type	Prot	NA	NA	Perm	Perm		
Protected Phases	5	2	6				10
Permitted Phases				6	4		
Detector Phase	5	2	6	6	4		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0		1.0
Minimum Split (s)	11.1	26.7	26.7	26.7	37.2		5.0
Total Split (s)	40.0	73.0	33.0	33.0	47.0		5.0
Total Split (%)	32.0%	58.4%	26.4%	26.4%	37.6%		4%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.0		2.0
All-Red Time (s)	2.4	1.9	1.9	1.9	3.2		0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.1	5.6	5.6	5.6	6.2		
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None		Min
Act Effct Green (s)	22.5	78.4	49.8	49.8	27.3		
Actuated g/C Ratio	0.18	0.63	0.40	0.40	0.22		
v/c Ratio	0.77	0.53	0.27	0.17	0.81		
Control Delay	64.6	15.1	28.8	7.4	59.2		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	64.6	15.1	28.8	7.4	59.2		
LOS	E	B	C	A	E		
Approach Delay		23.6	24.4		59.2		
Approach LOS		C	C		E		
Queue Length 50th (m)	55.3	76.5	31.3	0.0	65.3		
Queue Length 95th (m)	77.6	114.1	53.2	13.1	89.3		
Internal Link Dist (m)		104.0	170.5		278.4		
Turn Bay Length (m)	155.0			80.0			
Base Capacity (vph)	459	2126	1350	563	541		
Starvation Cap Reductn	0	0	0	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.51	0.53	0.27	0.17	0.56		

Intersection Summary
Cycle Length: 125
Actuated Cycle Length: 125
Offset: 106 (85%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 67.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Carling & Parkdale



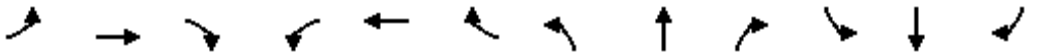
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	140	1043	427	92	46	28
Future Volume (vph)	140	1043	427	92	46	28
Satd. Flow (prot)	1695	3390	3390	1517	1623	0
Flt Permitted	0.468				0.970	
Satd. Flow (perm)	820	3390	3390	1404	1602	0
Satd. Flow (RTOR)				92	26	
Lane Group Flow (vph)	140	1043	427	92	74	0
Turn Type	pm+pt	NA	NA	Perm	Prot	
Protected Phases	5	2	6		7	
Permitted Phases	2			6		
Detector Phase	5	2	6	6	7	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	11.4	31.3	31.3	31.3	15.3	
Total Split (s)	15.0	78.0	63.0	63.0	42.0	
Total Split (%)	12.5%	65.0%	52.5%	52.5%	35.0%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.4	5.3	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	
Act Effct Green (s)	100.5	101.8	86.7	86.7	10.9	
Actuated g/C Ratio	0.84	0.85	0.72	0.72	0.09	
v/c Ratio	0.19	0.36	0.17	0.09	0.44	
Control Delay	2.9	3.1	4.4	0.6	42.9	
Queue Delay	0.0	0.2	0.0	0.0	0.0	
Total Delay	2.9	3.4	4.4	0.6	42.9	
LOS	A	A	A	A	D	
Approach Delay		3.3	3.7		42.9	
Approach LOS		A	A		D	
Queue Length 50th (m)	5.1	26.3	10.6	0.1	10.9	
Queue Length 95th (m)	10.3	39.8	12.5	0.2	25.4	
Internal Link Dist (m)		170.5	180.8		39.9	
Turn Bay Length (m)	90.0			140.0		
Base Capacity (vph)	750	2875	2448	1039	514	
Starvation Cap Reductn	0	955	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.19	0.54	0.17	0.09	0.14	

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 108 (90%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 51.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Carling & Civic



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	971	96	42	445	12	54	0	6	8	6	4
Future Volume (vph)	18	971	96	42	445	12	54	0	6	8	6	4
Satd. Flow (prot)	1695	3390	1517	1695	3390	1517	0	1678	0	0	1675	0
Flt Permitted	0.494			0.265				0.734			0.891	
Satd. Flow (perm)	850	3390	1323	464	3390	1362	0	1247	0	0	1513	0
Satd. Flow (RTOR)			41			40		25			4	
Lane Group Flow (vph)	18	971	96	42	445	12	0	60	0	0	18	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	35.0	35.0	35.0	34.3	34.3	34.3	42.4	42.4		42.4	42.4	
Total Split (s)	77.0	77.0	77.0	77.0	77.0	77.0	43.0	43.0		43.0	43.0	
Total Split (%)	64.2%	64.2%	64.2%	64.2%	64.2%	64.2%	35.8%	35.8%		35.8%	35.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	4.4	4.4		4.4	4.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	-1.7		0.0			0.0	
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	4.0		7.4			7.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		None	None	
Act Effct Green (s)	86.5	86.5	86.5	86.5	86.5	87.9		25.0			25.0	
Actuated g/C Ratio	0.72	0.72	0.72	0.72	0.72	0.73		0.21			0.21	
v/c Ratio	0.03	0.40	0.10	0.13	0.18	0.01		0.22			0.06	
Control Delay	9.4	9.0	5.6	11.1	8.4	0.2		23.2			26.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	9.4	9.0	5.6	11.1	8.4	0.2		23.2			26.7	
LOS	A	A	A	B	A	A		C			C	
Approach Delay		8.7			8.5			23.2			26.7	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.7	49.9	4.3	3.7	21.6	0.0		6.0			2.4	
Queue Length 95th (m)	m4.5	61.2	11.8	9.7	31.4	0.3		16.6			7.9	
Internal Link Dist (m)		236.1			191.5			174.3			220.8	
Turn Bay Length (m)	20.0		15.0	45.0		25.0						
Base Capacity (vph)	613	2444	965	334	2444	1008		387			451	
Starvation Cap Reductn	0	0	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.03	0.40	0.10	0.13	0.18	0.01		0.16			0.04	

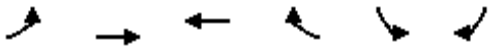
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 75 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Maple/Old Irvine & Carling



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	6	891	383	73	142	2
Future Volume (vph)	6	891	383	73	142	2
Satd. Flow (prot)	1695	3390	4542	0	1695	1517
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1470	3390	4542	0	1668	1472
Satd. Flow (RTOR)			47			2
Lane Group Flow (vph)	6	891	456	0	142	2
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases						4
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	10.0
Minimum Split (s)	10.3	25.1	25.1		25.1	25.1
Total Split (s)	13.0	79.0	66.0		41.0	41.0
Total Split (%)	10.8%	65.8%	55.0%		34.2%	34.2%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3		5.3	5.3
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	6.0	93.9	91.4		15.5	15.5
Actuated g/C Ratio	0.05	0.78	0.76		0.13	0.13
v/c Ratio	0.07	0.34	0.13		0.65	0.01
Control Delay	66.5	3.1	11.1		62.8	29.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	66.5	3.1	11.1		62.8	29.0
LOS	E	A	B		E	C
Approach Delay		3.5	11.1		62.4	
Approach LOS		A	B		E	
Queue Length 50th (m)	1.4	14.4	21.3		32.3	0.0
Queue Length 95th (m)	m4.7	22.8	30.8		50.5	2.4
Internal Link Dist (m)		118.3	141.7		152.1	
Turn Bay Length (m)	30.0					15.0
Base Capacity (vph)	108	2652	3471		504	439
Starvation Cap Reductn	0	0	0		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.06	0.34	0.13		0.28	0.00

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 112 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

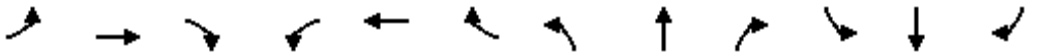
Maximum v/c Ratio: 0.65

Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 44.9%	ICU Level of Service A
Analysis Period (min) 15	

Description: Phase 9 also operates as a bus advance phase with minimum 7s

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 15: Carling & Sherwood



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	558	449	422	446	225	5	0	5	113	0	52
Future Volume (vph)	116	558	449	422	446	225	5	0	5	113	0	52
Satd. Flow (prot)	1695	3390	1517	1695	4871	1517	1695	1413	0	1695	1456	0
Flt Permitted	0.950			0.950			0.723			0.754		
Satd. Flow (perm)	1449	3390	1380	1653	4871	1061	1258	1413	0	1271	1456	0
Satd. Flow (RTOR)			449			225		601			412	
Lane Group Flow (vph)	116	558	449	422	446	225	5	5	0	113	52	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2			6	8			4		
Detector Phase	5	2	2	1	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	15.3	26.3	26.3	15.3	26.3	26.3	18.3	18.3		32.9	32.9	
Total Split (s)	21.3	39.0	39.0	48.0	65.7	65.7	33.0	33.0		33.0	33.0	
Total Split (%)	17.8%	32.5%	32.5%	40.0%	54.8%	54.8%	27.5%	27.5%		27.5%	27.5%	
Yellow Time (s)	3.3	3.7	3.7	3.3	3.7	3.7	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	1.6	1.6	2.0	1.6	1.6	2.0	2.0		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None		None	None	
Act Effct Green (s)	13.5	51.5	51.5	35.0	73.0	73.0	17.6	17.6		17.0	17.0	
Actuated g/C Ratio	0.11	0.43	0.43	0.29	0.61	0.61	0.15	0.15		0.14	0.14	
v/c Ratio	0.61	0.38	0.53	0.85	0.15	0.31	0.03	0.01		0.63	0.09	
Control Delay	64.1	29.8	9.8	63.0	4.5	2.6	39.4	0.0		62.7	0.3	
Queue Delay	0.0	0.0	0.1	0.7	0.0	0.3	0.0	0.0		0.0	0.0	
Total Delay	64.1	29.8	9.9	63.8	4.5	2.8	39.4	0.0		62.7	0.3	
LOS	E	C	A	E	A	A	D	A		E	A	
Approach Delay		25.4			27.0			19.7			43.0	
Approach LOS		C			C			B			D	
Queue Length 50th (m)	27.8	51.7	8.8	76.7	4.0	0.1	1.1	0.0		25.7	0.0	
Queue Length 95th (m)	41.5	83.7	51.0	137.8	14.9	14.9	4.3	0.0		40.6	0.0	
Internal Link Dist (m)		141.7			98.6			63.9			477.2	
Turn Bay Length (m)	55.0		75.0	61.0		35.0				30.0		
Base Capacity (vph)	228	1458	849	605	2971	734	290	788		287	647	
Starvation Cap Reductn	0	0	43	41	0	161	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.51	0.38	0.56	0.75	0.15	0.39	0.02	0.01		0.39	0.08	

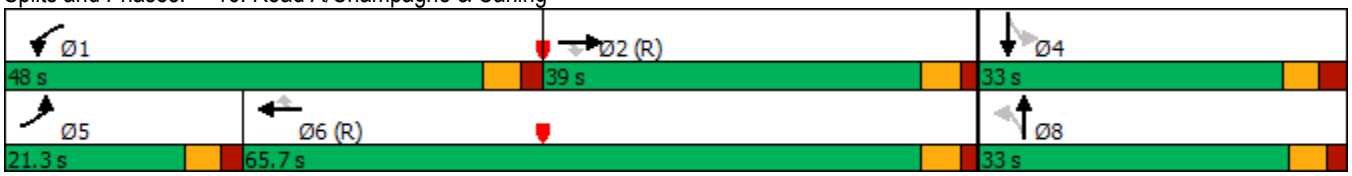
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 85.7%	ICU Level of Service E
Analysis Period (min) 15	

Description: walk time for SB and NB reduced from 7s to 2s as captured in 5s advance

Splits and Phases: 16: Road A/Champagne & Carling



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑↑							
Traffic Volume (vph)	0	617	0	0	1051	0	0	0	0	0	0	0
Future Volume (vph)	0	617	0	0	1051	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3390	0	0	4871	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3390	0	0	4871	0	0	0	0	0	0	0
Satd. Flow (RTOR)												
Lane Group Flow (vph)	0	617	0	0	1051	0	0	0	0	0	0	0
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Detector Phase		2			6							
Switch Phase												
Minimum Initial (s)		10.0			10.0							
Minimum Split (s)		31.3			31.3							
Total Split (s)		84.0			84.0							
Total Split (%)		70.0%			70.0%							
Yellow Time (s)		3.7			3.7							
All-Red Time (s)		1.4			1.4							
Lost Time Adjust (s)		0.0			0.0							
Total Lost Time (s)		5.1			5.1							
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min			C-Min							
Act Effct Green (s)		87.4			87.4							
Actuated g/C Ratio		0.73			0.73							
v/c Ratio		0.25			0.30							
Control Delay		7.4			5.2							
Queue Delay		0.1			0.1							
Total Delay		7.5			5.3							
LOS		A			A							
Approach Delay		7.5			5.3							
Approach LOS		A			A							
Queue Length 50th (m)		17.2			23.2							
Queue Length 95th (m)		47.1			21.9							
Internal Link Dist (m)		98.6			92.8			53.0			60.9	
Turn Bay Length (m)												
Base Capacity (vph)		2470			3549							
Starvation Cap Reductn		809			938							
Spillback Cap Reductn		0			157							
Storage Cap Reductn		0			0							
Reduced v/c Ratio		0.37			0.40							

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

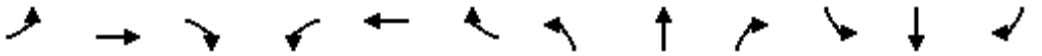
Lane Group	Ø4	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	4	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	10.0	10.0
Minimum Split (s)	35.6	35.6
Total Split (s)	36.0	36.0
Total Split (%)	30%	30%
Yellow Time (s)	3.0	3.0
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary

Maximum v/c Ratio: 0.30

Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 25.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: Carling & Trillium MUP



