January 14, 2020

# Traffic Impact Study

9922 Brentlinger Lane Louisville, KY 40059

Prepared for

Louisville Metro Planning Commission





# **Table of Contents**

| INTRODUCTION                                | 2 |
|---|---|
| Figure 1. Site Map                          | 2 |
| EXISTING CONDITIONS                         |   |
| Figure 2. Existing Peak Hour Volumes        |   |
| FUTURE CONDITIONS                           |   |
| Figure 3. 2022 No Build Peak Hour Volumes   |   |
| TRIP GENERATION                             |   |
| Table 1. Peak Hour Trips Generated by Site  |   |
| Figure 4. Trip Distribution Percentages     |   |
| Figure 5. Peak Hour Trips Generated by Site |   |
| Figure 6. 2022 Build Peak Hour Volumes      |   |
| ANALYSIS                                    |   |
| Table 2. Peak Hour Level of Service         | 6 |
| CONCLUSIONS                                 | 6 |
| APPENDIX                                    | 7 |

## INTRODUCTION

The development plan for 9922 Brentlinger Lane in Louisville, KY shows 116 multi-family units. **Figure 1** displays a map of the site. Access to the development will be from an entrance on Brentlinger Lane and Major Lane. The purpose of this study is to examine the traffic impacts of the development upon the adjacent highway system. For this study, the impact area was defined to be the intersection of Brentlinger Lane with Leaders Lane.



Figure 1. Site Map

## **EXISTING CONDITIONS**

Brentlinger Lane is maintained by Louisville Metro with an estimated 2019 Average Annual Daily Traffic (AADT) volume of 3,200 vehicles per day between Bardstown Road and Broad Run Road, as estimated by the Kentucky Transportation Cabinet count station 318. The road has two lanes of nine feet and one-foot shoulders through study area. The speed limit is 35 mph. There are no sidewalks along the property. There are sidewalks along the adjacent property to the west. The intersection with Leaders Lane is controlled with a stop sign on Leaders Lane.

Peak hour traffic counts for the intersections were obtained on Thursday, October 17, 2019. The a.m. peak hour occurred between 8:00 and 9:00 and the p.m. peak hour was 4:45 to 5:45. **Figure 2** illustrates the existing a.m. and p.m. peak hour traffic volumes. The Appendix contains the full count data for the intersection.

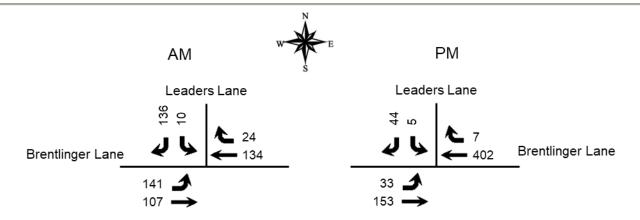


Figure 2. Existing Peak Hour Volumes

## **FUTURE CONDITIONS**

The project completion date is 2022. An annual growth rate of 2.0 percent was applied to the through volumes on Brentlinger Lane. The trips generated by the proposed Southpointe Commons from their traffic study were included on Leaders Lane. A left-turn lane on eastbound Brentlinger Lane is currently in the design phase. **Figure 3** displays the 2022 No Build peak hour volumes.

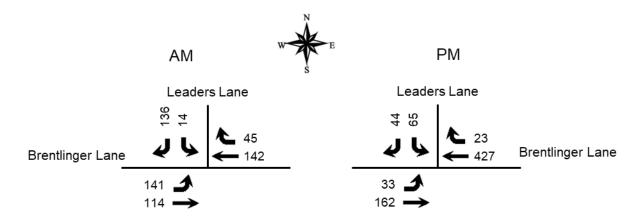


Figure 3. 2022 No Build Peak Hour Volumes

## TRIP GENERATION

The Institute of Transportation Engineers <u>Trip Generation Manual</u>, 10<sup>th</sup> Edition contains trip generation rates for a wide range of developments. The land uses of "Multi-Family (Low-Rise) (220)" was reviewed and determined to be the best match. The trip generation results are listed in **Table 1**. The trips were assigned to the highway network with the percentages shown in **Figure 4**. **Figure 5** shows the trips generated by this development and distributed throughout the road network during the peak hours. **Figure 6** displays the individual turning movements for the peak hours when the development is completed.

Table 1. Peak Hour Trips Generated by Site

|                          | A.M. I | Peak | Hour | P.M. F | Peak | Hour |
|--------------------------|--------|------|------|--------|------|------|
| Land Use                 | Trips  | In   | Out  | Trips  | In   | Out  |
| Multi-Family (116 units) | 55     | 13   | 42   | 67     | 42   | 35   |

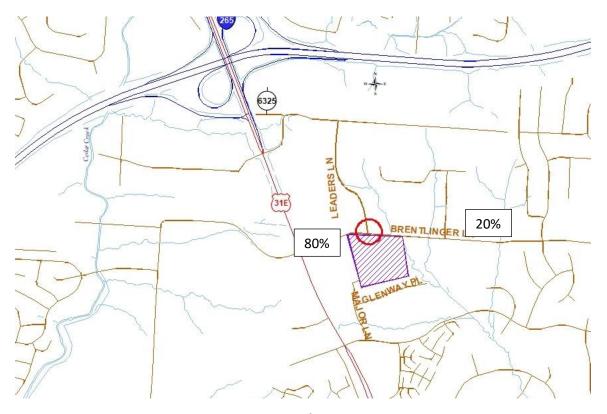


Figure 4. Trip Distribution Percentages

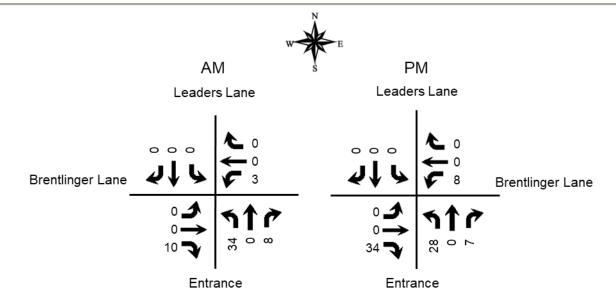


Figure 5. Peak Hour Trips Generated by Site

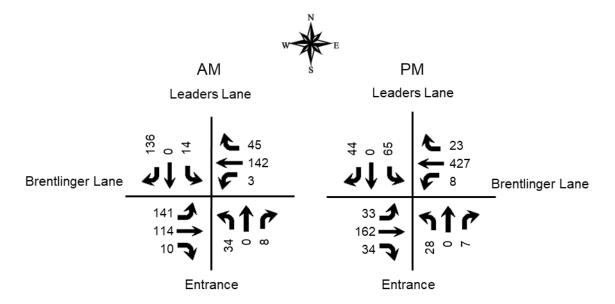


Figure 6. 2022 Build Peak Hour Volumes

## **ANALYSIS**

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a "Level of Service". Level of Service is a ranking scale from A through F, "A" is the best operating condition and "F" is the worst. Level of Service results depend upon the facility that is analyzed. In this case, the Level of Service is based upon the total delay experienced for lanes at stop-controlled intersections.

