

# HCS7 Freeway Facilities Report

## Project Information

|                     |                                            |                      |                         |
|---------------------|--------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                         | Date                 | 9/3/2020                |
| Agency              | Lee Engineering                            | Analysis Year        | 2020                    |
| Jurisdiction        | NMDOT                                      | Time Period Analyzed | AM Peak Period          |
| Project Description | Existing Conditions - NB I25<br>5AM to 9AM | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 3.06  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                       | Length, ft | Lanes |
|-----|---------|----------|--------------------------------------------|------------|-------|
| 1   | Basic   | Basic    | NB I25 South of Sunport                    | 5280       | 3     |
| 2   | Diverge | Diverge  | Off-Ramp to Sunport                        | 1500       | 3     |
| 3   | Basic   | Basic    | NB I25 bet                                 | 3070       | 3     |
| 4   | Weaving | Weaving  | Sunport Off/On Ramps                       | 1750       | 4     |
| 5   | Basic   | Basic    | NB I24 bet Sunport On and Gibson Off Ramps | 1155       | 3     |
| 6   | Merge   | Merge    | NB I25 bet Gibson Off/On Ramps             | 700        | 3     |
| 7   | Basic   | Basic    | On-ramp from EB Gibson                     | 400        | 3     |
| 8   | Merge   | Merge    | NB I25 bet Gibson On-Ramps                 | 800        | 3     |
| 9   | Basic   | Basic    | On-ramp from WB Gibson                     | 1500       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1109             | 6970            | 0.16      | 70.8         | 5.2                | A   |
| 2           | 1.00 | 0.909 | 1743             | 6970            | 0.25      | 70.8         | 8.2                | A   |
| 3           | 1.00 | 0.909 | 2068             | 6970            | 0.30      | 70.8         | 9.7                | A   |
| 4           | 1.00 | 0.909 | 1861             | 6970            | 0.27      | 70.8         | 8.8                | A   |
| 5           | 1.00 | 0.909 | 2851             | 6970            | 0.41      | 70.8         | 13.4               | B   |
| 6           | 1.00 | 0.909 | 3657             | 6970            | 0.52      | 70.6         | 17.3               | B   |
| 7           | 1.00 | 0.909 | 4251             | 6970            | 0.61      | 69.5         | 20.4               | C   |
| 8           | 1.00 | 0.909 | 3789             | 6970            | 0.54      | 70.4         | 17.9               | B   |
| 9           | 1.00 | 0.909 | 4625             | 6970            | 0.66      | 68.3         | 22.6               | C   |
| 10          | 1.00 | 0.909 | 5342             | 6970            | 0.77      | 64.8         | 27.5               | D   |
| 11          | 1.00 | 0.909 | 4647             | 6970            | 0.67      | 68.2         | 22.7               | C   |
| 12          | 1.00 | 0.909 | 3287             | 6970            | 0.47      | 70.8         | 15.5               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 3305  |       | 6970             |      | 0.47            | 70.8 |           | 15.6 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 3274  |       | 6970             |      | 0.47            | 70.8 |           | 15.4 |              | B    |                    |      |     |
| 15                 | 1.00 | 0.909 | 3151  |       | 6970             |      | 0.45            | 70.8 |           | 14.8 |              | B    |                    |      |     |
| 16                 | 1.00 | 0.909 | 2442  |       | 6970             |      | 0.35            | 70.8 |           | 11.5 |              | B    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1109             | 29   | 6970            | 2033 | 0.16      | 0.01 | 67.3         | 63.6 | 5.5                | 9.0  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 1743             | 58   | 6970            | 2033 | 0.25      | 0.03 | 67.5         | 63.5 | 8.6                | 12.8 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2068             | 70   | 6970            | 2033 | 0.30      | 0.03 | 67.6         | 63.5 | 10.2               | 14.7 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 1861             | 82   | 6970            | 2033 | 0.27      | 0.04 | 67.4         | 63.4 | 9.2                | 13.6 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 2851             | 82   | 6970            | 2033 | 0.41      | 0.04 | 67.8         | 63.4 | 14.0               | 19.0 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 3657             | 91   | 6970            | 2033 | 0.52      | 0.04 | 68.0         | 63.4 | 17.9               | 23.1 | C   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4251             | 99   | 6970            | 2033 | 0.61      | 0.05 | 68.0         | 63.4 | 20.8               | 26.0 | C   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 3789             | 115  | 6970            | 2033 | 0.54      | 0.06 | 67.9         | 63.3 | 18.6               | 23.8 | C   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4625             | 82   | 6970            | 2033 | 0.66      | 0.04 | 67.9         | 63.4 | 22.7               | 27.8 | C   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5342             | 124  | 6970            | 2033 | 0.77      | 0.06 | 67.7         | 63.3 | 26.3               | 30.9 | D   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4647             | 169  | 6970            | 2033 | 0.67      | 0.08 | 67.8         | 63.2 | 22.8               | 27.9 | C   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3287             | 165  | 6970            | 2033 | 0.47      | 0.08 | 67.8         | 63.2 | 16.2               | 21.4 | C   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3305             | 132  | 6970            | 2033 | 0.47      | 0.06 | 67.9         | 63.3 | 16.2               | 21.4 | C   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 3274             | 132  | 6970            | 2033 | 0.47      | 0.06 | 67.9         | 63.3 | 16.1               | 21.3 | C   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3151             | 132  | 6970            | 2033 | 0.45      | 0.06 | 67.8         | 63.3 | 15.5               | 20.7 | C   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2442             | 107  | 6970            | 2033 | 0.35      | 0.05 | 67.6         | 63.4 | 12.0               | 16.9 | B   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| 1                  | 1.00 |       | 0.909 |       | 1078             |      | 6970            |      | 0.15      |      | 70.7         |      | 5.1                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1681             |      | 6970            |      | 0.24      |      | 70.7         |      | 7.9                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 1993             |      | 6970            |      | 0.29      |      | 70.7         |      | 9.4                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 1773             |      | 6970            |      | 0.25      |      | 70.7         |      | 8.3                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2763             |      | 6970            |      | 0.40      |      | 70.7         |      | 13.0               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 3560             |      | 6970            |      | 0.51      |      | 70.7         |      | 16.8               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 4145             |      | 6970            |      | 0.59      |      | 69.7         |      | 19.8               |      | C   |
| 8                  | 1.00 |       | 0.909 |       | 3666             |      | 6970            |      | 0.53      |      | 70.6         |      | 17.3               |      | B   |
| 9                  | 1.00 |       | 0.909 |       | 4537             |      | 6970            |      | 0.65      |      | 68.6         |      | 22.0               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 5210             |      | 6970            |      | 0.75      |      | 65.6         |      | 26.5               |      | D   |
| 11                 | 1.00 |       | 0.909 |       | 4466             |      | 6970            |      | 0.64      |      | 68.8         |      | 21.6               |      | C   |
| 12                 | 1.00 |       | 0.909 |       | 3111             |      | 6970            |      | 0.45      |      | 70.7         |      | 14.6               |      | B   |
| 13                 | 1.00 |       | 0.909 |       | 3164             |      | 6970            |      | 0.45      |      | 70.7         |      | 14.9               |      | B   |
| 14                 | 1.00 |       | 0.909 |       | 3133             |      | 6970            |      | 0.45      |      | 70.7         |      | 14.7               |      | B   |
| 15                 | 1.00 |       | 0.909 |       | 3010             |      | 6970            |      | 0.43      |      | 70.7         |      | 14.2               |      | B   |

| 16                 | 1.00 | 0.909 | 2328             | 6970            | 0.33      | 70.7         | 11.0               | A   |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| Segment 4: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 1449             | 6873            | 0.21      | 66.4         | 5.5                | A   |
| 2                  | 1.00 | 0.909 | 2077             | 7926            | 0.26      | 65.5         | 7.9                | A   |
| 3                  | 1.00 | 0.909 | 2249             | 7992            | 0.28      | 65.4         | 8.6                | A   |
| 4                  | 1.00 | 0.909 | 2126             | 7061            | 0.30      | 64.3         | 8.3                | A   |
| 5                  | 1.00 | 0.909 | 3228             | 8076            | 0.40      | 63.2         | 12.8               | B   |
| 6                  | 1.00 | 0.909 | 3913             | 8190            | 0.48      | 62.4         | 15.7               | B   |
| 7                  | 1.00 | 0.909 | 4432             | 8213            | 0.54      | 61.3         | 18.1               | B   |
| 8                  | 1.00 | 0.909 | 3970             | 8042            | 0.49      | 60.7         | 16.4               | B   |
| 9                  | 1.00 | 0.909 | 4956             | 8085            | 0.61      | 58.5         | 21.2               | C   |
| 10                 | 1.00 | 0.909 | 5576             | 8217            | 0.68      | 58.6         | 23.8               | C   |
| 11                 | 1.00 | 0.909 | 4917             | 8085            | 0.61      | 58.5         | 21.0               | C   |
| 12                 | 1.00 | 0.909 | 3475             | 6508            | 0.53      | 59.1         | 14.7               | B   |
| 13                 | 1.00 | 0.909 | 3556             | 7891            | 0.45      | 60.6         | 14.7               | B   |
| 14                 | 1.00 | 0.909 | 3385             | 7992            | 0.42      | 61.9         | 13.7               | B   |
| 15                 | 1.00 | 0.909 | 3415             | 7964            | 0.43      | 61.6         | 13.9               | B   |
| 16                 | 1.00 | 0.909 | 2840             | 5505            | 0.52      | 59.8         | 11.9               | B   |
| Segment 5: Basic   |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 1364             | 6970            | 0.20      | 70.4         | 6.4                | A   |
| 2                  | 1.00 | 0.909 | 1932             | 6970            | 0.28      | 70.3         | 9.1                | A   |
| 3                  | 1.00 | 0.909 | 1963             | 6970            | 0.28      | 70.3         | 9.2                | A   |
| 4                  | 1.00 | 0.909 | 1826             | 6970            | 0.26      | 70.2         | 8.6                | A   |
| 5                  | 1.00 | 0.909 | 2997             | 6970            | 0.43      | 70.1         | 14.1               | B   |
| 6                  | 1.00 | 0.909 | 3560             | 6970            | 0.51      | 70.0         | 16.8               | B   |
| 7                  | 1.00 | 0.909 | 3952             | 6970            | 0.57      | 69.9         | 18.8               | C   |
| 8                  | 1.00 | 0.909 | 3380             | 6970            | 0.48      | 69.8         | 15.9               | B   |
| 9                  | 1.00 | 0.909 | 4317             | 6970            | 0.62      | 69.3         | 20.8               | C   |
| 10                 | 1.00 | 0.909 | 4981             | 6970            | 0.71      | 66.7         | 24.9               | C   |
| 11                 | 1.00 | 0.909 | 4317             | 6970            | 0.62      | 69.3         | 20.8               | C   |
| 12                 | 1.00 | 0.909 | 2684             | 6970            | 0.39      | 69.7         | 12.6               | B   |
| 13                 | 1.00 | 0.909 | 2988             | 6970            | 0.43      | 69.8         | 14.1               | B   |
| 14                 | 1.00 | 0.909 | 2821             | 6970            | 0.40      | 70.0         | 13.3               | B   |
| 15                 | 1.00 | 0.909 | 2970             | 6970            | 0.43      | 69.9         | 14.0               | B   |
| 16                 | 1.00 | 0.909 | 2235             | 6970            | 0.32      | 69.8         | 10.5               | A   |
| Segment 6: Merge   |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |

|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 1430             | 66   | 6970            | 2033 | 0.21      | 0.03 | 68.0         | 65.0 | 7.0                | 8.0  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 1986             | 54   | 6970            | 2033 | 0.28      | 0.03 | 67.7         | 64.9 | 9.8                | 10.5 | B   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 2058             | 95   | 6970            | 2033 | 0.30      | 0.05 | 67.6         | 64.9 | 10.1               | 11.0 | B   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 1933             | 107  | 6970            | 2033 | 0.28      | 0.05 | 67.7         | 64.9 | 9.5                | 10.4 | B   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 3075             | 78   | 6970            | 2033 | 0.44      | 0.04 | 66.9         | 64.5 | 15.3               | 15.7 | B   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 3692             | 132  | 6970            | 2033 | 0.53      | 0.06 | 66.3         | 64.1 | 18.6               | 18.7 | B   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 4137             | 185  | 6970            | 2033 | 0.59      | 0.09 | 65.9         | 63.8 | 20.9               | 20.9 | C   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 3565             | 185  | 6970            | 2033 | 0.51      | 0.09 | 66.4         | 64.2 | 17.9               | 18.3 | B   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 4618             | 301  | 6970            | 2033 | 0.66      | 0.15 | 65.2         | 63.1 | 23.6               | 23.5 | C   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 5199             | 218  | 6970            | 2033 | 0.75      | 0.11 | 64.4         | 62.3 | 26.9               | 26.0 | C   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 4626             | 309  | 6970            | 2033 | 0.66      | 0.15 | 65.2         | 63.1 | 23.7               | 23.5 | C   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 2968             | 284  | 6970            | 2033 | 0.43      | 0.14 | 66.9         | 64.5 | 14.8               | 15.7 | B   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 3173             | 185  | 6970            | 2033 | 0.46      | 0.09 | 66.8         | 64.5 | 15.8               | 16.4 | B   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 3039             | 218  | 6970            | 2033 | 0.44      | 0.11 | 66.9         | 64.5 | 15.1               | 15.9 | B   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 3254             | 284  | 6970            | 2033 | 0.47      | 0.14 | 66.7         | 64.4 | 16.3               | 17.1 | B   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 2507             | 272  | 6970            | 2033 | 0.36      | 0.13 | 67.2         | 64.7 | 12.4               | 13.6 | B   |
| Segment 7: Basic |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |      | 0.909 |       | 1435             |      | 6970            |      | 0.21      |      | 69.7         |      | 6.8                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 1989             |      | 6970            |      | 0.29      |      | 69.5         |      | 9.4                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 2064             |      | 6970            |      | 0.30      |      | 69.5         |      | 9.7                |      | A   |
| 4                | 1.00 |      | 0.909 |       | 1941             |      | 6970            |      | 0.28      |      | 69.5         |      | 9.1                |      | A   |
| 5                | 1.00 |      | 0.909 |       | 3080             |      | 6970            |      | 0.44      |      | 69.2         |      | 14.5               |      | B   |
| 6                | 1.00 |      | 0.909 |       | 3701             |      | 6970            |      | 0.53      |      | 69.0         |      | 17.5               |      | B   |
| 7                | 1.00 |      | 0.909 |       | 4150             |      | 6970            |      | 0.60      |      | 68.8         |      | 19.8               |      | C   |
| 8                | 1.00 |      | 0.909 |       | 3578             |      | 6970            |      | 0.51      |      | 69.0         |      | 16.9               |      | B   |
| 9                | 1.00 |      | 0.909 |       | 4638             |      | 6970            |      | 0.67      |      | 68.2         |      | 22.7               |      | C   |
| 10               | 1.00 |      | 0.909 |       | 5215             |      | 6970            |      | 0.75      |      | 65.5         |      | 26.5               |      | D   |
| 11               | 1.00 |      | 0.909 |       | 4647             |      | 6970            |      | 0.67      |      | 68.2         |      | 22.7               |      | C   |
| 12               | 1.00 |      | 0.909 |       | 2988             |      | 6970            |      | 0.43      |      | 69.2         |      | 14.1               |      | B   |
| 13               | 1.00 |      | 0.909 |       | 3186             |      | 6970            |      | 0.46      |      | 69.2         |      | 15.0               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 3054             |      | 6970            |      | 0.44      |      | 69.2         |      | 14.4               |      | B   |
| 15               | 1.00 |      | 0.909 |       | 3274             |      | 6970            |      | 0.47      |      | 69.1         |      | 15.4               |      | B   |
| 16               | 1.00 |      | 0.909 |       | 2526             |      | 6970            |      | 0.36      |      | 69.3         |      | 11.9               |      | B   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 1542             | 107  | 6970            | 2033 | 0.22      | 0.05 | 68.0         | 65.3 | 7.6                | 8.0  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 2141             | 152  | 6970            | 2033 | 0.31      | 0.07 | 67.6         | 65.1 | 10.6               | 11.0 | B   |

|                              |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
|------------------------------|-------------|------|-------|-------------------|------------------|-----|--------------------|------|-----------|------------------|--------------|------|--------------------|------|-----|
| 3                            | 1.00        | 1.00 | 0.909 | 0.971             | 2237             | 173 | 6970               | 2033 | 0.32      | 0.09             | 67.6         | 65.1 | 11.0               | 11.5 | B   |
| 4                            | 1.00        | 1.00 | 0.909 | 0.971             | 2159             | 218 | 6970               | 2033 | 0.31      | 0.11             | 67.6         | 65.1 | 10.6               | 11.2 | B   |
| 5                            | 1.00        | 1.00 | 0.909 | 0.971             | 3315             | 235 | 6970               | 2033 | 0.48      | 0.12             | 66.8         | 64.6 | 16.5               | 16.7 | B   |
| 6                            | 1.00        | 1.00 | 0.909 | 0.971             | 4039             | 338 | 6970               | 2033 | 0.58      | 0.17             | 66.1         | 64.0 | 20.4               | 20.3 | C   |
| 7                            | 1.00        | 1.00 | 0.909 | 0.971             | 4578             | 428 | 6970               | 2033 | 0.66      | 0.21             | 65.4         | 63.3 | 23.3               | 23.1 | C   |
| 8                            | 1.00        | 1.00 | 0.909 | 0.971             | 4056             | 478 | 6970               | 2033 | 0.58      | 0.24             | 66.0         | 63.9 | 20.5               | 20.8 | C   |
| 9                            | 1.00        | 1.00 | 0.909 | 0.971             | 5169             | 531 | 6970               | 2033 | 0.74      | 0.26             | 64.4         | 62.2 | 26.8               | 26.1 | C   |
| 10                           | 1.00        | 1.00 | 0.909 | 0.971             | 5821             | 606 | 6970               | 2033 | 0.84      | 0.30             | 62.9         | 60.5 | 30.8               | 29.4 | D   |
| 11                           | 1.00        | 1.00 | 0.909 | 0.971             | 5298             | 651 | 6970               | 2033 | 0.76      | 0.32             | 64.0         | 61.8 | 27.6               | 27.1 | C   |
| 12                           | 1.00        | 1.00 | 0.909 | 0.971             | 3647             | 659 | 6970               | 2033 | 0.52      | 0.32             | 66.3         | 64.2 | 18.3               | 19.4 | B   |
| 13                           | 1.00        | 1.00 | 0.909 | 0.971             | 3796             | 610 | 6970               | 2033 | 0.54      | 0.30             | 66.2         | 64.1 | 19.1               | 19.9 | B   |
| 14                           | 1.00        | 1.00 | 0.909 | 0.971             | 3693             | 639 | 6970               | 2033 | 0.53      | 0.31             | 66.2         | 64.1 | 18.6               | 19.5 | B   |
| 15                           | 1.00        | 1.00 | 0.909 | 0.971             | 3822             | 548 | 6970               | 2033 | 0.55      | 0.27             | 66.2         | 64.1 | 19.2               | 19.9 | B   |
| 16                           | 1.00        | 1.00 | 0.909 | 0.971             | 3119             | 593 | 6970               | 2033 | 0.45      | 0.29             | 66.7         | 64.6 | 15.6               | 16.7 | B   |
| Segment 9: Basic             |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |     | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 1549             |     | 6970               |      | 0.22      |                  | 70.4         |      | 7.3                |      | A   |
| 2                            | 1.00        |      | 0.909 |                   | 2152             |     | 6970               |      | 0.31      |                  | 70.3         |      | 10.1               |      | A   |
| 3                            | 1.00        |      | 0.909 |                   | 2249             |     | 6970               |      | 0.32      |                  | 70.3         |      | 10.6               |      | A   |
| 4                            | 1.00        |      | 0.909 |                   | 2174             |     | 6970               |      | 0.31      |                  | 70.3         |      | 10.2               |      | A   |
| 5                            | 1.00        |      | 0.909 |                   | 3331             |     | 6970               |      | 0.48      |                  | 70.2         |      | 15.7               |      | B   |
| 6                            | 1.00        |      | 0.909 |                   | 4062             |     | 6970               |      | 0.58      |                  | 69.9         |      | 19.4               |      | C   |
| 7                            | 1.00        |      | 0.909 |                   | 4607             |     | 6970               |      | 0.66      |                  | 68.3         |      | 22.5               |      | C   |
| 8                            | 1.00        |      | 0.909 |                   | 4088             |     | 6970               |      | 0.59      |                  | 69.9         |      | 19.5               |      | C   |
| 9                            | 1.00        |      | 0.909 |                   | 5206             |     | 6970               |      | 0.75      |                  | 65.6         |      | 26.4               |      | D   |
| 10                           | 1.00        |      | 0.909 |                   | 5861             |     | 6970               |      | 0.84      |                  | 61.4         |      | 31.8               |      | D   |
| 11                           | 1.00        |      | 0.909 |                   | 5342             |     | 6970               |      | 0.77      |                  | 64.8         |      | 27.5               |      | D   |
| 12                           | 1.00        |      | 0.909 |                   | 3692             |     | 6970               |      | 0.53      |                  | 70.1         |      | 17.4               |      | B   |
| 13                           | 1.00        |      | 0.909 |                   | 3837             |     | 6970               |      | 0.55      |                  | 70.1         |      | 18.2               |      | C   |
| 14                           | 1.00        |      | 0.909 |                   | 3736             |     | 6970               |      | 0.54      |                  | 70.1         |      | 17.7               |      | B   |
| 15                           | 1.00        |      | 0.909 |                   | 3859             |     | 6970               |      | 0.55      |                  | 70.1         |      | 18.3               |      | C   |
| 16                           | 1.00        |      | 0.909 |                   | 3160             |     | 6970               |      | 0.45      |                  | 70.2         |      | 14.9               |      | B   |
| Facility Time Period Results |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |     | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |      |     |
| 1                            | 69.5        |      |       | 5.8               |                  |     | 5.2                |      |           | 2.60             |              |      | A                  |      |     |
| 2                            | 69.3        |      |       | 8.6               |                  |     | 7.8                |      |           | 2.60             |              |      | A                  |      |     |
| 3                            | 69.4        |      |       | 9.7               |                  |     | 8.8                |      |           | 2.60             |              |      | A                  |      |     |
| 4                            | 69.2        |      |       | 8.9               |                  |     | 8.1                |      |           | 2.70             |              |      | A                  |      |     |
| 5                            | 69.0        |      |       | 13.8              |                  |     | 12.6               |      |           | 2.70             |              |      | B                  |      |     |
| 6                            | 68.7        |      |       | 17.4              |                  |     | 15.8               |      |           | 2.70             |              |      | B                  |      |     |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 7  | 67.9 | 20.2 | 18.4 | 2.70 | C |
| 8  | 68.4 | 17.8 | 16.1 | 2.70 | B |
| 9  | 66.5 | 22.8 | 20.7 | 2.80 | C |
| 10 | 64.1 | 27.0 | 24.6 | 2.90 | D |
| 11 | 66.3 | 22.9 | 20.8 | 2.80 | C |
| 12 | 68.3 | 15.3 | 14.0 | 2.70 | B |
| 13 | 68.6 | 15.7 | 14.3 | 2.70 | B |
| 14 | 68.8 | 15.3 | 13.9 | 2.70 | B |
| 15 | 68.7 | 15.2 | 13.8 | 2.70 | B |
| 16 | 68.4 | 12.0 | 10.9 | 2.70 | B |

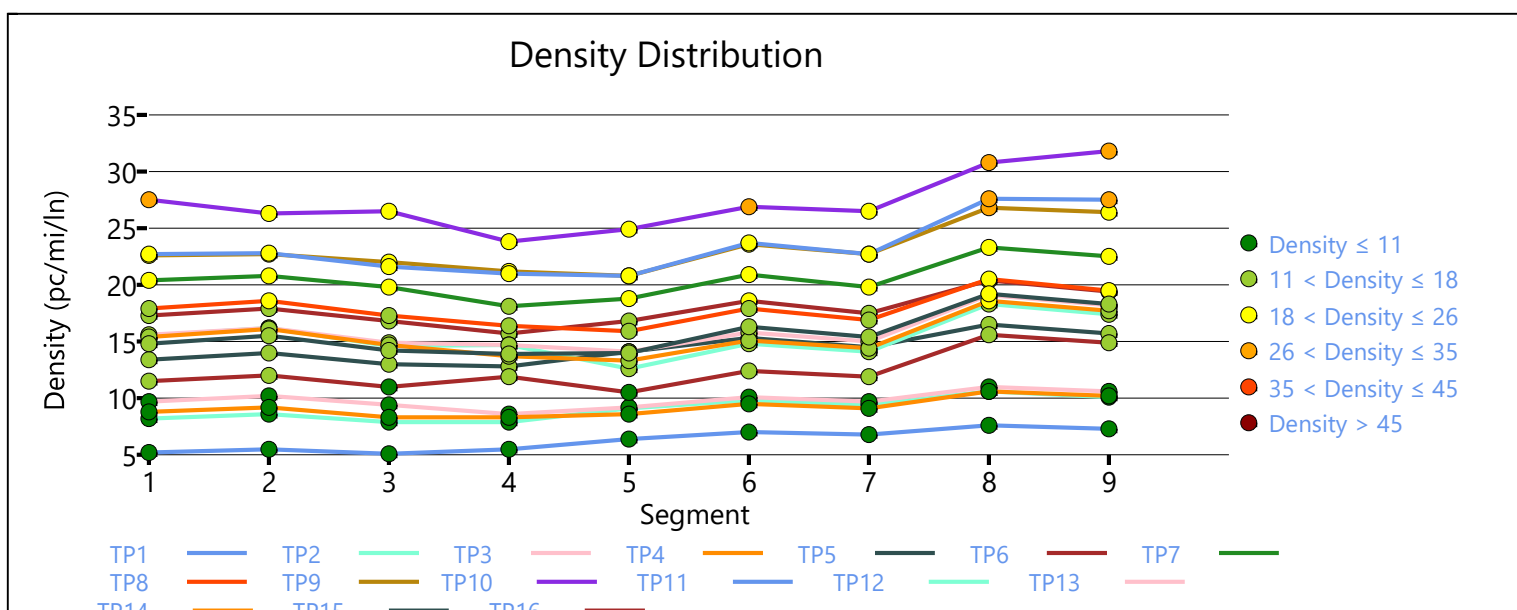
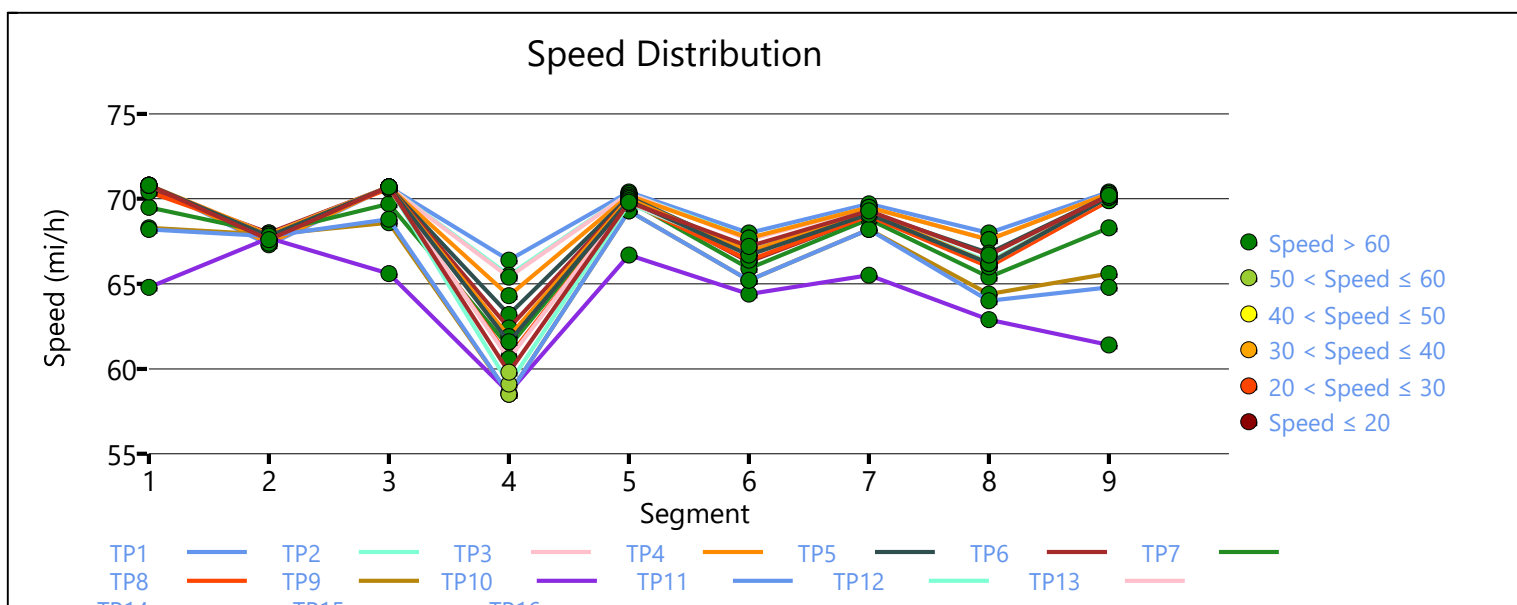
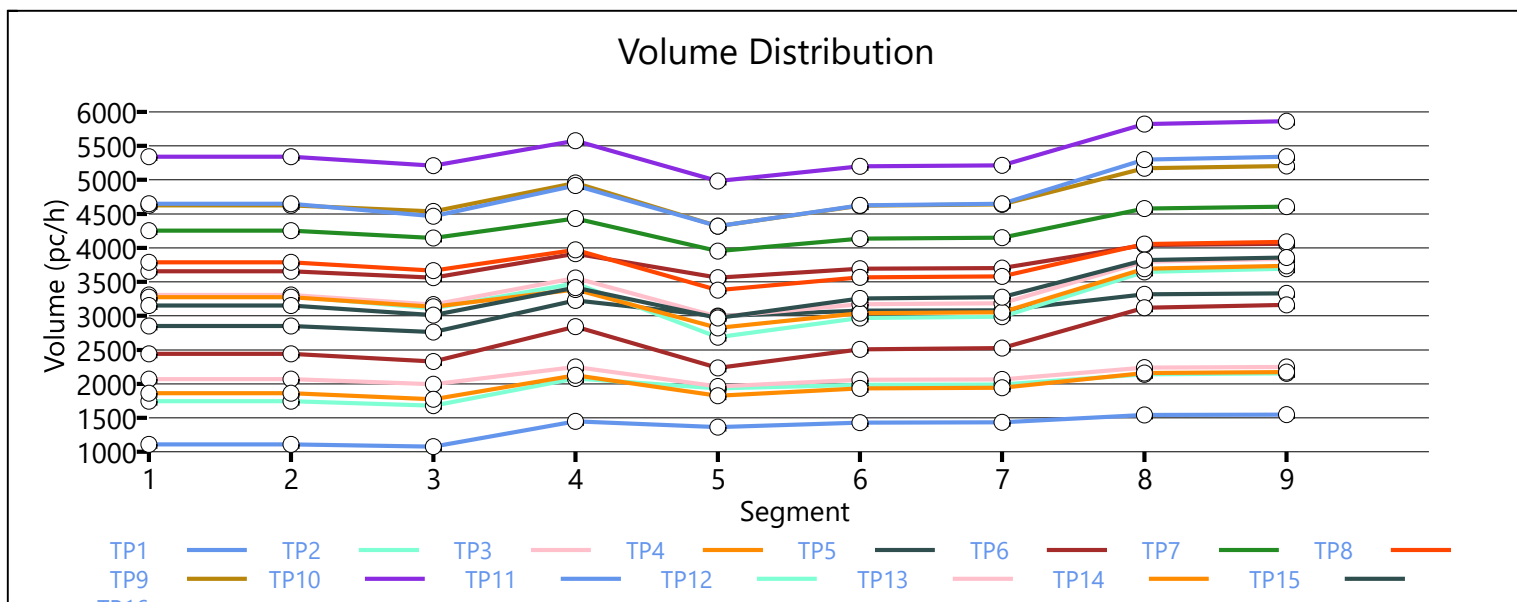
Facility Overall Results

|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 67.8 | Density, veh/mi/ln | 14.1 |
| Average Travel Time, min | 2.70 | Density, pc/mi/ln  | 15.5 |

Messages

Comments

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# HCS7 Freeway Facilities Report

## Project Information

|                     |                               |                      |                         |
|---------------------|-------------------------------|----------------------|-------------------------|
| Analyst             | PG                            | Date                 | 9/3/2020                |
| Agency              | Lee Engineering               | Analysis Year        | 2020 Existing           |
| Jurisdiction        | NMDOT                         | Time Period Analyzed | AM Peak Period          |
| Project Description | 2020 Existing I-25 Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.73  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | I-25 SB North of Gibson             | 2640       | 3     |
| 2   | Diverge | Diverge  | SB Off-Ramp to WB Gibson            | 1500       | 3     |
| 3   | Basic   | Basic    | Btw Gibson Off Ramps                | 200        | 3     |
| 4   | Diverge | Basic    | SB Off-Ramp to EB Gibson            | 750        | 4     |
| 5   | Basic   | Basic    | Btw Gibson Off and On Ramps         | 620        | 3     |
| 6   | Weaving | Weaving  | Btw Gibson On and Sunport Off Ramps | 2250       | 4     |
| 7   | Basic   | Basic    | Btw Sunport Off and On Ramps        | 2950       | 3     |
| 8   | Merge   | Merge    | On-Ramp from Sunport                | 875        | 3     |
| 9   | Basic   | Basic    | I-25 Sb South of Sunport            | 2640       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1461             | 6970            | 0.21      | 70.8         | 6.9                | A   |
| 2           | 1.00 | 0.909 | 1756             | 6970            | 0.25      | 70.8         | 8.3                | A   |
| 3           | 1.00 | 0.909 | 2477             | 6970            | 0.36      | 70.8         | 11.7               | B   |
| 4           | 1.00 | 0.909 | 3182             | 6970            | 0.46      | 70.8         | 15.0               | B   |
| 5           | 1.00 | 0.909 | 3138             | 6970            | 0.45      | 70.8         | 14.8               | B   |
| 6           | 1.00 | 0.909 | 4167             | 6970            | 0.60      | 69.7         | 19.9               | C   |
| 7           | 1.00 | 0.909 | 4906             | 6970            | 0.70      | 67.1         | 24.4               | C   |
| 8           | 1.00 | 0.909 | 5439             | 6970            | 0.78      | 64.2         | 28.2               | D   |
| 9           | 1.00 | 0.909 | 4840             | 6970            | 0.69      | 67.4         | 23.9               | C   |
| 10          | 1.00 | 0.909 | 5219             | 6970            | 0.75      | 65.5         | 26.6               | D   |
| 11          | 1.00 | 0.909 | 4713             | 6970            | 0.68      | 67.9         | 23.1               | C   |
| 12          | 1.00 | 0.909 | 4779             | 6970            | 0.69      | 67.6         | 23.6               | C   |
| 13          | 1.00 | 0.909 | 4422             | 6970            | 0.63      | 69.0         | 21.4               | C   |



| 14                 | 1.00 | 0.909 | 4273  |       | 6970             |      | 0.61            | 69.4 | 20.5      |      | C            |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 15                 | 1.00 | 0.909 | 3947  |       | 6970             |      | 0.57            | 70.2 | 18.7      |      | C            |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 3820  |       | 6970             |      | 0.55            | 70.4 | 18.1      |      | C            |      |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1461             | 66   | 6389            | 1936 | 0.23      | 0.03 | 65.7         | 61.5 | 7.4                | 11.7 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 1756             | 62   | 6389            | 1936 | 0.27      | 0.03 | 65.8         | 61.5 | 8.9                | 13.4 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2477             | 107  | 6389            | 1936 | 0.39      | 0.06 | 65.9         | 61.3 | 12.5               | 17.5 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 3182             | 119  | 6389            | 1936 | 0.50      | 0.06 | 66.3         | 61.3 | 16.0               | 21.3 | C   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3138             | 128  | 6389            | 1936 | 0.49      | 0.07 | 66.2         | 61.3 | 15.8               | 21.1 | C   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4167             | 260  | 6389            | 1936 | 0.65      | 0.13 | 66.0         | 60.9 | 21.0               | 26.3 | C   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4906             | 235  | 6389            | 1936 | 0.77      | 0.12 | 66.0         | 61.0 | 24.8               | 29.7 | D   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 5439             | 408  | 6389            | 1936 | 0.85      | 0.21 | 65.6         | 60.5 | 27.6               | 32.1 | D   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4840             | 297  | 6389            | 1936 | 0.76      | 0.15 | 65.9         | 60.8 | 24.5               | 29.4 | D   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5219             | 260  | 6389            | 1936 | 0.82      | 0.13 | 65.9         | 60.9 | 26.4               | 31.0 | D   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4713             | 342  | 6389            | 1936 | 0.74      | 0.18 | 65.8         | 60.7 | 23.9               | 28.9 | D   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4779             | 342  | 6389            | 1936 | 0.75      | 0.18 | 65.8         | 60.7 | 24.2               | 29.2 | D   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4422             | 292  | 6389            | 1936 | 0.69      | 0.15 | 65.9         | 60.8 | 22.4               | 27.6 | C   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4273             | 334  | 6389            | 1936 | 0.67      | 0.17 | 65.8         | 60.7 | 21.6               | 26.9 | C   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3947             | 280  | 6389            | 1936 | 0.62      | 0.14 | 65.9         | 60.9 | 20.0               | 25.3 | C   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 3820             | 181  | 6389            | 1936 | 0.60      | 0.09 | 66.2         | 61.2 | 19.2               | 24.5 | C   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1391             |      | 6970            |      | 0.20      |      | 69.5         |      | 6.6                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1690             |      | 6970            |      | 0.24      |      | 69.5         |      | 8.0                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2363             |      | 6970            |      | 0.34      |      | 69.6         |      | 11.1               |      | B   |
| 4                  | 1.00 |       | 0.909 |       | 3054             |      | 6970            |      | 0.44      |      | 69.7         |      | 14.4               |      | B   |
| 5                  | 1.00 |       | 0.909 |       | 3001             |      | 6970            |      | 0.43      |      | 69.6         |      | 14.1               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 3890             |      | 6970            |      | 0.56      |      | 69.6         |      | 18.4               |      | C   |
| 7                  | 1.00 |       | 0.909 |       | 4656             |      | 6970            |      | 0.67      |      | 68.1         |      | 22.8               |      | C   |
| 8                  | 1.00 |       | 0.909 |       | 5003             |      | 6970            |      | 0.72      |      | 66.6         |      | 25.0               |      | C   |
| 9                  | 1.00 |       | 0.909 |       | 4524             |      | 6970            |      | 0.65      |      | 68.6         |      | 22.0               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 4942             |      | 6970            |      | 0.71      |      | 66.9         |      | 24.6               |      | C   |
| 11                 | 1.00 |       | 0.909 |       | 4348             |      | 6970            |      | 0.62      |      | 69.2         |      | 20.9               |      | C   |
| 12                 | 1.00 |       | 0.909 |       | 4414             |      | 6970            |      | 0.63      |      | 69.0         |      | 21.3               |      | C   |
| 13                 | 1.00 |       | 0.909 |       | 4110             |      | 6970            |      | 0.59      |      | 69.6         |      | 19.6               |      | C   |
| 14                 | 1.00 |       | 0.909 |       | 3916             |      | 6970            |      | 0.56      |      | 69.5         |      | 18.6               |      | C   |
| 15                 | 1.00 |       | 0.909 |       | 3648             |      | 6970            |      | 0.52      |      | 69.6         |      | 17.2               |      | B   |
| 16                 | 1.00 |       | 0.909 |       | 3626             |      | 6970            |      | 0.52      |      | 69.6         |      | 17.1               |      | B   |

| Segment 4: Diverge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00 | 0.909 | 0.971 | 1391             | 292  | 9293            | 1839 | 0.15      | 0.16 | 71.7         | 73.5 | 4.7                | 4.7  | A   |
| 2                  | 1.00 | 1.00 | 0.909 | 0.971 | 1690             | 383  | 9293            | 1839 | 0.18      | 0.21 | 71.7         | 73.5 | 5.7                | 5.7  | A   |
| 3                  | 1.00 | 1.00 | 0.909 | 0.971 | 2363             | 713  | 9293            | 1839 | 0.25      | 0.39 | 71.7         | 73.5 | 8.0                | 8.0  | A   |
| 4                  | 1.00 | 1.00 | 0.909 | 0.971 | 3054             | 906  | 9293            | 1839 | 0.33      | 0.49 | 71.7         | 73.5 | 10.4               | 10.4 | A   |
| 5                  | 1.00 | 1.00 | 0.909 | 0.971 | 3001             | 1042 | 9293            | 1839 | 0.32      | 0.57 | 71.7         | 73.5 | 10.2               | 10.2 | A   |
| 6                  | 1.00 | 1.00 | 0.909 | 0.971 | 3890             | 1261 | 9293            | 1839 | 0.42      | 0.69 | 71.7         | 73.5 | 13.2               | 13.2 | B   |
| 7                  | 1.00 | 1.00 | 0.909 | 0.971 | 4656             | 1878 | 9293            | 1839 | 0.50      | 1.02 | 71.0         | 73.1 | 15.9               | 15.9 | B   |
| 8                  | 1.00 | 1.00 | 0.909 | 0.971 | 5003             | 2146 | 9293            | 1839 | 0.54      | 1.17 | 70.3         | 72.7 | 17.2               | 17.2 | B   |
| 9                  | 1.00 | 1.00 | 0.909 | 0.971 | 4524             | 1990 | 9293            | 1839 | 0.49      | 1.08 | 71.2         | 73.3 | 15.4               | 15.4 | B   |
| 10                 | 1.00 | 1.00 | 0.909 | 0.971 | 4942             | 2101 | 9293            | 1839 | 0.53      | 1.14 | 70.4         | 72.8 | 17.0               | 17.0 | B   |
| 11                 | 1.00 | 1.00 | 0.909 | 0.971 | 4348             | 1660 | 9293            | 1839 | 0.47      | 0.90 | 71.5         | 73.4 | 14.8               | 14.8 | B   |
| 12                 | 1.00 | 1.00 | 0.909 | 0.971 | 4414             | 1648 | 9293            | 1839 | 0.47      | 0.90 | 71.4         | 73.3 | 15.1               | 15.1 | B   |
| 13                 | 1.00 | 1.00 | 0.909 | 0.971 | 4110             | 1570 | 9293            | 1839 | 0.44      | 0.85 | 71.7         | 73.5 | 14.0               | 14.0 | B   |
| 14                 | 1.00 | 1.00 | 0.909 | 0.971 | 3916             | 1364 | 9293            | 1839 | 0.42      | 0.74 | 71.7         | 73.5 | 13.3               | 13.3 | B   |
| 15                 | 1.00 | 1.00 | 0.909 | 0.971 | 3648             | 1244 | 9293            | 1839 | 0.39      | 0.68 | 71.7         | 73.5 | 12.4               | 12.4 | B   |
| 16                 | 1.00 | 1.00 | 0.909 | 0.971 | 3626             | 1166 | 9293            | 1839 | 0.39      | 0.63 | 71.7         | 73.5 | 12.3               | 12.3 | B   |
| Segment 5: Basic   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |      | 0.909 |       | 1078             |      | 6970            |      | 0.15      |      | 70.8         |      | 5.1                |      | A   |
| 2                  | 1.00 |      | 0.909 |       | 1281             |      | 6970            |      | 0.18      |      | 70.8         |      | 6.0                |      | A   |
| 3                  | 1.00 |      | 0.909 |       | 1602             |      | 6970            |      | 0.23      |      | 70.8         |      | 7.5                |      | A   |
| 4                  | 1.00 |      | 0.909 |       | 2086             |      | 6970            |      | 0.30      |      | 70.8         |      | 9.8                |      | A   |
| 5                  | 1.00 |      | 0.909 |       | 1888             |      | 6970            |      | 0.27      |      | 70.8         |      | 8.9                |      | A   |
| 6                  | 1.00 |      | 0.909 |       | 2543             |      | 6970            |      | 0.36      |      | 70.8         |      | 12.0               |      | B   |
| 7                  | 1.00 |      | 0.909 |       | 2649             |      | 6970            |      | 0.38      |      | 70.8         |      | 12.5               |      | B   |
| 8                  | 1.00 |      | 0.909 |       | 2711             |      | 6970            |      | 0.39      |      | 70.6         |      | 12.8               |      | B   |
| 9                  | 1.00 |      | 0.909 |       | 2398             |      | 6970            |      | 0.34      |      | 70.8         |      | 11.3               |      | B   |
| 10                 | 1.00 |      | 0.909 |       | 2697             |      | 6970            |      | 0.39      |      | 70.7         |      | 12.7               |      | B   |
| 11                 | 1.00 |      | 0.909 |       | 2574             |      | 6970            |      | 0.37      |      | 70.8         |      | 12.1               |      | B   |
| 12                 | 1.00 |      | 0.909 |       | 2653             |      | 6970            |      | 0.38      |      | 70.8         |      | 12.5               |      | B   |
| 13                 | 1.00 |      | 0.909 |       | 2433             |      | 6970            |      | 0.35      |      | 70.8         |      | 11.5               |      | B   |
| 14                 | 1.00 |      | 0.909 |       | 2460             |      | 6970            |      | 0.35      |      | 70.8         |      | 11.6               |      | B   |
| 15                 | 1.00 |      | 0.909 |       | 2319             |      | 6970            |      | 0.33      |      | 70.8         |      | 10.9               |      | A   |
| 16                 | 1.00 |      | 0.909 |       | 2381             |      | 6970            |      | 0.34      |      | 70.8         |      | 11.2               |      | B   |
| Segment 6: Weaving |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |

|                  |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 | 1081  | 4231  | 0.26             | 63.2 | 4.3             | A    |           |      |              |      |                    |      |     |
| 2                | 1.00 | 0.909 | 1278  | 4343  | 0.29             | 62.3 | 5.1             | A    |           |      |              |      |                    |      |     |
| 3                | 1.00 | 0.909 | 1675  | 4975  | 0.34             | 61.9 | 6.8             | A    |           |      |              |      |                    |      |     |
| 4                | 1.00 | 0.909 | 2182  | 5197  | 0.42             | 60.1 | 9.1             | A    |           |      |              |      |                    |      |     |
| 5                | 1.00 | 0.909 | 1982  | 7446  | 0.27             | 64.3 | 7.7             | A    |           |      |              |      |                    |      |     |
| 6                | 1.00 | 0.909 | 2647  | 7856  | 0.34             | 63.0 | 10.5            | B    |           |      |              |      |                    |      |     |
| 7                | 1.00 | 0.909 | 2806  | 7543  | 0.37             | 61.6 | 11.4            | B    |           |      |              |      |                    |      |     |
| 8                | 1.00 | 0.909 | 2953  | 5926  | 0.50             | 58.6 | 12.6            | B    |           |      |              |      |                    |      |     |
| 9                | 1.00 | 0.909 | 2560  | 6977  | 0.37             | 61.7 | 10.4            | B    |           |      |              |      |                    |      |     |
| 10               | 1.00 | 0.909 | 2978  | 6245  | 0.48             | 59.1 | 12.6            | B    |           |      |              |      |                    |      |     |
| 11               | 1.00 | 0.909 | 2864  | 5942  | 0.48             | 59.0 | 12.1            | B    |           |      |              |      |                    |      |     |
| 12               | 1.00 | 0.909 | 2885  | 6382  | 0.45             | 59.7 | 12.1            | B    |           |      |              |      |                    |      |     |
| 13               | 1.00 | 0.909 | 2671  | 6003  | 0.44             | 59.8 | 11.2            | B    |           |      |              |      |                    |      |     |
| 14               | 1.00 | 0.909 | 2764  | 7147  | 0.39             | 61.2 | 11.3            | B    |           |      |              |      |                    |      |     |
| 15               | 1.00 | 0.909 | 2552  | 7083  | 0.36             | 61.9 | 10.3            | B    |           |      |              |      |                    |      |     |
| 16               | 1.00 | 0.909 | 2660  | 7147  | 0.37             | 61.6 | 10.8            | B    |           |      |              |      |                    |      |     |
| Segment 7: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |       | 0.909 |       | 532              |      | 6970            |      | 0.08      |      | 70.7         |      | 2.5                |      | A   |
| 2                | 1.00 |       | 0.909 |       | 638              |      | 6970            |      | 0.09      |      | 70.7         |      | 3.0                |      | A   |
| 3                | 1.00 |       | 0.909 |       | 1021             |      | 6970            |      | 0.15      |      | 70.7         |      | 4.8                |      | A   |
| 4                | 1.00 |       | 0.909 |       | 1369             |      | 6970            |      | 0.20      |      | 70.6         |      | 6.4                |      | A   |
| 5                | 1.00 |       | 0.909 |       | 1501             |      | 6970            |      | 0.22      |      | 70.7         |      | 7.1                |      | A   |
| 6                | 1.00 |       | 0.909 |       | 2064             |      | 6970            |      | 0.30      |      | 70.7         |      | 9.7                |      | A   |
| 7                | 1.00 |       | 0.909 |       | 2156             |      | 6970            |      | 0.31      |      | 70.7         |      | 10.2               |      | A   |
| 8                | 1.00 |       | 0.909 |       | 2117             |      | 6970            |      | 0.30      |      | 70.6         |      | 10.0               |      | A   |
| 9                | 1.00 |       | 0.909 |       | 1927             |      | 6970            |      | 0.28      |      | 70.7         |      | 9.1                |      | A   |
| 10               | 1.00 |       | 0.909 |       | 2227             |      | 6970            |      | 0.32      |      | 70.6         |      | 10.5               |      | A   |
| 11               | 1.00 |       | 0.909 |       | 2108             |      | 6970            |      | 0.30      |      | 70.6         |      | 9.9                |      | A   |
| 12               | 1.00 |       | 0.909 |       | 2139             |      | 6970            |      | 0.31      |      | 70.6         |      | 10.1               |      | A   |
| 13               | 1.00 |       | 0.909 |       | 1945             |      | 6970            |      | 0.28      |      | 70.6         |      | 9.2                |      | A   |
| 14               | 1.00 |       | 0.909 |       | 2231             |      | 6970            |      | 0.32      |      | 70.7         |      | 10.5               |      | A   |
| 15               | 1.00 |       | 0.909 |       | 2007             |      | 6970            |      | 0.29      |      | 70.7         |      | 9.4                |      | A   |
| 16               | 1.00 |       | 0.909 |       | 2134             |      | 6970            |      | 0.31      |      | 70.7         |      | 10.0               |      | A   |
| Segment 8: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 565              | 33   | 6970            | 2033 | 0.08      | 0.02 | 68.2         | 65.4 | 2.8                | 3.3  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 671              | 33   | 6970            | 2033 | 0.10      | 0.02 | 68.3         | 65.4 | 3.3                | 3.8  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 1054             | 33   | 6970            | 2033 | 0.15      | 0.02 | 68.3         | 65.4 | 5.1                | 5.6  | A   |

|    |      |      |       |       |      |     |      |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|------|------|------|------|------|------|------|------|---|
| 4  | 1.00 | 1.00 | 0.909 | 0.971 | 1402 | 33  | 6970 | 2033 | 0.20 | 0.02 | 68.2 | 65.3 | 6.9  | 7.2  | A |
| 5  | 1.00 | 1.00 | 0.909 | 0.971 | 1534 | 33  | 6970 | 2033 | 0.22 | 0.02 | 68.1 | 65.3 | 7.5  | 7.8  | A |
| 6  | 1.00 | 1.00 | 0.909 | 0.971 | 2101 | 37  | 6970 | 2033 | 0.30 | 0.02 | 67.8 | 65.2 | 10.3 | 10.5 | B |
| 7  | 1.00 | 1.00 | 0.909 | 0.971 | 2197 | 41  | 6970 | 2033 | 0.32 | 0.02 | 67.7 | 65.1 | 10.8 | 10.9 | B |
| 8  | 1.00 | 1.00 | 0.909 | 0.971 | 2154 | 37  | 6970 | 2033 | 0.31 | 0.02 | 67.8 | 65.2 | 10.6 | 10.7 | B |
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 1981 | 54  | 6970 | 2033 | 0.28 | 0.03 | 67.9 | 65.2 | 9.7  | 9.9  | A |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 2293 | 66  | 6970 | 2033 | 0.33 | 0.03 | 67.7 | 65.1 | 11.3 | 11.4 | B |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 2207 | 99  | 6970 | 2033 | 0.32 | 0.05 | 67.7 | 65.1 | 10.9 | 11.1 | B |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 2246 | 107 | 6970 | 2033 | 0.32 | 0.05 | 67.6 | 65.1 | 11.1 | 11.3 | B |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 2023 | 78  | 6970 | 2033 | 0.29 | 0.04 | 67.8 | 65.2 | 9.9  | 10.2 | B |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 2326 | 95  | 6970 | 2033 | 0.33 | 0.05 | 67.6 | 65.1 | 11.5 | 11.7 | B |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 2135 | 128 | 6970 | 2033 | 0.31 | 0.06 | 67.7 | 65.1 | 10.5 | 10.9 | B |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 2229 | 95  | 6970 | 2033 | 0.32 | 0.05 | 67.6 | 65.1 | 11.0 | 11.2 | B |

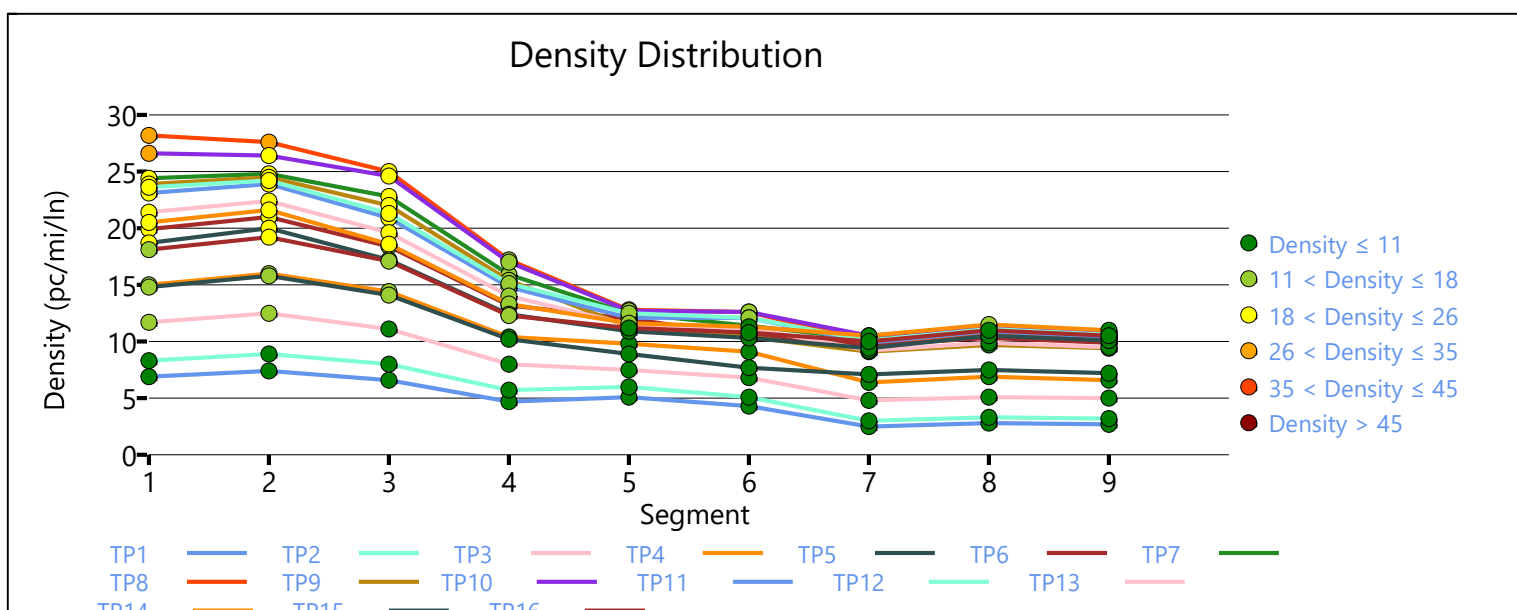
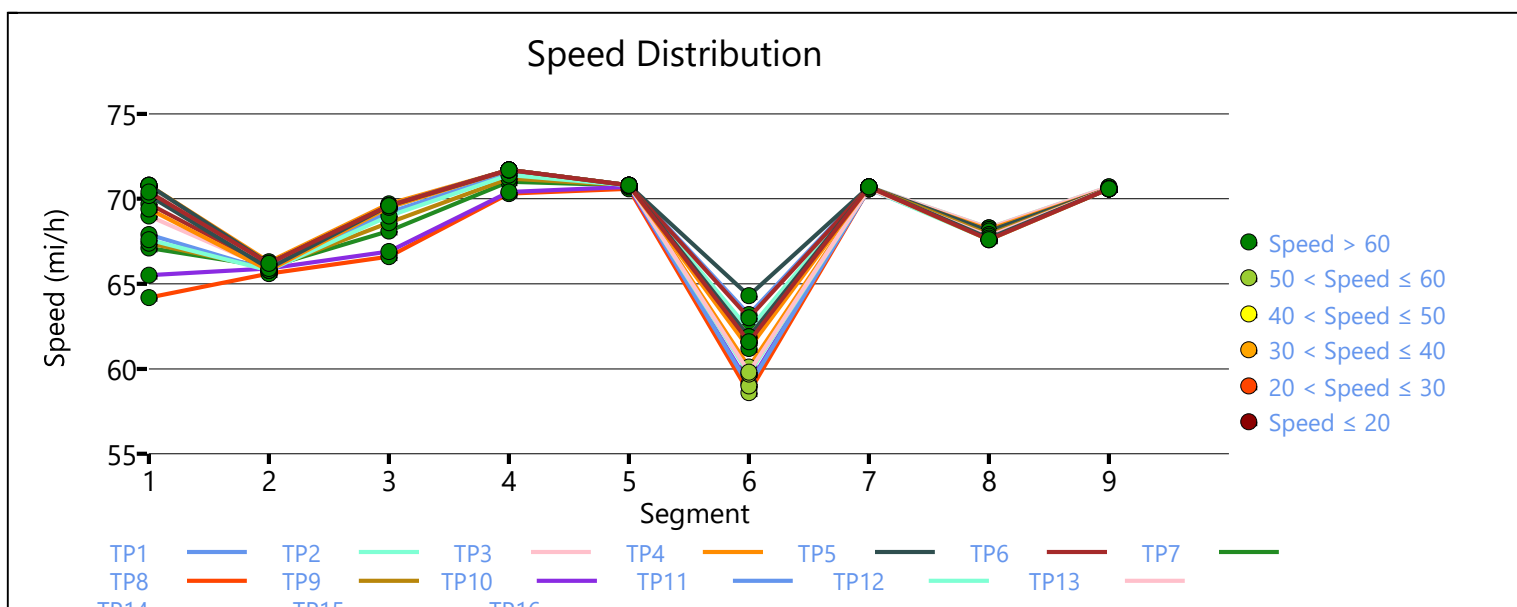
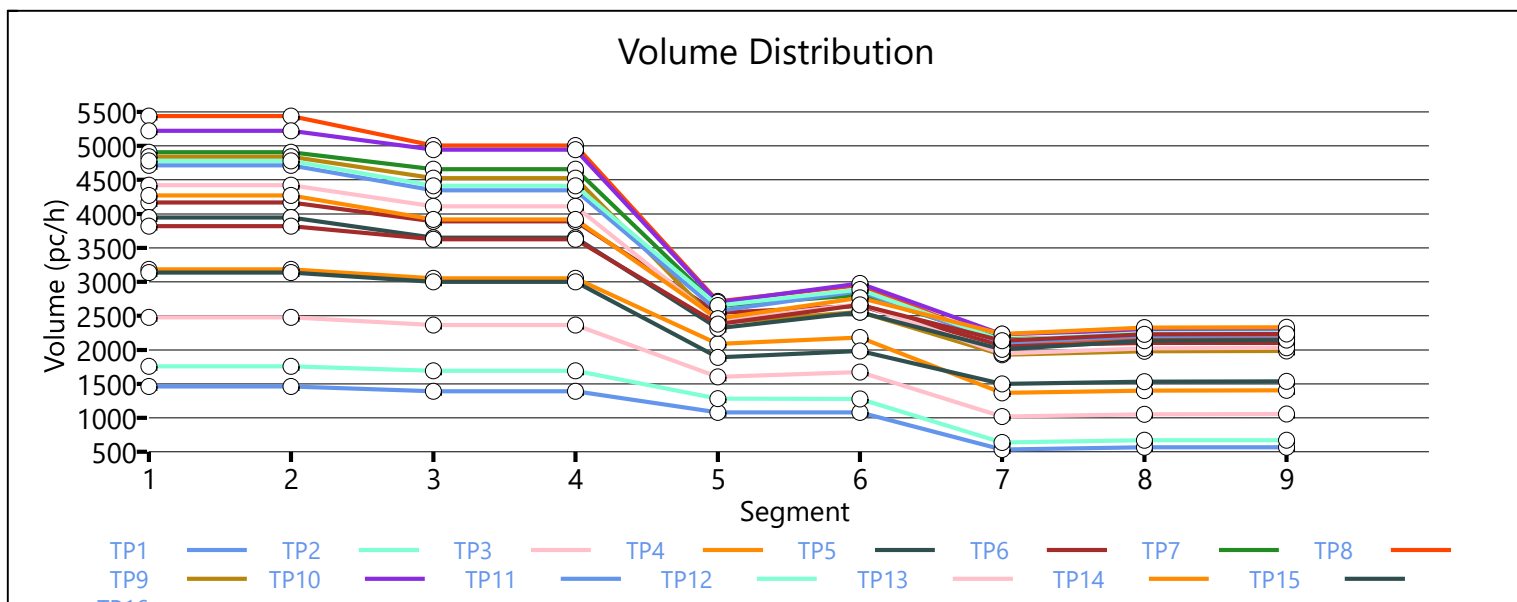
Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 568              | 6970            | 0.08      | 70.6         | 2.7                | A   |
| 2           | 1.00 | 0.909 | 673              | 6970            | 0.10      | 70.7         | 3.2                | A   |
| 3           | 1.00 | 0.909 | 1056             | 6970            | 0.15      | 70.7         | 5.0                | A   |
| 4           | 1.00 | 0.909 | 1404             | 6970            | 0.20      | 70.6         | 6.6                | A   |
| 5           | 1.00 | 0.909 | 1536             | 6970            | 0.22      | 70.6         | 7.2                | A   |
| 6           | 1.00 | 0.909 | 2103             | 6970            | 0.30      | 70.6         | 9.9                | A   |
| 7           | 1.00 | 0.909 | 2200             | 6970            | 0.32      | 70.6         | 10.4               | A   |
| 8           | 1.00 | 0.909 | 2156             | 6970            | 0.31      | 70.6         | 10.2               | A   |
| 9           | 1.00 | 0.909 | 1985             | 6970            | 0.28      | 70.6         | 9.4                | A   |
| 10          | 1.00 | 0.909 | 2297             | 6970            | 0.33      | 70.6         | 10.8               | A   |
| 11          | 1.00 | 0.909 | 2213             | 6970            | 0.32      | 70.6         | 10.4               | A   |
| 12          | 1.00 | 0.909 | 2253             | 6970            | 0.32      | 70.6         | 10.6               | A   |
| 13          | 1.00 | 0.909 | 2029             | 6970            | 0.29      | 70.6         | 9.5                | A   |
| 14          | 1.00 | 0.909 | 2332             | 6970            | 0.33      | 70.6         | 11.0               | A   |
| 15          | 1.00 | 0.909 | 2143             | 6970            | 0.31      | 70.6         | 10.1               | A   |
| 16          | 1.00 | 0.909 | 2235             | 6970            | 0.32      | 70.6         | 10.5               | A   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 68.4        | 4.4               | 4.0                | 2.40             | A   |
| 2 | 68.3        | 5.3               | 4.8                | 2.40             | A   |
| 3 | 68.3        | 7.6               | 6.9                | 2.40             | A   |
| 4 | 68.1        | 9.9               | 9.0                | 2.40             | A   |
| 5 | 69.0        | 9.8               | 8.9                | 2.40             | A   |
| 6 | 68.4        | 13.2              | 12.0               | 2.40             | B   |
| 7 | 67.4        | 15.0              | 13.6               | 2.40             | F   |

|                          |      |                                                                                                                                                                                                                      |                    |      |      |
|--------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------|------|
| 8                        | 65.8 | 16.2                                                                                                                                                                                                                 | 14.7               | 2.50 | F    |
| 9                        | 67.5 | 14.1                                                                                                                                                                                                                 | 12.9               | 2.40 | F    |
| 10                       | 66.4 | 16.0                                                                                                                                                                                                                 | 14.6               | 2.50 | F    |
| 11                       | 67.1 | 14.6                                                                                                                                                                                                                 | 13.3               | 2.40 | B    |
| 12                       | 67.2 | 14.9                                                                                                                                                                                                                 | 13.5               | 2.40 | B    |
| 13                       | 67.6 | 13.6                                                                                                                                                                                                                 | 12.4               | 2.40 | B    |
| 14                       | 68.0 | 13.9                                                                                                                                                                                                                 | 12.6               | 2.40 | B    |
| 15                       | 68.3 | 12.7                                                                                                                                                                                                                 | 11.6               | 2.40 | B    |
| 16                       | 68.4 | 12.9                                                                                                                                                                                                                 | 11.7               | 2.40 | B    |
| Facility Overall Results |      |                                                                                                                                                                                                                      |                    |      |      |
| Space Mean Speed, mi/h   |      | 67.6                                                                                                                                                                                                                 | Density, veh/mi/ln |      | 11.0 |
| Average Travel Time, min |      | 2.40                                                                                                                                                                                                                 | Density, pc/mi/ln  |      | 12.1 |
| Messages                 |      |                                                                                                                                                                                                                      |                    |      |      |
| WARNING 1                |      | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |                    |      |      |
| WARNING 2                |      | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |                    |      |      |
| WARNING 3                |      | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |                    |      |      |
| WARNING 4                |      | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |                    |      |      |
| Comments                 |      |                                                                                                                                                                                                                      |                    |      |      |
|                          |      |                                                                                                                                                                                                                      |                    |      |      |



# HCS7 Freeway Facilities Report

## Project Information

|                     |                                            |                      |                         |
|---------------------|--------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                         | Date                 | 9/3/2020                |
| Agency              | Lee Engineering                            | Analysis Year        | 2020                    |
| Jurisdiction        | NMDOT                                      | Time Period Analyzed | PM Peak Period          |
| Project Description | Existing Conditions - NB I25<br>2PM to 7PM | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 3.06  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                       | Length, ft | Lanes |
|-----|---------|----------|--------------------------------------------|------------|-------|
| 1   | Basic   | Basic    | NB I25 South of Sunport                    | 5280       | 3     |
| 2   | Diverge | Diverge  | Off-Ramp to Sunport                        | 1500       | 3     |
| 3   | Basic   | Basic    | NB I25 bet                                 | 3070       | 3     |
| 4   | Weaving | Weaving  | Sunport Off/On Ramps                       | 1750       | 4     |
| 5   | Basic   | Basic    | NB I24 bet Sunport On and Gibson Off Ramps | 1155       | 3     |
| 6   | Merge   | Merge    | NB I25 bet Gibson Off/On Ramps             | 700        | 3     |
| 7   | Basic   | Basic    | On-ramp from EB Gibson                     | 400        | 3     |
| 8   | Merge   | Merge    | NB I25 bet Gibson On-Ramps                 | 800        | 3     |
| 9   | Basic   | Basic    | On-ramp from WB Gibson                     | 1500       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2310             | 6970            | 0.33      | 70.8         | 10.9               | A   |
| 2           | 1.00 | 0.909 | 2420             | 6970            | 0.35      | 70.8         | 11.4               | B   |
| 3           | 1.00 | 0.909 | 2354             | 6970            | 0.34      | 70.8         | 11.1               | B   |
| 4           | 1.00 | 0.909 | 2477             | 6970            | 0.36      | 70.8         | 11.7               | B   |
| 5           | 1.00 | 0.909 | 2596             | 6970            | 0.37      | 70.8         | 12.2               | B   |
| 6           | 1.00 | 0.909 | 2389             | 6970            | 0.34      | 70.8         | 11.2               | B   |
| 7           | 1.00 | 0.909 | 2460             | 6970            | 0.35      | 70.8         | 11.6               | B   |
| 8           | 1.00 | 0.909 | 2438             | 6970            | 0.35      | 70.8         | 11.5               | B   |
| 9           | 1.00 | 0.909 | 2491             | 6970            | 0.36      | 70.8         | 11.7               | B   |
| 10          | 1.00 | 0.909 | 2623             | 6970            | 0.38      | 70.8         | 12.3               | B   |
| 11          | 1.00 | 0.909 | 2614             | 6970            | 0.38      | 70.8         | 12.3               | B   |
| 12          | 1.00 | 0.909 | 2645             | 6970            | 0.38      | 70.8         | 12.5               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 2372  |       | 6970             |      | 0.34            | 70.8 |           | 11.2 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 2213  |       | 6970             |      | 0.32            | 70.8 |           | 10.4 |              | A    |                    |      |     |
| 15                 | 1.00 | 0.909 | 1963  |       | 6970             |      | 0.28            | 70.8 |           | 9.2  |              | A    |                    |      |     |
| 16                 | 1.00 | 0.909 | 1998  |       | 6970             |      | 0.29            | 70.8 |           | 9.4  |              | A    |                    |      |     |
| 17                 | 1.00 | 0.909 | 1897  |       | 6970             |      | 0.27            | 70.8 |           | 8.9  |              | A    |                    |      |     |
| 18                 | 1.00 | 0.909 | 1694  |       | 6970             |      | 0.24            | 70.8 |           | 8.0  |              | A    |                    |      |     |
| 19                 | 1.00 | 0.909 | 1527  |       | 6970             |      | 0.22            | 70.8 |           | 7.2  |              | A    |                    |      |     |
| 20                 | 1.00 | 0.909 | 1443  |       | 6970             |      | 0.21            | 70.8 |           | 6.8  |              | A    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2310             | 99   | 6970            | 2033 | 0.33      | 0.05 | 67.6         | 63.4 | 11.4               | 16.1 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2420             | 103  | 6970            | 2033 | 0.35      | 0.05 | 67.6         | 63.4 | 11.9               | 16.7 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2354             | 124  | 6970            | 2033 | 0.34      | 0.06 | 67.5         | 63.3 | 11.6               | 16.4 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2477             | 124  | 6970            | 2033 | 0.36      | 0.06 | 67.5         | 63.3 | 12.2               | 17.1 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 2596             | 87   | 6970            | 2033 | 0.37      | 0.04 | 67.7         | 63.4 | 12.8               | 17.7 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2389             | 111  | 6970            | 2033 | 0.34      | 0.05 | 67.6         | 63.4 | 11.8               | 16.6 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 2460             | 78   | 6970            | 2033 | 0.35      | 0.04 | 67.7         | 63.5 | 12.1               | 16.9 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 2438             | 70   | 6970            | 2033 | 0.35      | 0.03 | 67.7         | 63.5 | 12.0               | 16.8 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 2491             | 66   | 6970            | 2033 | 0.36      | 0.03 | 67.8         | 63.5 | 12.2               | 17.1 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 2623             | 66   | 6970            | 2033 | 0.38      | 0.03 | 67.8         | 63.5 | 12.9               | 17.8 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 2614             | 54   | 6970            | 2033 | 0.38      | 0.03 | 67.8         | 63.5 | 12.9               | 17.7 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 2645             | 95   | 6970            | 2033 | 0.38      | 0.05 | 67.7         | 63.4 | 13.0               | 17.9 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2372             | 95   | 6970            | 2033 | 0.34      | 0.05 | 67.6         | 63.4 | 11.7               | 16.4 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2213             | 66   | 6970            | 2033 | 0.32      | 0.03 | 67.7         | 63.5 | 10.9               | 15.5 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 1963             | 70   | 6970            | 2033 | 0.28      | 0.03 | 67.5         | 63.5 | 9.7                | 14.1 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 1998             | 91   | 6970            | 2033 | 0.29      | 0.04 | 67.4         | 63.4 | 9.9                | 14.4 | B   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 1897             | 37   | 6970            | 2033 | 0.27      | 0.02 | 67.6         | 63.5 | 9.4                | 13.7 | B   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 1694             | 37   | 6970            | 2033 | 0.24      | 0.02 | 67.5         | 63.5 | 8.4                | 12.5 | B   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1527             | 49   | 6970            | 2033 | 0.22      | 0.02 | 67.4         | 63.5 | 7.6                | 11.6 | B   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1443             | 37   | 6970            | 2033 | 0.21      | 0.02 | 67.4         | 63.5 | 7.1                | 11.0 | B   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2205             |      | 6970            |      | 0.32      |      | 70.7         |      | 10.4               |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2310             |      | 6970            |      | 0.33      |      | 70.7         |      | 10.9               |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2222             |      | 6970            |      | 0.32      |      | 70.7         |      | 10.5               |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2345             |      | 6970            |      | 0.34      |      | 70.7         |      | 11.0               |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2504             |      | 6970            |      | 0.36      |      | 70.7         |      | 11.8               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 2271             |      | 6970            |      | 0.33      |      | 70.7         |      | 10.7               |      | A   |
| 7                  | 1.00 |       | 0.909 |       | 2376             |      | 6970            |      | 0.34      |      | 70.7         |      | 11.2               |      | B   |



|                    |      |       |                  |                 |           |              |                    |     |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 8                  | 1.00 | 0.909 | 2363             | 6970            | 0.34      | 70.7         | 11.1               | B   |
| 9                  | 1.00 | 0.909 | 2420             | 6970            | 0.35      | 70.7         | 11.4               | B   |
| 10                 | 1.00 | 0.909 | 2552             | 6970            | 0.37      | 70.7         | 12.0               | B   |
| 11                 | 1.00 | 0.909 | 2557             | 6970            | 0.37      | 70.7         | 12.0               | B   |
| 12                 | 1.00 | 0.909 | 2543             | 6970            | 0.36      | 70.7         | 12.0               | B   |
| 13                 | 1.00 | 0.909 | 2271             | 6970            | 0.33      | 70.7         | 10.7               | A   |
| 14                 | 1.00 | 0.909 | 2143             | 6970            | 0.31      | 70.7         | 10.1               | A   |
| 15                 | 1.00 | 0.909 | 1888             | 6970            | 0.27      | 70.7         | 8.9                | A   |
| 16                 | 1.00 | 0.909 | 1901             | 6970            | 0.27      | 70.7         | 9.0                | A   |
| 17                 | 1.00 | 0.909 | 1857             | 6970            | 0.27      | 70.7         | 8.7                | A   |
| 18                 | 1.00 | 0.909 | 1655             | 6970            | 0.24      | 70.7         | 7.8                | A   |
| 19                 | 1.00 | 0.909 | 1474             | 6970            | 0.21      | 70.7         | 6.9                | A   |
| 20                 | 1.00 | 0.909 | 1404             | 6970            | 0.20      | 70.7         | 6.6                | A   |
| Segment 4: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 2873             | 6400            | 0.45      | 59.8         | 12.0               | B   |
| 2                  | 1.00 | 0.909 | 2968             | 6793            | 0.44      | 60.1         | 12.3               | B   |
| 3                  | 1.00 | 0.909 | 2929             | 6098            | 0.48      | 59.1         | 12.4               | B   |
| 4                  | 1.00 | 0.909 | 3042             | 6212            | 0.49      | 58.9         | 12.9               | B   |
| 5                  | 1.00 | 0.909 | 3328             | 6401            | 0.52      | 58.2         | 14.3               | B   |
| 6                  | 1.00 | 0.909 | 3005             | 6330            | 0.47      | 59.1         | 12.7               | B   |
| 7                  | 1.00 | 0.909 | 3100             | 6753            | 0.46      | 59.5         | 13.0               | B   |
| 8                  | 1.00 | 0.909 | 3097             | 6417            | 0.48      | 59.0         | 13.1               | B   |
| 9                  | 1.00 | 0.909 | 3467             | 5652            | 0.61      | 56.2         | 15.4               | B   |
| 10                 | 1.00 | 0.909 | 3601             | 5505            | 0.65      | 55.4         | 16.2               | B   |
| 11                 | 1.00 | 0.909 | 3564             | 5316            | 0.67      | 55.1         | 16.2               | B   |
| 12                 | 1.00 | 0.909 | 3284             | 5185            | 0.63      | 55.8         | 14.7               | B   |
| 13                 | 1.00 | 0.909 | 3550             | 4870            | 0.73      | 54.0         | 16.4               | B   |
| 14                 | 1.00 | 0.909 | 2984             | 4891            | 0.61      | 56.1         | 13.3               | B   |
| 15                 | 1.00 | 0.909 | 2551             | 4810            | 0.53      | 57.6         | 11.1               | B   |
| 16                 | 1.00 | 0.909 | 2384             | 4484            | 0.53      | 57.4         | 10.4               | B   |
| 17                 | 1.00 | 0.909 | 2424             | 5403            | 0.45      | 59.6         | 10.2               | B   |
| 18                 | 1.00 | 0.909 | 2275             | 5094            | 0.45      | 59.5         | 9.6                | A   |
| 19                 | 1.00 | 0.909 | 2071             | 5185            | 0.40      | 60.5         | 8.6                | A   |
| 20                 | 1.00 | 0.909 | 1933             | 5428            | 0.36      | 61.6         | 7.8                | A   |
| Segment 5: Basic   |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 2570             | 6970            | 0.37      | 69.8         | 12.1               | B   |
| 2                  | 1.00 | 0.909 | 2680             | 6970            | 0.38      | 69.8         | 12.6               | B   |
| 3                  | 1.00 | 0.909 | 2596             | 6970            | 0.37      | 69.7         | 12.2               | B   |



| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 |      | 0.909 |       | 2741             |      | 6970            |      | 0.39      |      | 69.3         |      | 12.9               |      | B   |
| 2                | 1.00 |      | 0.909 |       | 2891             |      | 6970            |      | 0.41      |      | 69.2         |      | 13.6               |      | B   |
| 3                | 1.00 |      | 0.909 |       | 2803             |      | 6970            |      | 0.40      |      | 69.2         |      | 13.2               |      | B   |
| 4                | 1.00 |      | 0.909 |       | 2961             |      | 6970            |      | 0.42      |      | 69.2         |      | 13.9               |      | B   |
| 5                | 1.00 |      | 0.909 |       | 3305             |      | 6970            |      | 0.47      |      | 69.1         |      | 15.6               |      | B   |
| 6                | 1.00 |      | 0.909 |       | 3014             |      | 6970            |      | 0.43      |      | 69.2         |      | 14.2               |      | B   |
| 7                | 1.00 |      | 0.909 |       | 3270             |      | 6970            |      | 0.47      |      | 69.1         |      | 15.4               |      | B   |
| 8                | 1.00 |      | 0.909 |       | 3014             |      | 6970            |      | 0.43      |      | 69.2         |      | 14.2               |      | B   |
| 9                | 1.00 |      | 0.909 |       | 3498             |      | 6970            |      | 0.50      |      | 69.0         |      | 16.5               |      | B   |
| 10               | 1.00 |      | 0.909 |       | 3481             |      | 6970            |      | 0.50      |      | 69.0         |      | 16.4               |      | B   |
| 11               | 1.00 |      | 0.909 |       | 3419             |      | 6970            |      | 0.49      |      | 69.1         |      | 16.1               |      | B   |
| 12               | 1.00 |      | 0.909 |       | 2812             |      | 6970            |      | 0.40      |      | 69.3         |      | 13.2               |      | B   |
| 13               | 1.00 |      | 0.909 |       | 3525             |      | 6970            |      | 0.51      |      | 69.0         |      | 16.6               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 2675             |      | 6970            |      | 0.38      |      | 69.3         |      | 12.6               |      | B   |
| 15               | 1.00 |      | 0.909 |       | 2213             |      | 6970            |      | 0.32      |      | 69.4         |      | 10.4               |      | A   |
| 16               | 1.00 |      | 0.909 |       | 1831             |      | 6970            |      | 0.26      |      | 69.5         |      | 8.6                |      | A   |
| 17               | 1.00 |      | 0.909 |       | 2152             |      | 6970            |      | 0.31      |      | 69.5         |      | 10.1               |      | A   |
| 18               | 1.00 |      | 0.909 |       | 2042             |      | 6970            |      | 0.29      |      | 69.5         |      | 9.6                |      | A   |
| 19               | 1.00 |      | 0.909 |       | 1941             |      | 6970            |      | 0.28      |      | 69.5         |      | 9.1                |      | A   |
| 20               | 1.00 |      | 0.909 |       | 1804             |      | 6970            |      | 0.26      |      | 69.6         |      | 8.5                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 3450             | 709  | 6970            | 2033 | 0.50      | 0.35 | 66.4         | 64.3 | 17.3               | 18.6 | B   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 3604             | 713  | 6970            | 2033 | 0.52      | 0.35 | 66.3         | 64.2 | 18.1               | 19.3 | B   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 3610             | 807  | 6970            | 2033 | 0.52      | 0.40 | 66.2         | 64.1 | 18.2               | 19.6 | B   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 3805             | 844  | 6970            | 2033 | 0.55      | 0.42 | 66.0         | 63.9 | 19.2               | 20.6 | C   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 4368             | 1063 | 6970            | 2033 | 0.63      | 0.52 | 65.1         | 63.0 | 22.4               | 23.8 | C   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 4217             | 1203 | 6970            | 2033 | 0.61      | 0.59 | 65.2         | 63.1 | 21.6               | 23.5 | C   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 4712             | 1442 | 6970            | 2033 | 0.68      | 0.71 | 64.1         | 61.9 | 24.5               | 26.4 | C   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 4715             | 1701 | 6970            | 2033 | 0.68      | 0.84 | 63.7         | 61.5 | 24.7               | 27.1 | C   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 5335             | 1837 | 6970            | 2033 | 0.77      | 0.90 | 61.8         | 59.3 | 28.8               | 30.4 | D   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 5471             | 1990 | 6970            | 2033 | 0.78      | 0.98 | 60.9         | 58.3 | 29.9               | 31.4 | D   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 4951             | 1532 | 6970            | 2033 | 0.71      | 0.75 | 63.5         | 61.2 | 26.0               | 27.8 | C   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 4559             | 1747 | 6970            | 2033 | 0.65      | 0.86 | 63.9         | 61.8 | 23.8               | 26.5 | C   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 5086             | 1561 | 6970            | 2033 | 0.73      | 0.77 | 63.1         | 60.7 | 26.9               | 28.5 | D   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 3981             | 1306 | 6970            | 2033 | 0.57      | 0.64 | 65.4         | 63.4 | 20.3               | 22.6 | C   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 3226             | 1013 | 6970            | 2033 | 0.46      | 0.50 | 66.3         | 64.3 | 16.2               | 18.3 | B   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 2391             | 560  | 6970            | 2033 | 0.34      | 0.28 | 67.2         | 65.0 | 11.9               | 13.2 | B   |

|    |      |      |       |       |      |     |      |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|------|------|------|------|------|------|------|------|---|
| 17 | 1.00 | 1.00 | 0.909 | 0.971 | 2774 | 622 | 6970 | 2033 | 0.40 | 0.31 | 66.9 | 64.8 | 13.8 | 15.2 | B |
| 18 | 1.00 | 1.00 | 0.909 | 0.971 | 2701 | 659 | 6970 | 2033 | 0.39 | 0.32 | 66.9 | 64.8 | 13.5 | 14.9 | B |
| 19 | 1.00 | 1.00 | 0.909 | 0.971 | 2481 | 540 | 6970 | 2033 | 0.36 | 0.27 | 67.1 | 64.9 | 12.3 | 13.6 | B |
| 20 | 1.00 | 1.00 | 0.909 | 0.971 | 2422 | 618 | 6970 | 2033 | 0.35 | 0.30 | 67.0 | 64.9 | 12.0 | 13.5 | B |

Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3498             | 6970            | 0.50      | 70.1         | 16.5               | B   |
| 2           | 1.00 | 0.909 | 3652             | 6970            | 0.52      | 70.1         | 17.2               | B   |
| 3           | 1.00 | 0.909 | 3666             | 6970            | 0.53      | 70.1         | 17.3               | B   |
| 4           | 1.00 | 0.909 | 3864             | 6970            | 0.55      | 70.1         | 18.3               | C   |
| 5           | 1.00 | 0.909 | 4440             | 6970            | 0.64      | 68.9         | 21.5               | C   |
| 6           | 1.00 | 0.909 | 4299             | 6970            | 0.62      | 69.3         | 20.7               | C   |
| 7           | 1.00 | 0.909 | 4810             | 6970            | 0.69      | 67.5         | 23.7               | C   |
| 8           | 1.00 | 0.909 | 4832             | 6970            | 0.69      | 67.4         | 23.9               | C   |
| 9           | 1.00 | 0.909 | 5461             | 6970            | 0.78      | 64.1         | 28.4               | D   |
| 10          | 1.00 | 0.909 | 5606             | 6970            | 0.80      | 63.2         | 29.6               | D   |
| 11          | 1.00 | 0.909 | 5056             | 6970            | 0.73      | 66.4         | 25.4               | C   |
| 12          | 1.00 | 0.909 | 4678             | 6970            | 0.67      | 68.1         | 22.9               | C   |
| 13          | 1.00 | 0.909 | 5193             | 6970            | 0.75      | 65.7         | 26.3               | D   |
| 14          | 1.00 | 0.909 | 4070             | 6970            | 0.58      | 69.9         | 19.4               | C   |
| 15          | 1.00 | 0.909 | 3296             | 6970            | 0.47      | 70.1         | 15.5               | B   |
| 16          | 1.00 | 0.909 | 2429             | 6970            | 0.35      | 70.2         | 11.4               | B   |
| 17          | 1.00 | 0.909 | 2816             | 6970            | 0.40      | 70.2         | 13.3               | B   |
| 18          | 1.00 | 0.909 | 2746             | 6970            | 0.39      | 70.2         | 12.9               | B   |
| 19          | 1.00 | 0.909 | 2517             | 6970            | 0.36      | 70.2         | 11.9               | B   |
| 20          | 1.00 | 0.909 | 2464             | 6970            | 0.35      | 70.2         | 11.6               | B   |

Facility Time Period Results

| T  | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|----|-------------|-------------------|--------------------|------------------|-----|
| 1  | 68.3        | 12.1              | 11.0               | 2.70             | B   |
| 2  | 68.3        | 12.6              | 11.5               | 2.70             | B   |
| 3  | 68.1        | 12.4              | 11.2               | 2.70             | B   |
| 4  | 68.1        | 13.0              | 11.8               | 2.70             | B   |
| 5  | 67.7        | 14.2              | 12.9               | 2.70             | B   |
| 6  | 68.0        | 13.1              | 11.9               | 2.70             | B   |
| 7  | 67.7        | 13.9              | 12.6               | 2.70             | B   |
| 8  | 67.5        | 13.8              | 12.5               | 2.70             | B   |
| 9  | 66.2        | 15.1              | 13.7               | 2.80             | B   |
| 10 | 65.8        | 15.8              | 14.3               | 2.80             | B   |
| 11 | 66.6        | 15.1              | 13.8               | 2.80             | B   |
| 12 | 67.1        | 14.3              | 13.0               | 2.70             | B   |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 13 | 66.0 | 14.7 | 13.3 | 2.80 | B |
| 14 | 67.4 | 12.3 | 11.2 | 2.70 | B |
| 15 | 67.8 | 10.5 | 9.6  | 2.70 | A |
| 16 | 67.9 | 9.7  | 8.8  | 2.70 | A |
| 17 | 68.3 | 9.9  | 9.0  | 2.70 | A |
| 18 | 68.2 | 9.1  | 8.3  | 2.70 | A |
| 19 | 68.4 | 8.3  | 7.5  | 2.70 | A |
| 20 | 68.6 | 7.8  | 7.1  | 2.70 | A |

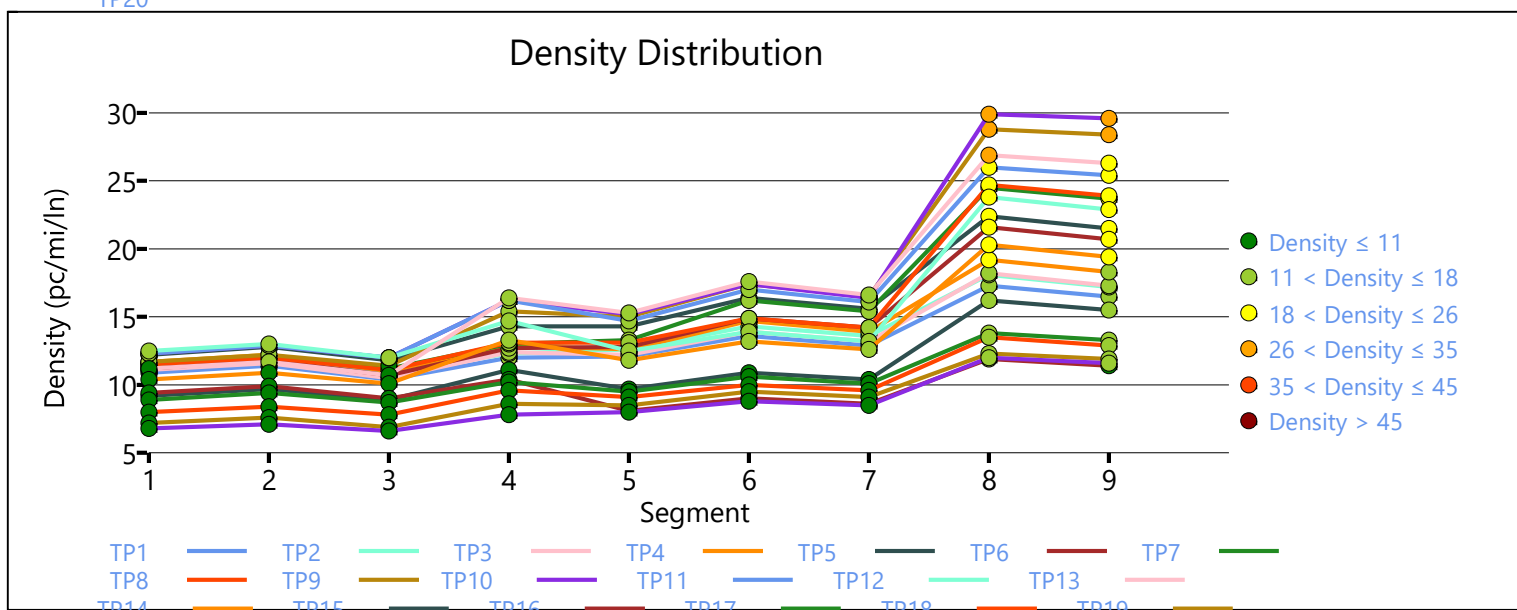
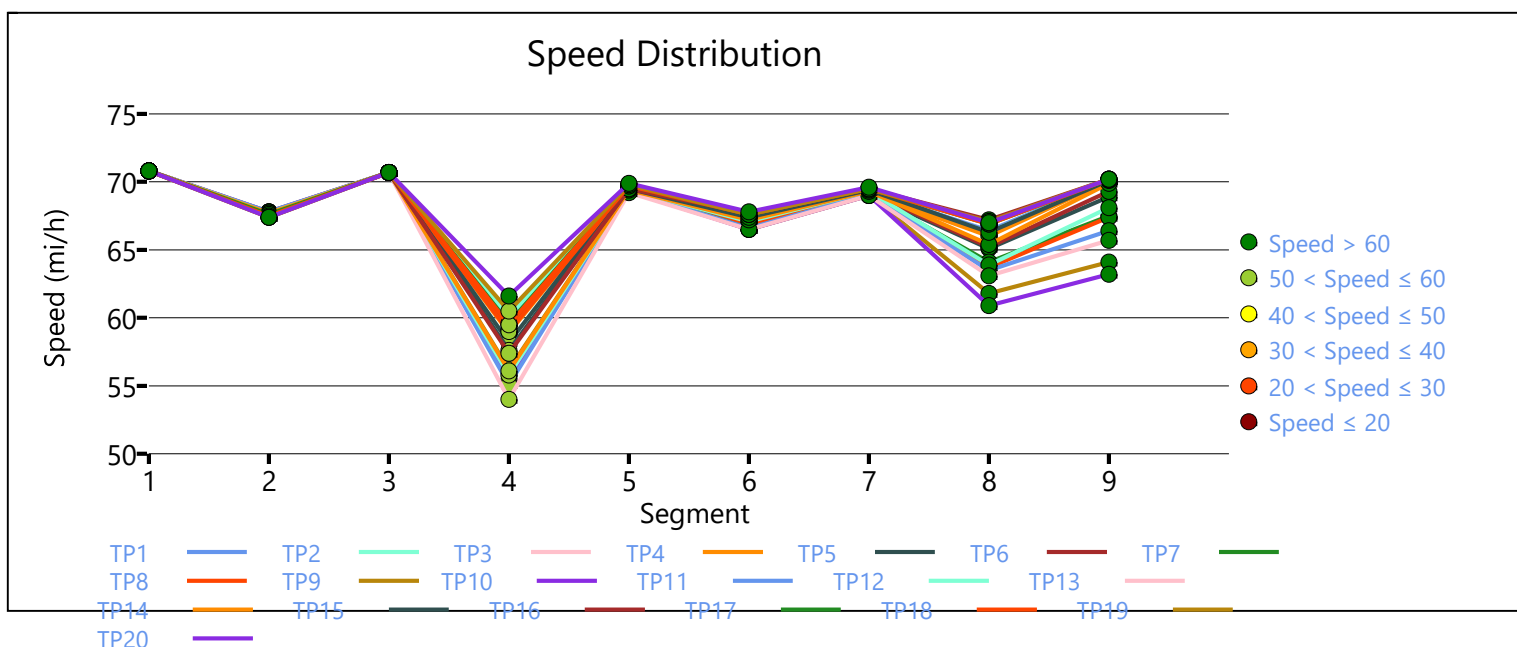
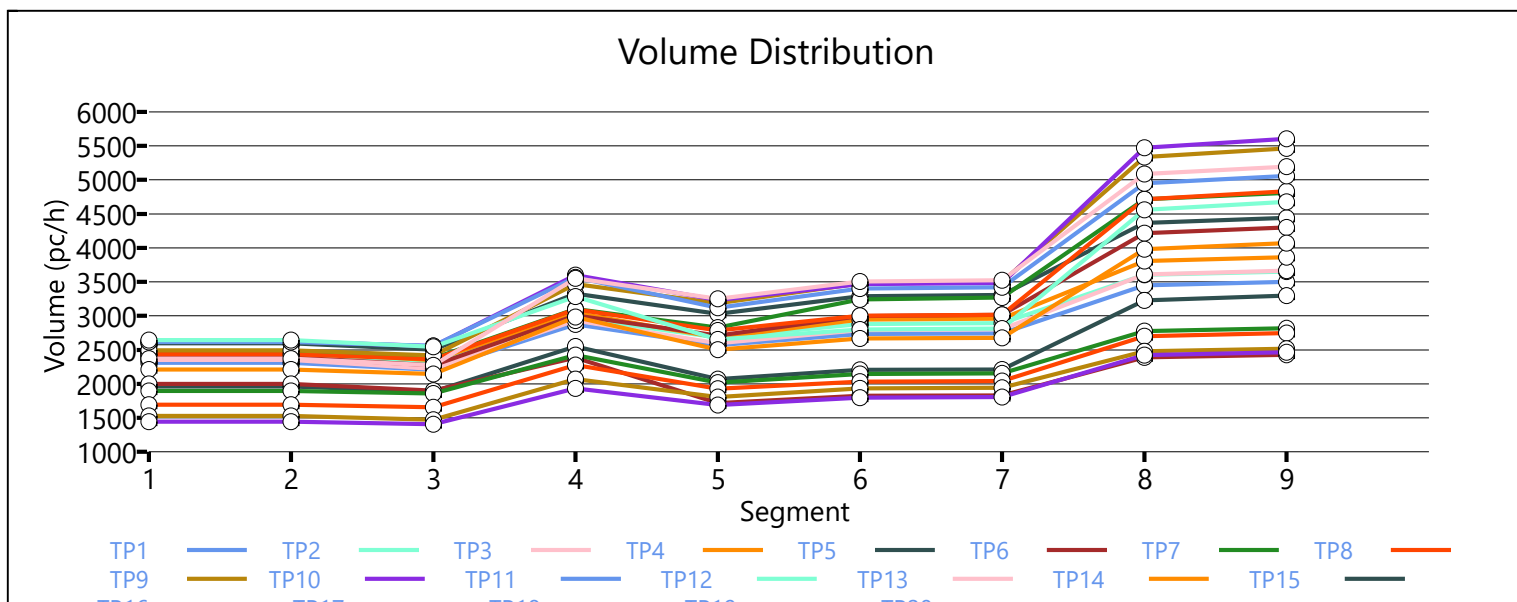
Facility Overall Results

|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 67.5 | Density, veh/mi/ln | 11.2 |
| Average Travel Time, min | 2.70 | Density, pc/mi/ln  | 12.4 |

Messages

Comments

|  |
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|  |
|--|



# HCS7 Freeway Facilities Report

## Project Information

|                     |                               |                      |                         |
|---------------------|-------------------------------|----------------------|-------------------------|
| Analyst             | PG                            | Date                 | 9/3/2020                |
| Agency              | Lee Engineering               | Analysis Year        | 2020 Existing           |
| Jurisdiction        | NMDOT                         | Time Period Analyzed | PM Peak Period          |
| Project Description | 2020 Existing I-25 Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.73  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | I-25 SB North of Gibson             | 2640       | 3     |
| 2   | Diverge | Diverge  | SB Off-Ramp to WB Gibson            | 1500       | 3     |
| 3   | Basic   | Basic    | Btw Gibson Off Ramps                | 200        | 3     |
| 4   | Diverge | Basic    | SB Off-Ramp to WB Gibson            | 750        | 4     |
| 5   | Basic   | Basic    | Btw Gibson Off and On Ramps         | 620        | 3     |
| 6   | Weaving | Weaving  | Btw Gibson On and Sunport Off Ramps | 2250       | 4     |
| 7   | Basic   | Basic    | Btw Sunport Off and On Ramps        | 2950       | 3     |
| 8   | Merge   | Merge    | On-Ramp from Sunport                | 875        | 3     |
| 9   | Basic   | Basic    | I-25 Sb South of Sunport            | 2640       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3736             | 6970            | 0.54      | 70.5         | 17.7               | B   |
| 2           | 1.00 | 0.909 | 3806             | 6970            | 0.55      | 70.4         | 18.0               | B   |
| 3           | 1.00 | 0.909 | 4084             | 6970            | 0.59      | 69.9         | 19.5               | C   |
| 4           | 1.00 | 0.909 | 4537             | 6970            | 0.65      | 68.6         | 22.0               | C   |
| 5           | 1.00 | 0.909 | 4528             | 6970            | 0.65      | 68.6         | 22.0               | C   |
| 6           | 1.00 | 0.909 | 4405             | 6970            | 0.63      | 69.0         | 21.3               | C   |
| 7           | 1.00 | 0.909 | 4475             | 6970            | 0.64      | 68.8         | 21.7               | C   |
| 8           | 1.00 | 0.909 | 4480             | 6970            | 0.64      | 68.8         | 21.7               | C   |
| 9           | 1.00 | 0.909 | 4400             | 6970            | 0.63      | 69.0         | 21.3               | C   |
| 10          | 1.00 | 0.909 | 4559             | 6970            | 0.65      | 68.5         | 22.2               | C   |
| 11          | 1.00 | 0.909 | 4123             | 6970            | 0.59      | 69.8         | 19.7               | C   |
| 12          | 1.00 | 0.909 | 4480             | 6970            | 0.64      | 68.8         | 21.7               | C   |
| 13          | 1.00 | 0.909 | 4194             | 6970            | 0.60      | 69.6         | 20.1               | C   |

| 14                 | 1.00 | 0.909 |       |       | 4471             |      |                 | 6970 | 0.64      |      | 68.8         |      | 21.7               |      | C   |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 15                 | 1.00 | 0.909 |       |       | 4299             |      |                 | 6970 | 0.62      |      | 69.3         |      | 20.7               |      | C   |
| 16                 | 1.00 | 0.909 |       |       | 4220             |      |                 | 6970 | 0.61      |      | 69.6         |      | 20.2               |      | C   |
| 17                 | 1.00 | 0.909 |       |       | 4141             |      |                 | 6970 | 0.59      |      | 69.8         |      | 19.8               |      | C   |
| 18                 | 1.00 | 0.909 |       |       | 3908             |      |                 | 6970 | 0.56      |      | 70.2         |      | 18.6               |      | C   |
| 19                 | 1.00 | 0.909 |       |       | 3498             |      |                 | 6970 | 0.50      |      | 70.7         |      | 16.5               |      | B   |
| 20                 | 1.00 | 0.909 |       |       | 3287             |      |                 | 6970 | 0.47      |      | 70.8         |      | 15.5               |      | B   |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 3736             | 251  | 6389            | 1936 | 0.58      | 0.13 | 65.9         | 60.9 | 18.9               | 24.2 | C   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 3806             | 321  | 6389            | 1936 | 0.60      | 0.17 | 65.7         | 60.7 | 19.3               | 24.7 | C   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 4084             | 260  | 6389            | 1936 | 0.64      | 0.13 | 66.0         | 60.9 | 20.6               | 25.9 | C   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4537             | 383  | 6389            | 1936 | 0.71      | 0.20 | 65.7         | 60.6 | 23.0               | 28.2 | D   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4528             | 342  | 6389            | 1936 | 0.71      | 0.18 | 65.8         | 60.7 | 22.9               | 28.1 | D   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4405             | 317  | 6389            | 1936 | 0.69      | 0.16 | 65.8         | 60.7 | 22.3               | 27.5 | C   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4475             | 292  | 6389            | 1936 | 0.70      | 0.15 | 65.9         | 60.8 | 22.6               | 27.8 | C   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4480             | 317  | 6389            | 1936 | 0.70      | 0.16 | 65.8         | 60.7 | 22.7               | 27.8 | C   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4400             | 260  | 6389            | 1936 | 0.69      | 0.13 | 66.0         | 60.9 | 22.2               | 27.4 | C   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4559             | 330  | 6389            | 1936 | 0.71      | 0.17 | 65.8         | 60.7 | 23.1               | 28.2 | D   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4123             | 292  | 6389            | 1936 | 0.65      | 0.15 | 65.9         | 60.8 | 20.9               | 26.1 | C   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4480             | 243  | 6389            | 1936 | 0.70      | 0.13 | 66.1         | 61.0 | 22.6               | 27.8 | C   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4194             | 264  | 6389            | 1936 | 0.66      | 0.14 | 66.0         | 60.9 | 21.2               | 26.5 | C   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4471             | 321  | 6389            | 1936 | 0.70      | 0.17 | 65.8         | 60.7 | 22.6               | 27.8 | C   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4299             | 251  | 6389            | 1936 | 0.67      | 0.13 | 66.0         | 60.9 | 21.7               | 26.9 | C   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4220             | 206  | 6389            | 1936 | 0.66      | 0.11 | 66.2         | 61.1 | 21.2               | 26.5 | C   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 4141             | 218  | 6389            | 1936 | 0.65      | 0.11 | 66.1         | 61.0 | 20.9               | 26.1 | C   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 3908             | 161  | 6389            | 1936 | 0.61      | 0.08 | 66.2         | 61.2 | 19.7               | 24.9 | C   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3498             | 124  | 6389            | 1936 | 0.55      | 0.06 | 66.3         | 61.3 | 17.6               | 22.9 | C   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3287             | 124  | 6389            | 1936 | 0.51      | 0.06 | 66.3         | 61.3 | 16.5               | 21.8 | C   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 3468             |      | 6970            |      | 0.50      |      | 69.6         |      | 16.3               |      | B   |
| 2                  | 1.00 |       | 0.909 |       | 3463             |      | 6970            |      | 0.50      |      | 69.5         |      | 16.3               |      | B   |
| 3                  | 1.00 |       | 0.909 |       | 3806             |      | 6970            |      | 0.55      |      | 69.6         |      | 18.0               |      | B   |
| 4                  | 1.00 |       | 0.909 |       | 4128             |      | 6970            |      | 0.59      |      | 69.5         |      | 19.7               |      | C   |
| 5                  | 1.00 |       | 0.909 |       | 4163             |      | 6970            |      | 0.60      |      | 69.5         |      | 19.9               |      | C   |
| 6                  | 1.00 |       | 0.909 |       | 4066             |      | 6970            |      | 0.58      |      | 69.5         |      | 19.4               |      | C   |
| 7                  | 1.00 |       | 0.909 |       | 4163             |      | 6970            |      | 0.60      |      | 69.6         |      | 19.9               |      | C   |
| 8                  | 1.00 |       | 0.909 |       | 4141             |      | 6970            |      | 0.59      |      | 69.5         |      | 19.8               |      | C   |



|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 9                  | 1.00 | 0.909 | 4123  |       | 6970             |      | 0.59            | 69.6 |           | 19.7 |              | C    |                    |      |     |
| 10                 | 1.00 | 0.909 | 4207  |       | 6970             |      | 0.60            | 69.5 |           | 20.1 |              | C    |                    |      |     |
| 11                 | 1.00 | 0.909 | 3811  |       | 6970             |      | 0.55            | 69.6 |           | 18.0 |              | B    |                    |      |     |
| 12                 | 1.00 | 0.909 | 4220  |       | 6970             |      | 0.61            | 69.6 |           | 20.2 |              | C    |                    |      |     |
| 13                 | 1.00 | 0.909 | 3912  |       | 6970             |      | 0.56            | 69.6 |           | 18.6 |              | C    |                    |      |     |
| 14                 | 1.00 | 0.909 | 4128  |       | 6970             |      | 0.59            | 69.5 |           | 19.7 |              | C    |                    |      |     |
| 15                 | 1.00 | 0.909 | 4031  |       | 6970             |      | 0.58            | 69.6 |           | 19.2 |              | C    |                    |      |     |
| 16                 | 1.00 | 0.909 | 4000  |       | 6970             |      | 0.57            | 69.6 |           | 19.0 |              | C    |                    |      |     |
| 17                 | 1.00 | 0.909 | 3908  |       | 6970             |      | 0.56            | 69.6 |           | 18.6 |              | C    |                    |      |     |
| 18                 | 1.00 | 0.909 | 3736  |       | 6970             |      | 0.54            | 69.6 |           | 17.7 |              | B    |                    |      |     |
| 19                 | 1.00 | 0.909 | 3366  |       | 6970             |      | 0.48            | 69.7 |           | 15.8 |              | B    |                    |      |     |
| 20                 | 1.00 | 0.909 | 3155  |       | 6970             |      | 0.45            | 69.7 |           | 14.9 |              | B    |                    |      |     |
| Segment 4: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 3468             | 622  | 9293            | 1839 | 0.37      | 0.34 | 71.7         | 73.5 | 11.8               | 11.8 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 3463             | 676  | 9293            | 1839 | 0.37      | 0.37 | 71.7         | 73.5 | 11.8               | 11.8 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 3806             | 807  | 9293            | 1839 | 0.41      | 0.44 | 71.7         | 73.5 | 13.0               | 13.0 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4128             | 820  | 9293            | 1839 | 0.44      | 0.45 | 71.7         | 73.5 | 14.0               | 14.0 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4163             | 754  | 9293            | 1839 | 0.45      | 0.41 | 71.7         | 73.5 | 14.2               | 14.2 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4066             | 667  | 9293            | 1839 | 0.44      | 0.36 | 71.7         | 73.5 | 13.8               | 13.8 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4163             | 700  | 9293            | 1839 | 0.45      | 0.38 | 71.7         | 73.5 | 14.2               | 14.2 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4141             | 746  | 9293            | 1839 | 0.45      | 0.41 | 71.7         | 73.5 | 14.1               | 14.1 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4123             | 663  | 9293            | 1839 | 0.44      | 0.36 | 71.7         | 73.5 | 14.0               | 14.0 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4207             | 692  | 9293            | 1839 | 0.45      | 0.38 | 71.7         | 73.5 | 14.3               | 14.3 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 3811             | 643  | 9293            | 1839 | 0.41      | 0.35 | 71.7         | 73.5 | 13.0               | 13.0 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4220             | 742  | 9293            | 1839 | 0.45      | 0.40 | 71.7         | 73.5 | 14.4               | 14.4 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3912             | 680  | 9293            | 1839 | 0.42      | 0.37 | 71.7         | 73.5 | 13.3               | 13.3 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4128             | 700  | 9293            | 1839 | 0.44      | 0.38 | 71.7         | 73.5 | 14.0               | 14.0 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4031             | 634  | 9293            | 1839 | 0.43      | 0.34 | 71.7         | 73.5 | 13.7               | 13.7 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4000             | 614  | 9293            | 1839 | 0.43      | 0.33 | 71.7         | 73.5 | 13.6               | 13.6 | B   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 3908             | 618  | 9293            | 1839 | 0.42      | 0.34 | 71.7         | 73.5 | 13.3               | 13.3 | B   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 3736             | 540  | 9293            | 1839 | 0.40      | 0.29 | 71.7         | 73.5 | 12.7               | 12.7 | B   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3366             | 585  | 9293            | 1839 | 0.36      | 0.32 | 71.7         | 73.5 | 11.5               | 11.5 | B   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3155             | 647  | 9293            | 1839 | 0.34      | 0.35 | 71.7         | 73.5 | 10.7               | 10.7 | A   |
| Segment 5: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | 1    |       | 0.909 |       | 2803             |      | 6970            |      | 0.40      |      | 70.8         |      | 13.2               |      | B   |
| 2                  |      | 0.909 |       | 2741  |                  | 6970 |                 | 0.39 |           | 70.8 |              | 12.9 |                    | B    |     |
| 3                  |      | 0.909 |       | 2944  |                  | 6970 |                 | 0.42 |           | 70.8 |              | 13.9 |                    | B    |     |

|                    |      |       |                  |                 |           |              |                    |     |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 4                  | 1.00 | 0.909 | 3252             | 6970            | 0.47      | 70.8         | 15.3               | B   |
| 5                  | 1.00 | 0.909 | 3358             | 6970            | 0.48      | 70.8         | 15.8               | B   |
| 6                  | 1.00 | 0.909 | 3353             | 6970            | 0.48      | 70.8         | 15.8               | B   |
| 7                  | 1.00 | 0.909 | 3415             | 6970            | 0.49      | 70.8         | 16.1               | B   |
| 8                  | 1.00 | 0.909 | 3344             | 6970            | 0.48      | 70.8         | 15.7               | B   |
| 9                  | 1.00 | 0.909 | 3415             | 6970            | 0.49      | 70.8         | 16.1               | B   |
| 10                 | 1.00 | 0.909 | 3468             | 6970            | 0.50      | 70.8         | 16.3               | B   |
| 11                 | 1.00 | 0.909 | 3124             | 6970            | 0.45      | 70.8         | 14.7               | B   |
| 12                 | 1.00 | 0.909 | 3428             | 6970            | 0.49      | 70.8         | 16.1               | B   |
| 13                 | 1.00 | 0.909 | 3186             | 6970            | 0.46      | 70.8         | 15.0               | B   |
| 14                 | 1.00 | 0.909 | 3380             | 6970            | 0.48      | 70.8         | 15.9               | B   |
| 15                 | 1.00 | 0.909 | 3353             | 6970            | 0.48      | 70.8         | 15.8               | B   |
| 16                 | 1.00 | 0.909 | 3344             | 6970            | 0.48      | 70.8         | 15.7               | B   |
| 17                 | 1.00 | 0.909 | 3248             | 6970            | 0.47      | 70.8         | 15.3               | B   |
| 18                 | 1.00 | 0.909 | 3160             | 6970            | 0.45      | 70.8         | 14.9               | B   |
| 19                 | 1.00 | 0.909 | 2741             | 6970            | 0.39      | 70.8         | 12.9               | B   |
| 20                 | 1.00 | 0.909 | 2464             | 6970            | 0.35      | 70.8         | 11.6               | B   |
| Segment 6: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 3159             | 7518            | 0.42      | 60.5         | 13.1               | B   |
| 2                  | 1.00 | 0.909 | 3167             | 7518            | 0.42      | 60.4         | 13.1               | B   |
| 3                  | 1.00 | 0.909 | 3366             | 7543            | 0.45      | 59.8         | 14.1               | B   |
| 4                  | 1.00 | 0.909 | 3636             | 7902            | 0.46      | 60.4         | 15.0               | B   |
| 5                  | 1.00 | 0.909 | 3734             | 7888            | 0.47      | 59.9         | 15.6               | B   |
| 6                  | 1.00 | 0.909 | 3909             | 7814            | 0.50      | 58.6         | 16.7               | B   |
| 7                  | 1.00 | 0.909 | 3942             | 7802            | 0.51      | 58.3         | 16.9               | B   |
| 8                  | 1.00 | 0.909 | 3814             | 7814            | 0.49      | 58.8         | 16.2               | B   |
| 9                  | 1.00 | 0.909 | 3946             | 7376            | 0.53      | 57.6         | 17.1               | B   |
| 10                 | 1.00 | 0.909 | 4029             | 7817            | 0.52      | 58.2         | 17.3               | B   |
| 11                 | 1.00 | 0.909 | 3710             | 7471            | 0.50      | 58.6         | 15.8               | B   |
| 12                 | 1.00 | 0.909 | 4000             | 7814            | 0.51      | 58.2         | 17.2               | B   |
| 13                 | 1.00 | 0.909 | 3820             | 7833            | 0.49      | 59.1         | 16.2               | B   |
| 14                 | 1.00 | 0.909 | 3953             | 7867            | 0.50      | 59.0         | 16.8               | B   |
| 15                 | 1.00 | 0.909 | 3798             | 7976            | 0.48      | 60.7         | 15.6               | B   |
| 16                 | 1.00 | 0.909 | 3810             | 7976            | 0.48      | 60.7         | 15.7               | B   |
| 17                 | 1.00 | 0.909 | 3638             | 8051            | 0.45      | 61.9         | 14.7               | B   |
| 18                 | 1.00 | 0.909 | 3539             | 8057            | 0.44      | 62.3         | 14.2               | B   |
| 19                 | 1.00 | 0.909 | 3008             | 8092            | 0.37      | 64.2         | 11.7               | B   |
| 20                 | 1.00 | 0.909 | 2752             | 8022            | 0.34      | 64.2         | 10.7               | B   |
| Segment 7: Basic   |      |       |                  |                 |           |              |                    |     |
| Time               | PHF  | fHV   | Flow Rate        | Capacity        | d/c       | Speed        | Density            | LOS |

| Period           |      |       | (pc/h) |       | (pc/h)           | Ratio | (mi/h)          | (pc/mi/ln) |           |      |              |      |                    |      |     |
|------------------|------|-------|--------|-------|------------------|-------|-----------------|------------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 | 2605   |       | 6970             | 0.37  | 70.6            | 12.3       | B         |      |              |      |                    |      |     |
| 2                | 1.00 | 0.909 | 2680   |       | 6970             | 0.38  | 70.6            | 12.6       | B         |      |              |      |                    |      |     |
| 3                | 1.00 | 0.909 | 2821   |       | 6970             | 0.40  | 70.6            | 13.3       | B         |      |              |      |                    |      |     |
| 4                | 1.00 | 0.909 | 3129   |       | 6970             | 0.45  | 70.6            | 14.7       | B         |      |              |      |                    |      |     |
| 5                | 1.00 | 0.909 | 3177   |       | 6970             | 0.46  | 70.6            | 15.0       | B         |      |              |      |                    |      |     |
| 6                | 1.00 | 0.909 | 3406   |       | 6970             | 0.49  | 70.6            | 16.0       | B         |      |              |      |                    |      |     |
| 7                | 1.00 | 0.909 | 3388   |       | 6970             | 0.49  | 70.6            | 15.9       | B         |      |              |      |                    |      |     |
| 8                | 1.00 | 0.909 | 3248   |       | 6970             | 0.47  | 70.6            | 15.3       | B         |      |              |      |                    |      |     |
| 9                | 1.00 | 0.909 | 3318   |       | 6970             | 0.48  | 70.6            | 15.6       | B         |      |              |      |                    |      |     |
| 10               | 1.00 | 0.909 | 3503   |       | 6970             | 0.50  | 70.6            | 16.5       | B         |      |              |      |                    |      |     |
| 11               | 1.00 | 0.909 | 3221   |       | 6970             | 0.46  | 70.6            | 15.2       | B         |      |              |      |                    |      |     |
| 12               | 1.00 | 0.909 | 3485   |       | 6970             | 0.50  | 70.6            | 16.4       | B         |      |              |      |                    |      |     |
| 13               | 1.00 | 0.909 | 3441   |       | 6970             | 0.49  | 70.6            | 16.2       | B         |      |              |      |                    |      |     |
| 14               | 1.00 | 0.909 | 3516   |       | 6970             | 0.50  | 70.6            | 16.6       | B         |      |              |      |                    |      |     |
| 15               | 1.00 | 0.909 | 3393   |       | 6970             | 0.49  | 70.7            | 16.0       | B         |      |              |      |                    |      |     |
| 16               | 1.00 | 0.909 | 3428   |       | 6970             | 0.49  | 70.7            | 16.1       | B         |      |              |      |                    |      |     |
| 17               | 1.00 | 0.909 | 3296   |       | 6970             | 0.47  | 70.7            | 15.5       | B         |      |              |      |                    |      |     |
| 18               | 1.00 | 0.909 | 3217   |       | 6970             | 0.46  | 70.7            | 15.1       | B         |      |              |      |                    |      |     |
| 19               | 1.00 | 0.909 | 2711   |       | 6970             | 0.39  | 70.7            | 12.8       | B         |      |              |      |                    |      |     |
| 20               | 1.00 | 0.909 | 2464   |       | 6970             | 0.35  | 70.7            | 11.6       | B         |      |              |      |                    |      |     |
| Segment 8: Merge |      |       |        |       |                  |       |                 |            |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV    |       | Flow Rate (pc/h) |       | Capacity (pc/h) |            | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F      | R     | Freeway          | Ramp  | Freeway         | Ramp       | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909  | 0.971 | 2745             | 140   | 6970            | 2033       | 0.39      | 0.07 | 67.3         | 64.9 | 13.6               | 13.8 | B   |
| 2                | 1.00 | 1.00  | 0.909  | 0.971 | 2828             | 148   | 6970            | 2033       | 0.41      | 0.07 | 67.2         | 64.9 | 14.0               | 14.2 | B   |
| 3                | 1.00 | 1.00  | 0.909  | 0.971 | 2986             | 165   | 6970            | 2033       | 0.43      | 0.08 | 67.1         | 64.8 | 14.8               | 14.9 | B   |
| 4                | 1.00 | 1.00  | 0.909  | 0.971 | 3257             | 128   | 6970            | 2033       | 0.47      | 0.06 | 66.9         | 64.7 | 16.2               | 16.1 | B   |
| 5                | 1.00 | 1.00  | 0.909  | 0.971 | 3317             | 140   | 6970            | 2033       | 0.48      | 0.07 | 66.8         | 64.6 | 16.6               | 16.4 | B   |
| 6                | 1.00 | 1.00  | 0.909  | 0.971 | 3538             | 132   | 6970            | 2033       | 0.51      | 0.06 | 66.7         | 64.5 | 17.7               | 17.4 | B   |
| 7                | 1.00 | 1.00  | 0.909  | 0.971 | 3532             | 144   | 6970            | 2033       | 0.51      | 0.07 | 66.6         | 64.5 | 17.7               | 17.4 | B   |
| 8                | 1.00 | 1.00  | 0.909  | 0.971 | 3367             | 119   | 6970            | 2033       | 0.48      | 0.06 | 66.8         | 64.6 | 16.8               | 16.6 | B   |
| 9                | 1.00 | 1.00  | 0.909  | 0.971 | 3503             | 185   | 6970            | 2033       | 0.50      | 0.09 | 66.6         | 64.5 | 17.5               | 17.4 | B   |
| 10               | 1.00 | 1.00  | 0.909  | 0.971 | 3680             | 177   | 6970            | 2033       | 0.53      | 0.09 | 66.5         | 64.4 | 18.4               | 18.2 | B   |
| 11               | 1.00 | 1.00  | 0.909  | 0.971 | 3452             | 231   | 6970            | 2033       | 0.50      | 0.11 | 66.7         | 64.5 | 17.3               | 17.3 | B   |
| 12               | 1.00 | 1.00  | 0.909  | 0.971 | 3666             | 181   | 6970            | 2033       | 0.53      | 0.09 | 66.5         | 64.4 | 18.4               | 18.2 | B   |
| 13               | 1.00 | 1.00  | 0.909  | 0.971 | 3684             | 243   | 6970            | 2033       | 0.53      | 0.12 | 66.5         | 64.4 | 18.5               | 18.4 | B   |
| 14               | 1.00 | 1.00  | 0.909  | 0.971 | 3714             | 198   | 6970            | 2033       | 0.53      | 0.10 | 66.5         | 64.4 | 18.6               | 18.4 | B   |
| 15               | 1.00 | 1.00  | 0.909  | 0.971 | 3529             | 136   | 6970            | 2033       | 0.51      | 0.07 | 66.6         | 64.5 | 17.7               | 17.4 | B   |
| 16               | 1.00 | 1.00  | 0.909  | 0.971 | 3510             | 82    | 6970            | 2033       | 0.50      | 0.04 | 66.7         | 64.6 | 17.5               | 17.2 | B   |
| 17               | 1.00 | 1.00  | 0.909  | 0.971 | 3383             | 87    | 6970            | 2033       | 0.49      | 0.04 | 66.8         | 64.6 | 16.9               | 16.6 | B   |

|                              |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
|------------------------------|-------------|------|-------|-------------------|------------------|----|--------------------|------|-----------|------------------|--------------|------|--------------------|------|-----|
| 18                           | 1.00        | 1.00 | 0.909 | 0.971             | 3291             | 74 | 6970               | 2033 | 0.47      | 0.04             | 66.9         | 64.7 | 16.4               | 16.1 | B   |
| 19                           | 1.00        | 1.00 | 0.909 | 0.971             | 2785             | 74 | 6970               | 2033 | 0.40      | 0.04             | 67.3         | 64.9 | 13.8               | 13.8 | B   |
| 20                           | 1.00        | 1.00 | 0.909 | 0.971             | 2513             | 49 | 6970               | 2033 | 0.36      | 0.02             | 67.5         | 65.0 | 12.4               | 12.4 | B   |
| Segment 9: Basic             |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |    | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 2755             |    | 6970               |      | 0.40      |                  | 70.6         |      | 13.0               |      | B   |
| 2                            | 1.00        |      | 0.909 |                   | 2838             |    | 6970               |      | 0.41      |                  | 70.6         |      | 13.4               |      | B   |
| 3                            | 1.00        |      | 0.909 |                   | 2997             |    | 6970               |      | 0.43      |                  | 70.6         |      | 14.1               |      | B   |
| 4                            | 1.00        |      | 0.909 |                   | 3265             |    | 6970               |      | 0.47      |                  | 70.6         |      | 15.4               |      | B   |
| 5                            | 1.00        |      | 0.909 |                   | 3327             |    | 6970               |      | 0.48      |                  | 70.6         |      | 15.7               |      | B   |
| 6                            | 1.00        |      | 0.909 |                   | 3547             |    | 6970               |      | 0.51      |                  | 70.6         |      | 16.7               |      | B   |
| 7                            | 1.00        |      | 0.909 |                   | 3542             |    | 6970               |      | 0.51      |                  | 70.6         |      | 16.7               |      | B   |
| 8                            | 1.00        |      | 0.909 |                   | 3375             |    | 6970               |      | 0.48      |                  | 70.6         |      | 15.9               |      | B   |
| 9                            | 1.00        |      | 0.909 |                   | 3516             |    | 6970               |      | 0.50      |                  | 70.6         |      | 16.6               |      | B   |
| 10                           | 1.00        |      | 0.909 |                   | 3692             |    | 6970               |      | 0.53      |                  | 70.6         |      | 17.4               |      | B   |
| 11                           | 1.00        |      | 0.909 |                   | 3468             |    | 6970               |      | 0.50      |                  | 70.6         |      | 16.3               |      | B   |
| 12                           | 1.00        |      | 0.909 |                   | 3679             |    | 6970               |      | 0.53      |                  | 70.6         |      | 17.4               |      | B   |
| 13                           | 1.00        |      | 0.909 |                   | 3701             |    | 6970               |      | 0.53      |                  | 70.6         |      | 17.5               |      | B   |
| 14                           | 1.00        |      | 0.909 |                   | 3727             |    | 6970               |      | 0.53      |                  | 70.5         |      | 17.6               |      | B   |
| 15                           | 1.00        |      | 0.909 |                   | 3538             |    | 6970               |      | 0.51      |                  | 70.6         |      | 16.7               |      | B   |
| 16                           | 1.00        |      | 0.909 |                   | 3516             |    | 6970               |      | 0.50      |                  | 70.6         |      | 16.6               |      | B   |
| 17                           | 1.00        |      | 0.909 |                   | 3388             |    | 6970               |      | 0.49      |                  | 70.6         |      | 15.9               |      | B   |
| 18                           | 1.00        |      | 0.909 |                   | 3296             |    | 6970               |      | 0.47      |                  | 70.6         |      | 15.5               |      | B   |
| 19                           | 1.00        |      | 0.909 |                   | 2790             |    | 6970               |      | 0.40      |                  | 70.6         |      | 13.1               |      | B   |
| 20                           | 1.00        |      | 0.909 |                   | 2517             |    | 6970               |      | 0.36      |                  | 70.6         |      | 11.9               |      | B   |
| Facility Time Period Results |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |    | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |      |     |
| 1                            | 68.0        |      |       | 14.3              |                  |    | 13.0               |      |           | 2.40             |              |      | B                  |      |     |
| 2                            | 68.0        |      |       | 14.5              |                  |    | 13.2               |      |           | 2.40             |              |      | B                  |      |     |
| 3                            | 67.8        |      |       | 15.5              |                  |    | 14.1               |      |           | 2.40             |              |      | B                  |      |     |
| 4                            | 67.6        |      |       | 17.1              |                  |    | 15.5               |      |           | 2.40             |              |      | B                  |      |     |
| 5                            | 67.5        |      |       | 17.3              |                  |    | 15.8               |      |           | 2.40             |              |      | B                  |      |     |
| 6                            | 67.3        |      |       | 17.8              |                  |    | 16.2               |      |           | 2.40             |              |      | B                  |      |     |
| 7                            | 67.2        |      |       | 17.9              |                  |    | 16.3               |      |           | 2.40             |              |      | B                  |      |     |
| 8                            | 67.3        |      |       | 17.5              |                  |    | 15.9               |      |           | 2.40             |              |      | B                  |      |     |
| 9                            | 67.1        |      |       | 17.8              |                  |    | 16.1               |      |           | 2.40             |              |      | B                  |      |     |
| 10                           | 67.1        |      |       | 18.4              |                  |    | 16.8               |      |           | 2.40             |              |      | C                  |      |     |
| 11                           | 67.5        |      |       | 16.8              |                  |    | 15.3               |      |           | 2.40             |              |      | B                  |      |     |
| 12                           | 67.2        |      |       | 18.3              |                  |    | 16.6               |      |           | 2.40             |              |      | C                  |      |     |
| 13                           | 67.6        |      |       | 17.5              |                  |    | 15.9               |      |           | 2.40             |              |      | B                  |      |     |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 14 | 67.4 | 18.2 | 16.6 | 2.40 | C |
| 15 | 67.9 | 17.4 | 15.8 | 2.40 | B |
| 16 | 67.9 | 17.2 | 15.7 | 2.40 | B |
| 17 | 68.2 | 16.6 | 15.2 | 2.40 | B |
| 18 | 68.4 | 16.0 | 14.5 | 2.40 | B |
| 19 | 68.9 | 13.8 | 12.5 | 2.40 | B |
| 20 | 68.9 | 12.7 | 11.5 | 2.40 | B |

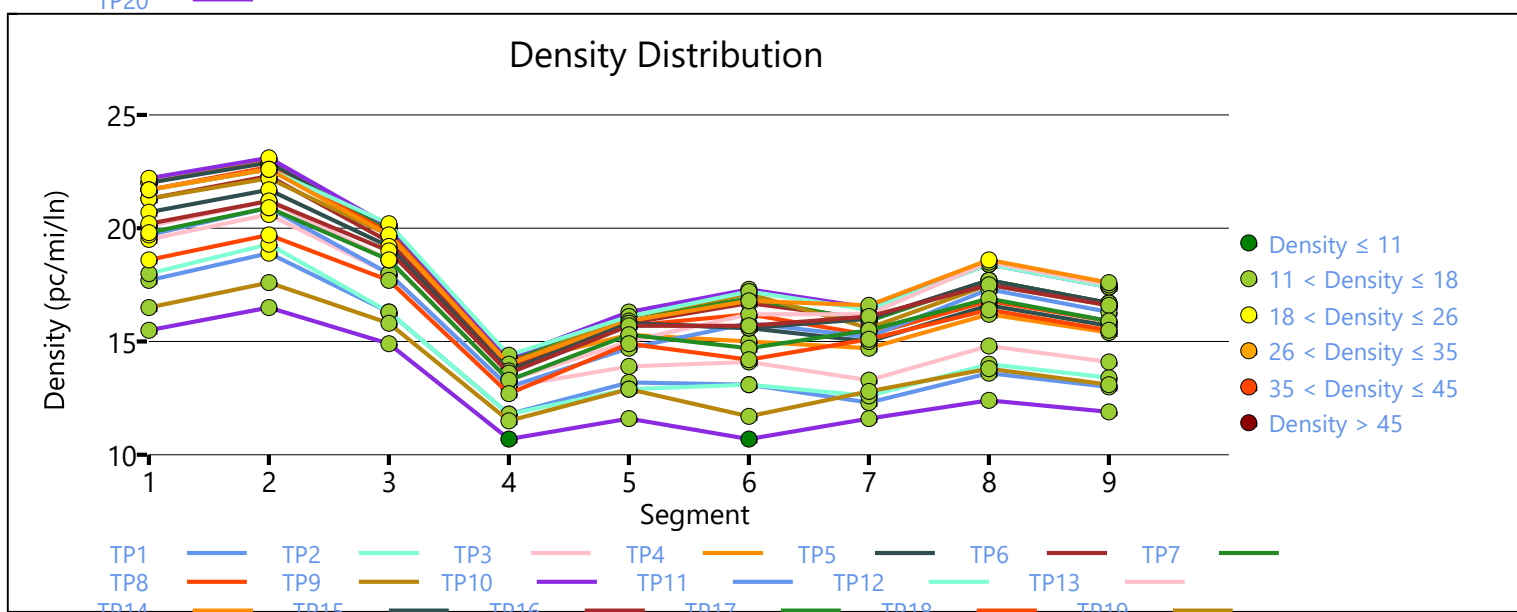
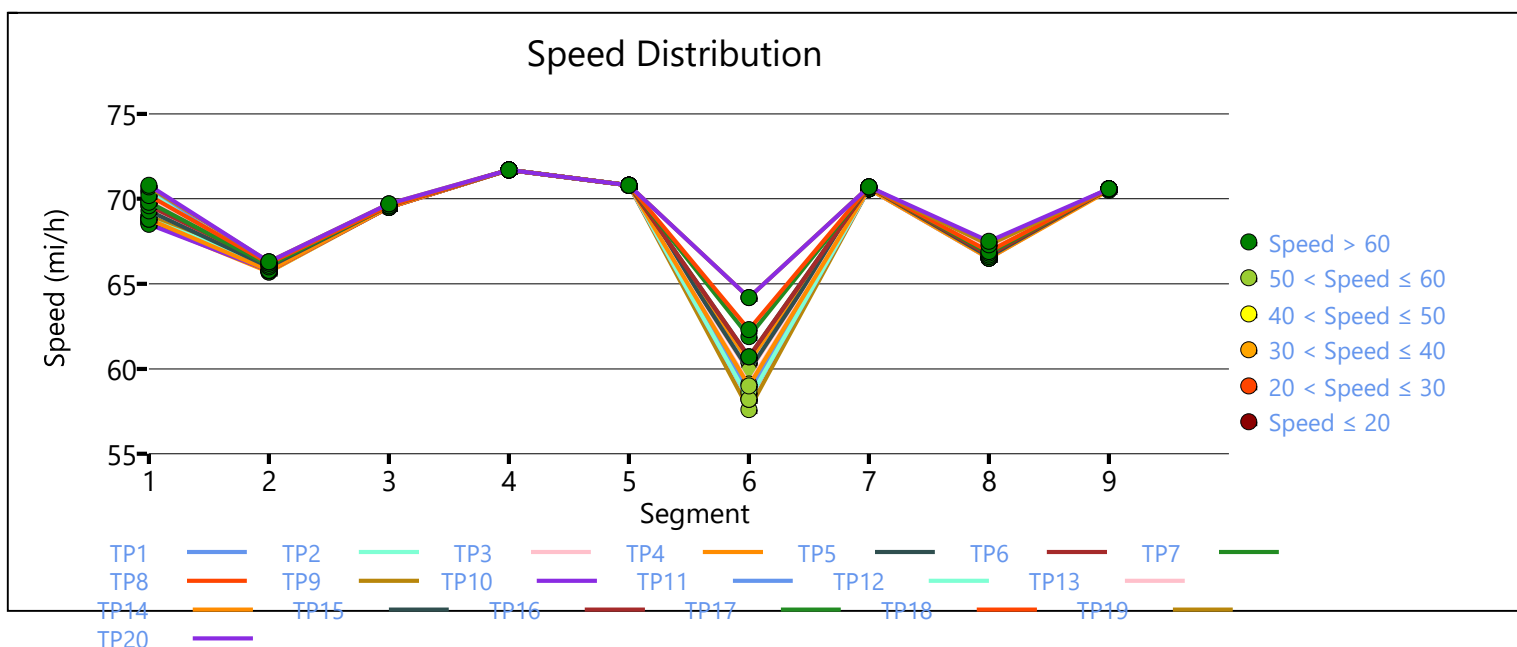
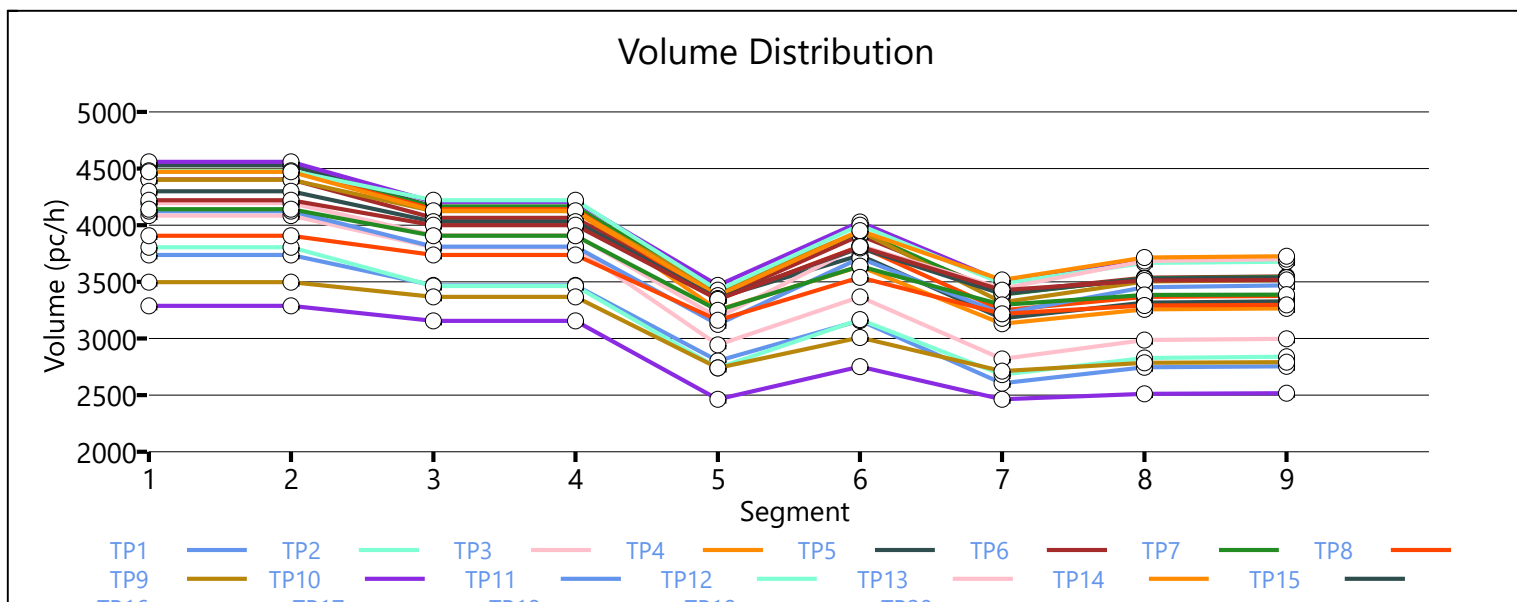
Facility Overall Results

|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 67.7 | Density, veh/mi/ln | 15.1 |
| Average Travel Time, min | 2.40 | Density, pc/mi/ln  | 16.6 |

Messages

Comments

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# HCS7 Freeway Facilities Report

## Project Information

|                     |                              |                      |                         |
|---------------------|------------------------------|----------------------|-------------------------|
| Analyst             | PG                           | Date                 | 9/17/2020               |
| Agency              | Lee Engineering              | Analysis Year        | 2025                    |
| Jurisdiction        | NMDOT                        | Time Period Analyzed | AM Peak Period          |
| Project Description | No Build - NB I25 5AM to 9AM | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 3.06  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                       | Length, ft | Lanes |
|-----|---------|----------|--------------------------------------------|------------|-------|
| 1   | Basic   | Basic    | NB I25 South of Sunport                    | 5280       | 3     |
| 2   | Diverge | Diverge  | Off-Ramp to Sunport                        | 1500       | 3     |
| 3   | Basic   | Basic    | NB I25 bet                                 | 3070       | 3     |
| 4   | Weaving | Weaving  | Sunport Off/On Ramps                       | 1750       | 4     |
| 5   | Basic   | Basic    | NB I24 bet Sunport On and Gibson Off Ramps | 1155       | 3     |
| 6   | Merge   | Merge    | NB I25 bet Gibson Off/On Ramps             | 700        | 3     |
| 7   | Basic   | Basic    | On-ramp from EB Gibson                     | 400        | 3     |
| 8   | Merge   | Merge    | NB I25 bet Gibson On-Ramps                 | 800        | 3     |
| 9   | Basic   | Basic    | On-ramp from WB Gibson                     | 1500       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1179             | 6970            | 0.17      | 70.8         | 5.6                | A   |
| 2           | 1.00 | 0.909 | 1848             | 6970            | 0.27      | 70.8         | 8.7                | A   |
| 3           | 1.00 | 0.909 | 2196             | 6970            | 0.32      | 70.8         | 10.3               | A   |
| 4           | 1.00 | 0.909 | 1976             | 6970            | 0.28      | 70.8         | 9.3                | A   |
| 5           | 1.00 | 0.909 | 3023             | 6970            | 0.43      | 70.8         | 14.2               | B   |
| 6           | 1.00 | 0.909 | 3881             | 6970            | 0.56      | 70.3         | 18.4               | C   |
| 7           | 1.00 | 0.909 | 4515             | 6970            | 0.65      | 68.7         | 21.9               | C   |
| 8           | 1.00 | 0.909 | 4022             | 6970            | 0.58      | 70.0         | 19.2               | C   |
| 9           | 1.00 | 0.909 | 4911             | 6970            | 0.70      | 67.1         | 24.4               | C   |
| 10          | 1.00 | 0.909 | 5672             | 6970            | 0.81      | 62.7         | 30.2               | D   |
| 11          | 1.00 | 0.909 | 4933             | 6970            | 0.71      | 67.0         | 24.5               | C   |
| 12          | 1.00 | 0.909 | 3485             | 6970            | 0.50      | 70.7         | 16.4               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 3512  |       | 6970             |      | 0.50            | 70.7 |           | 16.6 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 3472  |       | 6970             |      | 0.50            | 70.7 |           | 16.4 |              | B    |                    |      |     |
| 15                 | 1.00 | 0.909 | 3344  |       | 6970             |      | 0.48            | 70.8 |           | 15.7 |              | B    |                    |      |     |
| 16                 | 1.00 | 0.909 | 2596  |       | 6970             |      | 0.37            | 70.8 |           | 12.2 |              | B    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1179             | 29   | 6970            | 2033 | 0.17      | 0.01 | 67.4         | 63.6 | 5.8                | 9.5  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 1848             | 62   | 6970            | 2033 | 0.27      | 0.03 | 67.5         | 63.5 | 9.1                | 13.5 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2196             | 74   | 6970            | 2033 | 0.32      | 0.04 | 67.6         | 63.5 | 10.8               | 15.5 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 1976             | 87   | 6970            | 2033 | 0.28      | 0.04 | 67.4         | 63.4 | 9.8                | 14.2 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3023             | 87   | 6970            | 2033 | 0.43      | 0.04 | 67.9         | 63.4 | 14.8               | 19.9 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 3881             | 95   | 6970            | 2033 | 0.56      | 0.05 | 68.0         | 63.4 | 19.0               | 24.3 | C   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4515             | 103  | 6970            | 2033 | 0.65      | 0.05 | 67.9         | 63.4 | 22.2               | 27.3 | C   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4022             | 119  | 6970            | 2033 | 0.58      | 0.06 | 67.9         | 63.3 | 19.7               | 25.0 | C   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4911             | 87   | 6970            | 2033 | 0.70      | 0.04 | 67.9         | 63.4 | 24.1               | 29.0 | D   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5672             | 132  | 6970            | 2033 | 0.81      | 0.06 | 67.6         | 63.3 | 28.0               | 32.3 | D   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4933             | 177  | 6970            | 2033 | 0.71      | 0.09 | 67.7         | 63.2 | 24.3               | 29.3 | D   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3485             | 173  | 6970            | 2033 | 0.50      | 0.09 | 67.8         | 63.2 | 17.1               | 22.4 | C   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3512             | 140  | 6970            | 2033 | 0.50      | 0.07 | 67.9         | 63.3 | 17.2               | 22.5 | C   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 3472             | 140  | 6970            | 2033 | 0.50      | 0.07 | 67.9         | 63.3 | 17.0               | 22.3 | C   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3344             | 140  | 6970            | 2033 | 0.48      | 0.07 | 67.9         | 63.3 | 16.4               | 21.7 | C   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2596             | 111  | 6970            | 2033 | 0.37      | 0.05 | 67.7         | 63.4 | 12.8               | 17.7 | B   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1149             |      | 6970            |      | 0.16      |      | 70.7         |      | 5.4                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1782             |      | 6970            |      | 0.26      |      | 70.7         |      | 8.4                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2117             |      | 6970            |      | 0.30      |      | 70.7         |      | 10.0               |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 1883             |      | 6970            |      | 0.27      |      | 70.7         |      | 8.9                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2931             |      | 6970            |      | 0.42      |      | 70.7         |      | 13.8               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 3780             |      | 6970            |      | 0.54      |      | 70.5         |      | 17.9               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 4405             |      | 6970            |      | 0.63      |      | 69.0         |      | 21.3               |      | C   |
| 8                  | 1.00 |       | 0.909 |       | 3894             |      | 6970            |      | 0.56      |      | 70.3         |      | 18.5               |      | C   |
| 9                  | 1.00 |       | 0.909 |       | 4818             |      | 6970            |      | 0.69      |      | 67.5         |      | 23.8               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 5531             |      | 6970            |      | 0.79      |      | 63.7         |      | 28.9               |      | D   |
| 11                 | 1.00 |       | 0.909 |       | 4744             |      | 6970            |      | 0.68      |      | 67.8         |      | 23.3               |      | C   |
| 12                 | 1.00 |       | 0.909 |       | 3300             |      | 6970            |      | 0.47      |      | 70.7         |      | 15.5               |      | B   |
| 13                 | 1.00 |       | 0.909 |       | 3362             |      | 6970            |      | 0.48      |      | 70.7         |      | 15.8               |      | B   |
| 14                 | 1.00 |       | 0.909 |       | 3322             |      | 6970            |      | 0.48      |      | 70.7         |      | 15.6               |      | B   |
| 15                 | 1.00 |       | 0.909 |       | 3195             |      | 6970            |      | 0.46      |      | 70.7         |      | 15.0               |      | B   |

