



Appendix C

Future Conditions Memorandum

To: Jeremy Caron, PE
Director of Public Works and
Engineering
City of Brewer, ME
Jacob Stein
Transportation Planner
Bangor Area Comprehensive
Transportation System (BACTS)

From: Evan Drew, PE PTOE
Jessa Brewer, AICP
Stantec

Project/File: 179450812
Brewer Village Partnership Initiative
(VPI)
179450851
Brewer South Main Street Study

Date: November 12, 2024

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

The purpose of this memorandum is to estimate future traffic volumes within the study areas to ensure our recommendations both meet the projects' goals and also account for changes in traffic volumes to the year 2045.

Brewer VPI Study Area

The study area for this Village Partnership Initiative encompasses Downtown Brewer, Route 1A (Wilson Street), Route 9 (North Main Street), Center Street, and State Street, as well as Jordan Street and Washington Street. There are a total of six intersections detailed for further study within the VPI boundaries. The study area includes the following intersections:

- North Main Street at State Street
- North Main Street at Chamberlain Street
- North Main Street at Center Street
- North Main Street at Betton Street and Parker Street
- North Main Street and South Main Street at Wilson Street
- Wilson Street at Parker Street

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

The Assessment of Current Conditions¹ can be reviewed for Stantec’s process in adjusting the Bangor Area Comprehensive Transportation System (BACTS) Metropolitan Planning Organization (MPO) collected raw traffic volumes to design for the year 2024.

This memorandum will focus on the adjustments required to forecast traffic to the future year of 2045 using MaineDOT-provided and Stantec-derived data.

Brewer South Main Street Study Area

The study area for this South Main Street Study extends from the northern terminus of South Main Street, at the intersection with North Main Street and Wilson Street, south to the intersection with Abbott Street. This area encompasses commercial and mixed-use (commercial and residential) properties along the Penobscot River, a transitional area just south of the intersection with Getchell Street to Brewer’s industrial businesses (Baker Boulevard) and the Exit 4 interchange with I-393. There are a total of five intersections detailed for further study within the South Main Street Study boundaries. The study area includes the following intersections:

- North Main Street and South Main Street at Wilson Street
- South Main Street at Brimmer Street
- South Main Street at Getchell Street
- South Main Street at Baker Boulevard
- South Main Street at Abbott Street

The Assessment of Current Conditions² can be reviewed for Stantec’s process in adjusting the Bangor Area Comprehensive Transportation System (BACTS) collected raw traffic volumes to design for the year 2024.

This memorandum will focus on the adjustments required to forecast traffic to the future year of 2045 using MaineDOT-provided and Stantec-derived data.

Interstate 395 Extension

Per the I-395 / Route 9 Transportation Study’s Environmental Impact Statement by MaineDOT, the construction of the I-395 Extension from its current terminus at the interchange with Route 1A (Wilson Street) in Brewer to a new terminus with Route 9 in Eddington, just north of Brewer and over six miles north of the existing terminus. This extension is anticipated to reduce traffic in the downtown districts of Brewer, specifically a reduction of 12.4 percent of average annual daily traffic along Route 9 between Brewer and Eddington, which is the co-sign of North and South Main Street through Brewer. In addition, this extension and connector is anticipated to reduce average annual daily truck traffic by up to 32.5 percent through downtown Brewer. For the purpose of the two studies, Stantec assumes a general ten percent (10%) reduction in general traffic when the I-395 / Route 9 connector is completed.

The pages from the I-395 / Route 9 Transportation Study’s Environmental Impact Statement can be found in **Appendix A** and the full document is available on MaineDOT’s website.

¹ Assessment of Current Conditions – Brewer Village Partnership Initiative, Stantec, August 21, 2024

² Assessment of Current Conditions – Brewer South Main Street Corridor Study, Stantec, August 21, 2024

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

MaineDOT Coordination

Stantec coordinated with MaineDOT to inquire about the State's Future Traffic Model to assist in the development of future traffic volumes, beginning with a meeting on September 24, 2024. From this coordination MaineDOT was able to provide Stantec with map-based outputs of historical traffic volumes and projections to estimate future traffic throughout the City of Brewer to inform Stantec's projections for recommendations and improvements.

This model map was used to inform the potential regional and local growth evaluated for recommendations and improvements. The State's Future Traffic Model map can be found in **Appendix B**.

Forecasted Traffic – Regional Estimate

Per MaineDOT's model, the statewide average annual growth rate for future projects along the roadway types seen within the study areas range between is 0.01 and 0.14 percent per year, with the recommended average annual growth rate for design considerations is 0.5 percent per year. Between 2024 and 2045, this amounts to a eleven percent (11%) increase in general traffic volumes.

The following is the breakdown of adjustments from the raw 2024 traffic volumes from the Assessment of Current Conditions to be projected to future 2045 conditions at the respective intersections including the MaineDOT 0.5 percent average annual growth rate, expected reductions in traffic from the completion of the I-395 Extension and Route 9 Connector, and seasonal adjustment factors for 2024:

- **North Main Street at State Street**
 - Eight percent (8%) increase to all approaches
- **North Main Street at Chamberlain Street**
 - Two percent (2%) increase to North Main Street approaches
 - Thirteen percent (13%) increase to Chamberlain Street approaches
- **North Main Street at Center Street**
 - One percent (1%) increase to North Main Street approaches
 - Twelve percent (12%) increase to Center Street approaches
- **North Main Street at Betton Street and Parker Street**
 - One percent (1%) increase to North Main Street approaches
 - Twelve percent (12%) increase to Betton Street and Parker Street approaches
- **North Main Street and South Main Street at Wilson Street**
 - Eight percent (8%) increase to North Main Street and Wilson Street approaches
 - Twenty percent (20%) increase to South Main Street approach
- **Wilson Street at Parker Street**
 - Eight percent (8%) increase to Wilson Street approaches
 - Thirteen (13%) increase to Parker Street approach
- **South Main Street at Brimmer Street**