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	472	137	364	815	53	153	347	189	132	311	78
Future Volume (vph)	94	472	137	364	815	53	153	347	189	132	311	78
Satd. Flow (prot)	1695	3390	1517	1695	4783	0	1695	3178	0	1695	1700	0
Flt Permitted	0.950			0.950			0.225			0.453		
Satd. Flow (perm)	1634	3390	1333	1629	4783	0	394	3178	0	803	1700	0
Satd. Flow (RTOR)			211		9			103			11	
Lane Group Flow (vph)	94	472	137	364	868	0	153	536	0	132	389	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.2	30.0	30.0	11.2	30.0		11.9	43.9		43.9	43.9	
Total Split (s)	19.7	31.1	31.1	33.0	44.4		12.0	55.9		43.9	43.9	
Total Split (%)	16.4%	25.9%	25.9%	27.5%	37.0%		10.0%	46.6%		36.6%	36.6%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3		3.6	3.6		3.6	3.6	
Lost Time Adjust (s)	0.0	0.0	2.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.0	8.0	6.2	6.0		6.9	6.9		6.9	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Act Effct Green (s)	11.2	26.7	24.7	26.8	42.3		47.4	47.4		34.1	34.1	
Actuated g/C Ratio	0.09	0.22	0.21	0.22	0.35		0.40	0.40		0.28	0.28	
v/c Ratio	0.59	0.63	0.31	0.96	0.51		0.68	0.41		0.58	0.79	
Control Delay	76.0	36.5	8.7	92.8	31.2		42.6	21.4		47.0	50.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	76.0	36.5	8.7	92.8	31.2		42.6	21.4		47.0	50.8	
LOS	E	D	A	F	C		D	C		D	D	
Approach Delay		36.4			49.4			26.1			49.8	
Approach LOS		D			D			C			D	
Queue Length 50th (m)	23.4	57.0	9.1	88.5	40.6		22.7	36.1		25.7	79.5	
Queue Length 95th (m)	41.0	63.8	17.6	#146.2	72.3		#43.9	51.1		46.8	115.7	
Internal Link Dist (m)		92.8			165.9			145.6			55.2	
Turn Bay Length (m)	70.0		45.0	75.0			75.0			35.0		
Base Capacity (vph)	190	769	446	378	1694		224	1371		247	531	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.49	0.61	0.31	0.96	0.51		0.68	0.39		0.53	0.73	

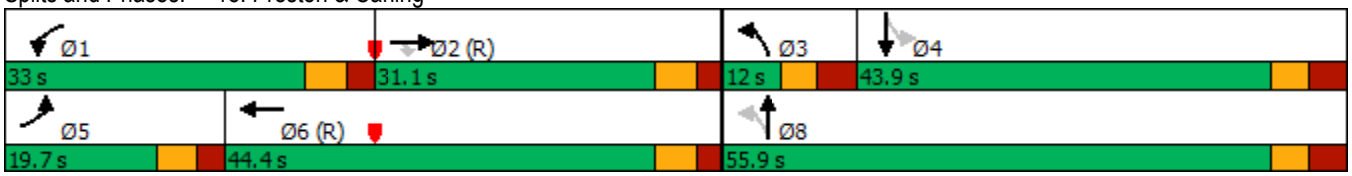
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 116 (97%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

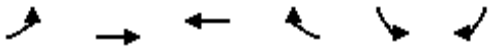
Maximum v/c Ratio: 0.96

Intersection Signal Delay: 41.4	Intersection LOS: D
Intersection Capacity Utilization 101.1%	ICU Level of Service G
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 18: Preston & Carling





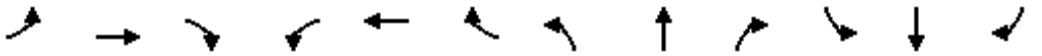
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	247	738	915	188	210	235
Future Volume (vph)	247	738	915	188	210	235
Satd. Flow (prot)	1695	3390	3390	1517	1695	1517
Flt Permitted	0.202				0.950	
Satd. Flow (perm)	360	3390	3390	1197	1658	1319
Satd. Flow (RTOR)				88		229
Lane Group Flow (vph)	247	738	915	188	210	235
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	10.9	29.7	29.7	29.7	39.0	39.0
Total Split (s)	34.0	81.0	47.0	47.0	39.0	39.0
Total Split (%)	28.3%	67.5%	39.2%	39.2%	32.5%	32.5%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3
All-Red Time (s)	2.2	2.0	2.0	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.7	5.7	5.7	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	79.1	79.3	58.4	58.4	29.0	29.0
Actuated g/C Ratio	0.66	0.66	0.49	0.49	0.24	0.24
v/c Ratio	0.61	0.33	0.55	0.30	0.51	0.48
Control Delay	26.2	10.4	25.7	13.5	42.9	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	10.4	25.7	13.5	42.9	8.3
LOS	C	B	C	B	D	A
Approach Delay		14.3	23.6		24.6	
Approach LOS		B	C		C	
Queue Length 50th (m)	36.4	43.0	82.3	13.6	41.0	1.0
Queue Length 95th (m)	56.5	49.9	117.6	34.7	64.1	20.7
Internal Link Dist (m)		100.4	398.0		220.7	
Turn Bay Length (m)	50.0			30.0		30.0
Base Capacity (vph)	549	2240	1650	627	466	528
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.33	0.55	0.30	0.45	0.45

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 116 (97%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 20.2	Intersection LOS: C
Intersection Capacity Utilization 82.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 20: Carling & Booth



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	346	58	561	0	0	0	649	792	22	0	662	427
Future Volume (vph)	346	58	561	0	0	0	649	792	22	0	662	427
Satd. Flow (prot)	1610	1643	1517	0	0	0	3288	1769	0	0	3111	0
Flt Permitted	0.950	0.969					0.950					
Satd. Flow (perm)	1520	1583	1274	0	0	0	3226	1769	0	0	3111	0
Satd. Flow (RTOR)			174					2			137	
Lane Group Flow (vph)	239	165	561	0	0	0	649	814	0	0	1089	0
Turn Type	Perm	NA	pm+ov				Prot	NA			NA	
Protected Phases		4	5				5	2			6	
Permitted Phases	4		4									
Detector Phase	4	4	5				5	2			6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0				10.0	10.0			10.0	
Minimum Split (s)	31.0	31.0	16.0				16.0	25.1			33.0	
Total Split (s)	31.0	31.0	33.0				33.0	79.0			46.0	
Total Split (%)	26.5%	26.5%	28.2%				28.2%	67.5%			39.3%	
Yellow Time (s)	3.3	3.3	3.3				3.3	3.3			3.3	
All-Red Time (s)	2.7	2.7	2.7				2.7	2.7			2.7	
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0			0.0	
Total Lost Time (s)	6.0	6.0	6.0				6.0	6.0			6.0	
Lead/Lag			Lead				Lead				Lag	
Lead-Lag Optimize?			Yes				Yes				Yes	
Recall Mode	None	None	None				None	C-Min			C-Min	
Act Effct Green (s)	23.1	23.1	49.4				26.2	74.8			42.5	
Actuated g/C Ratio	0.20	0.20	0.42				0.22	0.64			0.36	
v/c Ratio	0.80	0.53	0.81				0.88	0.72			0.89	
Control Delay	64.2	48.1	28.6				58.4	19.3			42.1	
Queue Delay	0.0	0.0	0.0				0.0	0.0			0.0	
Total Delay	64.2	48.1	28.6				58.4	19.3			42.1	
LOS	E	D	C				E	B			D	
Approach Delay		40.7						36.6			42.1	
Approach LOS		D						D			D	
Queue Length 50th (m)	54.2	35.2	65.2				73.9	120.7			114.1	
Queue Length 95th (m)	#90.2	57.7	105.0				#101.7	171.0			#158.0	
Internal Link Dist (m)		398.0			115.0			394.4			328.4	
Turn Bay Length (m)	40.0		185.0				50.0					
Base Capacity (vph)	324	338	701				758	1131			1217	
Starvation Cap Reductn	0	0	0				0	0			0	
Spillback Cap Reductn	0	0	0				0	0			0	
Storage Cap Reductn	0	0	0				0	0			0	
Reduced v/c Ratio	0.74	0.49	0.80				0.86	0.72			0.89	

Intersection Summary
Cycle Length: 117
Actuated Cycle Length: 117
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0
Total Split (%)	6%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 39.4	Intersection LOS: D
Intersection Capacity Utilization 90.4%	ICU Level of Service E
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Bronson & Carling/Glebe

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	302	0	510	164	329	0	0	531	260
Future Volume (vph)	0	0	0	302	0	510	164	329	0	0	531	260
Satd. Flow (prot)	0	0	0	1695	1481	0	1695	1784	0	0	1667	0
Flt Permitted				0.950			0.163					
Satd. Flow (perm)	0	0	0	1695	1481	0	291	1784	0	0	1667	0
Satd. Flow (RTOR)					482						32	
Lane Group Flow (vph)	0	0	0	302	510	0	164	329	0	0	791	0
Turn Type				Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Detector Phase				8	8		5	2			6	
Switch Phase												
Minimum Initial (s)				10.0	10.0		5.0	10.0			10.0	
Minimum Split (s)				29.0	29.0		10.3	27.3			25.1	
Total Split (s)				34.0	34.0		14.0	66.0			52.0	
Total Split (%)				34.0%	34.0%		14.0%	66.0%			52.0%	
Yellow Time (s)				3.3	3.3		3.0	3.0			3.0	
All-Red Time (s)				2.2	2.2		2.2	3.3			3.3	
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)				5.5	5.5		5.2	6.3			6.3	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode				None	None		None	C-Min			C-Min	
Act Effct Green (s)				23.1	23.1		66.2	65.1			51.2	
Actuated g/C Ratio				0.23	0.23		0.66	0.65			0.51	
v/c Ratio				0.77	0.72		0.52	0.28			0.91	
Control Delay				49.0	10.1		26.2	7.4			39.5	
Queue Delay				0.0	0.0		0.9	1.8			26.9	
Total Delay				49.0	10.1		27.1	9.2			66.4	
LOS				D	B		C	A			E	
Approach Delay					24.5			15.2			66.4	
Approach LOS					C			B			E	
Queue Length 50th (m)				54.5	4.2		12.1	23.5			132.3	
Queue Length 95th (m)				78.9	33.5		29.7	39.0			#230.0	
Internal Link Dist (m)		157.5			140.3			45.3			171.5	
Turn Bay Length (m)												
Base Capacity (vph)				483	766		316	1160			869	
Starvation Cap Reductn				0	0		36	657			0	
Spillback Cap Reductn				0	0		0	0			115	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				0.63	0.67		0.59	0.65			1.05	

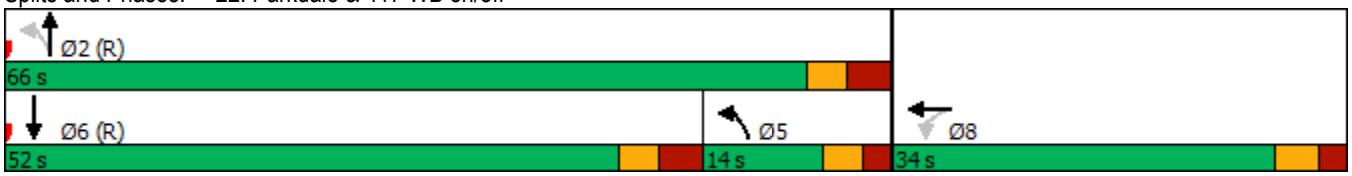
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 69 (69%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

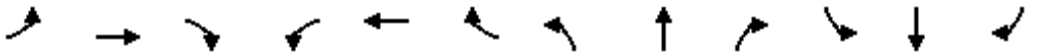
Maximum v/c Ratio: 0.91

Intersection Signal Delay: 38.1	Intersection LOS: D
Intersection Capacity Utilization 138.5%	ICU Level of Service H
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 22: Parkdale & 417 WB on/off





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	238	0	426	0	0	0	0	269	284	438	415	0
Future Volume (vph)	238	0	426	0	0	0	0	269	284	438	415	0
Satd. Flow (prot)	0	1695	1517	0	0	0	0	2966	0	1695	1784	0
Flt Permitted		0.950								0.344		
Satd. Flow (perm)	0	1692	1474	0	0	0	0	2966	0	598	1784	0
Satd. Flow (RTOR)			420					284				
Lane Group Flow (vph)	0	238	426	0	0	0	0	553	0	438	415	0
Turn Type	Perm	NA	Perm					NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Detector Phase	4	4	4					2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0					10.0		5.0	10.0	
Minimum Split (s)	25.1	25.1	25.1					25.1		10.3	25.1	
Total Split (s)	34.0	34.0	34.0					40.0		26.0	66.0	
Total Split (%)	34.0%	34.0%	34.0%					40.0%		26.0%	66.0%	
Yellow Time (s)	3.3	3.3	3.3					3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6	2.6					2.8		2.3	2.8	
Lost Time Adjust (s)		0.0	0.0					0.0		0.0	0.0	
Total Lost Time (s)		5.9	5.9					5.8		5.3	5.8	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None	None					C-Min		None	C-Min	
Act Effct Green (s)		19.8	19.8					41.8		69.0	68.5	
Actuated g/C Ratio		0.20	0.20					0.42		0.69	0.68	
v/c Ratio		0.71	0.68					0.39		0.68	0.34	
Control Delay		48.7	9.4					13.6		16.1	10.0	
Queue Delay		0.0	0.0					0.1		55.4	5.3	
Total Delay		48.7	9.4					13.7		71.5	15.3	
LOS		D	A					B		E	B	
Approach Delay		23.5						13.7			44.2	
Approach LOS		C						B			D	
Queue Length 50th (m)		43.7	1.0					22.1		42.2	33.3	
Queue Length 95th (m)		62.1	24.9					41.4		m68.4	m64.8	
Internal Link Dist (m)		109.8			145.0			90.1			45.3	
Turn Bay Length (m)			75.0									
Base Capacity (vph)		475	716					1447		674	1222	
Starvation Cap Reductn		0	0					181		279	731	
Spillback Cap Reductn		0	5					48		0	22	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.50	0.60					0.44		1.11	0.85	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 53 (53%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 138.5%	ICU Level of Service H
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: Parkdale & 417 EB on/off