To evaluate the impact of the proposed development, the vehicle delays at the intersections were determined using procedures detailed in the <u>Highway Capacity Manual</u>, 6<sup>th</sup> edition. Future delays and Level of Service were determined

for the intersections using the HCS Streets (version 7.8.5) software. The delays and Level of Service are summarized in **Table 2**.

Table 2. Peak Hour Level of Service

|  |          | A.M.     |       |          | P.M.     |       |
|--|----------|----------|-------|----------|----------|-------|
| Approach                               | 2019     | 2022     | 2022  | 2019     | 2022     | 2022  |
| Approach                               | Existing | No Build | Build | Existing | No Build | Build |
| Brentlinger Lane at Leaders Lane       |          |          |       |          |          |       |
| Brentlinger Lane Eastbound (Left turn) | Α        | Α        | Α     | Α        | Α        | Α     |
| Brentinger Lane Eastbound (Left turn)  | 8.1      | 8.3      | 8.3   | 8.3      | 8.4      | 8.4   |
| Brentlinger Lane Westbound (Left turn) |          |          | Α     |          |          | Α     |
| Brentinger Lane Westbound (Lent turn)  |          |          | 7.6   |          |          | 7.6   |
| Entrance Northbound                    |          |          | С     |          |          | В     |
| Littratice Northbodild                 |          |          | 21.5  |          |          | 14.3  |
| Leaders Lane Southbound                | В        | В        | В     | В        | С        | В     |
| Leaders Lane Southbound                | 11.7     | 12.6     | 12.2  | 11.7     | 15.8     | 14.9  |

Key: Level of Service, Delay in seconds per vehicle

The intersection of Brentlinger Lane at the entrance was evaluated for turn lanes using the Kentucky Transportation Cabinet <u>Highway Design Guidance Manual</u> dated March, 2017. Using the volumes in Figure 6, no turn lanes will be required for the entrance.

## **CONCLUSIONS**

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2022, there will be a minor impact to the existing highway network. No improvements are required for this development.

## **APPENDIX**

## Brentlinger Lane Traffic Impact Study

#### Jefferson County, KY

Classified Turn Movement Count

Site 1 of 1

Local Access Brentlinger Ln (East)

Brentlinger Ln (West)

**Lat/Long** 38.134886°, -85.576344°

Date

Thursday, October 17, 2019

Weather Fair 51°F

## **Traffic Counts**



41 Peabody Street, Nashville, TN 37210
10 Glenlake Parkway, Suite 130, Atlanta, GA 30328
555 Fayetteville Street, Suite 201, Raleigh, NC 27601
1229 South Shelby Street, Louisville, KY 40203
6565 North MacArthur Boulevard, Suite 225, Dallas, TX 75039

hello@marrtraffic.com www.marrtraffic.com

1 (800) 615-3765

|               |       | S    | outhboun  | d    |     |       | ١     | Vestbound   | d      |     |        | -     | Eastbound   | d     |     |     |
|---------------|-------|------|-----------|------|-----|-------|-------|-------------|--------|-----|--------|-------|-------------|-------|-----|-----|
|               |       | L    | ocal Acce | ss   |     |       | Brent | linger Ln ( | (East) |     |        | Brent | linger Ln ( | West) |     |     |
|               | U-Tum | Left | Right     | Peds | Арр | U-Tum | Thru  | Right       | Peds   | Арр | U-Turn | Left  | Thru        | Peds  | App | Int |
| 0700 - 0715   | 0     | 0    | 8         | 0    | 8   | 0     | 47    | 1           | 0      | 48  | 0      | 2     | 27          | 0     | 29  | 85  |
| 0715 - 0730   | 0     | 0    | 5         | 0    | 5   | 0     | 43    | 2           | 0      | 45  | 0      | 5     | 36          | 0     | 41  | 91  |
| 0730 - 0745   | 0     | 1    | 2         | 0    | 3   | 0     | 47    | 0           | 0      | 47  | 0      | 5     | 57          | 0     | 62  | 112 |
| 0745 - 0800   | 0     | 1    | 3         | 0    | 4   | 0     | 40    | 1           | 0      | 41  | 0      | 1     | 64          | 0     | 65  | 110 |
| 0800 - 0815   | 0     | 1    | 2         | 0    | 3   | 0     | 39    | 3           | 0      | 42  | 0      | 5     | 31          | 0     | 36  | 81  |
| 0815 - 0830   | 0     | 1    | 5         | 0    | 6   | 0     | 27    | 1           | 0      | 28  | 0      | 23    | 31          | 0     | 54  | 88  |
| 0830 - 0845   | 0     | 3    | 64        | 0    | 67  | 0     | 36    | 9           | 0      | 45  | 0      | 50    | 24          | 0     | 74  | 186 |
| 0845 - 0900   | 0     | 5    | 65        | 0    | 70  | 0     | 32    | 11          | 0      | 43  | 0      | 63    | 21          | 0     | 84  | 197 |
| 1530 - 1545   | 0     | 1    | 2         | 0    | 3   | 0     | 45    | 2           | 0      | 47  | 0      | 17    | 33          | 0     | 50  | 100 |
| 1545 - 1600   | 0     | 2    | 49        | 0    | 51  | 0     | 49    | 4           | 0      | 53  | 0      | 20    | 35          | 0     | 55  | 159 |
| 1600 - 1615   | 0     | 6    | 42        | 0    | 48  | 0     | 60    | 1           | 0      | 61  | 0      | 15    | 36          | 0     | 51  | 160 |
| 1615 - 1630   | 0     | 1    | 9         | 0    | 10  | 0     | 71    | 2           | 0      | 73  | 0      | 8     | 23          | 0     | 31  | 114 |
| 1630 - 1645   | 0     | 1    | 4         | 0    | 5   | 0     | 75    | 1           | 0      | 76  | 0      | 9     | 32          | 0     | 41  | 122 |
| 1645 - 1700   | 0     | 0    | 5         | 0    | 5   | 0     | 85    | 3           | 0      | 88  | 0      | 13    | 29          | 0     | 42  | 135 |
| 1700 - 1715   | 0     | 4    | 25        | 0    | 29  | 0     | 94    | 3           | 0      | 97  | 0      | 9     | 38          | 0     | 47  | 173 |
| 1715 - 1730   | 0     | 0    | 8         | 0    | 8   | 0     | 109   | 0           | 0      | 109 | 0      | 3     | 42          | 0     | 45  | 162 |
| 1730 - 1745   | 0     | 1    | 6         | 0    | 7   | 0     | 114   | 1           | 0      | 115 | 0      | 8     | 44          | 0     | 52  | 174 |
| 1745 - 1800   | 0     | 0    | 5         | 0    | 5   | 0     | 87    | 0           | 0      | 87  | 0      | 2     | 38          | 0     | 40  | 132 |
|               | •     |      |           |      |     | -     |       |             | •      |     |        |       |             |       |     |     |
| 0800 - 0815   | 0     | 1    | 2         | 0    | 3   | 0     | 39    | 3           | 0      | 42  | 0      | 5     | 31          | 0     | 36  | 81  |
| 0815 - 0830   | 0     | 1    | 5         | 0    | 6   | 0     | 27    | 1           | 0      | 28  | 0      | 23    | 31          | 0     | 54  | 88  |
| 0830 - 0845   | 0     | 3    | 64        | 0    | 67  | 0     | 36    | 9           | 0      | 45  | 0      | 50    | 24          | 0     | 74  | 186 |
| 0845 - 0900   | 0     | 5    | 65        | 0    | 70  | 0     | 32    | 11          | 0      | 43  | 0      | 63    | 21          | 0     | 84  | 197 |
| AM PEAK TOTAL | 0     | 10   | 136       | 0    | 146 | 0     | 134   | 24          | 0      | 158 | 0      | 141   | 107         | 0     | 248 | 552 |
| 1645 - 1700   | 0     | 0    | 5         | 0    | 5   | 0     | 85    | 3           | 0      | 88  | 0      | 13    | 29          | 0     | 42  | 135 |
| 1700 - 1715   | 0     | 4    | 25        | 0    | 29  | 0     | 94    | 3           | 0      | 97  | 0      | 9     | 38          | 0     | 47  | 173 |
| 1715 - 1730   | 0     | 0    | 8         | 0    | 8   | 0     | 109   | 0           | 0      | 109 | 0      | 3     | 42          | 0     | 45  | 162 |
| 1730 - 1745   | 0     | 1    | 6         | 0    | 7   | 0     | 114   | 1           | 0      | 115 | 0      | 8     | 44          | 0     | 52  | 174 |
| PM PEAK TOTAL | 0     | 5    | 44        | 0    | 49  | 0     | 402   | 7           | 0      | 409 | 0      | 33    | 153         | 0     | 186 | 644 |