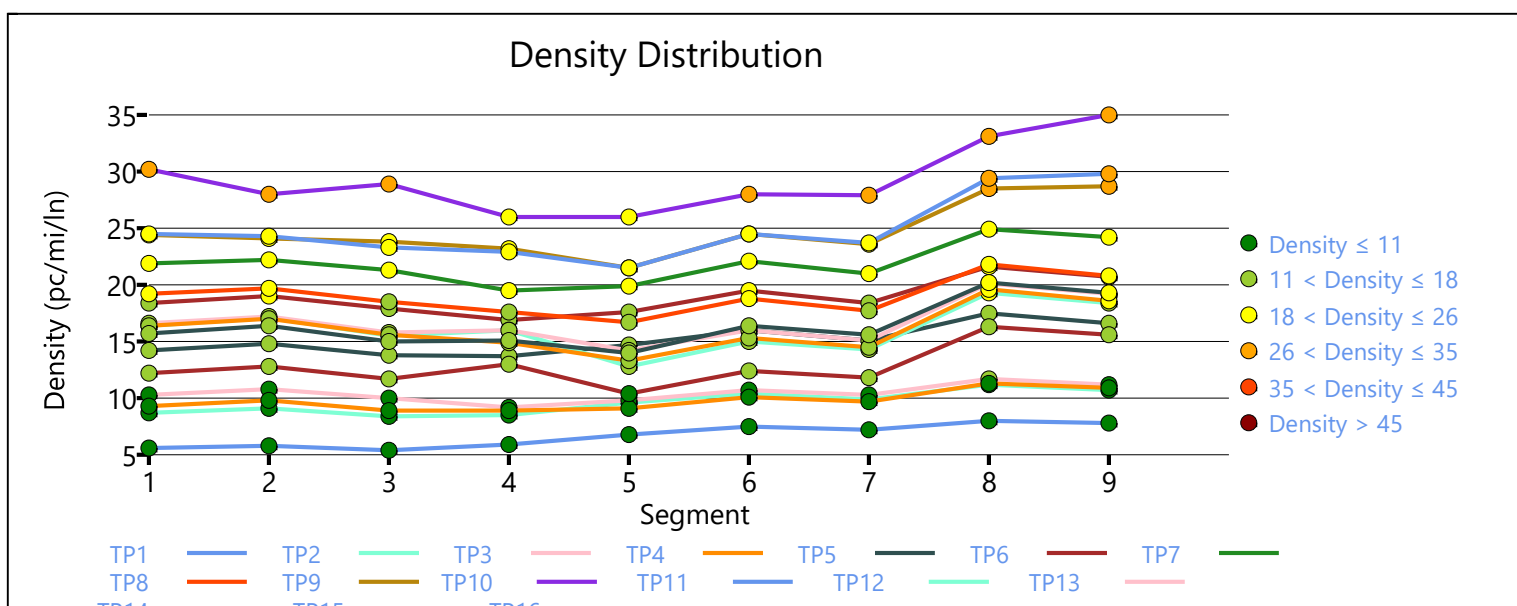
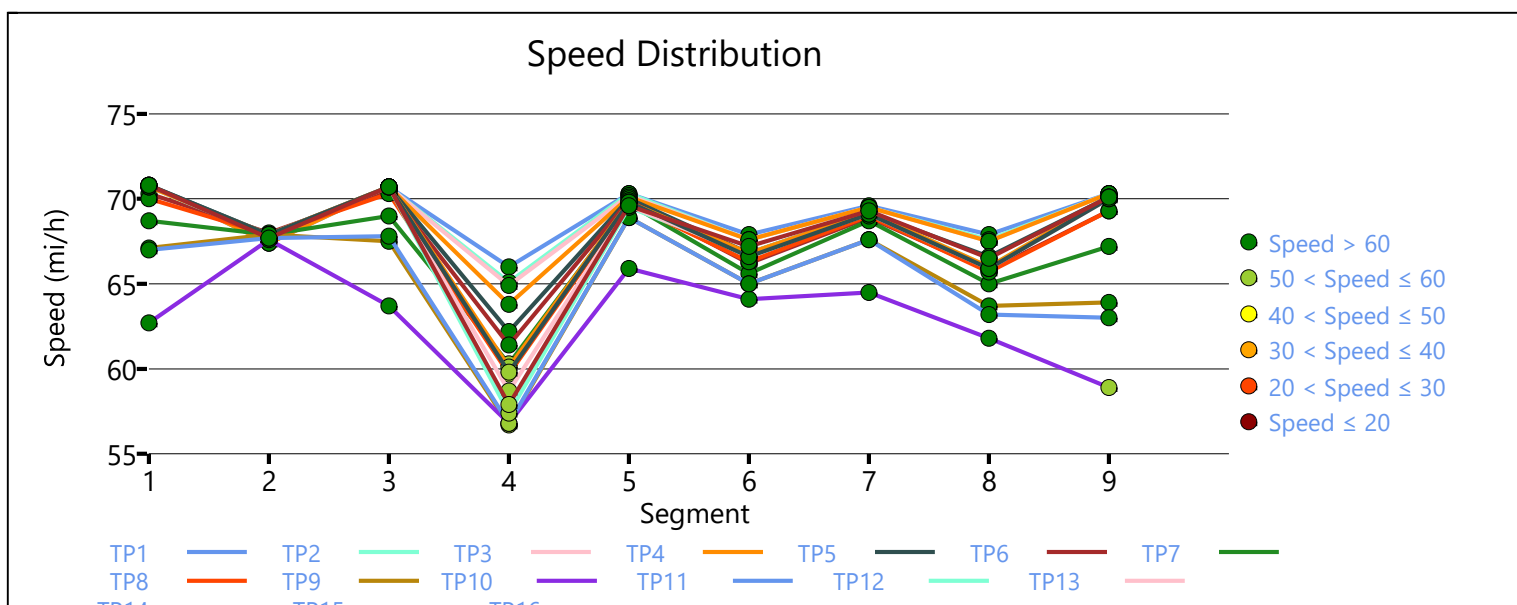
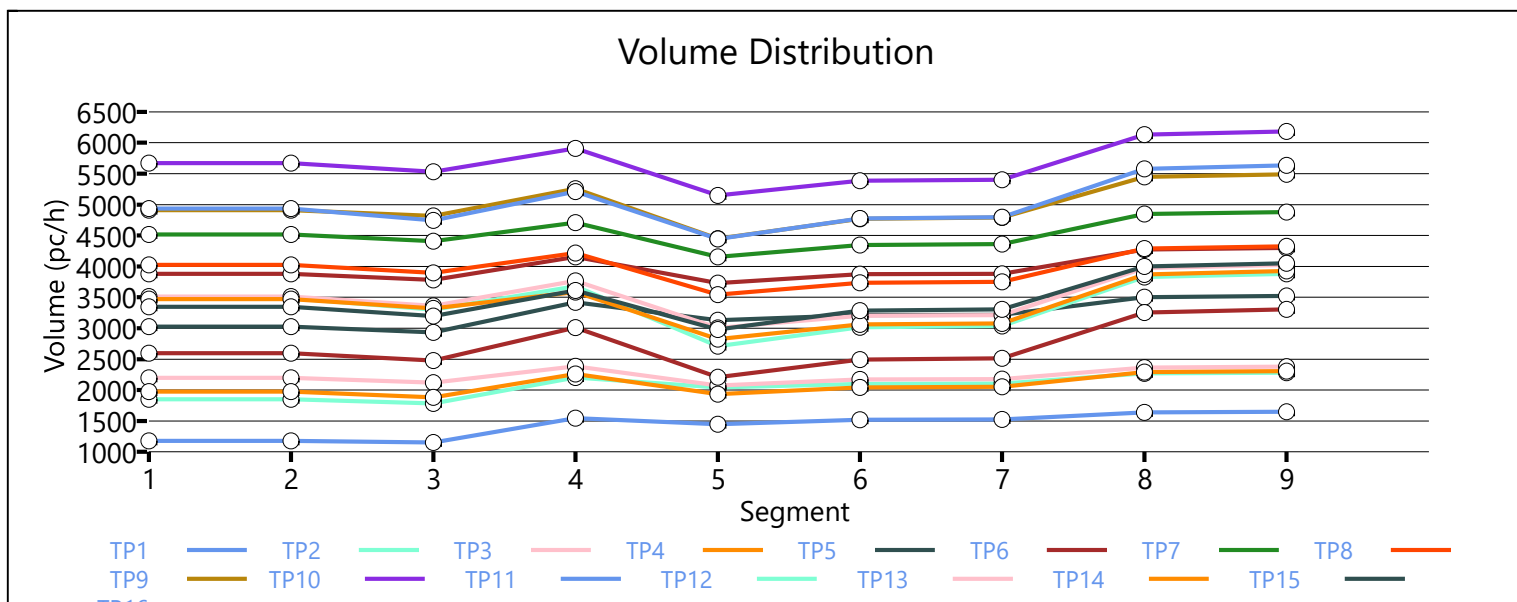


| 16                 | 1.00 | 0.909 | 2477             | 6970            | 0.36      | 70.7         | 11.7               | B   |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| Segment 4: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 1545             | 6793            | 0.23      | 66.0         | 5.9                | A   |
| 2                  | 1.00 | 0.909 | 2202             | 7918            | 0.28      | 65.1         | 8.5                | A   |
| 3                  | 1.00 | 0.909 | 2386             | 7980            | 0.30      | 64.9         | 9.2                | A   |
| 4                  | 1.00 | 0.909 | 2259             | 6955            | 0.32      | 63.8         | 8.9                | A   |
| 5                  | 1.00 | 0.909 | 3419             | 8035            | 0.43      | 62.2         | 13.7               | B   |
| 6                  | 1.00 | 0.909 | 4153             | 8155            | 0.51      | 61.4         | 16.9               | B   |
| 7                  | 1.00 | 0.909 | 4708             | 8186            | 0.58      | 60.3         | 19.5               | B   |
| 8                  | 1.00 | 0.909 | 4214             | 8011            | 0.53      | 59.7         | 17.6               | B   |
| 9                  | 1.00 | 0.909 | 5255             | 8007            | 0.66      | 56.7         | 23.2               | C   |
| 10                 | 1.00 | 0.909 | 5910             | 8151            | 0.73      | 56.8         | 26.0               | C   |
| 11                 | 1.00 | 0.909 | 5212             | 8007            | 0.65      | 56.8         | 22.9               | C   |
| 12                 | 1.00 | 0.909 | 3677             | 5926            | 0.62      | 57.4         | 16.0               | B   |
| 13                 | 1.00 | 0.909 | 3765             | 7018            | 0.54      | 58.7         | 16.0               | B   |
| 14                 | 1.00 | 0.909 | 3583             | 7616            | 0.47      | 60.1         | 14.9               | B   |
| 15                 | 1.00 | 0.909 | 3610             | 7471            | 0.48      | 59.8         | 15.1               | B   |
| 16                 | 1.00 | 0.909 | 3008             | 4881            | 0.62      | 57.9         | 13.0               | B   |
| Segment 5: Basic   |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 1448             | 6970            | 0.21      | 70.3         | 6.8                | A   |
| 2                  | 1.00 | 0.909 | 2042             | 6970            | 0.29      | 70.3         | 9.6                | A   |
| 3                  | 1.00 | 0.909 | 2073             | 6970            | 0.30      | 70.2         | 9.8                | A   |
| 4                  | 1.00 | 0.909 | 1932             | 6970            | 0.28      | 70.1         | 9.1                | A   |
| 5                  | 1.00 | 0.909 | 3129             | 6970            | 0.45      | 70.0         | 14.7               | B   |
| 6                  | 1.00 | 0.909 | 3732             | 6970            | 0.54      | 69.9         | 17.6               | B   |
| 7                  | 1.00 | 0.909 | 4154             | 6970            | 0.60      | 69.7         | 19.9               | C   |
| 8                  | 1.00 | 0.909 | 3542             | 6970            | 0.51      | 69.7         | 16.7               | B   |
| 9                  | 1.00 | 0.909 | 4449             | 6970            | 0.64      | 68.9         | 21.5               | C   |
| 10                 | 1.00 | 0.909 | 5149             | 6970            | 0.74      | 65.9         | 26.0               | C   |
| 11                 | 1.00 | 0.909 | 4444             | 6970            | 0.64      | 68.9         | 21.5               | C   |
| 12                 | 1.00 | 0.909 | 2711             | 6970            | 0.39      | 69.5         | 12.8               | B   |
| 13                 | 1.00 | 0.909 | 3006             | 6970            | 0.43      | 69.6         | 14.2               | B   |
| 14                 | 1.00 | 0.909 | 2825             | 6970            | 0.41      | 69.8         | 13.3               | B   |
| 15                 | 1.00 | 0.909 | 2979             | 6970            | 0.43      | 69.8         | 14.0               | B   |
| 16                 | 1.00 | 0.909 | 2205             | 6970            | 0.32      | 69.6         | 10.4               | A   |
| Segment 6: Merge   |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |

|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 1518             | 70   | 6970            | 2033 | 0.22      | 0.03 | 67.9         | 65.0 | 7.5                | 8.4  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 2100             | 58   | 6970            | 2033 | 0.30      | 0.03 | 67.6         | 64.9 | 10.4               | 11.1 | B   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 2172             | 99   | 6970            | 2033 | 0.31      | 0.05 | 67.6         | 64.9 | 10.7               | 11.5 | B   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 2043             | 111  | 6970            | 2033 | 0.29      | 0.05 | 67.6         | 64.9 | 10.1               | 11.0 | B   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 3211             | 82   | 6970            | 2033 | 0.46      | 0.04 | 66.8         | 64.5 | 16.0               | 16.3 | B   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 3872             | 140  | 6970            | 2033 | 0.56      | 0.07 | 66.2         | 64.0 | 19.5               | 19.6 | B   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 4348             | 194  | 6970            | 2033 | 0.62      | 0.10 | 65.6         | 63.5 | 22.1               | 21.9 | C   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 3736             | 194  | 6970            | 2033 | 0.54      | 0.10 | 66.3         | 64.1 | 18.8               | 19.1 | B   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 4770             | 321  | 6970            | 2033 | 0.68      | 0.16 | 65.0         | 62.9 | 24.5               | 24.2 | C   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 5384             | 235  | 6970            | 2033 | 0.77      | 0.12 | 64.1         | 62.0 | 28.0               | 26.9 | C   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 4774             | 330  | 6970            | 2033 | 0.68      | 0.16 | 65.0         | 62.9 | 24.5               | 24.3 | C   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 3016             | 305  | 6970            | 2033 | 0.43      | 0.15 | 66.8         | 64.5 | 15.0               | 16.0 | B   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 3200             | 194  | 6970            | 2033 | 0.46      | 0.10 | 66.7         | 64.4 | 16.0               | 16.6 | B   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 3060             | 235  | 6970            | 2033 | 0.44      | 0.12 | 66.8         | 64.5 | 15.3               | 16.0 | B   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 3284             | 305  | 6970            | 2033 | 0.47      | 0.15 | 66.6         | 64.3 | 16.4               | 17.3 | B   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 2493             | 288  | 6970            | 2033 | 0.36      | 0.14 | 67.2         | 64.7 | 12.4               | 13.5 | B   |
| Segment 7: Basic |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |      | 0.909 |       | 1523             |      | 6970            |      | 0.22      |      | 69.6         |      | 7.2                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 2103             |      | 6970            |      | 0.30      |      | 69.5         |      | 9.9                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 2178             |      | 6970            |      | 0.31      |      | 69.5         |      | 10.3               |      | A   |
| 4                | 1.00 |      | 0.909 |       | 2051             |      | 6970            |      | 0.29      |      | 69.5         |      | 9.7                |      | A   |
| 5                | 1.00 |      | 0.909 |       | 3217             |      | 6970            |      | 0.46      |      | 69.2         |      | 15.1               |      | B   |
| 6                | 1.00 |      | 0.909 |       | 3881             |      | 6970            |      | 0.56      |      | 68.9         |      | 18.4               |      | C   |
| 7                | 1.00 |      | 0.909 |       | 4361             |      | 6970            |      | 0.63      |      | 68.7         |      | 21.0               |      | C   |
| 8                | 1.00 |      | 0.909 |       | 3749             |      | 6970            |      | 0.54      |      | 69.0         |      | 17.7               |      | B   |
| 9                | 1.00 |      | 0.909 |       | 4792             |      | 6970            |      | 0.69      |      | 67.6         |      | 23.6               |      | C   |
| 10               | 1.00 |      | 0.909 |       | 5399             |      | 6970            |      | 0.77      |      | 64.5         |      | 27.9               |      | D   |
| 11               | 1.00 |      | 0.909 |       | 4796             |      | 6970            |      | 0.69      |      | 67.6         |      | 23.7               |      | C   |
| 12               | 1.00 |      | 0.909 |       | 3036             |      | 6970            |      | 0.44      |      | 69.2         |      | 14.3               |      | B   |
| 13               | 1.00 |      | 0.909 |       | 3212             |      | 6970            |      | 0.46      |      | 69.1         |      | 15.1               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 3076             |      | 6970            |      | 0.44      |      | 69.2         |      | 14.5               |      | B   |
| 15               | 1.00 |      | 0.909 |       | 3305             |      | 6970            |      | 0.47      |      | 69.1         |      | 15.6               |      | B   |
| 16               | 1.00 |      | 0.909 |       | 2513             |      | 6970            |      | 0.36      |      | 69.3         |      | 11.8               |      | B   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 1638             | 115  | 6970            | 2033 | 0.24      | 0.06 | 67.9         | 65.2 | 8.0                | 8.5  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 2268             | 165  | 6970            | 2033 | 0.33      | 0.08 | 67.6         | 65.1 | 11.2               | 11.6 | B   |

|                              |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
|------------------------------|-------------|------|-------|-------------------|------------------|-----|--------------------|------|-----------|------------------|--------------|------|--------------------|------|-----|
| 3                            | 1.00        | 1.00 | 0.909 | 0.971             | 2363             | 185 | 6970               | 2033 | 0.34      | 0.09             | 67.5         | 65.1 | 11.7               | 12.1 | B   |
| 4                            | 1.00        | 1.00 | 0.909 | 0.971             | 2290             | 239 | 6970               | 2033 | 0.33      | 0.12             | 67.5         | 65.1 | 11.3               | 11.9 | B   |
| 5                            | 1.00        | 1.00 | 0.909 | 0.971             | 3501             | 284 | 6970               | 2033 | 0.50      | 0.14             | 66.6         | 64.5 | 17.5               | 17.7 | B   |
| 6                            | 1.00        | 1.00 | 0.909 | 0.971             | 4272             | 391 | 6970               | 2033 | 0.61      | 0.19             | 65.8         | 63.7 | 21.6               | 21.6 | C   |
| 7                            | 1.00        | 1.00 | 0.909 | 0.971             | 4847             | 486 | 6970               | 2033 | 0.70      | 0.24             | 65.0         | 62.9 | 24.9               | 24.5 | C   |
| 8                            | 1.00        | 1.00 | 0.909 | 0.971             | 4289             | 540 | 6970               | 2033 | 0.62      | 0.27             | 65.7         | 63.6 | 21.8               | 22.0 | C   |
| 9                            | 1.00        | 1.00 | 0.909 | 0.971             | 5447             | 655 | 6970               | 2033 | 0.78      | 0.32             | 63.7         | 61.4 | 28.5               | 27.8 | C   |
| 10                           | 1.00        | 1.00 | 0.909 | 0.971             | 6132             | 733 | 6970               | 2033 | 0.88      | 0.36             | 61.8         | 59.1 | 33.1               | 31.2 | D   |
| 11                           | 1.00        | 1.00 | 0.909 | 0.971             | 5579             | 783 | 6970               | 2033 | 0.80      | 0.39             | 63.2         | 60.8 | 29.4               | 28.7 | D   |
| 12                           | 1.00        | 1.00 | 0.909 | 0.971             | 3827             | 791 | 6970               | 2033 | 0.55      | 0.39             | 66.0         | 63.9 | 19.3               | 20.5 | C   |
| 13                           | 1.00        | 1.00 | 0.909 | 0.971             | 3974             | 762 | 6970               | 2033 | 0.57      | 0.37             | 65.9         | 63.8 | 20.1               | 21.2 | C   |
| 14                           | 1.00        | 1.00 | 0.909 | 0.971             | 3871             | 795 | 6970               | 2033 | 0.56      | 0.39             | 66.0         | 63.9 | 19.6               | 20.8 | C   |
| 15                           | 1.00        | 1.00 | 0.909 | 0.971             | 4001             | 696 | 6970               | 2033 | 0.57      | 0.34             | 65.9         | 63.8 | 20.2               | 21.1 | C   |
| 16                           | 1.00        | 1.00 | 0.909 | 0.971             | 3255             | 742 | 6970               | 2033 | 0.47      | 0.37             | 66.5         | 64.4 | 16.3               | 17.7 | B   |
| Segment 9: Basic             |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |     | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 1646             |     | 6970               |      | 0.24      |                  | 70.3         |      | 7.8                |      | A   |
| 2                            | 1.00        |      | 0.909 |                   | 2279             |     | 6970               |      | 0.33      |                  | 70.3         |      | 10.7               |      | A   |
| 3                            | 1.00        |      | 0.909 |                   | 2376             |     | 6970               |      | 0.34      |                  | 70.3         |      | 11.2               |      | B   |
| 4                            | 1.00        |      | 0.909 |                   | 2306             |     | 6970               |      | 0.33      |                  | 70.3         |      | 10.9               |      | A   |
| 5                            | 1.00        |      | 0.909 |                   | 3520             |     | 6970               |      | 0.51      |                  | 70.1         |      | 16.6               |      | B   |
| 6                            | 1.00        |      | 0.909 |                   | 4299             |     | 6970               |      | 0.62      |                  | 69.3         |      | 20.7               |      | C   |
| 7                            | 1.00        |      | 0.909 |                   | 4880             |     | 6970               |      | 0.70      |                  | 67.2         |      | 24.2               |      | C   |
| 8                            | 1.00        |      | 0.909 |                   | 4326             |     | 6970               |      | 0.62      |                  | 69.3         |      | 20.8               |      | C   |
| 9                            | 1.00        |      | 0.909 |                   | 5492             |     | 6970               |      | 0.79      |                  | 63.9         |      | 28.7               |      | D   |
| 10                           | 1.00        |      | 0.909 |                   | 6183             |     | 6970               |      | 0.89      |                  | 58.9         |      | 35.0               |      | D   |
| 11                           | 1.00        |      | 0.909 |                   | 5633             |     | 6970               |      | 0.81      |                  | 63.0         |      | 29.8               |      | D   |
| 12                           | 1.00        |      | 0.909 |                   | 3881             |     | 6970               |      | 0.56      |                  | 70.1         |      | 18.4               |      | C   |
| 13                           | 1.00        |      | 0.909 |                   | 4026             |     | 6970               |      | 0.58      |                  | 70.0         |      | 19.2               |      | C   |
| 14                           | 1.00        |      | 0.909 |                   | 3925             |     | 6970               |      | 0.56      |                  | 70.1         |      | 18.6               |      | C   |
| 15                           | 1.00        |      | 0.909 |                   | 4048             |     | 6970               |      | 0.58      |                  | 70.0         |      | 19.3               |      | C   |
| 16                           | 1.00        |      | 0.909 |                   | 3305             |     | 6970               |      | 0.47      |                  | 70.1         |      | 15.6               |      | B   |
| Facility Time Period Results |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |     | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |      |     |
| 1                            | 69.4        |      |       | 6.1               |                  |     | 5.6                |      |           | 2.60             |              |      | A                  |      |     |
| 2                            | 69.3        |      |       | 9.1               |                  |     | 8.3                |      |           | 2.60             |              |      | A                  |      |     |
| 3                            | 69.3        |      |       | 10.3              |                  |     | 9.4                |      |           | 2.60             |              |      | A                  |      |     |
| 4                            | 69.1        |      |       | 9.5               |                  |     | 8.6                |      |           | 2.70             |              |      | A                  |      |     |
| 5                            | 68.8        |      |       | 14.6              |                  |     | 13.3               |      |           | 2.70             |              |      | B                  |      |     |
| 6                            | 68.4        |      |       | 18.5              |                  |     | 16.8               |      |           | 2.70             |              |      | C                  |      |     |

|                          |      |      |                    |      |      |
|--------------------------|------|------|--------------------|------|------|
| 7                        | 67.2 | 21.7 | 19.7               | 2.70 | C    |
| 8                        | 68.0 | 18.9 | 17.2               | 2.70 | C    |
| 9                        | 65.4 | 24.5 | 22.2               | 2.80 | C    |
| 10                       | 62.4 | 29.3 | 26.7               | 2.90 | D    |
| 11                       | 65.3 | 24.5 | 22.3               | 2.80 | C    |
| 12                       | 68.0 | 16.2 | 14.7               | 2.70 | B    |
| 13                       | 68.2 | 16.6 | 15.1               | 2.70 | B    |
| 14                       | 68.5 | 16.1 | 14.7               | 2.70 | B    |
| 15                       | 68.4 | 16.0 | 14.5               | 2.70 | B    |
| 16                       | 68.0 | 12.7 | 11.5               | 2.70 | B    |
| Facility Overall Results |      |      |                    |      |      |
| Space Mean Speed, mi/h   |      | 67.1 | Density, veh/mi/ln |      | 15.0 |
| Average Travel Time, min |      | 2.70 | Density, pc/mi/ln  |      | 16.5 |
| Messages                 |      |      |                    |      |      |
| Comments                 |      |      |                    |      |      |
|                          |      |      |                    |      |      |



# HCS7 Freeway Facilities Report

## Project Information

|                     |                          |                      |                         |
|---------------------|--------------------------|----------------------|-------------------------|
| Analyst             | PG                       | Date                 | 9/17/2020               |
| Agency              | Lee Engineering          | Analysis Year        | 2025                    |
| Jurisdiction        | NMDOT                    | Time Period Analyzed | AM Peak Period          |
| Project Description | No Build I-25 Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.73  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | I-25 SB North of Gibson             | 2640       | 3     |
| 2   | Diverge | Diverge  | SB Off-Ramp to WB Gibson            | 1500       | 3     |
| 3   | Basic   | Basic    | Btw Gibson Off Ramps                | 200        | 3     |
| 4   | Diverge | Basic    | SB Off-Ramp to EB Gibson            | 750        | 4     |
| 5   | Basic   | Basic    | Btw Gibson Off and On Ramps         | 620        | 3     |
| 6   | Weaving | Weaving  | Btw Gibson On and Sunport Off Ramps | 2250       | 4     |
| 7   | Basic   | Basic    | Btw Sunport Off and On Ramps        | 2950       | 3     |
| 8   | Merge   | Merge    | On-Ramp from Sunport                | 875        | 3     |
| 9   | Basic   | Basic    | I-25 Sb South of Sunport            | 2640       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1567             | 6970            | 0.22      | 70.8         | 7.4                | A   |
| 2           | 1.00 | 0.909 | 1883             | 6970            | 0.27      | 70.8         | 8.9                | A   |
| 3           | 1.00 | 0.909 | 2645             | 6970            | 0.38      | 70.8         | 12.5               | B   |
| 4           | 1.00 | 0.909 | 3384             | 6970            | 0.49      | 70.8         | 15.9               | B   |
| 5           | 1.00 | 0.909 | 3424             | 6970            | 0.49      | 70.8         | 16.1               | B   |
| 6           | 1.00 | 0.909 | 4519             | 6970            | 0.65      | 68.6         | 22.0               | C   |
| 7           | 1.00 | 0.909 | 5311             | 6970            | 0.76      | 65.0         | 27.2               | D   |
| 8           | 1.00 | 0.909 | 5866             | 6970            | 0.84      | 61.4         | 31.8               | D   |
| 9           | 1.00 | 0.909 | 5413             | 6970            | 0.78      | 64.4         | 28.0               | D   |
| 10          | 1.00 | 0.909 | 5813             | 6970            | 0.83      | 61.8         | 31.4               | D   |
| 11          | 1.00 | 0.909 | 5281             | 6970            | 0.76      | 65.2         | 27.0               | D   |
| 12          | 1.00 | 0.909 | 5347             | 6970            | 0.77      | 64.8         | 27.5               | D   |
| 13          | 1.00 | 0.909 | 5056             | 6970            | 0.73      | 66.4         | 25.4               | C   |

| 14                 | 1.00 | 0.909 | 4889  |       | 6970             |      | 0.70            | 67.2 | 24.3      |      | C            |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 15                 | 1.00 | 0.909 | 4550  |       | 6970             |      | 0.65            | 68.5 | 22.1      |      | C            |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 4409  |       | 6970             |      | 0.63            | 69.0 | 21.3      |      | C            |      |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1567             | 70   | 6389            | 1936 | 0.25      | 0.04 | 65.7         | 61.5 | 8.0                | 12.3 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 1883             | 66   | 6389            | 1936 | 0.29      | 0.03 | 65.9         | 61.5 | 9.5                | 14.1 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2645             | 111  | 6389            | 1936 | 0.41      | 0.06 | 66.0         | 61.3 | 13.4               | 18.4 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 3384             | 124  | 6389            | 1936 | 0.53      | 0.06 | 66.3         | 61.3 | 17.0               | 22.3 | C   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3424             | 136  | 6389            | 1936 | 0.54      | 0.07 | 66.3         | 61.3 | 17.2               | 22.5 | C   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4519             | 276  | 6389            | 1936 | 0.71      | 0.14 | 66.0         | 60.9 | 22.8               | 28.0 | C   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 5311             | 251  | 6389            | 1936 | 0.83      | 0.13 | 65.9         | 60.9 | 26.9               | 31.4 | D   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 5866             | 433  | 6389            | 1936 | 0.92      | 0.22 | 65.4         | 60.4 | 29.9               | 33.9 | D   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5413             | 317  | 6389            | 1936 | 0.85      | 0.16 | 65.8         | 60.7 | 27.4               | 31.9 | D   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5813             | 276  | 6389            | 1936 | 0.91      | 0.14 | 65.8         | 60.9 | 29.4               | 33.5 | D   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 5281             | 363  | 6389            | 1936 | 0.83      | 0.19 | 65.7         | 60.6 | 26.8               | 31.4 | D   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 5347             | 363  | 6389            | 1936 | 0.84      | 0.19 | 65.7         | 60.6 | 27.1               | 31.7 | D   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 5056             | 313  | 6389            | 1936 | 0.79      | 0.16 | 65.9         | 60.8 | 25.6               | 30.4 | D   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4889             | 354  | 6389            | 1936 | 0.77      | 0.18 | 65.7         | 60.6 | 24.8               | 29.7 | D   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4550             | 301  | 6389            | 1936 | 0.71      | 0.16 | 65.9         | 60.8 | 23.0               | 28.1 | D   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4409             | 189  | 6389            | 1936 | 0.69      | 0.10 | 66.2         | 61.1 | 22.2               | 27.3 | C   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1492             |      | 6970            |      | 0.21      |      | 69.5         |      | 7.0                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1813             |      | 6970            |      | 0.26      |      | 69.6         |      | 8.5                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2526             |      | 6970            |      | 0.36      |      | 69.6         |      | 11.9               |      | B   |
| 4                  | 1.00 |       | 0.909 |       | 3252             |      | 6970            |      | 0.47      |      | 69.7         |      | 15.3               |      | B   |
| 5                  | 1.00 |       | 0.909 |       | 3278             |      | 6970            |      | 0.47      |      | 69.7         |      | 15.4               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 4224             |      | 6970            |      | 0.61      |      | 69.5         |      | 20.3               |      | C   |
| 7                  | 1.00 |       | 0.909 |       | 5043             |      | 6970            |      | 0.72      |      | 66.4         |      | 25.3               |      | C   |
| 8                  | 1.00 |       | 0.909 |       | 5404             |      | 6970            |      | 0.78      |      | 64.5         |      | 27.9               |      | D   |
| 9                  | 1.00 |       | 0.909 |       | 5074             |      | 6970            |      | 0.73      |      | 66.3         |      | 25.5               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 5518             |      | 6970            |      | 0.79      |      | 63.8         |      | 28.8               |      | D   |
| 11                 | 1.00 |       | 0.909 |       | 4893             |      | 6970            |      | 0.70      |      | 67.1         |      | 24.3               |      | C   |
| 12                 | 1.00 |       | 0.909 |       | 4959             |      | 6970            |      | 0.71      |      | 66.8         |      | 24.7               |      | C   |
| 13                 | 1.00 |       | 0.909 |       | 4722             |      | 6970            |      | 0.68      |      | 67.9         |      | 23.2               |      | C   |
| 14                 | 1.00 |       | 0.909 |       | 4510             |      | 6970            |      | 0.65      |      | 68.7         |      | 21.9               |      | C   |
| 15                 | 1.00 |       | 0.909 |       | 4229             |      | 6970            |      | 0.61      |      | 69.5         |      | 20.3               |      | C   |
| 16                 | 1.00 |       | 0.909 |       | 4207             |      | 6970            |      | 0.60      |      | 69.6         |      | 20.1               |      | C   |

| Segment 4: Diverge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00 | 0.909 | 0.971 | 1492             | 330  | 9293            | 1839 | 0.16      | 0.18 | 71.7         | 73.5 | 5.1                | 5.1  | A   |
| 2                  | 1.00 | 1.00 | 0.909 | 0.971 | 1813             | 424  | 9293            | 1839 | 0.20      | 0.23 | 71.7         | 73.5 | 6.2                | 6.2  | A   |
| 3                  | 1.00 | 1.00 | 0.909 | 0.971 | 2526             | 774  | 9293            | 1839 | 0.27      | 0.42 | 71.7         | 73.5 | 8.6                | 8.6  | A   |
| 4                  | 1.00 | 1.00 | 0.909 | 0.971 | 3252             | 976  | 9293            | 1839 | 0.35      | 0.53 | 71.7         | 73.5 | 11.1               | 11.1 | B   |
| 5                  | 1.00 | 1.00 | 0.909 | 0.971 | 3278             | 1211 | 9293            | 1839 | 0.35      | 0.66 | 71.7         | 73.5 | 11.2               | 11.2 | B   |
| 6                  | 1.00 | 1.00 | 0.909 | 0.971 | 4224             | 1442 | 9293            | 1839 | 0.45      | 0.78 | 71.6         | 73.5 | 14.4               | 14.4 | B   |
| 7                  | 1.00 | 1.00 | 0.909 | 0.971 | 5043             | 2101 | 9293            | 1839 | 0.54      | 1.14 | 70.2         | 72.6 | 17.4               | 17.4 | B   |
| 8                  | 1.00 | 1.00 | 0.909 | 0.971 | 5404             | 2381 | 9293            | 1839 | 0.58      | 1.29 | 69.3         | 71.9 | 18.8               | 18.8 | C   |
| 9                  | 1.00 | 1.00 | 0.909 | 0.971 | 5074             | 2410 | 9293            | 1839 | 0.55      | 1.31 | 70.2         | 72.6 | 17.5               | 17.5 | B   |
| 10                 | 1.00 | 1.00 | 0.909 | 0.971 | 5518             | 2525 | 9293            | 1839 | 0.59      | 1.37 | 69.0         | 71.6 | 19.3               | 19.3 | C   |
| 11                 | 1.00 | 1.00 | 0.909 | 0.971 | 4893             | 2060 | 9293            | 1839 | 0.53      | 1.12 | 70.5         | 72.8 | 16.8               | 16.8 | B   |
| 12                 | 1.00 | 1.00 | 0.909 | 0.971 | 4959             | 2047 | 9293            | 1839 | 0.53      | 1.11 | 70.4         | 72.7 | 17.1               | 17.1 | B   |
| 13                 | 1.00 | 1.00 | 0.909 | 0.971 | 4722             | 2051 | 9293            | 1839 | 0.51      | 1.12 | 70.9         | 73.1 | 16.1               | 16.1 | B   |
| 14                 | 1.00 | 1.00 | 0.909 | 0.971 | 4510             | 1829 | 9293            | 1839 | 0.49      | 0.99 | 71.3         | 73.3 | 15.4               | 15.4 | B   |
| 15                 | 1.00 | 1.00 | 0.909 | 0.971 | 4229             | 1705 | 9293            | 1839 | 0.46      | 0.93 | 71.6         | 73.4 | 14.4               | 14.4 | B   |
| 16                 | 1.00 | 1.00 | 0.909 | 0.971 | 4207             | 1623 | 9293            | 1839 | 0.45      | 0.88 | 71.7         | 73.5 | 14.3               | 14.3 | B   |
| Segment 5: Basic   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |      | 0.909 |       | 1140             |      | 6970            |      | 0.16      |      | 70.8         |      | 5.4                |      | A   |
| 2                  | 1.00 |      | 0.909 |       | 1360             |      | 6970            |      | 0.20      |      | 70.8         |      | 6.4                |      | A   |
| 3                  | 1.00 |      | 0.909 |       | 1699             |      | 6970            |      | 0.24      |      | 70.8         |      | 8.0                |      | A   |
| 4                  | 1.00 |      | 0.909 |       | 2209             |      | 6970            |      | 0.32      |      | 70.8         |      | 10.4               |      | A   |
| 5                  | 1.00 |      | 0.909 |       | 1985             |      | 6970            |      | 0.28      |      | 70.8         |      | 9.4                |      | A   |
| 6                  | 1.00 |      | 0.909 |       | 2684             |      | 6970            |      | 0.39      |      | 70.8         |      | 12.6               |      | B   |
| 7                  | 1.00 |      | 0.909 |       | 2799             |      | 6970            |      | 0.40      |      | 70.6         |      | 13.2               |      | B   |
| 8                  | 1.00 |      | 0.909 |       | 2860             |      | 6970            |      | 0.41      |      | 70.3         |      | 13.5               |      | B   |
| 9                  | 1.00 |      | 0.909 |       | 2499             |      | 6970            |      | 0.36      |      | 70.6         |      | 11.8               |      | B   |
| 10                 | 1.00 |      | 0.909 |       | 2821             |      | 6970            |      | 0.40      |      | 70.2         |      | 13.3               |      | B   |
| 11                 | 1.00 |      | 0.909 |       | 2693             |      | 6970            |      | 0.39      |      | 70.7         |      | 12.7               |      | B   |
| 12                 | 1.00 |      | 0.909 |       | 2772             |      | 6970            |      | 0.40      |      | 70.7         |      | 13.1               |      | B   |
| 13                 | 1.00 |      | 0.909 |       | 2530             |      | 6970            |      | 0.36      |      | 70.8         |      | 11.9               |      | B   |
| 14                 | 1.00 |      | 0.909 |       | 2557             |      | 6970            |      | 0.37      |      | 70.8         |      | 12.0               |      | B   |
| 15                 | 1.00 |      | 0.909 |       | 2407             |      | 6970            |      | 0.35      |      | 70.8         |      | 11.3               |      | B   |
| 16                 | 1.00 |      | 0.909 |       | 2473             |      | 6970            |      | 0.35      |      | 70.8         |      | 11.6               |      | B   |
| Segment 6: Weaving |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |



|                  |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 | 1149  | 4209  | 0.27             | 62.8 | 4.6             | A    |           |      |              |      |                    |      |     |
| 2                | 1.00 | 0.909 | 1362  | 4318  | 0.32             | 61.9 | 5.5             | A    |           |      |              |      |                    |      |     |
| 3                | 1.00 | 0.909 | 1778  | 4964  | 0.36             | 61.3 | 7.3             | A    |           |      |              |      |                    |      |     |
| 4                | 1.00 | 0.909 | 2314  | 5174  | 0.45             | 59.5 | 9.7             | A    |           |      |              |      |                    |      |     |
| 5                | 1.00 | 0.909 | 2101  | 7282  | 0.29             | 63.6 | 8.3             | A    |           |      |              |      |                    |      |     |
| 6                | 1.00 | 0.909 | 2810  | 7841  | 0.36             | 62.4 | 11.3            | B    |           |      |              |      |                    |      |     |
| 7                | 1.00 | 0.909 | 2977  | 7423  | 0.40             | 60.9 | 12.2            | B    |           |      |              |      |                    |      |     |
| 8                | 1.00 | 0.909 | 3136  | 5837  | 0.54             | 57.8 | 13.6            | B    |           |      |              |      |                    |      |     |
| 9                | 1.00 | 0.909 | 2717  | 6638  | 0.41             | 60.7 | 11.2            | B    |           |      |              |      |                    |      |     |
| 10               | 1.00 | 0.909 | 3160  | 6019  | 0.53             | 58.1 | 13.6            | B    |           |      |              |      |                    |      |     |
| 11               | 1.00 | 0.909 | 3041  | 5737  | 0.53             | 57.9 | 13.1            | B    |           |      |              |      |                    |      |     |
| 12               | 1.00 | 0.909 | 3063  | 6130  | 0.50             | 58.6 | 13.1            | B    |           |      |              |      |                    |      |     |
| 13               | 1.00 | 0.909 | 2834  | 5737  | 0.49             | 58.7 | 12.1            | B    |           |      |              |      |                    |      |     |
| 14               | 1.00 | 0.909 | 2928  | 6793  | 0.43             | 60.2 | 12.2            | B    |           |      |              |      |                    |      |     |
| 15               | 1.00 | 0.909 | 2704  | 6714  | 0.40             | 60.9 | 11.1            | B    |           |      |              |      |                    |      |     |
| 16               | 1.00 | 0.909 | 2821  | 6773  | 0.42             | 60.5 | 11.7            | B    |           |      |              |      |                    |      |     |
| Segment 7: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |       | 0.909 |       | 568              |      | 6970            |      | 0.08      |      | 70.7         |      | 2.7                |      | A   |
| 2                | 1.00 |       | 0.909 |       | 682              |      | 6970            |      | 0.10      |      | 70.7         |      | 3.2                |      | A   |
| 3                | 1.00 |       | 0.909 |       | 1083             |      | 6970            |      | 0.16      |      | 70.7         |      | 5.1                |      | A   |
| 4                | 1.00 |       | 0.909 |       | 1452             |      | 6970            |      | 0.21      |      | 70.6         |      | 6.8                |      | A   |
| 5                | 1.00 |       | 0.909 |       | 1593             |      | 6970            |      | 0.23      |      | 70.7         |      | 7.5                |      | A   |
| 6                | 1.00 |       | 0.909 |       | 2196             |      | 6970            |      | 0.32      |      | 70.7         |      | 10.3               |      | A   |
| 7                | 1.00 |       | 0.909 |       | 2288             |      | 6970            |      | 0.33      |      | 70.7         |      | 10.8               |      | A   |
| 8                | 1.00 |       | 0.909 |       | 2249             |      | 6970            |      | 0.32      |      | 70.6         |      | 10.6               |      | A   |
| 9                | 1.00 |       | 0.909 |       | 2046             |      | 6970            |      | 0.29      |      | 70.7         |      | 9.6                |      | A   |
| 10               | 1.00 |       | 0.909 |       | 2363             |      | 6970            |      | 0.34      |      | 70.6         |      | 11.1               |      | B   |
| 11               | 1.00 |       | 0.909 |       | 2240             |      | 6970            |      | 0.32      |      | 70.6         |      | 10.6               |      | A   |
| 12               | 1.00 |       | 0.909 |       | 2271             |      | 6970            |      | 0.33      |      | 70.6         |      | 10.7               |      | A   |
| 13               | 1.00 |       | 0.909 |       | 2068             |      | 6970            |      | 0.30      |      | 70.6         |      | 9.7                |      | A   |
| 14               | 1.00 |       | 0.909 |       | 2367             |      | 6970            |      | 0.34      |      | 70.6         |      | 11.1               |      | B   |
| 15               | 1.00 |       | 0.909 |       | 2130             |      | 6970            |      | 0.31      |      | 70.7         |      | 10.0               |      | A   |
| 16               | 1.00 |       | 0.909 |       | 2266             |      | 6970            |      | 0.33      |      | 70.6         |      | 10.7               |      | A   |
| Segment 8: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 601              | 33   | 6970            | 2033 | 0.09      | 0.02 | 68.2         | 65.4 | 2.9                | 3.4  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 715              | 33   | 6970            | 2033 | 0.10      | 0.02 | 68.3         | 65.4 | 3.5                | 4.0  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 1116             | 33   | 6970            | 2033 | 0.16      | 0.02 | 68.3         | 65.4 | 5.4                | 5.8  | A   |

|    |      |      |       |       |      |     |      |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|------|------|------|------|------|------|------|------|---|
| 4  | 1.00 | 1.00 | 0.909 | 0.971 | 1485 | 33  | 6970 | 2033 | 0.21 | 0.02 | 68.2 | 65.3 | 7.3  | 7.6  | A |
| 5  | 1.00 | 1.00 | 0.909 | 0.971 | 1626 | 33  | 6970 | 2033 | 0.23 | 0.02 | 68.1 | 65.3 | 8.0  | 8.2  | A |
| 6  | 1.00 | 1.00 | 0.909 | 0.971 | 2233 | 37  | 6970 | 2033 | 0.32 | 0.02 | 67.7 | 65.1 | 11.0 | 11.1 | B |
| 7  | 1.00 | 1.00 | 0.909 | 0.971 | 2333 | 45  | 6970 | 2033 | 0.33 | 0.02 | 67.6 | 65.1 | 11.5 | 11.6 | B |
| 8  | 1.00 | 1.00 | 0.909 | 0.971 | 2286 | 37  | 6970 | 2033 | 0.33 | 0.02 | 67.7 | 65.1 | 11.3 | 11.3 | B |
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 2104 | 58  | 6970 | 2033 | 0.30 | 0.03 | 67.8 | 65.2 | 10.3 | 10.5 | B |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 2433 | 70  | 6970 | 2033 | 0.35 | 0.03 | 67.6 | 65.1 | 12.0 | 12.1 | B |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 2343 | 103 | 6970 | 2033 | 0.34 | 0.05 | 67.6 | 65.1 | 11.6 | 11.8 | B |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 2382 | 111 | 6970 | 2033 | 0.34 | 0.05 | 67.6 | 65.1 | 11.7 | 12.0 | B |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 2150 | 82  | 6970 | 2033 | 0.31 | 0.04 | 67.8 | 65.2 | 10.6 | 10.8 | B |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 2466 | 99  | 6970 | 2033 | 0.35 | 0.05 | 67.5 | 65.0 | 12.2 | 12.3 | B |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 2266 | 136 | 6970 | 2033 | 0.33 | 0.07 | 67.6 | 65.1 | 11.2 | 11.5 | B |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 2365 | 99  | 6970 | 2033 | 0.34 | 0.05 | 67.6 | 65.1 | 11.7 | 11.9 | B |

Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 603              | 6970            | 0.09      | 70.6         | 2.8                | A   |
| 2           | 1.00 | 0.909 | 717              | 6970            | 0.10      | 70.7         | 3.4                | A   |
| 3           | 1.00 | 0.909 | 1118             | 6970            | 0.16      | 70.7         | 5.3                | A   |
| 4           | 1.00 | 0.909 | 1487             | 6970            | 0.21      | 70.6         | 7.0                | A   |
| 5           | 1.00 | 0.909 | 1628             | 6970            | 0.23      | 70.6         | 7.7                | A   |
| 6           | 1.00 | 0.909 | 2235             | 6970            | 0.32      | 70.6         | 10.5               | A   |
| 7           | 1.00 | 0.909 | 2337             | 6970            | 0.34      | 70.6         | 11.0               | A   |
| 8           | 1.00 | 0.909 | 2288             | 6970            | 0.33      | 70.6         | 10.8               | A   |
| 9           | 1.00 | 0.909 | 2108             | 6970            | 0.30      | 70.6         | 9.9                | A   |
| 10          | 1.00 | 0.909 | 2438             | 6970            | 0.35      | 70.6         | 11.5               | B   |
| 11          | 1.00 | 0.909 | 2350             | 6970            | 0.34      | 70.6         | 11.1               | B   |
| 12          | 1.00 | 0.909 | 2389             | 6970            | 0.34      | 70.6         | 11.2               | B   |
| 13          | 1.00 | 0.909 | 2156             | 6970            | 0.31      | 70.6         | 10.2               | A   |
| 14          | 1.00 | 0.909 | 2473             | 6970            | 0.35      | 70.6         | 11.6               | B   |
| 15          | 1.00 | 0.909 | 2275             | 6970            | 0.33      | 70.6         | 10.7               | A   |
| 16          | 1.00 | 0.909 | 2372             | 6970            | 0.34      | 70.6         | 11.2               | B   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 68.3        | 4.7               | 4.3                | 2.40             | A   |
| 2 | 68.2        | 5.7               | 5.2                | 2.40             | A   |
| 3 | 68.2        | 8.1               | 7.3                | 2.40             | A   |
| 4 | 67.9        | 10.5              | 9.6                | 2.40             | A   |
| 5 | 68.9        | 10.6              | 9.6                | 2.40             | A   |
| 6 | 68.0        | 14.3              | 13.0               | 2.40             | B   |
| 7 | 66.6        | 16.2              | 14.8               | 2.50             | F   |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 8  | 64.7 | 17.6 | 16.0 | 2.50 | F |
| 9  | 66.3 | 15.7 | 14.3 | 2.50 | F |
| 10 | 64.9 | 17.8 | 16.2 | 2.50 | F |
| 11 | 66.1 | 16.3 | 14.8 | 2.50 | F |
| 12 | 66.1 | 16.5 | 15.0 | 2.50 | F |
| 13 | 66.6 | 15.2 | 13.8 | 2.50 | F |
| 14 | 67.2 | 15.5 | 14.1 | 2.40 | B |
| 15 | 67.7 | 14.2 | 12.9 | 2.40 | B |
| 16 | 67.8 | 14.4 | 13.1 | 2.40 | B |

### Facility Overall Results

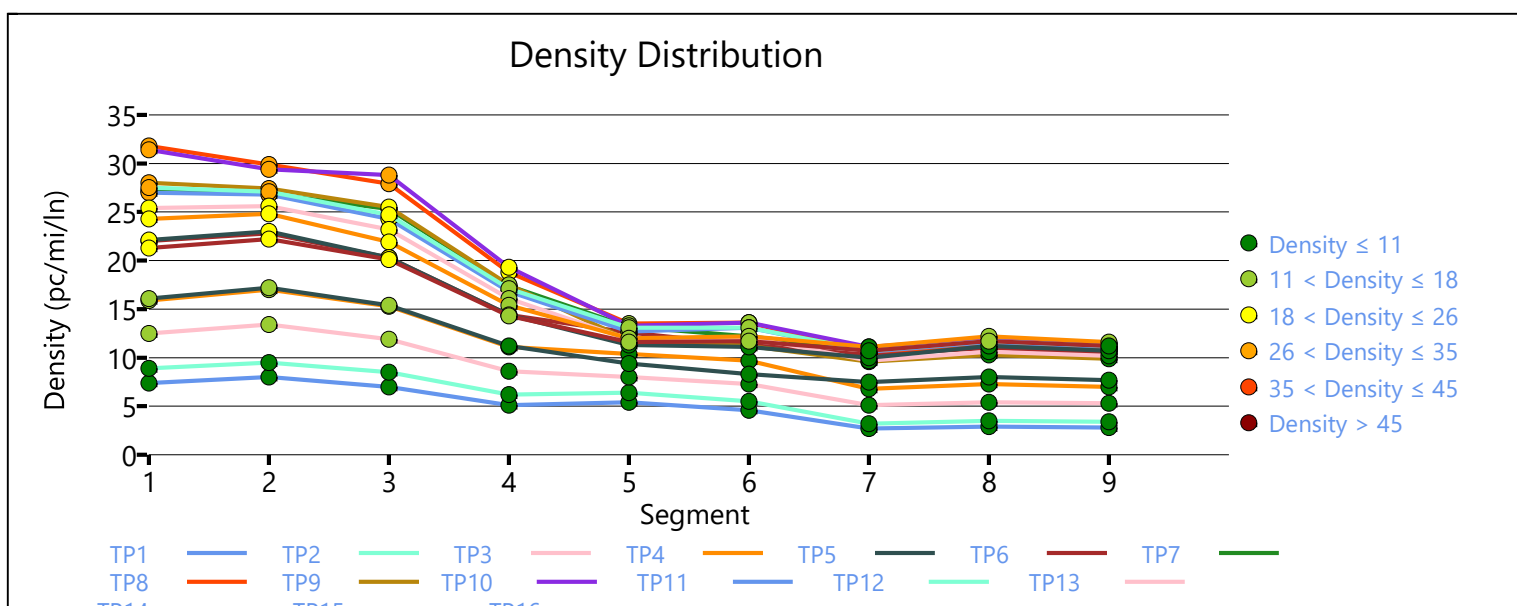
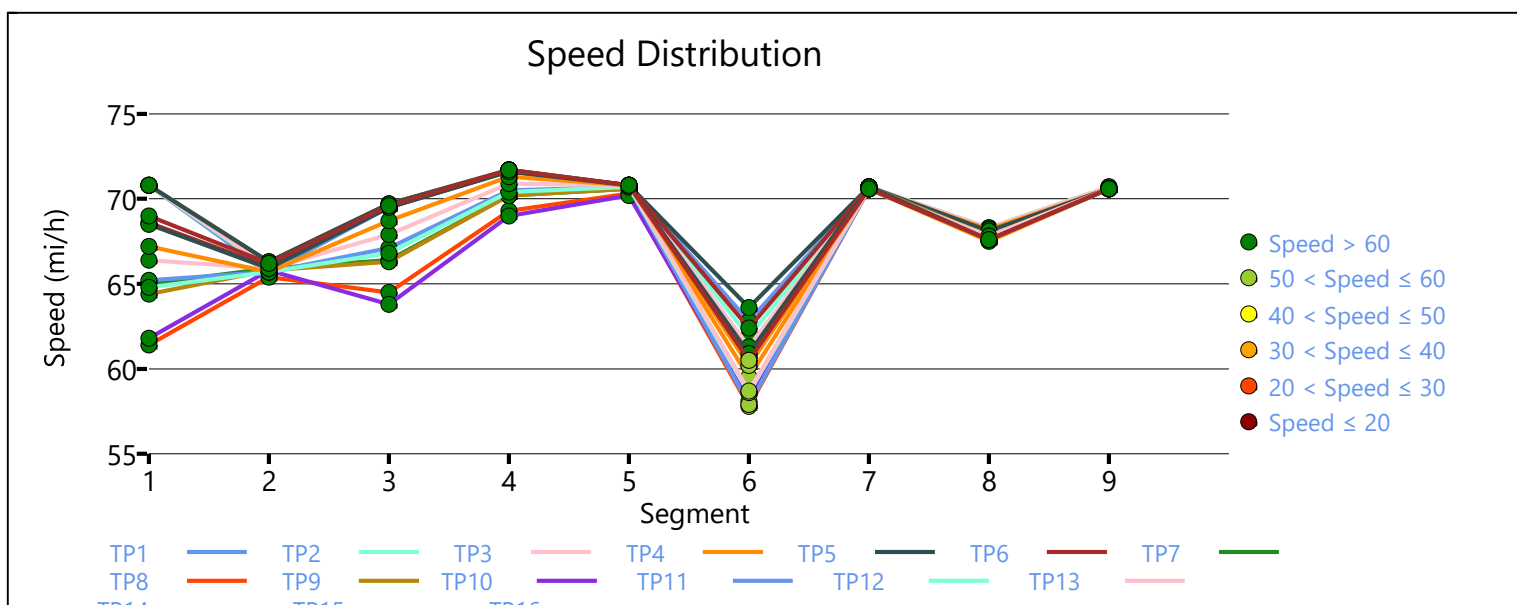
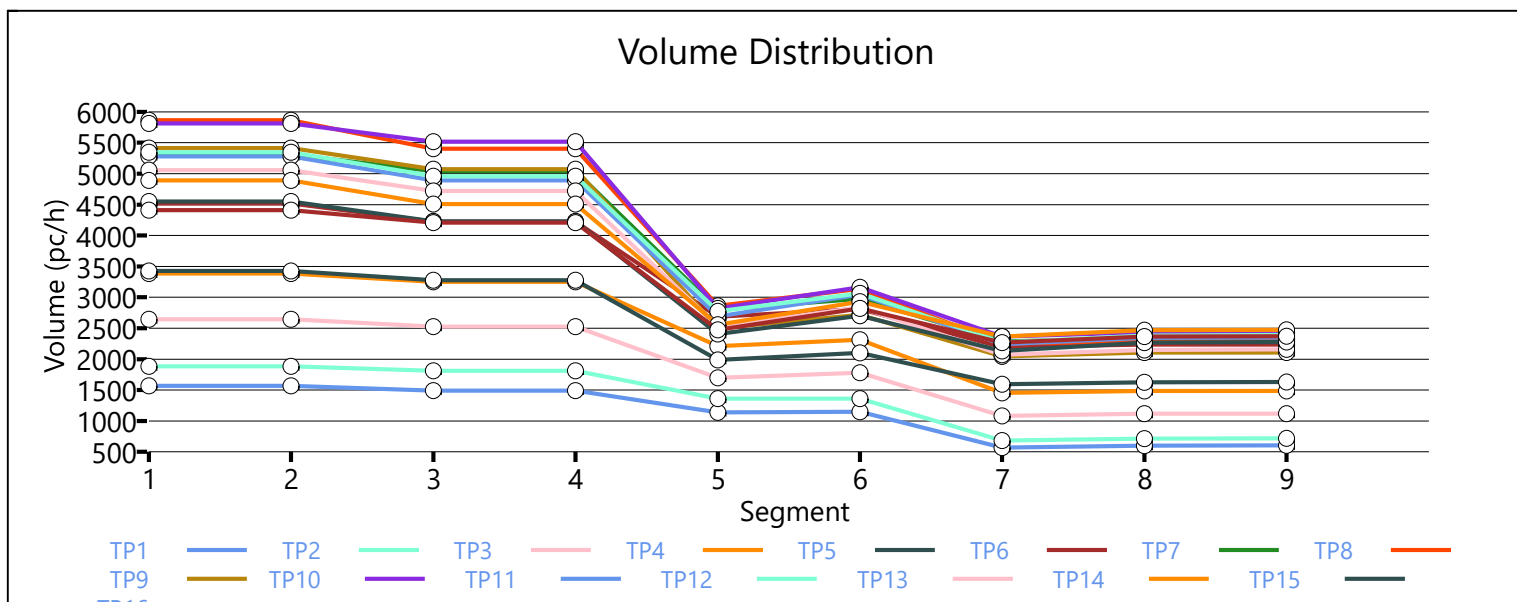
|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 66.8 | Density, veh/mi/ln | 12.1 |
| Average Travel Time, min | 2.50 | Density, pc/mi/ln  | 13.3 |

### Messages

|           |                                                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WARNING 1 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 2 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 3 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 4 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 5 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 6 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 7 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |

### Comments

|  |
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|  |
|--|



# HCS7 Freeway Facilities Report

## Project Information

|                     |                                            |                      |                         |
|---------------------|--------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                         | Date                 | 9/3/2020                |
| Agency              | Lee Engineering                            | Analysis Year        | 2025                    |
| Jurisdiction        | NMDOT                                      | Time Period Analyzed | PM Peak Period          |
| Project Description | No Build Conditions - NB I25<br>2PM to 7PM | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 3.06  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                       | Length, ft | Lanes |
|-----|---------|----------|--------------------------------------------|------------|-------|
| 1   | Basic   | Basic    | NB I25 South of Sunport                    | 5280       | 3     |
| 2   | Diverge | Diverge  | Off-Ramp to Sunport                        | 1500       | 3     |
| 3   | Basic   | Basic    | NB I25 bet                                 | 3070       | 3     |
| 4   | Weaving | Weaving  | Sunport Off/On Ramps                       | 1750       | 4     |
| 5   | Basic   | Basic    | NB I24 bet Sunport On and Gibson Off Ramps | 1155       | 3     |
| 6   | Merge   | Merge    | NB I25 bet Gibson Off/On Ramps             | 700        | 3     |
| 7   | Basic   | Basic    | On-ramp from EB Gibson                     | 400        | 3     |
| 8   | Merge   | Merge    | NB I25 bet Gibson On-Ramps                 | 800        | 3     |
| 9   | Basic   | Basic    | On-ramp from WB Gibson                     | 1500       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2451             | 6970            | 0.35      | 70.8         | 11.5               | B   |
| 2           | 1.00 | 0.909 | 2570             | 6970            | 0.37      | 70.8         | 12.1               | B   |
| 3           | 1.00 | 0.909 | 2499             | 6970            | 0.36      | 70.8         | 11.8               | B   |
| 4           | 1.00 | 0.909 | 2631             | 6970            | 0.38      | 70.8         | 12.4               | B   |
| 5           | 1.00 | 0.909 | 2755             | 6970            | 0.40      | 70.8         | 13.0               | B   |
| 6           | 1.00 | 0.909 | 2535             | 6970            | 0.36      | 70.8         | 11.9               | B   |
| 7           | 1.00 | 0.909 | 2614             | 6970            | 0.38      | 70.8         | 12.3               | B   |
| 8           | 1.00 | 0.909 | 2592             | 6970            | 0.37      | 70.8         | 12.2               | B   |
| 9           | 1.00 | 0.909 | 2645             | 6970            | 0.38      | 70.8         | 12.5               | B   |
| 10          | 1.00 | 0.909 | 2785             | 6970            | 0.40      | 70.8         | 13.1               | B   |
| 11          | 1.00 | 0.909 | 2777             | 6970            | 0.40      | 70.8         | 13.1               | B   |
| 12          | 1.00 | 0.909 | 2807             | 6970            | 0.40      | 70.8         | 13.2               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 2517  |       | 6970             |      | 0.36            | 70.8 |           | 11.9 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 2350  |       | 6970             |      | 0.34            | 70.8 |           | 11.1 |              | B    |                    |      |     |
| 15                 | 1.00 | 0.909 | 2081  |       | 6970             |      | 0.30            | 70.8 |           | 9.8  |              | A    |                    |      |     |
| 16                 | 1.00 | 0.909 | 2121  |       | 6970             |      | 0.30            | 70.8 |           | 10.0 |              | A    |                    |      |     |
| 17                 | 1.00 | 0.909 | 2011  |       | 6970             |      | 0.29            | 70.8 |           | 9.5  |              | A    |                    |      |     |
| 18                 | 1.00 | 0.909 | 1800  |       | 6970             |      | 0.26            | 70.8 |           | 8.5  |              | A    |                    |      |     |
| 19                 | 1.00 | 0.909 | 1619  |       | 6970             |      | 0.23            | 70.8 |           | 7.6  |              | A    |                    |      |     |
| 20                 | 1.00 | 0.909 | 1531  |       | 6970             |      | 0.22            | 70.8 |           | 7.2  |              | A    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2451             | 103  | 6970            | 2033 | 0.35      | 0.05 | 67.6         | 63.4 | 12.1               | 16.9 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2570             | 107  | 6970            | 2033 | 0.37      | 0.05 | 67.7         | 63.4 | 12.7               | 17.6 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2499             | 132  | 6970            | 2033 | 0.36      | 0.06 | 67.5         | 63.3 | 12.3               | 17.2 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2631             | 132  | 6970            | 2033 | 0.38      | 0.06 | 67.6         | 63.3 | 13.0               | 17.9 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 2755             | 91   | 6970            | 2033 | 0.40      | 0.04 | 67.8         | 63.4 | 13.5               | 18.5 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2535             | 115  | 6970            | 2033 | 0.36      | 0.06 | 67.6         | 63.3 | 12.5               | 17.4 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 2614             | 82   | 6970            | 2033 | 0.38      | 0.04 | 67.7         | 63.4 | 12.9               | 17.8 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 2592             | 74   | 6970            | 2033 | 0.37      | 0.04 | 67.8         | 63.5 | 12.7               | 17.6 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 2645             | 70   | 6970            | 2033 | 0.38      | 0.03 | 67.8         | 63.5 | 13.0               | 17.9 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 2785             | 70   | 6970            | 2033 | 0.40      | 0.03 | 67.9         | 63.5 | 13.7               | 18.6 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 2777             | 58   | 6970            | 2033 | 0.40      | 0.03 | 67.9         | 63.5 | 13.6               | 18.6 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 2807             | 99   | 6970            | 2033 | 0.40      | 0.05 | 67.8         | 63.4 | 13.8               | 18.8 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2517             | 99   | 6970            | 2033 | 0.36      | 0.05 | 67.7         | 63.4 | 12.4               | 17.3 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2350             | 70   | 6970            | 2033 | 0.34      | 0.03 | 67.7         | 63.5 | 11.6               | 16.3 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 2081             | 74   | 6970            | 2033 | 0.30      | 0.04 | 67.6         | 63.5 | 10.3               | 14.8 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2121             | 95   | 6970            | 2033 | 0.30      | 0.05 | 67.5         | 63.4 | 10.5               | 15.1 | B   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 2011             | 37   | 6970            | 2033 | 0.29      | 0.02 | 67.6         | 63.5 | 9.9                | 14.3 | B   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 1800             | 37   | 6970            | 2033 | 0.26      | 0.02 | 67.5         | 63.5 | 8.9                | 13.1 | B   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1619             | 54   | 6970            | 2033 | 0.23      | 0.03 | 67.4         | 63.5 | 8.0                | 12.1 | B   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1531             | 37   | 6970            | 2033 | 0.22      | 0.02 | 67.4         | 63.5 | 7.6                | 11.6 | B   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2341             |      | 6970            |      | 0.34      |      | 70.7         |      | 11.0               |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2455             |      | 6970            |      | 0.35      |      | 70.7         |      | 11.6               |      | B   |
| 3                  | 1.00 |       | 0.909 |       | 2359             |      | 6970            |      | 0.34      |      | 70.7         |      | 11.1               |      | B   |
| 4                  | 1.00 |       | 0.909 |       | 2491             |      | 6970            |      | 0.36      |      | 70.7         |      | 11.7               |      | B   |
| 5                  | 1.00 |       | 0.909 |       | 2658             |      | 6970            |      | 0.38      |      | 70.7         |      | 12.5               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 2411             |      | 6970            |      | 0.35      |      | 70.7         |      | 11.4               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 2526             |      | 6970            |      | 0.36      |      | 70.7         |      | 11.9               |      | B   |

|                    |      |       |                  |                 |           |              |                    |     |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 8                  | 1.00 | 0.909 | 2513             | 6970            | 0.36      | 70.7         | 11.8               | B   |
| 9                  | 1.00 | 0.909 | 2570             | 6970            | 0.37      | 70.7         | 12.1               | B   |
| 10                 | 1.00 | 0.909 | 2711             | 6970            | 0.39      | 70.7         | 12.8               | B   |
| 11                 | 1.00 | 0.909 | 2715             | 6970            | 0.39      | 70.7         | 12.8               | B   |
| 12                 | 1.00 | 0.909 | 2702             | 6970            | 0.39      | 70.7         | 12.7               | B   |
| 13                 | 1.00 | 0.909 | 2411             | 6970            | 0.35      | 70.7         | 11.4               | B   |
| 14                 | 1.00 | 0.909 | 2275             | 6970            | 0.33      | 70.7         | 10.7               | A   |
| 15                 | 1.00 | 0.909 | 2002             | 6970            | 0.29      | 70.7         | 9.4                | A   |
| 16                 | 1.00 | 0.909 | 2020             | 6970            | 0.29      | 70.7         | 9.5                | A   |
| 17                 | 1.00 | 0.909 | 1971             | 6970            | 0.28      | 70.7         | 9.3                | A   |
| 18                 | 1.00 | 0.909 | 1760             | 6970            | 0.25      | 70.7         | 8.3                | A   |
| 19                 | 1.00 | 0.909 | 1562             | 6970            | 0.22      | 70.7         | 7.4                | A   |
| 20                 | 1.00 | 0.909 | 1492             | 6970            | 0.21      | 70.7         | 7.0                | A   |
| Segment 4: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 3050             | 6196            | 0.49      | 58.8         | 13.0               | B   |
| 2                  | 1.00 | 0.909 | 3153             | 6563            | 0.48      | 59.1         | 13.3               | B   |
| 3                  | 1.00 | 0.909 | 3107             | 5897            | 0.53      | 58.0         | 13.4               | B   |
| 4                  | 1.00 | 0.909 | 3229             | 6034            | 0.54      | 57.9         | 13.9               | B   |
| 5                  | 1.00 | 0.909 | 3531             | 6229            | 0.57      | 57.2         | 15.4               | B   |
| 6                  | 1.00 | 0.909 | 3187             | 6130            | 0.52      | 58.2         | 13.7               | B   |
| 7                  | 1.00 | 0.909 | 3291             | 6526            | 0.50      | 58.5         | 14.1               | B   |
| 8                  | 1.00 | 0.909 | 3286             | 6229            | 0.53      | 58.0         | 14.2               | B   |
| 9                  | 1.00 | 0.909 | 3678             | 5492            | 0.67      | 55.1         | 16.7               | B   |
| 10                 | 1.00 | 0.909 | 3825             | 5341            | 0.72      | 54.2         | 17.6               | B   |
| 11                 | 1.00 | 0.909 | 3783             | 5174            | 0.73      | 53.9         | 17.5               | B   |
| 12                 | 1.00 | 0.909 | 3485             | 5029            | 0.69      | 54.6         | 16.0               | B   |
| 13                 | 1.00 | 0.909 | 3764             | 4750            | 0.79      | 52.8         | 17.8               | B   |
| 14                 | 1.00 | 0.909 | 3164             | 4742            | 0.67      | 55.1         | 14.4               | B   |
| 15                 | 1.00 | 0.909 | 2707             | 4637            | 0.58      | 56.6         | 12.0               | B   |
| 16                 | 1.00 | 0.909 | 2530             | 4326            | 0.58      | 56.3         | 11.2               | B   |
| 17                 | 1.00 | 0.909 | 2567             | 5291            | 0.49      | 58.7         | 10.9               | B   |
| 18                 | 1.00 | 0.909 | 2418             | 4975            | 0.49      | 58.6         | 10.3               | B   |
| 19                 | 1.00 | 0.909 | 2197             | 5039            | 0.44      | 59.7         | 9.2                | A   |
| 20                 | 1.00 | 0.909 | 2050             | 5256            | 0.39      | 60.8         | 8.4                | A   |
| Segment 5: Basic   |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 2693             | 6970            | 0.39      | 69.7         | 12.7               | B   |
| 2                  | 1.00 | 0.909 | 2812             | 6970            | 0.40      | 69.7         | 13.2               | B   |
| 3                  | 1.00 | 0.909 | 2715             | 6970            | 0.39      | 69.6         | 12.8               | B   |





| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 |      | 0.909 |       | 2873             |      | 6970            |      | 0.41      |      | 69.2         |      | 13.5               |      | B   |
| 2                | 1.00 |      | 0.909 |       | 3032             |      | 6970            |      | 0.44      |      | 69.2         |      | 14.3               |      | B   |
| 3                | 1.00 |      | 0.909 |       | 2931             |      | 6970            |      | 0.42      |      | 69.2         |      | 13.8               |      | B   |
| 4                | 1.00 |      | 0.909 |       | 3107             |      | 6970            |      | 0.45      |      | 69.2         |      | 14.6               |      | B   |
| 5                | 1.00 |      | 0.909 |       | 3472             |      | 6970            |      | 0.50      |      | 69.0         |      | 16.4               |      | B   |
| 6                | 1.00 |      | 0.909 |       | 3164             |      | 6970            |      | 0.45      |      | 69.1         |      | 14.9               |      | B   |
| 7                | 1.00 |      | 0.909 |       | 3432             |      | 6970            |      | 0.49      |      | 69.0         |      | 16.2               |      | B   |
| 8                | 1.00 |      | 0.909 |       | 3164             |      | 6970            |      | 0.45      |      | 69.1         |      | 14.9               |      | B   |
| 9                | 1.00 |      | 0.909 |       | 3670             |      | 6970            |      | 0.53      |      | 69.0         |      | 17.3               |      | B   |
| 10               | 1.00 |      | 0.909 |       | 3652             |      | 6970            |      | 0.52      |      | 69.0         |      | 17.2               |      | B   |
| 11               | 1.00 |      | 0.909 |       | 3591             |      | 6970            |      | 0.52      |      | 69.0         |      | 16.9               |      | B   |
| 12               | 1.00 |      | 0.909 |       | 2935             |      | 6970            |      | 0.42      |      | 69.2         |      | 13.8               |      | B   |
| 13               | 1.00 |      | 0.909 |       | 3692             |      | 6970            |      | 0.53      |      | 69.0         |      | 17.4               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 2790             |      | 6970            |      | 0.40      |      | 69.2         |      | 13.1               |      | B   |
| 15               | 1.00 |      | 0.909 |       | 2301             |      | 6970            |      | 0.33      |      | 69.4         |      | 10.8               |      | A   |
| 16               | 1.00 |      | 0.909 |       | 1892             |      | 6970            |      | 0.27      |      | 69.5         |      | 8.9                |      | A   |
| 17               | 1.00 |      | 0.909 |       | 2253             |      | 6970            |      | 0.32      |      | 69.4         |      | 10.6               |      | A   |
| 18               | 1.00 |      | 0.909 |       | 2143             |      | 6970            |      | 0.31      |      | 69.5         |      | 10.1               |      | A   |
| 19               | 1.00 |      | 0.909 |       | 2033             |      | 6970            |      | 0.29      |      | 69.5         |      | 9.6                |      | A   |
| 20               | 1.00 |      | 0.909 |       | 1883             |      | 6970            |      | 0.27      |      | 69.5         |      | 8.9                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 3882             | 1009 | 6970            | 2033 | 0.56      | 0.50 | 65.7         | 63.7 | 19.7               | 21.4 | C   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 4045             | 1013 | 6970            | 2033 | 0.58      | 0.50 | 65.6         | 63.5 | 20.6               | 22.2 | C   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 4043             | 1112 | 6970            | 2033 | 0.58      | 0.55 | 65.5         | 63.4 | 20.6               | 22.4 | C   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 4260             | 1153 | 6970            | 2033 | 0.61      | 0.57 | 65.2         | 63.1 | 21.8               | 23.5 | C   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 4864             | 1392 | 6970            | 2033 | 0.70      | 0.68 | 63.9         | 61.6 | 25.4               | 27.0 | C   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 4705             | 1541 | 6970            | 2033 | 0.68      | 0.76 | 64.0         | 61.8 | 24.5               | 26.6 | C   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 5228             | 1796 | 6970            | 2033 | 0.75      | 0.88 | 62.3         | 59.8 | 28.0               | 29.8 | D   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 5232             | 2068 | 6970            | 2033 | 0.75      | 1.02 | 61.5         | 59.1 | 28.4               | 30.5 | D   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 5923             | 2253 | 6970            | 2033 | 0.85      | 1.11 | 58.1         | 55.0 | 34.0               | 34.2 | D   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 6070             | 2418 | 6970            | 2033 | 0.87      | 1.19 | 56.5         | 53.3 | 35.8               | 35.4 | E   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 5523             | 1932 | 6970            | 2033 | 0.79      | 0.95 | 61.0         | 58.3 | 30.2               | 31.5 | D   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 5094             | 2159 | 6970            | 2033 | 0.73      | 1.06 | 61.7         | 59.4 | 27.5               | 30.1 | D   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 5653             | 1961 | 6970            | 2033 | 0.81      | 0.96 | 60.4         | 57.6 | 31.2               | 32.2 | D   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 4475             | 1685 | 6970            | 2033 | 0.64      | 0.83 | 64.2         | 62.1 | 23.2               | 26.0 | C   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 3677             | 1376 | 6970            | 2033 | 0.53      | 0.68 | 65.6         | 63.7 | 18.7               | 21.4 | C   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 2786             | 894  | 6970            | 2033 | 0.40      | 0.44 | 66.7         | 64.7 | 13.9               | 15.9 | B   |

|    |      |      |       |       |      |     |      |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|------|------|------|------|------|------|------|------|---|
| 17 | 1.00 | 1.00 | 0.909 | 0.971 | 3073 | 820 | 6970 | 2033 | 0.44 | 0.40 | 66.6 | 64.5 | 15.4 | 17.1 | B |
| 18 | 1.00 | 1.00 | 0.909 | 0.971 | 3000 | 857 | 6970 | 2033 | 0.43 | 0.42 | 66.6 | 64.6 | 15.0 | 16.9 | B |
| 19 | 1.00 | 1.00 | 0.909 | 0.971 | 2762 | 729 | 6970 | 2033 | 0.40 | 0.36 | 66.8 | 64.7 | 13.8 | 15.4 | B |
| 20 | 1.00 | 1.00 | 0.909 | 0.971 | 2699 | 816 | 6970 | 2033 | 0.39 | 0.40 | 66.7 | 64.7 | 13.5 | 15.3 | B |

Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3952             | 6970            | 0.57      | 70.0         | 18.8               | C   |
| 2           | 1.00 | 0.909 | 4114             | 6970            | 0.59      | 69.8         | 19.6               | C   |
| 3           | 1.00 | 0.909 | 4119             | 6970            | 0.59      | 69.8         | 19.7               | C   |
| 4           | 1.00 | 0.909 | 4339             | 6970            | 0.62      | 69.2         | 20.9               | C   |
| 5           | 1.00 | 0.909 | 4959             | 6970            | 0.71      | 66.8         | 24.7               | C   |
| 6           | 1.00 | 0.909 | 4810             | 6970            | 0.69      | 67.5         | 23.7               | C   |
| 7           | 1.00 | 0.909 | 5351             | 6970            | 0.77      | 64.8         | 27.5               | D   |
| 8           | 1.00 | 0.909 | 5373             | 6970            | 0.77      | 64.6         | 27.7               | D   |
| 9           | 1.00 | 0.909 | 6077             | 6970            | 0.87      | 59.8         | 33.9               | D   |
| 10          | 1.00 | 0.909 | 6235             | 6970            | 0.89      | 58.5         | 35.5               | E   |
| 11          | 1.00 | 0.909 | 5655             | 6970            | 0.81      | 62.9         | 30.0               | D   |
| 12          | 1.00 | 0.909 | 5241             | 6970            | 0.75      | 65.4         | 26.7               | D   |
| 13          | 1.00 | 0.909 | 5787             | 6970            | 0.83      | 62.0         | 31.1               | D   |
| 14          | 1.00 | 0.909 | 4590             | 6970            | 0.66      | 68.4         | 22.4               | C   |
| 15          | 1.00 | 0.909 | 3771             | 6970            | 0.54      | 70.0         | 17.8               | B   |
| 16          | 1.00 | 0.909 | 2847             | 6970            | 0.41      | 70.2         | 13.4               | B   |
| 17          | 1.00 | 0.909 | 3129             | 6970            | 0.45      | 70.1         | 14.7               | B   |
| 18          | 1.00 | 0.909 | 3058             | 6970            | 0.44      | 70.1         | 14.4               | B   |
| 19          | 1.00 | 0.909 | 2812             | 6970            | 0.40      | 70.2         | 13.2               | B   |
| 20          | 1.00 | 0.909 | 2755             | 6970            | 0.40      | 70.2         | 13.0               | B   |

Facility Time Period Results

| T  | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|----|-------------|-------------------|--------------------|------------------|-----|
| 1  | 68.1        | 13.0              | 11.8               | 2.70             | B   |
| 2  | 68.1        | 13.6              | 12.3               | 2.70             | B   |
| 3  | 67.9        | 13.3              | 12.1               | 2.70             | B   |
| 4  | 67.8        | 14.0              | 12.7               | 2.70             | B   |
| 5  | 67.2        | 15.3              | 13.9               | 2.70             | B   |
| 6  | 67.4        | 14.1              | 12.8               | 2.70             | B   |
| 7  | 66.9        | 15.1              | 13.7               | 2.70             | B   |
| 8  | 66.7        | 14.9              | 13.6               | 2.80             | B   |
| 9  | 64.7        | 16.6              | 15.1               | 2.80             | B   |
| 10 | 64.2        | 17.3              | 15.8               | 2.90             | B   |
| 11 | 65.5        | 16.5              | 15.0               | 2.80             | B   |
| 12 | 66.3        | 15.5              | 14.1               | 2.80             | B   |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 13 | 64.8 | 16.0 | 14.6 | 2.80 | B |
| 14 | 66.9 | 13.4 | 12.2 | 2.70 | B |
| 15 | 67.6 | 11.3 | 10.3 | 2.70 | B |
| 16 | 67.7 | 10.4 | 9.5  | 2.70 | A |
| 17 | 68.1 | 10.6 | 9.6  | 2.70 | A |
| 18 | 68.0 | 9.8  | 8.9  | 2.70 | A |
| 19 | 68.2 | 8.9  | 8.1  | 2.70 | A |
| 20 | 68.4 | 8.4  | 7.6  | 2.70 | A |

Facility Overall Results

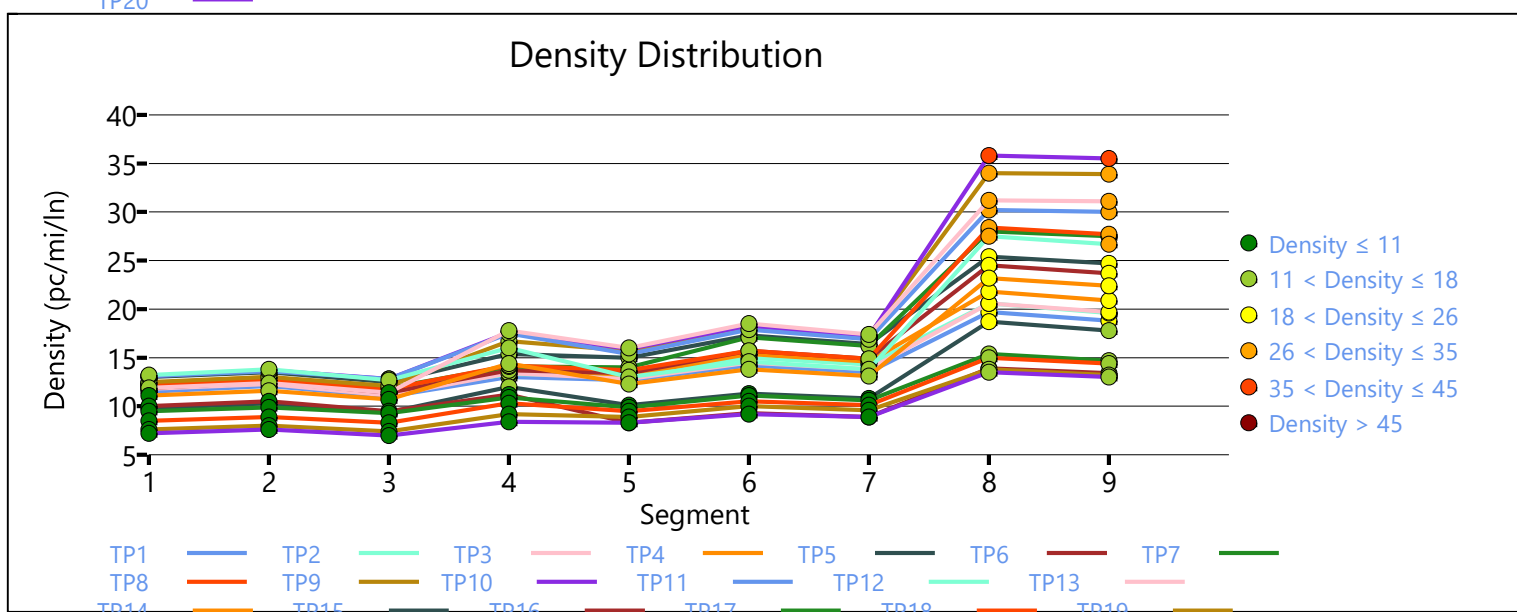
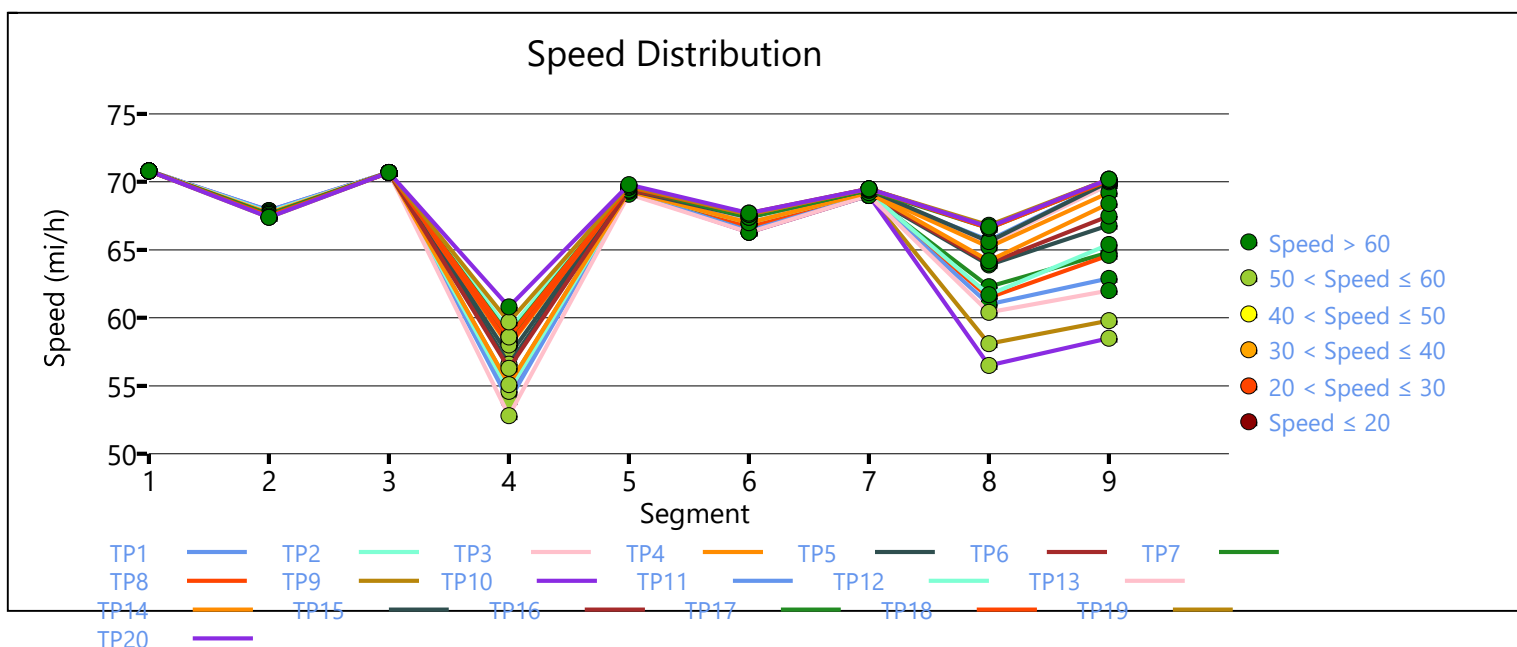
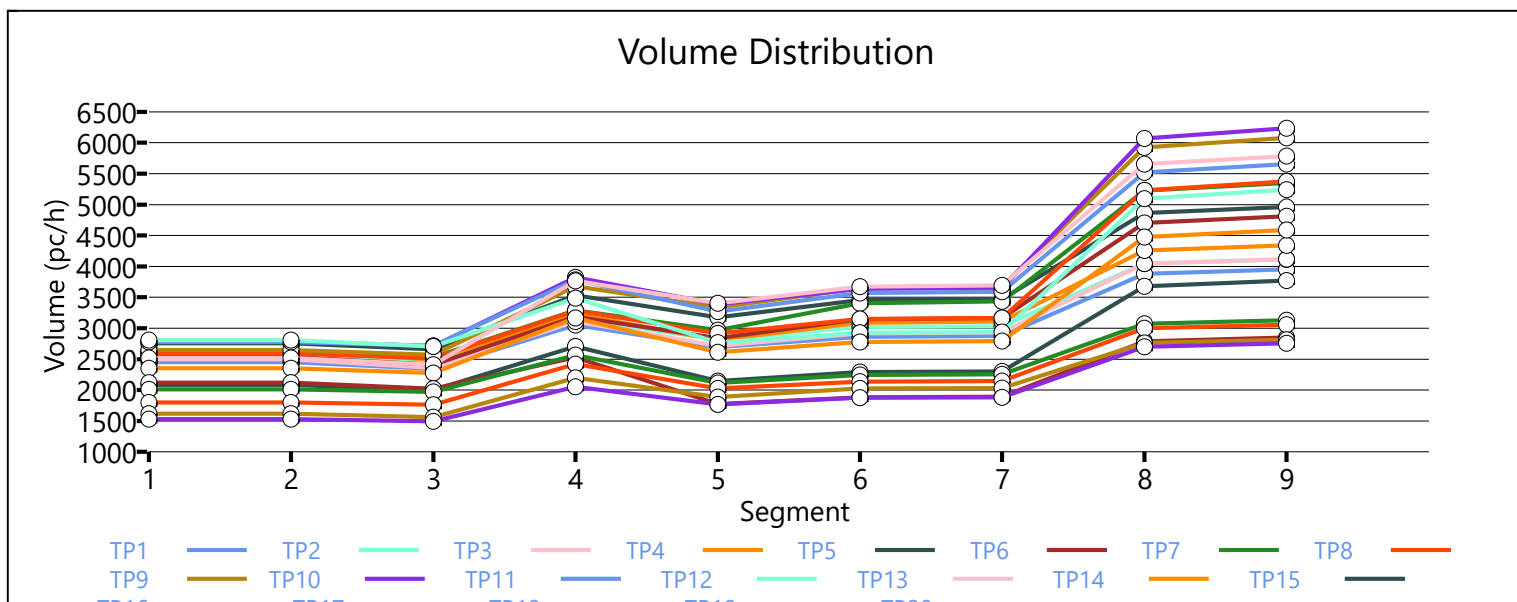
|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 66.8 | Density, veh/mi/ln | 12.2 |
| Average Travel Time, min | 2.70 | Density, pc/mi/ln  | 13.4 |