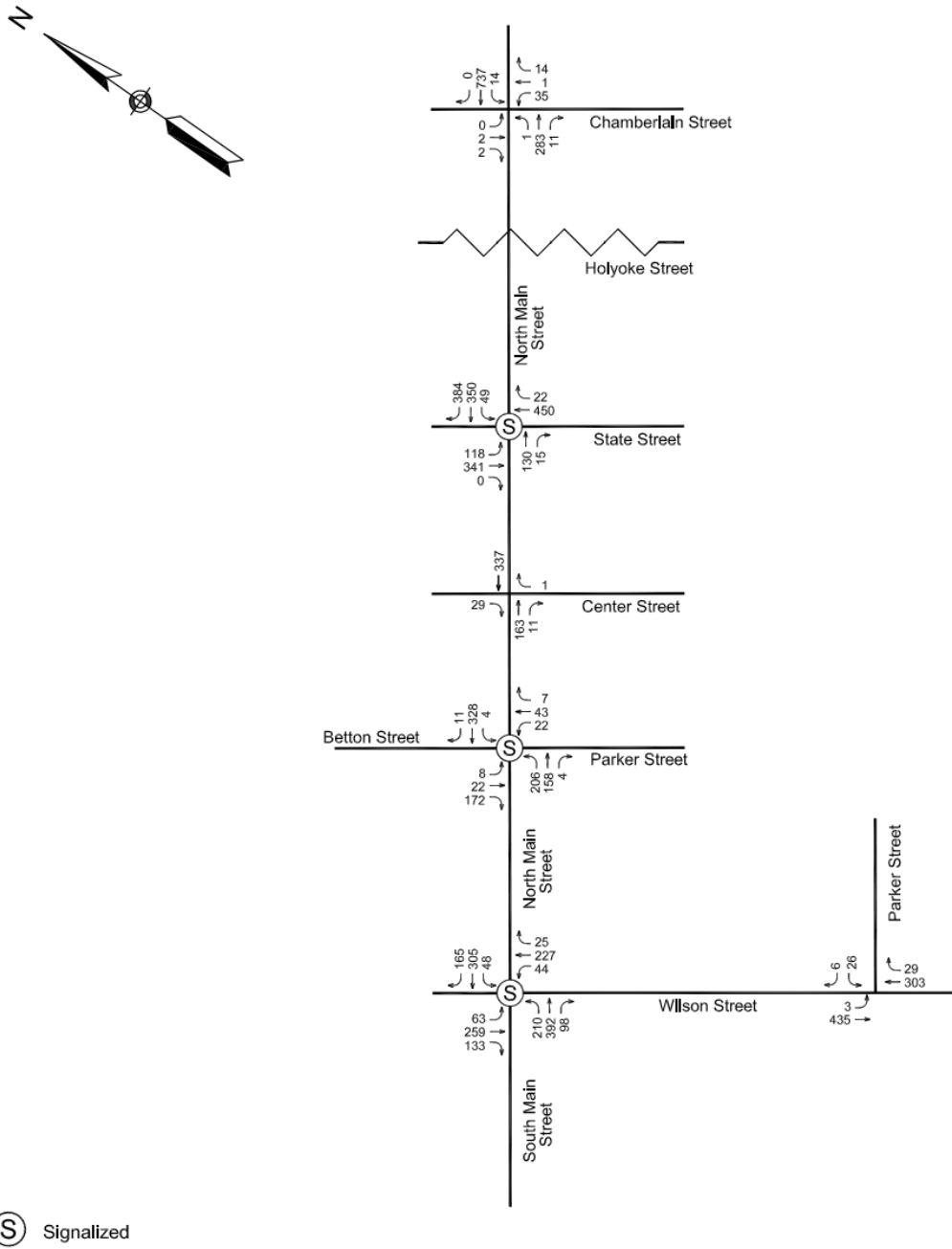
Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

- Fourteen percent (14%) increase to all approaches
- **South Main Street at Getchell Street**
 - Thirteen percent (13%) increase to all approaches
- **South Main Street at Baker Boulevard**
 - Thirteen percent (13%) increase to all approaches
- **South Main Street at I-395 Exit 4 Interchange Westbound Ramps**
 - Fifteen percent (15%) increase to all approaches
- **South Main Street at I-395 Exit 4 Interchange Eastbound Ramps**
 - Thirteen percent (13%) increase to all approaches
- **South Main Street at Abbott Street**
 - Three percent (3%) increase to all approaches

The 2045 Future Traffic Volume Networks for High Growth Potential can be found as **Figure 1** through **Figure 4**.

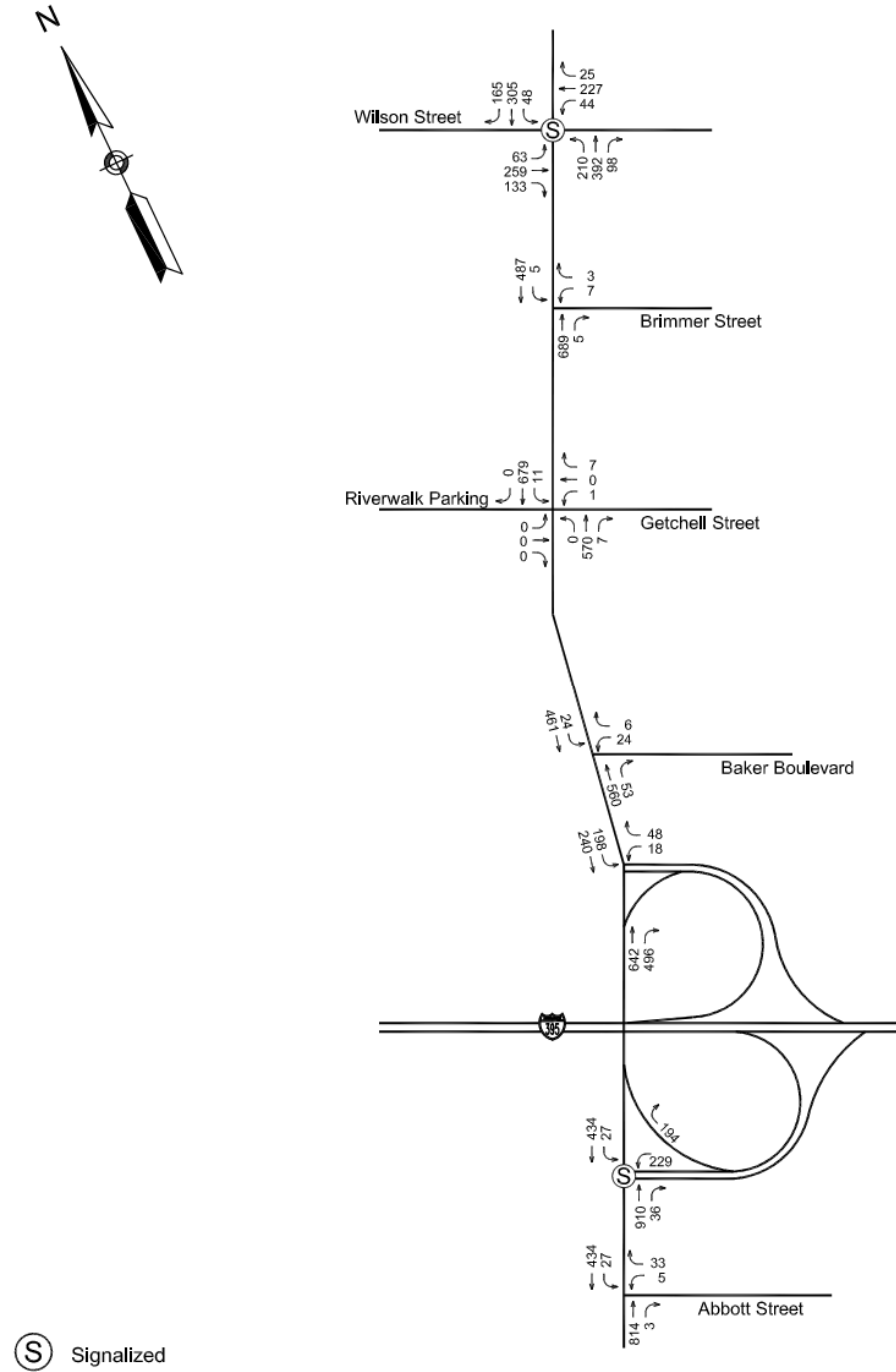
Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 1 – Brewer VPI – 2045 Morning Peak Hour Period – Regional Growth Traffic Volumes