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	2	2	0	0	61	0	450	6	120	561	50
Future Volume (vph)	62	2	2	0	0	61	0	450	6	120	561	50
Satd. Flow (prot)	0	1688	0	0	1441	0	0	1778	0	0	1746	0
Flt Permitted		0.700									0.849	
Satd. Flow (perm)	0	1230	0	0	1441	0	0	1778	0	0	1483	0
Satd. Flow (RTOR)		1			488			2			11	
Lane Group Flow (vph)	0	66	0	0	61	0	0	456	0	0	731	0
Turn Type	Perm	NA			NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		1.0	1.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		25.1	25.1		25.1	25.1	
Total Split (s)	18.0	18.0		18.0	18.0		82.0	82.0		82.0	82.0	
Total Split (%)	18.0%	18.0%		18.0%	18.0%		82.0%	82.0%		82.0%	82.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			5.6			5.6	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Ped	Ped		Ped	Ped		C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		14.3			14.3			76.1			76.1	
Actuated g/C Ratio		0.14			0.14			0.76			0.76	
v/c Ratio		0.37			0.10			0.34			0.65	
Control Delay		44.8			0.3			4.6			8.5	
Queue Delay		0.0			0.0			0.0			0.1	
Total Delay		44.8			0.3			4.6			8.6	
LOS		D			A			A			A	
Approach Delay		44.8			0.3			4.6			8.6	
Approach LOS		D			A			A			A	
Queue Length 50th (m)		11.6			0.0			22.7			38.5	
Queue Length 95th (m)		24.1			0.0			36.4			51.1	
Internal Link Dist (m)		221.3			335.0			289.1			90.1	
Turn Bay Length (m)												
Base Capacity (vph)		177			624			1358			1135	
Starvation Cap Reductn		0			0			0			28	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.37			0.10			0.34			0.66	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 25 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 91.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 24: Parkdale & Sherwood

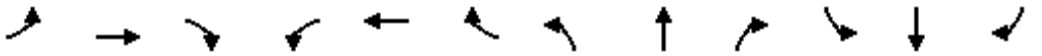
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	48	2	34	16	150	0	236	92	200	273	8
Future Volume (vph)	12	48	2	34	16	150	0	236	92	200	273	8
Satd. Flow (prot)	0	1753	0	1695	1468	0	0	1695	0	0	1744	0
Flt Permitted		0.919		0.847							0.722	
Satd. Flow (perm)	0	1619	0	1385	1468	0	0	1695	0	0	1277	0
Satd. Flow (RTOR)		2			150			54			2	
Lane Group Flow (vph)	0	62	0	34	166	0	0	328	0	0	481	0
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	19.4	19.4		19.4	19.4		31.8	31.8		31.8	31.8	
Total Split (s)	20.0	20.0		20.0	20.0		65.0	65.0		65.0	65.0	
Total Split (%)	23.5%	23.5%		23.5%	23.5%		76.5%	76.5%		76.5%	76.5%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.4	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.4		5.4	5.4			5.8			5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		13.2		13.2	13.2			60.6			60.6	
Actuated g/C Ratio		0.16		0.16	0.16			0.71			0.71	
v/c Ratio		0.25		0.16	0.47			0.27			0.53	
Control Delay		32.9		32.6	12.1			4.3			8.4	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		32.9		32.6	12.1			4.3			8.4	
LOS		C		C	B			A			A	
Approach Delay		32.9			15.5			4.3			8.4	
Approach LOS		C			B			A			A	
Queue Length 50th (m)		8.6		4.8	2.2			13.3			31.1	
Queue Length 95th (m)		19.2		12.6	18.6			22.4			52.6	
Internal Link Dist (m)		220.6			228.6			278.4			289.1	
Turn Bay Length (m)				40.0								
Base Capacity (vph)		279		237	376			1223			911	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.22		0.14	0.44			0.27			0.53	

Intersection Summary
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 45 (53%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 9.9	Intersection LOS: A
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 25: Parkdale & Ruskin



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	573	140	2	0	162	142	2	0	0	134	4	660
Future Volume (vph)	573	140	2	0	162	142	2	0	0	134	4	660
Satd. Flow (prot)	3288	1779	0	1784	1784	1517	0	1695	0	0	1702	1517
Flt Permitted	0.950							0.611			0.732	
Satd. Flow (perm)	3243	1779	0	1784	1784	1442	0	1053	0	0	1253	1378
Satd. Flow (RTOR)						159						
Lane Group Flow (vph)	573	142	0	0	162	142	0	2	0	0	138	660
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases				6		6	8			4		4
Detector Phase	5	2		6	6	6	8	8		4	4	5
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	16.1	32.1		32.1	32.1	32.1	29.5	29.5		29.5	29.5	16.1
Total Split (s)	23.0	55.5		32.5	32.5	32.5	29.5	29.5		29.5	29.5	23.0
Total Split (%)	23.0%	55.5%		32.5%	32.5%	32.5%	29.5%	29.5%		29.5%	29.5%	23.0%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.3	3.3		3.3	3.3	3.7
All-Red Time (s)	2.4	2.4		2.4	2.4	2.4	2.2	2.2		2.2	2.2	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	6.1	6.1		6.1	6.1	6.1		5.5			5.5	6.1
Lead/Lag	Lead											Lead
Lead-Lag Optimize?	Yes											Yes
Recall Mode	None	C-Min		C-Min	C-Min	C-Min	None	None		None	None	None
Act Effct Green (s)	38.6	68.8			24.1	24.1		16.6			16.6	54.6
Actuated g/C Ratio	0.39	0.69			0.24	0.24		0.17			0.17	0.55
v/c Ratio	0.45	0.12			0.38	0.30		0.01			0.67	0.82
Control Delay	32.6	7.2			33.3	5.5		31.0			53.8	30.3
Queue Delay	0.0	0.0			0.0	0.0		0.0			0.0	0.0
Total Delay	32.6	7.2			33.3	5.5		31.0			53.8	30.3
LOS	C	A			C	A		C			D	C
Approach Delay		27.6			20.3			31.0			34.4	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	40.3	7.2			25.8	0.0		0.3			25.5	78.1
Queue Length 95th (m)	#96.5	15.3			43.5	11.4		2.1			41.4	#159.9
Internal Link Dist (m)		79.9			173.8			12.4			145.6	
Turn Bay Length (m)	45.0					45.0						
Base Capacity (vph)	1269	1224			487	509		252			300	805
Starvation Cap Reductn	0	0			0	0		0			0	0
Spillback Cap Reductn	0	0			0	0		0			0	0
Storage Cap Reductn	0	0			0	0		0			0	0
Reduced v/c Ratio	0.45	0.12			0.33	0.28		0.01			0.46	0.82

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated

Lane Group	Ø9	Ø10	Ø11
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Satd. Flow (RTOR)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	9	10	11
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	10.0
Total Split (s)	5.0	5.0	10.0
Total Split (%)	5%	5%	10%
Yellow Time (s)	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	
Lead-Lag Optimize?		Yes	
Recall Mode	None	None	None
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (m)			
Queue Length 95th (m)			
Internal Link Dist (m)			
Turn Bay Length (m)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

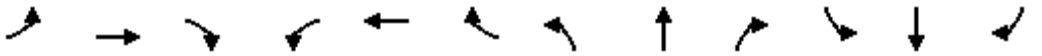
Intersection Summary

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 29.4	Intersection LOS: C
Intersection Capacity Utilization 95.5%	ICU Level of Service F
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 30: Prince of Wales & Preston



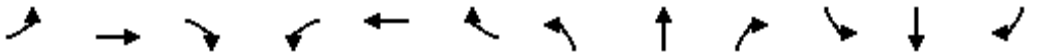
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	203	120	68	121	258	0	0	81	166
Future Volume (vph)	0	0	0	203	120	68	121	258	0	0	81	166
Satd. Flow (prot)	0	0	0	1695	1650	0	1695	1784	0	0	1784	1517
Flt Permitted				0.950			0.565					
Satd. Flow (perm)	0	0	0	1678	1650	0	984	1784	0	0	1784	1436
Satd. Flow (RTOR)					49							166
Lane Group Flow (vph)	0	0	0	203	188	0	121	258	0	0	81	166
Turn Type				Perm	NA		pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8			2					6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				10.0	10.0		5.0	10.0			10.0	10.0
Minimum Split (s)				23.7	23.7		10.9	27.3			24.9	24.9
Total Split (s)				24.0	24.0		11.0	36.0			25.0	25.0
Total Split (%)				40.0%	40.0%		18.3%	60.0%			41.7%	41.7%
Yellow Time (s)				3.3	3.3		3.3	3.3			3.3	3.3
All-Red Time (s)				2.4	2.4		2.6	2.6			2.6	2.6
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				5.7	5.7		5.9	5.9			5.9	5.9
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		None	C-Min			C-Min	C-Min
Act Effct Green (s)				13.1	13.1		35.3	35.3			25.1	25.1
Actuated g/C Ratio				0.22	0.22		0.59	0.59			0.42	0.42
v/c Ratio				0.56	0.47		0.18	0.25			0.11	0.24
Control Delay				26.3	18.3		5.7	5.9			14.3	4.1
Queue Delay				0.0	0.0		0.0	0.0			0.0	0.0
Total Delay				26.3	18.3		5.7	5.9			14.3	4.1
LOS				C	B		A	A			B	A
Approach Delay					22.4			5.8			7.4	
Approach LOS					C			A			A	
Queue Length 50th (m)				20.2	13.3		5.2	11.5			5.6	0.0
Queue Length 95th (m)				33.3	25.6		10.4	19.8			14.4	10.7
Internal Link Dist (m)		122.0			89.8			72.3			151.7	
Turn Bay Length (m)												35.0
Base Capacity (vph)				511	537		658	1049			746	697
Starvation Cap Reductn				0	0		0	0			0	0
Spillback Cap Reductn				0	0		0	0			0	0
Storage Cap Reductn				0	0		0	0			0	0
Reduced v/c Ratio				0.40	0.35		0.18	0.25			0.11	0.24

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 53 (88%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 31: Rochester & 417 WB on/Raymond



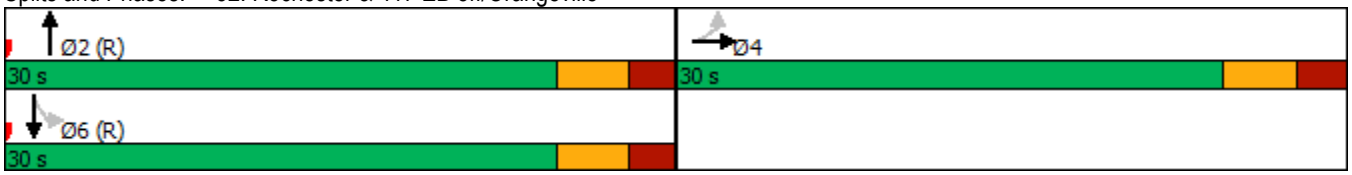
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	158	226	316	0	0	0	0	218	23	4	275	0
Future Volume (vph)	158	226	316	0	0	0	0	218	23	4	275	0
Satd. Flow (prot)	0	3073	0	0	0	0	0	3331	0	0	3387	0
Flt Permitted		0.989									0.952	
Satd. Flow (perm)	0	3070	0	0	0	0	0	3331	0	0	3227	0
Satd. Flow (RTOR)		316						22				
Lane Group Flow (vph)	0	700	0	0	0	0	0	241	0	0	279	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Detector Phase	4	4						2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0						10.0		10.0	10.0	
Minimum Split (s)	26.0	26.0						25.1		25.1	25.1	
Total Split (s)	30.0	30.0						30.0		30.0	30.0	
Total Split (%)	50.0%	50.0%						50.0%		50.0%	50.0%	
Yellow Time (s)	3.3	3.3						3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3						2.1		2.1	2.1	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		5.6						5.4			5.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None						C-Min		C-Min	C-Min	
Act Effct Green (s)		14.7						34.3			34.3	
Actuated g/C Ratio		0.24						0.57			0.57	
v/c Ratio		0.71						0.13			0.15	
Control Delay		14.7						4.9			8.7	
Queue Delay		0.0						0.0			0.0	
Total Delay		14.7						4.9			8.7	
LOS		B						A			A	
Approach Delay		14.7						4.9			8.7	
Approach LOS		B						A			A	
Queue Length 50th (m)		19.2						4.0			13.3	
Queue Length 95th (m)		29.7						10.4			21.8	
Internal Link Dist (m)		104.8			107.2			99.1			72.3	
Turn Bay Length (m)												
Base Capacity (vph)		1435						1914			1845	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.49						0.13			0.15	

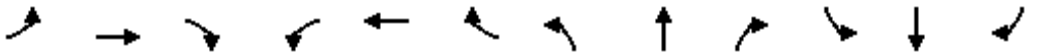
Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 52 (87%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 49.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 32: Rochester & 417 EB off/Orangeville





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	720	558	360	424	814	0	0	473	138
Future Volume (vph)	0	0	0	720	558	360	424	814	0	0	473	138
Satd. Flow (prot)	0	0	0	1458	4241	0	1695	3390	0	0	3230	0
Flt Permitted				0.950	0.990		0.190					
Satd. Flow (perm)	0	0	0	1458	4241	0	335	3390	0	0	3230	0
Satd. Flow (RTOR)					99						37	
Lane Group Flow (vph)	0	0	0	490	1148	0	424	814	0	0	611	0
Turn Type				Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Detector Phase				8	8		5	2			6	
Switch Phase												
Minimum Initial (s)				10.0	10.0		5.0	10.0			10.0	
Minimum Split (s)				25.9	25.9		11.0	25.1			25.1	
Total Split (s)				41.0	41.0		26.0	54.0			28.0	
Total Split (%)				43.2%	43.2%		27.4%	56.8%			29.5%	
Yellow Time (s)				3.3	3.3		3.3	3.3			3.3	
All-Red Time (s)				2.6	2.6		2.7	2.8			2.8	
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)				5.9	5.9		6.0	6.1			6.1	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode				None	None		None	C-Min			C-Min	
Act Effct Green (s)				34.7	34.7		48.4	48.3			22.6	
Actuated g/C Ratio				0.37	0.37		0.51	0.51			0.24	
v/c Ratio				0.92	0.71		0.94	0.47			0.77	
Control Delay				53.8	26.3		57.1	19.9			39.5	
Queue Delay				26.3	0.2		9.2	2.1			0.0	
Total Delay				80.1	26.4		66.3	22.0			39.5	
LOS				F	C		E	C			D	
Approach Delay					42.5			37.2			39.5	
Approach LOS					D			D			D	
Queue Length 50th (m)				97.7	62.8		71.5	56.7			52.4	
Queue Length 95th (m)				#166.9	79.5		#113.8	81.5			#72.4	
Internal Link Dist (m)		151.3			165.9			71.3			102.2	
Turn Bay Length (m)												
Base Capacity (vph)				544	1646		456	1735			809	
Starvation Cap Reductn				0	0		26	741			0	
Spillback Cap Reductn				73	70		0	0			1	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				1.04	0.73		0.99	0.82			0.76	