Messages

|           |                                                        |
|-----------|--------------------------------------------------------|
| WARNING 1 | Merge capacity is less than merge demand on segment 8. |
| WARNING 2 | Merge capacity is less than merge demand on segment 8. |
| WARNING 3 | Merge capacity is less than merge demand on segment 8. |
| WARNING 4 | Merge capacity is less than merge demand on segment 8. |

Comments

|  |
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|  |
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# HCS7 Freeway Facilities Report

## Project Information

|                     |                          |                      |                         |
|---------------------|--------------------------|----------------------|-------------------------|
| Analyst             | PG                       | Date                 | 9/17/2020               |
| Agency              | Lee Engineering          | Analysis Year        | 2025                    |
| Jurisdiction        | NMDOT                    | Time Period Analyzed | PM Peak Period          |
| Project Description | No Build I-25 Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.73  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | I-25 SB North of Gibson             | 2640       | 3     |
| 2   | Diverge | Diverge  | SB Off-Ramp to WB Gibson            | 1500       | 3     |
| 3   | Basic   | Basic    | Btw Gibson Off Ramps                | 200        | 3     |
| 4   | Diverge | Basic    | SB Off-Ramp to WB Gibson            | 750        | 4     |
| 5   | Basic   | Basic    | Btw Gibson Off and On Ramps         | 620        | 3     |
| 6   | Weaving | Weaving  | Btw Gibson On and Sunport Off Ramps | 2250       | 4     |
| 7   | Basic   | Basic    | Btw Sunport Off and On Ramps        | 2950       | 3     |
| 8   | Merge   | Merge    | On-Ramp from Sunport                | 875        | 3     |
| 9   | Basic   | Basic    | I-25 Sb South of Sunport            | 2640       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3938             | 6970            | 0.56      | 70.2         | 18.7               | C   |
| 2           | 1.00 | 0.909 | 4009             | 6970            | 0.58      | 70.1         | 19.1               | C   |
| 3           | 1.00 | 0.909 | 4308             | 6970            | 0.62      | 69.3         | 20.7               | C   |
| 4           | 1.00 | 0.909 | 4788             | 6970            | 0.69      | 67.6         | 23.6               | C   |
| 5           | 1.00 | 0.909 | 4779             | 6970            | 0.69      | 67.6         | 23.6               | C   |
| 6           | 1.00 | 0.909 | 4656             | 6970            | 0.67      | 68.1         | 22.8               | C   |
| 7           | 1.00 | 0.909 | 4726             | 6970            | 0.68      | 67.9         | 23.2               | C   |
| 8           | 1.00 | 0.909 | 4735             | 6970            | 0.68      | 67.8         | 23.3               | C   |
| 9           | 1.00 | 0.909 | 4642             | 6970            | 0.67      | 68.2         | 22.7               | C   |
| 10          | 1.00 | 0.909 | 4810             | 6970            | 0.69      | 67.5         | 23.7               | C   |
| 11          | 1.00 | 0.909 | 4343             | 6970            | 0.62      | 69.2         | 20.9               | C   |
| 12          | 1.00 | 0.909 | 4722             | 6970            | 0.68      | 67.9         | 23.2               | C   |
| 13          | 1.00 | 0.909 | 4414             | 6970            | 0.63      | 69.0         | 21.3               | C   |

| 14                 | 1.00 | 0.909 |       |       | 4717             |      |                 | 6970 | 0.68      |      |              | 67.9 |                    |      | 23.2 | C |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|------|---|
| 15                 | 1.00 | 0.909 |       |       | 4528             |      |                 | 6970 | 0.65      |      |              | 68.6 |                    |      | 22.0 | C |
| 16                 | 1.00 | 0.909 |       |       | 4449             |      |                 | 6970 | 0.64      |      |              | 68.9 |                    |      | 21.5 | C |
| 17                 | 1.00 | 0.909 |       |       | 4392             |      |                 | 6970 | 0.63      |      |              | 69.1 |                    |      | 21.2 | C |
| 18                 | 1.00 | 0.909 |       |       | 4128             |      |                 | 6970 | 0.59      |      |              | 69.8 |                    |      | 19.7 | C |
| 19                 | 1.00 | 0.909 |       |       | 3692             |      |                 | 6970 | 0.53      |      |              | 70.6 |                    |      | 17.4 | B |
| 20                 | 1.00 | 0.909 |       |       | 3472             |      |                 | 6970 | 0.50      |      |              | 70.7 |                    |      | 16.4 | B |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |      |   |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS  |   |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |      |   |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 3938             | 268  | 6389            | 1936 | 0.62      | 0.14 | 65.9         | 60.9 | 19.9               | 25.2 | C    |   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 4009             | 342  | 6389            | 1936 | 0.63      | 0.18 | 65.7         | 60.7 | 20.3               | 25.7 | C    |   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 4308             | 276  | 6389            | 1936 | 0.67      | 0.14 | 66.0         | 60.9 | 21.8               | 27.0 | C    |   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4788             | 408  | 6389            | 1936 | 0.75      | 0.21 | 65.6         | 60.5 | 24.3               | 29.4 | D    |   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4779             | 363  | 6389            | 1936 | 0.75      | 0.19 | 65.7         | 60.6 | 24.2               | 29.3 | D    |   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4656             | 338  | 6389            | 1936 | 0.73      | 0.17 | 65.8         | 60.7 | 23.6               | 28.7 | D    |   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4726             | 313  | 6389            | 1936 | 0.74      | 0.16 | 65.9         | 60.8 | 23.9               | 28.9 | D    |   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4735             | 338  | 6389            | 1936 | 0.74      | 0.17 | 65.8         | 60.7 | 24.0               | 29.0 | D    |   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4642             | 276  | 6389            | 1936 | 0.73      | 0.14 | 66.0         | 60.9 | 23.4               | 28.5 | D    |   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4810             | 350  | 6389            | 1936 | 0.75      | 0.18 | 65.7         | 60.6 | 24.4               | 29.4 | D    |   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4343             | 313  | 6389            | 1936 | 0.68      | 0.16 | 65.9         | 60.8 | 22.0               | 27.2 | C    |   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4722             | 260  | 6389            | 1936 | 0.74      | 0.13 | 66.0         | 60.9 | 23.8               | 28.9 | D    |   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4414             | 280  | 6389            | 1936 | 0.69      | 0.14 | 66.0         | 60.9 | 22.3               | 27.5 | C    |   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4717             | 342  | 6389            | 1936 | 0.74      | 0.18 | 65.8         | 60.7 | 23.9               | 28.9 | D    |   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4528             | 268  | 6389            | 1936 | 0.71      | 0.14 | 66.0         | 60.9 | 22.9               | 28.0 | C    |   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4449             | 222  | 6389            | 1936 | 0.70      | 0.11 | 66.1         | 61.0 | 22.4               | 27.6 | C    |   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 4392             | 235  | 6389            | 1936 | 0.69      | 0.12 | 66.1         | 61.0 | 22.1               | 27.3 | C    |   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 4128             | 169  | 6389            | 1936 | 0.65      | 0.09 | 66.2         | 61.2 | 20.8               | 26.0 | C    |   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3692             | 132  | 6389            | 1936 | 0.58      | 0.07 | 66.3         | 61.3 | 18.6               | 23.9 | C    |   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3472             | 132  | 6389            | 1936 | 0.54      | 0.07 | 66.3         | 61.3 | 17.5               | 22.7 | C    |   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |      |   |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS  |   |
| 1                  | 1.00 |       | 0.909 |       | 3652             |      | 6970            |      | 0.52      |      | 69.6         |      | 17.2               |      | B    |   |
| 2                  | 1.00 |       | 0.909 |       | 3644             |      | 6970            |      | 0.52      |      | 69.5         |      | 17.2               |      | B    |   |
| 3                  | 1.00 |       | 0.909 |       | 4013             |      | 6970            |      | 0.58      |      | 69.6         |      | 19.1               |      | C    |   |
| 4                  | 1.00 |       | 0.909 |       | 4352             |      | 6970            |      | 0.62      |      | 69.2         |      | 21.0               |      | C    |   |
| 5                  | 1.00 |       | 0.909 |       | 4392             |      | 6970            |      | 0.63      |      | 69.1         |      | 21.2               |      | C    |   |
| 6                  | 1.00 |       | 0.909 |       | 4295             |      | 6970            |      | 0.62      |      | 69.4         |      | 20.6               |      | C    |   |
| 7                  | 1.00 |       | 0.909 |       | 4392             |      | 6970            |      | 0.63      |      | 69.1         |      | 21.2               |      | C    |   |
| 8                  | 1.00 |       | 0.909 |       | 4374             |      | 6970            |      | 0.63      |      | 69.1         |      | 21.1               |      | C    |   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |   |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|---|
| 9                  | 1.00 | 0.909 | 4348  |       | 6970             |      | 0.62            | 69.2 | 20.9      |      | C            |      |                    |      |     |   |
| 10                 | 1.00 | 0.909 | 4436  |       | 6970             |      | 0.64            | 68.9 | 21.5      |      | C            |      |                    |      |     |   |
| 11                 | 1.00 | 0.909 | 4009  |       | 6970             |      | 0.58            | 69.6 | 19.1      |      | C            |      |                    |      |     |   |
| 12                 | 1.00 | 0.909 | 4444  |       | 6970             |      | 0.64            | 68.9 | 21.5      |      | C            |      |                    |      |     |   |
| 13                 | 1.00 | 0.909 | 4114  |       | 6970             |      | 0.59            | 69.6 | 19.6      |      | C            |      |                    |      |     |   |
| 14                 | 1.00 | 0.909 | 4352  |       | 6970             |      | 0.62            | 69.2 | 21.0      |      | C            |      |                    |      |     |   |
| 15                 | 1.00 | 0.909 | 4242  |       | 6970             |      | 0.61            | 69.5 | 20.3      |      | C            |      |                    |      |     |   |
| 16                 | 1.00 | 0.909 | 4211  |       | 6970             |      | 0.60            | 69.6 | 20.2      |      | C            |      |                    |      |     |   |
| 17                 | 1.00 | 0.909 | 4141  |       | 6970             |      | 0.59            | 69.6 | 19.8      |      | C            |      |                    |      |     |   |
| 18                 | 1.00 | 0.909 | 3947  |       | 6970             |      | 0.57            | 69.6 | 18.7      |      | C            |      |                    |      |     |   |
| 19                 | 1.00 | 0.909 | 3551  |       | 6970             |      | 0.51            | 69.7 | 16.7      |      | B            |      |                    |      |     |   |
| 20                 | 1.00 | 0.909 | 3331  |       | 6970             |      | 0.48            | 69.7 | 15.7      |      | B            |      |                    |      |     |   |
| Segment 4: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |   |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |   |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |   |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 3652             | 750  | 9293            | 1839 | 0.39      | 0.41 | 71.7         | 73.5 | 12.4               | 12.4 | B   |   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 3644             | 803  | 9293            | 1839 | 0.39      | 0.44 | 71.7         | 73.5 | 12.4               | 12.4 | B   |   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 4013             | 943  | 9293            | 1839 | 0.43      | 0.51 | 71.7         | 73.5 | 13.6               | 13.6 | B   |   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4352             | 956  | 9293            | 1839 | 0.47      | 0.52 | 71.5         | 73.4 | 14.8               | 14.8 | B   |   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4392             | 890  | 9293            | 1839 | 0.47      | 0.48 | 71.5         | 73.4 | 15.0               | 15.0 | B   |   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4295             | 799  | 9293            | 1839 | 0.46      | 0.43 | 71.6         | 73.4 | 14.6               | 14.6 | B   |   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4392             | 836  | 9293            | 1839 | 0.47      | 0.45 | 71.5         | 73.4 | 15.0               | 15.0 | B   |   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4374             | 882  | 9293            | 1839 | 0.47      | 0.48 | 71.5         | 73.4 | 14.9               | 14.9 | B   |   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4348             | 807  | 9293            | 1839 | 0.47      | 0.44 | 71.5         | 73.4 | 14.8               | 14.8 | B   |   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4436             | 840  | 9293            | 1839 | 0.48      | 0.46 | 71.4         | 73.3 | 15.1               | 15.1 | B   |   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4009             | 787  | 9293            | 1839 | 0.43      | 0.43 | 71.7         | 73.5 | 13.6               | 13.6 | B   |   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4444             | 890  | 9293            | 1839 | 0.48      | 0.48 | 71.4         | 73.3 | 15.2               | 15.2 | B   |   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4114             | 824  | 9293            | 1839 | 0.44      | 0.45 | 71.7         | 73.5 | 14.0               | 14.0 | B   |   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4352             | 844  | 9293            | 1839 | 0.47      | 0.46 | 71.5         | 73.4 | 14.8               | 14.8 | B   |   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4242             | 774  | 9293            | 1839 | 0.46      | 0.42 | 71.6         | 73.4 | 14.4               | 14.4 | B   |   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4211             | 750  | 9293            | 1839 | 0.45      | 0.41 | 71.7         | 73.5 | 14.3               | 14.3 | B   |   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 4141             | 713  | 9293            | 1839 | 0.45      | 0.39 | 71.7         | 73.5 | 14.1               | 14.1 | B   |   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 3947             | 626  | 9293            | 1839 | 0.42      | 0.34 | 71.7         | 73.5 | 13.4               | 13.4 | B   |   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3551             | 671  | 9293            | 1839 | 0.38      | 0.36 | 71.7         | 73.5 | 12.1               | 12.1 | B   |   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3331             | 742  | 9293            | 1839 | 0.36      | 0.40 | 71.7         | 73.5 | 11.3               | 11.3 | B   |   |
| Segment 5: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |   |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |   |
|                    | 1    |       | 0.909 |       | 2851             |      | 6970            |      | 0.41      |      | 70.8         |      | 13.4               |      | B   |   |
| 2                  |      | 1.00  |       | 0.909 |                  | 2785 |                 | 6970 |           | 0.40 |              | 70.8 |                    | 13.1 |     | B |
| 3                  |      | 1.00  |       | 0.909 |                  | 3006 |                 | 6970 |           | 0.43 |              | 70.8 |                    | 14.2 |     | B |

|                    |      |       |                  |                 |           |              |                    |     |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 4                  | 1.00 | 0.909 | 3331             | 6970            | 0.48      | 70.8         | 15.7               | B   |
| 5                  | 1.00 | 0.909 | 3441             | 6970            | 0.49      | 70.8         | 16.2               | B   |
| 6                  | 1.00 | 0.909 | 3441             | 6970            | 0.49      | 70.8         | 16.2               | B   |
| 7                  | 1.00 | 0.909 | 3498             | 6970            | 0.50      | 70.7         | 16.5               | B   |
| 8                  | 1.00 | 0.909 | 3432             | 6970            | 0.49      | 70.8         | 16.2               | B   |
| 9                  | 1.00 | 0.909 | 3485             | 6970            | 0.50      | 70.7         | 16.4               | B   |
| 10                 | 1.00 | 0.909 | 3538             | 6970            | 0.51      | 70.7         | 16.7               | B   |
| 11                 | 1.00 | 0.909 | 3168             | 6970            | 0.45      | 70.8         | 14.9               | B   |
| 12                 | 1.00 | 0.909 | 3494             | 6970            | 0.50      | 70.7         | 16.5               | B   |
| 13                 | 1.00 | 0.909 | 3234             | 6970            | 0.46      | 70.8         | 15.2               | B   |
| 14                 | 1.00 | 0.909 | 3450             | 6970            | 0.49      | 70.8         | 16.2               | B   |
| 15                 | 1.00 | 0.909 | 3415             | 6970            | 0.49      | 70.8         | 16.1               | B   |
| 16                 | 1.00 | 0.909 | 3410             | 6970            | 0.49      | 70.8         | 16.1               | B   |
| 17                 | 1.00 | 0.909 | 3380             | 6970            | 0.48      | 70.8         | 15.9               | B   |
| 18                 | 1.00 | 0.909 | 3278             | 6970            | 0.47      | 70.8         | 15.4               | B   |
| 19                 | 1.00 | 0.909 | 2834             | 6970            | 0.41      | 70.8         | 13.3               | B   |
| 20                 | 1.00 | 0.909 | 2539             | 6970            | 0.36      | 70.8         | 11.9               | B   |
| Segment 6: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 3341             | 6773            | 0.49      | 58.8         | 14.2               | B   |
| 2                  | 1.00 | 0.909 | 3349             | 6773            | 0.49      | 58.8         | 14.2               | B   |
| 3                  | 1.00 | 0.909 | 3565             | 6833            | 0.52      | 58.2         | 15.3               | B   |
| 4                  | 1.00 | 0.909 | 3848             | 7815            | 0.49      | 58.7         | 16.4               | B   |
| 5                  | 1.00 | 0.909 | 3955             | 7798            | 0.51      | 58.2         | 17.0               | B   |
| 6                  | 1.00 | 0.909 | 4144             | 7306            | 0.57      | 56.8         | 18.2               | B   |
| 7                  | 1.00 | 0.909 | 4172             | 7215            | 0.58      | 56.7         | 18.4               | B   |
| 8                  | 1.00 | 0.909 | 4044             | 7283            | 0.56      | 57.2         | 17.7               | B   |
| 9                  | 1.00 | 0.909 | 4183             | 6677            | 0.63      | 55.8         | 18.7               | B   |
| 10                 | 1.00 | 0.909 | 4266             | 7237            | 0.59      | 56.4         | 18.9               | B   |
| 11                 | 1.00 | 0.909 | 3928             | 6695            | 0.59      | 56.7         | 17.3               | B   |
| 12                 | 1.00 | 0.909 | 4237             | 7171            | 0.59      | 56.3         | 18.8               | B   |
| 13                 | 1.00 | 0.909 | 4040             | 7306            | 0.55      | 57.2         | 17.7               | B   |
| 14                 | 1.00 | 0.909 | 4190             | 7592            | 0.55      | 57.1         | 18.3               | B   |
| 15                 | 1.00 | 0.909 | 4017             | 7871            | 0.51      | 58.8         | 17.1               | B   |
| 16                 | 1.00 | 0.909 | 4035             | 7876            | 0.51      | 58.9         | 17.1               | B   |
| 17                 | 1.00 | 0.909 | 3863             | 7992            | 0.48      | 60.6         | 15.9               | B   |
| 18                 | 1.00 | 0.909 | 3751             | 8000            | 0.47      | 61.0         | 15.4               | B   |
| 19                 | 1.00 | 0.909 | 3190             | 8022            | 0.40      | 63.0         | 12.7               | B   |
| 20                 | 1.00 | 0.909 | 2917             | 7945            | 0.37      | 63.0         | 11.6               | B   |
| Segment 7: Basic   |      |       |                  |                 |           |              |                    |     |
| Time               | PHF  | fHV   | Flow Rate        | Capacity        | d/c       | Speed        | Density            | LOS |



| Period           |      |       |       |       | (pc/h)           |      | (pc/h)          |      | Ratio     |      | (mi/h)       |      | (pc/mi/ln)         |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 |       |       | 2763             |      | 6970            |      | 0.40      |      | 70.6         |      | 13.0               |      | B   |
| 2                | 1.00 | 0.909 |       |       | 2843             |      | 6970            |      | 0.41      |      | 70.6         |      | 13.4               |      | B   |
| 3                | 1.00 | 0.909 |       |       | 2997             |      | 6970            |      | 0.43      |      | 70.6         |      | 14.1               |      | B   |
| 4                | 1.00 | 0.909 |       |       | 3318             |      | 6970            |      | 0.48      |      | 70.6         |      | 15.6               |      | B   |
| 5                | 1.00 | 0.909 |       |       | 3375             |      | 6970            |      | 0.48      |      | 70.6         |      | 15.9               |      | B   |
| 6                | 1.00 | 0.909 |       |       | 3617             |      | 6970            |      | 0.52      |      | 70.6         |      | 17.1               |      | B   |
| 7                | 1.00 | 0.909 |       |       | 3595             |      | 6970            |      | 0.52      |      | 70.6         |      | 16.9               |      | B   |
| 8                | 1.00 | 0.909 |       |       | 3454             |      | 6970            |      | 0.50      |      | 70.6         |      | 16.3               |      | B   |
| 9                | 1.00 | 0.909 |       |       | 3525             |      | 6970            |      | 0.51      |      | 70.6         |      | 16.6               |      | B   |
| 10               | 1.00 | 0.909 |       |       | 3718             |      | 6970            |      | 0.53      |      | 70.5         |      | 17.6               |      | B   |
| 11               | 1.00 | 0.909 |       |       | 3419             |      | 6970            |      | 0.49      |      | 70.6         |      | 16.1               |      | B   |
| 12               | 1.00 | 0.909 |       |       | 3701             |      | 6970            |      | 0.53      |      | 70.6         |      | 17.5               |      | B   |
| 13               | 1.00 | 0.909 |       |       | 3648             |      | 6970            |      | 0.52      |      | 70.6         |      | 17.2               |      | B   |
| 14               | 1.00 | 0.909 |       |       | 3736             |      | 6970            |      | 0.54      |      | 70.5         |      | 17.7               |      | B   |
| 15               | 1.00 | 0.909 |       |       | 3600             |      | 6970            |      | 0.52      |      | 70.6         |      | 17.0               |      | B   |
| 16               | 1.00 | 0.909 |       |       | 3639             |      | 6970            |      | 0.52      |      | 70.6         |      | 17.2               |      | B   |
| 17               | 1.00 | 0.909 |       |       | 3503             |      | 6970            |      | 0.50      |      | 70.6         |      | 16.5               |      | B   |
| 18               | 1.00 | 0.909 |       |       | 3415             |      | 6970            |      | 0.49      |      | 70.7         |      | 16.1               |      | B   |
| 19               | 1.00 | 0.909 |       |       | 2878             |      | 6970            |      | 0.41      |      | 70.7         |      | 13.5               |      | B   |
| 20               | 1.00 | 0.909 |       |       | 2614             |      | 6970            |      | 0.38      |      | 70.7         |      | 12.3               |      | B   |
| Segment 8: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 2911             | 148  | 6970            | 2033 | 0.42      | 0.07 | 67.2         | 64.9 | 14.4               | 14.6 | B   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 3000             | 157  | 6970            | 2033 | 0.43      | 0.08 | 67.1         | 64.8 | 14.9               | 15.0 | B   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 3170             | 173  | 6970            | 2033 | 0.45      | 0.09 | 66.9         | 64.7 | 15.8               | 15.8 | B   |
| 4                | 1.00 | 1.00  | 0.909 | 0.971 | 3454             | 136  | 6970            | 2033 | 0.50      | 0.07 | 66.7         | 64.6 | 17.3               | 17.1 | B   |
| 5                | 1.00 | 1.00  | 0.909 | 0.971 | 3523             | 148  | 6970            | 2033 | 0.51      | 0.07 | 66.6         | 64.5 | 17.6               | 17.4 | B   |
| 6                | 1.00 | 1.00  | 0.909 | 0.971 | 3757             | 140  | 6970            | 2033 | 0.54      | 0.07 | 66.5         | 64.4 | 18.8               | 18.5 | B   |
| 7                | 1.00 | 1.00  | 0.909 | 0.971 | 3747             | 152  | 6970            | 2033 | 0.54      | 0.07 | 66.5         | 64.4 | 18.8               | 18.5 | B   |
| 8                | 1.00 | 1.00  | 0.909 | 0.971 | 3578             | 124  | 6970            | 2033 | 0.51      | 0.06 | 66.6         | 64.5 | 17.9               | 17.6 | B   |
| 9                | 1.00 | 1.00  | 0.909 | 0.971 | 3719             | 194  | 6970            | 2033 | 0.53      | 0.10 | 66.5         | 64.4 | 18.6               | 18.5 | B   |
| 10               | 1.00 | 1.00  | 0.909 | 0.971 | 3903             | 185  | 6970            | 2033 | 0.56      | 0.09 | 66.3         | 64.2 | 19.6               | 19.3 | B   |
| 11               | 1.00 | 1.00  | 0.909 | 0.971 | 3666             | 247  | 6970            | 2033 | 0.53      | 0.12 | 66.5         | 64.4 | 18.4               | 18.3 | B   |
| 12               | 1.00 | 1.00  | 0.909 | 0.971 | 3890             | 189  | 6970            | 2033 | 0.56      | 0.09 | 66.3         | 64.2 | 19.6               | 19.2 | B   |
| 13               | 1.00 | 1.00  | 0.909 | 0.971 | 3908             | 260  | 6970            | 2033 | 0.56      | 0.13 | 66.2         | 64.2 | 19.7               | 19.5 | B   |
| 14               | 1.00 | 1.00  | 0.909 | 0.971 | 3942             | 206  | 6970            | 2033 | 0.57      | 0.10 | 66.2         | 64.2 | 19.8               | 19.5 | B   |
| 15               | 1.00 | 1.00  | 0.909 | 0.971 | 3744             | 144  | 6970            | 2033 | 0.54      | 0.07 | 66.5         | 64.4 | 18.8               | 18.4 | B   |
| 16               | 1.00 | 1.00  | 0.909 | 0.971 | 3726             | 87   | 6970            | 2033 | 0.53      | 0.04 | 66.5         | 64.4 | 18.7               | 18.2 | B   |
| 17               | 1.00 | 1.00  | 0.909 | 0.971 | 3594             | 91   | 6970            | 2033 | 0.52      | 0.04 | 66.6         | 64.5 | 18.0               | 17.6 | B   |

|                              |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
|------------------------------|-------------|------|-------|-------------------|------------------|----|--------------------|------|-----------|------------------|--------------|------|--------------------|------|-----|
| 18                           | 1.00        | 1.00 | 0.909 | 0.971             | 3493             | 78 | 6970               | 2033 | 0.50      | 0.04             | 66.8         | 64.6 | 17.4               | 17.1 | B   |
| 19                           | 1.00        | 1.00 | 0.909 | 0.971             | 2956             | 78 | 6970               | 2033 | 0.42      | 0.04             | 67.2         | 64.9 | 14.7               | 14.6 | B   |
| 20                           | 1.00        | 1.00 | 0.909 | 0.971             | 2668             | 54 | 6970               | 2033 | 0.38      | 0.03             | 67.4         | 65.0 | 13.2               | 13.2 | B   |
| Segment 9: Basic             |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |    | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 2922             |    | 6970               |      | 0.42      |                  | 70.6         |      | 13.8               |      | B   |
| 2                            | 1.00        |      | 0.909 |                   | 3010             |    | 6970               |      | 0.43      |                  | 70.6         |      | 14.2               |      | B   |
| 3                            | 1.00        |      | 0.909 |                   | 3182             |    | 6970               |      | 0.46      |                  | 70.6         |      | 15.0               |      | B   |
| 4                            | 1.00        |      | 0.909 |                   | 3463             |    | 6970               |      | 0.50      |                  | 70.6         |      | 16.3               |      | B   |
| 5                            | 1.00        |      | 0.909 |                   | 3534             |    | 6970               |      | 0.51      |                  | 70.6         |      | 16.7               |      | B   |
| 6                            | 1.00        |      | 0.909 |                   | 3767             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.8               |      | B   |
| 7                            | 1.00        |      | 0.909 |                   | 3758             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.8               |      | B   |
| 8                            | 1.00        |      | 0.909 |                   | 3586             |    | 6970               |      | 0.51      |                  | 70.6         |      | 16.9               |      | B   |
| 9                            | 1.00        |      | 0.909 |                   | 3732             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.6               |      | B   |
| 10                           | 1.00        |      | 0.909 |                   | 3916             |    | 6970               |      | 0.56      |                  | 70.2         |      | 18.6               |      | C   |
| 11                           | 1.00        |      | 0.909 |                   | 3683             |    | 6970               |      | 0.53      |                  | 70.6         |      | 17.4               |      | B   |
| 12                           | 1.00        |      | 0.909 |                   | 3903             |    | 6970               |      | 0.56      |                  | 70.3         |      | 18.5               |      | C   |
| 13                           | 1.00        |      | 0.909 |                   | 3925             |    | 6970               |      | 0.56      |                  | 70.2         |      | 18.6               |      | C   |
| 14                           | 1.00        |      | 0.909 |                   | 3956             |    | 6970               |      | 0.57      |                  | 70.2         |      | 18.8               |      | C   |
| 15                           | 1.00        |      | 0.909 |                   | 3754             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.7               |      | B   |
| 16                           | 1.00        |      | 0.909 |                   | 3732             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.6               |      | B   |
| 17                           | 1.00        |      | 0.909 |                   | 3600             |    | 6970               |      | 0.52      |                  | 70.6         |      | 17.0               |      | B   |
| 18                           | 1.00        |      | 0.909 |                   | 3498             |    | 6970               |      | 0.50      |                  | 70.6         |      | 16.5               |      | B   |
| 19                           | 1.00        |      | 0.909 |                   | 2961             |    | 6970               |      | 0.42      |                  | 70.6         |      | 13.9               |      | B   |
| 20                           | 1.00        |      | 0.909 |                   | 2671             |    | 6970               |      | 0.38      |                  | 70.6         |      | 12.6               |      | B   |
| Facility Time Period Results |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |    | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |      |     |
| 1                            | 67.6        |      |       | 15.1              |                  |    | 13.7               |      |           | 2.40             |              |      | B                  |      |     |
| 2                            | 67.6        |      |       | 15.4              |                  |    | 14.0               |      |           | 2.40             |              |      | B                  |      |     |
| 3                            | 67.3        |      |       | 16.5              |                  |    | 15.0               |      |           | 2.40             |              |      | B                  |      |     |
| 4                            | 67.0        |      |       | 18.2              |                  |    | 16.6               |      |           | 2.40             |              |      | C                  |      |     |
| 5                            | 66.9        |      |       | 18.5              |                  |    | 16.8               |      |           | 2.50             |              |      | C                  |      |     |
| 6                            | 66.7        |      |       | 19.0              |                  |    | 17.3               |      |           | 2.50             |              |      | C                  |      |     |
| 7                            | 66.6        |      |       | 19.1              |                  |    | 17.4               |      |           | 2.50             |              |      | C                  |      |     |
| 8                            | 66.7        |      |       | 18.7              |                  |    | 17.0               |      |           | 2.50             |              |      | C                  |      |     |
| 9                            | 66.5        |      |       | 18.9              |                  |    | 17.2               |      |           | 2.50             |              |      | C                  |      |     |
| 10                           | 66.4        |      |       | 19.7              |                  |    | 17.9               |      |           | 2.50             |              |      | C                  |      |     |
| 11                           | 66.9        |      |       | 17.9              |                  |    | 16.3               |      |           | 2.40             |              |      | B                  |      |     |
| 12                           | 66.5        |      |       | 19.5              |                  |    | 17.7               |      |           | 2.50             |              |      | C                  |      |     |
| 13                           | 67.0        |      |       | 18.6              |                  |    | 16.9               |      |           | 2.40             |              |      | C                  |      |     |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 14 | 66.7 | 19.5 | 17.7 | 2.50 | C |
| 15 | 67.3 | 18.5 | 16.8 | 2.40 | C |
| 16 | 67.4 | 18.4 | 16.7 | 2.40 | C |
| 17 | 67.8 | 17.8 | 16.2 | 2.40 | B |
| 18 | 68.1 | 17.0 | 15.5 | 2.40 | B |
| 19 | 68.7 | 14.6 | 13.3 | 2.40 | B |
| 20 | 68.7 | 13.4 | 12.2 | 2.40 | B |

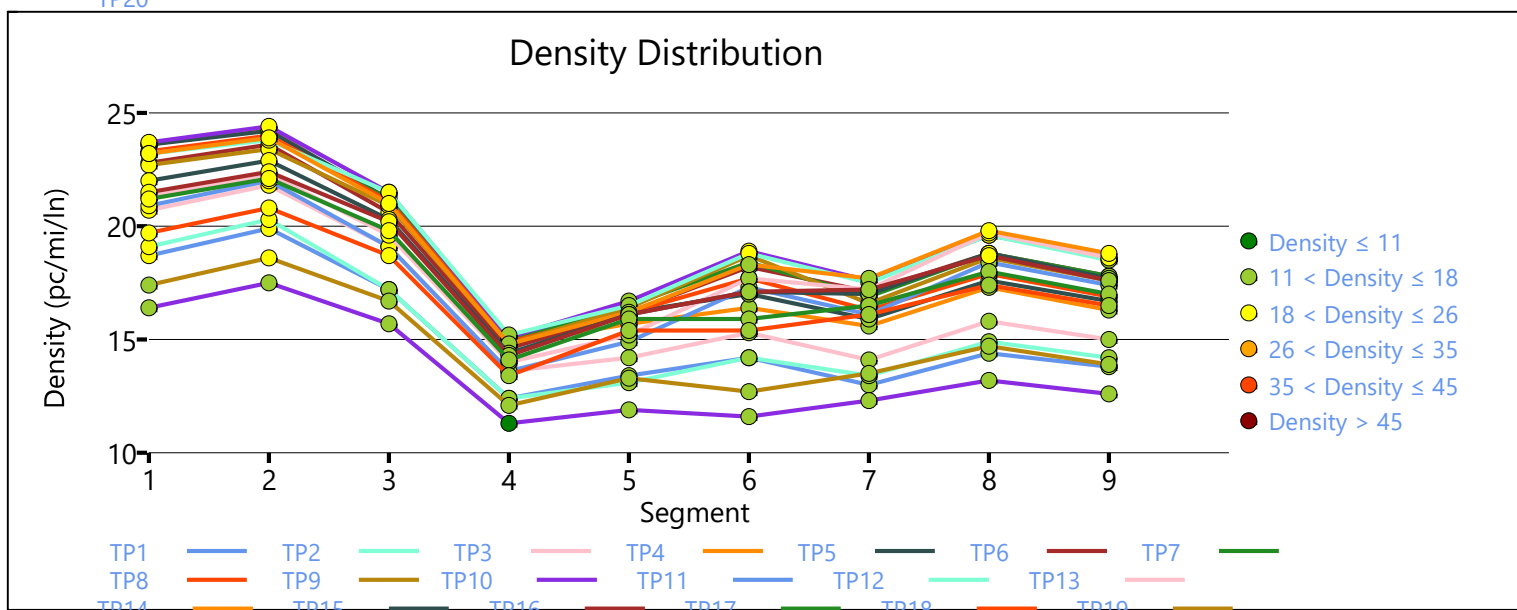
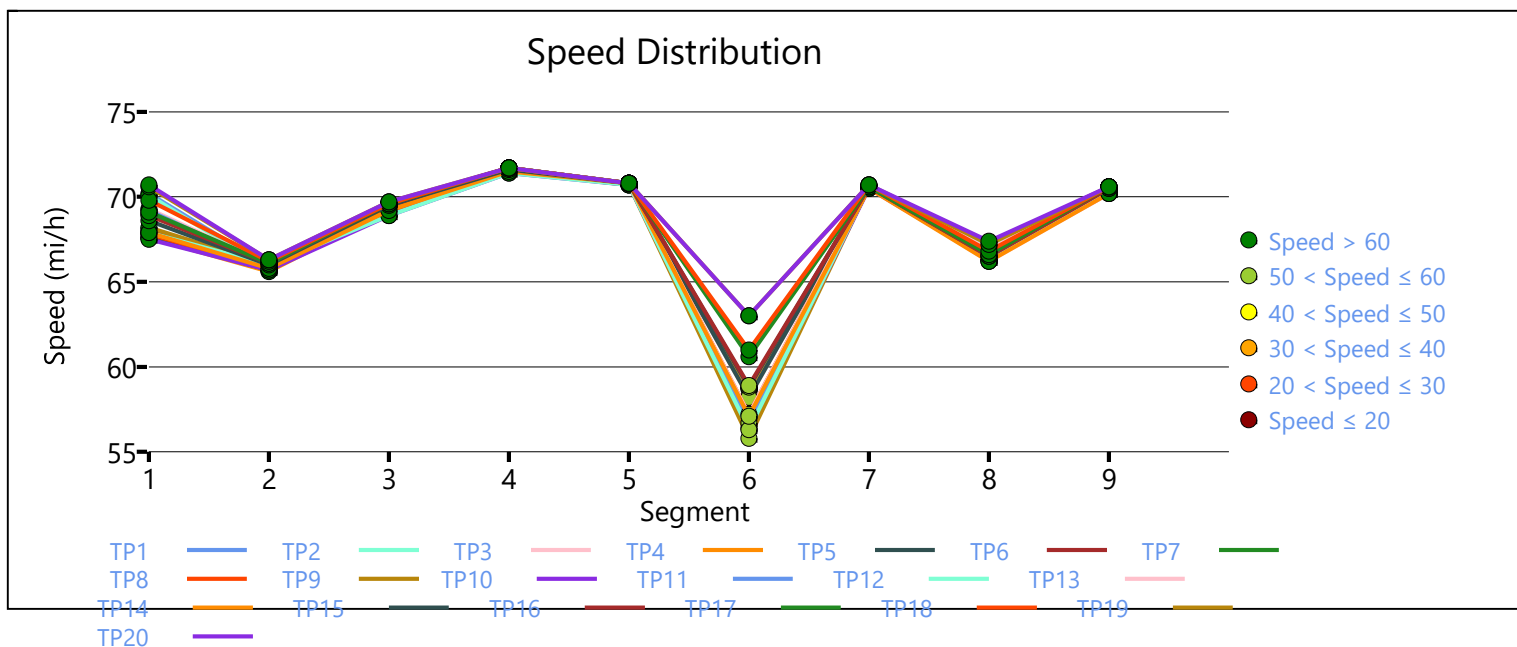
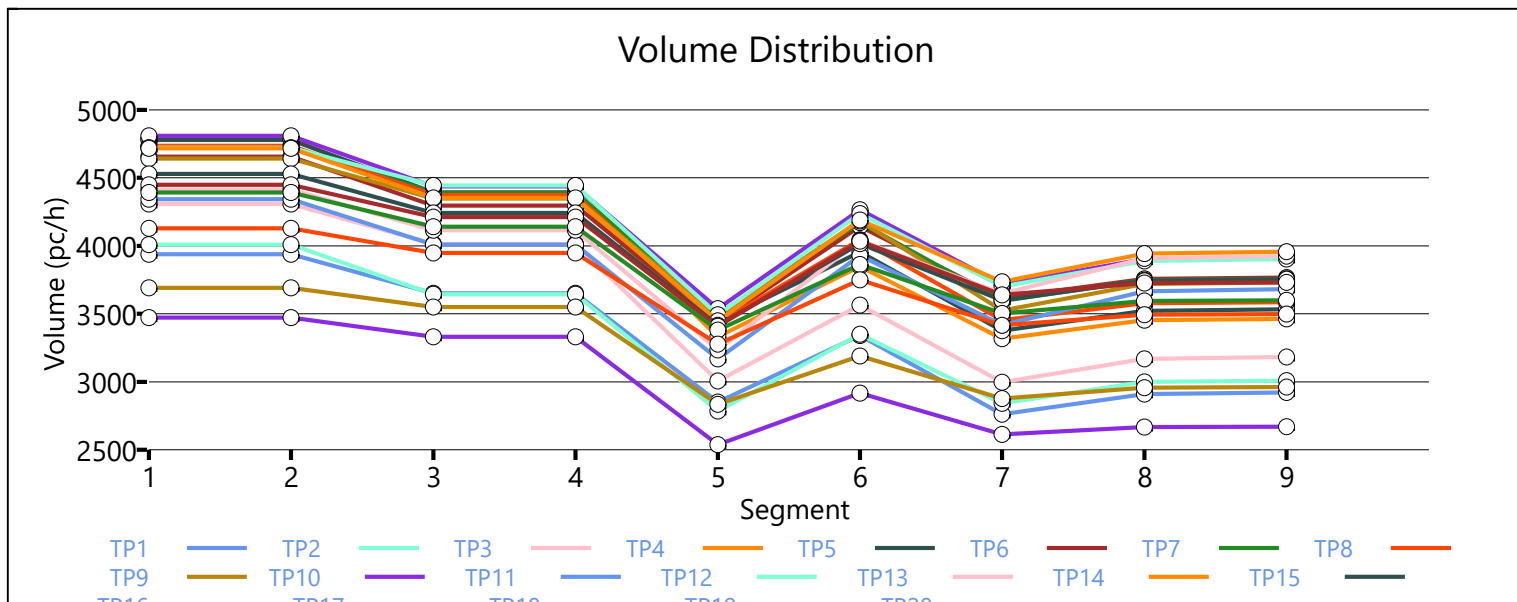
Facility Overall Results

|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 67.2 | Density, veh/mi/ln | 16.1 |
| Average Travel Time, min | 2.40 | Density, pc/mi/ln  | 17.7 |

Messages

Comments

|  |
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# HCS7 Freeway Facilities Report

## Project Information

|                     |                           |                      |                         |
|---------------------|---------------------------|----------------------|-------------------------|
| Analyst             | PG                        | Date                 | 9/17/2020               |
| Agency              | Lee Engineering           | Analysis Year        | 2025                    |
| Jurisdiction        | NMDOT                     | Time Period Analyzed | AM Peak Period          |
| Project Description | Build - NB I25 5AM to 9AM | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 3.06  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                       | Length, ft | Lanes |
|-----|---------|----------|--------------------------------------------|------------|-------|
| 1   | Basic   | Basic    | NB I25 South of Sunport                    | 5280       | 3     |
| 2   | Diverge | Diverge  | Off-Ramp to Sunport                        | 1500       | 3     |
| 3   | Basic   | Basic    | NB I25 bet                                 | 3070       | 3     |
| 4   | Weaving | Weaving  | Sunport Off/On Ramps                       | 1750       | 4     |
| 5   | Basic   | Basic    | NB I24 bet Sunport On and Gibson Off Ramps | 1155       | 3     |
| 6   | Merge   | Merge    | NB I25 bet Gibson Off/On Ramps             | 700        | 3     |
| 7   | Basic   | Basic    | On-ramp from EB Gibson                     | 400        | 3     |
| 8   | Merge   | Merge    | NB I25 bet Gibson On-Ramps                 | 800        | 3     |
| 9   | Basic   | Basic    | On-ramp from WB Gibson                     | 1500       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1347             | 6970            | 0.19      | 70.8         | 6.3                | A   |
| 2           | 1.00 | 0.909 | 2015             | 6970            | 0.29      | 70.8         | 9.5                | A   |
| 3           | 1.00 | 0.909 | 2363             | 6970            | 0.34      | 70.8         | 11.1               | B   |
| 4           | 1.00 | 0.909 | 2143             | 6970            | 0.31      | 70.8         | 10.1               | A   |
| 5           | 1.00 | 0.909 | 3036             | 6970            | 0.44      | 70.8         | 14.3               | B   |
| 6           | 1.00 | 0.909 | 3894             | 6970            | 0.56      | 70.3         | 18.5               | C   |
| 7           | 1.00 | 0.909 | 4528             | 6970            | 0.65      | 68.6         | 22.0               | C   |
| 8           | 1.00 | 0.909 | 4035             | 6970            | 0.58      | 70.0         | 19.2               | C   |
| 9           | 1.00 | 0.909 | 4928             | 6970            | 0.71      | 67.0         | 24.5               | C   |
| 10          | 1.00 | 0.909 | 5690             | 6970            | 0.82      | 62.6         | 30.3               | D   |
| 11          | 1.00 | 0.909 | 4950             | 6970            | 0.71      | 66.9         | 24.7               | C   |
| 12          | 1.00 | 0.909 | 3503             | 6970            | 0.50      | 70.7         | 16.5               | B   |
| 13          | 1.00 | 0.909 | 3525             | 6970            | 0.51      | 70.7         | 16.6               | B   |

| 14                 | 1.00 | 0.909 | 3485  |       | 6970             |      | 0.50            | 70.7 |           | 16.4 |              | B    |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 15                 | 1.00 | 0.909 | 3358  |       | 6970             |      | 0.48            | 70.8 |           | 15.8 |              | B    |                    |      |     |
| 16                 | 1.00 | 0.909 | 2609  |       | 6970             |      | 0.37            | 70.8 |           | 12.3 |              | B    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1347             | 41   | 6970            | 2033 | 0.19      | 0.02 | 67.3         | 63.5 | 6.7                | 10.5 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2015             | 74   | 6970            | 2033 | 0.29      | 0.04 | 67.6         | 63.5 | 9.9                | 14.4 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2363             | 87   | 6970            | 2033 | 0.34      | 0.04 | 67.6         | 63.4 | 11.7               | 16.4 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2143             | 99   | 6970            | 2033 | 0.31      | 0.05 | 67.5         | 63.4 | 10.6               | 15.2 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3036             | 87   | 6970            | 2033 | 0.44      | 0.04 | 67.9         | 63.4 | 14.9               | 20.0 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 3894             | 95   | 6970            | 2033 | 0.56      | 0.05 | 68.0         | 63.4 | 19.1               | 24.3 | C   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4528             | 103  | 6970            | 2033 | 0.65      | 0.05 | 67.9         | 63.4 | 22.2               | 27.3 | C   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4035             | 119  | 6970            | 2033 | 0.58      | 0.06 | 67.9         | 63.3 | 19.8               | 25.0 | C   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4928             | 87   | 6970            | 2033 | 0.71      | 0.04 | 67.9         | 63.4 | 24.2               | 29.1 | D   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5690             | 132  | 6970            | 2033 | 0.82      | 0.06 | 67.6         | 63.3 | 28.1               | 32.4 | D   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4950             | 177  | 6970            | 2033 | 0.71      | 0.09 | 67.7         | 63.2 | 24.4               | 29.3 | D   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3503             | 173  | 6970            | 2033 | 0.50      | 0.09 | 67.8         | 63.2 | 17.2               | 22.5 | C   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3525             | 140  | 6970            | 2033 | 0.51      | 0.07 | 67.9         | 63.3 | 17.3               | 22.6 | C   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 3485             | 140  | 6970            | 2033 | 0.50      | 0.07 | 67.9         | 63.3 | 17.1               | 22.4 | C   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3358             | 140  | 6970            | 2033 | 0.48      | 0.07 | 67.9         | 63.3 | 16.5               | 21.7 | C   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2609             | 111  | 6970            | 2033 | 0.37      | 0.05 | 67.7         | 63.4 | 12.8               | 17.8 | B   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1303             |      | 6970            |      | 0.19      |      | 70.7         |      | 6.1                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1936             |      | 6970            |      | 0.28      |      | 70.7         |      | 9.1                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2271             |      | 6970            |      | 0.33      |      | 70.7         |      | 10.7               |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2037             |      | 6970            |      | 0.29      |      | 70.7         |      | 9.6                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2944             |      | 6970            |      | 0.42      |      | 70.7         |      | 13.9               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 3793             |      | 6970            |      | 0.54      |      | 70.4         |      | 18.0               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 4418             |      | 6970            |      | 0.63      |      | 69.0         |      | 21.3               |      | C   |
| 8                  | 1.00 |       | 0.909 |       | 3908             |      | 6970            |      | 0.56      |      | 70.2         |      | 18.6               |      | C   |
| 9                  | 1.00 |       | 0.909 |       | 4836             |      | 6970            |      | 0.69      |      | 67.4         |      | 23.9               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 5549             |      | 6970            |      | 0.80      |      | 63.5         |      | 29.1               |      | D   |
| 11                 | 1.00 |       | 0.909 |       | 4761             |      | 6970            |      | 0.68      |      | 67.7         |      | 23.4               |      | C   |
| 12                 | 1.00 |       | 0.909 |       | 3318             |      | 6970            |      | 0.48      |      | 70.7         |      | 15.6               |      | B   |
| 13                 | 1.00 |       | 0.909 |       | 3375             |      | 6970            |      | 0.48      |      | 70.7         |      | 15.9               |      | B   |
| 14                 | 1.00 |       | 0.909 |       | 3336             |      | 6970            |      | 0.48      |      | 70.7         |      | 15.7               |      | B   |
| 15                 | 1.00 |       | 0.909 |       | 3208             |      | 6970            |      | 0.46      |      | 70.7         |      | 15.1               |      | B   |
| 16                 | 1.00 |       | 0.909 |       | 2491             |      | 6970            |      | 0.36      |      | 70.7         |      | 11.7               |      | B   |

| Segment 4: Weaving |      |   |       |   |                  |      |                 |      |           |   |              |   |                    |      |     |
|--------------------|------|---|-------|---|------------------|------|-----------------|------|-----------|---|--------------|---|--------------------|------|-----|
| Time Period        | PHF  |   | fHV   |   | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |   | Speed (mi/h) |   | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |   | 0.909 |   | 1689             |      | 5837            |      | 0.29      |   | 64.5         |   | 6.5                |      | A   |
| 2                  | 1.00 |   | 0.909 |   | 2347             |      | 7105            |      | 0.33      |   | 63.7         |   | 9.2                |      | A   |
| 3                  | 1.00 |   | 0.909 |   | 2530             |      | 7642            |      | 0.33      |   | 63.6         |   | 9.9                |      | A   |
| 4                  | 1.00 |   | 0.909 |   | 2403             |      | 6212            |      | 0.39      |   | 62.4         |   | 9.6                |      | A   |
| 5                  | 1.00 |   | 0.909 |   | 3432             |      | 8031            |      | 0.43      |   | 62.2         |   | 13.8               |      | B   |
| 6                  | 1.00 |   | 0.909 |   | 4166             |      | 8151            |      | 0.51      |   | 61.3         |   | 17.0               |      | B   |
| 7                  | 1.00 |   | 0.909 |   | 4720             |      | 8182            |      | 0.58      |   | 60.3         |   | 19.6               |      | B   |
| 8                  | 1.00 |   | 0.909 |   | 4226             |      | 8007            |      | 0.53      |   | 59.6         |   | 17.7               |      | B   |
| 9                  | 1.00 |   | 0.909 |   | 5272             |      | 7999            |      | 0.66      |   | 56.6         |   | 23.3               |      | C   |
| 10                 | 1.00 |   | 0.909 |   | 5927             |      | 8143            |      | 0.73      |   | 56.7         |   | 26.1               |      | C   |
| 11                 | 1.00 |   | 0.909 |   | 5229             |      | 7999            |      | 0.65      |   | 56.7         |   | 23.1               |      | C   |
| 12                 | 1.00 |   | 0.909 |   | 3694             |      | 5897            |      | 0.63      |   | 57.3         |   | 16.1               |      | B   |
| 13                 | 1.00 |   | 0.909 |   | 3777             |      | 6955            |      | 0.54      |   | 58.6         |   | 16.1               |      | B   |
| 14                 | 1.00 |   | 0.909 |   | 3595             |      | 7568            |      | 0.48      |   | 59.9         |   | 15.0               |      | B   |
| 15                 | 1.00 |   | 0.909 |   | 3623             |      | 7398            |      | 0.49      |   | 59.7         |   | 15.2               |      | B   |
| 16                 | 1.00 |   | 0.909 |   | 3021             |      | 4850            |      | 0.62      |   | 57.8         |   | 13.1               |      | B   |
| Segment 5: Basic   |      |   |       |   |                  |      |                 |      |           |   |              |   |                    |      |     |
| Time Period        | PHF  |   | fHV   |   | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |   | Speed (mi/h) |   | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |   | 0.909 |   | 1448             |      | 6970            |      | 0.21      |   | 70.2         |   | 6.8                |      | A   |
| 2                  | 1.00 |   | 0.909 |   | 2042             |      | 6970            |      | 0.29      |   | 70.1         |   | 9.6                |      | A   |
| 3                  | 1.00 |   | 0.909 |   | 2073             |      | 6970            |      | 0.30      |   | 70.1         |   | 9.8                |      | A   |
| 4                  | 1.00 |   | 0.909 |   | 1932             |      | 6970            |      | 0.28      |   | 70.0         |   | 9.1                |      | A   |
| 5                  | 1.00 |   | 0.909 |   | 3133             |      | 6970            |      | 0.45      |   | 70.0         |   | 14.7               |      | B   |
| 6                  | 1.00 |   | 0.909 |   | 3736             |      | 6970            |      | 0.54      |   | 69.9         |   | 17.7               |      | B   |
| 7                  | 1.00 |   | 0.909 |   | 4158             |      | 6970            |      | 0.60      |   | 69.7         |   | 19.9               |      | C   |
| 8                  | 1.00 |   | 0.909 |   | 3547             |      | 6970            |      | 0.51      |   | 69.7         |   | 16.7               |      | B   |
| 9                  | 1.00 |   | 0.909 |   | 4453             |      | 6970            |      | 0.64      |   | 68.9         |   | 21.5               |      | C   |
| 10                 | 1.00 |   | 0.909 |   | 5153             |      | 6970            |      | 0.74      |   | 65.9         |   | 26.1               |      | D   |
| 11                 | 1.00 |   | 0.909 |   | 4449             |      | 6970            |      | 0.64      |   | 68.9         |   | 21.5               |      | C   |
| 12                 | 1.00 |   | 0.909 |   | 2715             |      | 6970            |      | 0.39      |   | 69.5         |   | 12.8               |      | B   |
| 13                 | 1.00 |   | 0.909 |   | 3006             |      | 6970            |      | 0.43      |   | 69.6         |   | 14.2               |      | B   |
| 14                 | 1.00 |   | 0.909 |   | 2825             |      | 6970            |      | 0.41      |   | 69.8         |   | 13.3               |      | B   |
| 15                 | 1.00 |   | 0.909 |   | 2979             |      | 6970            |      | 0.43      |   | 69.7         |   | 14.0               |      | B   |
| 16                 | 1.00 |   | 0.909 |   | 2205             |      | 6970            |      | 0.32      |   | 69.6         |   | 10.4               |      | A   |
| Segment 6: Merge   |      |   |       |   |                  |      |                 |      |           |   |              |   |                    |      |     |
| Time Period        | PHF  |   | fHV   |   | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |   | Speed (mi/h) |   | Density (pc/mi/ln) |      | LOS |
|                    | F    | R | F     | R | Freeway          | Ramp | Freeway         | Ramp | F         | R | F            | R | Freeway            | Ramp |     |

|                  |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 1518             | 70   | 6970            | 2033 | 0.22      | 0.03 | 67.9         | 65.0 | 7.5                | 8.4  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 2100             | 58   | 6970            | 2033 | 0.30      | 0.03 | 67.6         | 64.9 | 10.4               | 11.1 | B   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 2172             | 99   | 6970            | 2033 | 0.31      | 0.05 | 67.6         | 64.9 | 10.7               | 11.5 | B   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 2043             | 111  | 6970            | 2033 | 0.29      | 0.05 | 67.6         | 64.9 | 10.1               | 11.0 | B   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 3215             | 82   | 6970            | 2033 | 0.46      | 0.04 | 66.8         | 64.5 | 16.0               | 16.3 | B   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 3876             | 140  | 6970            | 2033 | 0.56      | 0.07 | 66.2         | 64.0 | 19.5               | 19.6 | B   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 4352             | 194  | 6970            | 2033 | 0.62      | 0.10 | 65.6         | 63.5 | 22.1               | 21.9 | C   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 3741             | 194  | 6970            | 2033 | 0.54      | 0.10 | 66.3         | 64.1 | 18.8               | 19.1 | B   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 4774             | 321  | 6970            | 2033 | 0.68      | 0.16 | 65.0         | 62.9 | 24.5               | 24.2 | C   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 5388             | 235  | 6970            | 2033 | 0.77      | 0.12 | 64.1         | 62.0 | 28.0               | 26.9 | C   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 4779             | 330  | 6970            | 2033 | 0.69      | 0.16 | 65.0         | 62.9 | 24.5               | 24.3 | C   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 3020             | 305  | 6970            | 2033 | 0.43      | 0.15 | 66.8         | 64.5 | 15.1               | 16.0 | B   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 3200             | 194  | 6970            | 2033 | 0.46      | 0.10 | 66.7         | 64.4 | 16.0               | 16.6 | B   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 3060             | 235  | 6970            | 2033 | 0.44      | 0.12 | 66.8         | 64.5 | 15.3               | 16.0 | B   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 3284             | 305  | 6970            | 2033 | 0.47      | 0.15 | 66.6         | 64.3 | 16.4               | 17.3 | B   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 2493             | 288  | 6970            | 2033 | 0.36      | 0.14 | 67.2         | 64.7 | 12.4               | 13.5 | B   |
| Segment 7: Basic |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |      | 0.909 |       | 1523             |      | 6970            |      | 0.22      |      | 69.6         |      | 7.2                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 2103             |      | 6970            |      | 0.30      |      | 69.5         |      | 9.9                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 2178             |      | 6970            |      | 0.31      |      | 69.5         |      | 10.3               |      | A   |
| 4                | 1.00 |      | 0.909 |       | 2051             |      | 6970            |      | 0.29      |      | 69.5         |      | 9.7                |      | A   |
| 5                | 1.00 |      | 0.909 |       | 3221             |      | 6970            |      | 0.46      |      | 69.2         |      | 15.2               |      | B   |
| 6                | 1.00 |      | 0.909 |       | 3886             |      | 6970            |      | 0.56      |      | 68.9         |      | 18.4               |      | C   |
| 7                | 1.00 |      | 0.909 |       | 4365             |      | 6970            |      | 0.63      |      | 68.7         |      | 21.1               |      | C   |
| 8                | 1.00 |      | 0.909 |       | 3754             |      | 6970            |      | 0.54      |      | 69.0         |      | 17.7               |      | B   |
| 9                | 1.00 |      | 0.909 |       | 4796             |      | 6970            |      | 0.69      |      | 67.6         |      | 23.7               |      | C   |
| 10               | 1.00 |      | 0.909 |       | 5404             |      | 6970            |      | 0.78      |      | 64.5         |      | 27.9               |      | D   |
| 11               | 1.00 |      | 0.909 |       | 4801             |      | 6970            |      | 0.69      |      | 67.6         |      | 23.7               |      | C   |
| 12               | 1.00 |      | 0.909 |       | 3041             |      | 6970            |      | 0.44      |      | 69.2         |      | 14.3               |      | B   |
| 13               | 1.00 |      | 0.909 |       | 3212             |      | 6970            |      | 0.46      |      | 69.1         |      | 15.1               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 3076             |      | 6970            |      | 0.44      |      | 69.2         |      | 14.5               |      | B   |
| 15               | 1.00 |      | 0.909 |       | 3305             |      | 6970            |      | 0.47      |      | 69.1         |      | 15.6               |      | B   |
| 16               | 1.00 |      | 0.909 |       | 2513             |      | 6970            |      | 0.36      |      | 69.3         |      | 11.8               |      | B   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 1638             | 115  | 6970            | 2033 | 0.24      | 0.06 | 67.9         | 65.2 | 8.0                | 8.5  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 2268             | 165  | 6970            | 2033 | 0.33      | 0.08 | 67.6         | 65.1 | 11.2               | 11.6 | B   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 2363             | 185  | 6970            | 2033 | 0.34      | 0.09 | 67.5         | 65.1 | 11.7               | 12.1 | B   |



|    |      |      |       |       |      |     |      |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|------|------|------|------|------|------|------|------|---|
| 4  | 1.00 | 1.00 | 0.909 | 0.971 | 2290 | 239 | 6970 | 2033 | 0.33 | 0.12 | 67.5 | 65.1 | 11.3 | 11.9 | B |
| 5  | 1.00 | 1.00 | 0.909 | 0.971 | 3608 | 387 | 6970 | 2033 | 0.52 | 0.19 | 66.5 | 64.4 | 18.1 | 18.4 | B |
| 6  | 1.00 | 1.00 | 0.909 | 0.971 | 4380 | 494 | 6970 | 2033 | 0.63 | 0.24 | 65.6 | 63.5 | 22.3 | 22.3 | C |
| 7  | 1.00 | 1.00 | 0.909 | 0.971 | 4954 | 589 | 6970 | 2033 | 0.71 | 0.29 | 64.7 | 62.6 | 25.5 | 25.3 | C |
| 8  | 1.00 | 1.00 | 0.909 | 0.971 | 4393 | 639 | 6970 | 2033 | 0.63 | 0.31 | 65.5 | 63.4 | 22.4 | 22.8 | C |
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 5488 | 692 | 6970 | 2033 | 0.79 | 0.34 | 63.5 | 61.2 | 28.8 | 28.1 | D |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 6174 | 770 | 6970 | 2033 | 0.89 | 0.38 | 61.6 | 58.8 | 33.4 | 31.5 | D |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 5621 | 820 | 6970 | 2033 | 0.81 | 0.40 | 63.1 | 60.6 | 29.7 | 29.0 | D |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 3869 | 828 | 6970 | 2033 | 0.56 | 0.41 | 65.9 | 63.9 | 19.6 | 20.8 | C |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 4007 | 795 | 6970 | 2033 | 0.57 | 0.39 | 65.8 | 63.7 | 20.3 | 21.4 | C |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 3904 | 828 | 6970 | 2033 | 0.56 | 0.41 | 65.9 | 63.8 | 19.7 | 21.0 | C |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 4034 | 729 | 6970 | 2033 | 0.58 | 0.36 | 65.9 | 63.8 | 20.4 | 21.3 | C |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 3287 | 774 | 6970 | 2033 | 0.47 | 0.38 | 66.5 | 64.4 | 16.5 | 18.0 | B |

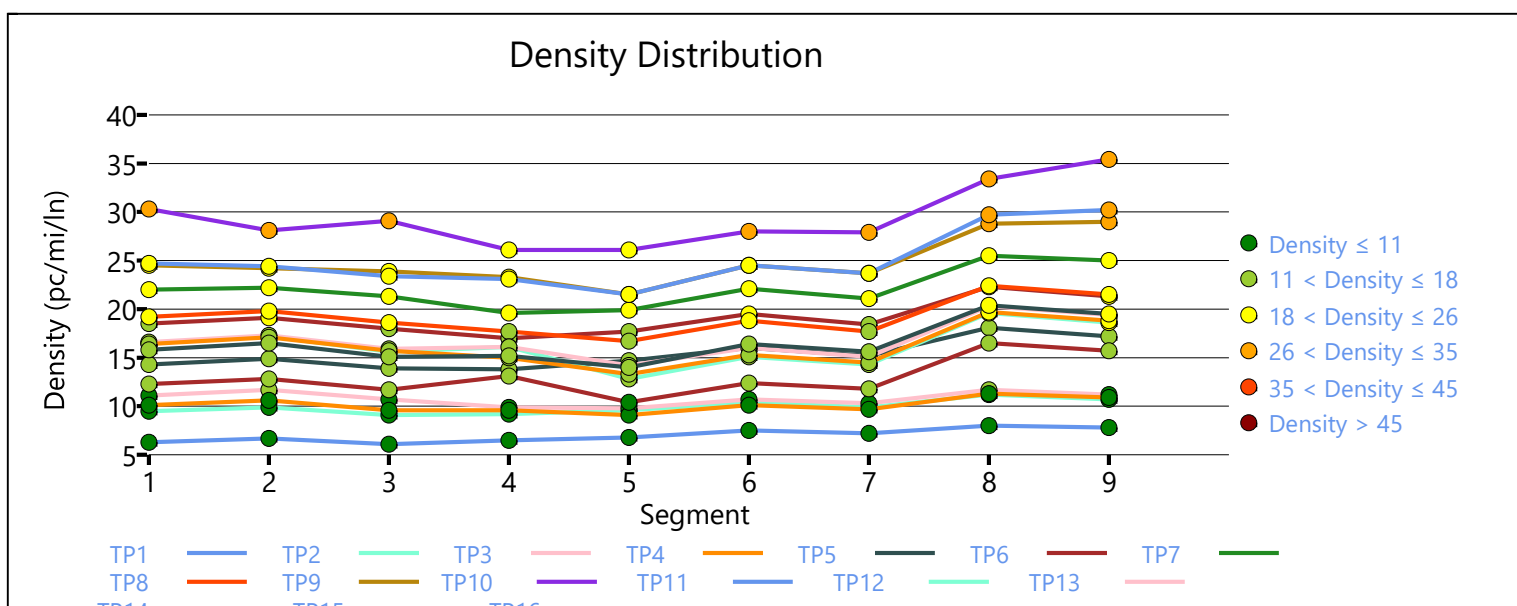
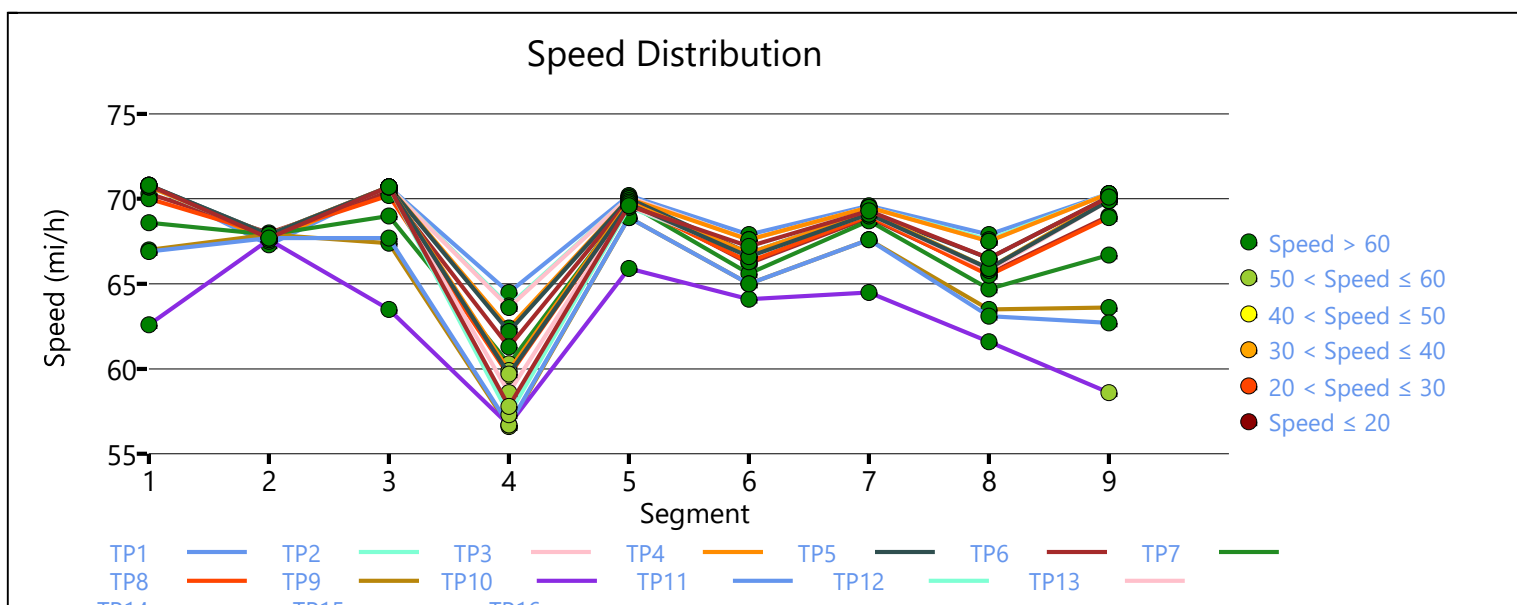
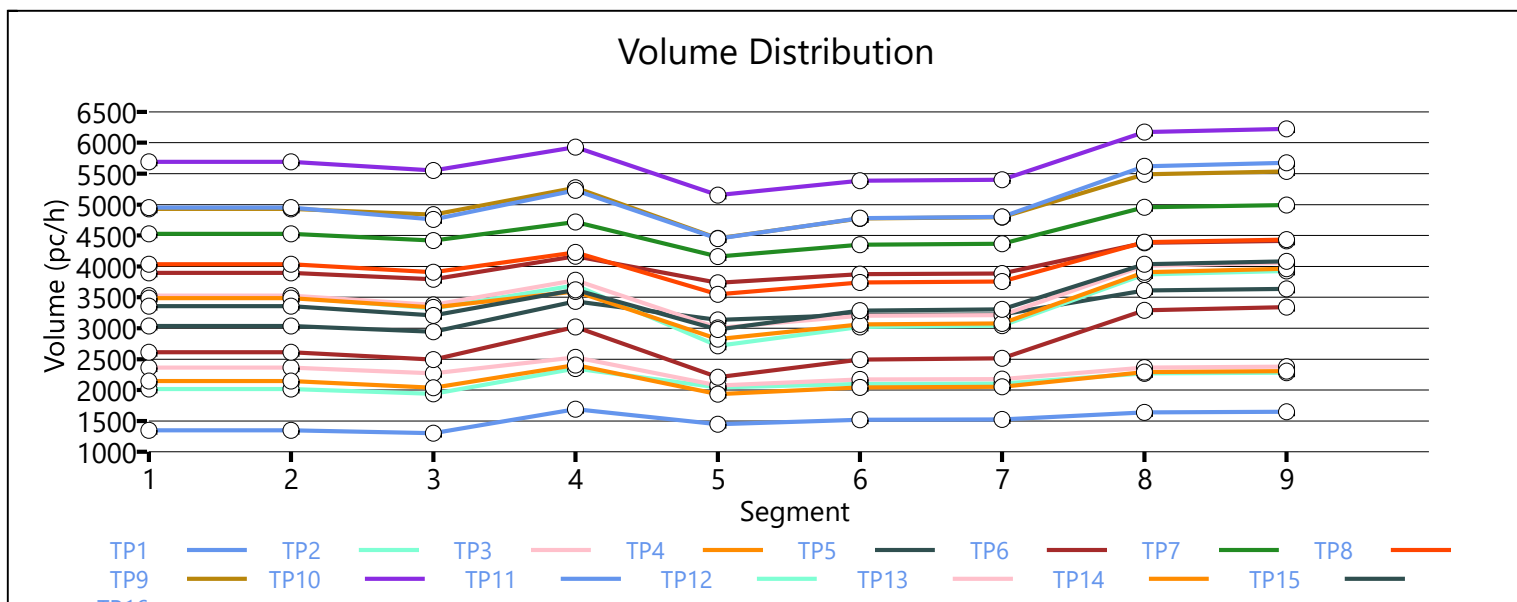
Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1646             | 6970            | 0.24      | 70.3         | 7.8                | A   |
| 2           | 1.00 | 0.909 | 2279             | 6970            | 0.33      | 70.3         | 10.7               | A   |
| 3           | 1.00 | 0.909 | 2376             | 6970            | 0.34      | 70.3         | 11.2               | B   |
| 4           | 1.00 | 0.909 | 2306             | 6970            | 0.33      | 70.3         | 10.9               | A   |
| 5           | 1.00 | 0.909 | 3635             | 6970            | 0.52      | 70.1         | 17.2               | B   |
| 6           | 1.00 | 0.909 | 4414             | 6970            | 0.63      | 69.0         | 21.3               | C   |
| 7           | 1.00 | 0.909 | 4994             | 6970            | 0.72      | 66.7         | 25.0               | C   |
| 8           | 1.00 | 0.909 | 4436             | 6970            | 0.64      | 68.9         | 21.5               | C   |
| 9           | 1.00 | 0.909 | 5536             | 6970            | 0.79      | 63.6         | 29.0               | D   |
| 10          | 1.00 | 0.909 | 6227             | 6970            | 0.89      | 58.6         | 35.4               | E   |
| 11          | 1.00 | 0.909 | 5677             | 6970            | 0.81      | 62.7         | 30.2               | D   |
| 12          | 1.00 | 0.909 | 3925             | 6970            | 0.56      | 70.0         | 18.6               | C   |
| 13          | 1.00 | 0.909 | 4062             | 6970            | 0.58      | 69.9         | 19.4               | C   |
| 14          | 1.00 | 0.909 | 3960             | 6970            | 0.57      | 70.0         | 18.8               | C   |
| 15          | 1.00 | 0.909 | 4084             | 6970            | 0.59      | 69.9         | 19.5               | C   |
| 16          | 1.00 | 0.909 | 3340             | 6970            | 0.48      | 70.1         | 15.7               | B   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 69.2        | 6.7               | 6.0                | 2.70             | A   |
| 2 | 69.1        | 9.7               | 8.8                | 2.70             | A   |
| 3 | 69.1        | 10.8              | 9.8                | 2.70             | A   |
| 4 | 68.9        | 10.0              | 9.1                | 2.70             | A   |
| 5 | 68.8        | 14.8              | 13.4               | 2.70             | B   |
| 6 | 68.3        | 18.7              | 17.0               | 2.70             | C   |
| 7 | 67.1        | 21.8              | 19.9               | 2.70             | C   |

|                          |      |      |                    |      |      |
|--------------------------|------|------|--------------------|------|------|
| 8                        | 67.9 | 19.1 | 17.4               | 2.70 | C    |
| 9                        | 65.3 | 24.6 | 22.4               | 2.80 | C    |
| 10                       | 62.3 | 29.5 | 26.8               | 2.90 | D    |
| 11                       | 65.1 | 24.7 | 22.5               | 2.80 | C    |
| 12                       | 68.0 | 16.3 | 14.8               | 2.70 | B    |
| 13                       | 68.2 | 16.7 | 15.2               | 2.70 | B    |
| 14                       | 68.4 | 16.2 | 14.7               | 2.70 | B    |
| 15                       | 68.4 | 16.1 | 14.6               | 2.70 | B    |
| 16                       | 68.0 | 12.7 | 11.6               | 2.70 | B    |
| Facility Overall Results |      |      |                    |      |      |
| Space Mean Speed, mi/h   |      | 67.1 | Density, veh/mi/ln |      | 15.2 |
| Average Travel Time, min |      | 2.70 | Density, pc/mi/ln  |      | 16.8 |
| Messages                 |      |      |                    |      |      |
| Comments                 |      |      |                    |      |      |
|                          |      |      |                    |      |      |