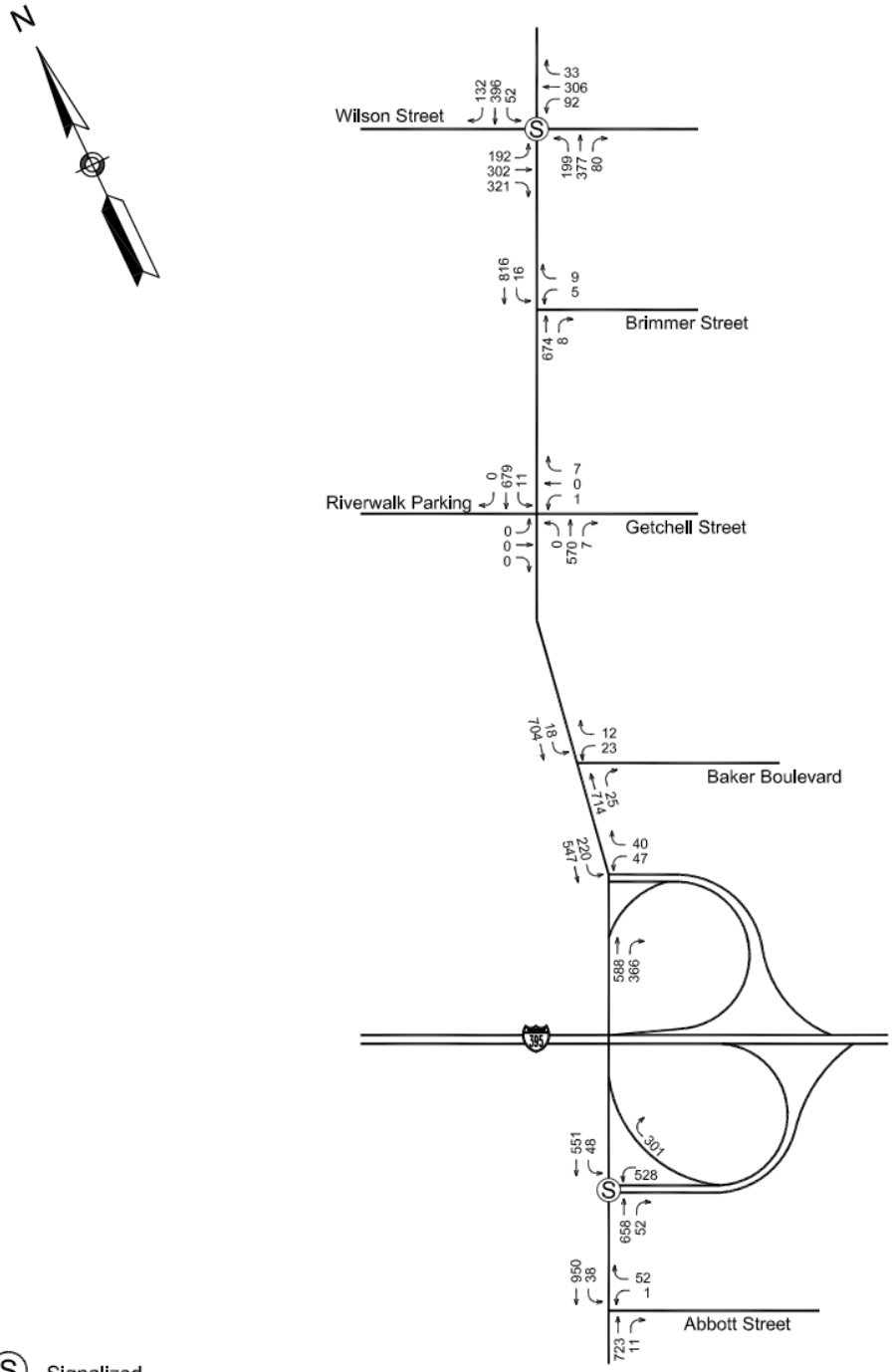
Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 3 – Brewer South Main Street Corridor – 2045 Morning Peak Hour Period Regional Growth Traffic Volumes



Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 4 – Brewer South Main Street Corridor – 2045 Evening Peak Hour Period Regional Growth Traffic Volumes



 Signalized
Forecasted Traffic – Local Estimate

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Stantec reviewed the realized traffic volume fluctuations based on the history of traffic counts within the study areas that range between 0.01 and 0.14 percent per year as shown in MaineDOT's Future Traffic Model.

The following is the breakdown of adjustments from the raw 2024 traffic volumes from the Assessment of Current Conditions to be projected to future 2045 conditions at the respective intersections using this conservative growth potential forecasting alongside expected reductions in traffic from the completion of the I-395 Extension and Route 9 Connector, seasonal adjustment factors for 2024, and these realized growth rates:

- **North Main Street at State Street**
 - One percent (1%) decrease to all approaches
- **North Main Street at Chamberlain Street**
 - One percent (1%) decrease to North Main Street approaches
 - Ten percent (10%) increase to Chamberlain Street approaches
- **North Main Street at Center Street**
 - Seven percent (7%) decrease to North Main Street approaches
 - Four percent (4%) increase to Center Street approaches
- **North Main Street at Betton Street and Parker Street**
 - Seven percent (7%) decrease to North Main Street approaches
 - Four percent (4%) increase to Betton Street and Parker Street approaches
- **North Main Street and South Main Street at Wilson Street**
 - Zero percent (0%) change to North Main Street and Wilson Street approaches
 - Eight percent (8%) increase to South Main Street approach
- **Wilson Street at Parker Street**
 - Zero percent (0%) change to Wilson Street approaches
 - Five (5%) increase to Parker Street approach
- **South Main Street at Brimmer Street**
 - Six percent (6%) increase to all approaches
- **South Main Street at Getchell Street**
 - Five percent (5%) increase to all approaches
- **South Main Street at Baker Boulevard**
 - Five percent (5%) increase to all approaches
- **South Main Street at I-395 Exit 4 Interchange Westbound Ramps**
 - Five percent (5%) increase to all approaches
- **South Main Street at I-395 Exit 4 Interchange Eastbound Ramps**

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

- Five percent (5%) increase to all approaches
- **South Main Street at Abbott Street**
 - Three percent (3%) increase to all approaches

Stantec met with Brewer staff regarding available parcels and interests in redevelopment opportunities within the study areas. Based on this feedback, Stantec estimated potential added traffic with potential new developments to inform realistic test cases and their impact on the City's transportation network. This process includes evaluating these potential land uses within the Institute of Transportation Engineer's (ITE's) Trip Generation Manual to establish estimates for the trip generation for the developments. The daily trip generation estimates and morning peak hour period and evening peak hour period trip generation estimates were estimated from potential, right-sized multi-use developments centered at parcels in Brewer that the City sees as having development interest or potential.

The estimated trips from such a development are presented in **Table 1**.

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Table 1 – Potential Development Traffic Generation Summary

Potential Development Sites	Address	Potential Future Land Uses	Size / # of Units	Total		AM Peak Hour		PM Peak Hour	
				In	Out	In	Out	In	Out
Box Factory Properties	75 & 77 South Main Street	Residential Planned Unit Development (PUD)	80 Dwelling Units	300	300	15	50	40	20
JR Redemption Property	151 South Main Street	All Suites Hotel	80 Rooms	175	175	15	15	15	15
Penobscot Rentals LLC Property	95 South Main Street	High-Turnover, Sit-Down Restaurant	12,000 SF	640	640	-	-	65	45
Getchell Ice Property	1 Union Street	Mixed-Use Office / Commercial	50,000 SF	315	315	80	10	15	75
Bonton Towers Property	0 Betton Street	Residential Planned Unit Development (PUD)	80 Dwelling Units	300	300	15	50	40	20
Church Street Church	23 Church Street	Affordable Housing	10 Dwelling Units	90	90	0	5	5	10
			Totals	1820	1820	125	130	180	185