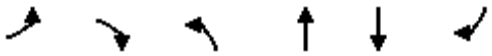
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 35 (37%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 40.1	Intersection LOS: D
Intersection Capacity Utilization 109.3%	ICU Level of Service H
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 33: Bronson & Catherine 417 WB on



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	202	400	0	956	1123	0
Future Volume (vph)	202	400	0	956	1123	0
Satd. Flow (prot)	1695	1517	0	3390	3390	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	1474	0	3390	3390	0
Satd. Flow (RTOR)		100				
Lane Group Flow (vph)	202	400	0	956	1123	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		10.0	10.0	
Minimum Split (s)	25.1	25.1		34.3	34.3	
Total Split (s)	30.0	30.0		65.0	65.0	
Total Split (%)	31.6%	31.6%		68.4%	68.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.8	5.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None		C-Min	C-Min	
Act Effct Green (s)	26.8	26.8		57.0	57.0	
Actuated g/C Ratio	0.28	0.28		0.60	0.60	
v/c Ratio	0.42	0.82		0.47	0.55	
Control Delay	29.4	37.4		12.5	6.6	
Queue Delay	0.1	0.0		0.0	0.7	
Total Delay	29.5	37.4		12.5	7.3	
LOS	C	D		B	A	
Approach Delay	34.7			12.5	7.3	
Approach LOS	C			B	A	
Queue Length 50th (m)	29.6	51.4		49.0	4.8	
Queue Length 95th (m)	44.4	79.8		74.6	m115.8	
Internal Link Dist (m)	81.4			50.7	71.3	
Turn Bay Length (m)		60.0				
Base Capacity (vph)	505	509		2167	2167	
Starvation Cap Reductn	0	0		0	652	
Spillback Cap Reductn	29	0		136	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.42	0.79		0.47	0.74	

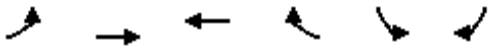
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 72 (76%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 15.4	Intersection LOS: B
Intersection Capacity Utilization 109.3%	ICU Level of Service H
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 34: Bronson & 417 EB off



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	152	703	448	204	4	0	
Future Volume (vph)	152	703	448	204	4	0	
Satd. Flow (prot)	1695	1784	3194	0	1695	1784	
Flt Permitted	0.366				0.950		
Satd. Flow (perm)	650	1784	3194	0	1648	1784	
Satd. Flow (RTOR)							
Lane Group Flow (vph)	152	703	652	0	4	0	
Turn Type	pm+pt	NA	NA		Perm	Perm	
Protected Phases	5	2	6				9
Permitted Phases	2				4	4	
Detector Phase	5	2	6		4	4	
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0		10.0	10.0	1.0
Minimum Split (s)	10.3	23.3	23.3		23.3	23.3	10.0
Total Split (s)	10.4	66.7	56.3		23.3	23.3	10.0
Total Split (%)	10.4%	66.7%	56.3%		23.3%	23.3%	10%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3	2.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3		5.3	5.3	
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?	Yes		Yes				
Recall Mode	None	C-Min	C-Min		None	None	None
Act Effct Green (s)	88.0	92.3	75.9		11.6		
Actuated g/C Ratio	0.88	0.92	0.76		0.12		
v/c Ratio	0.24	0.43	0.27		0.02		
Control Delay	3.8	4.7	6.3		37.0		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	3.8	4.7	6.3		37.0		
LOS	A	A	A		D		
Approach Delay		4.6	6.3		37.0		
Approach LOS		A	A		D		
Queue Length 50th (m)	0.0	0.0	1.5		0.7		
Queue Length 95th (m)	19.9	116.8	m71.5		3.6		
Internal Link Dist (m)		198.2	95.9		17.7		
Turn Bay Length (m)	45.0						
Base Capacity (vph)	643	1646	2469		296		
Starvation Cap Reductn	0	0	0		0		
Spillback Cap Reductn	0	0	0		0		
Storage Cap Reductn	0	0	0		0		
Reduced v/c Ratio	0.24	0.43	0.26		0.01		

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.43

Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 39: Prince of Wales & Road B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	1049	423	22	26	24
Future Vol, veh/h	28	1049	423	22	26	24
Conflicting Peds, #/hr	40	0	0	40	3	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	1049	423	22	26	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	485	0	-	0	1047	261
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	584	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1074	-	-	-	224	738
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1038	-	-	-	203	708
Mov Cap-2 Maneuver	-	-	-	-	203	-
Stage 1	-	-	-	-	564	-
Stage 2	-	-	-	-	503	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1038	-	-	-	309
HCM Lane V/C Ratio	0.027	-	-	-	0.162
HCM Control Delay (s)	8.6	-	-	-	18.9
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	13.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑↱			↱
Traffic Vol, veh/h	0	1453	1500	363	0	259
Future Vol, veh/h	0	1453	1500	363	0	259
Conflicting Peds, #/hr	36	0	0	36	1	2
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1453	1500	363	0	259

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	970
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	~ 217
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	~ 210
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	185.4
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	210
HCM Lane V/C Ratio	-	-	-	1.233
HCM Control Delay (s)	-	-	-	185.4
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	13.4

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	705	0	0	658	144	0	0	2	0	0	0
Future Vol, veh/h	0	705	0	0	658	144	0	0	2	0	0	0
Conflicting Peds, #/hr	2	0	7	7	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	705	0	0	658	144	0	0	2	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	712	0	0	1442	1516	712	-	-	732
Stage 1	-	-	-	-	-	-	712	712	-	-	-	-
Stage 2	-	-	-	-	-	-	730	804	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	888	-	-	110	119	432	0	0	421
Stage 1	0	-	-	-	-	-	423	436	-	0	0	-
Stage 2	0	-	-	-	-	-	414	396	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	883	-	-	109	118	429	-	-	420
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	118	-	-	-	-
Stage 1	-	-	-	-	-	-	423	433	-	-	-	-
Stage 2	-	-	-	-	-	-	414	395	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.4	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	429	-	-	883	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-	-	-	-
HCM Control Delay (s)	13.4	-	-	0	-	-	0
HCM Lane LOS	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	0	-	-	-

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	118	12	0	37	36	2	6	0	62	38	14
Future Vol, veh/h	36	118	12	0	37	36	2	6	0	62	38	14
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	118	12	0	37	36	2	6	0	62	38	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	7.5	7.7	8.3
HCM LOS	A	A	A	A

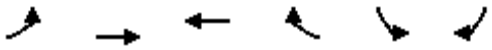
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	22%	0%	54%
Vol Thru, %	75%	71%	51%	33%
Vol Right, %	0%	7%	49%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	166	73	114
LT Vol	2	36	0	62
Through Vol	6	118	37	38
RT Vol	0	12	36	14
Lane Flow Rate	8	166	73	114
Geometry Grp	1	1	1	1
Degree of Util (X)	0.01	0.199	0.083	0.143
Departure Headway (Hd)	4.647	4.308	4.102	4.507
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	772	838	876	798
Service Time	2.665	2.308	2.115	2.52
HCM Lane V/C Ratio	0.01	0.198	0.083	0.143
HCM Control Delay	7.7	8.4	7.5	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.7	0.3	0.5

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	0	30	0	0	0	30	30	0	0	72	72
Future Vol, veh/h	30	0	30	0	0	0	30	30	0	0	72	72
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	0	30	0	0	0	30	30	0	0	72	72
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	0	7.6	7.5
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	50%	50%	0%	0%
Vol Thru, %	50%	0%	100%	50%
Vol Right, %	0%	50%	0%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	60	0	144
LT Vol	30	30	0	0
Through Vol	30	0	0	72
RT Vol	0	30	0	72
Lane Flow Rate	60	60	0	144
Geometry Grp	1	1	1	1
Degree of Util (X)	0.071	0.068	0	0.151
Departure Headway (Hd)	4.248	4.082	4.333	3.783
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	838	866	0	942
Service Time	2.299	2.16	2.426	1.829
HCM Lane V/C Ratio	0.072	0.069	0	0.153
HCM Control Delay	7.6	7.5	7.4	7.5
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.2	0.2	0	0.5



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø10
Lane Configurations							
Traffic Volume (vph)	131	712	1956	162	79	321	
Future Volume (vph)	131	712	1956	162	79	321	
Satd. Flow (prot)	1695	3390	3390	1517	1538	0	
Flt Permitted	0.950				0.990		
Satd. Flow (perm)	1678	3390	3390	1239	1535	0	
Satd. Flow (RTOR)				102	141		
Lane Group Flow (vph)	131	712	1956	162	400	0	
Turn Type	Prot	NA	NA	Perm	Perm		
Protected Phases	5	2	6				10
Permitted Phases				6	4		
Detector Phase	5	2	6	6	4		
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0		1.0
Minimum Split (s)	11.1	26.7	26.7	26.7	37.2		5.0
Total Split (s)	16.0	92.8	76.8	76.8	37.2		5.0
Total Split (%)	11.9%	68.7%	56.9%	56.9%	27.6%		4%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.0		2.0
All-Red Time (s)	2.4	1.9	1.9	1.9	3.2		0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	6.1	5.6	5.6	5.6	6.2		
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Min	C-Min	C-Min	None		Min
Act Effct Green (s)	12.3	90.2	71.8	71.8	28.0		
Actuated g/C Ratio	0.09	0.67	0.53	0.53	0.21		
v/c Ratio	0.85	0.31	1.08	0.23	0.93		
Control Delay	101.5	10.2	79.4	7.4	62.8		
Queue Delay	0.0	0.0	6.8	0.0	0.0		
Total Delay	101.5	10.2	86.2	7.4	62.8		
LOS	F	B	F	A	E		
Approach Delay		24.4	80.2		62.8		
Approach LOS		C	F		E		
Queue Length 50th (m)	~38.1	41.8	~309.3	7.7	70.1		
Queue Length 95th (m)	#79.1	52.2	#350.9	19.8	#125.8		
Internal Link Dist (m)		104.0	170.5		278.4		
Turn Bay Length (m)	155.0			80.0			
Base Capacity (vph)	154	2265	1803	706	461		
Starvation Cap Reductn	0	0	243	0	0		
Spillback Cap Reductn	0	0	0	0	0		
Storage Cap Reductn	0	0	0	0	0		
Reduced v/c Ratio	0.85	0.31	1.25	0.23	0.87		

Intersection Summary
Cycle Length: 135
Actuated Cycle Length: 135
Offset: 66 (49%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

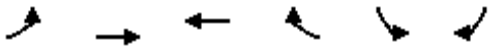
Maximum v/c Ratio: 1.08

Intersection Signal Delay: 64.1	Intersection LOS: E
Intersection Capacity Utilization 106.3%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Carling & Parkdale



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	66	754	2225	104	71	38
Future Volume (vph)	66	754	2225	104	71	38
Satd. Flow (prot)	1695	3390	3390	1517	1630	0
Flt Permitted	0.041				0.968	
Satd. Flow (perm)	73	3390	3390	1388	1622	0
Satd. Flow (RTOR)				95	21	
Lane Group Flow (vph)	66	754	2225	104	109	0
Turn Type	pm+pt	NA	NA	Perm	Prot	
Protected Phases	5	2	6		7	
Permitted Phases	2			6		
Detector Phase	5	2	6	6	7	
Switch Phase						
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	16.4	31.3	31.3	31.3	15.3	
Total Split (s)	17.0	88.0	71.0	71.0	42.0	
Total Split (%)	13.1%	67.7%	54.6%	54.6%	32.3%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	
All-Red Time (s)	2.7	2.7	2.7	2.7	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.4	6.4	6.4	6.4	5.3	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	
Act Effct Green (s)	105.2	105.2	92.1	92.1	13.1	
Actuated g/C Ratio	0.81	0.81	0.71	0.71	0.10	
v/c Ratio	0.36	0.27	0.93	0.10	0.60	
Control Delay	18.7	3.5	27.1	1.1	57.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	18.7	3.5	27.1	1.1	57.9	
LOS	B	A	C	A	E	
Approach Delay		4.7	25.9		57.9	
Approach LOS		A	C		E	
Queue Length 50th (m)	2.7	19.6	300.1	2.7	21.9	
Queue Length 95th (m)	16.7	32.1	#366.4	m0.0	39.4	
Internal Link Dist (m)		170.5	180.8		39.9	
Turn Bay Length (m)	90.0			140.0		
Base Capacity (vph)	191	2743	2401	1011	475	
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.35	0.27	0.93	0.10	0.23	

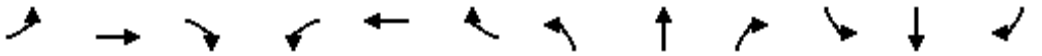
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 70 (54%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 83.0%	ICU Level of Service E
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Carling & Civic



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	556	53	38	1578	5	127	6	39	10	8	6
Future Volume (vph)	32	556	53	38	1578	5	127	6	39	10	8	6
Satd. Flow (prot)	1695	3390	1517	1695	3390	1517	0	1652	0	0	1678	0
Flt Permitted	0.114			0.436				0.767			0.867	
Satd. Flow (perm)	203	3390	1293	736	3390	1178	0	1302	0	0	1472	0
Satd. Flow (RTOR)			40			37		11			6	
Lane Group Flow (vph)	32	556	53	38	1578	5	0	172	0	0	24	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	2	2	2	6	6	6	8	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	35.0	35.0	35.0	34.3	34.3	34.3	42.4	42.4		42.4	42.4	
Total Split (s)	87.0	87.0	87.0	87.0	87.0	87.0	43.0	43.0		43.0	43.0	
Total Split (%)	66.9%	66.9%	66.9%	66.9%	66.9%	66.9%	33.1%	33.1%		33.1%	33.1%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	4.4	4.4		4.4	4.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	-1.7		0.0			0.0	
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	4.0		7.4			7.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	C-Min	None	None		None	None	
Act Effct Green (s)	92.4	92.4	92.4	92.4	92.4	94.1		24.5			24.5	
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71	0.72		0.19			0.19	
v/c Ratio	0.22	0.23	0.06	0.07	0.65	0.01		0.68			0.09	
Control Delay	13.4	7.8	3.3	7.5	11.1	0.0		57.7			31.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0			0.0	
Total Delay	13.4	7.8	3.3	7.5	11.1	0.0		57.7			31.5	
LOS	B	A	A	A	B	A		E			C	
Approach Delay		7.7			11.0			57.7			31.5	
Approach LOS		A			B			E			C	
Queue Length 50th (m)	2.0	19.8	0.6	2.3	76.1	0.0		40.0			4.0	
Queue Length 95th (m)	8.9	37.1	5.4	m6.3	128.6	m0.0		57.4			10.3	
Internal Link Dist (m)		236.1			191.5			174.3			220.8	
Turn Bay Length (m)	20.0		15.0	45.0		25.0						
Base Capacity (vph)	144	2410	931	523	2410	863		364			407	
Starvation Cap Reductn	0	0	0	0	0	0		0			0	
Spillback Cap Reductn	0	0	0	0	0	0		0			0	
Storage Cap Reductn	0	0	0	0	0	0		0			0	
Reduced v/c Ratio	0.22	0.23	0.06	0.07	0.65	0.01		0.47			0.06	