## **HCS REPORTS**

|   |         | Н         | CS7      | Two-            | -Way  | Stop          | o-Co       | ntrol     | Rep      | ort   |       |            |         |       |       |     |
|---|---------|-----------|----------|-----------------|---|---------------|------------|-----------|----------|-------|-------|------------|---------|-------|-------|-----|
| General Information   |         |           |          |                 |   |               | Site       | Inforr    | natio    | n     |       |            |         |       |       | _   |
| Analyst   | DBZ     |           |          |                 |   |               | Inters     | ection    |          |       | Brent | tlinger at | Leaders | ;     |       |     |
| Agency/Co.  | Diane   | e B Zimn  | nerman T | raffic En       | gineerin  | g             | Jurisd     | liction   |          |       |       |            |         |       |       |     |
| Date Performed  | 1/13/   |           |          |                 |   | -             | East/\     | Nest Stre | eet      |       | Brent | tlinger La | ane     |       |       | _   |
| Analysis Year   | 2019    |           |          |                 |   |               | North      | /South S  | Street   |       | Leade | ers Lane   |         |       |       |     |
| Time Analyzed   | AM P    | eak       |          |                 |   |               |            | Hour Fac  |          |       | 0.70  |            |         |       |       | _   |
| Intersection Orientation                                      | East-   | West      |          |                 |   |               | Analy      | sis Time  | Period ( | hrs)  | 0.25  |            |         |       |       |     |
| Project Description   | Brent   | linger La | ine      |                 |   |               |            |           |          |       |       |            |         |       |       | _   |
| Lanes   |         |           |          |                 |   |               |            |           |          |       |       |            |         |       |       |     |
|   |         |           |          | D 7 4 4 7 7 7 0 | \<br>The state of the | or Street: Ea | <b>↑</b> ↑ | 114471    |          |       |       |            |         |       |       |     |
| Vehicle Volumes and Adj                                       | justme  | nts       |          |                 |   |               |            |           |          |       |       |            |         |       |       |     |
| Approach  |         | Eastb     | ound     |                 |   | Westl         | oound      |           |          | North | bound |            |         | South | bound |     |
| Movement  | U       | L         | T        | R               | U   | L             | T          | R         | U L      |       | T     |            | U       | L     | Т     | R   |
| Priority  | 10      | 1         | 2        | 3               | 4U  | 4             | 5          | 6         |          | 7     | 8     | 9          |         | 10    | 11    | 12  |
| Number of Lanes   | 0       | 0         | 1        | 0               | 0   | 0             | 1          | 0         |          | 0     | 0     | 0          |         | 0     | 1     | 0   |
| Configuration   | _       | LT        |          |                 |   |               |            | TR        |          |       |       | _          | _       | _     | LR    | L   |
| Volume (veh/h)  | -       | 141       | 107      |                 |   |               | 134        | 24        |          |       |       |            |         | 10    |       | 136 |
| Percent Heavy Vehicles (%)                                    |         | 0         |          |                 |   |               |            |           |          |       |       |            |         | 10    |       | 1   |
| Proportion Time Blocked                                       |         |           |          |                 |   |               |            |           |          |       |       |            |         |       |       |     |
| Percent Grade (%)   | _       |           |          |                 |   |               |            |           |          |       |       |            |         |       | 0     |     |
| Right Turn Channelized  | -       |           |          |                 |   |               |            |           |          |       |       |            |         |       |       |     |
| Median Type   Storage   | $\perp$ |           |          | Undi            | vided   |               |            |           |          |       |       |            |         |       |       | _   |
| Critical and Follow-up H                                      | eadwa   | ys        |          |                 |   |               |            |           |          |       |       |            |         |       |       |     |
| Base Critical Headway (sec)                                   | Т       | 4.1       |          |                 |   |               |            |           |          |       |       |            |         | 7.1   |       | 6.2 |
| Critical Headway (sec)  |         | 4.10      |          |                 |   |               |            |           |          |       |       |            |         | 6.50  |       | 6.2 |
| Base Follow-Up Headway (sec)                                  |         | 2.2       |          |                 |   |               |            |           |          |       |       |            |         | 3.5   |       | 3.3 |
| Follow-Up Headway (sec)                                       |         | 2.20      |          |                 |   |               |            |           |          |       |       |            |         | 3.59  |       | 3.3 |
| Delay, Queue Length, an                                       | d Leve  | l of S    | ervice   |                 |   |               |            |           |          |       |       |            |         |       |       |     |
| Flow Rate, v (veh/h)  | T       | 201       |          |                 |   |               |            |           |          |       | П     |            |         |       | 209   |     |
| Capacity, c (veh/h)   |         | 1355      |          |                 |   |               |            |           |          |       |       |            |         |       | 744   |     |
| v/c Ratio   |         | 0.15      |          |                 |   |               |            |           |          |       |       |            |         |       | 0.28  |     |
|   |         | 0.5       |          |                 |   |               |            |           |          |       |       |            |         |       | 1.1   |     |
| 95% Queue Length, Q <sub>95</sub> (veh)                       |         | _         |          |                 |   |               |            |           |          |       |       |            |         |       | 11.7  |     |
| 95% Queue Length, Q <sub>95</sub> (veh) Control Delay (s/veh) |         | 8.1       |          | ı               |   |               |            |           |          |       |       |            |         |       |       |     |
| • • • • • •   |         | 8.1<br>A  |          |                 |   |               |            |           |          |       |       |            |         |       | В     |     |
| Control Delay (s/veh)   |         | А         | .2       |                 |   |               |            |           |          |       |       |            |         | 1     | _     |     |