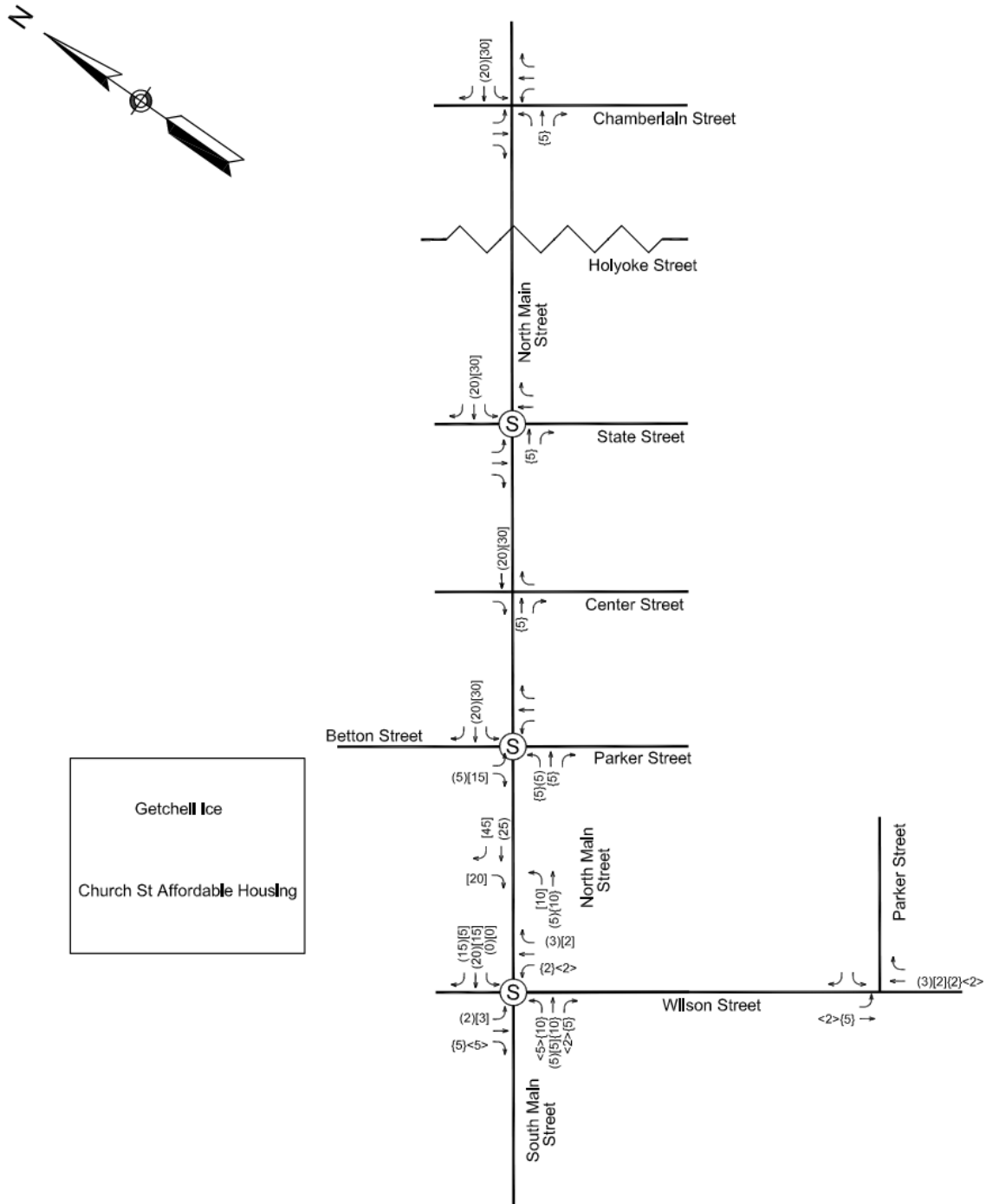
Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

The trips from **Table 1** were applied to the base, adjusted traffic volume networks and distributed based on existing traffic distribution through the City roadway network. These trips and their distribution are represented in **Figure 5** through **Figure 8**.

Based on the localized growth rates listed in the MaineDOT Statewide Growth Model and the addition of trips specific to the potential developments as shown in **Table 1**, Stantec presents figures showing local growth-based traffic volumes through Brewer in **Figure 9** through **Figure 12**.

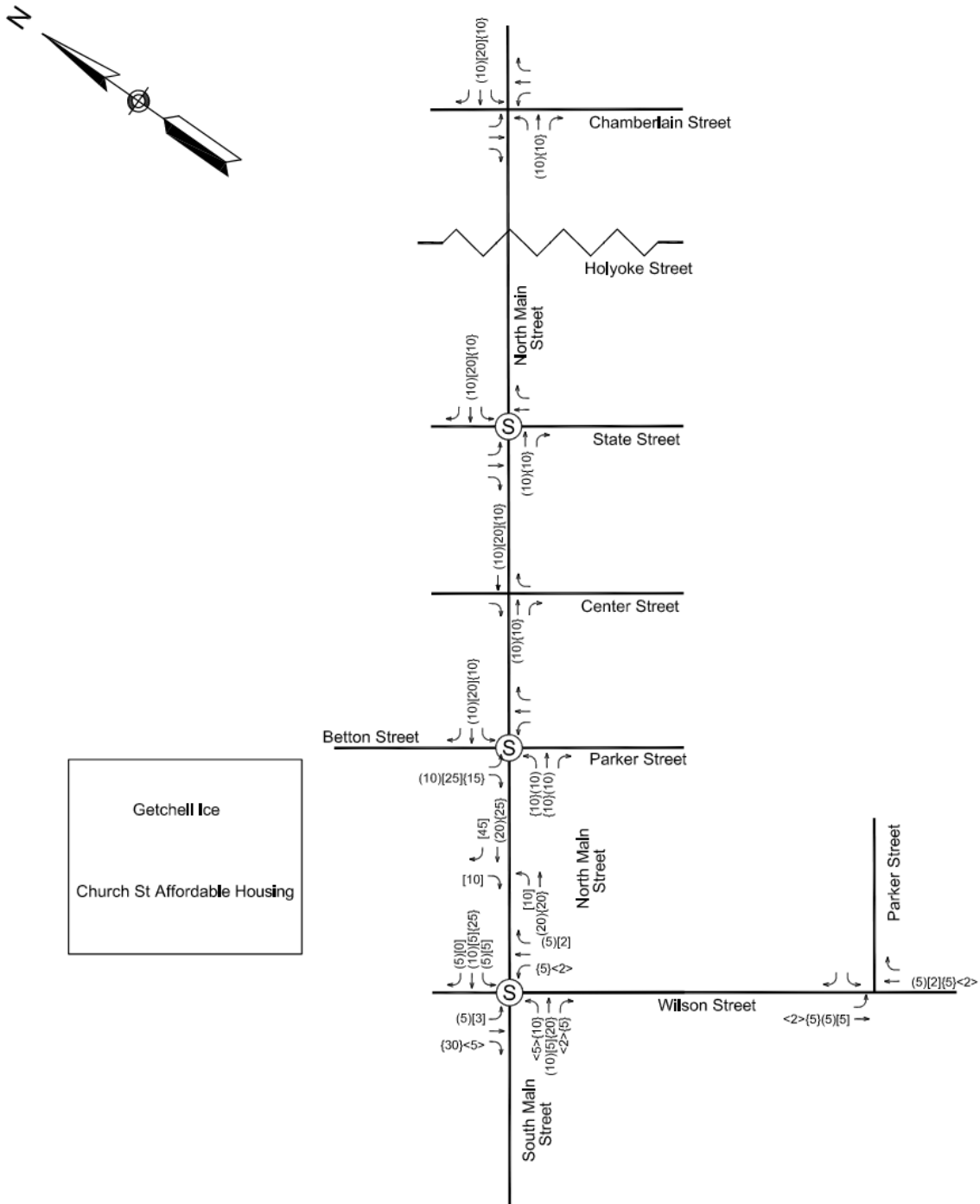
Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 5 – Brewer VPI – Potential Development Trips – AM Peak Hour Period



Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 6 – Brewer VPI – Potential Development Trips – PM Peak Hour Period



Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 7 – Brewer South Main Street Corridor – Potential Development Trips – AM Peak Hour Period

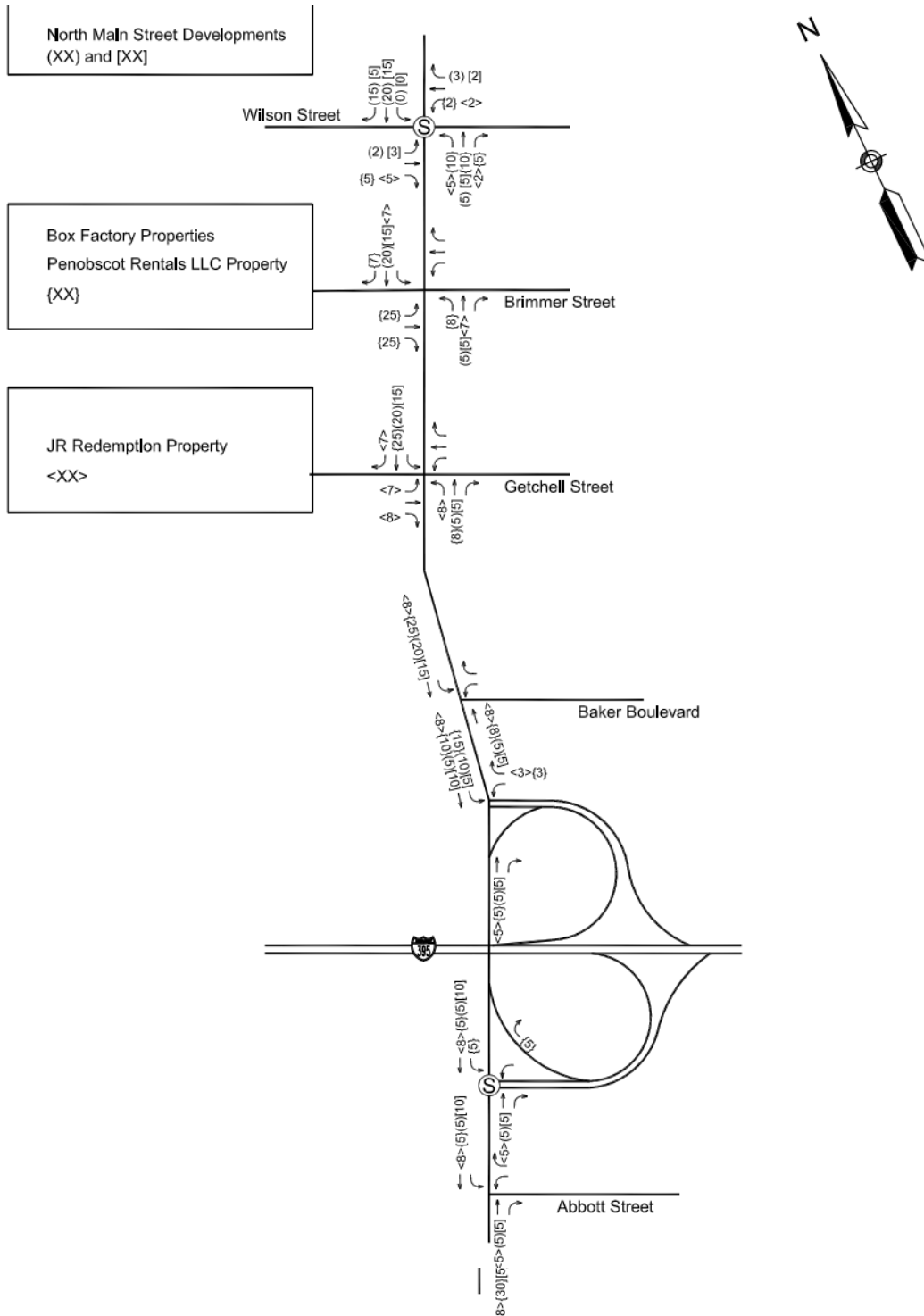


Figure 8 – Brewer South Main Street Corridor – Potential Development Trips – PM Peak Hour Period

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 9 – Brewer VPI – 2045 Morning Peak Hour Period – Local Growth Traffic Volumes