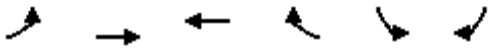
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 28 (22%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 81.0%	ICU Level of Service D
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 13: Maple/Old Irvine & Carling



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	55	812	1771	241	164	7
Future Volume (vph)	55	812	1771	241	164	7
Satd. Flow (prot)	1695	3390	4616	0	1695	1517
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1667	3390	4616	0	1669	1473
Satd. Flow (RTOR)			29			5
Lane Group Flow (vph)	55	812	2012	0	164	7
Turn Type	Prot	NA	NA		Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases						4
Detector Phase	5	2	6		4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		10.0	10.0
Minimum Split (s)	10.3	25.1	25.1		25.1	25.1
Total Split (s)	15.0	89.0	74.0		41.0	41.0
Total Split (%)	11.5%	68.5%	56.9%		31.5%	31.5%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	5.3	5.3	5.3		5.3	5.3
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	9.6	101.4	88.8		18.0	18.0
Actuated g/C Ratio	0.07	0.78	0.68		0.14	0.14
v/c Ratio	0.44	0.31	0.64		0.70	0.03
Control Delay	68.4	4.9	7.7		68.8	30.3
Queue Delay	0.0	0.0	0.4		0.0	0.0
Total Delay	68.4	4.9	8.1		68.8	30.3
LOS	E	A	A		E	C
Approach Delay		8.9	8.1		67.3	
Approach LOS		A	A		E	
Queue Length 50th (m)	13.6	26.8	34.9		40.6	0.5
Queue Length 95th (m)	26.9	42.2	168.4		61.0	4.7
Internal Link Dist (m)		118.3	141.7		152.1	
Turn Bay Length (m)	30.0					15.0
Base Capacity (vph)	139	2645	3161		465	408
Starvation Cap Reductn	0	0	555		0	0
Spillback Cap Reductn	0	0	0		0	0
Storage Cap Reductn	0	0	0		0	0
Reduced v/c Ratio	0.40	0.31	0.77		0.35	0.02

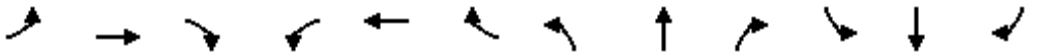
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 24 (18%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 67.9%	ICU Level of Service C
Analysis Period (min) 15	

Description: phase 9 is also an EB transit advance

Splits and Phases: 15: Carling & Sherwood



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	756	5	5	1131	120	370	0	337	183	0	209
Future Volume (vph)	82	756	5	5	1131	120	370	0	337	183	0	209
Satd. Flow (prot)	1695	3390	1517	1695	4651	0	1695	1402	0	1695	1417	0
Flt Permitted	0.950			0.950			0.395			0.558		
Satd. Flow (perm)	1608	3390	1356	1649	4651	0	681	1402	0	955	1417	0
Satd. Flow (RTOR)			113		15			237			208	
Lane Group Flow (vph)	82	756	5	5	1251	0	370	337	0	183	209	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	15.3	26.3	26.3	15.3	26.3		10.3	23.3		37.9	37.9	
Total Split (s)	16.0	48.7	48.7	15.3	48.0		27.0	66.0		39.0	39.0	
Total Split (%)	12.3%	37.5%	37.5%	11.8%	36.9%		20.8%	50.8%		30.0%	30.0%	
Yellow Time (s)	3.3	3.7	3.7	3.3	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	1.6	1.6	2.0	1.6		2.0	2.0		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3	5.3	5.3		5.3	5.3		5.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Act Effct Green (s)	10.6	60.1	60.1	10.0	47.3		56.2	56.2		28.5	28.5	
Actuated g/C Ratio	0.08	0.46	0.46	0.08	0.36		0.43	0.43		0.22	0.22	
v/c Ratio	0.59	0.48	0.01	0.04	0.74		0.80	0.46		0.88	0.44	
Control Delay	75.5	24.3	0.0	56.4	39.7		40.3	8.8		85.5	8.2	
Queue Delay	0.0	0.0	0.0	0.0	4.1		0.1	0.0		0.0	0.0	
Total Delay	75.5	24.3	0.0	56.4	43.8		40.4	8.8		85.5	8.3	
LOS	E	C	A	E	D		D	A		F	A	
Approach Delay		29.2			43.9			25.3			44.3	
Approach LOS		C			D			C			D	
Queue Length 50th (m)	16.8	77.0	0.0	1.2	106.9		63.7	14.5		44.5	0.2	
Queue Length 95th (m)	#39.4	114.7	m0.0	5.4	124.7		90.3	36.6		#79.0	19.3	
Internal Link Dist (m)		141.7			98.6			63.9			477.2	
Turn Bay Length (m)	55.0		75.0	61.0						30.0		
Base Capacity (vph)	142	1568	688	130	1705		468	780		243	515	
Starvation Cap Reductn	0	0	0	0	368		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	109		2	0		0	8	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.58	0.48	0.01	0.04	0.94		0.79	0.43		0.75	0.41	

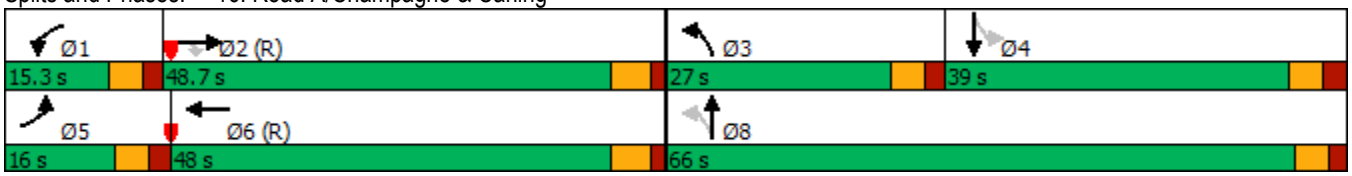
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 36.0	Intersection LOS: D
Intersection Capacity Utilization 99.2%	ICU Level of Service F
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Road A/Champagne & Carling



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑↑							
Traffic Volume (vph)	0	1423	0	0	1623	0	0	0	0	0	0	0
Future Volume (vph)	0	1423	0	0	1623	0	0	0	0	0	0	0
Satd. Flow (prot)	0	3390	0	0	4871	0	0	0	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3390	0	0	4871	0	0	0	0	0	0	0
Satd. Flow (RTOR)												
Lane Group Flow (vph)	0	1423	0	0	1623	0	0	0	0	0	0	0
Turn Type		NA			NA							
Protected Phases		2			6							
Permitted Phases												
Detector Phase		2			6							
Switch Phase												
Minimum Initial (s)		10.0			10.0							
Minimum Split (s)		31.1			31.1							
Total Split (s)		35.0			35.0							
Total Split (%)		50.0%			50.0%							
Yellow Time (s)		3.7			3.7							
All-Red Time (s)		1.4			1.4							
Lost Time Adjust (s)		0.0			0.0							
Total Lost Time (s)		5.1			5.1							
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min			C-Min							
Act Effct Green (s)		62.0			62.0							
Actuated g/C Ratio		0.89			0.89							
v/c Ratio		0.47			0.38							
Control Delay		7.3			4.6							
Queue Delay		0.2			0.0							
Total Delay		7.6			4.6							
LOS		A			A							
Approach Delay		7.6			4.6							
Approach LOS		A			A							
Queue Length 50th (m)		0.0			0.0							
Queue Length 95th (m)		#140.4			m92.4							
Internal Link Dist (m)		98.6			92.8			53.0			60.9	
Turn Bay Length (m)												
Base Capacity (vph)		3002			4313							
Starvation Cap Reductn		34			35							
Spillback Cap Reductn		719			0							
Storage Cap Reductn		0			0							
Reduced v/c Ratio		0.62			0.38							

Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Lane Group	Ø4	Ø8
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Satd. Flow (RTOR)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	4	8
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	35.6	35.6
Total Split (s)	35.0	35.0
Total Split (%)	50%	50%
Yellow Time (s)	3.0	3.0
All-Red Time (s)	3.6	3.6
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	None	None
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

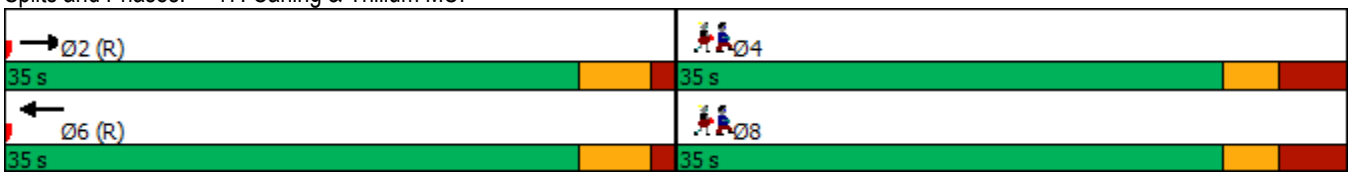
Intersection Summary

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 6.0	Intersection LOS: A
Intersection Capacity Utilization 45.8%	ICU Level of Service A
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Carling & Trillium MUP



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	898	369	346	1052	62	357	451	248	108	331	100
Future Volume (vph)	172	898	369	346	1052	62	357	451	248	108	331	100
Satd. Flow (prot)	1695	3390	1517	1695	4792	0	1695	3097	0	1695	1676	0
Flt Permitted	0.950			0.950			0.128			0.386		
Satd. Flow (perm)	1651	3390	1322	1648	4792	0	222	3097	0	667	1676	0
Satd. Flow (RTOR)			185		6			95			11	
Lane Group Flow (vph)	172	898	369	346	1114	0	357	699	0	108	431	0
Turn Type	Prot	NA	Perm	Prot	NA		pm+pt	NA		Perm	NA	
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8			4		
Detector Phase	5	2	2	1	6		3	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0		5.0	10.0		10.0	10.0	
Minimum Split (s)	11.2	30.0	30.0	11.2	30.0		11.9	43.9		43.9	43.9	
Total Split (s)	25.0	41.1	41.1	30.0	46.1		25.0	68.9		43.9	43.9	
Total Split (%)	17.9%	29.4%	29.4%	21.4%	32.9%		17.9%	49.2%		31.4%	31.4%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.5	2.3	2.3	2.5	2.3		3.6	3.6		3.6	3.6	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.0	6.0	6.2	6.0		6.9	6.9		6.9	6.9	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None		None	None	
Act Effct Green (s)	17.3	35.1	35.1	24.3	42.1		61.5	61.5		36.5	36.5	
Actuated g/C Ratio	0.12	0.25	0.25	0.17	0.30		0.44	0.44		0.26	0.26	
v/c Ratio	0.82	1.06	0.79	1.18	0.77		1.24	0.49		0.62	0.97	
Control Delay	88.3	92.7	35.2	158.4	49.1		167.0	25.2		62.9	85.1	
Queue Delay	0.0	17.4	3.5	0.0	0.0		0.3	0.0		0.0	42.0	
Total Delay	88.3	110.0	38.7	158.4	49.1		167.3	25.2		62.9	127.1	
LOS	F	F	D	F	D		F	C		E	F	
Approach Delay		89.1			75.0			73.3			114.2	
Approach LOS		F			E			E			F	
Queue Length 50th (m)	46.5	~143.0	50.1	~116.0	104.7		~102.1	61.6		26.4	115.6	
Queue Length 95th (m)	#82.4	#189.1	#60.0	#176.3	122.6		#164.5	79.1		49.0	#181.3	
Internal Link Dist (m)		92.8			165.9			145.6			55.2	
Turn Bay Length (m)	70.0		45.0	75.0			75.0			35.0		
Base Capacity (vph)	227	849	470	294	1443		287	1424		176	451	
Starvation Cap Reductn	0	122	46	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		7	0		0	59	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.76	1.24	0.87	1.18	0.77		1.27	0.49		0.61	1.10	

Intersection Summary
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 6 (4%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

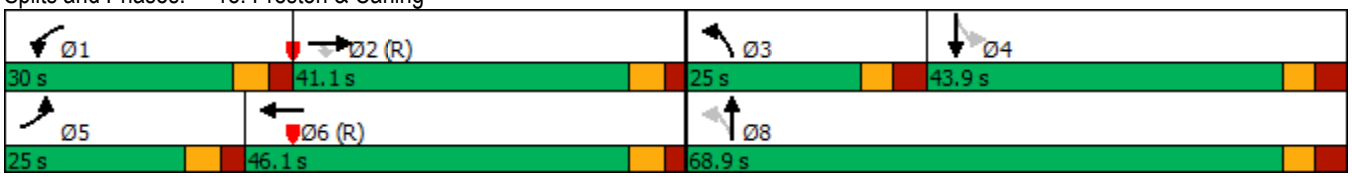
Maximum v/c Ratio: 1.24

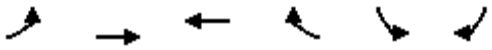
Intersection Signal Delay: 83.8	Intersection LOS: F
Intersection Capacity Utilization 119.5%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 18: Preston & Carling