# HCS7 Freeway Facilities Report

## Project Information

|                     |                       |                      |                         |
|---------------------|-----------------------|----------------------|-------------------------|
| Analyst             | PG                    | Date                 | 9/17/2020               |
| Agency              | Lee Engineering       | Analysis Year        | 2025                    |
| Jurisdiction        | NMDOT                 | Time Period Analyzed | AM Peak Period          |
| Project Description | Build I-25 Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.73  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | I-25 SB North of Gibson             | 2640       | 3     |
| 2   | Diverge | Diverge  | SB Off-Ramp to WB Gibson            | 1500       | 3     |
| 3   | Basic   | Basic    | Btw Gibson Off Ramps                | 200        | 3     |
| 4   | Diverge | Basic    | SB Off-Ramp to EB Gibson            | 750        | 4     |
| 5   | Basic   | Basic    | Btw Gibson Off and On Ramps         | 620        | 3     |
| 6   | Weaving | Weaving  | Btw Gibson On and Sunport Off Ramps | 2250       | 4     |
| 7   | Basic   | Basic    | Btw Sunport Off and On Ramps        | 2950       | 3     |
| 8   | Merge   | Merge    | On-Ramp from Sunport                | 875        | 3     |
| 9   | Basic   | Basic    | I-25 Sb South of Sunport            | 2640       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1989             | 6970            | 0.29      | 70.8         | 9.4                | A   |
| 2           | 1.00 | 0.909 | 2306             | 6970            | 0.33      | 70.8         | 10.9               | A   |
| 3           | 1.00 | 0.909 | 3067             | 6970            | 0.44      | 70.8         | 14.4               | B   |
| 4           | 1.00 | 0.909 | 3806             | 6970            | 0.55      | 70.4         | 18.0               | B   |
| 5           | 1.00 | 0.909 | 3459             | 6970            | 0.50      | 70.8         | 16.3               | B   |
| 6           | 1.00 | 0.909 | 4554             | 6970            | 0.65      | 68.5         | 22.2               | C   |
| 7           | 1.00 | 0.909 | 5347             | 6970            | 0.77      | 64.8         | 27.5               | D   |
| 8           | 1.00 | 0.909 | 5901             | 6970            | 0.85      | 61.1         | 32.2               | D   |
| 9           | 1.00 | 0.909 | 5448             | 6970            | 0.78      | 64.2         | 28.3               | D   |
| 10          | 1.00 | 0.909 | 5848             | 6970            | 0.84      | 61.5         | 31.7               | D   |
| 11          | 1.00 | 0.909 | 5316             | 6970            | 0.76      | 65.0         | 27.3               | D   |
| 12          | 1.00 | 0.909 | 5382             | 6970            | 0.77      | 64.6         | 27.8               | D   |
| 13          | 1.00 | 0.909 | 5083             | 6970            | 0.73      | 66.2         | 25.6               | C   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 14                 | 1.00 | 0.909 | 4915  |       | 6970             |      | 0.71            | 67.0 | 24.4      |      | C            |      |                    |      |     |
| 15                 | 1.00 | 0.909 | 4576  |       | 6970             |      | 0.66            | 68.4 | 22.3      |      | C            |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 4436  |       | 6970             |      | 0.64            | 68.9 | 21.5      |      | C            |      |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1989             | 70   | 6389            | 1936 | 0.31      | 0.04 | 65.9         | 61.5 | 10.1               | 14.7 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2306             | 66   | 6389            | 1936 | 0.36      | 0.03 | 66.1         | 61.5 | 11.6               | 16.5 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 3067             | 111  | 6389            | 1936 | 0.48      | 0.06 | 66.2         | 61.3 | 15.4               | 20.6 | C   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 3806             | 124  | 6389            | 1936 | 0.60      | 0.06 | 66.3         | 61.3 | 19.1               | 24.4 | C   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3459             | 136  | 6389            | 1936 | 0.54      | 0.07 | 66.3         | 61.3 | 17.4               | 22.7 | C   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4554             | 276  | 6389            | 1936 | 0.71      | 0.14 | 66.0         | 60.9 | 23.0               | 28.1 | D   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 5347             | 251  | 6389            | 1936 | 0.84      | 0.13 | 65.9         | 60.9 | 27.0               | 31.6 | D   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 5901             | 433  | 6389            | 1936 | 0.92      | 0.22 | 65.4         | 60.4 | 30.1               | 34.1 | D   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5448             | 317  | 6389            | 1936 | 0.85      | 0.16 | 65.8         | 60.7 | 27.6               | 32.1 | D   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5848             | 276  | 6389            | 1936 | 0.92      | 0.14 | 65.8         | 60.9 | 29.6               | 33.6 | D   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 5316             | 363  | 6389            | 1936 | 0.83      | 0.19 | 65.7         | 60.6 | 27.0               | 31.6 | D   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 5382             | 363  | 6389            | 1936 | 0.84      | 0.19 | 65.7         | 60.6 | 27.3               | 31.9 | D   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 5083             | 313  | 6389            | 1936 | 0.80      | 0.16 | 65.8         | 60.8 | 25.7               | 30.5 | D   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4915             | 354  | 6389            | 1936 | 0.77      | 0.18 | 65.7         | 60.6 | 24.9               | 29.9 | D   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4576             | 301  | 6389            | 1936 | 0.72      | 0.16 | 65.9         | 60.8 | 23.1               | 28.3 | D   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4436             | 189  | 6389            | 1936 | 0.69      | 0.10 | 66.2         | 61.1 | 22.3               | 27.5 | C   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1914             |      | 6970            |      | 0.27      |      | 69.6         |      | 9.0                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2235             |      | 6970            |      | 0.32      |      | 69.6         |      | 10.5               |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2948             |      | 6970            |      | 0.42      |      | 69.6         |      | 13.9               |      | B   |
| 4                  | 1.00 |       | 0.909 |       | 3674             |      | 6970            |      | 0.53      |      | 69.7         |      | 17.4               |      | B   |
| 5                  | 1.00 |       | 0.909 |       | 3314             |      | 6970            |      | 0.48      |      | 69.7         |      | 15.6               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 4260             |      | 6970            |      | 0.61      |      | 69.5         |      | 20.4               |      | C   |
| 7                  | 1.00 |       | 0.909 |       | 5078             |      | 6970            |      | 0.73      |      | 66.2         |      | 25.6               |      | C   |
| 8                  | 1.00 |       | 0.909 |       | 5439             |      | 6970            |      | 0.78      |      | 64.2         |      | 28.2               |      | D   |
| 9                  | 1.00 |       | 0.909 |       | 5109             |      | 6970            |      | 0.73      |      | 66.1         |      | 25.8               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 5553             |      | 6970            |      | 0.80      |      | 63.5         |      | 29.1               |      | D   |
| 11                 | 1.00 |       | 0.909 |       | 4928             |      | 6970            |      | 0.71      |      | 67.0         |      | 24.5               |      | C   |
| 12                 | 1.00 |       | 0.909 |       | 4994             |      | 6970            |      | 0.72      |      | 66.7         |      | 25.0               |      | C   |
| 13                 | 1.00 |       | 0.909 |       | 4748             |      | 6970            |      | 0.68      |      | 67.8         |      | 23.3               |      | C   |
| 14                 | 1.00 |       | 0.909 |       | 4537             |      | 6970            |      | 0.65      |      | 68.6         |      | 22.0               |      | C   |
| 15                 | 1.00 |       | 0.909 |       | 4255             |      | 6970            |      | 0.61      |      | 69.5         |      | 20.4               |      | C   |
| 16                 | 1.00 |       | 0.909 |       | 4233             |      | 6970            |      | 0.61      |      | 69.5         |      | 20.3               |      | C   |

| Segment 4: Diverge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00 | 0.909 | 0.971 | 1914             | 725  | 9293            | 1839 | 0.21      | 0.39 | 71.7         | 73.5 | 6.5                | 6.5  | A   |
| 2                  | 1.00 | 1.00 | 0.909 | 0.971 | 2235             | 820  | 9293            | 1839 | 0.24      | 0.45 | 71.7         | 73.5 | 7.6                | 7.6  | A   |
| 3                  | 1.00 | 1.00 | 0.909 | 0.971 | 2948             | 1170 | 9293            | 1839 | 0.32      | 0.64 | 71.7         | 73.5 | 10.0               | 10.0 | A   |
| 4                  | 1.00 | 1.00 | 0.909 | 0.971 | 3674             | 1372 | 9293            | 1839 | 0.40      | 0.75 | 71.7         | 73.5 | 12.5               | 12.5 | B   |
| 5                  | 1.00 | 1.00 | 0.909 | 0.971 | 3314             | 1240 | 9293            | 1839 | 0.36      | 0.67 | 71.7         | 73.5 | 11.3               | 11.3 | B   |
| 6                  | 1.00 | 1.00 | 0.909 | 0.971 | 4260             | 1471 | 9293            | 1839 | 0.46      | 0.80 | 71.6         | 73.4 | 14.5               | 14.5 | B   |
| 7                  | 1.00 | 1.00 | 0.909 | 0.971 | 5078             | 2130 | 9293            | 1839 | 0.55      | 1.16 | 70.1         | 72.6 | 17.5               | 17.5 | B   |
| 8                  | 1.00 | 1.00 | 0.909 | 0.971 | 5439             | 2410 | 9293            | 1839 | 0.59      | 1.31 | 69.2         | 71.8 | 18.9               | 18.9 | C   |
| 9                  | 1.00 | 1.00 | 0.909 | 0.971 | 5109             | 2447 | 9293            | 1839 | 0.55      | 1.33 | 70.1         | 72.5 | 17.6               | 17.6 | B   |
| 10                 | 1.00 | 1.00 | 0.909 | 0.971 | 5553             | 2562 | 9293            | 1839 | 0.60      | 1.39 | 68.9         | 71.6 | 19.4               | 19.4 | C   |
| 11                 | 1.00 | 1.00 | 0.909 | 0.971 | 4928             | 2097 | 9293            | 1839 | 0.53      | 1.14 | 70.5         | 72.8 | 16.9               | 16.9 | B   |
| 12                 | 1.00 | 1.00 | 0.909 | 0.971 | 4994             | 2084 | 9293            | 1839 | 0.54      | 1.13 | 70.3         | 72.7 | 17.2               | 17.2 | B   |
| 13                 | 1.00 | 1.00 | 0.909 | 0.971 | 4748             | 2084 | 9293            | 1839 | 0.51      | 1.13 | 70.9         | 73.0 | 16.3               | 16.3 | B   |
| 14                 | 1.00 | 1.00 | 0.909 | 0.971 | 4537             | 1862 | 9293            | 1839 | 0.49      | 1.01 | 71.2         | 73.3 | 15.5               | 15.5 | B   |
| 15                 | 1.00 | 1.00 | 0.909 | 0.971 | 4255             | 1738 | 9293            | 1839 | 0.46      | 0.94 | 71.6         | 73.4 | 14.5               | 14.5 | B   |
| 16                 | 1.00 | 1.00 | 0.909 | 0.971 | 4233             | 1656 | 9293            | 1839 | 0.46      | 0.90 | 71.6         | 73.4 | 14.4               | 14.4 | B   |
| Segment 5: Basic   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |      | 0.909 |       | 1140             |      | 6970            |      | 0.16      |      | 70.8         |      | 5.4                |      | A   |
| 2                  | 1.00 |      | 0.909 |       | 1360             |      | 6970            |      | 0.20      |      | 70.8         |      | 6.4                |      | A   |
| 3                  | 1.00 |      | 0.909 |       | 1699             |      | 6970            |      | 0.24      |      | 70.8         |      | 8.0                |      | A   |
| 4                  | 1.00 |      | 0.909 |       | 2209             |      | 6970            |      | 0.32      |      | 70.8         |      | 10.4               |      | A   |
| 5                  | 1.00 |      | 0.909 |       | 1989             |      | 6970            |      | 0.29      |      | 70.8         |      | 9.4                |      | A   |
| 6                  | 1.00 |      | 0.909 |       | 2689             |      | 6970            |      | 0.39      |      | 70.8         |      | 12.7               |      | B   |
| 7                  | 1.00 |      | 0.909 |       | 2803             |      | 6970            |      | 0.40      |      | 70.6         |      | 13.2               |      | B   |
| 8                  | 1.00 |      | 0.909 |       | 2865             |      | 6970            |      | 0.41      |      | 70.3         |      | 13.5               |      | B   |
| 9                  | 1.00 |      | 0.909 |       | 2495             |      | 6970            |      | 0.36      |      | 70.6         |      | 11.8               |      | B   |
| 10                 | 1.00 |      | 0.909 |       | 2816             |      | 6970            |      | 0.40      |      | 70.2         |      | 13.3               |      | B   |
| 11                 | 1.00 |      | 0.909 |       | 2689             |      | 6970            |      | 0.39      |      | 70.7         |      | 12.7               |      | B   |
| 12                 | 1.00 |      | 0.909 |       | 2768             |      | 6970            |      | 0.40      |      | 70.7         |      | 13.0               |      | B   |
| 13                 | 1.00 |      | 0.909 |       | 2521             |      | 6970            |      | 0.36      |      | 70.8         |      | 11.9               |      | B   |
| 14                 | 1.00 |      | 0.909 |       | 2548             |      | 6970            |      | 0.37      |      | 70.8         |      | 12.0               |      | B   |
| 15                 | 1.00 |      | 0.909 |       | 2398             |      | 6970            |      | 0.34      |      | 70.8         |      | 11.3               |      | B   |
| 16                 | 1.00 |      | 0.909 |       | 2464             |      | 6970            |      | 0.35      |      | 70.8         |      | 11.6               |      | B   |
| Segment 6: Weaving |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |

|                  |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 | 1149  | 4209  | 0.27             | 62.8 | 4.6             | A    |           |      |              |      |                    |      |     |
| 2                | 1.00 | 0.909 | 1362  | 4318  | 0.32             | 61.9 | 5.5             | A    |           |      |              |      |                    |      |     |
| 3                | 1.00 | 0.909 | 1778  | 4964  | 0.36             | 61.3 | 7.3             | A    |           |      |              |      |                    |      |     |
| 4                | 1.00 | 0.909 | 2314  | 5174  | 0.45             | 59.5 | 9.7             | A    |           |      |              |      |                    |      |     |
| 5                | 1.00 | 0.909 | 2135  | 7082  | 0.30             | 63.3 | 8.4             | A    |           |      |              |      |                    |      |     |
| 6                | 1.00 | 0.909 | 2844  | 7817  | 0.36             | 62.1 | 11.4            | B    |           |      |              |      |                    |      |     |
| 7                | 1.00 | 0.909 | 3010  | 7283  | 0.41             | 60.6 | 12.4            | B    |           |      |              |      |                    |      |     |
| 8                | 1.00 | 0.909 | 3169  | 5765  | 0.55             | 57.5 | 13.8            | B    |           |      |              |      |                    |      |     |
| 9                | 1.00 | 0.909 | 2728  | 6545  | 0.42             | 60.5 | 11.3            | B    |           |      |              |      |                    |      |     |
| 10               | 1.00 | 0.909 | 3172  | 5956  | 0.53             | 57.9 | 13.7            | B    |           |      |              |      |                    |      |     |
| 11               | 1.00 | 0.909 | 3052  | 5681  | 0.54             | 57.8 | 13.2            | B    |           |      |              |      |                    |      |     |
| 12               | 1.00 | 0.909 | 3071  | 6081  | 0.51             | 58.5 | 13.1            | B    |           |      |              |      |                    |      |     |
| 13               | 1.00 | 0.909 | 2843  | 5667  | 0.50             | 58.5 | 12.1            | B    |           |      |              |      |                    |      |     |
| 14               | 1.00 | 0.909 | 2936  | 6714  | 0.44             | 60.1 | 12.2            | B    |           |      |              |      |                    |      |     |
| 15               | 1.00 | 0.909 | 2711  | 6618  | 0.41             | 60.7 | 11.2            | B    |           |      |              |      |                    |      |     |
| 16               | 1.00 | 0.909 | 2829  | 6676  | 0.42             | 60.3 | 11.7            | B    |           |      |              |      |                    |      |     |
| Segment 7: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |       | 0.909 |       | 568              |      | 6970            |      | 0.08      |      | 70.7         |      | 2.7                |      | A   |
| 2                | 1.00 |       | 0.909 |       | 682              |      | 6970            |      | 0.10      |      | 70.7         |      | 3.2                |      | A   |
| 3                | 1.00 |       | 0.909 |       | 1083             |      | 6970            |      | 0.16      |      | 70.7         |      | 5.1                |      | A   |
| 4                | 1.00 |       | 0.909 |       | 1452             |      | 6970            |      | 0.21      |      | 70.6         |      | 6.8                |      | A   |
| 5                | 1.00 |       | 0.909 |       | 1628             |      | 6970            |      | 0.23      |      | 70.7         |      | 7.7                |      | A   |
| 6                | 1.00 |       | 0.909 |       | 2231             |      | 6970            |      | 0.32      |      | 70.7         |      | 10.5               |      | A   |
| 7                | 1.00 |       | 0.909 |       | 2323             |      | 6970            |      | 0.33      |      | 70.6         |      | 10.9               |      | A   |
| 8                | 1.00 |       | 0.909 |       | 2284             |      | 6970            |      | 0.33      |      | 70.6         |      | 10.7               |      | A   |
| 9                | 1.00 |       | 0.909 |       | 2059             |      | 6970            |      | 0.30      |      | 70.6         |      | 9.7                |      | A   |
| 10               | 1.00 |       | 0.909 |       | 2376             |      | 6970            |      | 0.34      |      | 70.6         |      | 11.2               |      | B   |
| 11               | 1.00 |       | 0.909 |       | 2253             |      | 6970            |      | 0.32      |      | 70.6         |      | 10.6               |      | A   |
| 12               | 1.00 |       | 0.909 |       | 2279             |      | 6970            |      | 0.33      |      | 70.6         |      | 10.7               |      | A   |
| 13               | 1.00 |       | 0.909 |       | 2077             |      | 6970            |      | 0.30      |      | 70.6         |      | 9.8                |      | A   |
| 14               | 1.00 |       | 0.909 |       | 2376             |      | 6970            |      | 0.34      |      | 70.6         |      | 11.2               |      | B   |
| 15               | 1.00 |       | 0.909 |       | 2139             |      | 6970            |      | 0.31      |      | 70.7         |      | 10.1               |      | A   |
| 16               | 1.00 |       | 0.909 |       | 2275             |      | 6970            |      | 0.33      |      | 70.6         |      | 10.7               |      | A   |
| Segment 8: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 601              | 33   | 6970            | 2033 | 0.09      | 0.02 | 68.2         | 65.4 | 2.9                | 3.4  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 715              | 33   | 6970            | 2033 | 0.10      | 0.02 | 68.3         | 65.4 | 3.5                | 4.0  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 1116             | 33   | 6970            | 2033 | 0.16      | 0.02 | 68.3         | 65.4 | 5.4                | 5.8  | A   |

|    |      |      |       |       |      |     |      |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|------|------|------|------|------|------|------|------|---|
| 4  | 1.00 | 1.00 | 0.909 | 0.971 | 1485 | 33  | 6970 | 2033 | 0.21 | 0.02 | 68.2 | 65.3 | 7.3  | 7.6  | A |
| 5  | 1.00 | 1.00 | 0.909 | 0.971 | 1669 | 41  | 6970 | 2033 | 0.24 | 0.02 | 68.0 | 65.2 | 8.2  | 8.5  | A |
| 6  | 1.00 | 1.00 | 0.909 | 0.971 | 2276 | 45  | 6970 | 2033 | 0.33 | 0.02 | 67.7 | 65.1 | 11.2 | 11.3 | B |
| 7  | 1.00 | 1.00 | 0.909 | 0.971 | 2377 | 54  | 6970 | 2033 | 0.34 | 0.03 | 67.6 | 65.1 | 11.7 | 11.8 | B |
| 8  | 1.00 | 1.00 | 0.909 | 0.971 | 2329 | 45  | 6970 | 2033 | 0.33 | 0.02 | 67.6 | 65.1 | 11.5 | 11.5 | B |
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 2121 | 62  | 6970 | 2033 | 0.30 | 0.03 | 67.8 | 65.2 | 10.4 | 10.6 | B |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 2450 | 74  | 6970 | 2033 | 0.35 | 0.04 | 67.6 | 65.1 | 12.1 | 12.2 | B |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 2360 | 107 | 6970 | 2033 | 0.34 | 0.05 | 67.6 | 65.1 | 11.6 | 11.9 | B |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 2394 | 115 | 6970 | 2033 | 0.34 | 0.06 | 67.6 | 65.1 | 11.8 | 12.0 | B |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 2164 | 87  | 6970 | 2033 | 0.31 | 0.04 | 67.7 | 65.1 | 10.7 | 10.9 | B |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 2479 | 103 | 6970 | 2033 | 0.36 | 0.05 | 67.5 | 65.0 | 12.2 | 12.4 | B |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 2279 | 140 | 6970 | 2033 | 0.33 | 0.07 | 67.6 | 65.1 | 11.2 | 11.6 | B |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 2378 | 103 | 6970 | 2033 | 0.34 | 0.05 | 67.6 | 65.1 | 11.7 | 11.9 | B |

Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 603              | 6970            | 0.09      | 70.6         | 2.8                | A   |
| 2           | 1.00 | 0.909 | 717              | 6970            | 0.10      | 70.7         | 3.4                | A   |
| 3           | 1.00 | 0.909 | 1118             | 6970            | 0.16      | 70.7         | 5.3                | A   |
| 4           | 1.00 | 0.909 | 1487             | 6970            | 0.21      | 70.6         | 7.0                | A   |
| 5           | 1.00 | 0.909 | 1672             | 6970            | 0.24      | 70.6         | 7.9                | A   |
| 6           | 1.00 | 0.909 | 2279             | 6970            | 0.33      | 70.6         | 10.7               | A   |
| 7           | 1.00 | 0.909 | 2381             | 6970            | 0.34      | 70.6         | 11.2               | B   |
| 8           | 1.00 | 0.909 | 2332             | 6970            | 0.33      | 70.6         | 11.0               | A   |
| 9           | 1.00 | 0.909 | 2125             | 6970            | 0.30      | 70.6         | 10.0               | A   |
| 10          | 1.00 | 0.909 | 2455             | 6970            | 0.35      | 70.6         | 11.6               | B   |
| 11          | 1.00 | 0.909 | 2367             | 6970            | 0.34      | 70.6         | 11.1               | B   |
| 12          | 1.00 | 0.909 | 2403             | 6970            | 0.34      | 70.6         | 11.3               | B   |
| 13          | 1.00 | 0.909 | 2169             | 6970            | 0.31      | 70.6         | 10.2               | A   |
| 14          | 1.00 | 0.909 | 2486             | 6970            | 0.36      | 70.6         | 11.7               | B   |
| 15          | 1.00 | 0.909 | 2288             | 6970            | 0.33      | 70.6         | 10.8               | A   |
| 16          | 1.00 | 0.909 | 2385             | 6970            | 0.34      | 70.6         | 11.2               | B   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 68.5        | 5.4               | 4.9                | 2.40             | A   |
| 2 | 68.4        | 6.3               | 5.8                | 2.40             | A   |
| 3 | 68.4        | 8.7               | 7.9                | 2.40             | A   |
| 4 | 67.9        | 11.2              | 10.2               | 2.40             | B   |
| 5 | 68.8        | 10.7              | 9.7                | 2.40             | A   |
| 6 | 68.0        | 14.4              | 13.1               | 2.40             | B   |
| 7 | 66.5        | 16.4              | 14.9               | 2.50             | F   |



|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 8  | 64.5 | 17.8 | 16.2 | 2.50 | F |
| 9  | 66.2 | 15.8 | 14.4 | 2.50 | F |
| 10 | 64.8 | 18.0 | 16.3 | 2.50 | F |
| 11 | 66.0 | 16.4 | 14.9 | 2.50 | F |
| 12 | 66.0 | 16.6 | 15.1 | 2.50 | F |
| 13 | 66.5 | 15.3 | 13.9 | 2.50 | F |
| 14 | 67.1 | 15.6 | 14.2 | 2.40 | F |
| 15 | 67.7 | 14.3 | 13.0 | 2.40 | B |
| 16 | 67.8 | 14.4 | 13.1 | 2.40 | B |

## Facility Overall Results

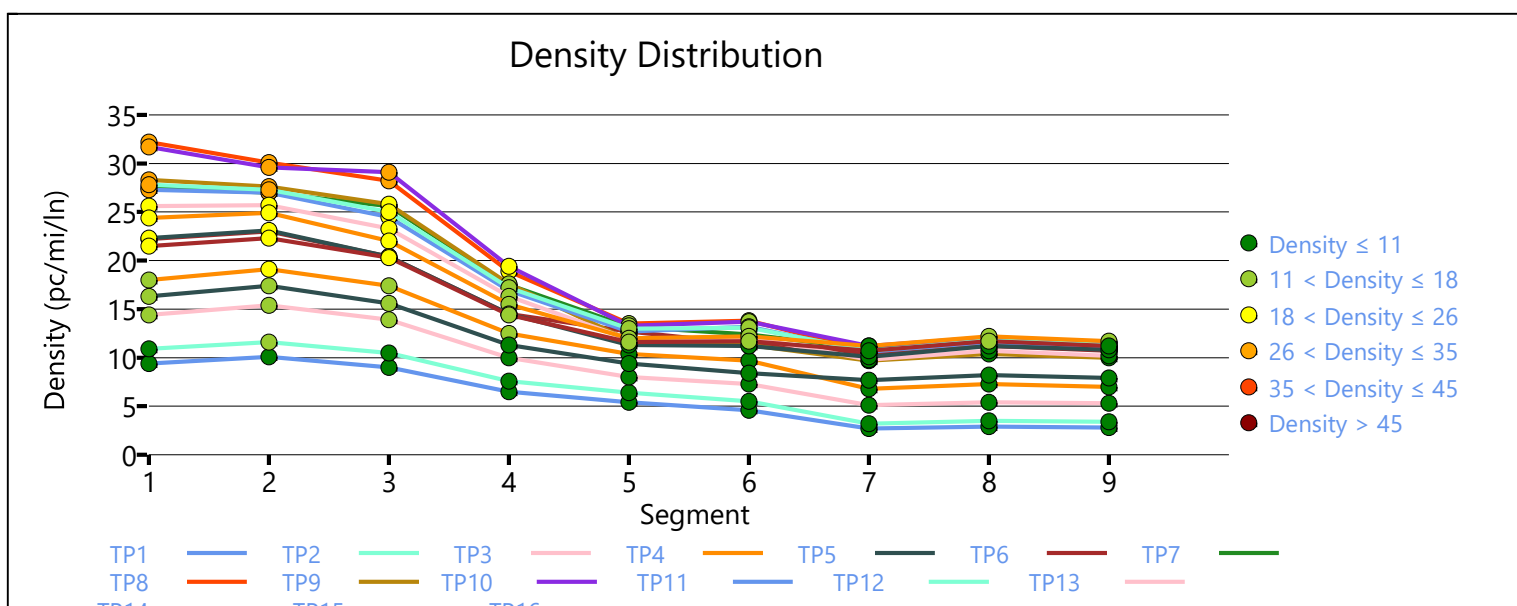
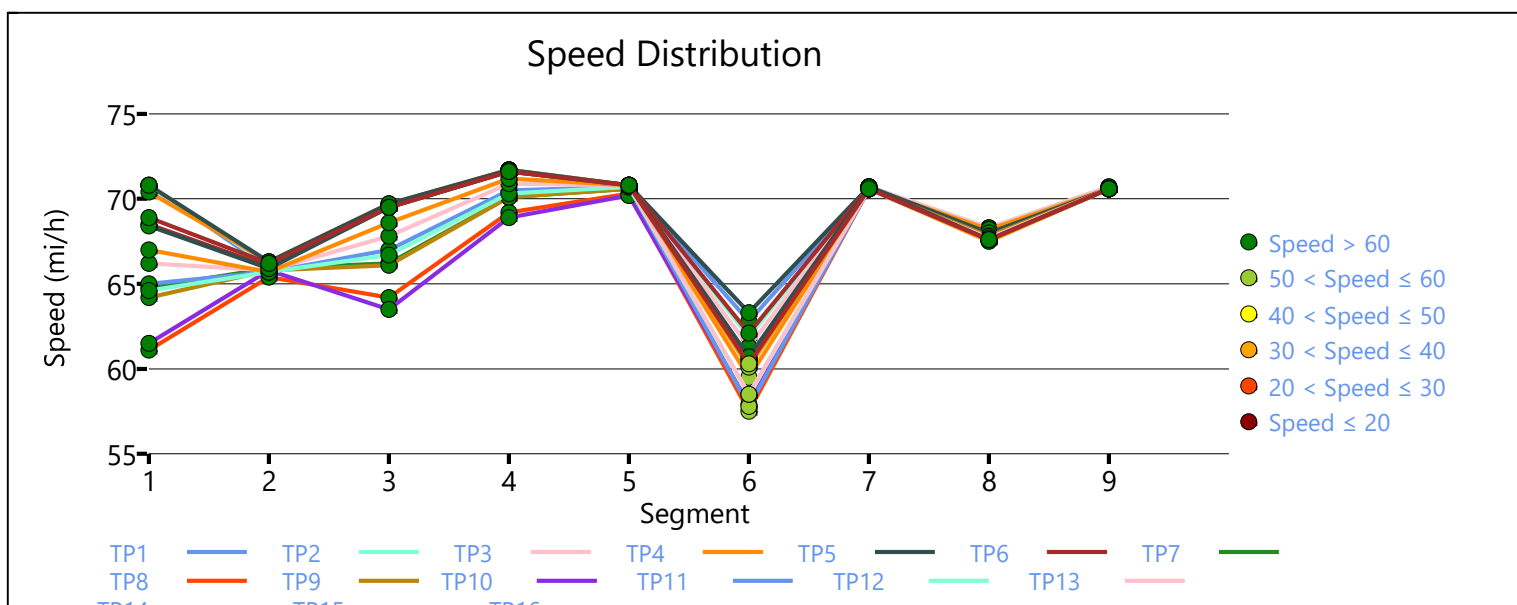
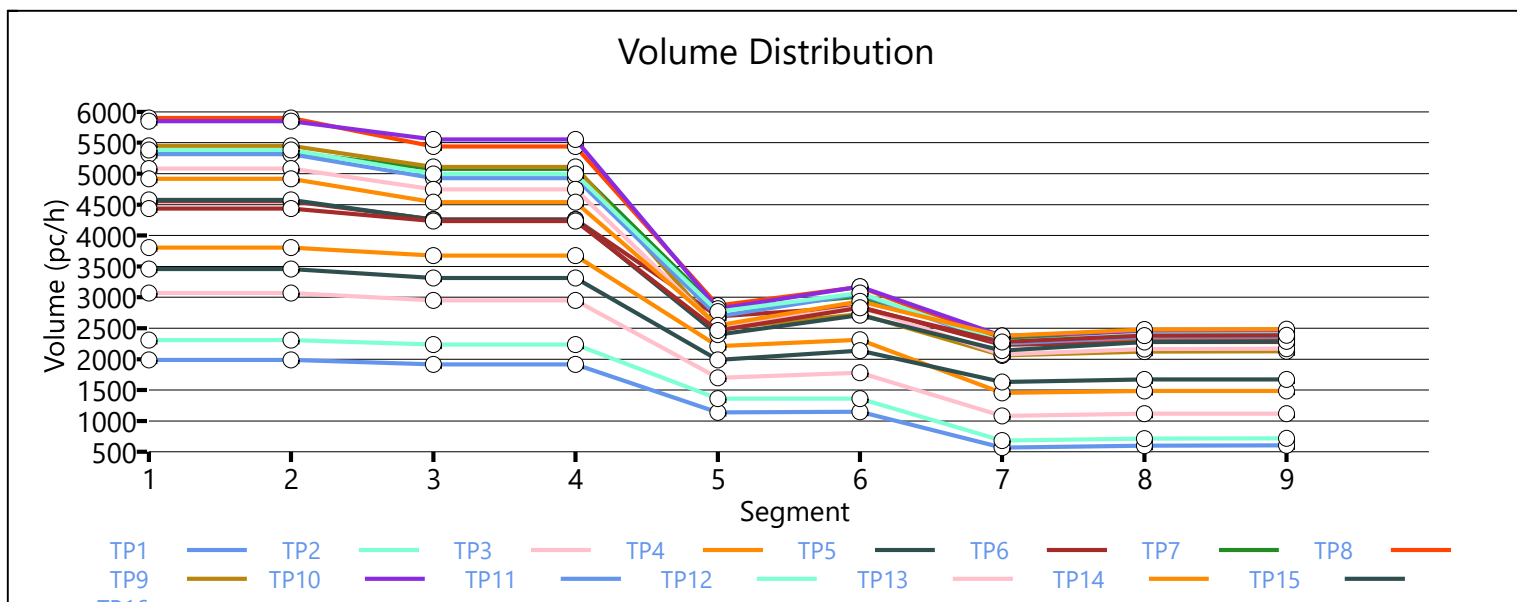
|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 66.8 | Density, veh/mi/ln | 12.4 |
| Average Travel Time, min | 2.50 | Density, pc/mi/ln  | 13.6 |

## Messages

|           |                                                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WARNING 1 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 2 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 3 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 4 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 5 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 6 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 7 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 8 | Diverge capacity is less than diverge demand on segment 4. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |

## Comments

|  |
|--|
|  |
|--|



# HCS7 Freeway Facilities Report

## Project Information

|                     |                                         |                      |                         |
|---------------------|-----------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                      | Date                 | 9/17/2020               |
| Agency              | Lee Engineering                         | Analysis Year        | 2025                    |
| Jurisdiction        | NMDOT                                   | Time Period Analyzed | PM Peak Period          |
| Project Description | Build Conditions - NB I25<br>2PM to 7PM | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 3.06  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                       | Length, ft | Lanes |
|-----|---------|----------|--------------------------------------------|------------|-------|
| 1   | Basic   | Basic    | NB I25 South of Sunport                    | 5280       | 3     |
| 2   | Diverge | Diverge  | Off-Ramp to Sunport                        | 1500       | 3     |
| 3   | Basic   | Basic    | NB I25 bet                                 | 3070       | 3     |
| 4   | Weaving | Weaving  | Sunport Off/On Ramps                       | 1750       | 4     |
| 5   | Basic   | Basic    | NB I24 bet Sunport On and Gibson Off Ramps | 1155       | 3     |
| 6   | Merge   | Merge    | NB I25 bet Gibson Off/On Ramps             | 700        | 3     |
| 7   | Basic   | Basic    | On-ramp from EB Gibson                     | 400        | 3     |
| 8   | Merge   | Merge    | NB I25 bet Gibson On-Ramps                 | 800        | 3     |
| 9   | Basic   | Basic    | On-ramp from WB Gibson                     | 1500       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2561             | 6970            | 0.37      | 70.8         | 12.1               | B   |
| 2           | 1.00 | 0.909 | 2680             | 6970            | 0.38      | 70.8         | 12.6               | B   |
| 3           | 1.00 | 0.909 | 2609             | 6970            | 0.37      | 70.8         | 12.3               | B   |
| 4           | 1.00 | 0.909 | 2741             | 6970            | 0.39      | 70.8         | 12.9               | B   |
| 5           | 1.00 | 0.909 | 2772             | 6970            | 0.40      | 70.8         | 13.1               | B   |
| 6           | 1.00 | 0.909 | 2552             | 6970            | 0.37      | 70.8         | 12.0               | B   |
| 7           | 1.00 | 0.909 | 2631             | 6970            | 0.38      | 70.8         | 12.4               | B   |
| 8           | 1.00 | 0.909 | 2609             | 6970            | 0.37      | 70.8         | 12.3               | B   |
| 9           | 1.00 | 0.909 | 2662             | 6970            | 0.38      | 70.8         | 12.5               | B   |
| 10          | 1.00 | 0.909 | 2803             | 6970            | 0.40      | 70.8         | 13.2               | B   |
| 11          | 1.00 | 0.909 | 2794             | 6970            | 0.40      | 70.8         | 13.1               | B   |
| 12          | 1.00 | 0.909 | 2825             | 6970            | 0.41      | 70.8         | 13.3               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 2535  |       | 6970             |      | 0.36            | 70.8 |           | 11.9 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 2367  |       | 6970             |      | 0.34            | 70.8 |           | 11.1 |              | B    |                    |      |     |
| 15                 | 1.00 | 0.909 | 2099  |       | 6970             |      | 0.30            | 70.8 |           | 9.9  |              | A    |                    |      |     |
| 16                 | 1.00 | 0.909 | 2134  |       | 6970             |      | 0.31            | 70.8 |           | 10.0 |              | A    |                    |      |     |
| 17                 | 1.00 | 0.909 | 2020  |       | 6970             |      | 0.29            | 70.8 |           | 9.5  |              | A    |                    |      |     |
| 18                 | 1.00 | 0.909 | 1809  |       | 6970             |      | 0.26            | 70.8 |           | 8.5  |              | A    |                    |      |     |
| 19                 | 1.00 | 0.909 | 1628  |       | 6970             |      | 0.23            | 70.8 |           | 7.7  |              | A    |                    |      |     |
| 20                 | 1.00 | 0.909 | 1540  |       | 6970             |      | 0.22            | 70.8 |           | 7.2  |              | A    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2561             | 111  | 6970            | 2033 | 0.37      | 0.05 | 67.7         | 63.4 | 12.6               | 17.5 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2680             | 115  | 6970            | 2033 | 0.38      | 0.06 | 67.6         | 63.3 | 13.2               | 18.2 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2609             | 140  | 6970            | 2033 | 0.37      | 0.07 | 67.6         | 63.3 | 12.9               | 17.8 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2741             | 140  | 6970            | 2033 | 0.39      | 0.07 | 67.6         | 63.3 | 13.5               | 18.5 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 2772             | 91   | 6970            | 2033 | 0.40      | 0.04 | 67.8         | 63.4 | 13.6               | 18.6 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2552             | 115  | 6970            | 2033 | 0.37      | 0.06 | 67.6         | 63.3 | 12.6               | 17.5 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 2631             | 82   | 6970            | 2033 | 0.38      | 0.04 | 67.7         | 63.4 | 13.0               | 17.8 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 2609             | 74   | 6970            | 2033 | 0.37      | 0.04 | 67.8         | 63.5 | 12.8               | 17.7 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 2662             | 70   | 6970            | 2033 | 0.38      | 0.03 | 67.8         | 63.5 | 13.1               | 18.0 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 2803             | 70   | 6970            | 2033 | 0.40      | 0.03 | 67.9         | 63.5 | 13.8               | 18.8 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 2794             | 58   | 6970            | 2033 | 0.40      | 0.03 | 67.9         | 63.5 | 13.7               | 18.7 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 2825             | 99   | 6970            | 2033 | 0.41      | 0.05 | 67.8         | 63.4 | 13.9               | 18.9 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2535             | 99   | 6970            | 2033 | 0.36      | 0.05 | 67.7         | 63.4 | 12.5               | 17.4 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2367             | 70   | 6970            | 2033 | 0.34      | 0.03 | 67.7         | 63.5 | 11.7               | 16.4 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 2099             | 74   | 6970            | 2033 | 0.30      | 0.04 | 67.6         | 63.5 | 10.4               | 14.9 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2134             | 95   | 6970            | 2033 | 0.31      | 0.05 | 67.5         | 63.4 | 10.5               | 15.1 | B   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 2020             | 37   | 6970            | 2033 | 0.29      | 0.02 | 67.6         | 63.5 | 10.0               | 14.4 | B   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 1809             | 37   | 6970            | 2033 | 0.26      | 0.02 | 67.5         | 63.5 | 8.9                | 13.2 | B   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1628             | 54   | 6970            | 2033 | 0.23      | 0.03 | 67.4         | 63.5 | 8.1                | 12.2 | B   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1540             | 37   | 6970            | 2033 | 0.22      | 0.02 | 67.4         | 63.5 | 7.6                | 11.6 | B   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2442             |      | 6970            |      | 0.35      |      | 70.7         |      | 11.5               |      | B   |
| 2                  | 1.00 |       | 0.909 |       | 2557             |      | 6970            |      | 0.37      |      | 70.7         |      | 12.0               |      | B   |
| 3                  | 1.00 |       | 0.909 |       | 2460             |      | 6970            |      | 0.35      |      | 70.7         |      | 11.6               |      | B   |
| 4                  | 1.00 |       | 0.909 |       | 2592             |      | 6970            |      | 0.37      |      | 70.7         |      | 12.2               |      | B   |
| 5                  | 1.00 |       | 0.909 |       | 2675             |      | 6970            |      | 0.38      |      | 70.7         |      | 12.6               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 2429             |      | 6970            |      | 0.35      |      | 70.7         |      | 11.4               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 2543             |      | 6970            |      | 0.36      |      | 70.7         |      | 12.0               |      | B   |

|                    |      |       |                  |                 |           |              |                    |     |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 8                  | 1.00 | 0.909 | 2530             | 6970            | 0.36      | 70.7         | 11.9               | B   |
| 9                  | 1.00 | 0.909 | 2587             | 6970            | 0.37      | 70.7         | 12.2               | B   |
| 10                 | 1.00 | 0.909 | 2728             | 6970            | 0.39      | 70.7         | 12.8               | B   |
| 11                 | 1.00 | 0.909 | 2733             | 6970            | 0.39      | 70.7         | 12.9               | B   |
| 12                 | 1.00 | 0.909 | 2719             | 6970            | 0.39      | 70.7         | 12.8               | B   |
| 13                 | 1.00 | 0.909 | 2429             | 6970            | 0.35      | 70.7         | 11.4               | B   |
| 14                 | 1.00 | 0.909 | 2293             | 6970            | 0.33      | 70.7         | 10.8               | A   |
| 15                 | 1.00 | 0.909 | 2020             | 6970            | 0.29      | 70.7         | 9.5                | A   |
| 16                 | 1.00 | 0.909 | 2033             | 6970            | 0.29      | 70.7         | 9.6                | A   |
| 17                 | 1.00 | 0.909 | 1980             | 6970            | 0.28      | 70.7         | 9.3                | A   |
| 18                 | 1.00 | 0.909 | 1769             | 6970            | 0.25      | 70.7         | 8.3                | A   |
| 19                 | 1.00 | 0.909 | 1571             | 6970            | 0.23      | 70.7         | 7.4                | A   |
| 20                 | 1.00 | 0.909 | 1501             | 6970            | 0.22      | 70.7         | 7.1                | A   |
| Segment 4: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 3145             | 5896            | 0.53      | 57.9         | 13.6               | B   |
| 2                  | 1.00 | 0.909 | 3248             | 6229            | 0.52      | 58.2         | 14.0               | B   |
| 3                  | 1.00 | 0.909 | 3202             | 5639            | 0.57      | 57.2         | 14.0               | B   |
| 4                  | 1.00 | 0.909 | 3323             | 5765            | 0.58      | 57.0         | 14.6               | B   |
| 5                  | 1.00 | 0.909 | 3548             | 6195            | 0.57      | 57.1         | 15.5               | B   |
| 6                  | 1.00 | 0.909 | 3204             | 6114            | 0.52      | 58.1         | 13.8               | B   |
| 7                  | 1.00 | 0.909 | 3307             | 6508            | 0.51      | 58.4         | 14.2               | B   |
| 8                  | 1.00 | 0.909 | 3304             | 6196            | 0.53      | 57.9         | 14.3               | B   |
| 9                  | 1.00 | 0.909 | 3695             | 5453            | 0.68      | 54.9         | 16.8               | B   |
| 10                 | 1.00 | 0.909 | 3841             | 5316            | 0.72      | 54.1         | 17.7               | B   |
| 11                 | 1.00 | 0.909 | 3800             | 5151            | 0.74      | 53.8         | 17.7               | B   |
| 12                 | 1.00 | 0.909 | 3502             | 4996            | 0.70      | 54.5         | 16.1               | B   |
| 13                 | 1.00 | 0.909 | 3781             | 4741            | 0.80      | 52.7         | 17.9               | B   |
| 14                 | 1.00 | 0.909 | 3180             | 4732            | 0.67      | 54.9         | 14.5               | B   |
| 15                 | 1.00 | 0.909 | 2723             | 4628            | 0.59      | 56.4         | 12.1               | B   |
| 16                 | 1.00 | 0.909 | 2542             | 4310            | 0.59      | 56.2         | 11.3               | B   |
| 17                 | 1.00 | 0.909 | 2576             | 5268            | 0.49      | 58.7         | 11.0               | B   |
| 18                 | 1.00 | 0.909 | 2426             | 4953            | 0.49      | 58.5         | 10.4               | B   |
| 19                 | 1.00 | 0.909 | 2206             | 5017            | 0.44      | 59.6         | 9.3                | A   |
| 20                 | 1.00 | 0.909 | 2059             | 5232            | 0.39      | 60.6         | 8.5                | A   |
| Segment 5: Basic   |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 2693             | 6970            | 0.39      | 69.6         | 12.7               | B   |
| 2                  | 1.00 | 0.909 | 2812             | 6970            | 0.40      | 69.6         | 13.2               | B   |
| 3                  | 1.00 | 0.909 | 2715             | 6970            | 0.39      | 69.5         | 12.8               | B   |



| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 |      | 0.909 |       | 2873             |      | 6970            |      | 0.41      |      | 69.2         |      | 13.5               |      | B   |
| 2                | 1.00 |      | 0.909 |       | 3032             |      | 6970            |      | 0.44      |      | 69.2         |      | 14.3               |      | B   |
| 3                | 1.00 |      | 0.909 |       | 2931             |      | 6970            |      | 0.42      |      | 69.2         |      | 13.8               |      | B   |
| 4                | 1.00 |      | 0.909 |       | 3107             |      | 6970            |      | 0.45      |      | 69.2         |      | 14.6               |      | B   |
| 5                | 1.00 |      | 0.909 |       | 3476             |      | 6970            |      | 0.50      |      | 69.0         |      | 16.4               |      | B   |
| 6                | 1.00 |      | 0.909 |       | 3168             |      | 6970            |      | 0.45      |      | 69.1         |      | 14.9               |      | B   |
| 7                | 1.00 |      | 0.909 |       | 3437             |      | 6970            |      | 0.49      |      | 69.0         |      | 16.2               |      | B   |
| 8                | 1.00 |      | 0.909 |       | 3168             |      | 6970            |      | 0.45      |      | 69.2         |      | 14.9               |      | B   |
| 9                | 1.00 |      | 0.909 |       | 3670             |      | 6970            |      | 0.53      |      | 69.0         |      | 17.3               |      | B   |
| 10               | 1.00 |      | 0.909 |       | 3652             |      | 6970            |      | 0.52      |      | 69.0         |      | 17.2               |      | B   |
| 11               | 1.00 |      | 0.909 |       | 3591             |      | 6970            |      | 0.52      |      | 69.0         |      | 16.9               |      | B   |
| 12               | 1.00 |      | 0.909 |       | 2935             |      | 6970            |      | 0.42      |      | 69.2         |      | 13.8               |      | B   |
| 13               | 1.00 |      | 0.909 |       | 3696             |      | 6970            |      | 0.53      |      | 69.0         |      | 17.5               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 2794             |      | 6970            |      | 0.40      |      | 69.2         |      | 13.1               |      | B   |
| 15               | 1.00 |      | 0.909 |       | 2306             |      | 6970            |      | 0.33      |      | 69.4         |      | 10.9               |      | A   |
| 16               | 1.00 |      | 0.909 |       | 1892             |      | 6970            |      | 0.27      |      | 69.5         |      | 8.9                |      | A   |
| 17               | 1.00 |      | 0.909 |       | 2253             |      | 6970            |      | 0.32      |      | 69.4         |      | 10.6               |      | A   |
| 18               | 1.00 |      | 0.909 |       | 2143             |      | 6970            |      | 0.31      |      | 69.5         |      | 10.1               |      | A   |
| 19               | 1.00 |      | 0.909 |       | 2033             |      | 6970            |      | 0.29      |      | 69.5         |      | 9.6                |      | A   |
| 20               | 1.00 |      | 0.909 |       | 1883             |      | 6970            |      | 0.27      |      | 69.5         |      | 8.9                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 3911             | 1038 | 6970            | 2033 | 0.56      | 0.51 | 65.7         | 63.6 | 19.8               | 21.6 | C   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 4074             | 1042 | 6970            | 2033 | 0.58      | 0.51 | 65.5         | 63.5 | 20.7               | 22.4 | C   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 4072             | 1141 | 6970            | 2033 | 0.58      | 0.56 | 65.4         | 63.4 | 20.8               | 22.6 | C   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 4289             | 1182 | 6970            | 2033 | 0.62      | 0.58 | 65.1         | 63.0 | 22.0               | 23.7 | C   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 5301             | 1825 | 6970            | 2033 | 0.76      | 0.90 | 62.0         | 59.5 | 28.5               | 30.2 | D   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 5141             | 1973 | 6970            | 2033 | 0.74      | 0.97 | 62.1         | 59.7 | 27.6               | 29.8 | D   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 5666             | 2229 | 6970            | 2033 | 0.81      | 1.10 | 59.4         | 56.6 | 31.8               | 33.0 | D   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 5669             | 2501 | 6970            | 2033 | 0.81      | 1.23 | 58.4         | 55.6 | 32.4               | 33.7 | D   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 5965             | 2295 | 6970            | 2033 | 0.86      | 1.13 | 57.7         | 54.6 | 34.5               | 34.6 | D   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 6111             | 2459 | 6970            | 2033 | 0.88      | 1.21 | 56.0         | 52.7 | 36.4               | 35.7 | E   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 5564             | 1973 | 6970            | 2033 | 0.80      | 0.97 | 60.7         | 58.0 | 30.6               | 31.8 | D   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 5135             | 2200 | 6970            | 2033 | 0.74      | 1.08 | 61.5         | 59.1 | 27.8               | 30.4 | D   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 5694             | 1998 | 6970            | 2033 | 0.82      | 0.98 | 60.1         | 57.3 | 31.6               | 32.5 | D   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 4516             | 1722 | 6970            | 2033 | 0.65      | 0.85 | 64.0         | 61.9 | 23.5               | 26.2 | C   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 3719             | 1413 | 6970            | 2033 | 0.53      | 0.70 | 65.5         | 63.6 | 18.9               | 21.7 | C   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 2819             | 927  | 6970            | 2033 | 0.40      | 0.46 | 66.6         | 64.6 | 14.1               | 16.2 | B   |

|    |      |      |       |       |      |     |      |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|------|------|------|------|------|------|------|------|---|
| 17 | 1.00 | 1.00 | 0.909 | 0.971 | 3097 | 844 | 6970 | 2033 | 0.44 | 0.42 | 66.5 | 64.5 | 15.5 | 17.3 | B |
| 18 | 1.00 | 1.00 | 0.909 | 0.971 | 3025 | 882 | 6970 | 2033 | 0.43 | 0.43 | 66.5 | 64.5 | 15.2 | 17.0 | B |
| 19 | 1.00 | 1.00 | 0.909 | 0.971 | 2787 | 754 | 6970 | 2033 | 0.40 | 0.37 | 66.8 | 64.7 | 13.9 | 15.6 | B |
| 20 | 1.00 | 1.00 | 0.909 | 0.971 | 2723 | 840 | 6970 | 2033 | 0.39 | 0.41 | 66.7 | 64.7 | 13.6 | 15.5 | B |

Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3982             | 6970            | 0.57      | 70.0         | 18.9               | C   |
| 2           | 1.00 | 0.909 | 4145             | 6970            | 0.59      | 69.7         | 19.8               | C   |
| 3           | 1.00 | 0.909 | 4150             | 6970            | 0.60      | 69.7         | 19.8               | C   |
| 4           | 1.00 | 0.909 | 4370             | 6970            | 0.63      | 69.1         | 21.1               | C   |
| 5           | 1.00 | 0.909 | 5426             | 6970            | 0.78      | 64.3         | 28.1               | D   |
| 6           | 1.00 | 0.909 | 5276             | 6970            | 0.76      | 65.2         | 27.0               | D   |
| 7           | 1.00 | 0.909 | 5817             | 6970            | 0.83      | 61.7         | 31.4               | D   |
| 8           | 1.00 | 0.909 | 5839             | 6970            | 0.84      | 61.6         | 31.6               | D   |
| 9           | 1.00 | 0.909 | 6121             | 6970            | 0.88      | 59.4         | 34.3               | D   |
| 10          | 1.00 | 0.909 | 6279             | 6970            | 0.90      | 58.1         | 36.0               | E   |
| 11          | 1.00 | 0.909 | 5699             | 6970            | 0.82      | 62.6         | 30.4               | D   |
| 12          | 1.00 | 0.909 | 5285             | 6970            | 0.76      | 65.1         | 27.1               | D   |
| 13          | 1.00 | 0.909 | 5831             | 6970            | 0.84      | 61.6         | 31.6               | D   |
| 14          | 1.00 | 0.909 | 4634             | 6970            | 0.66      | 68.2         | 22.7               | C   |
| 15          | 1.00 | 0.909 | 3815             | 6970            | 0.55      | 70.0         | 18.1               | C   |
| 16          | 1.00 | 0.909 | 2882             | 6970            | 0.41      | 70.1         | 13.6               | B   |
| 17          | 1.00 | 0.909 | 3155             | 6970            | 0.45      | 70.1         | 14.9               | B   |
| 18          | 1.00 | 0.909 | 3085             | 6970            | 0.44      | 70.1         | 14.5               | B   |
| 19          | 1.00 | 0.909 | 2838             | 6970            | 0.41      | 70.2         | 13.4               | B   |
| 20          | 1.00 | 0.909 | 2781             | 6970            | 0.40      | 70.2         | 13.1               | B   |

Facility Time Period Results

| T  | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|----|-------------|-------------------|--------------------|------------------|-----|
| 1  | 67.9        | 13.4              | 12.2               | 2.70             | B   |
| 2  | 67.9        | 14.0              | 12.7               | 2.70             | B   |
| 3  | 67.7        | 13.7              | 12.5               | 2.70             | B   |
| 4  | 67.6        | 14.4              | 13.1               | 2.70             | B   |
| 5  | 66.5        | 15.9              | 14.4               | 2.80             | B   |
| 6  | 66.8        | 14.6              | 13.3               | 2.70             | B   |
| 7  | 65.9        | 15.7              | 14.2               | 2.80             | B   |
| 8  | 65.7        | 15.6              | 14.1               | 2.80             | B   |
| 9  | 64.6        | 16.7              | 15.2               | 2.80             | B   |
| 10 | 64.0        | 17.5              | 15.9               | 2.90             | B   |
| 11 | 65.4        | 16.6              | 15.1               | 2.80             | B   |
| 12 | 66.2        | 15.6              | 14.2               | 2.80             | B   |



|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 13 | 64.7 | 16.1 | 14.6 | 2.80 | B |
| 14 | 66.9 | 13.5 | 12.2 | 2.70 | B |
| 15 | 67.6 | 11.4 | 10.4 | 2.70 | B |
| 16 | 67.7 | 10.5 | 9.5  | 2.70 | A |
| 17 | 68.1 | 10.6 | 9.6  | 2.70 | A |
| 18 | 68.0 | 9.8  | 8.9  | 2.70 | A |
| 19 | 68.2 | 8.9  | 8.1  | 2.70 | A |
| 20 | 68.4 | 8.4  | 7.7  | 2.70 | A |

Facility Overall Results

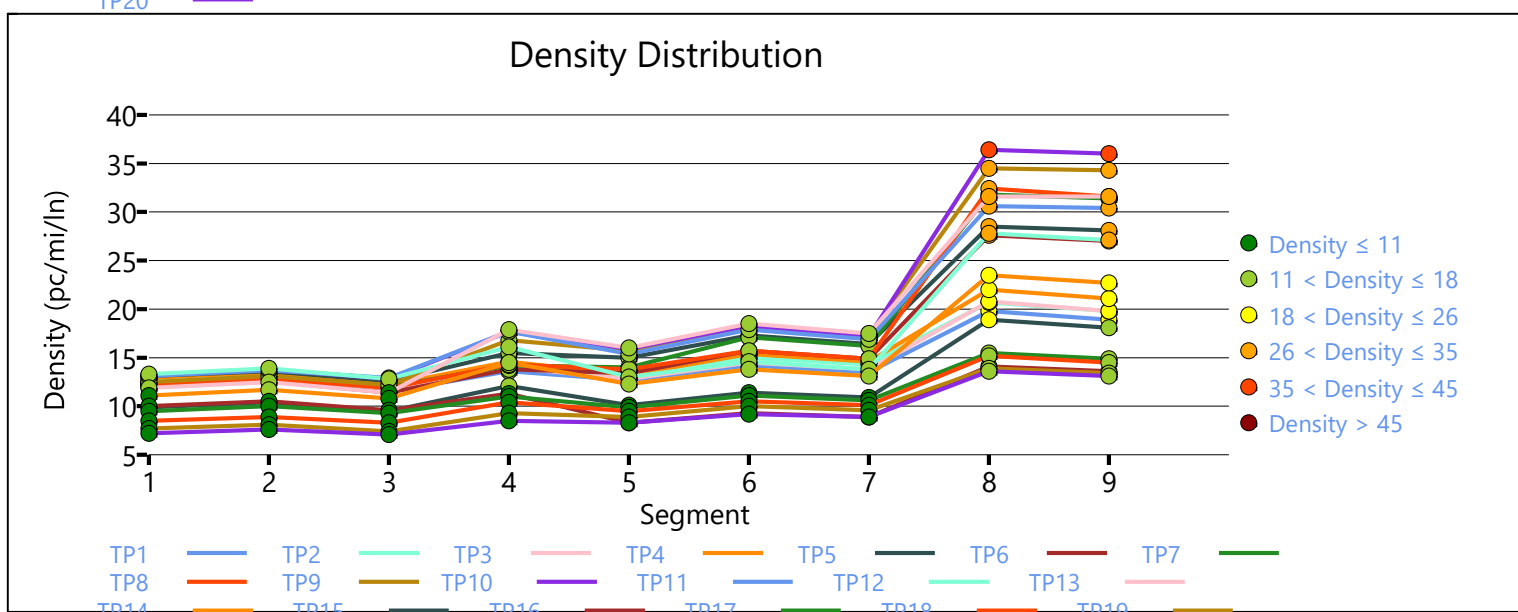
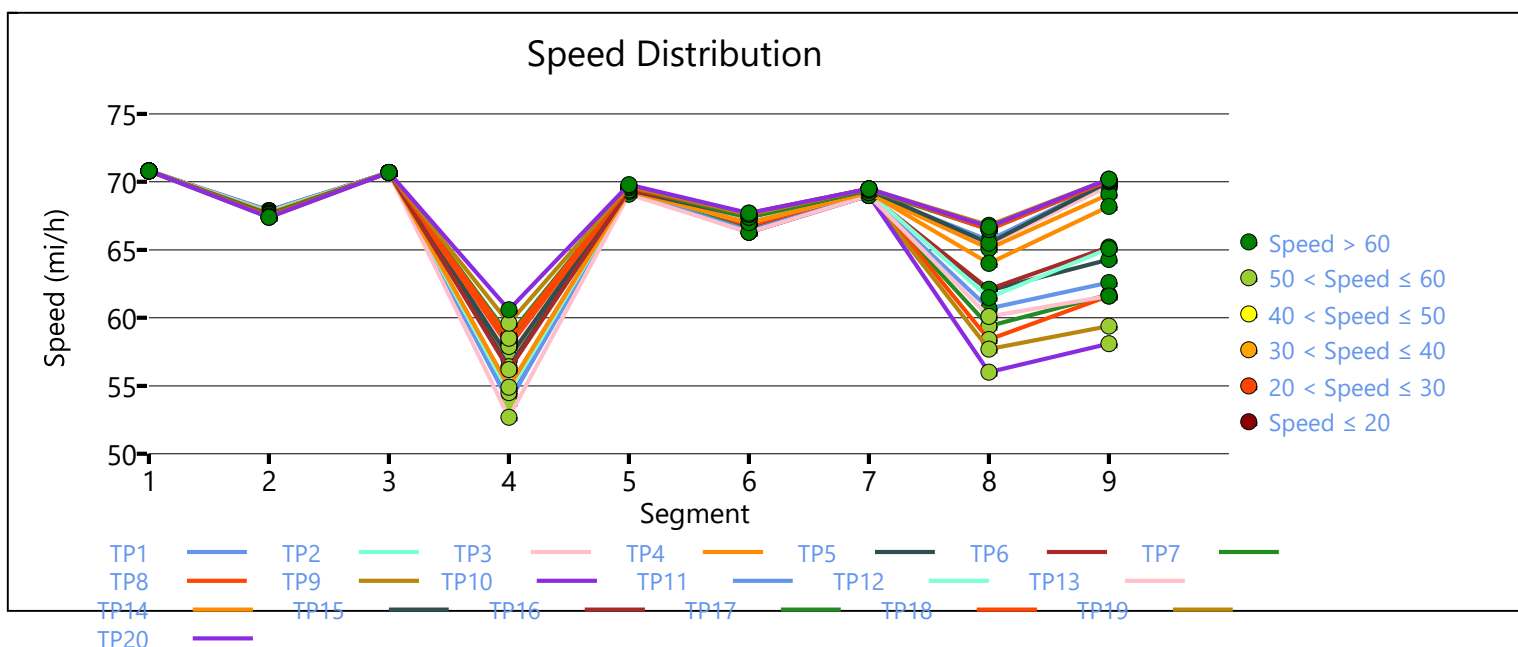
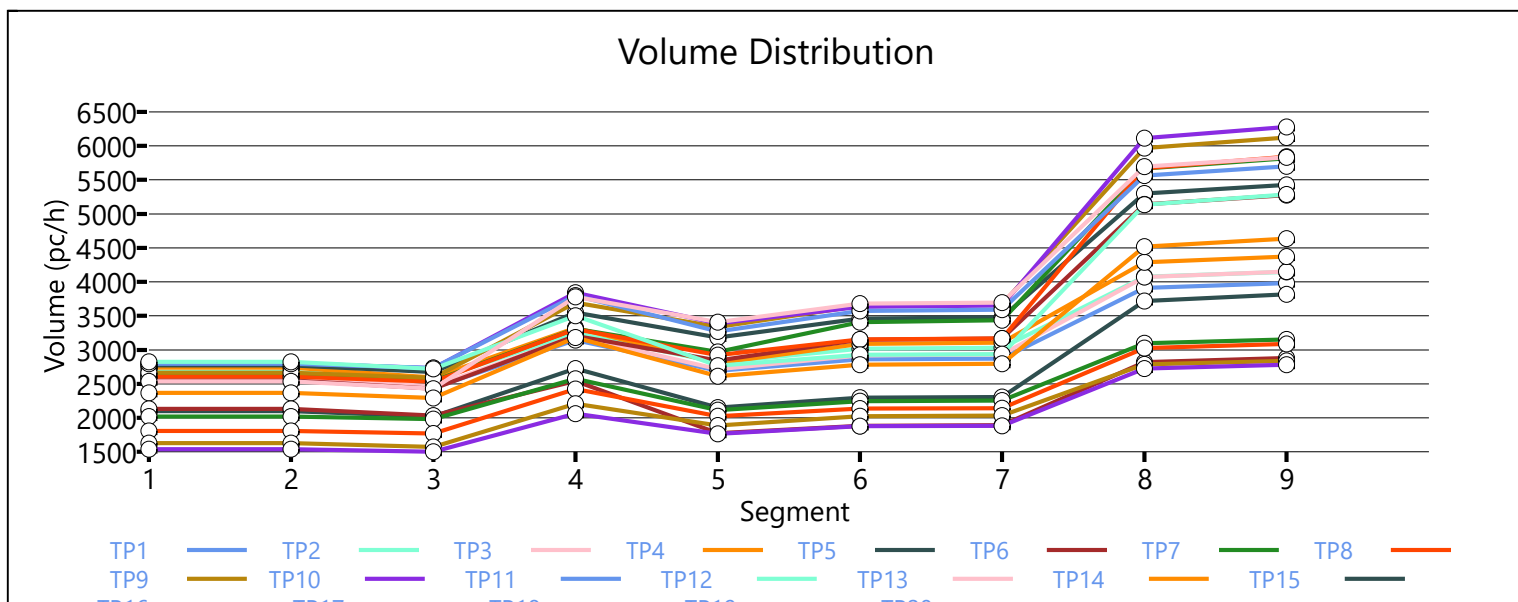
|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 66.6 | Density, veh/mi/ln | 12.4 |
| Average Travel Time, min | 2.80 | Density, pc/mi/ln  | 13.6 |

Messages

|           |                                                        |
|-----------|--------------------------------------------------------|
| WARNING 1 | Merge capacity is less than merge demand on segment 8. |
| WARNING 2 | Merge capacity is less than merge demand on segment 8. |
| WARNING 3 | Merge capacity is less than merge demand on segment 8. |
| WARNING 4 | Merge capacity is less than merge demand on segment 8. |
| WARNING 5 | Merge capacity is less than merge demand on segment 8. |

Comments

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# HCS7 Freeway Facilities Report