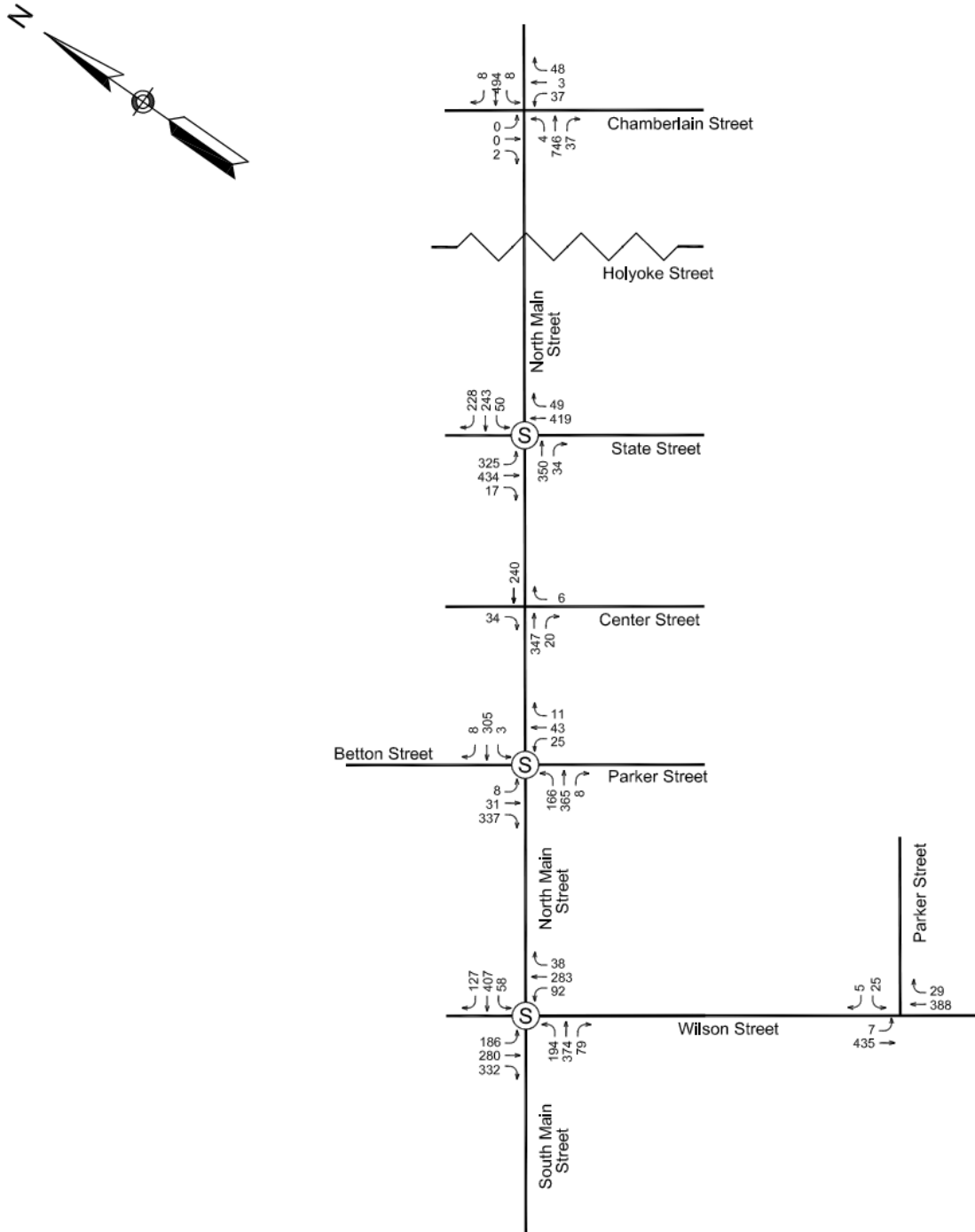
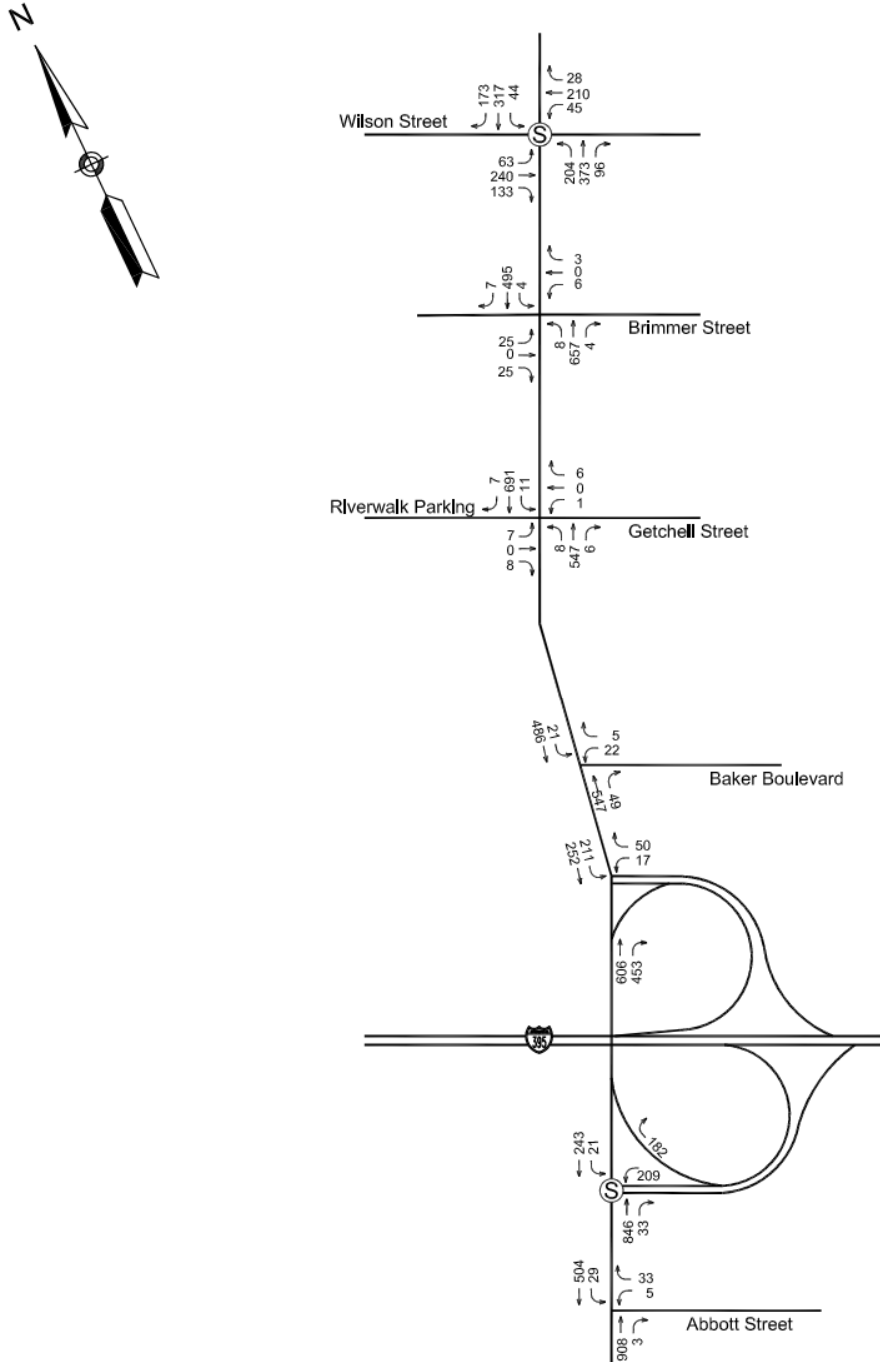


Figure 10 – Brewer VPI – 2045 Evening Peak Hour Period – Local Growth Traffic Volumes

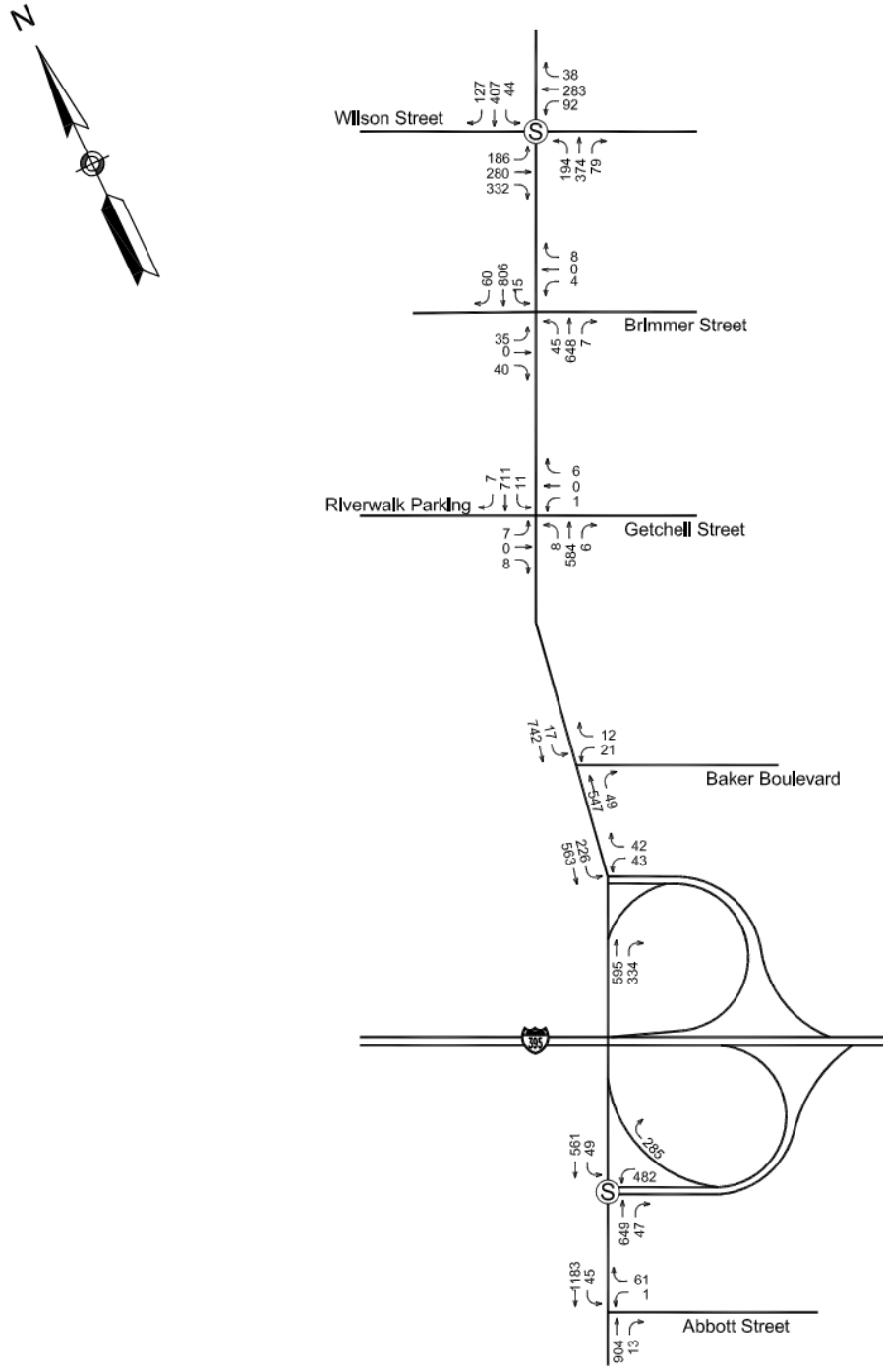
Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 11 – Brewer South Main Street Corridor – 2045 Morning Peak Hour Period – Local Growth Traffic Volumes



Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

Figure 12 – Brewer South Main Street Corridor – 2045 Evening Peak Hour Period – Local Growth Traffic Volumes



Future Conditions Summary

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

In anticipation of the evaluation of potential recommendations and improvements to the City of Brewer's transportation system within the Brewer VPI and South Main Street Corridor study areas, Stantec reviewed publicly available resources and MaineDOT traffic models to project existing traffic flow to 2045. Stantec evaluated two potential future outlooks of traffic volumes in the City: A standard MaineDOT-based regional outlook and a local outlook.

For the Regional Growth outlook, Stantec utilized the MaineDOT-recommended average annual growth rate of 0.5% per year alongside the changes in traffic demand due to the completion of the I-395 Extension and Route 9 Connector from Wilson Street (Route 1A) to Route 9 in Eddington, which is projected to reduce volumes along Route 9 by up to 12.7%. These traffic volumes for the morning and evening peak hour periods are presented in **Figure 1** and **Figure 4**.

For the Local Growth outlook, Stantec utilized the actual growth rates from count stations in Brewer as identified in the MaineDOT Future Traffic Model, as these growth rates ranged from 0.01% to 0.14%; relatively stagnant or just above baseline. Stantec coordinated with the City of Brewer to determine reasonable potential developments in the study areas that have potential to add specific traffic along the North Main Street and South Main Street corridors. This traffic was distributed in kind with current traffic flows throughout the City's roadway network. These trip generation estimates and distribution are presented in **Table 1** and the addition of these trips are presented in **Figure 5** through **Figure 8**. The addition of these trips to localized growth rates are presented in **Figure 9** through **Figure 12**.

When comparing the findings of both methods in evaluating future traffic through Brewer and for use in evaluating design alternatives and right-sizing infrastructure for Brewer's future, **Stantec recommends continuing to present impactful infrastructure evaluations and improvements by using the Regional Growth model to estimate future traffic volumes, which incorporates an overall average annual traffic volume growth rate of 0.5 percent per year.** This growth rate is larger than the locally identified annual growth rates along with inclusion of optimistic development construction and trip generation to Brewer's transportation system.

November 12, 2024
Jeremy Caron, PE and Jacob Stein
City of Brewer and BACTS

Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

APPENDIX A

I-395 / ROUTE 9 TRANSPORTATION STUDY ENVIRONMENTAL IMPACT STATEMENT – TRAFFIC REDISTRIBUTION

3 • I-395/Route 9 Transportation Study Environmental Impact Statement

Exhibit 3.18 – Changes in Traffic Volumes

Eddington - North of Downtown Brewer

Location	No-Build Alternative		Build Alternatives		Change in 2035 AADT No-Build v. Build	% Change in 2035 AADT No-Build v. Build
	2010	2035	2010	2035		
Total AADT	2010	2035	2010	2035		
Route 1A east of I-395	22,236	33,070	20,754	26,410	-6,660	-20.1
Route 1A west of Route 46	16,976	30,600	15,494	23,940	-6,660	-21.8
Route 1A east of Route 46	12,116	18,870	12,116	18,870	0	0.0
Route 46 south of Route 1A	2,021	3,130	2,021	3,130	0	0.0
Route 46 north of Route 1A	3,058	8,570	1,576	1,910	-6,660	-77.7
Route 9 east of Route 178	7,156	8,730	6,071	7,645	-1,085	-12.4
Route 9 west of Route 46	5,129	5,410	6,611	12,070	6,660	123.1
Route 9 east of Route 46	5,830	10,940	5,830	10,940	0	0.0
Truck AADT	1998	2035	2035			
Route 1A east of I-395	1,569	2,449	1,439		-1,010	-41.2
Route 1A west of Route 46	1,569	2,449	1,439		-1,010	-41.2
Route 1A east of Route 46	1,569	2,449	1,439		-1,010	-41.2
Route 46 south of Route 1A	265	281	281		0	0.0
Route 46 north of Route 1A	604	1,167	157		-1,010	-86.5
Route 9 east of Route 178	569	662	447		-215	-32.5
Route 9 west of Route 46	604	1,167	2,177		1,010	86.5
Route 9 east of Route 46	879	1,535	1,535		0	0.0

heavy-truck traffic along Route 9 west of Route 46 would increase over the No-Build Alternative. The build alternatives, including those that use portions of Route 9, would improve the quality of traffic flow at the intersection of Route 9/46 and other physically less intrusive improvements (e.g., adding turn lanes) could be made to the intersection that would further improve the quality of traffic flow at the intersection.

Improvements in LOS, or no further decrease in LOS, would occur on each of the key roadway segments in the study area with implementation of a build alternative (exhibit 3.19).

3.4.4 Crash Reductions

Locations in the study area exhibit higher crash rates than other locations in Maine with similar roadway and traffic characteristics. Of the major roads in

November 12, 2024
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Reference: Brewer VPI and Brewer South Main Street Study – Future Conditions Memorandum

APPENDIX B

MAINEDOT FUTURE TRAFFIC MODEL MAP – BREWER

Growth Rates Brewer, Maine (Village and South Main Street)

1
SR 9 (N MAIN ST)
SW/O CENTER ST

Growth Per Year: -1.86%
State Wide Model GPY: 0.13%
Recommended GPY: 0.5%

- 10790(1983)
- 10185(1984)
- 11800(1985)
- 14840(1988)
- 13000(1989)
- 12950(1990)
- 13900(1992)
- 12100(1996)
- 13970(2002)
- 12140(2008)
- 11250(2011)
- 10420(2014)
- 9820(2017)
- 10260(2023)

2
SR 9/178 (N MAIN ST)
NE/O STATE ST

Growth Per Year: -1.25%
State Wide Model GPY: 0.09%
Recommended GPY: 0.5%

- 10590(1982)
- 13810(1987)
- 15480(1989)
- 15950(1990)
- 14020(1991)
- 13860(1993)
- 14750(1996)
- 15090(1999)
- 15300(2002)
- 15130(2005)
- 14250(2006)
- 14920(2007)
- 14170(2008)
- 11340(2011)
- 13170(2014)
- 12250(2017)
- 12620(2023)