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	283	1142	1079	104	310	315
Future Volume (vph)	283	1142	1079	104	310	315
Satd. Flow (prot)	1695	3390	3390	1517	1695	1517
Flt Permitted	0.153				0.950	
Satd. Flow (perm)	273	3390	3390	1161	1665	1332
Satd. Flow (RTOR)				47		189
Lane Group Flow (vph)	283	1142	1079	104	310	315
Turn Type	pm+pt	NA	NA	Perm	Prot	Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Detector Phase	5	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	10.9	29.7	29.7	29.7	39.0	39.0
Total Split (s)	23.0	90.0	67.0	67.0	40.0	40.0
Total Split (%)	17.7%	69.2%	51.5%	51.5%	30.8%	30.8%
Yellow Time (s)	3.7	3.7	3.7	3.7	3.3	3.3
All-Red Time (s)	2.2	2.0	2.0	2.0	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.7	5.7	5.7	6.0	6.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	86.9	87.1	65.3	65.3	31.2	31.2
Actuated g/C Ratio	0.67	0.67	0.50	0.50	0.24	0.24
v/c Ratio	0.79	0.50	0.63	0.17	0.76	0.68
Control Delay	32.2	12.3	27.3	12.5	58.3	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	12.3	27.3	12.5	58.3	24.6
LOS	C	B	C	B	E	C
Approach Delay		16.2	26.0		41.3	
Approach LOS		B	C		D	
Queue Length 50th (m)	29.6	74.1	108.8	7.8	73.0	28.6
Queue Length 95th (m)	#73.5	98.5	139.9	19.8	101.6	59.3
Internal Link Dist (m)		100.4	398.0		220.7	
Turn Bay Length (m)	50.0			30.0		30.0
Base Capacity (vph)	379	2287	1735	617	450	492
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.50	0.62	0.17	0.69	0.64

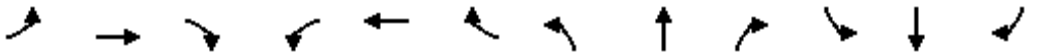
Intersection Summary
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 110 (85%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 24.6	Intersection LOS: C
Intersection Capacity Utilization 89.6%	ICU Level of Service E
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 20: Carling & Booth



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	708	144	599	0	0	1	603	691	17	0	1162	278
Future Volume (vph)	708	144	599	0	0	1	603	691	17	0	1162	278
Satd. Flow (prot)	1610	1646	1517	0	0	0	3288	1767	0	0	3247	0
Flt Permitted	0.950	0.971					0.950					
Satd. Flow (perm)	1511	1585	1415	0	0	0	3246	1767	0	0	3247	0
Satd. Flow (RTOR)			101		126			1			23	
Lane Group Flow (vph)	489	363	599	0	1	0	603	708	0	0	1440	0
Turn Type	Perm	NA	pm+ov				Prot	NA			NA	
Protected Phases		4	5				5	2			6	
Permitted Phases	4		4									
Detector Phase	4	4	5				5	2			6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0				10.0	10.0			10.0	
Minimum Split (s)	31.0	31.0	16.0				16.0	25.1			33.0	
Total Split (s)	47.0	47.0	29.0				29.0	93.0			64.0	
Total Split (%)	32.0%	32.0%	19.7%				19.7%	63.3%			43.5%	
Yellow Time (s)	3.3	3.3	3.3				3.3	3.3			3.3	
All-Red Time (s)	2.7	2.7	2.7				2.7	2.7			2.7	
Lost Time Adjust (s)	0.0	0.0	0.0				0.0	0.0			0.0	
Total Lost Time (s)	6.0	6.0	6.0				6.0	6.0			6.0	
Lead/Lag			Lead				Lead				Lag	
Lead-Lag Optimize?			Yes				Yes				Yes	
Recall Mode	None	None	None				None	C-Min			C-Min	
Act Effct Green (s)	41.0	41.0	64.0		0.0		23.0	87.0			58.0	
Actuated g/C Ratio	0.28	0.28	0.44		0.00		0.16	0.59			0.39	
v/c Ratio	1.16	0.82	0.87		0.01		1.17	0.68			1.11	
Control Delay	142.2	65.8	42.8		0.0		149.3	24.5			102.3	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay	142.2	65.8	42.8		0.0		149.3	24.5			102.3	
LOS	F	E	D		A		F	C			F	
Approach Delay		82.1						81.9			102.3	
Approach LOS		F						F			F	
Queue Length 50th (m)	~176.9	104.6	121.4		0.0		~107.6	134.5			~250.2	
Queue Length 95th (m)	#248.7	#155.7	#190.3		0.0		#145.0	179.5			#293.4	
Internal Link Dist (m)		398.0			115.0			394.4			328.4	
Turn Bay Length (m)	40.0		185.0				50.0					
Base Capacity (vph)	421	442	689		126		514	1046			1295	
Starvation Cap Reductn	0	0	0		0		0	0			0	
Spillback Cap Reductn	0	0	0		0		0	0			0	
Storage Cap Reductn	0	0	0		0		0	0			0	
Reduced v/c Ratio	1.16	0.82	0.87		0.01		1.17	0.68			1.11	

Intersection Summary
Cycle Length: 147
Actuated Cycle Length: 147
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

Lane Group	Ø10
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Satd. Flow (RTOR)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	10
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	7.0
Total Split (%)	5%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Maximum v/c Ratio: 1.17

Intersection Signal Delay: 88.9	Intersection LOS: F
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 21: Bronson & Carling/Glebe

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	280	40	426	198	504	0	0	569	236
Future Volume (vph)	0	0	0	280	40	426	198	504	0	0	569	236
Satd. Flow (prot)	0	0	0	1695	1487	0	1695	1784	0	0	1677	0
Flt Permitted				0.950			0.180					
Satd. Flow (perm)	0	0	0	1695	1487	0	321	1784	0	0	1677	0
Satd. Flow (RTOR)					360						32	
Lane Group Flow (vph)	0	0	0	280	466	0	198	504	0	0	805	0
Turn Type				Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Detector Phase				8	8		5	2			6	
Switch Phase												
Minimum Initial (s)				10.0	10.0		5.0	10.0			10.0	
Minimum Split (s)				29.0	29.0		10.3	27.3			25.1	
Total Split (s)				29.0	29.0		11.0	71.0			60.0	
Total Split (%)				29.0%	29.0%		11.0%	71.0%			60.0%	
Yellow Time (s)				3.3	3.3		3.0	3.0			3.0	
All-Red Time (s)				2.2	2.2		2.2	3.3			3.3	
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)				5.5	5.5		5.2	6.3			6.3	
Lead/Lag							Lag				Lead	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode				None	None		None	C-Min			C-Min	
Act Effct Green (s)				20.5	20.5		68.8	67.7			54.5	
Actuated g/C Ratio				0.20	0.20		0.69	0.68			0.54	
v/c Ratio				0.81	0.79		0.60	0.42			0.87	
Control Delay				55.7	19.5		19.6	4.1			31.2	
Queue Delay				0.0	0.0		22.7	2.1			49.3	
Total Delay				55.7	19.5		42.3	6.2			80.5	
LOS				E	B		D	A			F	
Approach Delay					33.1			16.3			80.5	
Approach LOS					C			B			F	
Queue Length 50th (m)				50.6	17.3		13.7	43.8			127.6	
Queue Length 95th (m)				#78.9	55.7		m22.0	10.5			#208.0	
Internal Link Dist (m)		157.5			140.3			45.3			171.5	
Turn Bay Length (m)												
Base Capacity (vph)				398	624		330	1207			936	
Starvation Cap Reductn				0	0		123	536			0	
Spillback Cap Reductn				0	0		0	0			273	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				0.70	0.75		0.96	0.75			1.21	

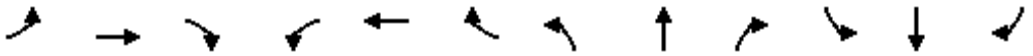
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 39 (39%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 44.8	Intersection LOS: D
Intersection Capacity Utilization 132.3%	ICU Level of Service H
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 22: Parkdale & 417 WB on/off



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	299	1	125	0	0	0	0	403	382	490	363	0
Future Volume (vph)	299	1	125	0	0	0	0	403	382	490	363	0
Satd. Flow (prot)	0	1700	1517	0	0	0	0	3000	0	1695	1784	0
Flt Permitted		0.953								0.195		
Satd. Flow (perm)	0	1700	1482	0	0	0	0	3000	0	348	1784	0
Satd. Flow (RTOR)			125					254				
Lane Group Flow (vph)	0	300	125	0	0	0	0	785	0	490	363	0
Turn Type	Perm	NA	Perm					NA		pm+pt	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4		4							6		
Detector Phase	4	4	4					2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0					10.0		5.0	10.0	
Minimum Split (s)	25.1	25.1	25.1					25.1		10.3	25.1	
Total Split (s)	30.0	30.0	30.0					38.0		32.0	70.0	
Total Split (%)	30.0%	30.0%	30.0%					38.0%		32.0%	70.0%	
Yellow Time (s)	3.3	3.3	3.3					3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6	2.6					2.8		2.3	2.8	
Lost Time Adjust (s)		0.0	0.0					0.0		0.0	0.0	
Total Lost Time (s)		5.9	5.9					5.8		5.3	5.8	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None	None					C-Min		None	C-Min	
Act Effct Green (s)		21.7	21.7					36.0		67.1	66.6	
Actuated g/C Ratio		0.22	0.22					0.36		0.67	0.67	
v/c Ratio		0.82	0.30					0.63		0.85	0.31	
Control Delay		55.1	7.6					21.2		35.5	10.1	
Queue Delay		0.0	0.0					0.3		55.3	4.7	
Total Delay		55.1	7.6					21.5		90.8	14.8	
LOS		E	A					C		F	B	
Approach Delay		41.1						21.5			58.5	
Approach LOS		D						C			E	
Queue Length 50th (m)		54.6	0.0					47.5		75.6	38.1	
Queue Length 95th (m)		#88.9	13.6					68.2		m#83.4	m42.4	
Internal Link Dist (m)		109.8			145.0			90.1			45.3	
Turn Bay Length (m)			75.0									
Base Capacity (vph)		415	457					1267		603	1195	
Starvation Cap Reductn		0	0					115		281	748	
Spillback Cap Reductn		0	0					95		0	0	
Storage Cap Reductn		0	0					0		0	0	
Reduced v/c Ratio		0.72	0.27					0.68		1.52	0.81	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 29 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 40.8	Intersection LOS: D
Intersection Capacity Utilization 132.3%	ICU Level of Service H
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: Parkdale & 417 EB on/off

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	6	10	0	4	208	2	554	4	58	368	51
Future Volume (vph)	53	6	10	0	4	208	2	554	4	58	368	51
Satd. Flow (prot)	0	1665	0	0	1482	0	0	1781	0	0	1738	0
Flt Permitted		0.710						0.999			0.892	
Satd. Flow (perm)	0	1225	0	0	1482	0	0	1780	0	0	1556	0
Satd. Flow (RTOR)		10			208			1			18	
Lane Group Flow (vph)	0	69	0	0	212	0	0	560	0	0	477	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		1.0	1.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	18.0	18.0		18.0	18.0		25.1	25.1		25.1	25.1	
Total Split (s)	18.0	18.0		18.0	18.0		37.0	37.0		37.0	37.0	
Total Split (%)	32.7%	32.7%		32.7%	32.7%		67.3%	67.3%		67.3%	67.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.0			4.0			5.6			5.6	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Ped	Ped		Ped	Ped		C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		14.0			14.0			31.4			31.4	
Actuated g/C Ratio		0.25			0.25			0.57			0.57	
v/c Ratio		0.22			0.40			0.55			0.53	
Control Delay		16.4			5.8			10.0			9.7	
Queue Delay		0.0			0.0			0.0			0.4	
Total Delay		16.4			5.8			10.0			10.1	
LOS		B			A			A			B	
Approach Delay		16.4			5.8			10.0			10.1	
Approach LOS		B			A			A			B	
Queue Length 50th (m)		4.6			0.3			30.4			24.3	
Queue Length 95th (m)		12.8			13.0			52.6			44.7	
Internal Link Dist (m)		221.3			335.0			289.1			90.1	
Turn Bay Length (m)												
Base Capacity (vph)		319			532			1016			896	
Starvation Cap Reductn		0			0			0			109	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.22			0.40			0.55			0.61	

Intersection Summary
Cycle Length: 55
Actuated Cycle Length: 55
Offset: 26 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 100.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 24: Parkdale & Sherwood

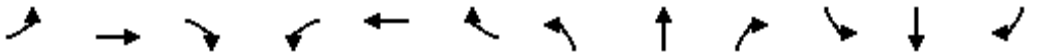
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	23	5	99	40	132	5	265	39	61	296	19
Future Volume (vph)	15	23	5	99	40	132	5	265	39	61	296	19
Satd. Flow (prot)	0	1709	0	1695	1476	0	0	1734	0	0	1754	0
Flt Permitted		0.850		0.729				0.995			0.902	
Satd. Flow (perm)	0	1454	0	1218	1476	0	0	1727	0	0	1584	0
Satd. Flow (RTOR)		5			132			20			7	
Lane Group Flow (vph)	0	43	0	99	172	0	0	309	0	0	376	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	19.4	19.4		19.4	19.4		31.8	31.8		31.8	31.8	
Total Split (s)	20.0	20.0		20.0	20.0		75.0	75.0		75.0	75.0	
Total Split (%)	21.1%	21.1%		21.1%	21.1%		78.9%	78.9%		78.9%	78.9%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.4	2.4		2.4	2.4		2.8	2.8		2.8	2.8	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.4		5.4	5.4			5.8			5.8	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Min	C-Min		C-Min	C-Min	
Act Effct Green (s)		13.7		13.7	13.7			70.1			70.1	
Actuated g/C Ratio		0.14		0.14	0.14			0.74			0.74	
v/c Ratio		0.20		0.56	0.53			0.24			0.32	
Control Delay		33.3		49.7	16.8			4.7			5.5	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		33.3		49.7	16.8			4.7			5.5	
LOS		C		D	B			A			A	
Approach Delay		33.3			28.8			4.7			5.5	
Approach LOS		C			C			A			A	
Queue Length 50th (m)		6.2		17.1	6.5			14.1			19.5	
Queue Length 95th (m)		14.7		31.3	24.0			28.1			38.0	
Internal Link Dist (m)		220.6			228.6			278.4			289.1	
Turn Bay Length (m)				40.0								
Base Capacity (vph)		242		200	352			1297			1186	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.18		0.49	0.49			0.24			0.32	

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 40 (42%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 73.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 25: Parkdale & Ruskin