## Project Information

|                     |                       |                      |                         |
|---------------------|-----------------------|----------------------|-------------------------|
| Analyst             | PG                    | Date                 | 9/17/2020               |
| Agency              | Lee Engineering       | Analysis Year        | 2025                    |
| Jurisdiction        | NMDOT                 | Time Period Analyzed | PM Peak Period          |
| Project Description | Build I-25 Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.73  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | I-25 SB North of Gibson             | 2640       | 3     |
| 2   | Diverge | Diverge  | SB Off-Ramp to WB Gibson            | 1500       | 3     |
| 3   | Basic   | Basic    | Btw Gibson Off Ramps                | 200        | 3     |
| 4   | Diverge | Basic    | SB Off-Ramp to WB Gibson            | 750        | 4     |
| 5   | Basic   | Basic    | Btw Gibson Off and On Ramps         | 620        | 3     |
| 6   | Weaving | Weaving  | Btw Gibson On and Sunport Off Ramps | 2250       | 4     |
| 7   | Basic   | Basic    | Btw Sunport Off and On Ramps        | 2950       | 3     |
| 8   | Merge   | Merge    | On-Ramp from Sunport                | 875        | 3     |
| 9   | Basic   | Basic    | I-25 Sb South of Sunport            | 2640       | 3     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 4211             | 6970            | 0.60      | 69.6         | 20.2               | C   |
| 2           | 1.00 | 0.909 | 4282             | 6970            | 0.61      | 69.4         | 20.6               | C   |
| 3           | 1.00 | 0.909 | 4581             | 6970            | 0.66      | 68.4         | 22.3               | C   |
| 4           | 1.00 | 0.909 | 5061             | 6970            | 0.73      | 66.3         | 25.4               | C   |
| 5           | 1.00 | 0.909 | 4818             | 6970            | 0.69      | 67.5         | 23.8               | C   |
| 6           | 1.00 | 0.909 | 4695             | 6970            | 0.67      | 68.0         | 23.0               | C   |
| 7           | 1.00 | 0.909 | 4766             | 6970            | 0.68      | 67.7         | 23.5               | C   |
| 8           | 1.00 | 0.909 | 4770             | 6970            | 0.68      | 67.7         | 23.5               | C   |
| 9           | 1.00 | 0.909 | 4686             | 6970            | 0.67      | 68.0         | 23.0               | C   |
| 10          | 1.00 | 0.909 | 4854             | 6970            | 0.70      | 67.3         | 24.0               | C   |
| 11          | 1.00 | 0.909 | 4387             | 6970            | 0.63      | 69.1         | 21.2               | C   |
| 12          | 1.00 | 0.909 | 4761             | 6970            | 0.68      | 67.7         | 23.4               | C   |
| 13          | 1.00 | 0.909 | 4449             | 6970            | 0.64      | 68.9         | 21.5               | C   |

| 14                 | 1.00 | 0.909 |       |       | 4752             |      |                 | 6970 | 0.68      |      |              | 67.8 |                    |      | 23.4 | C |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|------|---|
| 15                 | 1.00 | 0.909 |       |       | 4563             |      |                 | 6970 | 0.65      |      |              | 68.5 |                    |      | 22.2 | C |
| 16                 | 1.00 | 0.909 |       |       | 4480             |      |                 | 6970 | 0.64      |      |              | 68.8 |                    |      | 21.7 | C |
| 17                 | 1.00 | 0.909 |       |       | 4414             |      |                 | 6970 | 0.63      |      |              | 69.0 |                    |      | 21.3 | C |
| 18                 | 1.00 | 0.909 |       |       | 4150             |      |                 | 6970 | 0.60      |      |              | 69.7 |                    |      | 19.8 | C |
| 19                 | 1.00 | 0.909 |       |       | 3714             |      |                 | 6970 | 0.53      |      |              | 70.5 |                    |      | 17.6 | B |
| 20                 | 1.00 | 0.909 |       |       | 3490             |      |                 | 6970 | 0.50      |      |              | 70.7 |                    |      | 16.4 | B |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |      |   |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS  |   |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |      |   |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 4211             | 268  | 6389            | 1936 | 0.66      | 0.14 | 66.0         | 60.9 | 21.3               | 26.5 | C    |   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 4282             | 342  | 6389            | 1936 | 0.67      | 0.18 | 65.8         | 60.7 | 21.7               | 27.0 | C    |   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 4581             | 276  | 6389            | 1936 | 0.72      | 0.14 | 66.0         | 60.9 | 23.1               | 28.3 | D    |   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 5061             | 408  | 6389            | 1936 | 0.79      | 0.21 | 65.6         | 60.5 | 25.7               | 30.6 | D    |   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4818             | 363  | 6389            | 1936 | 0.75      | 0.19 | 65.7         | 60.6 | 24.4               | 29.4 | D    |   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4695             | 338  | 6389            | 1936 | 0.73      | 0.17 | 65.8         | 60.7 | 23.8               | 28.9 | D    |   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4766             | 313  | 6389            | 1936 | 0.75      | 0.16 | 65.9         | 60.8 | 24.1               | 29.1 | D    |   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4770             | 338  | 6389            | 1936 | 0.75      | 0.17 | 65.8         | 60.7 | 24.2               | 29.2 | D    |   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4686             | 276  | 6389            | 1936 | 0.73      | 0.14 | 66.0         | 60.9 | 23.7               | 28.7 | D    |   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4854             | 350  | 6389            | 1936 | 0.76      | 0.18 | 65.7         | 60.6 | 24.6               | 29.6 | D    |   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4387             | 313  | 6389            | 1936 | 0.69      | 0.16 | 65.9         | 60.8 | 22.2               | 27.4 | C    |   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4761             | 260  | 6389            | 1936 | 0.75      | 0.13 | 66.0         | 60.9 | 24.0               | 29.0 | D    |   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4449             | 280  | 6389            | 1936 | 0.70      | 0.14 | 66.0         | 60.9 | 22.5               | 27.7 | C    |   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4752             | 342  | 6389            | 1936 | 0.74      | 0.18 | 65.8         | 60.7 | 24.1               | 29.1 | D    |   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4563             | 268  | 6389            | 1936 | 0.71      | 0.14 | 66.0         | 60.9 | 23.0               | 28.2 | D    |   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4480             | 222  | 6389            | 1936 | 0.70      | 0.11 | 66.1         | 61.0 | 22.6               | 27.7 | C    |   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 4414             | 235  | 6389            | 1936 | 0.69      | 0.12 | 66.1         | 61.0 | 22.3               | 27.4 | C    |   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 4150             | 169  | 6389            | 1936 | 0.65      | 0.09 | 66.3         | 61.2 | 20.9               | 26.1 | C    |   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3714             | 132  | 6389            | 1936 | 0.58      | 0.07 | 66.3         | 61.3 | 18.7               | 24.0 | C    |   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3490             | 132  | 6389            | 1936 | 0.55      | 0.07 | 66.3         | 61.3 | 17.5               | 22.9 | C    |   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |      |   |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS  |   |
| 1                  | 1.00 |       | 0.909 |       | 3925             |      | 6970            |      | 0.56      |      | 69.6         |      | 18.6               |      | C    |   |
| 2                  | 1.00 |       | 0.909 |       | 3916             |      | 6970            |      | 0.56      |      | 69.5         |      | 18.6               |      | C    |   |
| 3                  | 1.00 |       | 0.909 |       | 4286             |      | 6970            |      | 0.61      |      | 69.4         |      | 20.6               |      | C    |   |
| 4                  | 1.00 |       | 0.909 |       | 4625             |      | 6970            |      | 0.66      |      | 68.3         |      | 22.6               |      | C    |   |
| 5                  | 1.00 |       | 0.909 |       | 4431             |      | 6970            |      | 0.64      |      | 68.9         |      | 21.4               |      | C    |   |
| 6                  | 1.00 |       | 0.909 |       | 4334             |      | 6970            |      | 0.62      |      | 69.2         |      | 20.9               |      | C    |   |
| 7                  | 1.00 |       | 0.909 |       | 4431             |      | 6970            |      | 0.64      |      | 68.9         |      | 21.4               |      | C    |   |
| 8                  | 1.00 |       | 0.909 |       | 4409             |      | 6970            |      | 0.63      |      | 69.0         |      | 21.3               |      | C    |   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 9                  | 1.00 | 0.909 | 4392  |       | 6970             |      | 0.63            | 69.1 |           | 21.2 |              | C    |                    |      |     |
| 10                 | 1.00 | 0.909 | 4480  |       | 6970             |      | 0.64            | 68.8 |           | 21.7 |              | C    |                    |      |     |
| 11                 | 1.00 | 0.909 | 4053  |       | 6970             |      | 0.58            | 69.6 |           | 19.3 |              | C    |                    |      |     |
| 12                 | 1.00 | 0.909 | 4484  |       | 6970             |      | 0.64            | 68.8 |           | 21.7 |              | C    |                    |      |     |
| 13                 | 1.00 | 0.909 | 4150  |       | 6970             |      | 0.60            | 69.6 |           | 19.8 |              | C    |                    |      |     |
| 14                 | 1.00 | 0.909 | 4387  |       | 6970             |      | 0.63            | 69.1 |           | 21.2 |              | C    |                    |      |     |
| 15                 | 1.00 | 0.909 | 4277  |       | 6970             |      | 0.61            | 69.4 |           | 20.5 |              | C    |                    |      |     |
| 16                 | 1.00 | 0.909 | 4242  |       | 6970             |      | 0.61            | 69.5 |           | 20.3 |              | C    |                    |      |     |
| 17                 | 1.00 | 0.909 | 4163  |       | 6970             |      | 0.60            | 69.6 |           | 19.9 |              | C    |                    |      |     |
| 18                 | 1.00 | 0.909 | 3969  |       | 6970             |      | 0.57            | 69.7 |           | 18.9 |              | C    |                    |      |     |
| 19                 | 1.00 | 0.909 | 3573  |       | 6970             |      | 0.51            | 69.7 |           | 16.8 |              | B    |                    |      |     |
| 20                 | 1.00 | 0.909 | 3349  |       | 6970             |      | 0.48            | 69.7 |           | 15.8 |              | B    |                    |      |     |
| Segment 4: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 3925             | 1009 | 9293            | 1839 | 0.42      | 0.55 | 71.7         | 73.5 | 13.3               | 13.3 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 3916             | 1063 | 9293            | 1839 | 0.42      | 0.58 | 71.7         | 73.5 | 13.3               | 13.3 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 4286             | 1203 | 9293            | 1839 | 0.46      | 0.65 | 71.6         | 73.4 | 14.6               | 14.6 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4625             | 1215 | 9293            | 1839 | 0.50      | 0.66 | 71.1         | 73.2 | 15.8               | 15.8 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4431             | 927  | 9293            | 1839 | 0.48      | 0.50 | 71.4         | 73.3 | 15.1               | 15.1 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4334             | 836  | 9293            | 1839 | 0.47      | 0.45 | 71.5         | 73.4 | 14.8               | 14.8 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4431             | 873  | 9293            | 1839 | 0.48      | 0.47 | 71.4         | 73.3 | 15.1               | 15.1 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4409             | 919  | 9293            | 1839 | 0.47      | 0.50 | 71.4         | 73.4 | 15.0               | 15.0 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4392             | 849  | 9293            | 1839 | 0.47      | 0.46 | 71.5         | 73.4 | 15.0               | 15.0 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4480             | 882  | 9293            | 1839 | 0.48      | 0.48 | 71.3         | 73.3 | 15.3               | 15.3 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4053             | 828  | 9293            | 1839 | 0.44      | 0.45 | 71.7         | 73.5 | 13.8               | 13.8 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4484             | 931  | 9293            | 1839 | 0.48      | 0.51 | 71.3         | 73.3 | 15.3               | 15.3 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4150             | 861  | 9293            | 1839 | 0.45      | 0.47 | 71.7         | 73.5 | 14.1               | 14.1 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4387             | 882  | 9293            | 1839 | 0.47      | 0.48 | 71.5         | 73.4 | 14.9               | 14.9 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4277             | 812  | 9293            | 1839 | 0.46      | 0.44 | 71.6         | 73.4 | 14.6               | 14.6 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4242             | 787  | 9293            | 1839 | 0.46      | 0.43 | 71.6         | 73.4 | 14.4               | 14.4 | B   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 4163             | 737  | 9293            | 1839 | 0.45      | 0.40 | 71.7         | 73.5 | 14.2               | 14.2 | B   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 3969             | 651  | 9293            | 1839 | 0.43      | 0.35 | 71.7         | 73.5 | 13.5               | 13.5 | B   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3573             | 696  | 9293            | 1839 | 0.38      | 0.38 | 71.7         | 73.5 | 12.1               | 12.1 | B   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3349             | 766  | 9293            | 1839 | 0.36      | 0.42 | 71.7         | 73.5 | 11.4               | 11.4 | B   |
| Segment 5: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | 1    |       | 0.909 |       | 2847             |      | 6970            |      | 0.41      |      | 70.8         |      | 13.4               |      | B   |
| 2                  |      | 0.909 |       | 2781  |                  | 6970 |                 | 0.40 |           | 70.8 |              | 13.1 |                    | B    |     |
| 3                  |      | 0.909 |       | 3001  |                  | 6970 |                 | 0.43 |           | 70.8 |              | 14.1 |                    | B    |     |

|                    |      |       |                  |                 |           |              |                    |     |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 4                  | 1.00 | 0.909 | 3327             | 6970            | 0.48      | 70.8         | 15.7               | B   |
| 5                  | 1.00 | 0.909 | 3441             | 6970            | 0.49      | 70.8         | 16.2               | B   |
| 6                  | 1.00 | 0.909 | 3441             | 6970            | 0.49      | 70.8         | 16.2               | B   |
| 7                  | 1.00 | 0.909 | 3498             | 6970            | 0.50      | 70.7         | 16.5               | B   |
| 8                  | 1.00 | 0.909 | 3428             | 6970            | 0.49      | 70.8         | 16.1               | B   |
| 9                  | 1.00 | 0.909 | 3485             | 6970            | 0.50      | 70.7         | 16.4               | B   |
| 10                 | 1.00 | 0.909 | 3538             | 6970            | 0.51      | 70.7         | 16.7               | B   |
| 11                 | 1.00 | 0.909 | 3168             | 6970            | 0.45      | 70.8         | 14.9               | B   |
| 12                 | 1.00 | 0.909 | 3490             | 6970            | 0.50      | 70.7         | 16.4               | B   |
| 13                 | 1.00 | 0.909 | 3230             | 6970            | 0.46      | 70.8         | 15.2               | B   |
| 14                 | 1.00 | 0.909 | 3446             | 6970            | 0.49      | 70.8         | 16.2               | B   |
| 15                 | 1.00 | 0.909 | 3410             | 6970            | 0.49      | 70.8         | 16.1               | B   |
| 16                 | 1.00 | 0.909 | 3402             | 6970            | 0.49      | 70.8         | 16.0               | B   |
| 17                 | 1.00 | 0.909 | 3375             | 6970            | 0.48      | 70.8         | 15.9               | B   |
| 18                 | 1.00 | 0.909 | 3274             | 6970            | 0.47      | 70.8         | 15.4               | B   |
| 19                 | 1.00 | 0.909 | 2829             | 6970            | 0.41      | 70.8         | 13.3               | B   |
| 20                 | 1.00 | 0.909 | 2530             | 6970            | 0.36      | 70.8         | 11.9               | B   |
| Segment 6: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 3349             | 6714            | 0.50      | 58.6         | 14.3               | B   |
| 2                  | 1.00 | 0.909 | 3358             | 6714            | 0.50      | 58.6         | 14.3               | B   |
| 3                  | 1.00 | 0.909 | 3574             | 6793            | 0.53      | 58.0         | 15.4               | B   |
| 4                  | 1.00 | 0.909 | 3855             | 7802            | 0.49      | 58.6         | 16.4               | B   |
| 5                  | 1.00 | 0.909 | 4083             | 7283            | 0.56      | 57.0         | 17.9               | B   |
| 6                  | 1.00 | 0.909 | 4271             | 6853            | 0.62      | 55.8         | 19.1               | B   |
| 7                  | 1.00 | 0.909 | 4299             | 6793            | 0.63      | 55.6         | 19.3               | B   |
| 8                  | 1.00 | 0.909 | 4171             | 6813            | 0.61      | 56.1         | 18.6               | B   |
| 9                  | 1.00 | 0.909 | 4195             | 6638            | 0.63      | 55.7         | 18.8               | B   |
| 10                 | 1.00 | 0.909 | 4279             | 7192            | 0.59      | 56.2         | 19.0               | B   |
| 11                 | 1.00 | 0.909 | 3941             | 6657            | 0.59      | 56.6         | 17.4               | B   |
| 12                 | 1.00 | 0.909 | 4248             | 7105            | 0.60      | 56.2         | 18.9               | B   |
| 13                 | 1.00 | 0.909 | 4052             | 7237            | 0.56      | 57.1         | 17.7               | B   |
| 14                 | 1.00 | 0.909 | 4202             | 7518            | 0.56      | 57.0         | 18.4               | B   |
| 15                 | 1.00 | 0.909 | 4029             | 7864            | 0.51      | 58.7         | 17.2               | B   |
| 16                 | 1.00 | 0.909 | 4043             | 7863            | 0.51      | 58.7         | 17.2               | B   |
| 17                 | 1.00 | 0.909 | 3867             | 7988            | 0.48      | 60.6         | 16.0               | B   |
| 18                 | 1.00 | 0.909 | 3756             | 7991            | 0.47      | 61.0         | 15.4               | B   |
| 19                 | 1.00 | 0.909 | 3194             | 8015            | 0.40      | 62.9         | 12.7               | B   |
| 20                 | 1.00 | 0.909 | 2920             | 7931            | 0.37      | 62.9         | 11.6               | B   |
| Segment 7: Basic   |      |       |                  |                 |           |              |                    |     |
| Time               | PHF  | fHV   | Flow Rate        | Capacity        | d/c       | Speed        | Density            | LOS |

| Period           |      |       | (pc/h) | (pc/h) | Ratio            | (mi/h) | (pc/mi/ln)      |      |           |      |              |      |                    |      |     |
|------------------|------|-------|--------|--------|------------------|--------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 | 2772   | 6970   | 0.40             | 70.6   | 13.1            | B    |           |      |              |      |                    |      |     |
| 2                | 1.00 | 0.909 | 2851   | 6970   | 0.41             | 70.6   | 13.4            | B    |           |      |              |      |                    |      |     |
| 3                | 1.00 | 0.909 | 3006   | 6970   | 0.43             | 70.6   | 14.2            | B    |           |      |              |      |                    |      |     |
| 4                | 1.00 | 0.909 | 3327   | 6970   | 0.48             | 70.6   | 15.7            | B    |           |      |              |      |                    |      |     |
| 5                | 1.00 | 0.909 | 3512   | 6970   | 0.50             | 70.6   | 16.6            | B    |           |      |              |      |                    |      |     |
| 6                | 1.00 | 0.909 | 3754   | 6970   | 0.54             | 70.5   | 17.7            | B    |           |      |              |      |                    |      |     |
| 7                | 1.00 | 0.909 | 3732   | 6970   | 0.54             | 70.5   | 17.6            | B    |           |      |              |      |                    |      |     |
| 8                | 1.00 | 0.909 | 3591   | 6970   | 0.52             | 70.6   | 16.9            | B    |           |      |              |      |                    |      |     |
| 9                | 1.00 | 0.909 | 3538   | 6970   | 0.51             | 70.6   | 16.7            | B    |           |      |              |      |                    |      |     |
| 10               | 1.00 | 0.909 | 3732   | 6970   | 0.54             | 70.5   | 17.6            | B    |           |      |              |      |                    |      |     |
| 11               | 1.00 | 0.909 | 3432   | 6970   | 0.49             | 70.6   | 16.2            | B    |           |      |              |      |                    |      |     |
| 12               | 1.00 | 0.909 | 3714   | 6970   | 0.53             | 70.5   | 17.6            | B    |           |      |              |      |                    |      |     |
| 13               | 1.00 | 0.909 | 3661   | 6970   | 0.53             | 70.6   | 17.3            | B    |           |      |              |      |                    |      |     |
| 14               | 1.00 | 0.909 | 3749   | 6970   | 0.54             | 70.5   | 17.7            | B    |           |      |              |      |                    |      |     |
| 15               | 1.00 | 0.909 | 3613   | 6970   | 0.52             | 70.6   | 17.1            | B    |           |      |              |      |                    |      |     |
| 16               | 1.00 | 0.909 | 3648   | 6970   | 0.52             | 70.6   | 17.2            | B    |           |      |              |      |                    |      |     |
| 17               | 1.00 | 0.909 | 3507   | 6970   | 0.50             | 70.6   | 16.5            | B    |           |      |              |      |                    |      |     |
| 18               | 1.00 | 0.909 | 3419   | 6970   | 0.49             | 70.7   | 16.1            | B    |           |      |              |      |                    |      |     |
| 19               | 1.00 | 0.909 | 2882   | 6970   | 0.41             | 70.7   | 13.6            | B    |           |      |              |      |                    |      |     |
| 20               | 1.00 | 0.909 | 2618   | 6970   | 0.38             | 70.7   | 12.3            | B    |           |      |              |      |                    |      |     |
| Segment 8: Merge |      |       |        |        |                  |        |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV    |        | Flow Rate (pc/h) |        | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F      | R      | Freeway          | Ramp   | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909  | 0.971  | 2924             | 152    | 6970            | 2033 | 0.42      | 0.07 | 67.1         | 64.8 | 14.5               | 14.6 | B   |
| 2                | 1.00 | 1.00  | 0.909  | 0.971  | 3012             | 161    | 6970            | 2033 | 0.43      | 0.08 | 67.1         | 64.8 | 15.0               | 15.1 | B   |
| 3                | 1.00 | 1.00  | 0.909  | 0.971  | 3183             | 177    | 6970            | 2033 | 0.46      | 0.09 | 66.9         | 64.7 | 15.9               | 15.9 | B   |
| 4                | 1.00 | 1.00  | 0.909  | 0.971  | 3467             | 140    | 6970            | 2033 | 0.50      | 0.07 | 66.7         | 64.6 | 17.3               | 17.1 | B   |
| 5                | 1.00 | 1.00  | 0.909  | 0.971  | 3701             | 189    | 6970            | 2033 | 0.53      | 0.09 | 66.5         | 64.4 | 18.6               | 18.4 | B   |
| 6                | 1.00 | 1.00  | 0.909  | 0.971  | 3935             | 181    | 6970            | 2033 | 0.56      | 0.09 | 66.3         | 64.2 | 19.8               | 19.4 | B   |
| 7                | 1.00 | 1.00  | 0.909  | 0.971  | 3926             | 194    | 6970            | 2033 | 0.56      | 0.10 | 66.3         | 64.2 | 19.7               | 19.4 | B   |
| 8                | 1.00 | 1.00  | 0.909  | 0.971  | 3756             | 165    | 6970            | 2033 | 0.54      | 0.08 | 66.5         | 64.4 | 18.8               | 18.6 | B   |
| 9                | 1.00 | 1.00  | 0.909  | 0.971  | 3736             | 198    | 6970            | 2033 | 0.54      | 0.10 | 66.5         | 64.4 | 18.7               | 18.5 | B   |
| 10               | 1.00 | 1.00  | 0.909  | 0.971  | 3921             | 189    | 6970            | 2033 | 0.56      | 0.09 | 66.3         | 64.2 | 19.7               | 19.4 | B   |
| 11               | 1.00 | 1.00  | 0.909  | 0.971  | 3683             | 251    | 6970            | 2033 | 0.53      | 0.12 | 66.5         | 64.4 | 18.5               | 18.4 | B   |
| 12               | 1.00 | 1.00  | 0.909  | 0.971  | 3908             | 194    | 6970            | 2033 | 0.56      | 0.10 | 66.3         | 64.2 | 19.6               | 19.3 | B   |
| 13               | 1.00 | 1.00  | 0.909  | 0.971  | 3925             | 264    | 6970            | 2033 | 0.56      | 0.13 | 66.2         | 64.2 | 19.8               | 19.6 | B   |
| 14               | 1.00 | 1.00  | 0.909  | 0.971  | 3959             | 210    | 6970            | 2033 | 0.57      | 0.10 | 66.2         | 64.2 | 19.9               | 19.6 | B   |
| 15               | 1.00 | 1.00  | 0.909  | 0.971  | 3761             | 148    | 6970            | 2033 | 0.54      | 0.07 | 66.5         | 64.4 | 18.9               | 18.5 | B   |
| 16               | 1.00 | 1.00  | 0.909  | 0.971  | 3739             | 91     | 6970            | 2033 | 0.54      | 0.04 | 66.5         | 64.4 | 18.7               | 18.3 | B   |
| 17               | 1.00 | 1.00  | 0.909  | 0.971  | 3602             | 95     | 6970            | 2033 | 0.52      | 0.05 | 66.6         | 64.5 | 18.0               | 17.6 | B   |

|                              |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
|------------------------------|-------------|------|-------|-------------------|------------------|----|--------------------|------|-----------|------------------|--------------|------|--------------------|------|-----|
| 18                           | 1.00        | 1.00 | 0.909 | 0.971             | 3501             | 82 | 6970               | 2033 | 0.50      | 0.04             | 66.7         | 64.6 | 17.5               | 17.1 | B   |
| 19                           | 1.00        | 1.00 | 0.909 | 0.971             | 2964             | 82 | 6970               | 2033 | 0.43      | 0.04             | 67.1         | 64.8 | 14.7               | 14.6 | B   |
| 20                           | 1.00        | 1.00 | 0.909 | 0.971             | 2676             | 58 | 6970               | 2033 | 0.38      | 0.03             | 67.4         | 65.0 | 13.2               | 13.2 | B   |
| Segment 9: Basic             |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |    | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 2935             |    | 6970               |      | 0.42      |                  | 70.6         |      | 13.8               |      | B   |
| 2                            | 1.00        |      | 0.909 |                   | 3023             |    | 6970               |      | 0.43      |                  | 70.6         |      | 14.2               |      | B   |
| 3                            | 1.00        |      | 0.909 |                   | 3195             |    | 6970               |      | 0.46      |                  | 70.6         |      | 15.0               |      | B   |
| 4                            | 1.00        |      | 0.909 |                   | 3476             |    | 6970               |      | 0.50      |                  | 70.6         |      | 16.4               |      | B   |
| 5                            | 1.00        |      | 0.909 |                   | 3714             |    | 6970               |      | 0.53      |                  | 70.5         |      | 17.6               |      | B   |
| 6                            | 1.00        |      | 0.909 |                   | 3947             |    | 6970               |      | 0.57      |                  | 70.2         |      | 18.7               |      | C   |
| 7                            | 1.00        |      | 0.909 |                   | 3938             |    | 6970               |      | 0.56      |                  | 70.2         |      | 18.7               |      | C   |
| 8                            | 1.00        |      | 0.909 |                   | 3767             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.8               |      | B   |
| 9                            | 1.00        |      | 0.909 |                   | 3749             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.7               |      | B   |
| 10                           | 1.00        |      | 0.909 |                   | 3934             |    | 6970               |      | 0.56      |                  | 70.2         |      | 18.7               |      | C   |
| 11                           | 1.00        |      | 0.909 |                   | 3701             |    | 6970               |      | 0.53      |                  | 70.6         |      | 17.5               |      | B   |
| 12                           | 1.00        |      | 0.909 |                   | 3921             |    | 6970               |      | 0.56      |                  | 70.2         |      | 18.6               |      | C   |
| 13                           | 1.00        |      | 0.909 |                   | 3943             |    | 6970               |      | 0.57      |                  | 70.2         |      | 18.7               |      | C   |
| 14                           | 1.00        |      | 0.909 |                   | 3974             |    | 6970               |      | 0.57      |                  | 70.1         |      | 18.9               |      | C   |
| 15                           | 1.00        |      | 0.909 |                   | 3771             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.8               |      | B   |
| 16                           | 1.00        |      | 0.909 |                   | 3745             |    | 6970               |      | 0.54      |                  | 70.5         |      | 17.7               |      | B   |
| 17                           | 1.00        |      | 0.909 |                   | 3608             |    | 6970               |      | 0.52      |                  | 70.6         |      | 17.0               |      | B   |
| 18                           | 1.00        |      | 0.909 |                   | 3507             |    | 6970               |      | 0.50      |                  | 70.6         |      | 16.5               |      | B   |
| 19                           | 1.00        |      | 0.909 |                   | 2970             |    | 6970               |      | 0.43      |                  | 70.6         |      | 14.0               |      | B   |
| 20                           | 1.00        |      | 0.909 |                   | 2680             |    | 6970               |      | 0.38      |                  | 70.6         |      | 12.6               |      | B   |
| Facility Time Period Results |             |      |       |                   |                  |    |                    |      |           |                  |              |      |                    |      |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |    | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |      |     |
| 1                            | 67.5        |      |       | 15.6              |                  |    | 14.2               |      |           | 2.40             |              |      | B                  |      |     |
| 2                            | 67.4        |      |       | 15.9              |                  |    | 14.4               |      |           | 2.40             |              |      | B                  |      |     |
| 3                            | 67.1        |      |       | 17.0              |                  |    | 15.5               |      |           | 2.40             |              |      | B                  |      |     |
| 4                            | 66.7        |      |       | 18.8              |                  |    | 17.1               |      |           | 2.50             |              |      | C                  |      |     |
| 5                            | 66.6        |      |       | 19.1              |                  |    | 17.3               |      |           | 2.50             |              |      | C                  |      |     |
| 6                            | 66.4        |      |       | 19.6              |                  |    | 17.8               |      |           | 2.50             |              |      | C                  |      |     |
| 7                            | 66.2        |      |       | 19.7              |                  |    | 17.9               |      |           | 2.50             |              |      | C                  |      |     |
| 8                            | 66.4        |      |       | 19.2              |                  |    | 17.5               |      |           | 2.50             |              |      | C                  |      |     |
| 9                            | 66.4        |      |       | 19.1              |                  |    | 17.4               |      |           | 2.50             |              |      | C                  |      |     |
| 10                           | 66.3        |      |       | 19.8              |                  |    | 18.0               |      |           | 2.50             |              |      | C                  |      |     |
| 11                           | 66.9        |      |       | 18.1              |                  |    | 16.4               |      |           | 2.50             |              |      | C                  |      |     |
| 12                           | 66.4        |      |       | 19.6              |                  |    | 17.8               |      |           | 2.50             |              |      | C                  |      |     |
| 13                           | 66.9        |      |       | 18.7              |                  |    | 17.0               |      |           | 2.40             |              |      | C                  |      |     |



|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 14 | 66.6 | 19.6 | 17.8 | 2.50 | C |
| 15 | 67.3 | 18.6 | 16.9 | 2.40 | C |
| 16 | 67.3 | 18.5 | 16.8 | 2.40 | C |
| 17 | 67.8 | 17.8 | 16.2 | 2.40 | B |
| 18 | 68.0 | 17.1 | 15.5 | 2.40 | B |
| 19 | 68.6 | 14.7 | 13.3 | 2.40 | B |
| 20 | 68.7 | 13.4 | 12.2 | 2.40 | B |

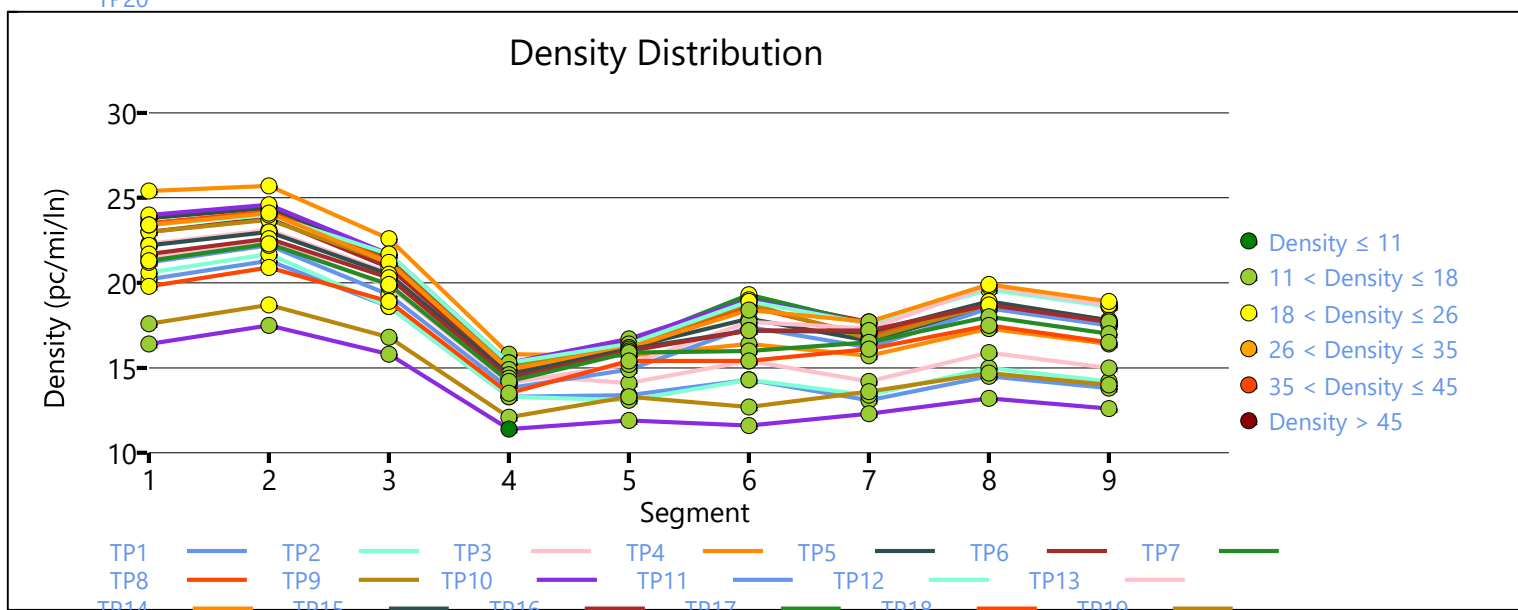
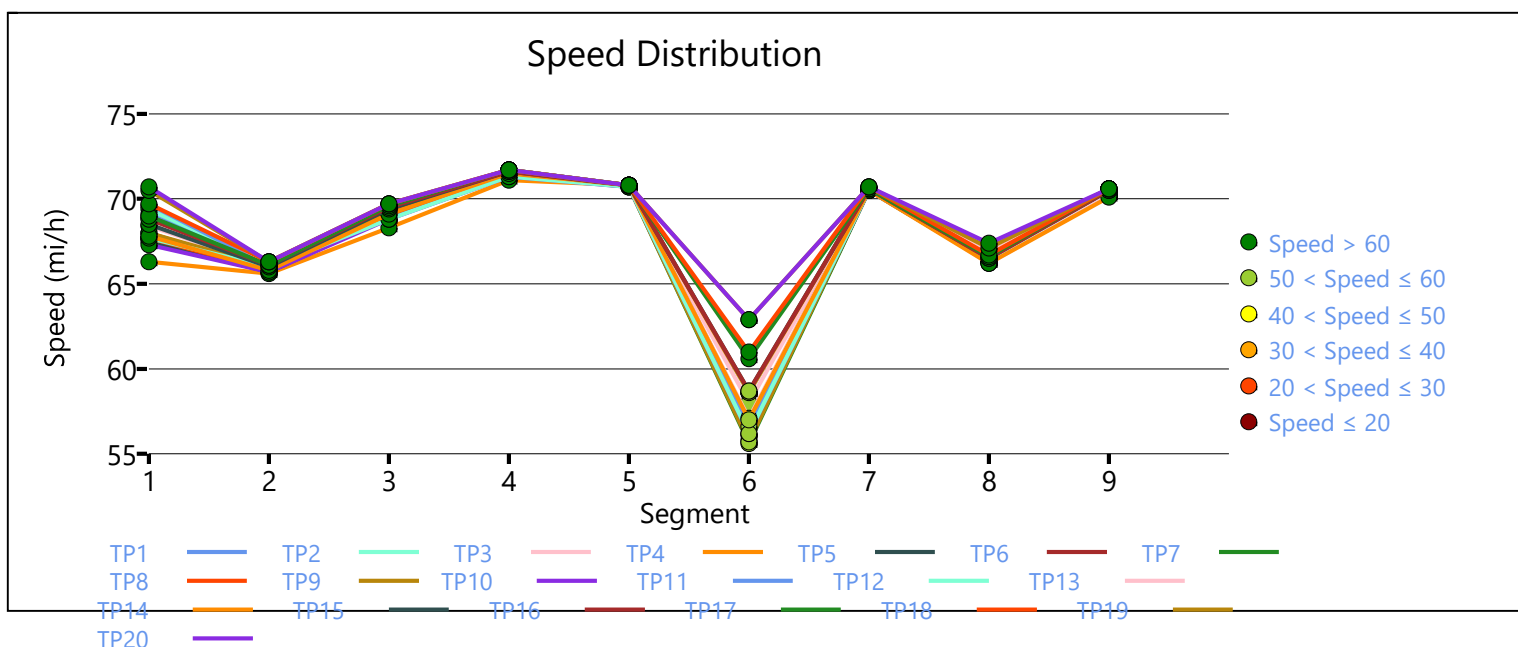
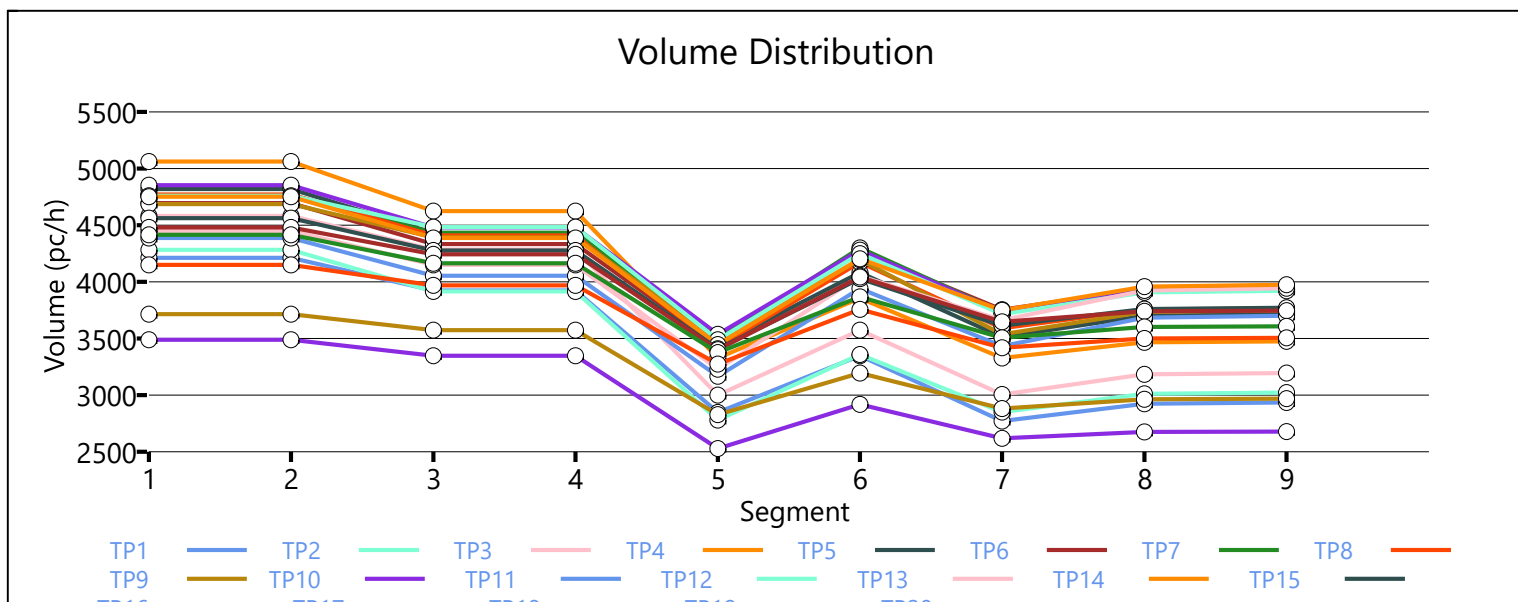
Facility Overall Results

|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 67.0 | Density, veh/mi/ln | 16.4 |
| Average Travel Time, min | 2.40 | Density, pc/mi/ln  | 18.0 |

Messages

Comments

|  |
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|  |
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# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                                |                      |                         |
|---------------------|----------------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                             | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                                | Analysis Year        | 2030                    |
| Jurisdiction        | NMDOT                                                          | Time Period Analyzed | AM Peak Period          |
| Project Description | 2030 No-Build, I-25<br>Programmed Improvements -<br>Northbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.91  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | South of Sunport                    | 2640       | 5     |
| 2   | Diverge | Basic    | Sunport Off Ramp                    | 1500       | 5     |
| 3   | Basic   | Basic    | Bet Sunport and Gibson Off Ramps    | 1100       | 4     |
| 4   | Diverge | Basic    | Gibson Off Ramp                     | 800        | 5     |
| 5   | Basic   | Basic    | Bet Gibson Off and Sunport On Ramps | 1600       | 4     |
| 6   | Weaving | Weaving  | Bet Sunport On and ACC Off Ramps    | 2200       | 5     |
| 7   | Basic   | Basic    | North of ACC Off Ramp               | 2200       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 700        | 5     |
| 9   | Basic   | Basic    | North of Gibson On Ramp             | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1404             | 11616           | 0.12      | 70.8         | 4.0                | A   |
| 2           | 1.00 | 0.909 | 2112             | 11616           | 0.18      | 70.8         | 6.0                | A   |
| 3           | 1.00 | 0.909 | 2473             | 11616           | 0.21      | 70.8         | 7.0                | A   |
| 4           | 1.00 | 0.909 | 2240             | 11616           | 0.19      | 70.8         | 6.3                | A   |
| 5           | 1.00 | 0.909 | 3190             | 11616           | 0.27      | 70.8         | 9.0                | A   |
| 6           | 1.00 | 0.909 | 4088             | 11616           | 0.35      | 70.8         | 11.6               | B   |
| 7           | 1.00 | 0.909 | 4757             | 11616           | 0.41      | 70.8         | 13.4               | B   |
| 8           | 1.00 | 0.909 | 4242             | 11616           | 0.37      | 70.8         | 12.0               | B   |
| 9           | 1.00 | 0.909 | 5179             | 11616           | 0.45      | 70.8         | 14.6               | B   |
| 10          | 1.00 | 0.909 | 5976             | 11616           | 0.51      | 70.7         | 16.9               | B   |
| 11          | 1.00 | 0.909 | 5201             | 11616           | 0.45      | 70.8         | 14.7               | B   |
| 12          | 1.00 | 0.909 | 3679             | 11616           | 0.32      | 70.8         | 10.4               | A   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 3705  |       | 11616            |      | 0.32            | 70.8 | 10.5      |      | A            |      |                    |      |     |
| 14                 | 1.00 | 0.909 | 3666  |       | 11616            |      | 0.32            | 70.8 | 10.4      |      | A            |      |                    |      |     |
| 15                 | 1.00 | 0.909 | 3529  |       | 11616            |      | 0.30            | 70.8 | 10.0      |      | A            |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 2741  |       | 11616            |      | 0.24            | 70.8 | 7.7       |      | A            |      |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1404             | 45   | 11616           | 2033 | 0.12      | 0.02 | 73.4         | 73.5 | 3.8                | 3.8  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2112             | 74   | 11616           | 2033 | 0.18      | 0.04 | 73.4         | 73.5 | 5.7                | 5.7  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2473             | 91   | 11616           | 2033 | 0.21      | 0.04 | 73.4         | 73.5 | 6.7                | 6.7  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2240             | 103  | 11616           | 2033 | 0.19      | 0.05 | 73.4         | 73.5 | 6.1                | 6.1  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3190             | 91   | 11616           | 2033 | 0.27      | 0.04 | 73.4         | 73.5 | 8.7                | 8.7  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4088             | 103  | 11616           | 2033 | 0.35      | 0.05 | 73.4         | 73.5 | 11.1               | 11.1 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4757             | 111  | 11616           | 2033 | 0.41      | 0.05 | 73.4         | 73.5 | 12.9               | 12.9 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4242             | 128  | 11616           | 2033 | 0.37      | 0.06 | 73.4         | 73.5 | 11.5               | 11.5 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5179             | 91   | 11616           | 2033 | 0.45      | 0.04 | 73.4         | 73.5 | 14.1               | 14.1 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5976             | 136  | 11616           | 2033 | 0.51      | 0.07 | 73.0         | 73.0 | 16.4               | 16.4 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 5201             | 189  | 11616           | 2033 | 0.45      | 0.09 | 73.4         | 73.5 | 14.1               | 14.1 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3679             | 181  | 11616           | 2033 | 0.32      | 0.09 | 73.4         | 73.5 | 10.0               | 10.0 | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3705             | 148  | 11616           | 2033 | 0.32      | 0.07 | 73.4         | 73.5 | 10.1               | 10.1 | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 3666             | 148  | 11616           | 2033 | 0.32      | 0.07 | 73.4         | 73.5 | 10.0               | 10.0 | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3529             | 148  | 11616           | 2033 | 0.30      | 0.07 | 73.4         | 73.5 | 9.6                | 9.6  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2741             | 119  | 11616           | 2033 | 0.24      | 0.06 | 73.4         | 73.5 | 7.5                | 7.5  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1355             |      | 9293            |      | 0.15      |      | 70.8         |      | 4.8                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2033             |      | 9293            |      | 0.22      |      | 70.8         |      | 7.2                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2376             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.4                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2130             |      | 9293            |      | 0.23      |      | 70.8         |      | 7.5                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 3094             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.9               |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 3978             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.0               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 4638             |      | 9293            |      | 0.50      |      | 70.7         |      | 16.4               |      | B   |
| 8                  | 1.00 |       | 0.909 |       | 4106             |      | 9293            |      | 0.44      |      | 70.8         |      | 14.5               |      | B   |
| 9                  | 1.00 |       | 0.909 |       | 5083             |      | 9293            |      | 0.55      |      | 70.4         |      | 18.1               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 5831             |      | 9293            |      | 0.63      |      | 69.1         |      | 21.1               |      | C   |
| 11                 | 1.00 |       | 0.909 |       | 4999             |      | 9293            |      | 0.54      |      | 70.5         |      | 17.7               |      | B   |
| 12                 | 1.00 |       | 0.909 |       | 3485             |      | 9293            |      | 0.38      |      | 70.8         |      | 12.3               |      | B   |
| 13                 | 1.00 |       | 0.909 |       | 3547             |      | 9293            |      | 0.38      |      | 70.8         |      | 12.5               |      | B   |
| 14                 | 1.00 |       | 0.909 |       | 3507             |      | 9293            |      | 0.38      |      | 70.8         |      | 12.4               |      | B   |
| 15                 | 1.00 |       | 0.909 |       | 3371             |      | 9293            |      | 0.36      |      | 70.8         |      | 11.9               |      | B   |

| 16                 | 1.00 | 0.909 | 2614  |       | 9293             |      | 0.28            |      | 70.8      |      | 9.2          |      | A                  |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Segment 4: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1355             | 276  | 11616           | 2033 | 0.12      | 0.14 | 72.9         | 73.5 | 3.7                | 3.7  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2033             | 342  | 11616           | 2033 | 0.18      | 0.17 | 72.9         | 73.5 | 5.5                | 5.5  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2376             | 494  | 11616           | 2033 | 0.20      | 0.24 | 72.9         | 73.5 | 6.5                | 6.5  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2130             | 515  | 11616           | 2033 | 0.18      | 0.25 | 72.9         | 73.5 | 5.8                | 5.8  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3094             | 350  | 11616           | 2033 | 0.27      | 0.17 | 72.9         | 73.5 | 8.4                | 8.4  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 3978             | 478  | 11616           | 2033 | 0.34      | 0.24 | 72.9         | 73.5 | 10.8               | 10.8 | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4638             | 614  | 11616           | 2033 | 0.40      | 0.30 | 72.9         | 73.5 | 12.6               | 12.6 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4106             | 737  | 11616           | 2033 | 0.35      | 0.36 | 72.9         | 73.5 | 11.2               | 11.2 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5083             | 890  | 11616           | 2033 | 0.44      | 0.44 | 72.8         | 73.5 | 13.8               | 13.8 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5831             | 836  | 11616           | 2033 | 0.50      | 0.41 | 72.6         | 73.1 | 16.0               | 16.0 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4999             | 849  | 11616           | 2033 | 0.43      | 0.42 | 72.9         | 73.5 | 13.6               | 13.6 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3485             | 1055 | 11616           | 2033 | 0.30      | 0.52 | 72.9         | 73.5 | 9.5                | 9.5  | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3547             | 836  | 11616           | 2033 | 0.31      | 0.41 | 72.9         | 73.5 | 9.6                | 9.6  | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 3507             | 824  | 11616           | 2033 | 0.30      | 0.41 | 72.9         | 73.5 | 9.5                | 9.5  | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3371             | 700  | 11616           | 2033 | 0.29      | 0.34 | 72.9         | 73.5 | 9.2                | 9.2  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2614             | 894  | 11616           | 2033 | 0.23      | 0.44 | 72.9         | 73.5 | 7.1                | 7.1  | A   |
| Segment 5: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1061             |      | 9293            |      | 0.11      |      | 70.8         |      | 3.7                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1668             |      | 9293            |      | 0.18      |      | 70.8         |      | 5.9                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 1848             |      | 9293            |      | 0.20      |      | 70.8         |      | 6.5                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 1580             |      | 9293            |      | 0.17      |      | 70.8         |      | 5.6                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2719             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.6                |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 3468             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.2               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 3982             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.1               |      | B   |
| 8                  | 1.00 |       | 0.909 |       | 3318             |      | 9293            |      | 0.36      |      | 70.8         |      | 11.7               |      | B   |
| 9                  | 1.00 |       | 0.909 |       | 4132             |      | 9293            |      | 0.44      |      | 70.8         |      | 14.6               |      | B   |
| 10                 | 1.00 |       | 0.909 |       | 4937             |      | 9293            |      | 0.53      |      | 70.6         |      | 17.5               |      | B   |
| 11                 | 1.00 |       | 0.909 |       | 4092             |      | 9293            |      | 0.44      |      | 70.8         |      | 14.4               |      | B   |
| 12                 | 1.00 |       | 0.909 |       | 2359             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.3                |      | A   |
| 13                 | 1.00 |       | 0.909 |       | 2653             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.4                |      | A   |
| 14                 | 1.00 |       | 0.909 |       | 2627             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.3                |      | A   |
| 15                 | 1.00 |       | 0.909 |       | 2623             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.3                |      | A   |
| 16                 | 1.00 |       | 0.909 |       | 1659             |      | 9293            |      | 0.18      |      | 70.8         |      | 5.9                |      | A   |
| Segment 6: Weaving |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time               | PHF  |       | fHV   |       | Flow Rate        |      | Capacity        |      | d/c       |      | Speed        |      | Density            |      | LOS |

| Period           |      |       |       |       | (pc/h)           |      | (pc/h)          |      | Ratio     |      | (mi/h)       |      | (pc/mi/ln)         |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 |       |       | 1465             |      | 4830            |      | 0.30      |      | 64.9         |      | 4.5                |      | A   |
| 2                | 1.00 | 0.909 |       |       | 2098             |      | 6163            |      | 0.34      |      | 64.4         |      | 6.5                |      | A   |
| 3                | 1.00 | 0.909 |       |       | 2126             |      | 6347            |      | 0.33      |      | 64.6         |      | 6.6                |      | A   |
| 4                | 1.00 | 0.909 |       |       | 1967             |      | 5040            |      | 0.39      |      | 63.5         |      | 6.2                |      | A   |
| 5                | 1.00 | 0.909 |       |       | 3234             |      | 8901            |      | 0.36      |      | 63.4         |      | 10.2               |      | B   |
| 6                | 1.00 | 0.909 |       |       | 3863             |      | 10314           |      | 0.37      |      | 63.0         |      | 12.3               |      | B   |
| 7                | 1.00 | 0.909 |       |       | 4304             |      | 10353           |      | 0.42      |      | 62.2         |      | 13.8               |      | B   |
| 8                | 1.00 | 0.909 |       |       | 3654             |      | 7544            |      | 0.48      |      | 61.2         |      | 11.9               |      | B   |
| 9                | 1.00 | 0.909 |       |       | 4600             |      | 8510            |      | 0.54      |      | 59.5         |      | 15.5               |      | B   |
| 10               | 1.00 | 0.909 |       |       | 5340             |      | 10295           |      | 0.52      |      | 59.3         |      | 18.0               |      | B   |
| 11               | 1.00 | 0.909 |       |       | 4594             |      | 8267            |      | 0.56      |      | 59.3         |      | 15.5               |      | B   |
| 12               | 1.00 | 0.909 |       |       | 2766             |      | 4610            |      | 0.60      |      | 60.0         |      | 9.2                |      | A   |
| 13               | 1.00 | 0.909 |       |       | 3085             |      | 5881            |      | 0.52      |      | 61.0         |      | 10.1               |      | B   |
| 14               | 1.00 | 0.909 |       |       | 2908             |      | 6400            |      | 0.45      |      | 62.2         |      | 9.4                |      | A   |
| 15               | 1.00 | 0.909 |       |       | 3066             |      | 6435            |      | 0.48      |      | 61.7         |      | 9.9                |      | A   |
| 16               | 1.00 | 0.909 |       |       | 2223             |      | 3677            |      | 0.60      |      | 60.0         |      | 7.4                |      | A   |
| Segment 7: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 | 0.909 |       |       | 1215             |      | 9293            |      | 0.13      |      | 70.6         |      | 4.3                |      | A   |
| 2                | 1.00 | 0.909 |       |       | 1791             |      | 9293            |      | 0.19      |      | 70.6         |      | 6.3                |      | A   |
| 3                | 1.00 | 0.909 |       |       | 1677             |      | 9293            |      | 0.18      |      | 70.6         |      | 5.9                |      | A   |
| 4                | 1.00 | 0.909 |       |       | 1509             |      | 9293            |      | 0.16      |      | 70.6         |      | 5.3                |      | A   |
| 5                | 1.00 | 0.909 |       |       | 2961             |      | 9293            |      | 0.32      |      | 70.6         |      | 10.5               |      | A   |
| 6                | 1.00 | 0.909 |       |       | 3472             |      | 9293            |      | 0.37      |      | 70.6         |      | 12.3               |      | B   |
| 7                | 1.00 | 0.909 |       |       | 3793             |      | 9293            |      | 0.41      |      | 70.6         |      | 13.4               |      | B   |
| 8                | 1.00 | 0.909 |       |       | 2944             |      | 9293            |      | 0.32      |      | 70.5         |      | 10.4               |      | A   |
| 9                | 1.00 | 0.909 |       |       | 3899             |      | 9293            |      | 0.42      |      | 70.5         |      | 13.8               |      | B   |
| 10               | 1.00 | 0.909 |       |       | 4634             |      | 9293            |      | 0.50      |      | 70.5         |      | 16.4               |      | B   |
| 11               | 1.00 | 0.909 |       |       | 3894             |      | 9293            |      | 0.42      |      | 70.5         |      | 13.8               |      | B   |
| 12               | 1.00 | 0.909 |       |       | 1875             |      | 9293            |      | 0.20      |      | 70.5         |      | 6.6                |      | A   |
| 13               | 1.00 | 0.909 |       |       | 2381             |      | 9293            |      | 0.26      |      | 70.5         |      | 8.4                |      | A   |
| 14               | 1.00 | 0.909 |       |       | 2205             |      | 9293            |      | 0.24      |      | 70.6         |      | 7.8                |      | A   |
| 15               | 1.00 | 0.909 |       |       | 2477             |      | 9293            |      | 0.27      |      | 70.5         |      | 8.7                |      | A   |
| 16               | 1.00 | 0.909 |       |       | 1479             |      | 9293            |      | 0.16      |      | 70.5         |      | 5.2                |      | A   |
| Segment 8: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 1413             | 198  | 11616           | 2033 | 0.12      | 0.10 | 73.2         | 73.5 | 3.8                | 3.8  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 2022             | 231  | 11616           | 2033 | 0.17      | 0.11 | 73.2         | 73.5 | 5.5                | 5.5  | A   |

|                              |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |      |     |
|------------------------------|-------------|------|-------|-------------------|------------------|------|--------------------|------|-----------|------------------|--------------|------|--------------------|------|-----|
| 3                            | 1.00        | 1.00 | 0.909 | 0.971             | 1974             | 297  | 11616              | 2033 | 0.17      | 0.15             | 73.2         | 73.5 | 5.4                | 5.4  | A   |
| 4                            | 1.00        | 1.00 | 0.909 | 0.971             | 1880             | 371  | 11616              | 2033 | 0.16      | 0.18             | 73.2         | 73.5 | 5.1                | 5.1  | A   |
| 5                            | 1.00        | 1.00 | 0.909 | 0.971             | 3447             | 486  | 11616              | 2033 | 0.30      | 0.24             | 73.2         | 73.5 | 9.4                | 9.4  | A   |
| 6                            | 1.00        | 1.00 | 0.909 | 0.971             | 4131             | 659  | 11616              | 2033 | 0.36      | 0.32             | 73.2         | 73.5 | 11.2               | 11.2 | B   |
| 7                            | 1.00        | 1.00 | 0.909 | 0.971             | 4613             | 820  | 11616              | 2033 | 0.40      | 0.40             | 73.2         | 73.5 | 12.6               | 12.6 | B   |
| 8                            | 1.00        | 1.00 | 0.909 | 0.971             | 3813             | 869  | 11616              | 2033 | 0.33      | 0.43             | 73.2         | 73.5 | 10.4               | 10.4 | A   |
| 9                            | 1.00        | 1.00 | 0.909 | 0.971             | 4958             | 1059 | 11616              | 2033 | 0.43      | 0.52             | 73.2         | 73.5 | 13.5               | 13.5 | B   |
| 10                           | 1.00        | 1.00 | 0.909 | 0.971             | 5680             | 1046 | 11616              | 2033 | 0.49      | 0.51             | 73.2         | 73.2 | 15.5               | 15.5 | B   |
| 11                           | 1.00        | 1.00 | 0.909 | 0.971             | 5097             | 1203 | 11616              | 2033 | 0.44      | 0.59             | 73.2         | 73.5 | 13.9               | 13.9 | B   |
| 12                           | 1.00        | 1.00 | 0.909 | 0.971             | 3057             | 1182 | 11616              | 2033 | 0.26      | 0.58             | 73.2         | 73.5 | 8.3                | 8.3  | A   |
| 13                           | 1.00        | 1.00 | 0.909 | 0.971             | 3415             | 1034 | 11616              | 2033 | 0.29      | 0.51             | 73.2         | 73.5 | 9.3                | 9.3  | A   |
| 14                           | 1.00        | 1.00 | 0.909 | 0.971             | 3313             | 1108 | 11616              | 2033 | 0.29      | 0.55             | 73.2         | 73.5 | 9.0                | 9.0  | A   |
| 15                           | 1.00        | 1.00 | 0.909 | 0.971             | 3552             | 1075 | 11616              | 2033 | 0.31      | 0.53             | 73.2         | 73.5 | 9.7                | 9.7  | A   |
| 16                           | 1.00        | 1.00 | 0.909 | 0.971             | 2591             | 1112 | 11616              | 2033 | 0.22      | 0.55             | 73.2         | 73.5 | 7.1                | 7.1  | A   |
| Segment 9: Basic             |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |      |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |      | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 1426             |      | 9293               |      | 0.15      |                  | 70.8         |      | 5.0                |      | A   |
| 2                            | 1.00        |      | 0.909 |                   | 2037             |      | 9293               |      | 0.22      |                  | 70.8         |      | 7.2                |      | A   |
| 3                            | 1.00        |      | 0.909 |                   | 1993             |      | 9293               |      | 0.21      |                  | 70.8         |      | 7.0                |      | A   |
| 4                            | 1.00        |      | 0.909 |                   | 1905             |      | 9293               |      | 0.20      |                  | 70.8         |      | 6.7                |      | A   |
| 5                            | 1.00        |      | 0.909 |                   | 3481             |      | 9293               |      | 0.37      |                  | 70.8         |      | 12.3               |      | B   |
| 6                            | 1.00        |      | 0.909 |                   | 4176             |      | 9293               |      | 0.45      |                  | 70.8         |      | 14.7               |      | B   |
| 7                            | 1.00        |      | 0.909 |                   | 4669             |      | 9293               |      | 0.50      |                  | 70.7         |      | 16.5               |      | B   |
| 8                            | 1.00        |      | 0.909 |                   | 3872             |      | 9293               |      | 0.42      |                  | 70.8         |      | 13.7               |      | B   |
| 9                            | 1.00        |      | 0.909 |                   | 5030             |      | 9293               |      | 0.54      |                  | 70.5         |      | 17.8               |      | B   |
| 10                           | 1.00        |      | 0.909 |                   | 5751             |      | 9293               |      | 0.62      |                  | 69.3         |      | 20.8               |      | C   |
| 11                           | 1.00        |      | 0.909 |                   | 5179             |      | 9293               |      | 0.56      |                  | 70.3         |      | 18.4               |      | C   |
| 12                           | 1.00        |      | 0.909 |                   | 3138             |      | 9293               |      | 0.34      |                  | 70.8         |      | 11.1               |      | B   |
| 13                           | 1.00        |      | 0.909 |                   | 3485             |      | 9293               |      | 0.38      |                  | 70.8         |      | 12.3               |      | B   |
| 14                           | 1.00        |      | 0.909 |                   | 3388             |      | 9293               |      | 0.36      |                  | 70.8         |      | 12.0               |      | B   |
| 15                           | 1.00        |      | 0.909 |                   | 3626             |      | 9293               |      | 0.39      |                  | 70.8         |      | 12.8               |      | B   |
| 16                           | 1.00        |      | 0.909 |                   | 2667             |      | 9293               |      | 0.29      |                  | 70.8         |      | 9.4                |      | A   |
| Facility Time Period Results |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |      |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |      | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |      |     |
| 1                            | 70.2        |      |       | 4.2               |                  |      | 3.9                |      |           | 2.50             |              |      | A                  |      |     |
| 2                            | 70.2        |      |       | 6.3               |                  |      | 5.7                |      |           | 2.50             |              |      | A                  |      |     |
| 3                            | 70.3        |      |       | 6.7               |                  |      | 6.1                |      |           | 2.50             |              |      | A                  |      |     |
| 4                            | 70.1        |      |       | 6.1               |                  |      | 5.6                |      |           | 2.50             |              |      | A                  |      |     |
| 5                            | 70.0        |      |       | 10.0              |                  |      | 9.1                |      |           | 2.50             |              |      | A                  |      |     |
| 6                            | 70.0        |      |       | 12.4              |                  |      | 11.2               |      |           | 2.50             |              |      | B                  |      |     |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 7  | 69.9 | 14.1 | 12.8 | 2.50 | B |
| 8  | 69.7 | 12.0 | 10.9 | 2.50 | B |
| 9  | 69.3 | 15.2 | 13.8 | 2.50 | B |
| 10 | 68.9 | 17.8 | 16.1 | 2.50 | B |
| 11 | 69.3 | 15.3 | 13.9 | 2.50 | B |
| 12 | 69.6 | 9.6  | 8.7  | 2.50 | A |
| 13 | 69.7 | 10.3 | 9.4  | 2.50 | A |
| 14 | 70.0 | 10.0 | 9.1  | 2.50 | A |
| 15 | 69.8 | 10.2 | 9.3  | 2.50 | A |
| 16 | 69.5 | 7.4  | 6.8  | 2.50 | A |

Facility Overall Results

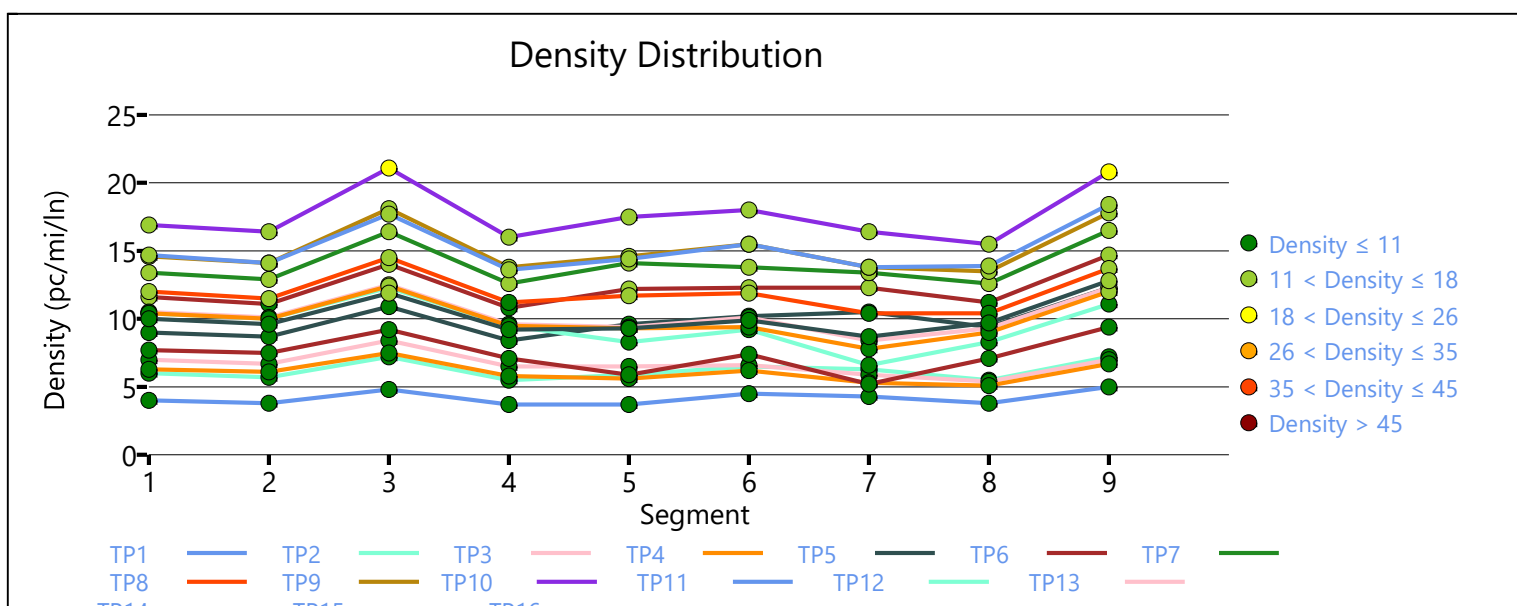
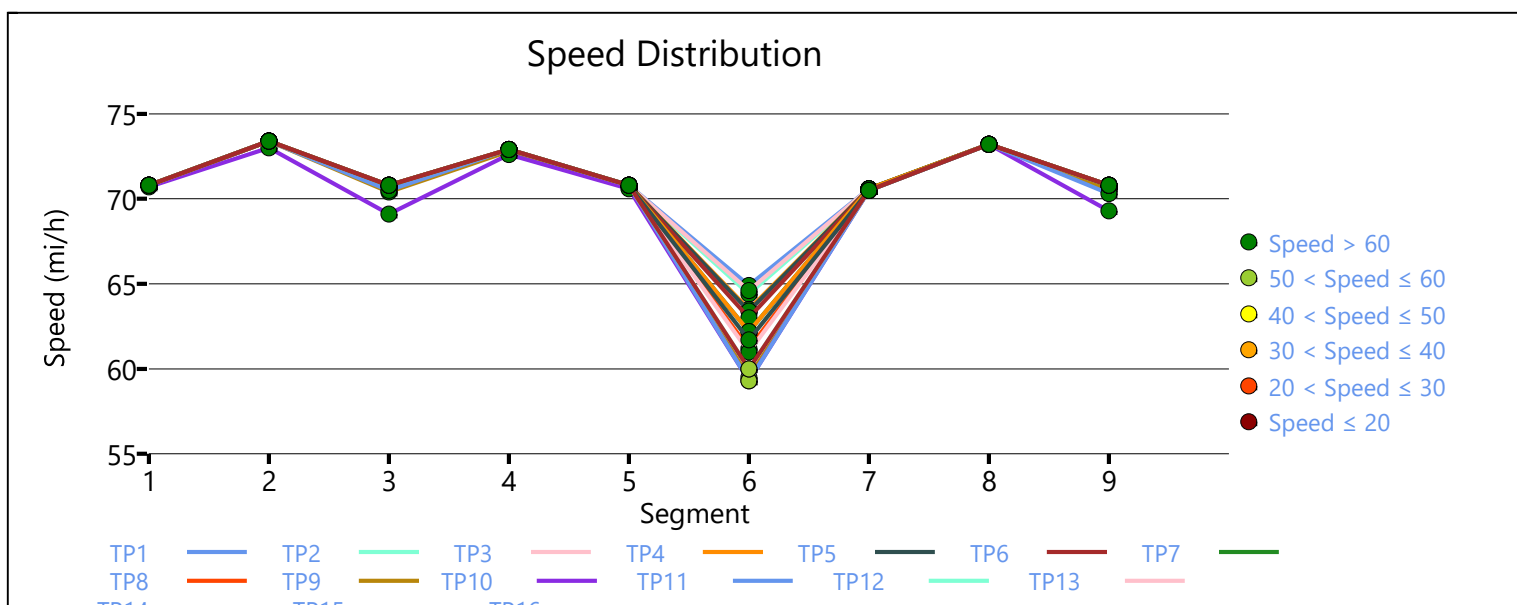
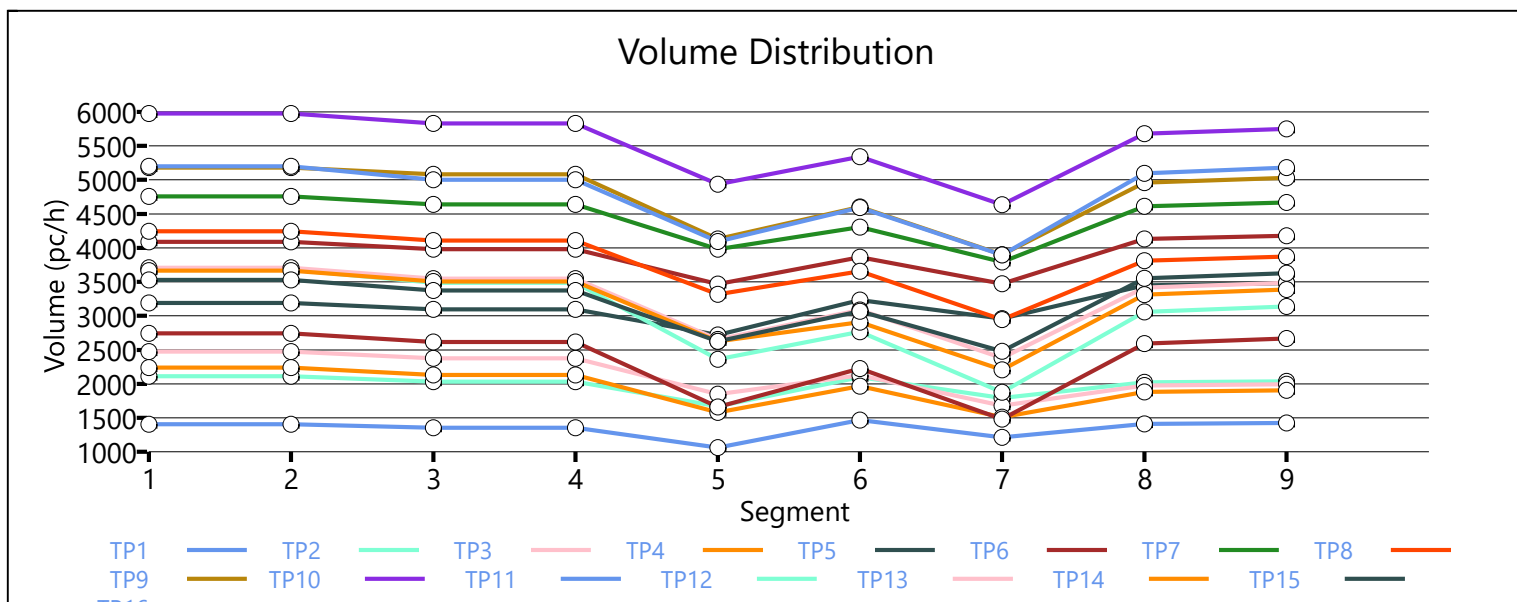
|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 69.7 | Density, veh/mi/ln | 9.5  |
| Average Travel Time, min | 2.50 | Density, pc/mi/ln  | 10.5 |

Messages

Comments

|  |
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# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                                |                      |                         |
|---------------------|----------------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                             | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                                | Analysis Year        | 2030                    |
| Jurisdiction        | NMDOT                                                          | Time Period Analyzed | AM Peak Period          |
| Project Description | 2030 No-Build, I-25<br>Programmed Improvements -<br>Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 11   |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.98  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | North of ACC                        | 2640       | 4     |
| 2   | Diverge | Basic    | Off Ramp to Gibson                  | 600        | 5     |
| 3   | Basic   | Basic    | Bet Gibson Off and ACC On Ramps     | 1750       | 4     |
| 4   | Merge   | Basic    | ACC On-ramp                         | 600        | 5     |
| 5   | Basic   | Basic    | Bet ACC On and Sunport Off Ramps    | 2400       | 4     |
| 6   | Diverge | Basic    | Sunport Off Ramp                    | 600        | 5     |
| 7   | Basic   | Basic    | Bet Sunport Off and Gibson On Ramps | 2000       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 800        | 5     |
| 9   | Basic   | Basic    | Bet Gibson and Sunport On Ramps     | 900        | 4     |
| 10  | Merge   | Basic    | Sunport On Ramp                     | 800        | 5     |
| 11  | Basic   | Basic    | S of Sunport                        | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2002             | 9600            | 0.21      | 72.6         | 6.9                | A   |
| 2           | 1.00 | 0.909 | 2337             | 9600            | 0.24      | 72.6         | 8.0                | A   |
| 3           | 1.00 | 0.909 | 3010             | 9600            | 0.31      | 72.6         | 10.4               | A   |
| 4           | 1.00 | 0.909 | 3745             | 9600            | 0.39      | 72.6         | 12.9               | B   |
| 5           | 1.00 | 0.909 | 3344             | 9600            | 0.35      | 72.6         | 11.5               | B   |
| 6           | 1.00 | 0.909 | 4458             | 9600            | 0.46      | 72.6         | 15.3               | B   |
| 7           | 1.00 | 0.909 | 5210             | 9600            | 0.54      | 72.1         | 18.1               | C   |
| 8           | 1.00 | 0.909 | 5571             | 9600            | 0.58      | 71.6         | 19.5               | C   |
| 9           | 1.00 | 0.909 | 5105             | 9600            | 0.53      | 72.2         | 17.7               | B   |
| 10          | 1.00 | 0.909 | 5523             | 9600            | 0.58      | 71.7         | 19.3               | C   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 11                 | 1.00 | 0.909 | 4959  |       | 9600             |      | 0.52            | 72.4 |           | 17.1 |              | B    |                    |      |     |
| 12                 | 1.00 | 0.909 | 5118  |       | 9600             |      | 0.53            | 72.2 |           | 17.7 |              | B    |                    |      |     |
| 13                 | 1.00 | 0.909 | 4792  |       | 9600             |      | 0.50            | 72.5 |           | 16.5 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 4524  |       | 9600             |      | 0.47            | 72.6 |           | 15.6 |              | B    |                    |      |     |
| 15                 | 1.00 | 0.909 | 4273  |       | 9600             |      | 0.45            | 72.6 |           | 14.7 |              | B    |                    |      |     |
| 16                 | 1.00 | 0.909 | 4035  |       | 9600             |      | 0.42            | 72.6 |           | 13.9 |              | B    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2002             | 816  | 12000           | 2033 | 0.17      | 0.40 | 75.2         | 75.4 | 5.3                | 5.3  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2337             | 910  | 12000           | 2033 | 0.19      | 0.45 | 75.2         | 75.4 | 6.2                | 6.2  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 3010             | 1326 | 12000           | 2033 | 0.25      | 0.65 | 75.2         | 75.4 | 8.0                | 8.0  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 3745             | 1553 | 12000           | 2033 | 0.31      | 0.76 | 75.2         | 75.4 | 9.9                | 9.9  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3344             | 1438 | 12000           | 2033 | 0.28      | 0.71 | 75.2         | 75.4 | 8.9                | 8.9  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4458             | 1829 | 12000           | 2033 | 0.37      | 0.90 | 75.2         | 75.4 | 11.8               | 11.8 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 5210             | 2492 | 12000           | 2033 | 0.43      | 1.23 | 75.2         | 75.4 | 13.8               | 13.8 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 5571             | 2978 | 12000           | 2033 | 0.46      | 1.46 | 75.1         | 75.2 | 14.8               | 14.8 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5105             | 2888 | 12000           | 2033 | 0.43      | 1.42 | 75.2         | 75.4 | 13.5               | 13.5 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5523             | 2970 | 12000           | 2033 | 0.46      | 1.46 | 75.1         | 75.2 | 14.7               | 14.7 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4959             | 2571 | 12000           | 2033 | 0.41      | 1.26 | 75.2         | 75.4 | 13.2               | 13.2 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 5118             | 2554 | 12000           | 2033 | 0.43      | 1.26 | 75.2         | 75.4 | 13.6               | 13.6 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4792             | 2496 | 12000           | 2033 | 0.40      | 1.23 | 75.2         | 75.4 | 12.7               | 12.7 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4524             | 2311 | 12000           | 2033 | 0.38      | 1.14 | 75.2         | 75.4 | 12.0               | 12.0 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4273             | 2117 | 12000           | 2033 | 0.36      | 1.04 | 75.2         | 75.4 | 11.3               | 11.3 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4035             | 1920 | 12000           | 2033 | 0.34      | 0.94 | 75.2         | 75.4 | 10.7               | 10.7 | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1131             |      | 9600            |      | 0.12      |      | 72.6         |      | 3.9                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1364             |      | 9600            |      | 0.14      |      | 72.6         |      | 4.7                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 1593             |      | 9600            |      | 0.17      |      | 72.6         |      | 5.5                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2086             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.2                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 1809             |      | 9600            |      | 0.19      |      | 72.6         |      | 6.2                |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 2504             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.6                |      | A   |
| 7                  | 1.00 |       | 0.909 |       | 2548             |      | 9600            |      | 0.27      |      | 72.6         |      | 8.8                |      | A   |
| 8                  | 1.00 |       | 0.909 |       | 2389             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 9                  | 1.00 |       | 0.909 |       | 2020             |      | 9600            |      | 0.21      |      | 72.6         |      | 7.0                |      | A   |
| 10                 | 1.00 |       | 0.909 |       | 2350             |      | 9600            |      | 0.24      |      | 72.6         |      | 8.1                |      | A   |
| 11                 | 1.00 |       | 0.909 |       | 2213             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.6                |      | A   |
| 12                 | 1.00 |       | 0.909 |       | 2389             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 13                 | 1.00 |       | 0.909 |       | 2125             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.3                |      | A   |

| 14               | 1.00 | 0.909 |       |       | 2055             |      |                 | 9600 | 0.21      |      | 72.6         |      | 7.1                |      | A   |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 15               | 1.00 | 0.909 |       |       | 2011             |      |                 | 9600 | 0.21      |      | 72.6         |      | 6.9                |      | A   |
| 16               | 1.00 | 0.909 |       |       | 1985             |      |                 | 9600 | 0.21      |      | 72.6         |      | 6.8                |      | A   |
| Segment 4: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 1193             | 62   | 12000           | 2033 | 0.10      | 0.03 | 75.0         | 75.4 | 3.2                | 3.2  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 1426             | 62   | 12000           | 2033 | 0.12      | 0.03 | 75.0         | 75.4 | 3.8                | 3.8  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 1770             | 177  | 12000           | 2033 | 0.15      | 0.09 | 75.0         | 75.4 | 4.7                | 4.7  | A   |
| 4                | 1.00 | 1.00  | 0.909 | 0.971 | 2308             | 222  | 12000           | 2033 | 0.19      | 0.11 | 75.0         | 75.4 | 6.1                | 6.1  | A   |
| 5                | 1.00 | 1.00  | 0.909 | 0.971 | 2077             | 268  | 12000           | 2033 | 0.17      | 0.13 | 75.0         | 75.4 | 5.5                | 5.5  | A   |
| 6                | 1.00 | 1.00  | 0.909 | 0.971 | 2801             | 297  | 12000           | 2033 | 0.23      | 0.15 | 75.0         | 75.4 | 7.4                | 7.4  | A   |
| 7                | 1.00 | 1.00  | 0.909 | 0.971 | 2923             | 375  | 12000           | 2033 | 0.24      | 0.18 | 75.0         | 75.4 | 7.8                | 7.8  | A   |
| 8                | 1.00 | 1.00  | 0.909 | 0.971 | 2966             | 577  | 12000           | 2033 | 0.25      | 0.28 | 75.0         | 75.4 | 7.9                | 7.9  | A   |
| 9                | 1.00 | 1.00  | 0.909 | 0.971 | 2597             | 577  | 12000           | 2033 | 0.22      | 0.28 | 75.0         | 75.4 | 6.9                | 6.9  | A   |
| 10               | 1.00 | 1.00  | 0.909 | 0.971 | 2927             | 577  | 12000           | 2033 | 0.24      | 0.28 | 75.0         | 75.4 | 7.8                | 7.8  | A   |
| 11               | 1.00 | 1.00  | 0.909 | 0.971 | 2790             | 577  | 12000           | 2033 | 0.23      | 0.28 | 75.0         | 75.4 | 7.4                | 7.4  | A   |
| 12               | 1.00 | 1.00  | 0.909 | 0.971 | 2879             | 490  | 12000           | 2033 | 0.24      | 0.24 | 75.0         | 75.4 | 7.6                | 7.6  | A   |
| 13               | 1.00 | 1.00  | 0.909 | 0.971 | 2628             | 503  | 12000           | 2033 | 0.22      | 0.25 | 75.0         | 75.4 | 7.0                | 7.0  | A   |
| 14               | 1.00 | 1.00  | 0.909 | 0.971 | 2644             | 589  | 12000           | 2033 | 0.22      | 0.29 | 75.0         | 75.4 | 7.0                | 7.0  | A   |
| 15               | 1.00 | 1.00  | 0.909 | 0.971 | 2497             | 486  | 12000           | 2033 | 0.21      | 0.24 | 75.0         | 75.4 | 6.6                | 6.6  | A   |
| 16               | 1.00 | 1.00  | 0.909 | 0.971 | 2553             | 568  | 12000           | 2033 | 0.21      | 0.28 | 75.0         | 75.4 | 6.8                | 6.8  | A   |
| Segment 5: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |       | 0.909 |       | 1197             |      | 9600            |      | 0.12      |      | 72.6         |      | 4.1                |      | A   |
| 2                | 1.00 |       | 0.909 |       | 1430             |      | 9600            |      | 0.15      |      | 72.6         |      | 4.9                |      | A   |
| 3                | 1.00 |       | 0.909 |       | 1782             |      | 9600            |      | 0.19      |      | 72.6         |      | 6.1                |      | A   |
| 4                | 1.00 |       | 0.909 |       | 2323             |      | 9600            |      | 0.24      |      | 72.6         |      | 8.0                |      | A   |
| 5                | 1.00 |       | 0.909 |       | 2095             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.2                |      | A   |
| 6                | 1.00 |       | 0.909 |       | 2821             |      | 9600            |      | 0.29      |      | 72.6         |      | 9.7                |      | A   |
| 7                | 1.00 |       | 0.909 |       | 2948             |      | 9600            |      | 0.31      |      | 72.6         |      | 10.2               |      | A   |
| 8                | 1.00 |       | 0.909 |       | 3006             |      | 9600            |      | 0.31      |      | 72.6         |      | 10.4               |      | A   |
| 9                | 1.00 |       | 0.909 |       | 2636             |      | 9600            |      | 0.27      |      | 72.6         |      | 9.1                |      | A   |
| 10               | 1.00 |       | 0.909 |       | 2966             |      | 9600            |      | 0.31      |      | 72.6         |      | 10.2               |      | A   |
| 11               | 1.00 |       | 0.909 |       | 2829             |      | 9600            |      | 0.29      |      | 72.6         |      | 9.7                |      | A   |
| 12               | 1.00 |       | 0.909 |       | 2913             |      | 9600            |      | 0.30      |      | 72.6         |      | 10.0               |      | A   |
| 13               | 1.00 |       | 0.909 |       | 2662             |      | 9600            |      | 0.28      |      | 72.6         |      | 9.2                |      | A   |
| 14               | 1.00 |       | 0.909 |       | 2684             |      | 9600            |      | 0.28      |      | 72.6         |      | 9.2                |      | A   |
| 15               | 1.00 |       | 0.909 |       | 2530             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.7                |      | A   |
| 16               | 1.00 |       | 0.909 |       | 2592             |      | 9600            |      | 0.27      |      | 72.6         |      | 8.9                |      | A   |

| Segment 6: Diverge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00 | 0.909 | 0.971 | 1197             | 614  | 12000           | 2033 | 0.10      | 0.30 | 75.2         | 75.4 | 3.2                | 3.2  | A   |
| 2                  | 1.00 | 1.00 | 0.909 | 0.971 | 1430             | 721  | 12000           | 2033 | 0.12      | 0.35 | 75.2         | 75.4 | 3.8                | 3.8  | A   |
| 3                  | 1.00 | 1.00 | 0.909 | 0.971 | 1782             | 742  | 12000           | 2033 | 0.15      | 0.37 | 75.2         | 75.4 | 4.7                | 4.7  | A   |
| 4                  | 1.00 | 1.00 | 0.909 | 0.971 | 2323             | 919  | 12000           | 2033 | 0.19      | 0.45 | 75.2         | 75.4 | 6.2                | 6.2  | A   |
| 5                  | 1.00 | 1.00 | 0.909 | 0.971 | 2095             | 548  | 12000           | 2033 | 0.17      | 0.27 | 75.2         | 75.4 | 5.6                | 5.6  | A   |
| 6                  | 1.00 | 1.00 | 0.909 | 0.971 | 2821             | 659  | 12000           | 2033 | 0.24      | 0.32 | 75.2         | 75.4 | 7.5                | 7.5  | A   |
| 7                  | 1.00 | 1.00 | 0.909 | 0.971 | 2948             | 742  | 12000           | 2033 | 0.25      | 0.37 | 75.2         | 75.4 | 7.8                | 7.8  | A   |
| 8                  | 1.00 | 1.00 | 0.909 | 0.971 | 3006             | 956  | 12000           | 2033 | 0.25      | 0.47 | 75.2         | 75.4 | 8.0                | 8.0  | A   |
| 9                  | 1.00 | 1.00 | 0.909 | 0.971 | 2636             | 725  | 12000           | 2033 | 0.22      | 0.36 | 75.2         | 75.4 | 7.0                | 7.0  | A   |
| 10                 | 1.00 | 1.00 | 0.909 | 0.971 | 2966             | 865  | 12000           | 2033 | 0.25      | 0.43 | 75.2         | 75.4 | 7.9                | 7.9  | A   |
| 11                 | 1.00 | 1.00 | 0.909 | 0.971 | 2829             | 869  | 12000           | 2033 | 0.24      | 0.43 | 75.2         | 75.4 | 7.5                | 7.5  | A   |
| 12                 | 1.00 | 1.00 | 0.909 | 0.971 | 2913             | 857  | 12000           | 2033 | 0.24      | 0.42 | 75.2         | 75.4 | 7.7                | 7.7  | A   |
| 13                 | 1.00 | 1.00 | 0.909 | 0.971 | 2662             | 832  | 12000           | 2033 | 0.22      | 0.41 | 75.2         | 75.4 | 7.1                | 7.1  | A   |
| 14                 | 1.00 | 1.00 | 0.909 | 0.971 | 2684             | 618  | 12000           | 2033 | 0.22      | 0.30 | 75.2         | 75.4 | 7.1                | 7.1  | A   |
| 15                 | 1.00 | 1.00 | 0.909 | 0.971 | 2530             | 626  | 12000           | 2033 | 0.21      | 0.31 | 75.2         | 75.4 | 6.7                | 6.7  | A   |
| 16                 | 1.00 | 1.00 | 0.909 | 0.971 | 2592             | 610  | 12000           | 2033 | 0.22      | 0.30 | 75.2         | 75.4 | 6.9                | 6.9  | A   |
| Segment 7: Basic   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |      | 0.909 |       | 541              |      | 9600            |      | 0.06      |      | 72.6         |      | 1.9                |      | A   |
| 2                  | 1.00 |      | 0.909 |       | 660              |      | 9600            |      | 0.07      |      | 72.6         |      | 2.3                |      | A   |
| 3                  | 1.00 |      | 0.909 |       | 990              |      | 9600            |      | 0.10      |      | 72.6         |      | 3.4                |      | A   |
| 4                  | 1.00 |      | 0.909 |       | 1342             |      | 9600            |      | 0.14      |      | 72.6         |      | 4.6                |      | A   |
| 5                  | 1.00 |      | 0.909 |       | 1509             |      | 9600            |      | 0.16      |      | 72.6         |      | 5.2                |      | A   |
| 6                  | 1.00 |      | 0.909 |       | 2117             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.3                |      | A   |
| 7                  | 1.00 |      | 0.909 |       | 2156             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.4                |      | A   |
| 8                  | 1.00 |      | 0.909 |       | 1985             |      | 9600            |      | 0.21      |      | 72.6         |      | 6.8                |      | A   |
| 9                  | 1.00 |      | 0.909 |       | 1861             |      | 9600            |      | 0.19      |      | 72.6         |      | 6.4                |      | A   |
| 10                 | 1.00 |      | 0.909 |       | 2042             |      | 9600            |      | 0.21      |      | 72.6         |      | 7.0                |      | A   |
| 11                 | 1.00 |      | 0.909 |       | 1901             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.5                |      | A   |
| 12                 | 1.00 |      | 0.909 |       | 1998             |      | 9600            |      | 0.21      |      | 72.6         |      | 6.9                |      | A   |
| 13                 | 1.00 |      | 0.909 |       | 1773             |      | 9600            |      | 0.18      |      | 72.6         |      | 6.1                |      | A   |
| 14                 | 1.00 |      | 0.909 |       | 2024             |      | 9600            |      | 0.21      |      | 72.6         |      | 7.0                |      | A   |
| 15                 | 1.00 |      | 0.909 |       | 1861             |      | 9600            |      | 0.19      |      | 72.6         |      | 6.4                |      | A   |
| 16                 | 1.00 |      | 0.909 |       | 1941             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.7                |      | A   |
| Segment 8: Merge   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |

|                   | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
|-------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 590              | 49   | 12000           | 2033 | 0.05      | 0.02 | 75.1         | 75.4 | 1.6                | 1.6  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 709              | 49   | 12000           | 2033 | 0.06      | 0.02 | 75.1         | 75.4 | 1.9                | 1.9  | A   |
| 3                 | 1.00 | 1.00 | 0.909 | 0.971 | 1126             | 136  | 12000           | 2033 | 0.09      | 0.07 | 75.1         | 75.4 | 3.0                | 3.0  | A   |
| 4                 | 1.00 | 1.00 | 0.909 | 0.971 | 1515             | 173  | 12000           | 2033 | 0.13      | 0.09 | 75.1         | 75.4 | 4.0                | 4.0  | A   |
| 5                 | 1.00 | 1.00 | 0.909 | 0.971 | 1694             | 185  | 12000           | 2033 | 0.14      | 0.09 | 75.1         | 75.4 | 4.5                | 4.5  | A   |
| 6                 | 1.00 | 1.00 | 0.909 | 0.971 | 2323             | 206  | 12000           | 2033 | 0.19      | 0.10 | 75.1         | 75.4 | 6.2                | 6.2  | A   |
| 7                 | 1.00 | 1.00 | 0.909 | 0.971 | 2424             | 268  | 12000           | 2033 | 0.20      | 0.13 | 75.1         | 75.4 | 6.4                | 6.4  | A   |
| 8                 | 1.00 | 1.00 | 0.909 | 0.971 | 2368             | 383  | 12000           | 2033 | 0.20      | 0.19 | 75.1         | 75.4 | 6.3                | 6.3  | A   |
| 9                 | 1.00 | 1.00 | 0.909 | 0.971 | 2145             | 284  | 12000           | 2033 | 0.18      | 0.14 | 75.1         | 75.4 | 5.7                | 5.7  | A   |
| 10                | 1.00 | 1.00 | 0.909 | 0.971 | 2470             | 428  | 12000           | 2033 | 0.21      | 0.21 | 75.1         | 75.4 | 6.6                | 6.6  | A   |
| 11                | 1.00 | 1.00 | 0.909 | 0.971 | 2338             | 437  | 12000           | 2033 | 0.19      | 0.21 | 75.1         | 75.4 | 6.2                | 6.2  | A   |
| 12                | 1.00 | 1.00 | 0.909 | 0.971 | 2369             | 371  | 12000           | 2033 | 0.20      | 0.18 | 75.1         | 75.4 | 6.3                | 6.3  | A   |
| 13                | 1.00 | 1.00 | 0.909 | 0.971 | 2156             | 383  | 12000           | 2033 | 0.18      | 0.19 | 75.1         | 75.4 | 5.7                | 5.7  | A   |
| 14                | 1.00 | 1.00 | 0.909 | 0.971 | 2469             | 445  | 12000           | 2033 | 0.21      | 0.22 | 75.1         | 75.4 | 6.5                | 6.5  | A   |
| 15                | 1.00 | 1.00 | 0.909 | 0.971 | 2228             | 367  | 12000           | 2033 | 0.19      | 0.18 | 75.1         | 75.4 | 5.9                | 5.9  | A   |
| 16                | 1.00 | 1.00 | 0.909 | 0.971 | 2365             | 424  | 12000           | 2033 | 0.20      | 0.21 | 75.1         | 75.4 | 6.3                | 6.3  | A   |
| Segment 9: Basic  |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                 | 1.00 |      | 0.909 |       | 594              |      | 9600            |      | 0.06      |      | 72.6         |      | 2.0                |      | A   |
| 2                 | 1.00 |      | 0.909 |       | 713              |      | 9600            |      | 0.07      |      | 72.6         |      | 2.5                |      | A   |
| 3                 | 1.00 |      | 0.909 |       | 1135             |      | 9600            |      | 0.12      |      | 72.6         |      | 3.9                |      | A   |
| 4                 | 1.00 |      | 0.909 |       | 1527             |      | 9600            |      | 0.16      |      | 72.6         |      | 5.3                |      | A   |
| 5                 | 1.00 |      | 0.909 |       | 1707             |      | 9600            |      | 0.18      |      | 72.6         |      | 5.9                |      | A   |
| 6                 | 1.00 |      | 0.909 |       | 2337             |      | 9600            |      | 0.24      |      | 72.6         |      | 8.0                |      | A   |
| 7                 | 1.00 |      | 0.909 |       | 2442             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.4                |      | A   |
| 8                 | 1.00 |      | 0.909 |       | 2394             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 9                 | 1.00 |      | 0.909 |       | 2165             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.5                |      | A   |
| 10                | 1.00 |      | 0.909 |       | 2499             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.6                |      | A   |
| 11                | 1.00 |      | 0.909 |       | 2367             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 12                | 1.00 |      | 0.909 |       | 2394             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 13                | 1.00 |      | 0.909 |       | 2183             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.5                |      | A   |
| 14                | 1.00 |      | 0.909 |       | 2499             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.6                |      | A   |
| 15                | 1.00 |      | 0.909 |       | 2253             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.8                |      | A   |
| 16                | 1.00 |      | 0.909 |       | 2394             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| Segment 10: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                   | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 631              | 37   | 12000           | 2033 | 0.05      | 0.02 | 74.7         | 75.4 | 1.7                | 1.7  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 750              | 37   | 12000           | 2033 | 0.06      | 0.02 | 74.7         | 75.4 | 2.0                | 2.0  | A   |

|    |      |      |       |       |      |     |       |      |      |      |      |      |     |     |   |
|----|------|------|-------|-------|------|-----|-------|------|------|------|------|------|-----|-----|---|
| 3  | 1.00 | 1.00 | 0.909 | 0.971 | 1172 | 37  | 12000 | 2033 | 0.10 | 0.02 | 74.7 | 75.4 | 3.1 | 3.1 | A |
| 4  | 1.00 | 1.00 | 0.909 | 0.971 | 1564 | 37  | 12000 | 2033 | 0.13 | 0.02 | 74.7 | 75.4 | 4.1 | 4.1 | A |
| 5  | 1.00 | 1.00 | 0.909 | 0.971 | 1752 | 45  | 12000 | 2033 | 0.15 | 0.02 | 74.7 | 75.4 | 4.6 | 4.6 | A |
| 6  | 1.00 | 1.00 | 0.909 | 0.971 | 2386 | 49  | 12000 | 2033 | 0.20 | 0.02 | 74.7 | 75.4 | 6.3 | 6.3 | A |
| 7  | 1.00 | 1.00 | 0.909 | 0.971 | 2496 | 54  | 12000 | 2033 | 0.21 | 0.03 | 74.7 | 75.4 | 6.6 | 6.6 | A |
| 8  | 1.00 | 1.00 | 0.909 | 0.971 | 2443 | 49  | 12000 | 2033 | 0.20 | 0.02 | 74.7 | 75.4 | 6.5 | 6.5 | A |
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 2227 | 62  | 12000 | 2033 | 0.19 | 0.03 | 74.7 | 75.4 | 5.9 | 5.9 | A |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 2573 | 74  | 12000 | 2033 | 0.21 | 0.04 | 74.7 | 75.4 | 6.8 | 6.8 | A |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 2478 | 111 | 12000 | 2033 | 0.21 | 0.05 | 74.7 | 75.4 | 6.6 | 6.6 | A |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 2518 | 124 | 12000 | 2033 | 0.21 | 0.06 | 74.7 | 75.4 | 6.7 | 6.7 | A |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 2274 | 91  | 12000 | 2033 | 0.19 | 0.04 | 74.7 | 75.4 | 6.0 | 6.0 | A |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 2606 | 107 | 12000 | 2033 | 0.22 | 0.05 | 74.7 | 75.4 | 6.9 | 6.9 | A |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 2397 | 144 | 12000 | 2033 | 0.20 | 0.07 | 74.7 | 75.4 | 6.4 | 6.4 | A |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 2501 | 107 | 12000 | 2033 | 0.21 | 0.05 | 74.7 | 75.4 | 6.6 | 6.6 | A |