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HCSTMI TWSC Version 7.8.5 Leaders AM 19.xtw Generated: 1/13/2020 5:05:51 PM

|  |        | Н   | CS7     | Two-      | -Way     | Stop                          | o-Co           | ntrol     | Rep      | ort   |       |           |         |                            |                                   |                   |
|--|--------|---|---------|-----------|----------|-------------------------------|----------------|-----------|----------|-------|-------|-----------|---------|----------------------------|-----------------------------------|-------------------|
| General Information  |        | _   | _       | _         | _        | _                             | Site           | Inforr    | natio    | n     | _     | _         | _       | _                          |                                   | _                 |
| Analyst  | DBZ    |   |         |           |          |                               | Inters         | ection    |          |       | Brent | linger at | Leaders | :                          |                                   |                   |
| Agency/Co.   | Diane  | B Zimm  | erman T | raffic En | gineerin | g                             |                | liction   |          |       |       |           |         |                            |                                   |                   |
| Date Performed   | 1/13/  | 2020  |         |           |          |                               | East/\         | West Stre | eet      |       | Brent | linger La | ne      |                            |                                   |                   |
| Analysis Year  | 2022   |   |         |           |          |                               | North          | n/South : | Street   |       | Leade | rs Lane   |         |                            |                                   |                   |
| Time Analyzed  | AM P   | eak No l  | Build   |           |          |                               | Peak           | Hour Fac  | ctor     |       | 0.70  |           |         |                            |                                   |                   |
| Intersection Orientation   | East-\ | West  |         |           |          |                               | Analy          | sis Time  | Period ( | hrs)  | 0.25  |           |         |                            |                                   |                   |
| Project Description  | Brent  | linger La   | ne      |           |          |                               |                |           |          |       |       |           |         |                            |                                   |                   |
| Lanes  |        |   |         |           |          |                               |                |           |          |       |       |           |         |                            |                                   |                   |
|  |        |   |         | 1744Y↑ FC |          | サ <b>ヤ</b> 1<br>or Street: Ea | トレー<br>st-West | 7 4 4 7 0 |          |       |       |           |         |                            |                                   |                   |
| Vehicle Volumes and Ad   | justme | nts   |         |           |          |                               |                |           |          |       |       |           |         |                            |                                   |                   |
| Approach   | $\bot$ | Eastb   | ound    |           |          | Westl                         | oound          |           | <u> </u> | North | bound |           |         | South                      | bound                             |                   |
| Movement   | U      | L   | T       | R         | U        | L                             | T              | R         | U        | L     | T     | R         | U       | L                          | T                                 | R                 |
| Priority   | 10     | 1   | 2       | 3         | 4U       | 4                             | 5              | 6         |          | 7     | 8     | 9         |         | 10                         | 11                                | 12                |
| Number of Lanes  | 0      | 0   | 1       | 0         | 0        | 0                             | 1              | 0         |          | 0     | 0     | 0         |         | 0                          | 1                                 | 0                 |
| Configuration  | +      | LT  | 111     |           |          |                               | 142            | TR        |          |       |       |           |         | 14                         | LR                                | 136               |
| Volume (veh/h)   | +-     | 141   | 114     |           |          |                               | 142            | 45        |          |       |       |           |         | 14                         |                                   | 13                |
|  |        |   |         | ı         |          |                               | ı              |           |          |       |       | l         |         | 10                         |                                   | 1                 |
| Percent Heavy Vehicles (%)   | +      | '   |         |           |          |                               |                |           |          |       |       |           |         |                            |                                   | 1                 |
| Proportion Time Blocked  |        |   |         |           |          |                               |                |           |          |       |       |           |         |                            | <u> </u>                          | 1                 |
| Proportion Time Blocked Percent Grade (%)  |        |   |         |           |          |                               |                |           |          |       |       |           |         |                            | 0                                 | 1                 |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized   |        |   |         | Undi      | vided    |                               |                |           |          |       |       |           |         |                            | 0                                 | 1                 |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage   | eadwa  |   |         | Undi      | vided    |                               |                |           |          |       |       |           |         |                            | 0                                 | 1                 |
| Proportion Time Blocked  Percent Grade (%)  Right Turn Channelized  Median Type   Storage  Critical and Follow-up H  | eadwa  | ys  |         | Undi      | vided    |                               |                |           |          |       |       |           |         |                            | 0                                 |                   |
| Proportion Time Blocked  Percent Grade (%)  Right Turn Channelized  Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)   | eadwa  | <b>ys</b> 4.1   |         | Undi      | vided    |                               |                |           |          |       |       |           |         | 7.1                        | 0                                 | 6.2               |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage  Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec)  | leadwa | <b>ys</b> 4.1 4.10  |         | Undi      | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50                | 0                                 | 6.2               |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage  Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)   | eadwa  | <b>ys</b> 4.1 4.10 2.2  |         | Undi      | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50<br>3.5         | 0                                 | 6.2<br>6.2<br>3.3 |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage  Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)   |        | <b>ys</b> 4.1 4.10 2.2 2.20                                     | arvisc  |           | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50                | 0                                 | 6.2               |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage  Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)  Delay, Queue Length, and   |        | ys 4.1 4.10 2.2 2.20 I of So                                    | ervice  |           | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50<br>3.5         |                                   | 6.2<br>6.2<br>3.3 |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage  Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)  Delay, Queue Length, and Flow Rate, v (veh/h)  |        | ys 4.1<br>4.10<br>2.2<br>2.20<br>I of Se                        | ervice  |           | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50<br>3.5         | 214                               | 6.2<br>6.2<br>3.3 |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage  Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)  Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)  |        | ys 4.1 4.10 2.2 2.20 I of So 201 1308                           | ervice  |           | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50<br>3.5         | 214 689                           | 6.2<br>6.2<br>3.3 |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage  Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)  Pelay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio  |        | ys 4.1 4.10 2.2 2.20 l of So 201 1308 0.15                      | ervice  |           | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50<br>3.5         | 214<br>689<br>0.31                | 6.2<br>6.2<br>3.3 |
| Proportion Time Blocked  Percent Grade (%)  Right Turn Channelized  Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  Delay, Queue Length, and Flow Rate, v (veh/h)  Capacity, c (veh/h)  v/c Ratio  95% Queue Length, Q95 (veh)                                    |        | ys 4.1 4.10 2.2 2.20 I of Se 201 1308 0.15 0.5                  | ervice  |           | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50<br>3.5         | 214<br>689<br>0.31<br>1.3         | 6.2<br>6.2<br>3.3 |
| Proportion Time Blocked  Percent Grade (%)  Right Turn Channelized  Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  Delay, Queue Length, and Flow Rate, v (veh/h)  Capacity, c (veh/h)  v/c Ratio  95% Queue Length, Q <sub>95</sub> (veh)  Control Delay (s/veh) |        | ys 4.1 4.10 2.2 2.20 l of Se 201 1308 0.15 0.5 8.3              | ervice  |           | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50<br>3.5         | 214<br>689<br>0.31<br>1.3<br>12.6 | 6.2<br>6.2<br>3.3 |
| Proportion Time Blocked Percent Grade (%) Right Turn Channelized Median Type   Storage  Critical and Follow-up H Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)  Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q95 (veh)  |        | ys  4.1  4.10  2.2  2.20  l of So  201  1308  0.15  0.5  8.3  A | ervice  |           | vided    |                               |                |           |          |       |       |           |         | 7.1<br>6.50<br>3.5<br>3.59 | 214<br>689<br>0.31<br>1.3         | 6.2<br>3.3        |