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	572	302	0	3	411	465	2	0	0	437	2	621
Future Volume (vph)	572	302	0	3	411	465	2	0	0	437	2	621
Satd. Flow (prot)	3288	1784	0	1695	1784	1517	0	1695	0	0	1700	1517
Flt Permitted	0.950			0.576				0.320			0.727	
Satd. Flow (perm)	3224	1784	0	942	1784	1432	0	540	0	0	1201	1194
Satd. Flow (RTOR)						300						
Lane Group Flow (vph)	572	302	0	3	411	465	0	2	0	0	439	621
Turn Type	Prot	NA		Perm	NA	Perm	Perm	NA		Perm	NA	pm+ov
Protected Phases	5	2			6			8			4	5
Permitted Phases				6		6	8			4		4
Detector Phase	5	2		6	6	6	8	8		4	4	5
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	10.0	10.0		10.0	10.0	10.0
Minimum Split (s)	16.1	32.1		32.1	32.1	32.1	29.5	29.5		29.5	29.5	16.1
Total Split (s)	27.4	59.5		32.1	32.1	32.1	45.5	45.5		45.5	45.5	27.4
Total Split (%)	22.8%	49.6%		26.8%	26.8%	26.8%	37.9%	37.9%		37.9%	37.9%	22.8%
Yellow Time (s)	3.7	3.7		3.7	3.7	3.7	3.3	3.3		3.3	3.3	3.7
All-Red Time (s)	2.4	2.4		2.4	2.4	2.4	2.2	2.2		2.2	2.2	2.4
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Lost Time (s)	6.1	6.1		6.1	6.1	6.1		5.5			5.5	6.1
Lead/Lag	Lead											Lead
Lead-Lag Optimize?	Yes											Yes
Recall Mode	None	C-Min		C-Min	C-Min	C-Min	None	None		None	None	None
Act Effct Green (s)	21.3	57.4		30.0	30.0	30.0		48.0			48.0	68.7
Actuated g/C Ratio	0.18	0.48		0.25	0.25	0.25		0.40			0.40	0.57
v/c Ratio	0.98	0.35		0.01	0.92	0.80		0.01			0.91	0.84
Control Delay	82.3	21.5		35.7	71.8	26.3		24.5			60.0	31.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0			0.0	0.0
Total Delay	82.3	21.5		35.7	71.8	26.3		24.5			60.0	31.5
LOS	F	C		D	E	C		C			E	C
Approach Delay		61.3			47.6			24.5			43.3	
Approach LOS		E			D			C			D	
Queue Length 50th (m)	69.8	42.7		0.5	93.6	37.1		0.3			93.6	82.7
Queue Length 95th (m)	#105.1	68.7		3.2	#167.5	#97.8		2.3			#178.8	#143.5
Internal Link Dist (m)		79.9			173.8			12.4			145.6	
Turn Bay Length (m)	45.0			30.0		45.0						
Base Capacity (vph)	583	853		235	445	583		216			480	740
Starvation Cap Reductn	0	0		0	0	0		0			0	0
Spillback Cap Reductn	0	0		0	0	0		0			0	0
Storage Cap Reductn	0	0		0	0	0		0			0	0
Reduced v/c Ratio	0.98	0.35		0.01	0.92	0.80		0.01			0.91	0.84

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Lane Group	Ø9	Ø10	Ø11
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Satd. Flow (RTOR)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	9	10	11
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	10.0
Total Split (s)	5.0	5.0	10.0
Total Split (%)	4%	4%	8%
Yellow Time (s)	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag		Lag	
Lead-Lag Optimize?		Yes	
Recall Mode	None	None	None
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (m)			
Queue Length 95th (m)			
Internal Link Dist (m)			
Turn Bay Length (m)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

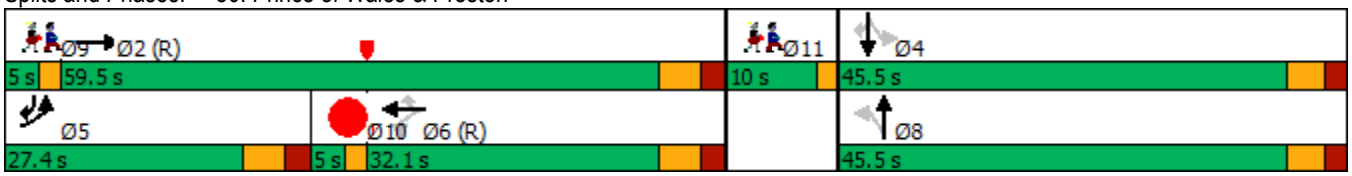
Intersection Summary

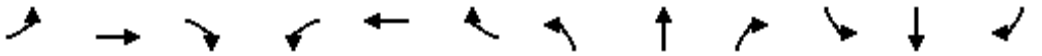
Maximum v/c Ratio: 0.98

Intersection Signal Delay: 50.2	Intersection LOS: D
Intersection Capacity Utilization 98.8%	ICU Level of Service F
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 30: Prince of Wales & Preston





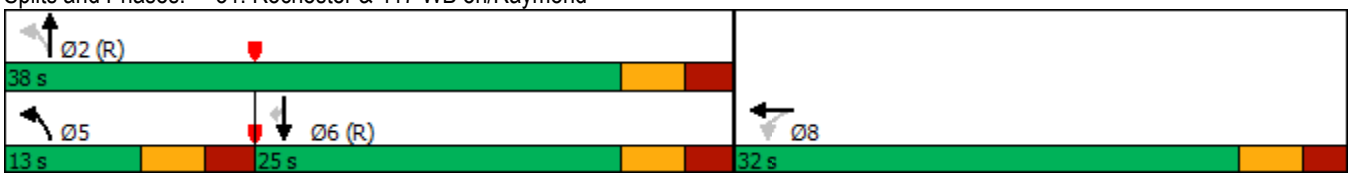
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	186	208	133	237	376	0	0	200	136
Future Volume (vph)	0	0	0	186	208	133	237	376	0	0	200	136
Satd. Flow (prot)	0	0	0	1695	1641	0	1695	1784	0	0	1784	1517
Flt Permitted				0.950			0.513					
Satd. Flow (perm)	0	0	0	1685	1641	0	889	1784	0	0	1784	1414
Satd. Flow (RTOR)					53							136
Lane Group Flow (vph)	0	0	0	186	341	0	237	376	0	0	200	136
Turn Type				Perm	NA		pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases				8			2					6
Detector Phase				8	8		5	2			6	6
Switch Phase												
Minimum Initial (s)				10.0	10.0		5.0	10.0			10.0	10.0
Minimum Split (s)				32.0	32.0		10.9	27.3			24.9	24.9
Total Split (s)				32.0	32.0		13.0	38.0			25.0	25.0
Total Split (%)				45.7%	45.7%		18.6%	54.3%			35.7%	35.7%
Yellow Time (s)				3.3	3.3		3.3	3.3			3.3	3.3
All-Red Time (s)				2.4	2.4		2.6	2.6			2.6	2.6
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)				5.7	5.7		5.9	5.9			5.9	5.9
Lead/Lag							Lead				Lag	Lag
Lead-Lag Optimize?							Yes				Yes	Yes
Recall Mode				None	None		None	C-Min			C-Min	C-Min
Act Effct Green (s)				18.0	18.0		40.4	40.4			25.3	25.3
Actuated g/C Ratio				0.26	0.26		0.58	0.58			0.36	0.36
v/c Ratio				0.43	0.74		0.38	0.37			0.31	0.23
Control Delay				23.4	29.2		14.5	14.7			20.1	5.3
Queue Delay				0.0	0.0		0.0	0.6			0.0	0.0
Total Delay				23.4	29.2		14.5	15.2			20.1	5.3
LOS				C	C		B	B			C	A
Approach Delay					27.1			14.9			14.1	
Approach LOS					C			B			B	
Queue Length 50th (m)				20.3	34.5		22.4	37.6			18.9	0.0
Queue Length 95th (m)				31.1	51.7		43.2	67.2			38.5	11.5
Internal Link Dist (m)		122.0			89.8			72.3			151.7	
Turn Bay Length (m)												35.0
Base Capacity (vph)				633	649		619	1028			645	598
Starvation Cap Reductn				0	0		0	319			0	0
Spillback Cap Reductn				0	0		0	0			0	0
Storage Cap Reductn				0	0		0	0			0	0
Reduced v/c Ratio				0.29	0.53		0.38	0.53			0.31	0.23

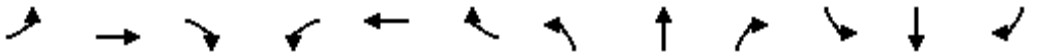
Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 8 (11%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 65.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 31: Rochester & 417 WB on/Raymond





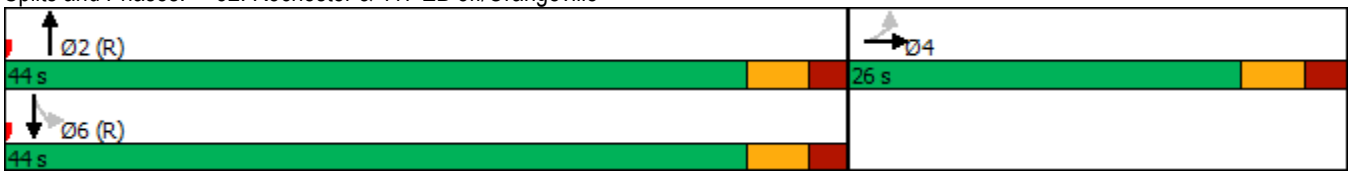
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	209	238	151	0	0	0	0	411	99	36	338	0
Future Volume (vph)	209	238	151	0	0	0	0	411	99	36	338	0
Satd. Flow (prot)	0	3178	0	0	0	0	0	3268	0	0	3373	0
Flt Permitted		0.983									0.880	
Satd. Flow (perm)	0	3171	0	0	0	0	0	3268	0	0	2980	0
Satd. Flow (RTOR)		67						67				
Lane Group Flow (vph)	0	598	0	0	0	0	0	510	0	0	374	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Detector Phase	4	4						2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0						10.0		10.0	10.0	
Minimum Split (s)	26.0	26.0						25.1		25.1	25.1	
Total Split (s)	26.0	26.0						44.0		44.0	44.0	
Total Split (%)	37.1%	37.1%						62.9%		62.9%	62.9%	
Yellow Time (s)	3.3	3.3						3.3		3.3	3.3	
All-Red Time (s)	2.3	2.3						2.1		2.1	2.1	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		5.6						5.4			5.4	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None						C-Min		C-Min	C-Min	
Act Effct Green (s)		17.3						41.7			41.7	
Actuated g/C Ratio		0.25						0.60			0.60	
v/c Ratio		0.72						0.26			0.21	
Control Delay		26.1						6.8			12.0	
Queue Delay		0.0						0.0			0.0	
Total Delay		26.1						6.8			12.0	
LOS		C						A			B	
Approach Delay		26.1						6.8			12.0	
Approach LOS		C						A			B	
Queue Length 50th (m)		33.5						12.6			4.6	
Queue Length 95th (m)		44.5						23.7			38.5	
Internal Link Dist (m)		104.8			107.2			99.1			72.3	
Turn Bay Length (m)												
Base Capacity (vph)		988						1991			1791	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						46			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.61						0.26			0.21	

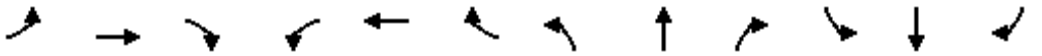
Intersection Summary
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 67 (96%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 65.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 32: Rochester & 417 EB off/Orangeville





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	746	638	248	265	857	0	0	743	130
Future Volume (vph)	0	0	0	746	638	248	265	857	0	0	743	130
Satd. Flow (prot)	0	0	0	1458	4357	0	1695	3390	0	0	3273	0
Flt Permitted				0.950	0.989		0.120					
Satd. Flow (perm)	0	0	0	1458	4357	0	214	3390	0	0	3273	0
Satd. Flow (RTOR)					81						22	
Lane Group Flow (vph)	0	0	0	507	1125	0	265	857	0	0	873	0
Turn Type				Perm	NA		pm+pt	NA			NA	
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Detector Phase				8	8		5	2			6	
Switch Phase												
Minimum Initial (s)				10.0	10.0		5.0	10.0			10.0	
Minimum Split (s)				25.9	25.9		11.0	25.1			25.1	
Total Split (s)				42.0	42.0		18.0	53.0			35.0	
Total Split (%)				44.2%	44.2%		18.9%	55.8%			36.8%	
Yellow Time (s)				3.3	3.3		3.3	3.3			3.3	
All-Red Time (s)				2.6	2.6		2.7	2.8			2.8	
Lost Time Adjust (s)				0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)				5.9	5.9		6.0	6.1			6.1	
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Recall Mode				None	None		None	C-Min			C-Min	
Act Effct Green (s)				35.5	35.5		47.6	47.5			29.4	
Actuated g/C Ratio				0.37	0.37		0.50	0.50			0.31	
v/c Ratio				0.93	0.67		0.90	0.51			0.85	
Control Delay				54.9	25.2		61.2	19.1			39.6	
Queue Delay				13.0	0.1		0.0	1.5			2.4	
Total Delay				67.9	25.2		61.2	20.7			42.1	
LOS				E	C		E	C			D	
Approach Delay					38.5			30.2			42.1	
Approach LOS					D			C			D	
Queue Length 50th (m)				101.0	60.3		41.4	43.7			77.3	
Queue Length 95th (m)				#172.0	76.3		#78.0	97.2			#109.7	
Internal Link Dist (m)		151.3			165.9			71.3			102.2	
Turn Bay Length (m)												
Base Capacity (vph)				555	1710		296	1699			1030	
Starvation Cap Reductn				0	0		0	614			0	
Spillback Cap Reductn				47	48		0	0			74	
Storage Cap Reductn				0	0		0	0			0	
Reduced v/c Ratio				1.00	0.68		0.90	0.79			0.91	

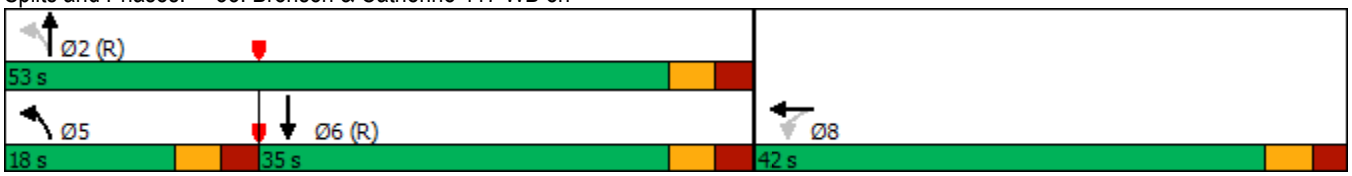
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 59 (62%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