Segment 11: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 634              | 9600            | 0.07      | 72.6         | 2.2                | A   |
| 2           | 1.00 | 0.909 | 752              | 9600            | 0.08      | 72.6         | 2.6                | A   |
| 3           | 1.00 | 0.909 | 1175             | 9600            | 0.12      | 72.6         | 4.0                | A   |
| 4           | 1.00 | 0.909 | 1567             | 9600            | 0.16      | 72.6         | 5.4                | A   |
| 5           | 1.00 | 0.909 | 1756             | 9600            | 0.18      | 72.6         | 6.0                | A   |
| 6           | 1.00 | 0.909 | 2389             | 9600            | 0.25      | 72.6         | 8.2                | A   |
| 7           | 1.00 | 0.909 | 2499             | 9600            | 0.26      | 72.6         | 8.6                | A   |
| 8           | 1.00 | 0.909 | 2447             | 9600            | 0.25      | 72.6         | 8.4                | A   |
| 9           | 1.00 | 0.909 | 2231             | 9600            | 0.23      | 72.6         | 7.7                | A   |
| 10          | 1.00 | 0.909 | 2579             | 9600            | 0.27      | 72.6         | 8.9                | A   |
| 11          | 1.00 | 0.909 | 2486             | 9600            | 0.26      | 72.6         | 8.6                | A   |
| 12          | 1.00 | 0.909 | 2526             | 9600            | 0.26      | 72.6         | 8.7                | A   |
| 13          | 1.00 | 0.909 | 2279             | 9600            | 0.24      | 72.6         | 7.9                | A   |
| 14          | 1.00 | 0.909 | 2614             | 9600            | 0.27      | 72.6         | 9.0                | A   |
| 15          | 1.00 | 0.909 | 2407             | 9600            | 0.25      | 72.6         | 8.3                | A   |
| 16          | 1.00 | 0.909 | 2508             | 9600            | 0.26      | 72.6         | 8.6                | A   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 73.1        | 3.5               | 3.2                | 2.40             | A   |
| 2 | 73.1        | 4.2               | 3.8                | 2.40             | A   |
| 3 | 73.1        | 5.5               | 5.0                | 2.40             | A   |
| 4 | 73.1        | 7.2               | 6.5                | 2.40             | A   |
| 5 | 73.1        | 6.9               | 6.3                | 2.40             | A   |
| 6 | 73.1        | 9.3               | 8.5                | 2.40             | A   |

|    |      |      |     |      |   |
|----|------|------|-----|------|---|
| 7  | 73.0 | 10.1 | 9.2 | 2.40 | F |
| 8  | 72.8 | 10.2 | 9.3 | 2.50 | F |
| 9  | 73.0 | 9.2  | 8.4 | 2.40 | F |
| 10 | 72.9 | 10.3 | 9.4 | 2.50 | F |
| 11 | 73.1 | 9.6  | 8.7 | 2.40 | F |
| 12 | 73.0 | 9.9  | 9.0 | 2.40 | F |
| 13 | 73.1 | 9.1  | 8.2 | 2.40 | F |
| 14 | 73.1 | 9.3  | 8.5 | 2.40 | F |
| 15 | 73.1 | 8.7  | 7.9 | 2.40 | F |
| 16 | 73.1 | 8.7  | 7.9 | 2.40 | A |

## Facility Overall Results

|                          |      |                    |     |
|--------------------------|------|--------------------|-----|
| Space Mean Speed, mi/h   | 73.0 | Density, veh/mi/ln | 7.5 |
| Average Travel Time, min | 2.40 | Density, pc/mi/ln  | 8.2 |

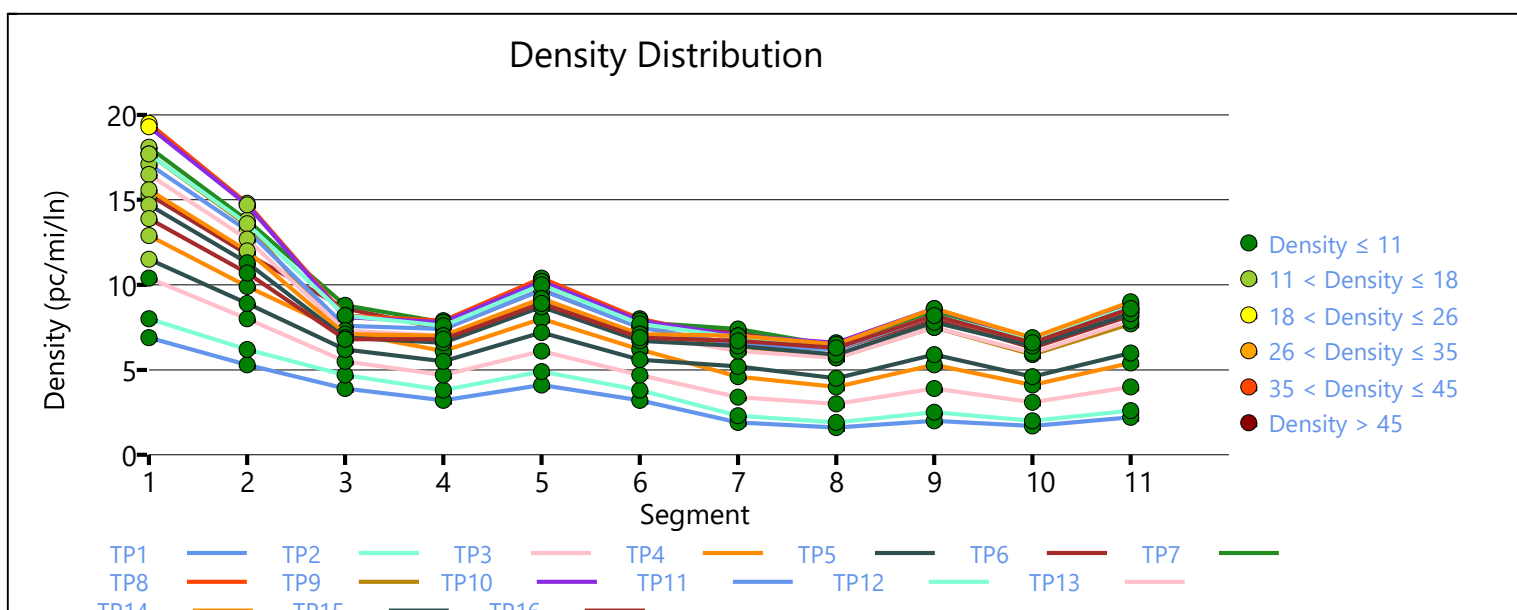
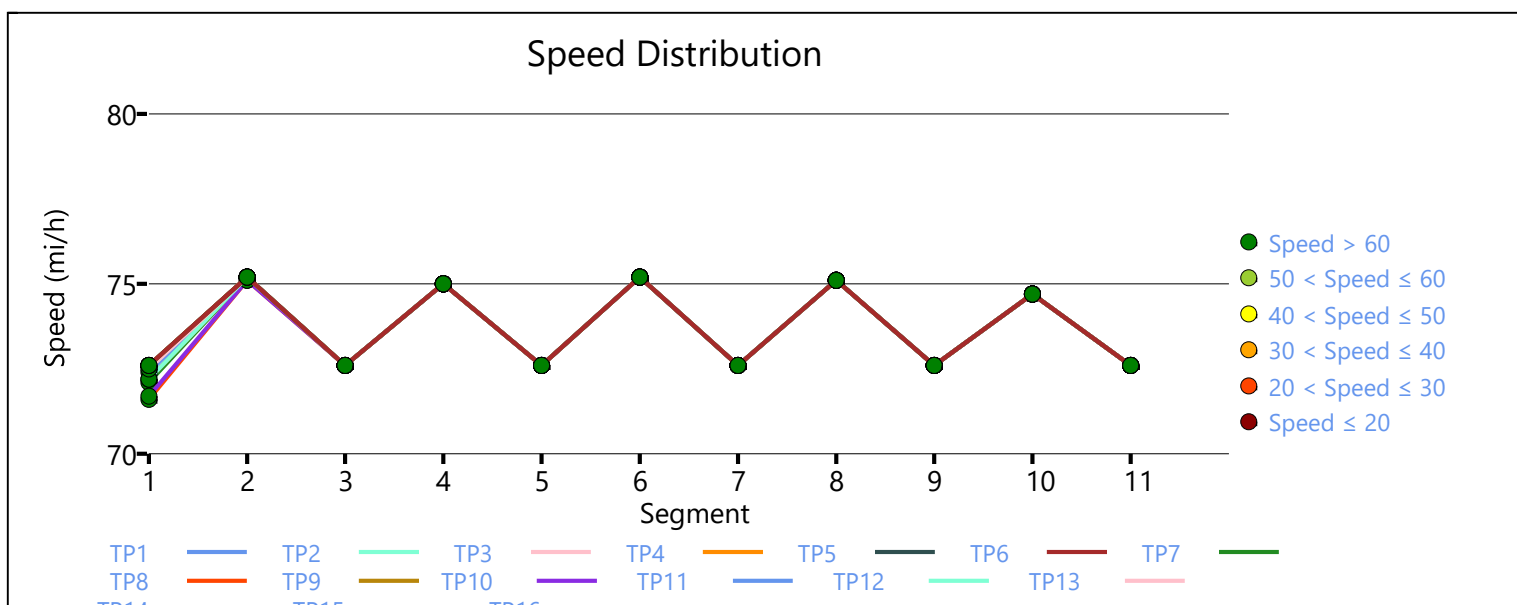
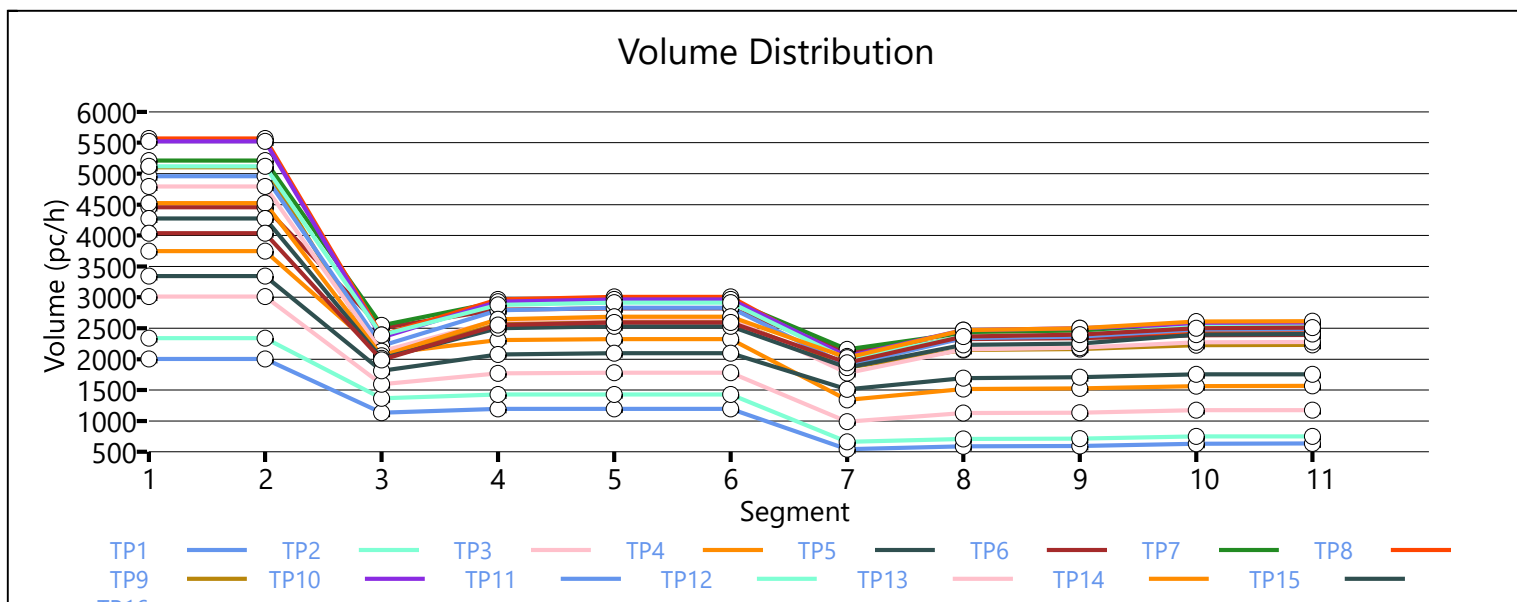
## Messages

|           |                                                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WARNING 1 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 2 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 3 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 4 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 5 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 6 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 7 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 8 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 9 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |

## Comments

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|  |
|--|





# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                                |                      |                         |
|---------------------|----------------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                             | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                                | Analysis Year        | 2030                    |
| Jurisdiction        | NMDOT                                                          | Time Period Analyzed | PM Peak Period          |
| Project Description | 2030 No-Build, I-25<br>Programmed Improvements -<br>Northbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.91  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | South of Sunport                    | 2640       | 5     |
| 2   | Diverge | Basic    | Sunport Off Ramp                    | 1500       | 5     |
| 3   | Basic   | Basic    | Bet Sunport and Gibson Off Ramps    | 1100       | 4     |
| 4   | Diverge | Basic    | Gibson Off Ramp                     | 800        | 5     |
| 5   | Basic   | Basic    | Bet Gibson Off and Sunport On Ramps | 1600       | 4     |
| 6   | Weaving | Weaving  | Bet Sunport On and ACC Off Ramps    | 2200       | 5     |
| 7   | Basic   | Basic    | North of ACC Off Ramp               | 2200       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 700        | 5     |
| 9   | Basic   | Basic    | North of Gibson On Ramp             | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2684             | 11616           | 0.23      | 70.8         | 7.6                | A   |
| 2           | 1.00 | 0.909 | 2812             | 11616           | 0.24      | 70.8         | 7.9                | A   |
| 3           | 1.00 | 0.909 | 2733             | 11616           | 0.24      | 70.8         | 7.7                | A   |
| 4           | 1.00 | 0.909 | 2873             | 11616           | 0.25      | 70.8         | 8.1                | A   |
| 5           | 1.00 | 0.909 | 2913             | 11616           | 0.25      | 70.8         | 8.2                | A   |
| 6           | 1.00 | 0.909 | 2680             | 11616           | 0.23      | 70.8         | 7.6                | A   |
| 7           | 1.00 | 0.909 | 2763             | 11616           | 0.24      | 70.8         | 7.8                | A   |
| 8           | 1.00 | 0.909 | 2737             | 11616           | 0.24      | 70.8         | 7.7                | A   |
| 9           | 1.00 | 0.909 | 2799             | 11616           | 0.24      | 70.8         | 7.9                | A   |
| 10          | 1.00 | 0.909 | 2944             | 11616           | 0.25      | 70.8         | 8.3                | A   |
| 11          | 1.00 | 0.909 | 2935             | 11616           | 0.25      | 70.8         | 8.3                | A   |
| 12          | 1.00 | 0.909 | 2966             | 11616           | 0.26      | 70.8         | 8.4                | A   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 2658  |       | 11616            |      | 0.23            | 70.8 |           | 7.5  |              | A    |                    |      |     |
| 14                 | 1.00 | 0.909 | 2486  |       | 11616            |      | 0.21            | 70.8 |           | 7.0  |              | A    |                    |      |     |
| 15                 | 1.00 | 0.909 | 2205  |       | 11616            |      | 0.19            | 70.8 |           | 6.2  |              | A    |                    |      |     |
| 16                 | 1.00 | 0.909 | 2244  |       | 11616            |      | 0.19            | 70.8 |           | 6.3  |              | A    |                    |      |     |
| 17                 | 1.00 | 0.909 | 2125  |       | 11616            |      | 0.18            | 70.8 |           | 6.0  |              | A    |                    |      |     |
| 18                 | 1.00 | 0.909 | 1901  |       | 11616            |      | 0.16            | 70.8 |           | 5.4  |              | A    |                    |      |     |
| 19                 | 1.00 | 0.909 | 1712  |       | 11616            |      | 0.15            | 70.8 |           | 4.8  |              | A    |                    |      |     |
| 20                 | 1.00 | 0.909 | 1619  |       | 11616            |      | 0.14            | 70.8 |           | 4.6  |              | A    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2684             | 115  | 11616           | 2033 | 0.23      | 0.06 | 73.4         | 73.5 | 7.3                | 7.3  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2812             | 124  | 11616           | 2033 | 0.24      | 0.06 | 73.4         | 73.5 | 7.6                | 7.6  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2733             | 144  | 11616           | 2033 | 0.24      | 0.07 | 73.4         | 73.5 | 7.4                | 7.4  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2873             | 144  | 11616           | 2033 | 0.25      | 0.07 | 73.4         | 73.5 | 7.8                | 7.8  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 2913             | 95   | 11616           | 2033 | 0.25      | 0.05 | 73.4         | 73.5 | 7.9                | 7.9  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2680             | 124  | 11616           | 2033 | 0.23      | 0.06 | 73.4         | 73.5 | 7.3                | 7.3  | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 2763             | 87   | 11616           | 2033 | 0.24      | 0.04 | 73.4         | 73.5 | 7.5                | 7.5  | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 2737             | 78   | 11616           | 2033 | 0.24      | 0.04 | 73.4         | 73.5 | 7.4                | 7.4  | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 2799             | 74   | 11616           | 2033 | 0.24      | 0.04 | 73.4         | 73.5 | 7.6                | 7.6  | A   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 2944             | 74   | 11616           | 2033 | 0.25      | 0.04 | 73.4         | 73.5 | 8.0                | 8.0  | A   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 2935             | 62   | 11616           | 2033 | 0.25      | 0.03 | 73.4         | 73.5 | 8.0                | 8.0  | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 2966             | 107  | 11616           | 2033 | 0.26      | 0.05 | 73.4         | 73.5 | 8.1                | 8.1  | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2658             | 107  | 11616           | 2033 | 0.23      | 0.05 | 73.4         | 73.5 | 7.2                | 7.2  | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2486             | 74   | 11616           | 2033 | 0.21      | 0.04 | 73.4         | 73.5 | 6.8                | 6.8  | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 2205             | 78   | 11616           | 2033 | 0.19      | 0.04 | 73.4         | 73.5 | 6.0                | 6.0  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2244             | 103  | 11616           | 2033 | 0.19      | 0.05 | 73.4         | 73.5 | 6.1                | 6.1  | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 2125             | 41   | 11616           | 2033 | 0.18      | 0.02 | 73.4         | 73.5 | 5.8                | 5.8  | A   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 1901             | 41   | 11616           | 2033 | 0.16      | 0.02 | 73.4         | 73.5 | 5.2                | 5.2  | A   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1712             | 54   | 11616           | 2033 | 0.15      | 0.03 | 73.4         | 73.5 | 4.7                | 4.7  | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1619             | 41   | 11616           | 2033 | 0.14      | 0.02 | 73.4         | 73.5 | 4.4                | 4.4  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2561             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.0                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2680             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.5                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2579             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.1                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2719             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.6                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2812             |      | 9293            |      | 0.30      |      | 70.8         |      | 9.9                |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 2548             |      | 9293            |      | 0.27      |      | 70.8         |      | 9.0                |      | A   |
| 7                  | 1.00 |       | 0.909 |       | 2671             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.4                |      | A   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 8                  | 1.00 | 0.909 | 2653  |       | 9293             |      | 0.29            | 70.8 |           | 9.4  |              | A    |                    |      |     |
| 9                  | 1.00 | 0.909 | 2719  |       | 9293             |      | 0.29            | 70.8 |           | 9.6  |              | A    |                    |      |     |
| 10                 | 1.00 | 0.909 | 2865  |       | 9293             |      | 0.31            | 70.8 |           | 10.1 |              | A    |                    |      |     |
| 11                 | 1.00 | 0.909 | 2869  |       | 9293             |      | 0.31            | 70.8 |           | 10.1 |              | A    |                    |      |     |
| 12                 | 1.00 | 0.909 | 2851  |       | 9293             |      | 0.31            | 70.8 |           | 10.1 |              | A    |                    |      |     |
| 13                 | 1.00 | 0.909 | 2543  |       | 9293             |      | 0.27            | 70.8 |           | 9.0  |              | A    |                    |      |     |
| 14                 | 1.00 | 0.909 | 2407  |       | 9293             |      | 0.26            | 70.8 |           | 8.5  |              | A    |                    |      |     |
| 15                 | 1.00 | 0.909 | 2121  |       | 9293             |      | 0.23            | 70.8 |           | 7.5  |              | A    |                    |      |     |
| 16                 | 1.00 | 0.909 | 2134  |       | 9293             |      | 0.23            | 70.8 |           | 7.5  |              | A    |                    |      |     |
| 17                 | 1.00 | 0.909 | 2081  |       | 9293             |      | 0.22            | 70.8 |           | 7.3  |              | A    |                    |      |     |
| 18                 | 1.00 | 0.909 | 1857  |       | 9293             |      | 0.20            | 70.8 |           | 6.6  |              | A    |                    |      |     |
| 19                 | 1.00 | 0.909 | 1655  |       | 9293             |      | 0.18            | 70.8 |           | 5.8  |              | A    |                    |      |     |
| 20                 | 1.00 | 0.909 | 1575  |       | 9293             |      | 0.17            | 70.8 |           | 5.6  |              | A    |                    |      |     |
| Segment 4: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2561             | 523  | 11616           | 2033 | 0.22      | 0.26 | 72.9         | 73.5 | 7.0                | 7.0  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2680             | 507  | 11616           | 2033 | 0.23      | 0.25 | 72.9         | 73.5 | 7.3                | 7.3  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2579             | 560  | 11616           | 2033 | 0.22      | 0.28 | 72.9         | 73.5 | 7.0                | 7.0  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2719             | 593  | 11616           | 2033 | 0.23      | 0.29 | 72.9         | 73.5 | 7.4                | 7.4  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 2812             | 449  | 11616           | 2033 | 0.24      | 0.22 | 72.9         | 73.5 | 7.6                | 7.6  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2548             | 437  | 11616           | 2033 | 0.22      | 0.21 | 72.9         | 73.5 | 6.9                | 6.9  | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 2671             | 408  | 11616           | 2033 | 0.23      | 0.20 | 72.9         | 73.5 | 7.3                | 7.3  | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 2653             | 453  | 11616           | 2033 | 0.23      | 0.22 | 72.9         | 73.5 | 7.2                | 7.2  | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 2719             | 457  | 11616           | 2033 | 0.23      | 0.22 | 72.9         | 73.5 | 7.4                | 7.4  | A   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 2865             | 552  | 11616           | 2033 | 0.25      | 0.27 | 72.9         | 73.5 | 7.8                | 7.8  | A   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 2869             | 634  | 11616           | 2033 | 0.25      | 0.31 | 72.9         | 73.5 | 7.8                | 7.8  | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 2851             | 828  | 11616           | 2033 | 0.25      | 0.41 | 72.9         | 73.5 | 7.8                | 7.8  | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2543             | 490  | 11616           | 2033 | 0.22      | 0.24 | 72.9         | 73.5 | 6.9                | 6.9  | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2407             | 659  | 11616           | 2033 | 0.21      | 0.32 | 72.9         | 73.5 | 6.5                | 6.5  | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 2121             | 651  | 11616           | 2033 | 0.18      | 0.32 | 72.9         | 73.5 | 5.8                | 5.8  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2134             | 844  | 11616           | 2033 | 0.18      | 0.42 | 72.9         | 73.5 | 5.8                | 5.8  | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 2081             | 527  | 11616           | 2033 | 0.18      | 0.26 | 72.9         | 73.5 | 5.7                | 5.7  | A   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 1857             | 470  | 11616           | 2033 | 0.16      | 0.23 | 72.9         | 73.5 | 5.0                | 5.0  | A   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1655             | 379  | 11616           | 2033 | 0.14      | 0.19 | 72.9         | 73.5 | 4.5                | 4.5  | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1575             | 346  | 11616           | 2033 | 0.14      | 0.17 | 72.9         | 73.5 | 4.3                | 4.3  | A   |
| Segment 5: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2002             |      | 9293            |      | 0.22      |      | 70.8         |      | 7.1                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2139             |      | 9293            |      | 0.23      |      | 70.8         |      | 7.6                |      | A   |



| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 |      | 0.909 |       | 2455             |      | 9293            |      | 0.26      |      | 70.5         |      | 8.7                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 2499             |      | 9293            |      | 0.27      |      | 70.5         |      | 8.8                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 2464             |      | 9293            |      | 0.27      |      | 70.5         |      | 8.7                |      | A   |
| 4                | 1.00 |      | 0.909 |       | 2675             |      | 9293            |      | 0.29      |      | 70.6         |      | 9.4                |      | A   |
| 5                | 1.00 |      | 0.909 |       | 3054             |      | 9293            |      | 0.33      |      | 70.5         |      | 10.8               |      | A   |
| 6                | 1.00 |      | 0.909 |       | 2715             |      | 9293            |      | 0.29      |      | 70.5         |      | 9.6                |      | A   |
| 7                | 1.00 |      | 0.909 |       | 2909             |      | 9293            |      | 0.31      |      | 70.6         |      | 10.3               |      | A   |
| 8                | 1.00 |      | 0.909 |       | 2807             |      | 9293            |      | 0.30      |      | 70.5         |      | 9.9                |      | A   |
| 9                | 1.00 |      | 0.909 |       | 3261             |      | 9293            |      | 0.35      |      | 70.5         |      | 11.5               |      | B   |
| 10               | 1.00 |      | 0.909 |       | 3331             |      | 9293            |      | 0.36      |      | 70.5         |      | 11.8               |      | B   |
| 11               | 1.00 |      | 0.909 |       | 3230             |      | 9293            |      | 0.35      |      | 70.5         |      | 11.4               |      | B   |
| 12               | 1.00 |      | 0.909 |       | 2609             |      | 9293            |      | 0.28      |      | 70.5         |      | 9.2                |      | A   |
| 13               | 1.00 |      | 0.909 |       | 3287             |      | 9293            |      | 0.35      |      | 70.4         |      | 11.6               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 2429             |      | 9293            |      | 0.26      |      | 70.5         |      | 8.6                |      | A   |
| 15               | 1.00 |      | 0.909 |       | 1927             |      | 9293            |      | 0.21      |      | 70.6         |      | 6.8                |      | A   |
| 16               | 1.00 |      | 0.909 |       | 1611             |      | 9293            |      | 0.17      |      | 70.6         |      | 5.7                |      | A   |
| 17               | 1.00 |      | 0.909 |       | 1980             |      | 9293            |      | 0.21      |      | 70.6         |      | 7.0                |      | A   |
| 18               | 1.00 |      | 0.909 |       | 1897             |      | 9293            |      | 0.20      |      | 70.6         |      | 6.7                |      | A   |
| 19               | 1.00 |      | 0.909 |       | 1734             |      | 9293            |      | 0.19      |      | 70.6         |      | 6.1                |      | A   |
| 20               | 1.00 |      | 0.909 |       | 1606             |      | 9293            |      | 0.17      |      | 70.6         |      | 5.7                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 3707             | 1252 | 11616           | 2033 | 0.32      | 0.62 | 73.2         | 73.5 | 10.1               | 10.1 | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 3797             | 1298 | 11616           | 2033 | 0.33      | 0.64 | 73.2         | 73.5 | 10.3               | 10.3 | A   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 3865             | 1401 | 11616           | 2033 | 0.33      | 0.69 | 73.2         | 73.5 | 10.5               | 10.5 | A   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 4199             | 1524 | 11616           | 2033 | 0.36      | 0.75 | 73.2         | 73.5 | 11.4               | 11.4 | B   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 5229             | 2175 | 11616           | 2033 | 0.45      | 1.07 | 73.2         | 73.5 | 14.2               | 14.2 | B   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 5071             | 2356 | 11616           | 2033 | 0.44      | 1.16 | 73.2         | 73.5 | 13.8               | 13.8 | B   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 5677             | 2768 | 11616           | 2033 | 0.49      | 1.36 | 73.2         | 73.2 | 15.5               | 15.5 | B   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 5645             | 2838 | 11616           | 2033 | 0.49      | 1.40 | 73.2         | 73.3 | 15.4               | 15.4 | B   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 5984             | 2723 | 11616           | 2033 | 0.52      | 1.34 | 73.0         | 73.0 | 16.4               | 16.4 | B   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 6157             | 2826 | 11616           | 2033 | 0.53      | 1.39 | 72.8         | 72.8 | 16.9               | 16.9 | B   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 5599             | 2369 | 11616           | 2033 | 0.48      | 1.17 | 73.2         | 73.3 | 15.3               | 15.3 | B   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 5068             | 2459 | 11616           | 2033 | 0.44      | 1.21 | 73.2         | 73.5 | 13.8               | 13.8 | B   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 5656             | 2369 | 11616           | 2033 | 0.49      | 1.17 | 73.2         | 73.3 | 15.4               | 15.4 | B   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 4398             | 1969 | 11616           | 2033 | 0.38      | 0.97 | 73.2         | 73.5 | 12.0               | 12.0 | B   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 3542             | 1615 | 11616           | 2033 | 0.30      | 0.79 | 73.2         | 73.5 | 9.6                | 9.6  | A   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 2686             | 1075 | 11616           | 2033 | 0.23      | 0.53 | 73.2         | 73.5 | 7.3                | 7.3  | A   |

|    |      |      |       |       |      |      |       |      |      |      |      |      |     |     |   |
|----|------|------|-------|-------|------|------|-------|------|------|------|------|------|-----|-----|---|
| 17 | 1.00 | 1.00 | 0.909 | 0.971 | 2993 | 1013 | 11616 | 2033 | 0.26 | 0.50 | 73.2 | 73.5 | 8.1 | 8.1 | A |
| 18 | 1.00 | 1.00 | 0.909 | 0.971 | 2935 | 1038 | 11616 | 2033 | 0.25 | 0.51 | 73.2 | 73.5 | 8.0 | 8.0 | A |
| 19 | 1.00 | 1.00 | 0.909 | 0.971 | 2657 | 923  | 11616 | 2033 | 0.23 | 0.45 | 73.2 | 73.5 | 7.2 | 7.2 | A |
| 20 | 1.00 | 1.00 | 0.909 | 0.971 | 2599 | 993  | 11616 | 2033 | 0.22 | 0.49 | 73.2 | 73.5 | 7.1 | 7.1 | A |

Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3793             | 9293            | 0.41      | 70.8         | 13.4               | B   |
| 2           | 1.00 | 0.909 | 3886             | 9293            | 0.42      | 70.8         | 13.7               | B   |
| 3           | 1.00 | 0.909 | 3960             | 9293            | 0.43      | 70.8         | 14.0               | B   |
| 4           | 1.00 | 0.909 | 4304             | 9293            | 0.46      | 70.8         | 15.2               | B   |
| 5           | 1.00 | 0.909 | 5377             | 9293            | 0.58      | 70.0         | 19.2               | C   |
| 6           | 1.00 | 0.909 | 5232             | 9293            | 0.56      | 70.2         | 18.6               | C   |
| 7           | 1.00 | 0.909 | 5866             | 9293            | 0.63      | 69.0         | 21.2               | C   |
| 8           | 1.00 | 0.909 | 5839             | 9293            | 0.63      | 69.1         | 21.1               | C   |
| 9           | 1.00 | 0.909 | 6169             | 9293            | 0.66      | 68.3         | 22.6               | C   |
| 10          | 1.00 | 0.909 | 6350             | 9293            | 0.68      | 67.7         | 23.5               | C   |
| 11          | 1.00 | 0.909 | 5760             | 9293            | 0.62      | 69.3         | 20.8               | C   |
| 12          | 1.00 | 0.909 | 5237             | 9293            | 0.56      | 70.2         | 18.6               | C   |
| 13          | 1.00 | 0.909 | 5817             | 9293            | 0.63      | 69.2         | 21.0               | C   |
| 14          | 1.00 | 0.909 | 4532             | 9293            | 0.49      | 70.8         | 16.0               | B   |
| 15          | 1.00 | 0.909 | 3652             | 9293            | 0.39      | 70.8         | 12.9               | B   |
| 16          | 1.00 | 0.909 | 2759             | 9293            | 0.30      | 70.8         | 9.7                | A   |
| 17          | 1.00 | 0.909 | 3063             | 9293            | 0.33      | 70.8         | 10.8               | A   |
| 18          | 1.00 | 0.909 | 3006             | 9293            | 0.32      | 70.8         | 10.6               | A   |
| 19          | 1.00 | 0.909 | 2719             | 9293            | 0.29      | 70.8         | 9.6                | A   |
| 20          | 1.00 | 0.909 | 2667             | 9293            | 0.29      | 70.8         | 9.4                | A   |

Facility Time Period Results

| T  | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|----|-------------|-------------------|--------------------|------------------|-----|
| 1  | 69.8        | 8.9               | 8.1                | 2.50             | A   |
| 2  | 69.7        | 9.3               | 8.4                | 2.50             | A   |
| 3  | 69.7        | 9.1               | 8.3                | 2.50             | A   |
| 4  | 69.9        | 9.7               | 8.8                | 2.50             | A   |
| 5  | 69.4        | 10.9              | 10.0               | 2.50             | A   |
| 6  | 69.7        | 10.1              | 9.2                | 2.50             | A   |
| 7  | 69.4        | 10.9              | 9.9                | 2.50             | A   |
| 8  | 69.4        | 10.8              | 9.8                | 2.50             | A   |
| 9  | 68.6        | 11.6              | 10.6               | 2.50             | B   |
| 10 | 68.5        | 12.1              | 11.0               | 2.60             | B   |
| 11 | 69.1        | 11.4              | 10.4               | 2.50             | B   |
| 12 | 69.8        | 10.4              | 9.4                | 2.50             | A   |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 13 | 68.5 | 11.2 | 10.2 | 2.60 | B |
| 14 | 69.7 | 9.1  | 8.2  | 2.50 | A |
| 15 | 69.9 | 7.5  | 6.8  | 2.50 | A |
| 16 | 70.3 | 6.6  | 5.9  | 2.50 | A |
| 17 | 70.1 | 7.1  | 6.5  | 2.50 | A |
| 18 | 70.0 | 6.6  | 6.0  | 2.50 | A |
| 19 | 70.0 | 6.0  | 5.5  | 2.50 | A |
| 20 | 70.1 | 5.8  | 5.2  | 2.50 | A |

Facility Overall Results

|                          |      |                    |     |
|--------------------------|------|--------------------|-----|
| Space Mean Speed, mi/h   | 69.5 | Density, veh/mi/ln | 8.4 |
| Average Travel Time, min | 2.50 | Density, pc/mi/ln  | 9.3 |

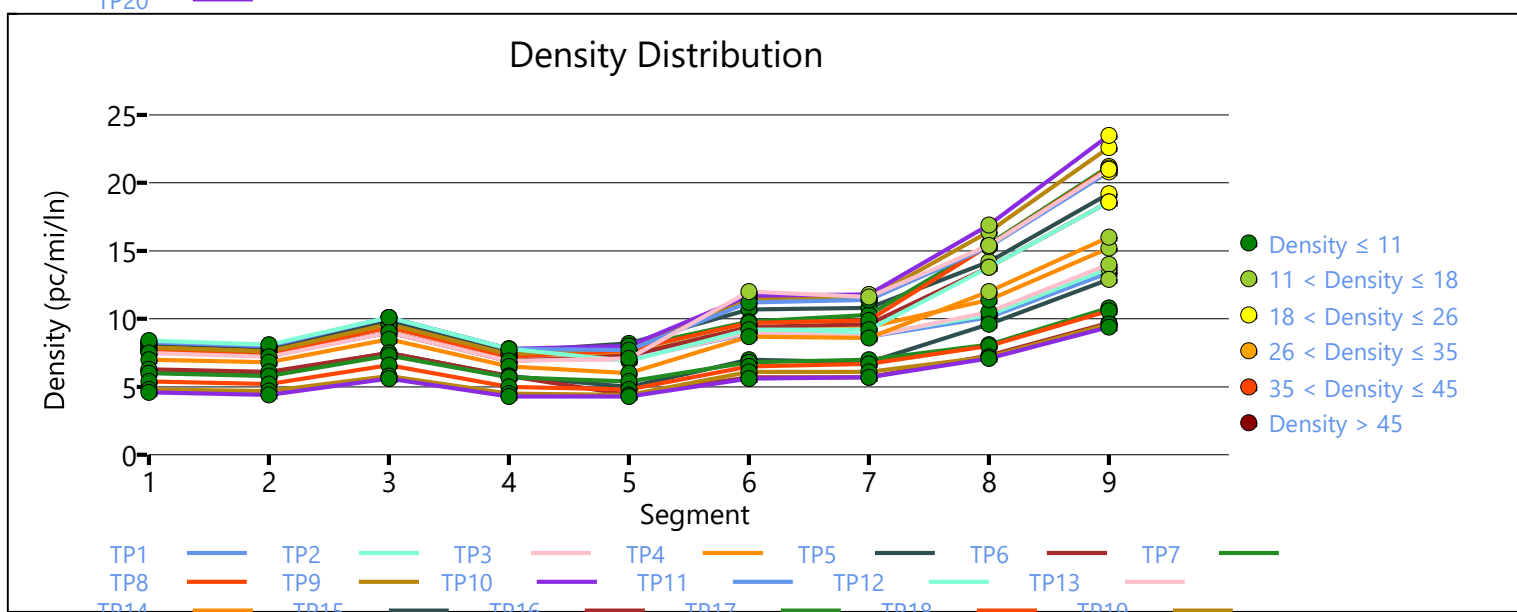
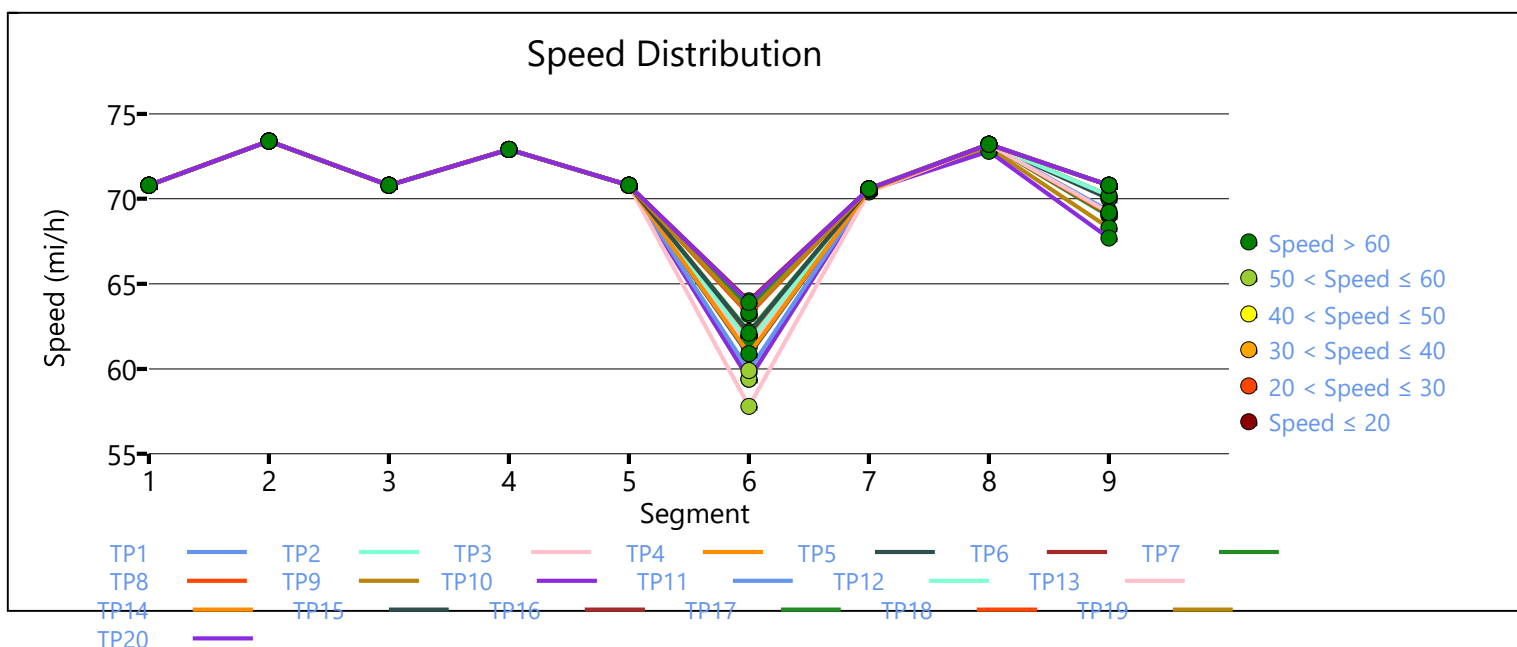
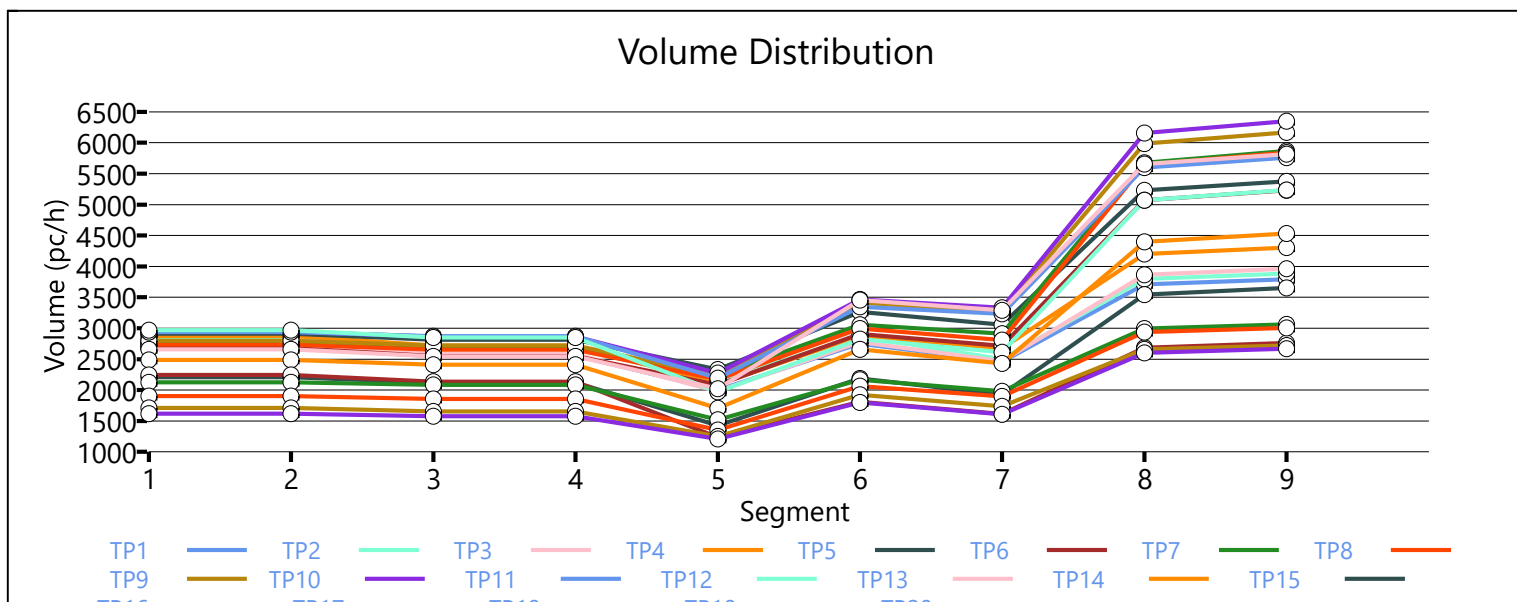
Messages

|           |                                                        |
|-----------|--------------------------------------------------------|
| WARNING 1 | Merge capacity is less than merge demand on segment 8. |
| WARNING 2 | Merge capacity is less than merge demand on segment 8. |
| WARNING 3 | Merge capacity is less than merge demand on segment 8. |
| WARNING 4 | Merge capacity is less than merge demand on segment 8. |
| WARNING 5 | Merge capacity is less than merge demand on segment 8. |
| WARNING 6 | Merge capacity is less than merge demand on segment 8. |
| WARNING 7 | Merge capacity is less than merge demand on segment 8. |
| WARNING 8 | Merge capacity is less than merge demand on segment 8. |
| WARNING 9 | Merge capacity is less than merge demand on segment 8. |

Comments

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# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                                |                      |                         |
|---------------------|----------------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                             | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                                | Analysis Year        | 2030                    |
| Jurisdiction        | NMDOT                                                          | Time Period Analyzed | PM Peak Period          |
| Project Description | 2030 No-Build, I-25<br>Programmed Improvements -<br>Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 11   |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.98  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | North of ACC                        | 2640       | 4     |
| 2   | Diverge | Basic    | Off Ramp to Gibson                  | 600        | 5     |
| 3   | Basic   | Basic    | Bet Gibson Off and ACC On Ramps     | 1750       | 4     |
| 4   | Merge   | Basic    | ACC On-Ramp                         | 600        | 5     |
| 5   | Basic   | Basic    | Bet ACC Off and Sunport Off Ramps   | 2400       | 4     |
| 6   | Diverge | Basic    | Sunport Off Ramp                    | 600        | 5     |
| 7   | Basic   | Basic    | Bet Sunport Off and Gibson On Ramps | 2000       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 800        | 5     |
| 9   | Basic   | Basic    | Bet Gibson and Sunport On Ramps     | 900        | 4     |
| 10  | Merge   | Basic    | Sunport On Ramp                     | 800        | 5     |
| 11  | Basic   | Basic    | S of Sunport                        | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3789             | 9293            | 0.41      | 70.8         | 13.4               | B   |
| 2           | 1.00 | 0.909 | 3780             | 9293            | 0.41      | 70.8         | 13.3               | B   |
| 3           | 1.00 | 0.909 | 4097             | 9293            | 0.44      | 70.8         | 14.5               | B   |
| 4           | 1.00 | 0.909 | 4656             | 9293            | 0.50      | 70.7         | 16.5               | B   |
| 5           | 1.00 | 0.909 | 4167             | 9293            | 0.45      | 70.8         | 14.7               | B   |
| 6           | 1.00 | 0.909 | 3820             | 9293            | 0.41      | 70.8         | 13.5               | B   |
| 7           | 1.00 | 0.909 | 3925             | 9293            | 0.42      | 70.8         | 13.9               | B   |
| 8           | 1.00 | 0.909 | 4000             | 9293            | 0.43      | 70.8         | 14.1               | B   |
| 9           | 1.00 | 0.909 | 4026             | 9293            | 0.43      | 70.8         | 14.2               | B   |
| 10          | 1.00 | 0.909 | 4185             | 9293            | 0.45      | 70.8         | 14.8               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 11                 | 1.00 | 0.909 | 3657  |       | 9293             |      | 0.39            | 70.8 |           | 12.9 |              | B    |                    |      |     |
| 12                 | 1.00 | 0.909 | 4013  |       | 9293             |      | 0.43            | 70.8 |           | 14.2 |              | B    |                    |      |     |
| 13                 | 1.00 | 0.909 | 3688  |       | 9293             |      | 0.40            | 70.8 |           | 13.0 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 4004  |       | 9293             |      | 0.43            | 70.8 |           | 14.1 |              | B    |                    |      |     |
| 15                 | 1.00 | 0.909 | 3811  |       | 9293             |      | 0.41            | 70.8 |           | 13.5 |              | B    |                    |      |     |
| 16                 | 1.00 | 0.909 | 3912  |       | 9293             |      | 0.42            | 70.8 |           | 13.8 |              | B    |                    |      |     |
| 17                 | 1.00 | 0.909 | 4040  |       | 9293             |      | 0.43            | 70.8 |           | 14.3 |              | B    |                    |      |     |
| 18                 | 1.00 | 0.909 | 3789  |       | 9293             |      | 0.41            | 70.8 |           | 13.4 |              | B    |                    |      |     |
| 19                 | 1.00 | 0.909 | 3472  |       | 9293             |      | 0.37            | 70.8 |           | 12.3 |              | B    |                    |      |     |
| 20                 | 1.00 | 0.909 | 3190  |       | 9293             |      | 0.34            | 70.8 |           | 11.3 |              | B    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 3789             | 1322 | 11616           | 2033 | 0.33      | 0.65 | 73.3         | 73.5 | 10.3               | 10.3 | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 3780             | 1458 | 11616           | 2033 | 0.33      | 0.72 | 73.3         | 73.5 | 10.3               | 10.3 | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 4097             | 1541 | 11616           | 2033 | 0.35      | 0.76 | 73.3         | 73.5 | 11.1               | 11.1 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4656             | 1689 | 11616           | 2033 | 0.40      | 0.83 | 73.3         | 73.5 | 12.7               | 12.7 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4167             | 1351 | 11616           | 2033 | 0.36      | 0.66 | 73.3         | 73.5 | 11.3               | 11.3 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 3820             | 1228 | 11616           | 2033 | 0.33      | 0.60 | 73.3         | 73.5 | 10.4               | 10.4 | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 3925             | 1240 | 11616           | 2033 | 0.34      | 0.61 | 73.3         | 73.5 | 10.7               | 10.7 | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4000             | 1314 | 11616           | 2033 | 0.34      | 0.65 | 73.3         | 73.5 | 10.9               | 10.9 | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4026             | 1178 | 11616           | 2033 | 0.35      | 0.58 | 73.3         | 73.5 | 11.0               | 11.0 | A   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4185             | 1285 | 11616           | 2033 | 0.36      | 0.63 | 73.3         | 73.5 | 11.4               | 11.4 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 3657             | 1195 | 11616           | 2033 | 0.31      | 0.59 | 73.3         | 73.5 | 9.9                | 9.9  | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4013             | 1244 | 11616           | 2033 | 0.35      | 0.61 | 73.3         | 73.5 | 10.9               | 10.9 | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3688             | 1191 | 11616           | 2033 | 0.32      | 0.59 | 73.3         | 73.5 | 10.0               | 10.0 | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4004             | 1277 | 11616           | 2033 | 0.34      | 0.63 | 73.3         | 73.5 | 10.9               | 10.9 | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3811             | 1125 | 11616           | 2033 | 0.33      | 0.55 | 73.3         | 73.5 | 10.4               | 10.4 | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 3912             | 1050 | 11616           | 2033 | 0.34      | 0.52 | 73.3         | 73.5 | 10.6               | 10.6 | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 4040             | 1018 | 11616           | 2033 | 0.35      | 0.50 | 73.3         | 73.5 | 11.0               | 11.0 | A   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 3789             | 857  | 11616           | 2033 | 0.33      | 0.42 | 73.3         | 73.5 | 10.3               | 10.3 | A   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3472             | 865  | 11616           | 2033 | 0.30      | 0.43 | 73.3         | 73.5 | 9.4                | 9.4  | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3190             | 939  | 11616           | 2033 | 0.27      | 0.46 | 73.3         | 73.5 | 8.7                | 8.7  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| 1                  | 1.00 |       | 0.909 |       | 2376             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.4                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2222             |      | 9293            |      | 0.24      |      | 70.8         |      | 7.9                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2451             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.7                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2851             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.1               |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2724             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.6                |      | A   |

|                  |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 6                | 1.00 | 0.909 | 2508  |       | 9293             |      | 0.27            | 70.8 |           | 8.9  |              | A    |                    |      |     |
| 7                | 1.00 | 0.909 | 2601  |       | 9293             |      | 0.28            | 70.8 |           | 9.2  |              | A    |                    |      |     |
| 8                | 1.00 | 0.909 | 2596  |       | 9293             |      | 0.28            | 70.8 |           | 9.2  |              | A    |                    |      |     |
| 9                | 1.00 | 0.909 | 2768  |       | 9293             |      | 0.30            | 70.8 |           | 9.8  |              | A    |                    |      |     |
| 10               | 1.00 | 0.909 | 2812  |       | 9293             |      | 0.30            | 70.8 |           | 9.9  |              | A    |                    |      |     |
| 11               | 1.00 | 0.909 | 2381  |       | 9293             |      | 0.26            | 70.8 |           | 8.4  |              | A    |                    |      |     |
| 12               | 1.00 | 0.909 | 2684  |       | 9293             |      | 0.29            | 70.8 |           | 9.5  |              | A    |                    |      |     |
| 13               | 1.00 | 0.909 | 2416  |       | 9293             |      | 0.26            | 70.8 |           | 8.5  |              | A    |                    |      |     |
| 14               | 1.00 | 0.909 | 2640  |       | 9293             |      | 0.28            | 70.8 |           | 9.3  |              | A    |                    |      |     |
| 15               | 1.00 | 0.909 | 2609  |       | 9293             |      | 0.28            | 70.8 |           | 9.2  |              | A    |                    |      |     |
| 16               | 1.00 | 0.909 | 2790  |       | 9293             |      | 0.30            | 70.8 |           | 9.9  |              | A    |                    |      |     |
| 17               | 1.00 | 0.909 | 2953  |       | 9293             |      | 0.32            | 70.8 |           | 10.4 |              | A    |                    |      |     |
| 18               | 1.00 | 0.909 | 2873  |       | 9293             |      | 0.31            | 70.8 |           | 10.1 |              | A    |                    |      |     |
| 19               | 1.00 | 0.909 | 2548  |       | 9293             |      | 0.27            | 70.8 |           | 9.0  |              | A    |                    |      |     |
| 20               | 1.00 | 0.909 | 2187  |       | 9293             |      | 0.24            | 70.8 |           | 7.7  |              | A    |                    |      |     |
| Segment 4: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 2965             | 589  | 11616           | 2033 | 0.26      | 0.29 | 73.1         | 73.5 | 8.1                | 8.1  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 2889             | 667  | 11616           | 2033 | 0.25      | 0.33 | 73.1         | 73.5 | 7.9                | 7.9  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 3118             | 667  | 11616           | 2033 | 0.27      | 0.33 | 73.1         | 73.5 | 8.5                | 8.5  | A   |
| 4                | 1.00 | 1.00  | 0.909 | 0.971 | 3465             | 614  | 11616           | 2033 | 0.30      | 0.30 | 73.1         | 73.5 | 9.4                | 9.4  | A   |
| 5                | 1.00 | 1.00  | 0.909 | 0.971 | 3568             | 844  | 11616           | 2033 | 0.31      | 0.42 | 73.1         | 73.5 | 9.7                | 9.7  | A   |
| 6                | 1.00 | 1.00  | 0.909 | 0.971 | 3550             | 1042 | 11616           | 2033 | 0.31      | 0.51 | 73.1         | 73.5 | 9.7                | 9.7  | A   |
| 7                | 1.00 | 1.00  | 0.909 | 0.971 | 3619             | 1018 | 11616           | 2033 | 0.31      | 0.50 | 73.1         | 73.5 | 9.8                | 9.8  | A   |
| 8                | 1.00 | 1.00  | 0.909 | 0.971 | 3543             | 947  | 11616           | 2033 | 0.31      | 0.47 | 73.1         | 73.5 | 9.6                | 9.6  | A   |
| 9                | 1.00 | 1.00  | 0.909 | 0.971 | 3604             | 836  | 11616           | 2033 | 0.31      | 0.41 | 73.1         | 73.5 | 9.8                | 9.8  | A   |
| 10               | 1.00 | 1.00  | 0.909 | 0.971 | 3669             | 857  | 11616           | 2033 | 0.32      | 0.42 | 73.1         | 73.5 | 10.0               | 10.0 | A   |
| 11               | 1.00 | 1.00  | 0.909 | 0.971 | 3271             | 890  | 11616           | 2033 | 0.28      | 0.44 | 73.1         | 73.5 | 8.9                | 8.9  | A   |
| 12               | 1.00 | 1.00  | 0.909 | 0.971 | 3611             | 927  | 11616           | 2033 | 0.31      | 0.46 | 73.1         | 73.5 | 9.8                | 9.8  | A   |
| 13               | 1.00 | 1.00  | 0.909 | 0.971 | 3343             | 927  | 11616           | 2033 | 0.29      | 0.46 | 73.1         | 73.5 | 9.1                | 9.1  | A   |
| 14               | 1.00 | 1.00  | 0.909 | 0.971 | 3567             | 927  | 11616           | 2033 | 0.31      | 0.46 | 73.1         | 73.5 | 9.7                | 9.7  | A   |
| 15               | 1.00 | 1.00  | 0.909 | 0.971 | 3536             | 927  | 11616           | 2033 | 0.30      | 0.46 | 73.1         | 73.5 | 9.6                | 9.6  | A   |
| 16               | 1.00 | 1.00  | 0.909 | 0.971 | 3532             | 742  | 11616           | 2033 | 0.30      | 0.37 | 73.1         | 73.5 | 9.6                | 9.6  | A   |
| 17               | 1.00 | 1.00  | 0.909 | 0.971 | 3517             | 564  | 11616           | 2033 | 0.30      | 0.28 | 73.1         | 73.5 | 9.6                | 9.6  | A   |
| 18               | 1.00 | 1.00  | 0.909 | 0.971 | 3417             | 544  | 11616           | 2033 | 0.29      | 0.27 | 73.1         | 73.5 | 9.3                | 9.3  | A   |
| 19               | 1.00 | 1.00  | 0.909 | 0.971 | 2960             | 412  | 11616           | 2033 | 0.25      | 0.20 | 73.1         | 73.5 | 8.1                | 8.1  | A   |
| 20               | 1.00 | 1.00  | 0.909 | 0.971 | 2640             | 453  | 11616           | 2033 | 0.23      | 0.22 | 73.1         | 73.5 | 7.2                | 7.2  | A   |
| Segment 5: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                  | 1.00 | 0.909 | 3006  | 9293  | 0.32             | 70.8 | 10.6            | A    |           |      |              |      |                    |      |     |
| 2                  | 1.00 | 0.909 | 2935  | 9293  | 0.32             | 70.8 | 10.4            | A    |           |      |              |      |                    |      |     |
| 3                  | 1.00 | 0.909 | 3164  | 9293  | 0.34             | 70.8 | 11.2            | B    |           |      |              |      |                    |      |     |
| 4                  | 1.00 | 0.909 | 3507  | 9293  | 0.38             | 70.8 | 12.4            | B    |           |      |              |      |                    |      |     |
| 5                  | 1.00 | 0.909 | 3626  | 9293  | 0.39             | 70.8 | 12.8            | B    |           |      |              |      |                    |      |     |
| 6                  | 1.00 | 0.909 | 3622  | 9293  | 0.39             | 70.8 | 12.8            | B    |           |      |              |      |                    |      |     |
| 7                  | 1.00 | 0.909 | 3688  | 9293  | 0.40             | 70.8 | 13.0            | B    |           |      |              |      |                    |      |     |
| 8                  | 1.00 | 0.909 | 3608  | 9293  | 0.39             | 70.8 | 12.7            | B    |           |      |              |      |                    |      |     |
| 9                  | 1.00 | 0.909 | 3661  | 9293  | 0.39             | 70.8 | 12.9            | B    |           |      |              |      |                    |      |     |
| 10                 | 1.00 | 0.909 | 3727  | 9293  | 0.40             | 70.8 | 13.2            | B    |           |      |              |      |                    |      |     |
| 11                 | 1.00 | 0.909 | 3331  | 9293  | 0.36             | 70.8 | 11.8            | B    |           |      |              |      |                    |      |     |
| 12                 | 1.00 | 0.909 | 3674  | 9293  | 0.40             | 70.8 | 13.0            | B    |           |      |              |      |                    |      |     |
| 13                 | 1.00 | 0.909 | 3406  | 9293  | 0.37             | 70.8 | 12.0            | B    |           |      |              |      |                    |      |     |
| 14                 | 1.00 | 0.909 | 3630  | 9293  | 0.39             | 70.8 | 12.8            | B    |           |      |              |      |                    |      |     |
| 15                 | 1.00 | 0.909 | 3600  | 9293  | 0.39             | 70.8 | 12.7            | B    |           |      |              |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 3582  | 9293  | 0.39             | 70.8 | 12.7            | B    |           |      |              |      |                    |      |     |
| 17                 | 1.00 | 0.909 | 3556  | 9293  | 0.38             | 70.8 | 12.6            | B    |           |      |              |      |                    |      |     |
| 18                 | 1.00 | 0.909 | 3454  | 9293  | 0.37             | 70.8 | 12.2            | B    |           |      |              |      |                    |      |     |
| 19                 | 1.00 | 0.909 | 2988  | 9293  | 0.32             | 70.8 | 10.6            | A    |           |      |              |      |                    |      |     |
| 20                 | 1.00 | 0.909 | 2671  | 9293  | 0.29             | 70.8 | 9.4             | A    |           |      |              |      |                    |      |     |
| Segment 6: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 3006             | 647  | 11616           | 2033 | 0.26      | 0.32 | 73.3         | 73.5 | 8.2                | 8.2  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2935             | 577  | 11616           | 2033 | 0.25      | 0.28 | 73.3         | 73.5 | 8.0                | 8.0  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 3164             | 643  | 11616           | 2033 | 0.27      | 0.32 | 73.3         | 73.5 | 8.6                | 8.6  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 3507             | 597  | 11616           | 2033 | 0.30      | 0.29 | 73.3         | 73.5 | 9.5                | 9.5  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3626             | 651  | 11616           | 2033 | 0.31      | 0.32 | 73.3         | 73.5 | 9.9                | 9.9  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 3622             | 606  | 11616           | 2033 | 0.31      | 0.30 | 73.3         | 73.5 | 9.9                | 9.9  | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 3688             | 659  | 11616           | 2033 | 0.32      | 0.32 | 73.3         | 73.5 | 10.0               | 10.0 | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 3608             | 667  | 11616           | 2033 | 0.31      | 0.33 | 73.3         | 73.5 | 9.8                | 9.8  | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 3661             | 746  | 11616           | 2033 | 0.32      | 0.37 | 73.3         | 73.5 | 10.0               | 10.0 | A   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 3727             | 634  | 11616           | 2033 | 0.32      | 0.31 | 73.3         | 73.5 | 10.1               | 10.1 | A   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 3331             | 593  | 11616           | 2033 | 0.29      | 0.29 | 73.3         | 73.5 | 9.1                | 9.1  | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3674             | 618  | 11616           | 2033 | 0.32      | 0.30 | 73.3         | 73.5 | 10.0               | 10.0 | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3406             | 474  | 11616           | 2033 | 0.29      | 0.23 | 73.3         | 73.5 | 9.3                | 9.3  | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 3630             | 531  | 11616           | 2033 | 0.31      | 0.26 | 73.3         | 73.5 | 9.9                | 9.9  | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3600             | 486  | 11616           | 2033 | 0.31      | 0.24 | 73.3         | 73.5 | 9.8                | 9.8  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 3582             | 465  | 11616           | 2033 | 0.31      | 0.23 | 73.3         | 73.5 | 9.7                | 9.7  | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 3556             | 416  | 11616           | 2033 | 0.31      | 0.20 | 73.3         | 73.5 | 9.7                | 9.7  | A   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 3454             | 391  | 11616           | 2033 | 0.30      | 0.19 | 73.3         | 73.5 | 9.4                | 9.4  | A   |

| 19               | 1.00 | 1.00 | 0.909 | 0.971 | 2988             | 354  | 11616           | 2033 | 0.26      | 0.17 | 73.3         | 73.5 | 8.1                | 8.1  | A   |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 20               | 1.00 | 1.00 | 0.909 | 0.971 | 2671             | 346  | 11616           | 2033 | 0.23      | 0.17 | 73.3         | 73.5 | 7.3                | 7.3  | A   |
| Segment 7: Basic |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |      | 0.909 |       | 2315             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.2                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 2319             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.2                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 2477             |      | 9293            |      | 0.27      |      | 70.8         |      | 8.7                |      | A   |
| 4                | 1.00 |      | 0.909 |       | 2869             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.1               |      | A   |
| 5                | 1.00 |      | 0.909 |       | 2931             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.4               |      | A   |
| 6                | 1.00 |      | 0.909 |       | 2975             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.5               |      | A   |
| 7                | 1.00 |      | 0.909 |       | 2983             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.5               |      | A   |
| 8                | 1.00 |      | 0.909 |       | 2895             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.2               |      | A   |
| 9                | 1.00 |      | 0.909 |       | 2865             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.1               |      | A   |
| 10               | 1.00 |      | 0.909 |       | 3050             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.8               |      | A   |
| 11               | 1.00 |      | 0.909 |       | 2697             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.5                |      | A   |
| 12               | 1.00 |      | 0.909 |       | 3014             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.6               |      | A   |
| 13               | 1.00 |      | 0.909 |       | 2900             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.2               |      | A   |
| 14               | 1.00 |      | 0.909 |       | 3063             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.8               |      | A   |
| 15               | 1.00 |      | 0.909 |       | 3080             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.9               |      | A   |
| 16               | 1.00 |      | 0.909 |       | 3085             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.9               |      | A   |
| 17               | 1.00 |      | 0.909 |       | 3111             |      | 9293            |      | 0.33      |      | 70.8         |      | 11.0               |      | A   |
| 18               | 1.00 |      | 0.909 |       | 3036             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.7               |      | A   |
| 19               | 1.00 |      | 0.909 |       | 2609             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.2                |      | A   |
| 20               | 1.00 |      | 0.909 |       | 2301             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.1                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 2879             | 564  | 11616           | 2033 | 0.25      | 0.28 | 73.2         | 73.5 | 7.8                | 7.8  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 2958             | 639  | 11616           | 2033 | 0.25      | 0.31 | 73.2         | 73.5 | 8.0                | 8.0  | A   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 3116             | 639  | 11616           | 2033 | 0.27      | 0.31 | 73.2         | 73.5 | 8.5                | 8.5  | A   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 3458             | 589  | 11616           | 2033 | 0.30      | 0.29 | 73.2         | 73.5 | 9.4                | 9.4  | A   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 3640             | 709  | 11616           | 2033 | 0.31      | 0.35 | 73.2         | 73.5 | 9.9                | 9.9  | A   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 3877             | 902  | 11616           | 2033 | 0.33      | 0.44 | 73.2         | 73.5 | 10.5               | 10.5 | A   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 3860             | 877  | 11616           | 2033 | 0.33      | 0.43 | 73.2         | 73.5 | 10.5               | 10.5 | A   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 3707             | 812  | 11616           | 2033 | 0.32      | 0.40 | 73.2         | 73.5 | 10.1               | 10.1 | A   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 3660             | 795  | 11616           | 2033 | 0.32      | 0.39 | 73.2         | 73.5 | 10.0               | 10.0 | A   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 3870             | 820  | 11616           | 2033 | 0.33      | 0.40 | 73.2         | 73.5 | 10.5               | 10.5 | A   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 3546             | 849  | 11616           | 2033 | 0.31      | 0.42 | 73.2         | 73.5 | 9.6                | 9.6  | A   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 3846             | 832  | 11616           | 2033 | 0.33      | 0.41 | 73.2         | 73.5 | 10.5               | 10.5 | A   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 3786             | 886  | 11616           | 2033 | 0.33      | 0.44 | 73.2         | 73.5 | 10.3               | 10.3 | A   |

|                   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|-------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 14                | 1.00 | 1.00 | 0.909 | 0.971 | 3879             | 816  | 11616           | 2033 | 0.33      | 0.40 | 73.2         | 73.5 | 10.6               | 10.6 | A   |
| 15                | 1.00 | 1.00 | 0.909 | 0.971 | 3751             | 671  | 11616           | 2033 | 0.32      | 0.33 | 73.2         | 73.5 | 10.2               | 10.2 | A   |
| 16                | 1.00 | 1.00 | 0.909 | 0.971 | 3789             | 704  | 11616           | 2033 | 0.33      | 0.35 | 73.2         | 73.5 | 10.3               | 10.3 | A   |
| 17                | 1.00 | 1.00 | 0.909 | 0.971 | 3651             | 540  | 11616           | 2033 | 0.31      | 0.27 | 73.2         | 73.5 | 9.9                | 9.9  | A   |
| 18                | 1.00 | 1.00 | 0.909 | 0.971 | 3559             | 523  | 11616           | 2033 | 0.31      | 0.26 | 73.2         | 73.5 | 9.7                | 9.7  | A   |
| 19                | 1.00 | 1.00 | 0.909 | 0.971 | 3004             | 395  | 11616           | 2033 | 0.26      | 0.19 | 73.2         | 73.5 | 8.2                | 8.2  | A   |
| 20                | 1.00 | 1.00 | 0.909 | 0.971 | 2729             | 428  | 11616           | 2033 | 0.23      | 0.21 | 73.2         | 73.5 | 7.4                | 7.4  | A   |
| Segment 9: Basic  |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                 | 1.00 |      | 0.909 |       | 2917             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.3               |      | A   |
| 2                 | 1.00 |      | 0.909 |       | 3001             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.6               |      | A   |
| 3                 | 1.00 |      | 0.909 |       | 3160             |      | 9293            |      | 0.34      |      | 70.8         |      | 11.2               |      | B   |
| 4                 | 1.00 |      | 0.909 |       | 3498             |      | 9293            |      | 0.38      |      | 70.8         |      | 12.3               |      | B   |
| 5                 | 1.00 |      | 0.909 |       | 3688             |      | 9293            |      | 0.40      |      | 70.8         |      | 13.0               |      | B   |
| 6                 | 1.00 |      | 0.909 |       | 3938             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.9               |      | B   |
| 7                 | 1.00 |      | 0.909 |       | 3921             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.8               |      | B   |
| 8                 | 1.00 |      | 0.909 |       | 3762             |      | 9293            |      | 0.40      |      | 70.8         |      | 13.3               |      | B   |
| 9                 | 1.00 |      | 0.909 |       | 3714             |      | 9293            |      | 0.40      |      | 70.8         |      | 13.1               |      | B   |
| 10                | 1.00 |      | 0.909 |       | 3925             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.9               |      | B   |
| 11                | 1.00 |      | 0.909 |       | 3604             |      | 9293            |      | 0.39      |      | 70.8         |      | 12.7               |      | B   |
| 12                | 1.00 |      | 0.909 |       | 3903             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.8               |      | B   |
| 13                | 1.00 |      | 0.909 |       | 3846             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.6               |      | B   |
| 14                | 1.00 |      | 0.909 |       | 3934             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.9               |      | B   |
| 15                | 1.00 |      | 0.909 |       | 3798             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.4               |      | B   |
| 16                | 1.00 |      | 0.909 |       | 3837             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.5               |      | B   |
| 17                | 1.00 |      | 0.909 |       | 3688             |      | 9293            |      | 0.40      |      | 70.8         |      | 13.0               |      | B   |
| 18                | 1.00 |      | 0.909 |       | 3595             |      | 9293            |      | 0.39      |      | 70.8         |      | 12.7               |      | B   |
| 19                | 1.00 |      | 0.909 |       | 3032             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.7               |      | A   |
| 20                | 1.00 |      | 0.909 |       | 2759             |      | 9293            |      | 0.30      |      | 70.8         |      | 9.7                |      | A   |
| Segment 10: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                   | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 3074             | 157  | 11616           | 2033 | 0.26      | 0.08 | 72.8         | 73.5 | 8.4                | 8.4  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 3166             | 165  | 11616           | 2033 | 0.27      | 0.08 | 72.8         | 73.5 | 8.6                | 8.6  | A   |
| 3                 | 1.00 | 1.00 | 0.909 | 0.971 | 3345             | 185  | 11616           | 2033 | 0.29      | 0.09 | 72.8         | 73.5 | 9.1                | 9.1  | A   |
| 4                 | 1.00 | 1.00 | 0.909 | 0.971 | 3642             | 144  | 11616           | 2033 | 0.31      | 0.07 | 72.8         | 73.5 | 9.9                | 9.9  | A   |
| 5                 | 1.00 | 1.00 | 0.909 | 0.971 | 3882             | 194  | 11616           | 2033 | 0.33      | 0.10 | 72.8         | 73.5 | 10.6               | 10.6 | A   |
| 6                 | 1.00 | 1.00 | 0.909 | 0.971 | 4123             | 185  | 11616           | 2033 | 0.35      | 0.09 | 72.8         | 73.5 | 11.2               | 11.2 | B   |
| 7                 | 1.00 | 1.00 | 0.909 | 0.971 | 4119             | 198  | 11616           | 2033 | 0.35      | 0.10 | 72.8         | 73.5 | 11.2               | 11.2 | B   |
| 8                 | 1.00 | 1.00 | 0.909 | 0.971 | 3935             | 173  | 11616           | 2033 | 0.34      | 0.09 | 72.8         | 73.5 | 10.7               | 10.7 | A   |

|    |      |      |       |       |      |     |       |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|-------|------|------|------|------|------|------|------|---|
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 3924 | 210 | 11616 | 2033 | 0.34 | 0.10 | 72.8 | 73.5 | 10.7 | 10.7 | A |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 4123 | 198 | 11616 | 2033 | 0.35 | 0.10 | 72.8 | 73.5 | 11.2 | 11.2 | B |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 3868 | 264 | 11616 | 2033 | 0.33 | 0.13 | 72.8 | 73.5 | 10.5 | 10.5 | A |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 4105 | 202 | 11616 | 2033 | 0.35 | 0.10 | 72.8 | 73.5 | 11.2 | 11.2 | B |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 4122 | 276 | 11616 | 2033 | 0.35 | 0.14 | 72.8 | 73.5 | 11.2 | 11.2 | B |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 4156 | 222 | 11616 | 2033 | 0.36 | 0.11 | 72.8 | 73.5 | 11.3 | 11.3 | B |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 3950 | 152 | 11616 | 2033 | 0.34 | 0.07 | 72.8 | 73.5 | 10.7 | 10.7 | A |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 3932 | 95  | 11616 | 2033 | 0.34 | 0.05 | 72.8 | 73.5 | 10.7 | 10.7 | A |
| 17 | 1.00 | 1.00 | 0.909 | 0.971 | 3787 | 99  | 11616 | 2033 | 0.33 | 0.05 | 72.8 | 73.5 | 10.3 | 10.3 | A |
| 18 | 1.00 | 1.00 | 0.909 | 0.971 | 3677 | 82  | 11616 | 2033 | 0.32 | 0.04 | 72.8 | 73.5 | 10.0 | 10.0 | A |
| 19 | 1.00 | 1.00 | 0.909 | 0.971 | 3114 | 82  | 11616 | 2033 | 0.27 | 0.04 | 72.8 | 73.5 | 8.5  | 8.5  | A |
| 20 | 1.00 | 1.00 | 0.909 | 0.971 | 2817 | 58  | 11616 | 2033 | 0.24 | 0.03 | 72.8 | 73.5 | 7.7  | 7.7  | A |