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|  |         | П   | C3/      | Two-       | -wa <u>y</u> | Sich  |        | 1100                                      | кер      | ort _               |   |             |         |                     |  |             |
|--|---------|---|----------|------------|--------------|---|--------|---|----------|---------------------|---|-------------|---------|---------------------|--|-------------|
| General Information  |         |   |          |            |              |   | Site   | Inform                                    | natio    | n                   |   |             |         |                     |  |             |
| Analyst  | DBZ     |   |          |            |              |   | Inters | ection                                    |          |                     | Brent   | linger at   | Leaders |                     |  |             |
| Agency/Co.   | Diane   | B Zimm  | erman 1  | Fraffic En | gineerin     | ıg  | Jurisd | liction                                   |          |                     |   |             |         |                     |  |             |
| Date Performed   | 1/13/   |   |          |            |              |   | East/\ | Nest Str                                  | eet      |                     | Brent   | linger La   | ne      |                     |  |             |
| Analysis Year  | 2022    |   |          |            |              |   | North  | /South                                    | Street   |                     | _   | er/Entrar   |         |                     |  |             |
| Time Analyzed  | AM P    | eak Build   | <u> </u> |            |              |   | Peak   | Hour Fac                                  | ctor     |                     | 0.70  |             |         |                     |  |             |
| Intersection Orientation   | East-\  | Vest  |          |            |              |   | Analy  | sis Time                                  | Period ( | hrs)                | 0.25  |             |         |                     |  |             |
| Project Description  | Brent   | linger  |          |            |              |   |        |   |          |                     |   |             |         |                     |  |             |
| Lanes  |         |   |          |            |              |   |        |   |          |                     |   |             |         |                     |  |             |
|  |         |   |          |            | ጉዛ           | †<br>† † † 1<br>or Street: Ea                               |        | * + ↑ ↑ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ ¢ |          |                     |   |             |         |                     |  |             |
| Vehicle Volumes and Ad   | ustme   | nts   |          |            |              |   |        |   |          |                     |   |             |         |                     |  |             |
| Approach   |         | Eastb   | ound     |            |              | Westl   | oound  |   |          | North               | bound   |             |         | South               | bound  |             |
| Movement   | U       | L   | Т        | R          | U            | L   | Т      | R   | U        | L                   | Т   | R           | U       | L                   | Т  | R           |
| Priority   | 1U      | 1   | 2        | 3          | 4U           | 4   | 5      | 6   |          | 7                   | 8   | 9           |         | 10                  | 11   | 12          |
| Number of Lanes  | 0       | 1   | 1        | 0          | 0            | 0   | 1      | 0   |          | 0                   | 1   | 0           |         | 0                   | 1  | 0           |
| Configuration  | $\perp$ | L   |          | TR         |              |   | LTR    |   |          |                     | LTR   |             |         |                     | LTR  |             |
| Volume (veh/h)   | $\bot$  | 141   | 114      | 10         |              | 3   | 142    | 45  |          | 34                  | 0   | 8           |         | 14                  | 0  | 136         |
| Percent Heavy Vehicles (%)   | $\perp$ | 0   |          |            |              | 0   |        |   |          | 0                   | 0   | 0           |         | 10                  | 0  | 1           |
| Proportion Time Blocked  | $\bot$  |   |          |            |              |   |        |   |          |                     |   |             |         |                     |  |             |
| Percent Grade (%)  | $\bot$  |   |          |            | _            |   |        |   |          |                     | 0   |             |         |                     | 0  |             |
| Right Turn Channelized   |         |   |          |            |              |   |        |   |          |                     |   |             |         |                     |  |             |
|  | -       |   |          |            |              |   |        |   | ı        |                     |   |             | 1       |                     |  |             |
| Median Type   Storage  | 二       |   |          | Left       | Only         |   |        |   |          |                     |   |             |         |                     |  |             |
| Median Type   Storage  | eadwa   | ys  |          | Left       | Only         |   |        |   |          |                     |   |             |         |                     |  |             |
|  | eadwa   | <b>ys</b>   |          | Left       | Only         | 4.1   |        |   |          | 7.1                 | 6.5   | 6.2         |         | 7.1                 | 6.5  | 6.2         |
| Median Type   Storage  Critical and Follow-up H  | eadwa   | _   |          | Left       | Only         | 4.1   |        |   |          | 7.1<br>7.10         | 6.5<br>6.50   | 6.20        |         | 7.1<br>7.20         | 6.5<br>6.50                                      | 6.2<br>6.21 |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)   | eadwa   | 4.1   |          | Left       | Only         | -   |        |   |          | _                   | _   |             |         |                     | _  | _           |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)   | eadwa   | 4.1<br>4.10   |          | Left       | Only         | 4.10  |        |   |          | 7.10                | 6.50  | 6.20        |         | 7.20                | 6.50   | 6.21<br>3.3 |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)   |         | 4.1<br>4.10<br>2.2<br>2.20  | ervice   |            | Only         | 4.10<br>2.2   |        |   |          | 7.10<br>3.5         | 6.50<br>4.0   | 6.20<br>3.3 |         | 7.20<br>3.5         | 6.50<br>4.0                                      | 6.21        |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  |         | 4.1<br>4.10<br>2.2<br>2.20  | ervice   |            | Only         | 4.10<br>2.2   |        |   |          | 7.10<br>3.5         | 6.50<br>4.0   | 6.20<br>3.3 |         | 7.20<br>3.5         | 6.50<br>4.0                                      | 6.21<br>3.3 |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  Delay, Queue Length, an   |         | 4.1<br>4.10<br>2.2<br>2.20  | ervice   |            | Only         | 4.10<br>2.2<br>2.20   |        |   |          | 7.10<br>3.5         | 6.50<br>4.0<br>4.00                                     | 6.20<br>3.3 |         | 7.20<br>3.5         | 6.50<br>4.0<br>4.00                              | 6.21<br>3.3 |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  Delay, Queue Length, an  Flow Rate, v (veh/h)   |         | 4.1<br>4.10<br>2.2<br>2.20<br>I of Se   | ervice   |            | Only         | 4.10<br>2.2<br>2.20   |        |   |          | 7.10<br>3.5         | 6.50<br>4.0<br>4.00                                     | 6.20<br>3.3 |         | 7.20<br>3.5         | 6.50<br>4.0<br>4.00                              | 6.21<br>3.3 |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  Delay, Queue Length, an  Flow Rate, v (veh/h)  Capacity, c (veh/h)  |         | 4.1<br>4.10<br>2.2<br>2.20<br>1 of Se<br>201<br>1308                            | ervice   |            | Only         | 4.10<br>2.2<br>2.20<br>4<br>1411                            |        |   |          | 7.10<br>3.5         | 6.50<br>4.0<br>4.00<br>60<br>278                        | 6.20<br>3.3 |         | 7.20<br>3.5         | 6.50<br>4.0<br>4.00<br>214<br>712                | 6.21<br>3.3 |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  Delay, Queue Length, an  Flow Rate, v (veh/h)  Capacity, c (veh/h)  v/c Ratio   |         | 4.1<br>4.10<br>2.2<br>2.20<br><b>I of Se</b><br>201<br>1308<br>0.15             | ervice   |            | Only         | 4.10<br>2.2<br>2.20<br>4<br>1411<br>0.00                    |        |   |          | 7.10<br>3.5         | 6.50<br>4.0<br>4.00<br>60<br>278<br>0.22                | 6.20<br>3.3 |         | 7.20<br>3.5         | 6.50<br>4.0<br>4.00<br>214<br>712<br>0.30        | 6.21<br>3.3 |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  Delay, Queue Length, an  Flow Rate, v (veh/h)  Capacity, c (veh/h)  v/c Ratio  95% Queue Length, Q <sub>95</sub> (veh)                        |         | 4.1<br>4.10<br>2.2<br>2.20<br>1 of Se<br>201<br>1308<br>0.15<br>0.5             | ervice   |            | Only         | 4.10<br>2.2<br>2.20<br>4<br>1411<br>0.00<br>0.0             |        |   |          | 7.10<br>3.5         | 6.50<br>4.0<br>4.00<br>60<br>278<br>0.22<br>0.8         | 6.20<br>3.3 |         | 7.20<br>3.5         | 6.50<br>4.0<br>4.00<br>214<br>712<br>0.30<br>1.3 | 6.21<br>3.3 |
| Median Type   Storage  Critical and Follow-up H  Base Critical Headway (sec)  Critical Headway (sec)  Base Follow-Up Headway (sec)  Follow-Up Headway (sec)  Delay, Queue Length, an  Flow Rate, v (veh/h)  Capacity, c (veh/h)  v/c Ratio  95% Queue Length, Q <sub>95</sub> (veh)  Control Delay (s/veh) |         | 4.1<br>4.10<br>2.2<br>2.20<br>1 of Se<br>201<br>1308<br>0.15<br>0.5<br>8.3<br>A | ervice.  |            | Only         | 4.10<br>2.2<br>2.20<br>4<br>1411<br>0.00<br>0.0<br>7.6<br>A | .1     |   |          | 7.10<br>3.5<br>3.50 | 6.50<br>4.0<br>4.00<br>60<br>278<br>0.22<br>0.8<br>21.5 | 6.20<br>3.3 |         | 7.20<br>3.5<br>3.59 | 6.50<br>4.0<br>4.00<br>214<br>712<br>0.30<br>1.3 | 6.21<br>3.3 |