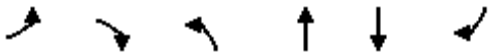
Maximum v/c Ratio: 0.93

Intersection Signal Delay: 36.8	Intersection LOS: D
Intersection Capacity Utilization 106.4%	ICU Level of Service G
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 33: Bronson & Catherine 417 WB on





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	122	261	0	963	1459	0
Future Volume (vph)	122	261	0	963	1459	0
Satd. Flow (prot)	1695	1517	0	3390	3390	0
Flt Permitted	0.950					
Satd. Flow (perm)	1695	1491	0	3390	3390	0
Satd. Flow (RTOR)		47				
Lane Group Flow (vph)	122	261	0	963	1459	0
Turn Type	Prot	Perm		NA	NA	
Protected Phases	4			2	6	
Permitted Phases		4				
Detector Phase	4	4		2	6	
Switch Phase						
Minimum Initial (s)	10.0	10.0		10.0	10.0	
Minimum Split (s)	25.1	25.1		34.3	34.3	
Total Split (s)	30.0	30.0		65.0	65.0	
Total Split (%)	31.6%	31.6%		68.4%	68.4%	
Yellow Time (s)	3.3	3.3		3.3	3.3	
All-Red Time (s)	2.1	2.1		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.4	5.4		5.8	5.8	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None		C-Min	C-Min	
Act Effct Green (s)	19.0	19.0		64.8	64.8	
Actuated g/C Ratio	0.20	0.20		0.68	0.68	
v/c Ratio	0.36	0.78		0.42	0.63	
Control Delay	34.1	44.6		8.1	7.1	
Queue Delay	0.0	0.0		0.1	1.6	
Total Delay	34.1	44.6		8.2	8.7	
LOS	C	D		A	A	
Approach Delay	41.2			8.2	8.7	
Approach LOS	D			A	A	
Queue Length 50th (m)	19.3	37.5		36.6	19.1	
Queue Length 95th (m)	31.9	59.1		60.9	m144.2	
Internal Link Dist (m)	81.4			50.7	71.3	
Turn Bay Length (m)		60.0				
Base Capacity (vph)	444	425		2323	2323	
Starvation Cap Reductn	0	0		0	636	
Spillback Cap Reductn	0	0		217	0	
Storage Cap Reductn	0	0		0	0	
Reduced v/c Ratio	0.27	0.61		0.46	0.86	

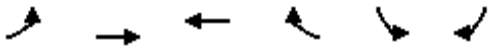
Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 91 (96%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 106.4%	ICU Level of Service G
Analysis Period (min) 15	

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 34: Bronson & 417 EB off



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	Ø9
Lane Configurations							
Traffic Volume (vph)	8	677	1051	0	284	98	
Future Volume (vph)	8	677	1051	0	284	98	
Satd. Flow (prot)	1695	1784	3390	0	1695	1517	
Flt Permitted	0.190				0.950		
Satd. Flow (perm)	339	1784	3390	0	1648	1440	
Satd. Flow (RTOR)						98	
Lane Group Flow (vph)	8	677	1051	0	284	98	
Turn Type	pm+pt	NA	NA		Perm	Perm	
Protected Phases	5	2	6				9
Permitted Phases	2				4	4	
Detector Phase	5	2	6		4	4	
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0		10.0	10.0	1.0
Minimum Split (s)	10.3	23.3	23.3		23.3	23.3	10.0
Total Split (s)	11.0	65.0	54.0		25.0	25.0	10.0
Total Split (%)	11.0%	65.0%	54.0%		25.0%	25.0%	10%
Yellow Time (s)	3.3	3.3	3.3		3.3	3.3	2.0
All-Red Time (s)	2.0	2.0	2.0		2.0	2.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.3	5.3	5.3		5.3	5.3	
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?	Yes		Yes				
Recall Mode	None	C-Min	C-Min		None	None	None
Act Effct Green (s)	65.3	65.3	63.1		22.1	22.1	
Actuated g/C Ratio	0.65	0.65	0.63		0.22	0.22	
v/c Ratio	0.03	0.58	0.49		0.78	0.25	
Control Delay	8.2	13.4	12.6		52.5	8.2	
Queue Delay	0.0	0.0	0.0		0.0	0.0	
Total Delay	8.2	13.4	12.6		52.5	8.2	
LOS	A	B	B		D	A	
Approach Delay		13.4	12.6		41.2		
Approach LOS		B	B		D		
Queue Length 50th (m)	0.5	66.3	48.6		50.7	0.0	
Queue Length 95th (m)	2.5	124.0	103.3		#89.7	12.5	
Internal Link Dist (m)		198.2	95.9		17.7		
Turn Bay Length (m)	45.0						
Base Capacity (vph)	298	1174	2157		373	402	
Starvation Cap Reductn	0	0	0		0	0	
Spillback Cap Reductn	0	0	0		0	0	
Storage Cap Reductn	0	0	0		0	0	
Reduced v/c Ratio	0.03	0.58	0.49		0.76	0.24	

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 39: Prince of Wales & Road B

Intersection	
Int Delay, s/veh	11.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	30	1025	2040	43	20	53
Future Vol, veh/h	30	1025	2040	43	20	53
Conflicting Peds, #/hr	42	0	0	42	4	8
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	250	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	1025	2040	43	20	53

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2125	0	-	0	2659	1070
Stage 1	-	-	-	-	2082	-
Stage 2	-	-	-	-	577	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	253	-	-	-	~ 18	217
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	525	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	244	-	-	-	~ 15	208
Mov Cap-2 Maneuver	-	-	-	-	~ 15	-
Stage 1	-	-	-	-	69	-
Stage 2	-	-	-	-	506	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	$ 486.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	244	-	-	-	46
HCM Lane V/C Ratio	0.123	-	-	-	1.587
HCM Control Delay (s)	21.8	-	-	-	-$ 486.1
HCM Lane LOS	C	-	-	-	F
HCM 95th %tile Q(veh)	0.4	-	-	-	7.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1277	1081	87	0	273
Future Vol, veh/h	0	1277	1081	87	0	273
Conflicting Peds, #/hr	70	0	0	70	1	5
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1277	1081	87	0	273

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	659
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	348
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	326
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	53.6
HCM LOS			F

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	326
HCM Lane V/C Ratio	-	-	-	0.837
HCM Control Delay (s)	-	-	-	53.6
HCM Lane LOS	-	-	-	F
HCM 95th %tile Q(veh)	-	-	-	7.3

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	969	1	1	991	15	2	0	6	0	0	43
Future Vol, veh/h	0	969	1	1	991	15	2	0	6	0	0	43
Conflicting Peds, #/hr	8	0	6	6	0	8	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	969	1	1	991	15	2	0	6	0	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	976	0	0	1999	1992	976	-	-	1008
Stage 1	-	-	-	-	-	-	976	976	-	-	-	-
Stage 2	-	-	-	-	-	-	1023	1016	-	-	-	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	707	-	-	45	61	305	0	0	292
Stage 1	0	-	-	-	-	-	302	329	-	0	0	-
Stage 2	0	-	-	-	-	-	284	315	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	703	-	-	38	60	303	-	-	290
Mov Cap-2 Maneuver	-	-	-	-	-	-	38	60	-	-	-	-
Stage 1	-	-	-	-	-	-	302	327	-	-	-	-
Stage 2	-	-	-	-	-	-	241	312	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	40.3	19.6
HCM LOS			E	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	110	-	-	703	-	-	290
HCM Lane V/C Ratio	0.073	-	-	0.001	-	-	0.148
HCM Control Delay (s)	40.3	-	-	10.1	-	-	19.6
HCM Lane LOS	E	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	0	-	-	0.5

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	101	8	2	156	100	1	8	2	101	173	43
Future Vol, veh/h	29	101	8	2	156	100	1	8	2	101	173	43
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	101	8	2	156	100	1	8	2	101	173	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	10.2	8.4	11.6
HCM LOS	A	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	21%	1%	32%
Vol Thru, %	73%	73%	60%	55%
Vol Right, %	18%	6%	39%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	138	258	317
LT Vol	1	29	2	101
Through Vol	8	101	156	173
RT Vol	2	8	100	43
Lane Flow Rate	11	138	258	317
Geometry Grp	1	1	1	1
Degree of Util (X)	0.016	0.195	0.337	0.428
Departure Headway (Hd)	5.222	5.083	4.705	4.866
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	677	701	759	735
Service Time	3.322	3.155	2.768	2.932
HCM Lane V/C Ratio	0.016	0.197	0.34	0.431
HCM Control Delay	8.4	9.4	10.2	11.6
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	0	0.7	1.5	2.2

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	86	0	30	0	0	0	30	86	0	0	50	49
Future Vol, veh/h	86	0	30	0	0	0	30	86	0	0	50	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	0	30	0	0	0	30	86	0	0	50	49
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	0	8.1	7.5
HCM LOS	A	-	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	74%	0%	0%
Vol Thru, %	74%	0%	100%	51%
Vol Right, %	0%	26%	0%	49%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	116	116	0	99
LT Vol	30	86	0	0
Through Vol	86	0	0	50
RT Vol	0	30	0	49
Lane Flow Rate	116	116	0	99
Geometry Grp	1	1	1	1
Degree of Util (X)	0.137	0.142	0	0.111
Departure Headway (Hd)	4.266	4.396	4.536	4.03
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	826	820	0	893
Service Time	2.365	2.401	2.545	2.038
HCM Lane V/C Ratio	0.14	0.141	0	0.111
HCM Control Delay	8.1	8.1	7.5	7.5
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.5	0.5	0	0.4

Appendix E:
Intersection Design Modifications

Plot Date: 9/7/2005 7:08:02 PM
Last Saved: 8/24/2021 1:42:37 PM
Consultant's Information: C:\01-Temp Dgn Holder\477447\Ot Hospital\Dgn\477447-01-INTERSECTIONS-INTERIM.Dgn

CHAMPAGNE AV

CARLING AVE

INTERIM LEFT TURN LANE

INTERIM RIGHT TURN LANE

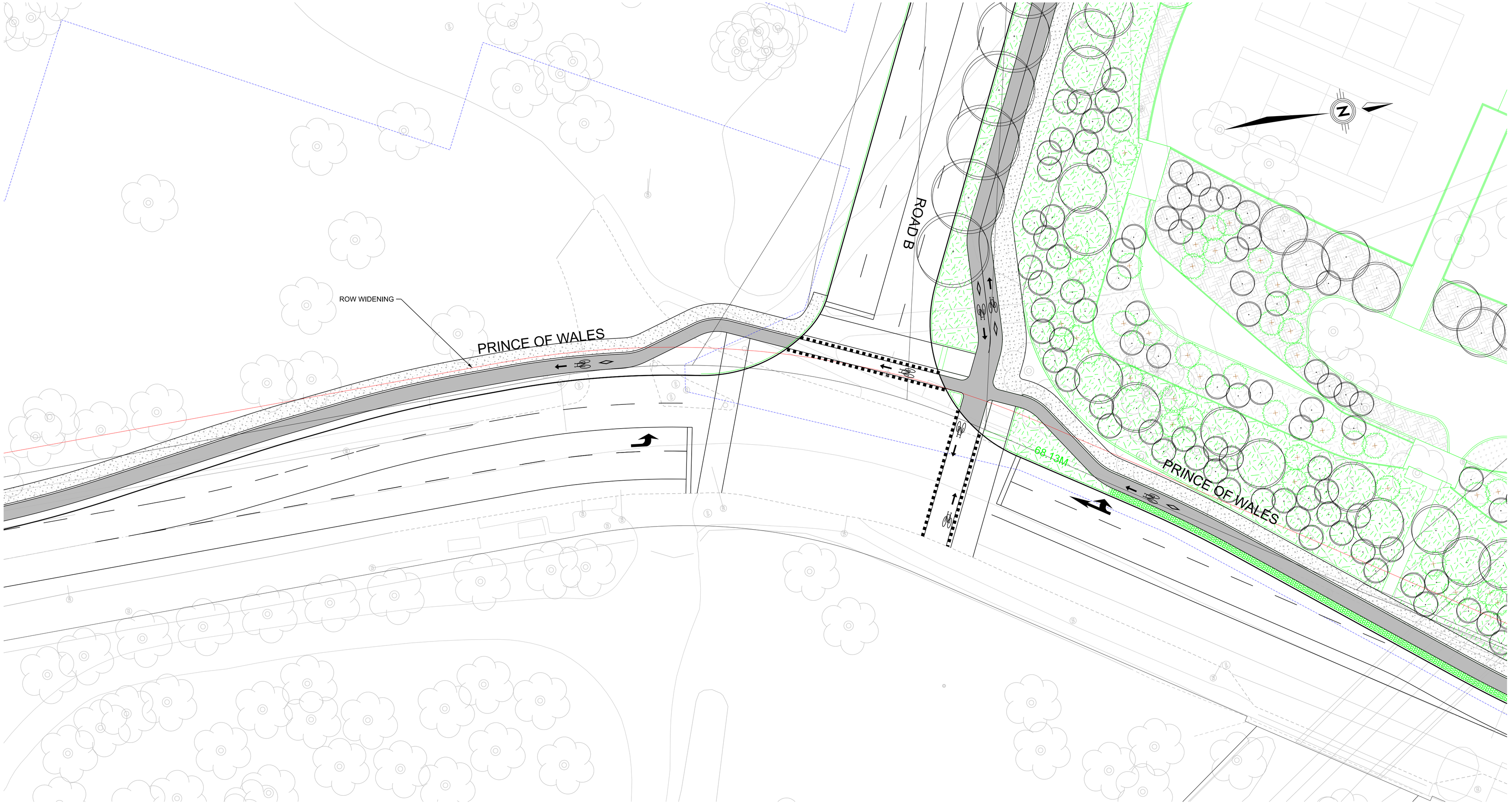
ROW WIDENING

Road A - Carling

Scale: HORIZONTAL
0m 2.5 5 10

PARSONS

Plot Date: 9/7/2005 7:08:02 PM
Last Saved: 8/24/2021 1:42:37 PM
Consultant's Information: C:\01-Temp Dgn Holder\477447\Ott Hospital\Dgn\477447-01-INTERSECTIONS-INTERIM.Dgn



Scale: HORIZONTAL 0m 2.5 5 10

Road B - Prince of Wales

PARSONS

N

ROW WIDENING

PRINCE OF WALES

PRESTON

PROPOSED DOUBLE LEFT

QUEEN ELIZABETH

Preston - POW

Scale:
HORIZONTAL
0m 2.5 5 10

PARSONS