7
SR 15B(S MAIN ST) SW/O
US 1A (WILSON ST)

Growth Per Year: -2.09%
State Wide Model GPY: 0.13%
Recommended GPY: 0.5%

- 16235(1985)
- 14420(1987)
- 18100(1989)
- 17690(1990)
- 16500(1991)
- 15700(1992)
- 15440(1996)
- 16070(1999)
- 17580(2003)
- 16010(2004)
- 15560(2006)
- 13780(2011)
- 13520(2014)
- 12570(2017)
- 11020(2020)
- 12640(2023)

- 12350(1987)
- 13810(1989)
- 13400(1996)
- 16020(2003)
- 13450(2006)
- 12270(2008)
- 11180(2011)
- 9300(2020)
- 11000(2023)

- 12450(1985)
- 12510(1987)
- 11840(1989)
- 11830(1993)
- 14080(2005)
- 13380(2007)
- 10210(2023)

3
STATE ST SE/O SOMERSET ST

Growth Per Year: -2.38%
State Wide Model GPY: 0.07%
Recommended GPY: 0.5%

- 12440(1996)
- 13860(1998)
- 14310(2003)
- 13830(2006)
- 14200(2008)
- 11790(2011)
- 11280(2014)
- 10820(2017)
- 10090(2023)

- 4660(2011)
- 4340(2014)
- 4140(2017)
- 4370(2023)

- 11450(1996)
- 10170(1998)
- 10330(2003)
- 9270(2006)
- 10040(2008)
- 9230(2011)
- 9040(2012)
- 8560(2014)
- 8460(2017)
- 8560(2023)

6
SR 15 (S MAIN) NE/O
I-395 EB OFFRMP

Growth Per Year: 0.07%
State Wide Model GPY: 0.06%
Recommended GPY: 0.5%

- 15190(1988)
- 15470(1991)
- 14390(2008)
- 14230(2011)
- 14410(2014)
- 13990(2017)
- 13800(2021)
- 15050(2023)

- 14060(1996)
- 15070(1998)
- 16580(2003)
- 13400(2006)
- 13200(2008)
- 13290(2011)
- 13060(2014)
- 11970(2017)
- 10080(2020)
- 12160(2023)

- 12320(2021)

5
US 1A (WILSON ST) SE/O
SR 9 (N MAIN ST)

Growth Per Year: -1.37%
State Wide Model GPY: 0.01%
Recommended GPY: 0.5%

- 11360(1987)
- 11395(1989)
- 10730(1991)
- 11160(1996)
- 10460(2003)
- 10790(2004)
- 9150(2006)
- 9520(2008)
- 9100(2011)
- 8280(2014)
- 8310(2017)
- 8460(2023)

4
US 1A (WILSON ST) SE/O
HIGHLAND AVE

Growth Per Year: -1.56%
State Wide Model GPY: 0.14%
Recommended GPY: 0.5%

- 16635(1985)
- 11830(1996)
- 10190(1998)
- 11580(2003)
- 10030(2006)
- 10860(2008)
- 9760(2011)
- 9110(2014)
- 9030(2017)
- 8720(2023)

- 15730(1988)
- 16490(1991)
- 16230(2021)

November 12, 2024
Jeremy Caron, PE and Jacob Stein
City of Brewer and BACTS

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APPENDIX C

SEASONAL ADJUSTMENT AND FACTORS

Regional Growth Potential

2024 -> 2045 21 Years
 Growth Factor @ 0.5% 1.11

I-395 Extension - Estimated Traffic Volume Reductions
 I-395 Extension Traffic Reduction Factor Say -10% Major Streets

[Redacted]

	Per Intersection Design Hour Adjustment (6th Highest Week)	Per Intersection Future 2045 Volume Adjustment	Per Intersection I-395 Extension Adjustment (Major Streets)
Chamberlain	1.02	1.13	1.02
Holyoke			
State	1.08	1.20	1.08
Center	1.01	1.12	1.01
Betton/Parker	1.01	1.12	1.01
Wilson	1.08	1.20	1.08
Parker	1.02	1.13	1.02
Brimmer	1.03	1.14	1.03
Getchell	1.02	1.13	1.02
Baker Blvd	1.02	1.13	1.02
WB Ramps	1.04	1.15	1.04
EB Ramps	1.04	1.15	1.04
Abbott	1.02	1.13	1.02

Local Growth Potential

2024 -> 2045 21 Years

I-395 Extension - Estimated Traffic Volume Reductions
 I-395 Extension Traffic Reduction Factor Say -10% Major Streets

[Redacted]

	Per Intersection Design Hour Adjustment (6th Highest Week)	Per Intersection Future 2045 Volume Adjustment	Per Intersection I-395 Extension Adjustment (Major Streets)
Chamberlain	1.02	0.09%	1.04
Holyoke			
State	1.08	0.09%	1.10
Center	1.01	0.13%	1.04
Betton/Parker	1.01	0.13%	1.04
Wilson	1.08	0.01%	1.08
Parker	1.02	0.14%	1.05
Brimmer	1.03	0.13%	1.06
Getchell	1.02	0.13%	1.05
Baker Blvd	1.02	0.13%	1.05
WB Ramps	1.04	0.06%	1.05
EB Ramps	1.04	0.06%	1.05
Abbott	1.02	0.06%	1.03

3 - I-395/Route 9 Transportation Study Environmental Impact Statement

Exhibit 3.18 - Changes in Traffic Volumes

Eddington - North of Downtown Brewer

Location	No-Build Alternative		Build Alternatives		Change in 2035 AADT No-Build v. Build	% Change in 2035 AADT No-Build v. Build
	2010	2035	2010	2035		
Total AADT						
Route 1A east of I-395	22,236	33,070	20,754	26,410	-6,660	-20.1
Route 1A west of Route 46	16,976	30,600	15,494	23,940	-6,660	-21.8
Route 1A east of Route 46	12,116	18,870	12,116	18,870	0	0.0
Route 46 south of Route 1A	2,021	3,130	2,021	3,130	0	0.0
Route 46 north of Route 1A	3,058	8,570	1,576	1,910	-6,660	-77.7
Route 9 east of Route 178	7,156	8,730	6,071	7,645	-1,085	-12.4
Route 9 west of Route 46	5,129	5,410	6,611	12,070	6,660	123.1
Route 9 east of Route 46	5,830	10,940	5,830	10,940	0	0.0
Truck AADT	1998	2035	2035			
Route 1A east of I-395	1,569	2,449	1,439		-1,010	-41.2
Route 1A west of Route 46	1,569	2,449	1,439		-1,010	-41.2
Route 1A east of Route 46	1,569	2,449	1,439		-1,010	-41.2
Route 46 south of Route 1A	265	281	281		0	0.0
Route 46 north of Route 1A	604	1,167	157		-1,010	-86.5
Route 9 east of Route 178	569	662	447		-215	-32.5
Route 9 west of Route 46	604	1,167	2,177		1,010	86.5
Route 9 east of Route 46	879	1,535	1,535		0	0.0

heavy-truck traffic along Route 9 west of Route 46 would increase over the No-Build Alternative. The build alternatives, including those that use portions of Route 9, would improve the quality of traffic flow at the intersection of Route 9/46 and other physically less intrusive improvements (e.g., adding turn lanes) could be made to the intersection that would further improve the quality of traffic flow at the intersection.

Improvements in LOS, or no further decrease in LOS, would occur on each of the key roadway segments in the study area with implementation of a build alternative (exhibit 3.19).

3.4.4 Crash Reductions

Locations in the study area exhibit higher crash rates than other locations in Maine with similar roadway and traffic characteristics. Of the major roads in