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|   |        | Н         | CS7      | Two-      | -Way       | Stop          | o-Co         | ntrol     | Rep      | ort   |       |           |         |       |       |          |
|---|--------|-----------|----------|-----------|------------|---------------|--------------|-----------|----------|-------|-------|-----------|---------|-------|-------|----------|
| General Information                     |        |           |          |           |            |               | Site         | Inform    | natio    | n     |       |           |         |       |       |          |
| Analyst                                 | DBZ    |           |          |           |            |               | Inters       | ection    |          |       | Brent | linger at | Leaders | <br>; |       |          |
| Agency/Co.                              | Diane  | B Zimm    | nerman 1 | raffic En | gineerin   | g             | Juriso       | liction   |          |       |       |           |         |       |       |          |
| Date Performed                          | 1/13/  |           |          |           |            |               | East/        | West Str  | eet      |       | Brent | linger La | ane     |       |       |          |
| Analysis Year                           | 2019   |           |          |           |            |               | North        | n/South : | Street   |       | -     | ers Lane  |         |       |       |          |
| Time Analyzed                           | PM P   | eak       |          |           |            |               | Peak         | Hour Fac  | ctor     |       | 0.93  |           |         |       |       |          |
| Intersection Orientation                | East-\ | West      |          |           |            |               | Analy        | sis Time  | Period ( | [hrs) | 0.25  |           |         |       |       |          |
| Project Description                     | Brent  | linger La | ine      |           |            |               |              |           |          |       |       |           |         |       |       |          |
| Lanes                                   |        |           |          |           |            |               |              |           |          |       |       |           |         |       |       |          |
|   |        |           |          | 5744Y→ ₹7 | ↑ ↑<br>Maj | or Street: Ea | <b>T</b> F C | ¥ +       |          |       |       |           |         |       |       |          |
| Vehicle Volumes and Ad                  | justme | nts       |          |           |            |               |              |           |          |       |       |           |         |       |       |          |
| Approach                                | $\bot$ | Eastb     | ound     |           |            | Westl         | bound        |           | _        | North | bound |           |         | South | bound |          |
| Movement                                | U      | L         | T        | R         | U          | L             | Т            | R         | U        | L     | T     | R         | U       | L     | T     | R        |
| Priority                                | 10     | 1         | 2        | 3         | 4U         | 4             | 5            | 6         |          | 7     | 8     | 9         |         | 10    | 11    | 12       |
| Number of Lanes                         | 0      | 0         | 1        | 0         | 0          | 0             | 1            | 0         |          | 0     | 0     | 0         |         | 0     | 1     | 0        |
| Configuration                           | -      | LT        |          |           |            |               |              | TR        |          |       |       |           |         | _     | LR    | <u> </u> |
| Volume (veh/h)                          | +      | 33        | 153      |           |            |               | 407          | 7         |          |       |       |           |         | 5     |       | 44       |
| Percent Heavy Vehicles (%)              | _      | 0         |          |           |            |               |              |           |          |       |       |           |         | 0     |       | 0        |
| Proportion Time Blocked                 | +      |           |          |           |            |               |              |           |          |       |       |           |         |       |       |          |
| Percent Grade (%)                       |        |           |          |           |            |               |              |           |          |       |       |           |         |       | 0     |          |
| Right Turn Channelized                  | +      |           |          | Undi      | ivided     |               |              |           |          |       |       |           |         |       |       |          |
| Median Type   Storage                   |        |           |          | Ondi      | viueu      |               |              |           |          |       |       |           |         |       |       |          |
| Critical and Follow-up H                | eadwa  | _         | _        | _         | _          |               |              | _         | _        | _     | _     | _         | _       | I     | _     |          |
| Base Critical Headway (sec)             |        | 4.1       |          |           |            |               |              |           |          |       |       |           |         | 7.1   |       | 6.2      |
| Critical Headway (sec)                  | -      | 4.10      |          |           |            |               |              |           |          |       |       |           |         | 6.40  |       | 6.20     |
| Base Follow-Up Headway (sec)            |        | 2.2       |          |           |            |               |              |           |          |       |       |           |         | 3.5   |       | 3.3      |
| Follow-Up Headway (sec)                 |        | 2.20      |          |           |            |               |              |           |          |       |       |           |         | 3.50  |       | 3.30     |
| Delay, Queue Length, an                 | d Leve |           | ervice   |           |            |               |              |           |          |       |       |           |         |       |       |          |
| Flow Rate, v (veh/h)                    |        | 35        |          |           |            |               |              |           |          |       | _     |           |         |       | 53    | _        |
| Capacity, c (veh/h)                     |        | 1126      |          |           |            |               |              |           |          |       |       |           |         |       | 589   |          |
| v/c Ratio                               | _      | 0.03      |          |           |            |               |              |           |          | _     |       | _         |         |       | 0.09  |          |
| 95% Queue Length, Q <sub>95</sub> (veh) |        | 0.1       |          |           |            |               |              |           |          |       |       |           |         |       | 0.3   |          |
| Control Delay (s/veh)                   |        | 8.3       |          |           |            |               |              |           |          |       |       |           |         |       | 11.7  |          |
| Level of Service (LOS)                  |        | A         |          |           |            |               |              |           |          |       |       |           |         |       | В     |          |
| Approach Delay (s/veh)                  |        | 1         | .7       |           |            |               |              |           |          |       |       |           |         |       | 1.7   |          |
| Approach LOS                            |        |           |          |           |            |               |              |           |          |       |       |           |         |       | В     |          |

HCSTM TWSC Version 7.8.5 Leaders PM 19.xtw Generated: 1/13/2020 5:03:30 PM

|   |               |           | <i>C</i> 3, |               | -Way                                     | 310           |                   |              |          |       |       |           |           |       |       |               |
|---|---------------|-----------|-------------|---------------|--|---------------|-------------------|--------------|----------|-------|-------|-----------|-----------|-------|-------|---------------|
| General Information                     |               |           |             |               |  |               | Site              | Inforr       | natio    | n     |       |           |           |       |       |               |
| Analyst                                 | DBZ           |           |             |               |  |               | Inters            | ection       |          |       | Brent | linger at | : Leaders |       |       |               |
| Agency/Co.                              | Diane         | B Zimm    | erman 1     | raffic En     | gineerin                                 | g             | Jurisd            | liction      |          |       |       |           |           |       |       |               |
| Date Performed                          | 1/13/         | 2020      |             |               |  |               | East/\            | Nest Str     | eet      |       | Brent | linger La | ane       |       |       |               |
| Analysis Year                           | 2022          |           |             |               |  |               | North             | /South       | Street   |       | Leade | ers Lane  |           |       |       |               |
| Time Analyzed                           | PM P          | eak No E  | Build       |               |  |               | Peak              | Hour Fac     | ctor     |       | 0.93  |           |           |       |       |               |
| Intersection Orientation                | East-\        | West      |             |               |  |               | Analy             | sis Time     | Period ( | hrs)  | 0.25  |           |           |       |       |               |
| Project Description                     | Brent         | linger La | ne          |               |  |               |                   |              |          |       |       |           |           |       |       |               |
| Lanes                                   |               |           |             |               |  |               |                   |              |          |       |       |           |           |       |       |               |
|   |               |           |             | 1 4 4 X 4 X C | \<br>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | or Street: Ea | <b>T</b> est-West | 74 + 7 + 7 0 |          |       |       |           |           |       |       |               |
| Vehicle Volumes and Adj                 | ustme         | nts       |             |               |  |               |                   |              |          |       |       |           |           |       |       |               |
| Approach                                |               | Eastb     | ound        |               |  | West          | bound             |              |          | North | bound |           |           | South | bound |               |
| Movement                                | U             | L         | T           | R             | U  | L             | T                 | R            | U        | L     | T     | R         | U         | L     | Т     | R             |
| Priority                                | 1U            | 1         | 2           | 3             | 4U                                       | 4             | 5                 | 6            |          | 7     | 8     | 9         |           | 10    | 11    | 12            |
| Number of Lanes                         | 0             | 0         | 1           | 0             | 0  | 0             | 1                 | 0            |          | 0     | 0     | 0         |           | 0     | 1     | 0             |
| Configuration                           |               | LT        |             |               |  |               |                   | TR           |          |       |       |           |           |       | LR    | $oxed{oxed}$  |
| Volume (veh/h)                          |               | 33        | 162         |               |  |               | 427               | 23           |          |       |       |           |           | 65    |       | 44            |
| Percent Heavy Vehicles (%)              |               | 0         |             |               |  |               |                   |              |          |       |       |           |           | 0     |       | 0             |
| Proportion Time Blocked                 |               |           |             |               |  |               |                   |              |          |       |       |           |           |       |       |               |
| Percent Grade (%)                       |               |           |             |               |  |               |                   |              |          |       |       |           |           |       | 0     |               |
| Right Turn Channelized                  |               |           |             |               |  |               |                   |              |          |       |       |           |           |       |       |               |
| Median Type   Storage                   | <u> </u>      |           |             | Undi          | vided                                    |               |                   |              |          |       |       |           |           |       |       |               |
| Critical and Follow-up H                | eadwa         | ys        |             |               |  |               |                   |              |          |       |       |           |           |       |       |               |
| Base Critical Headway (sec)             |               | 4.1       |             |               |  |               |                   |              |          |       |       |           |           | 7.1   |       | 6.2           |
| Critical Headway (sec)                  |               | 4.10      |             |               |  |               |                   |              |          |       |       |           |           | 6.40  |       | 6.20          |
| Base Follow-Up Headway (sec)            |               | 2.2       |             |               |  |               |                   |              |          |       |       |           |           | 3.5   |       | 3.3           |
| Follow-Up Headway (sec)                 |               | 2.20      |             |               |  |               |                   |              |          |       |       |           |           | 3.50  |       | 3.30          |
| Delay, Queue Length, an                 | d Leve        | l of Se   | ervice      |               |  |               |                   |              |          |       |       |           |           |       |       |               |
| Flow Rate, v (veh/h)                    | $\overline{}$ | 35        |             |               |  |               |                   |              |          |       | П     |           |           |       | 117   | $\overline{}$ |
| Capacity, c (veh/h)                     |               | 1089      |             |               |  |               |                   |              |          |       |       |           |           |       | 449   |               |
| v/c Ratio                               |               | 0.03      |             |               |  |               |                   |              |          |       |       |           |           |       | 0.26  |               |
| 95% Queue Length, Q <sub>95</sub> (veh) |               | 0.1       |             |               |  |               |                   |              |          |       |       |           |           |       | 1.0   |               |
| Control Delay (s/veh)                   |               | 8.4       |             |               |  |               |                   |              |          |       |       |           |           |       | 15.8  |               |
| Level of Service (LOS)                  |               | А         |             |               |  |               |                   |              |          |       |       |           |           |       | С     |               |
| Approach Delay (s/veh)                  |               | 1         | .7          |               |  |               |                   |              |          |       |       |           |           | 1:    | 5.8   |               |
| Approach LOS                            |               |           |             |               |  |               |                   |              |          |       |       |           |           |       | С     |               |

HCSTM TWSC Version 7.8.5 Leaders PM 22.xtw Generated: 1/13/2020 5:04:52 PM

|   |        |           | CS7     | 1000            | vvay     | 210                         |        | 110      | , teb    |       |       |           |         |       |       |      |
|---|--------|-----------|---------|-----------------|----------|-----------------------------|--------|----------|----------|-------|-------|-----------|---------|-------|-------|------|
| General Information                     |        |           |         |                 |          |                             | Site   | Inforr   | natio    | n     |       |           |         |       |       |      |
| Analyst                                 | DBZ    |           |         |                 |          |                             | Inters | ection   |          |       | Brent | linger at | Leaders |       |       |      |
| Agency/Co.                              | Diane  | B Zimm    | erman 1 | raffic En       | gineerin | g                           | Jurisd | liction  |          |       |       |           |         |       |       |      |
| Date Performed                          | 1/13/  | 2020      |         |                 |          |                             | East/\ | Nest Str | eet      |       | Brent | linger La | ine     |       |       |      |
| Analysis Year                           | 2022   |           |         |                 |          |                             | North  | /South : | Street   |       | Leade | er/Entrar | nce     |       |       |      |
| Time Analyzed                           | PM P   | eak Build | i       |                 |          |                             | Peak   | Hour Fac | ctor     |       | 0.93  |           |         |       |       |      |
| Intersection Orientation                | East-\ | Vest      |         |                 |          |                             | Analy  | sis Time | Period ( | hrs)  | 0.25  |           |         |       |       |      |
| Project Description                     | Brent  | linger    |         |                 |          |                             |        |          |          |       |       |           |         |       |       |      |
| Lanes                                   |        |           |         |                 |          |                             |        |          |          |       |       |           |         |       |       |      |
|   |        |           |         | 0 1 4 4 X 4 L U |          | ヤ<br>ヤ ヤ 1<br>or Street: Ea |        | \        |          |       |       |           |         |       |       |      |
| Vehicle Volumes and Adj                 | ustme  | nts       |         |                 |          |                             |        |          |          |       |       |           |         |       |       |      |
| Approach                                |        | Eastb     | ound    |                 |          | Westl                       | oound  |          |          | North | bound |           |         | South | bound |      |
| Movement                                | U      | L         | T       | R               | U        | L                           | T      | R        | U        | L     | Т     | R         | U       | L     | T     | R    |
| Priority                                | 1U     | 1         | 2       | 3               | 4U       | 4                           | 5      | 6        |          | 7     | 8     | 9         |         | 10    | 11    | 12   |
| Number of Lanes                         | 0      | 1         | 1       | 0               | 0        | 0                           | 1      | 0        |          | 0     | 1     | 0         |         | 0     | 1     | 0    |
| Configuration                           |        | L         |         | TR              |          |                             | LTR    |          |          |       | LTR   |           |         |       | LTR   |      |
| Volume (veh/h)                          |        | 33        | 162     | 34              |          | 8                           | 427    | 23       |          | 28    | 0     | 7         |         | 65    | 0     | 44   |
| Percent Heavy Vehicles (%)              |        | 0         |         |                 |          | 0                           |        |          |          | 0     | 0     | 0         |         | 0     | 0     | 0    |
| Proportion Time Blocked                 |        |           |         |                 |          |                             |        |          |          |       |       |           |         |       |       |      |
| Percent Grade (%)                       |        |           |         |                 |          |                             |        |          |          | -     | 0     |           |         | (     | )     |      |
| Right Turn Channelized                  |        |           |         |                 |          |                             |        |          |          |       |       |           |         |       |       |      |
| Median Type   Storage                   |        |           |         | Left            | Only     |                             |        |          |          |       |       |           | 1       |       |       |      |
| Critical and Follow-up H                | eadwa  | ys        |         |                 |          |                             |        |          |          |       |       |           |         |       |       |      |
| Base Critical Headway (sec)             |        | 4.1       |         |                 |          | 4.1                         |        |          |          | 7.1   | 6.5   | 6.2       |         | 7.1   | 6.5   | 6.2  |
| Critical Headway (sec)                  |        | 4.10      |         |                 |          | 4.10                        |        |          |          | 7.10  | 6.50  | 6.20      |         | 7.10  | 6.50  | 6.20 |
| Base Follow-Up Headway (sec)            |        | 2.2       |         |                 |          | 2.2                         |        |          |          | 3.5   | 4.0   | 3.3       |         | 3.5   | 4.0   | 3.3  |
| Follow-Up Headway (sec)                 |        | 2.20      |         |                 |          | 2.20                        |        |          |          | 3.50  | 4.00  | 3.30      |         | 3.50  | 4.00  | 3.30 |
| Delay, Queue Length, an                 | d Leve | l of Se   | ervice  |                 |          |                             |        |          |          |       |       |           |         |       |       |      |
| Flow Rate, v (veh/h)                    | T      | 35        |         |                 |          | 9                           |        |          |          |       | 38    |           |         |       | 117   |      |
| Capacity, c (veh/h)                     |        | 1089      |         |                 |          | 1372                        |        |          |          |       | 423   |           |         |       | 480   |      |
| v/c Ratio                               |        | 0.03      |         |                 |          | 0.01                        |        |          |          |       | 0.09  |           |         |       | 0.24  |      |
| 95% Queue Length, Q <sub>95</sub> (veh) |        | 0.1       |         |                 |          | 0.0                         |        |          |          |       | 0.3   |           |         |       | 0.9   |      |
| Control Delay (s/veh)                   |        | 8.4       |         |                 |          | 7.6                         |        |          |          |       | 14.3  |           |         |       | 14.9  |      |
| Level of Service (LOS)                  |        | А         |         |                 |          | А                           |        |          |          |       | В     |           |         |       | В     |      |
| Approach Delay (s/veh)                  |        | 1         | .2      |                 |          | 0                           | .2     |          |          | 14    | 4.3   |           |         | 14    | 1.9   |      |
| Approach LOS                            | 1      |           |         |                 |          |                             |        |          | ВВВ      |       |       |           |         |       |       |      |

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