Segment 11: Basic

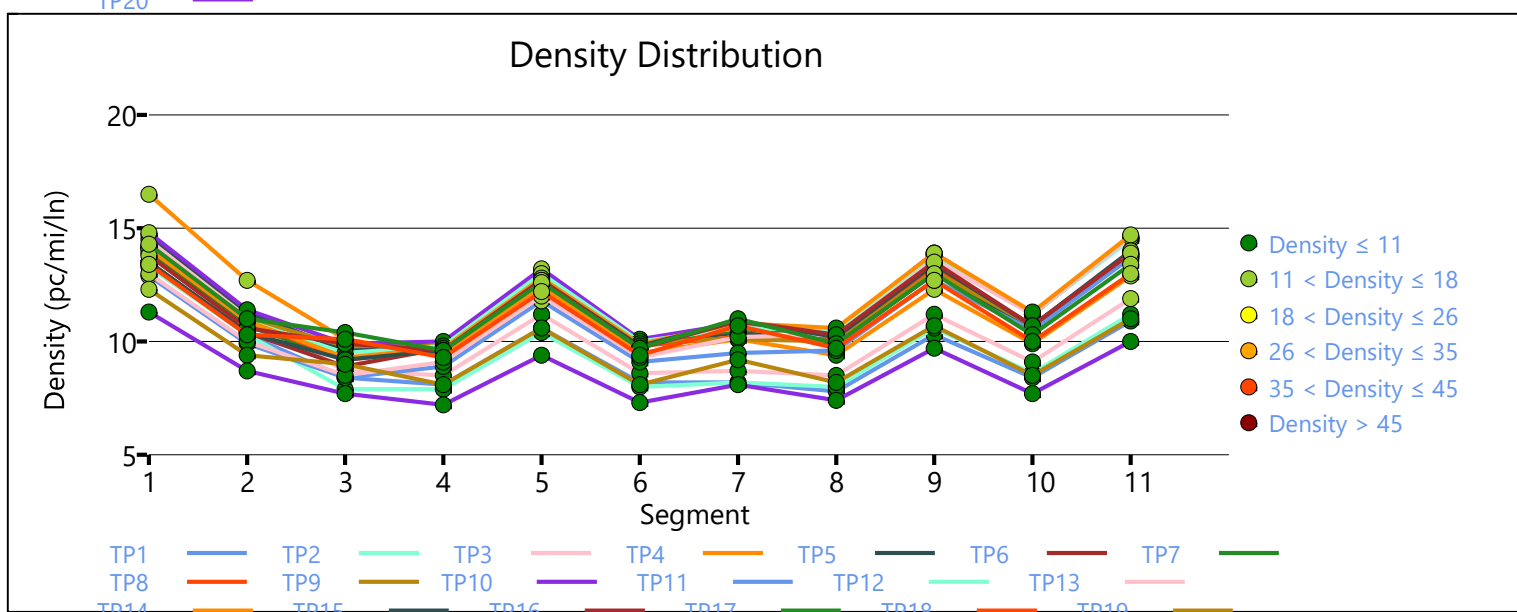
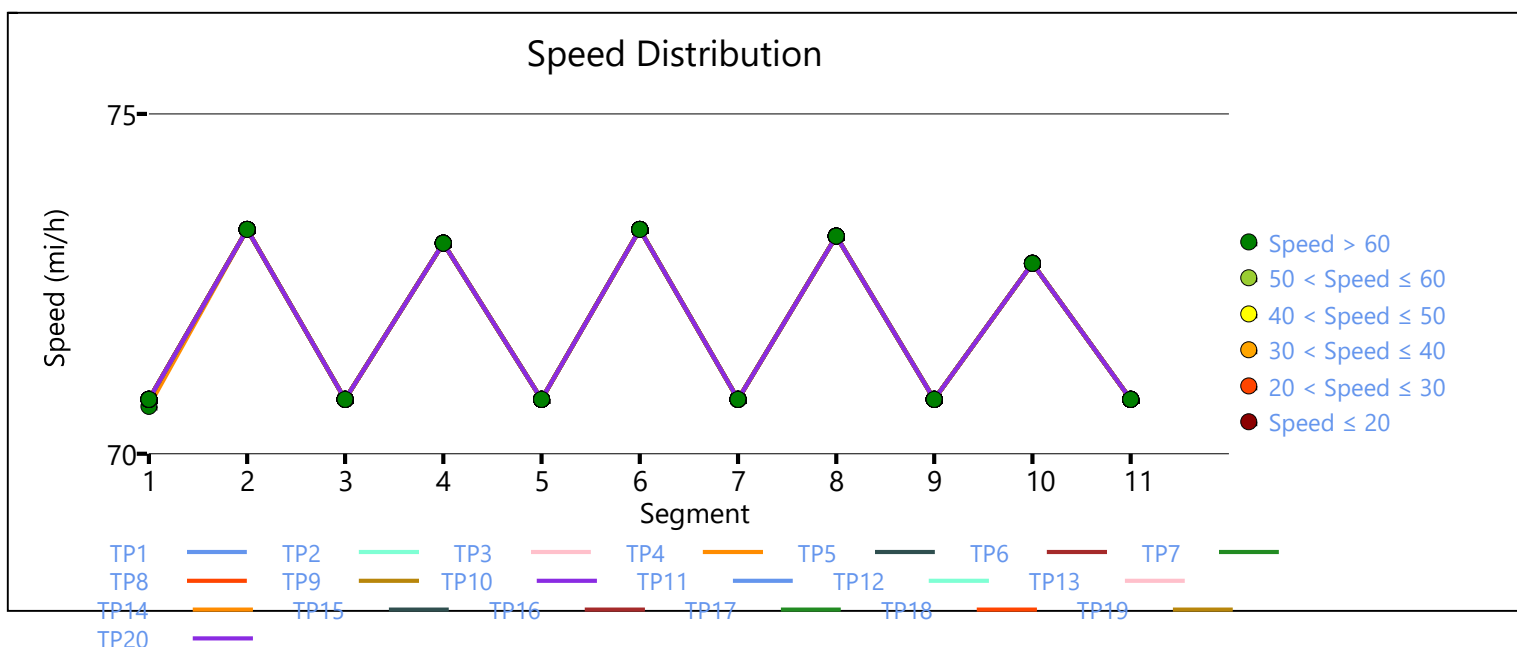
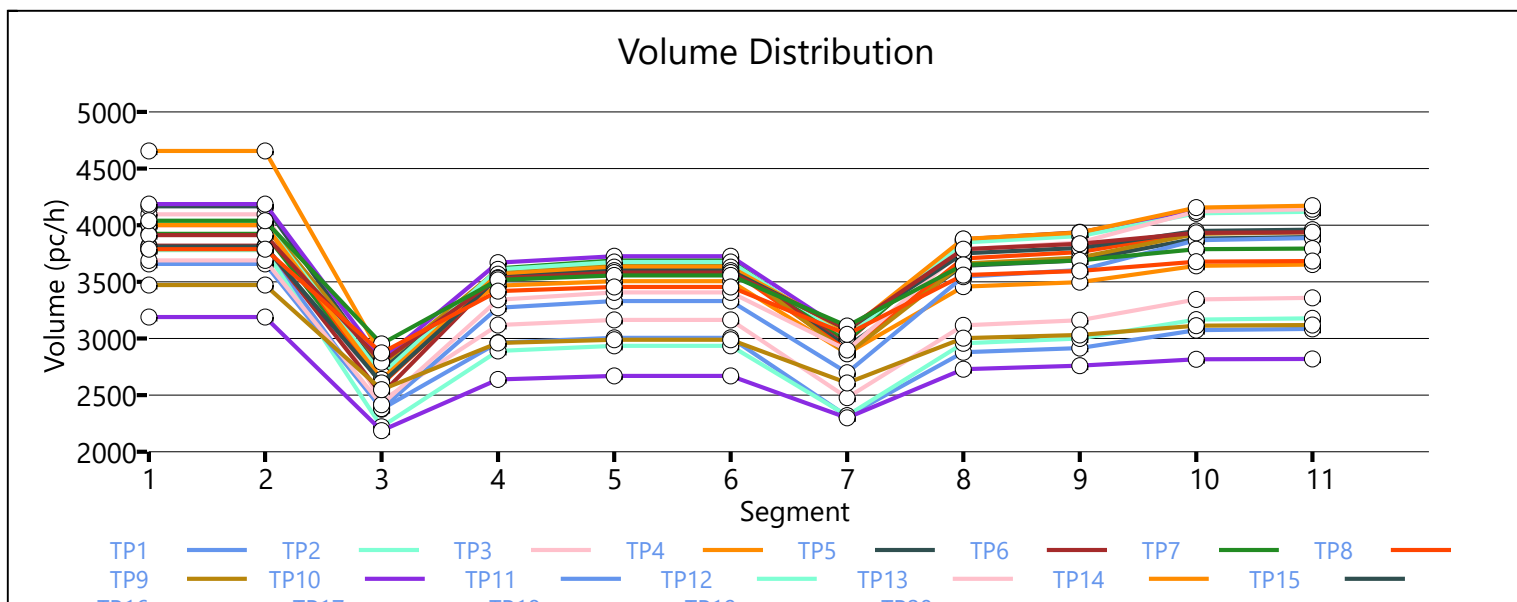
| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3085             | 9293            | 0.33      | 70.8         | 10.9               | A   |
| 2           | 1.00 | 0.909 | 3177             | 9293            | 0.34      | 70.8         | 11.2               | B   |
| 3           | 1.00 | 0.909 | 3358             | 9293            | 0.36      | 70.8         | 11.9               | B   |
| 4           | 1.00 | 0.909 | 3652             | 9293            | 0.39      | 70.8         | 12.9               | B   |
| 5           | 1.00 | 0.909 | 3894             | 9293            | 0.42      | 70.8         | 13.8               | B   |
| 6           | 1.00 | 0.909 | 4136             | 9293            | 0.45      | 70.8         | 14.6               | B   |
| 7           | 1.00 | 0.909 | 4132             | 9293            | 0.44      | 70.8         | 14.6               | B   |
| 8           | 1.00 | 0.909 | 3947             | 9293            | 0.42      | 70.8         | 13.9               | B   |
| 9           | 1.00 | 0.909 | 3938             | 9293            | 0.42      | 70.8         | 13.9               | B   |
| 10          | 1.00 | 0.909 | 4136             | 9293            | 0.45      | 70.8         | 14.6               | B   |
| 11          | 1.00 | 0.909 | 3886             | 9293            | 0.42      | 70.8         | 13.7               | B   |
| 12          | 1.00 | 0.909 | 4119             | 9293            | 0.44      | 70.8         | 14.5               | B   |
| 13          | 1.00 | 0.909 | 4141             | 9293            | 0.45      | 70.8         | 14.6               | B   |
| 14          | 1.00 | 0.909 | 4172             | 9293            | 0.45      | 70.8         | 14.7               | B   |
| 15          | 1.00 | 0.909 | 3960             | 9293            | 0.43      | 70.8         | 14.0               | B   |
| 16          | 1.00 | 0.909 | 3938             | 9293            | 0.42      | 70.8         | 13.9               | B   |
| 17          | 1.00 | 0.909 | 3793             | 9293            | 0.41      | 70.8         | 13.4               | B   |
| 18          | 1.00 | 0.909 | 3683             | 9293            | 0.40      | 70.8         | 13.0               | B   |
| 19          | 1.00 | 0.909 | 3120             | 9293            | 0.34      | 70.8         | 11.0               | A   |
| 20          | 1.00 | 0.909 | 2821             | 9293            | 0.30      | 70.8         | 10.0               | A   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 71.3        | 10.0              | 9.1                | 2.50             | A   |
| 2 | 71.3        | 10.0              | 9.1                | 2.50             | A   |
| 3 | 71.3        | 10.7              | 9.8                | 2.50             | A   |
| 4 | 71.3        | 12.0              | 10.9               | 2.50             | B   |



|                          |      |      |                    |      |      |
|--------------------------|------|------|--------------------|------|------|
| 5                        | 71.3 | 12.0 | 10.9               | 2.50 | B    |
| 6                        | 71.3 | 12.0 | 10.9               | 2.50 | B    |
| 7                        | 71.3 | 12.1 | 11.0               | 2.50 | B    |
| 8                        | 71.3 | 11.9 | 10.8               | 2.50 | B    |
| 9                        | 71.3 | 12.0 | 10.9               | 2.50 | B    |
| 10                       | 71.3 | 12.4 | 11.3               | 2.50 | B    |
| 11                       | 71.3 | 11.1 | 10.1               | 2.50 | B    |
| 12                       | 71.3 | 12.2 | 11.1               | 2.50 | B    |
| 13                       | 71.3 | 11.6 | 10.5               | 2.50 | B    |
| 14                       | 71.3 | 12.2 | 11.1               | 2.50 | B    |
| 15                       | 71.3 | 11.8 | 10.8               | 2.50 | B    |
| 16                       | 71.3 | 12.0 | 10.9               | 2.50 | B    |
| 17                       | 71.3 | 12.0 | 10.9               | 2.50 | B    |
| 18                       | 71.3 | 11.5 | 10.5               | 2.50 | B    |
| 19                       | 71.3 | 10.1 | 9.1                | 2.50 | A    |
| 20                       | 71.3 | 9.0  | 8.2                | 2.50 | A    |
| Facility Overall Results |      |      |                    |      |      |
| Space Mean Speed, mi/h   |      | 71.3 | Density, veh/mi/ln |      | 10.4 |
| Average Travel Time, min |      | 2.50 | Density, pc/mi/ln  |      | 11.4 |
| Messages                 |      |      |                    |      |      |
| Comments                 |      |      |                    |      |      |
|                          |      |      |                    |      |      |



# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                       |                      |                         |
|---------------------|-------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                    | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                       | Analysis Year        | 2030                    |
| Jurisdiction        | NMDOT                                                 | Time Period Analyzed | AM Peak Period          |
| Project Description | 2030 Build, I-25 Programmed Improvements - Northbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.91  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | South of Sunport                    | 2640       | 5     |
| 2   | Diverge | Basic    | Sunport Off Ramp                    | 1500       | 5     |
| 3   | Basic   | Basic    | Bet Sunport and Gibson Off Ramps    | 1100       | 4     |
| 4   | Diverge | Basic    | Gibson Off Ramp                     | 800        | 5     |
| 5   | Basic   | Basic    | Bet Gibson Off and Sunport On Ramps | 1600       | 4     |
| 6   | Weaving | Weaving  | Bet Sunport On and ACC Off Ramps    | 2200       | 5     |
| 7   | Basic   | Basic    | North of ACC Off Ramp               | 2200       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 700        | 5     |
| 9   | Basic   | Basic    | North of Gibson On Ramp             | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1483             | 11616           | 0.13      | 70.8         | 4.2                | A   |
| 2           | 1.00 | 0.909 | 2191             | 11616           | 0.19      | 70.8         | 6.2                | A   |
| 3           | 1.00 | 0.909 | 2552             | 11616           | 0.22      | 70.8         | 7.2                | A   |
| 4           | 1.00 | 0.909 | 2319             | 11616           | 0.20      | 70.8         | 6.6                | A   |
| 5           | 1.00 | 0.909 | 3208             | 11616           | 0.28      | 70.8         | 9.1                | A   |
| 6           | 1.00 | 0.909 | 4106             | 11616           | 0.35      | 70.8         | 11.6               | B   |
| 7           | 1.00 | 0.909 | 4774             | 11616           | 0.41      | 70.8         | 13.5               | B   |
| 8           | 1.00 | 0.909 | 4260             | 11616           | 0.37      | 70.8         | 12.0               | B   |
| 9           | 1.00 | 0.909 | 5223             | 11616           | 0.45      | 70.8         | 14.8               | B   |
| 10          | 1.00 | 0.909 | 6020             | 11616           | 0.52      | 70.6         | 17.1               | B   |
| 11          | 1.00 | 0.909 | 5245             | 11616           | 0.45      | 70.8         | 14.8               | B   |
| 12          | 1.00 | 0.909 | 3723             | 11616           | 0.32      | 70.8         | 10.5               | A   |
| 13          | 1.00 | 0.909 | 3754             | 11616           | 0.32      | 70.8         | 10.6               | A   |

| 14                 | 1.00 | 0.909 | 3714  |       | 11616            |      | 0.32            | 70.8 | 10.5      | A    |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 15                 | 1.00 | 0.909 | 3578  |       | 11616            |      | 0.31            | 70.8 | 10.1      | A    |              |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 2790  |       | 11616            |      | 0.24            | 70.8 | 7.9       | A    |              |      |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1483             | 49   | 11616           | 2033 | 0.13      | 0.02 | 73.4         | 73.5 | 4.0                | 4.0  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2191             | 78   | 11616           | 2033 | 0.19      | 0.04 | 73.4         | 73.5 | 6.0                | 6.0  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2552             | 95   | 11616           | 2033 | 0.22      | 0.05 | 73.4         | 73.5 | 6.9                | 6.9  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2319             | 107  | 11616           | 2033 | 0.20      | 0.05 | 73.4         | 73.5 | 6.3                | 6.3  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3208             | 91   | 11616           | 2033 | 0.28      | 0.04 | 73.4         | 73.5 | 8.7                | 8.7  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4106             | 103  | 11616           | 2033 | 0.35      | 0.05 | 73.4         | 73.5 | 11.2               | 11.2 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4774             | 111  | 11616           | 2033 | 0.41      | 0.05 | 73.4         | 73.5 | 13.0               | 13.0 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4260             | 128  | 11616           | 2033 | 0.37      | 0.06 | 73.4         | 73.5 | 11.6               | 11.6 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5223             | 95   | 11616           | 2033 | 0.45      | 0.05 | 73.4         | 73.5 | 14.2               | 14.2 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 6020             | 140  | 11616           | 2033 | 0.52      | 0.07 | 72.9         | 72.9 | 16.5               | 16.5 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 5245             | 194  | 11616           | 2033 | 0.45      | 0.10 | 73.4         | 73.5 | 14.3               | 14.3 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3723             | 185  | 11616           | 2033 | 0.32      | 0.09 | 73.4         | 73.5 | 10.1               | 10.1 | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3754             | 152  | 11616           | 2033 | 0.32      | 0.07 | 73.4         | 73.5 | 10.2               | 10.2 | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 3714             | 152  | 11616           | 2033 | 0.32      | 0.07 | 73.4         | 73.5 | 10.1               | 10.1 | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3578             | 152  | 11616           | 2033 | 0.31      | 0.07 | 73.4         | 73.5 | 9.7                | 9.7  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2790             | 124  | 11616           | 2033 | 0.24      | 0.06 | 73.4         | 73.5 | 7.6                | 7.6  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1430             |      | 9293            |      | 0.15      |      | 70.8         |      | 5.1                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2108             |      | 9293            |      | 0.23      |      | 70.8         |      | 7.4                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2451             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.7                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2205             |      | 9293            |      | 0.24      |      | 70.8         |      | 7.8                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 3111             |      | 9293            |      | 0.33      |      | 70.8         |      | 11.0               |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 3996             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.1               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 4656             |      | 9293            |      | 0.50      |      | 70.7         |      | 16.5               |      | B   |
| 8                  | 1.00 |       | 0.909 |       | 4123             |      | 9293            |      | 0.44      |      | 70.8         |      | 14.6               |      | B   |
| 9                  | 1.00 |       | 0.909 |       | 5122             |      | 9293            |      | 0.55      |      | 70.4         |      | 18.2               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 5870             |      | 9293            |      | 0.63      |      | 69.0         |      | 21.3               |      | C   |
| 11                 | 1.00 |       | 0.909 |       | 5039             |      | 9293            |      | 0.54      |      | 70.5         |      | 17.9               |      | B   |
| 12                 | 1.00 |       | 0.909 |       | 3525             |      | 9293            |      | 0.38      |      | 70.8         |      | 12.4               |      | B   |
| 13                 | 1.00 |       | 0.909 |       | 3591             |      | 9293            |      | 0.39      |      | 70.8         |      | 12.7               |      | B   |
| 14                 | 1.00 |       | 0.909 |       | 3551             |      | 9293            |      | 0.38      |      | 70.8         |      | 12.5               |      | B   |
| 15                 | 1.00 |       | 0.909 |       | 3415             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.1               |      | B   |
| 16                 | 1.00 |       | 0.909 |       | 2658             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.4                |      | A   |

| Segment 4: Diverge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00 | 0.909 | 0.971 | 1430             | 346  | 11616           | 2033 | 0.12      | 0.17 | 72.9         | 73.5 | 3.9                | 3.9  | A   |
| 2                  | 1.00 | 1.00 | 0.909 | 0.971 | 2108             | 412  | 11616           | 2033 | 0.18      | 0.20 | 72.9         | 73.5 | 5.7                | 5.7  | A   |
| 3                  | 1.00 | 1.00 | 0.909 | 0.971 | 2451             | 564  | 11616           | 2033 | 0.21      | 0.28 | 72.9         | 73.5 | 6.7                | 6.7  | A   |
| 4                  | 1.00 | 1.00 | 0.909 | 0.971 | 2205             | 585  | 11616           | 2033 | 0.19      | 0.29 | 72.9         | 73.5 | 6.0                | 6.0  | A   |
| 5                  | 1.00 | 1.00 | 0.909 | 0.971 | 3111             | 367  | 11616           | 2033 | 0.27      | 0.18 | 72.9         | 73.5 | 8.5                | 8.5  | A   |
| 6                  | 1.00 | 1.00 | 0.909 | 0.971 | 3996             | 494  | 11616           | 2033 | 0.34      | 0.24 | 72.9         | 73.5 | 10.9               | 10.9 | A   |
| 7                  | 1.00 | 1.00 | 0.909 | 0.971 | 4656             | 630  | 11616           | 2033 | 0.40      | 0.31 | 72.9         | 73.5 | 12.7               | 12.7 | B   |
| 8                  | 1.00 | 1.00 | 0.909 | 0.971 | 4123             | 754  | 11616           | 2033 | 0.35      | 0.37 | 72.9         | 73.5 | 11.2               | 11.2 | B   |
| 9                  | 1.00 | 1.00 | 0.909 | 0.971 | 5122             | 927  | 11616           | 2033 | 0.44      | 0.46 | 72.8         | 73.5 | 13.9               | 13.9 | B   |
| 10                 | 1.00 | 1.00 | 0.909 | 0.971 | 5870             | 873  | 11616           | 2033 | 0.51      | 0.43 | 72.5         | 73.1 | 16.1               | 16.1 | B   |
| 11                 | 1.00 | 1.00 | 0.909 | 0.971 | 5039             | 886  | 11616           | 2033 | 0.43      | 0.44 | 72.9         | 73.5 | 13.7               | 13.7 | B   |
| 12                 | 1.00 | 1.00 | 0.909 | 0.971 | 3525             | 1092 | 11616           | 2033 | 0.30      | 0.54 | 72.9         | 73.5 | 9.6                | 9.6  | A   |
| 13                 | 1.00 | 1.00 | 0.909 | 0.971 | 3591             | 877  | 11616           | 2033 | 0.31      | 0.43 | 72.9         | 73.5 | 9.8                | 9.8  | A   |
| 14                 | 1.00 | 1.00 | 0.909 | 0.971 | 3551             | 865  | 11616           | 2033 | 0.31      | 0.43 | 72.9         | 73.5 | 9.7                | 9.7  | A   |
| 15                 | 1.00 | 1.00 | 0.909 | 0.971 | 3415             | 742  | 11616           | 2033 | 0.29      | 0.37 | 72.9         | 73.5 | 9.3                | 9.3  | A   |
| 16                 | 1.00 | 1.00 | 0.909 | 0.971 | 2658             | 935  | 11616           | 2033 | 0.23      | 0.46 | 72.9         | 73.5 | 7.2                | 7.2  | A   |
| Segment 5: Basic   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |      | 0.909 |       | 1061             |      | 9293            |      | 0.11      |      | 70.8         |      | 3.7                |      | A   |
| 2                  | 1.00 |      | 0.909 |       | 1668             |      | 9293            |      | 0.18      |      | 70.8         |      | 5.9                |      | A   |
| 3                  | 1.00 |      | 0.909 |       | 1848             |      | 9293            |      | 0.20      |      | 70.8         |      | 6.5                |      | A   |
| 4                  | 1.00 |      | 0.909 |       | 1580             |      | 9293            |      | 0.17      |      | 70.8         |      | 5.6                |      | A   |
| 5                  | 1.00 |      | 0.909 |       | 2719             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.6                |      | A   |
| 6                  | 1.00 |      | 0.909 |       | 3468             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.2               |      | B   |
| 7                  | 1.00 |      | 0.909 |       | 3982             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.1               |      | B   |
| 8                  | 1.00 |      | 0.909 |       | 3318             |      | 9293            |      | 0.36      |      | 70.8         |      | 11.7               |      | B   |
| 9                  | 1.00 |      | 0.909 |       | 4132             |      | 9293            |      | 0.44      |      | 70.8         |      | 14.6               |      | B   |
| 10                 | 1.00 |      | 0.909 |       | 4937             |      | 9293            |      | 0.53      |      | 70.6         |      | 17.5               |      | B   |
| 11                 | 1.00 |      | 0.909 |       | 4092             |      | 9293            |      | 0.44      |      | 70.8         |      | 14.4               |      | B   |
| 12                 | 1.00 |      | 0.909 |       | 2359             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.3                |      | A   |
| 13                 | 1.00 |      | 0.909 |       | 2653             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.4                |      | A   |
| 14                 | 1.00 |      | 0.909 |       | 2627             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.3                |      | A   |
| 15                 | 1.00 |      | 0.909 |       | 2623             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.3                |      | A   |
| 16                 | 1.00 |      | 0.909 |       | 1659             |      | 9293            |      | 0.18      |      | 70.8         |      | 5.9                |      | A   |
| Segment 6: Weaving |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |

|                  |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 | 1465  | 4830  | 0.30             | 64.9 | 4.5             | A    |           |      |              |      |                    |      |     |
| 2                | 1.00 | 0.909 | 2098  | 6163  | 0.34             | 64.4 | 6.5             | A    |           |      |              |      |                    |      |     |
| 3                | 1.00 | 0.909 | 2126  | 6347  | 0.33             | 64.6 | 6.6             | A    |           |      |              |      |                    |      |     |
| 4                | 1.00 | 0.909 | 1967  | 5040  | 0.39             | 63.5 | 6.2             | A    |           |      |              |      |                    |      |     |
| 5                | 1.00 | 0.909 | 3234  | 8901  | 0.36             | 63.4 | 10.2            | B    |           |      |              |      |                    |      |     |
| 6                | 1.00 | 0.909 | 3863  | 10314 | 0.37             | 63.0 | 12.3            | B    |           |      |              |      |                    |      |     |
| 7                | 1.00 | 0.909 | 4304  | 10353 | 0.42             | 62.2 | 13.8            | B    |           |      |              |      |                    |      |     |
| 8                | 1.00 | 0.909 | 3654  | 7544  | 0.48             | 61.2 | 11.9            | B    |           |      |              |      |                    |      |     |
| 9                | 1.00 | 0.909 | 4600  | 8510  | 0.54             | 59.5 | 15.5            | B    |           |      |              |      |                    |      |     |
| 10               | 1.00 | 0.909 | 5340  | 10295 | 0.52             | 59.3 | 18.0            | B    |           |      |              |      |                    |      |     |
| 11               | 1.00 | 0.909 | 4594  | 8267  | 0.56             | 59.3 | 15.5            | B    |           |      |              |      |                    |      |     |
| 12               | 1.00 | 0.909 | 2766  | 4610  | 0.60             | 60.0 | 9.2             | A    |           |      |              |      |                    |      |     |
| 13               | 1.00 | 0.909 | 3085  | 5881  | 0.52             | 61.0 | 10.1            | B    |           |      |              |      |                    |      |     |
| 14               | 1.00 | 0.909 | 2908  | 6400  | 0.45             | 62.2 | 9.4             | A    |           |      |              |      |                    |      |     |
| 15               | 1.00 | 0.909 | 3066  | 6435  | 0.48             | 61.7 | 9.9             | A    |           |      |              |      |                    |      |     |
| 16               | 1.00 | 0.909 | 2223  | 3677  | 0.60             | 60.0 | 7.4             | A    |           |      |              |      |                    |      |     |
| Segment 7: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |       | 0.909 |       | 1215             |      | 9293            |      | 0.13      |      | 70.6         |      | 4.3                |      | A   |
| 2                | 1.00 |       | 0.909 |       | 1791             |      | 9293            |      | 0.19      |      | 70.6         |      | 6.3                |      | A   |
| 3                | 1.00 |       | 0.909 |       | 1677             |      | 9293            |      | 0.18      |      | 70.6         |      | 5.9                |      | A   |
| 4                | 1.00 |       | 0.909 |       | 1509             |      | 9293            |      | 0.16      |      | 70.6         |      | 5.3                |      | A   |
| 5                | 1.00 |       | 0.909 |       | 2961             |      | 9293            |      | 0.32      |      | 70.6         |      | 10.5               |      | A   |
| 6                | 1.00 |       | 0.909 |       | 3472             |      | 9293            |      | 0.37      |      | 70.6         |      | 12.3               |      | B   |
| 7                | 1.00 |       | 0.909 |       | 3793             |      | 9293            |      | 0.41      |      | 70.6         |      | 13.4               |      | B   |
| 8                | 1.00 |       | 0.909 |       | 2944             |      | 9293            |      | 0.32      |      | 70.5         |      | 10.4               |      | A   |
| 9                | 1.00 |       | 0.909 |       | 3899             |      | 9293            |      | 0.42      |      | 70.5         |      | 13.8               |      | B   |
| 10               | 1.00 |       | 0.909 |       | 4634             |      | 9293            |      | 0.50      |      | 70.5         |      | 16.4               |      | B   |
| 11               | 1.00 |       | 0.909 |       | 3894             |      | 9293            |      | 0.42      |      | 70.5         |      | 13.8               |      | B   |
| 12               | 1.00 |       | 0.909 |       | 1875             |      | 9293            |      | 0.20      |      | 70.5         |      | 6.6                |      | A   |
| 13               | 1.00 |       | 0.909 |       | 2381             |      | 9293            |      | 0.26      |      | 70.5         |      | 8.4                |      | A   |
| 14               | 1.00 |       | 0.909 |       | 2205             |      | 9293            |      | 0.24      |      | 70.6         |      | 7.8                |      | A   |
| 15               | 1.00 |       | 0.909 |       | 2477             |      | 9293            |      | 0.27      |      | 70.5         |      | 8.7                |      | A   |
| 16               | 1.00 |       | 0.909 |       | 1479             |      | 9293            |      | 0.16      |      | 70.5         |      | 5.2                |      | A   |
| Segment 8: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 1413             | 198  | 11616           | 2033 | 0.12      | 0.10 | 73.2         | 73.5 | 3.8                | 3.8  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 2022             | 231  | 11616           | 2033 | 0.17      | 0.11 | 73.2         | 73.5 | 5.5                | 5.5  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 1974             | 297  | 11616           | 2033 | 0.17      | 0.15 | 73.2         | 73.5 | 5.4                | 5.4  | A   |

|    |      |      |       |       |      |      |       |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|------|-------|------|------|------|------|------|------|------|---|
| 4  | 1.00 | 1.00 | 0.909 | 0.971 | 1880 | 371  | 11616 | 2033 | 0.16 | 0.18 | 73.2 | 73.5 | 5.1  | 5.1  | A |
| 5  | 1.00 | 1.00 | 0.909 | 0.971 | 3451 | 490  | 11616 | 2033 | 0.30 | 0.24 | 73.2 | 73.5 | 9.4  | 9.4  | A |
| 6  | 1.00 | 1.00 | 0.909 | 0.971 | 4135 | 663  | 11616 | 2033 | 0.36 | 0.33 | 73.2 | 73.5 | 11.3 | 11.3 | B |
| 7  | 1.00 | 1.00 | 0.909 | 0.971 | 4617 | 824  | 11616 | 2033 | 0.40 | 0.41 | 73.2 | 73.5 | 12.6 | 12.6 | B |
| 8  | 1.00 | 1.00 | 0.909 | 0.971 | 3817 | 873  | 11616 | 2033 | 0.33 | 0.43 | 73.2 | 73.5 | 10.4 | 10.4 | A |
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 4974 | 1075 | 11616 | 2033 | 0.43 | 0.53 | 73.2 | 73.5 | 13.5 | 13.5 | B |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 5697 | 1063 | 11616 | 2033 | 0.49 | 0.52 | 73.2 | 73.2 | 15.6 | 15.6 | B |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 5113 | 1219 | 11616 | 2033 | 0.44 | 0.60 | 73.2 | 73.5 | 13.9 | 13.9 | B |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 3074 | 1199 | 11616 | 2033 | 0.26 | 0.59 | 73.2 | 73.5 | 8.4  | 8.4  | A |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 3444 | 1063 | 11616 | 2033 | 0.30 | 0.52 | 73.2 | 73.5 | 9.4  | 9.4  | A |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 3342 | 1137 | 11616 | 2033 | 0.29 | 0.56 | 73.2 | 73.5 | 9.1  | 9.1  | A |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 3581 | 1104 | 11616 | 2033 | 0.31 | 0.54 | 73.2 | 73.5 | 9.7  | 9.7  | A |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 2616 | 1137 | 11616 | 2033 | 0.23 | 0.56 | 73.2 | 73.5 | 7.1  | 7.1  | A |

Segment 9: Basic

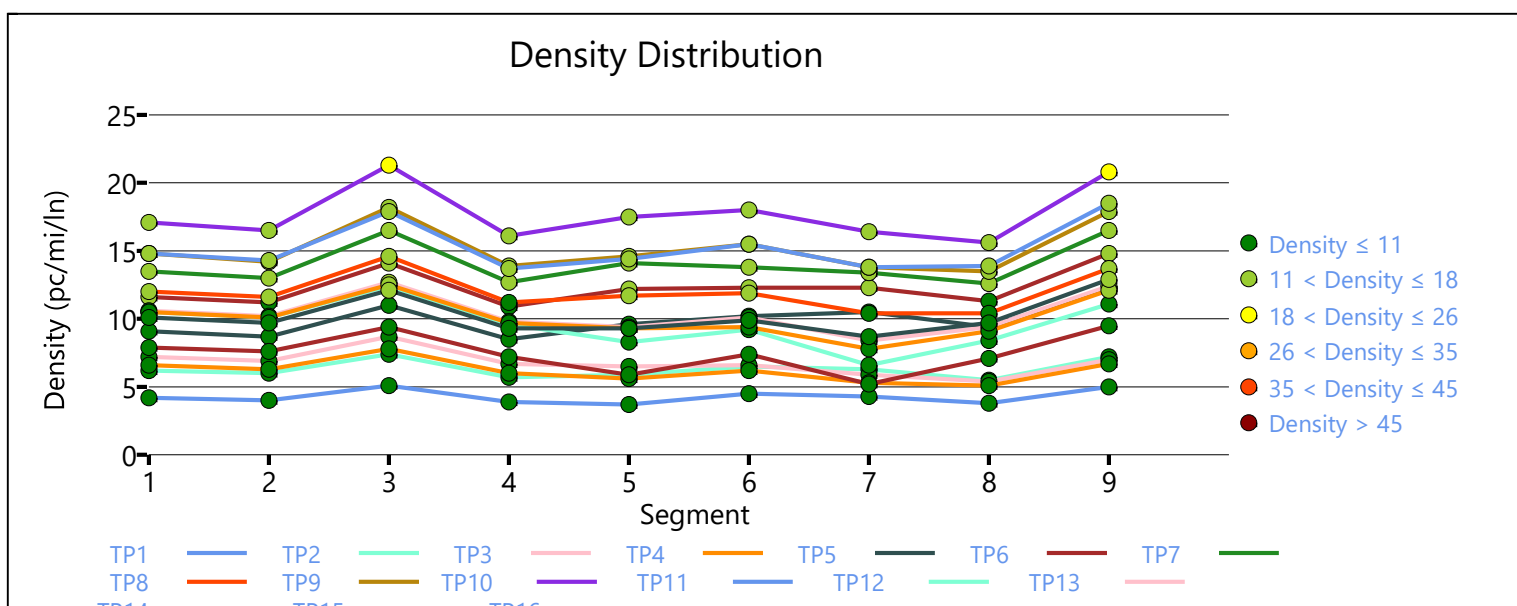
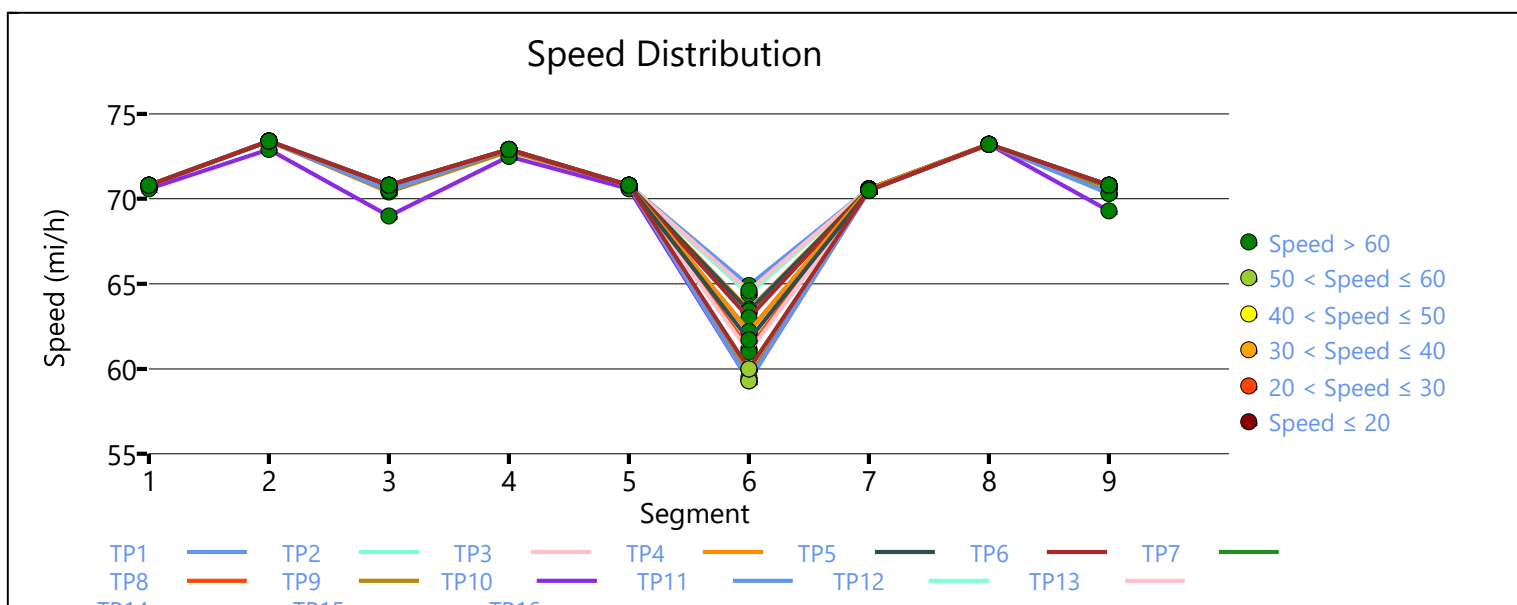
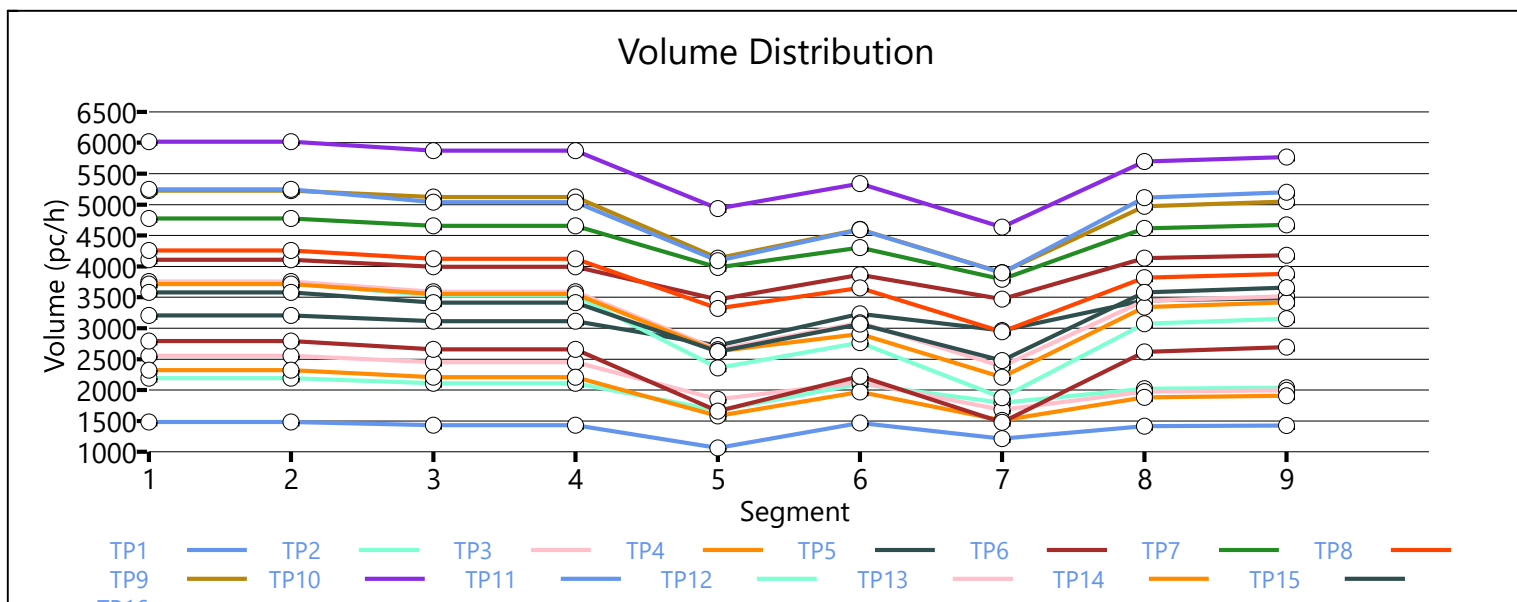
| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1426             | 9293            | 0.15      | 70.8         | 5.0                | A   |
| 2           | 1.00 | 0.909 | 2037             | 9293            | 0.22      | 70.8         | 7.2                | A   |
| 3           | 1.00 | 0.909 | 1993             | 9293            | 0.21      | 70.8         | 7.0                | A   |
| 4           | 1.00 | 0.909 | 1905             | 9293            | 0.20      | 70.8         | 6.7                | A   |
| 5           | 1.00 | 0.909 | 3485             | 9293            | 0.38      | 70.8         | 12.3               | B   |
| 6           | 1.00 | 0.909 | 4180             | 9293            | 0.45      | 70.8         | 14.8               | B   |
| 7           | 1.00 | 0.909 | 4673             | 9293            | 0.50      | 70.7         | 16.5               | B   |
| 8           | 1.00 | 0.909 | 3877             | 9293            | 0.42      | 70.8         | 13.7               | B   |
| 9           | 1.00 | 0.909 | 5047             | 9293            | 0.54      | 70.4         | 17.9               | B   |
| 10          | 1.00 | 0.909 | 5769             | 9293            | 0.62      | 69.3         | 20.8               | C   |
| 11          | 1.00 | 0.909 | 5197             | 9293            | 0.56      | 70.3         | 18.5               | C   |
| 12          | 1.00 | 0.909 | 3155             | 9293            | 0.34      | 70.8         | 11.1               | B   |
| 13          | 1.00 | 0.909 | 3516             | 9293            | 0.38      | 70.8         | 12.4               | B   |
| 14          | 1.00 | 0.909 | 3419             | 9293            | 0.37      | 70.8         | 12.1               | B   |
| 15          | 1.00 | 0.909 | 3657             | 9293            | 0.39      | 70.8         | 12.9               | B   |
| 16          | 1.00 | 0.909 | 2693             | 9293            | 0.29      | 70.8         | 9.5                | A   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 70.3        | 4.3               | 3.9                | 2.50             | A   |
| 2 | 70.2        | 6.4               | 5.8                | 2.50             | A   |
| 3 | 70.3        | 6.8               | 6.2                | 2.50             | A   |
| 4 | 70.1        | 6.2               | 5.7                | 2.50             | A   |
| 5 | 70.0        | 10.0              | 9.1                | 2.50             | A   |
| 6 | 70.0        | 12.4              | 11.3               | 2.50             | B   |
| 7 | 69.9        | 14.1              | 12.8               | 2.50             | B   |

|                          |      |      |                    |      |      |
|--------------------------|------|------|--------------------|------|------|
| 8                        | 69.7 | 12.0 | 10.9               | 2.50 | B    |
| 9                        | 69.3 | 15.3 | 13.9               | 2.50 | B    |
| 10                       | 68.9 | 17.8 | 16.2               | 2.50 | B    |
| 11                       | 69.3 | 15.3 | 14.0               | 2.50 | B    |
| 12                       | 69.6 | 9.6  | 8.7                | 2.50 | A    |
| 13                       | 69.7 | 10.4 | 9.4                | 2.50 | A    |
| 14                       | 70.0 | 10.1 | 9.2                | 2.50 | A    |
| 15                       | 69.8 | 10.3 | 9.3                | 2.50 | A    |
| 16                       | 69.5 | 7.5  | 6.8                | 2.50 | A    |
| Facility Overall Results |      |      |                    |      |      |
| Space Mean Speed, mi/h   |      | 69.7 | Density, veh/mi/ln |      | 9.6  |
| Average Travel Time, min |      | 2.50 | Density, pc/mi/ln  |      | 10.5 |
| Messages                 |      |      |                    |      |      |
| Comments                 |      |      |                    |      |      |
|                          |      |      |                    |      |      |





# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                       |                      |                         |
|---------------------|-------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                    | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                       | Analysis Year        | 2030                    |
| Jurisdiction        | NMDOT                                                 | Time Period Analyzed | AM Peak Period          |
| Project Description | 2030 Build, I-25 Programmed Improvements - Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 11   |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.98  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | North of ACC                        | 2640       | 4     |
| 2   | Diverge | Basic    | Off Ramp to Gibson                  | 600        | 5     |
| 3   | Basic   | Basic    | Bet Gibson Off and ACC On Ramps     | 1750       | 4     |
| 4   | Merge   | Basic    | ACC On-ramp                         | 600        | 5     |
| 5   | Basic   | Basic    | Bet ACC On and Sunport Off Ramps    | 2400       | 4     |
| 6   | Diverge | Basic    | Sunport Off Ramp                    | 600        | 5     |
| 7   | Basic   | Basic    | Bet Sunport Off and Gibson On Ramps | 2000       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 800        | 5     |
| 9   | Basic   | Basic    | Bet Gibson and Sunport On Ramps     | 900        | 4     |
| 10  | Merge   | Basic    | Sunport On Ramp                     | 800        | 5     |
| 11  | Basic   | Basic    | S of Sunport                        | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2433             | 9600            | 0.25      | 72.6         | 8.4                | A   |
| 2           | 1.00 | 0.909 | 2768             | 9600            | 0.29      | 72.6         | 9.5                | A   |
| 3           | 1.00 | 0.909 | 3441             | 9600            | 0.36      | 72.6         | 11.8               | B   |
| 4           | 1.00 | 0.909 | 4176             | 9600            | 0.44      | 72.6         | 14.4               | B   |
| 5           | 1.00 | 0.909 | 3353             | 9600            | 0.35      | 72.6         | 11.5               | B   |
| 6           | 1.00 | 0.909 | 4466             | 9600            | 0.47      | 72.6         | 15.4               | B   |
| 7           | 1.00 | 0.909 | 5219             | 9600            | 0.54      | 72.1         | 18.1               | C   |
| 8           | 1.00 | 0.909 | 5580             | 9600            | 0.58      | 71.6         | 19.5               | C   |
| 9           | 1.00 | 0.909 | 5135             | 9600            | 0.53      | 72.2         | 17.8               | B   |
| 10          | 1.00 | 0.909 | 5553             | 9600            | 0.58      | 71.6         | 19.4               | C   |
| 11          | 1.00 | 0.909 | 4990             | 9600            | 0.52      | 72.3         | 17.3               | B   |

| 12                 | 1.00 | 0.909 |       |       | 5153             |      |                 | 9600 | 0.54      |      | 72.2         |      | 17.8               |      | B   |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 |       |       | 4823             |      |                 | 9600 | 0.50      |      | 72.5         |      | 16.6               |      | B   |
| 14                 | 1.00 | 0.909 |       |       | 4554             |      |                 | 9600 | 0.47      |      | 72.6         |      | 15.7               |      | B   |
| 15                 | 1.00 | 0.909 |       |       | 4304             |      |                 | 9600 | 0.45      |      | 72.6         |      | 14.8               |      | B   |
| 16                 | 1.00 | 0.909 |       |       | 4053             |      |                 | 9600 | 0.42      |      | 72.6         |      | 14.0               |      | B   |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2433             | 1211 | 12000           | 2033 | 0.20      | 0.60 | 75.2         | 75.4 | 6.5                | 6.5  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2768             | 1306 | 12000           | 2033 | 0.23      | 0.64 | 75.2         | 75.4 | 7.3                | 7.3  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 3441             | 1722 | 12000           | 2033 | 0.29      | 0.85 | 75.2         | 75.4 | 9.1                | 9.1  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4176             | 1949 | 12000           | 2033 | 0.35      | 0.96 | 75.2         | 75.4 | 11.1               | 11.1 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3353             | 1467 | 12000           | 2033 | 0.28      | 0.72 | 75.2         | 75.4 | 8.9                | 8.9  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4466             | 1858 | 12000           | 2033 | 0.37      | 0.91 | 75.2         | 75.4 | 11.8               | 11.8 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 5219             | 2521 | 12000           | 2033 | 0.43      | 1.24 | 75.2         | 75.4 | 13.8               | 13.8 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 5580             | 3007 | 12000           | 2033 | 0.47      | 1.48 | 75.1         | 75.2 | 14.8               | 14.8 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5135             | 2925 | 12000           | 2033 | 0.43      | 1.44 | 75.2         | 75.4 | 13.6               | 13.6 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 5553             | 3007 | 12000           | 2033 | 0.46      | 1.48 | 75.1         | 75.2 | 14.8               | 14.8 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4990             | 2608 | 12000           | 2033 | 0.42      | 1.28 | 75.2         | 75.4 | 13.2               | 13.2 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 5153             | 2591 | 12000           | 2033 | 0.43      | 1.27 | 75.2         | 75.4 | 13.7               | 13.7 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4823             | 2529 | 12000           | 2033 | 0.40      | 1.24 | 75.2         | 75.4 | 12.8               | 12.8 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4554             | 2344 | 12000           | 2033 | 0.38      | 1.15 | 75.2         | 75.4 | 12.1               | 12.1 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4304             | 2150 | 12000           | 2033 | 0.36      | 1.06 | 75.2         | 75.4 | 11.4               | 11.4 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4053             | 1953 | 12000           | 2033 | 0.34      | 0.96 | 75.2         | 75.4 | 10.8               | 10.8 | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1140             |      | 9600            |      | 0.12      |      | 72.6         |      | 3.9                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1373             |      | 9600            |      | 0.14      |      | 72.6         |      | 4.7                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 1602             |      | 9600            |      | 0.17      |      | 72.6         |      | 5.5                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2095             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.2                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 1787             |      | 9600            |      | 0.19      |      | 72.6         |      | 6.2                |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 2482             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.5                |      | A   |
| 7                  | 1.00 |       | 0.909 |       | 2526             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.7                |      | A   |
| 8                  | 1.00 |       | 0.909 |       | 2367             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 9                  | 1.00 |       | 0.909 |       | 2011             |      | 9600            |      | 0.21      |      | 72.6         |      | 6.9                |      | A   |
| 10                 | 1.00 |       | 0.909 |       | 2341             |      | 9600            |      | 0.24      |      | 72.6         |      | 8.1                |      | A   |
| 11                 | 1.00 |       | 0.909 |       | 2205             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.6                |      | A   |
| 12                 | 1.00 |       | 0.909 |       | 2385             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 13                 | 1.00 |       | 0.909 |       | 2121             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.3                |      | A   |
| 14                 | 1.00 |       | 0.909 |       | 2051             |      | 9600            |      | 0.21      |      | 72.6         |      | 7.1                |      | A   |



| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 1206             | 614  | 12000           | 2033 | 0.10      | 0.30 | 75.2         | 75.4 | 3.2                | 3.2  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 1439             | 721  | 12000           | 2033 | 0.12      | 0.35 | 75.2         | 75.4 | 3.8                | 3.8  | A   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 1791             | 742  | 12000           | 2033 | 0.15      | 0.37 | 75.2         | 75.4 | 4.7                | 4.7  | A   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 2332             | 919  | 12000           | 2033 | 0.19      | 0.45 | 75.2         | 75.4 | 6.2                | 6.2  | A   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 2073             | 548  | 12000           | 2033 | 0.17      | 0.27 | 75.2         | 75.4 | 5.5                | 5.5  | A   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 2799             | 659  | 12000           | 2033 | 0.23      | 0.32 | 75.2         | 75.4 | 7.4                | 7.4  | A   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 2926             | 742  | 12000           | 2033 | 0.24      | 0.37 | 75.2         | 75.4 | 7.8                | 7.8  | A   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 2983             | 956  | 12000           | 2033 | 0.25      | 0.47 | 75.2         | 75.4 | 7.9                | 7.9  | A   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 2627             | 725  | 12000           | 2033 | 0.22      | 0.36 | 75.2         | 75.4 | 7.0                | 7.0  | A   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 2957             | 865  | 12000           | 2033 | 0.25      | 0.43 | 75.2         | 75.4 | 7.8                | 7.8  | A   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 2821             | 869  | 12000           | 2033 | 0.24      | 0.43 | 75.2         | 75.4 | 7.5                | 7.5  | A   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 2909             | 857  | 12000           | 2033 | 0.24      | 0.42 | 75.2         | 75.4 | 7.7                | 7.7  | A   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 2658             | 832  | 12000           | 2033 | 0.22      | 0.41 | 75.2         | 75.4 | 7.1                | 7.1  | A   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 2680             | 618  | 12000           | 2033 | 0.22      | 0.30 | 75.2         | 75.4 | 7.1                | 7.1  | A   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 2526             | 626  | 12000           | 2033 | 0.21      | 0.31 | 75.2         | 75.4 | 6.7                | 6.7  | A   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 2574             | 610  | 12000           | 2033 | 0.21      | 0.30 | 75.2         | 75.4 | 6.8                | 6.8  | A   |
| Segment 7: Basic |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |      | 0.909 |       | 550              |      | 9600            |      | 0.06      |      | 72.6         |      | 1.9                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 669              |      | 9600            |      | 0.07      |      | 72.6         |      | 2.3                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 999              |      | 9600            |      | 0.10      |      | 72.6         |      | 3.4                |      | A   |
| 4                | 1.00 |      | 0.909 |       | 1351             |      | 9600            |      | 0.14      |      | 72.6         |      | 4.7                |      | A   |
| 5                | 1.00 |      | 0.909 |       | 1487             |      | 9600            |      | 0.15      |      | 72.6         |      | 5.1                |      | A   |
| 6                | 1.00 |      | 0.909 |       | 2095             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.2                |      | A   |
| 7                | 1.00 |      | 0.909 |       | 2134             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.4                |      | A   |
| 8                | 1.00 |      | 0.909 |       | 1963             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.8                |      | A   |
| 9                | 1.00 |      | 0.909 |       | 1853             |      | 9600            |      | 0.19      |      | 72.6         |      | 6.4                |      | A   |
| 10               | 1.00 |      | 0.909 |       | 2033             |      | 9600            |      | 0.21      |      | 72.6         |      | 7.0                |      | A   |
| 11               | 1.00 |      | 0.909 |       | 1892             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.5                |      | A   |
| 12               | 1.00 |      | 0.909 |       | 1993             |      | 9600            |      | 0.21      |      | 72.6         |      | 6.9                |      | A   |
| 13               | 1.00 |      | 0.909 |       | 1769             |      | 9600            |      | 0.18      |      | 72.6         |      | 6.1                |      | A   |
| 14               | 1.00 |      | 0.909 |       | 2020             |      | 9600            |      | 0.21      |      | 72.6         |      | 7.0                |      | A   |
| 15               | 1.00 |      | 0.909 |       | 1857             |      | 9600            |      | 0.19      |      | 72.6         |      | 6.4                |      | A   |
| 16               | 1.00 |      | 0.909 |       | 1923             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.6                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |

|                   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|-------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 599              | 49   | 12000           | 2033 | 0.05      | 0.02 | 75.1         | 75.4 | 1.6                | 1.6  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 718              | 49   | 12000           | 2033 | 0.06      | 0.02 | 75.1         | 75.4 | 1.9                | 1.9  | A   |
| 3                 | 1.00 | 1.00 | 0.909 | 0.971 | 1135             | 136  | 12000           | 2033 | 0.09      | 0.07 | 75.1         | 75.4 | 3.0                | 3.0  | A   |
| 4                 | 1.00 | 1.00 | 0.909 | 0.971 | 1524             | 173  | 12000           | 2033 | 0.13      | 0.09 | 75.1         | 75.4 | 4.0                | 4.0  | A   |
| 5                 | 1.00 | 1.00 | 0.909 | 0.971 | 1701             | 214  | 12000           | 2033 | 0.14      | 0.11 | 75.1         | 75.4 | 4.5                | 4.5  | A   |
| 6                 | 1.00 | 1.00 | 0.909 | 0.971 | 2330             | 235  | 12000           | 2033 | 0.19      | 0.12 | 75.1         | 75.4 | 6.2                | 6.2  | A   |
| 7                 | 1.00 | 1.00 | 0.909 | 0.971 | 2431             | 297  | 12000           | 2033 | 0.20      | 0.15 | 75.1         | 75.4 | 6.4                | 6.4  | A   |
| 8                 | 1.00 | 1.00 | 0.909 | 0.971 | 2375             | 412  | 12000           | 2033 | 0.20      | 0.20 | 75.1         | 75.4 | 6.3                | 6.3  | A   |
| 9                 | 1.00 | 1.00 | 0.909 | 0.971 | 2150             | 297  | 12000           | 2033 | 0.18      | 0.15 | 75.1         | 75.4 | 5.7                | 5.7  | A   |
| 10                | 1.00 | 1.00 | 0.909 | 0.971 | 2474             | 441  | 12000           | 2033 | 0.21      | 0.22 | 75.1         | 75.4 | 6.6                | 6.6  | A   |
| 11                | 1.00 | 1.00 | 0.909 | 0.971 | 2341             | 449  | 12000           | 2033 | 0.20      | 0.22 | 75.1         | 75.4 | 6.2                | 6.2  | A   |
| 12                | 1.00 | 1.00 | 0.909 | 0.971 | 2376             | 383  | 12000           | 2033 | 0.20      | 0.19 | 75.1         | 75.4 | 6.3                | 6.3  | A   |
| 13                | 1.00 | 1.00 | 0.909 | 0.971 | 2164             | 395  | 12000           | 2033 | 0.18      | 0.19 | 75.1         | 75.4 | 5.7                | 5.7  | A   |
| 14                | 1.00 | 1.00 | 0.909 | 0.971 | 2477             | 457  | 12000           | 2033 | 0.21      | 0.22 | 75.1         | 75.4 | 6.6                | 6.6  | A   |
| 15                | 1.00 | 1.00 | 0.909 | 0.971 | 2236             | 379  | 12000           | 2033 | 0.19      | 0.19 | 75.1         | 75.4 | 5.9                | 5.9  | A   |
| 16                | 1.00 | 1.00 | 0.909 | 0.971 | 2368             | 445  | 12000           | 2033 | 0.20      | 0.22 | 75.1         | 75.4 | 6.3                | 6.3  | A   |
| Segment 9: Basic  |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                 | 1.00 |      | 0.909 |       | 603              |      | 9600            |      | 0.06      |      | 72.6         |      | 2.1                |      | A   |
| 2                 | 1.00 |      | 0.909 |       | 722              |      | 9600            |      | 0.08      |      | 72.6         |      | 2.5                |      | A   |
| 3                 | 1.00 |      | 0.909 |       | 1144             |      | 9600            |      | 0.12      |      | 72.6         |      | 3.9                |      | A   |
| 4                 | 1.00 |      | 0.909 |       | 1536             |      | 9600            |      | 0.16      |      | 72.6         |      | 5.3                |      | A   |
| 5                 | 1.00 |      | 0.909 |       | 1716             |      | 9600            |      | 0.18      |      | 72.6         |      | 5.9                |      | A   |
| 6                 | 1.00 |      | 0.909 |       | 2345             |      | 9600            |      | 0.24      |      | 72.6         |      | 8.1                |      | A   |
| 7                 | 1.00 |      | 0.909 |       | 2451             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.4                |      | A   |
| 8                 | 1.00 |      | 0.909 |       | 2403             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.3                |      | A   |
| 9                 | 1.00 |      | 0.909 |       | 2169             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.5                |      | A   |
| 10                | 1.00 |      | 0.909 |       | 2504             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.6                |      | A   |
| 11                | 1.00 |      | 0.909 |       | 2372             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 12                | 1.00 |      | 0.909 |       | 2403             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.3                |      | A   |
| 13                | 1.00 |      | 0.909 |       | 2191             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.5                |      | A   |
| 14                | 1.00 |      | 0.909 |       | 2508             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.6                |      | A   |
| 15                | 1.00 |      | 0.909 |       | 2262             |      | 9600            |      | 0.24      |      | 72.6         |      | 7.8                |      | A   |
| 16                | 1.00 |      | 0.909 |       | 2398             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.3                |      | A   |
| Segment 10: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                   | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 644              | 41   | 12000           | 2033 | 0.05      | 0.02 | 74.7         | 75.4 | 1.7                | 1.7  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 763              | 41   | 12000           | 2033 | 0.06      | 0.02 | 74.7         | 75.4 | 2.0                | 2.0  | A   |
| 3                 | 1.00 | 1.00 | 0.909 | 0.971 | 1185             | 41   | 12000           | 2033 | 0.10      | 0.02 | 74.7         | 75.4 | 3.1                | 3.1  | A   |

|    |      |      |       |       |      |     |       |      |      |      |      |      |     |     |   |
|----|------|------|-------|-------|------|-----|-------|------|------|------|------|------|-----|-----|---|
| 4  | 1.00 | 1.00 | 0.909 | 0.971 | 1577 | 41  | 12000 | 2033 | 0.13 | 0.02 | 74.7 | 75.4 | 4.2 | 4.2 | A |
| 5  | 1.00 | 1.00 | 0.909 | 0.971 | 1765 | 49  | 12000 | 2033 | 0.15 | 0.02 | 74.7 | 75.4 | 4.7 | 4.7 | A |
| 6  | 1.00 | 1.00 | 0.909 | 0.971 | 2399 | 54  | 12000 | 2033 | 0.20 | 0.03 | 74.7 | 75.4 | 6.4 | 6.4 | A |
| 7  | 1.00 | 1.00 | 0.909 | 0.971 | 2509 | 58  | 12000 | 2033 | 0.21 | 0.03 | 74.7 | 75.4 | 6.7 | 6.7 | A |
| 8  | 1.00 | 1.00 | 0.909 | 0.971 | 2457 | 54  | 12000 | 2033 | 0.20 | 0.03 | 74.7 | 75.4 | 6.5 | 6.5 | A |
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 2231 | 62  | 12000 | 2033 | 0.19 | 0.03 | 74.7 | 75.4 | 5.9 | 5.9 | A |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 2578 | 74  | 12000 | 2033 | 0.21 | 0.04 | 74.7 | 75.4 | 6.8 | 6.8 | A |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 2483 | 111 | 12000 | 2033 | 0.21 | 0.05 | 74.7 | 75.4 | 6.6 | 6.6 | A |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 2527 | 124 | 12000 | 2033 | 0.21 | 0.06 | 74.7 | 75.4 | 6.7 | 6.7 | A |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 2286 | 95  | 12000 | 2033 | 0.19 | 0.05 | 74.7 | 75.4 | 6.1 | 6.1 | A |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 2619 | 111 | 12000 | 2033 | 0.22 | 0.05 | 74.7 | 75.4 | 6.9 | 6.9 | A |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 2410 | 148 | 12000 | 2033 | 0.20 | 0.07 | 74.7 | 75.4 | 6.4 | 6.4 | A |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 2509 | 111 | 12000 | 2033 | 0.21 | 0.05 | 74.7 | 75.4 | 6.7 | 6.7 | A |

Segment 11: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 647              | 9600            | 0.07      | 72.6         | 2.2                | A   |
| 2           | 1.00 | 0.909 | 766              | 9600            | 0.08      | 72.6         | 2.6                | A   |
| 3           | 1.00 | 0.909 | 1188             | 9600            | 0.12      | 72.6         | 4.1                | A   |
| 4           | 1.00 | 0.909 | 1580             | 9600            | 0.16      | 72.6         | 5.4                | A   |
| 5           | 1.00 | 0.909 | 1769             | 9600            | 0.18      | 72.6         | 6.1                | A   |
| 6           | 1.00 | 0.909 | 2403             | 9600            | 0.25      | 72.6         | 8.3                | A   |
| 7           | 1.00 | 0.909 | 2513             | 9600            | 0.26      | 72.6         | 8.7                | A   |
| 8           | 1.00 | 0.909 | 2460             | 9600            | 0.26      | 72.6         | 8.5                | A   |
| 9           | 1.00 | 0.909 | 2235             | 9600            | 0.23      | 72.6         | 7.7                | A   |
| 10          | 1.00 | 0.909 | 2583             | 9600            | 0.27      | 72.6         | 8.9                | A   |
| 11          | 1.00 | 0.909 | 2491             | 9600            | 0.26      | 72.6         | 8.6                | A   |
| 12          | 1.00 | 0.909 | 2535             | 9600            | 0.26      | 72.6         | 8.7                | A   |
| 13          | 1.00 | 0.909 | 2293             | 9600            | 0.24      | 72.6         | 7.9                | A   |
| 14          | 1.00 | 0.909 | 2627             | 9600            | 0.27      | 72.6         | 9.0                | A   |
| 15          | 1.00 | 0.909 | 2420             | 9600            | 0.25      | 72.6         | 8.3                | A   |
| 16          | 1.00 | 0.909 | 2517             | 9600            | 0.26      | 72.6         | 8.7                | A   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 73.1        | 3.8               | 3.5                | 2.40             | A   |
| 2 | 73.1        | 4.5               | 4.1                | 2.40             | A   |
| 3 | 73.1        | 5.8               | 5.3                | 2.40             | A   |
| 4 | 73.1        | 7.5               | 6.8                | 2.40             | A   |
| 5 | 73.1        | 6.9               | 6.3                | 2.40             | A   |
| 6 | 73.1        | 9.3               | 8.5                | 2.40             | A   |
| 7 | 73.0        | 10.1              | 9.2                | 2.40             | F   |

|    |      |      |     |      |   |
|----|------|------|-----|------|---|
| 8  | 72.8 | 10.2 | 9.3 | 2.50 | F |
| 9  | 73.0 | 9.2  | 8.4 | 2.40 | F |
| 10 | 72.8 | 10.3 | 9.4 | 2.50 | F |
| 11 | 73.0 | 9.6  | 8.7 | 2.40 | F |
| 12 | 73.0 | 9.9  | 9.0 | 2.40 | F |
| 13 | 73.1 | 9.1  | 8.2 | 2.40 | F |
| 14 | 73.1 | 9.3  | 8.5 | 2.40 | F |
| 15 | 73.1 | 8.7  | 7.9 | 2.40 | F |
| 16 | 73.1 | 8.8  | 8.0 | 2.40 | A |

## Facility Overall Results

|                          |      |                    |     |
|--------------------------|------|--------------------|-----|
| Space Mean Speed, mi/h   | 73.0 | Density, veh/mi/ln | 7.6 |
| Average Travel Time, min | 2.40 | Density, pc/mi/ln  | 8.3 |

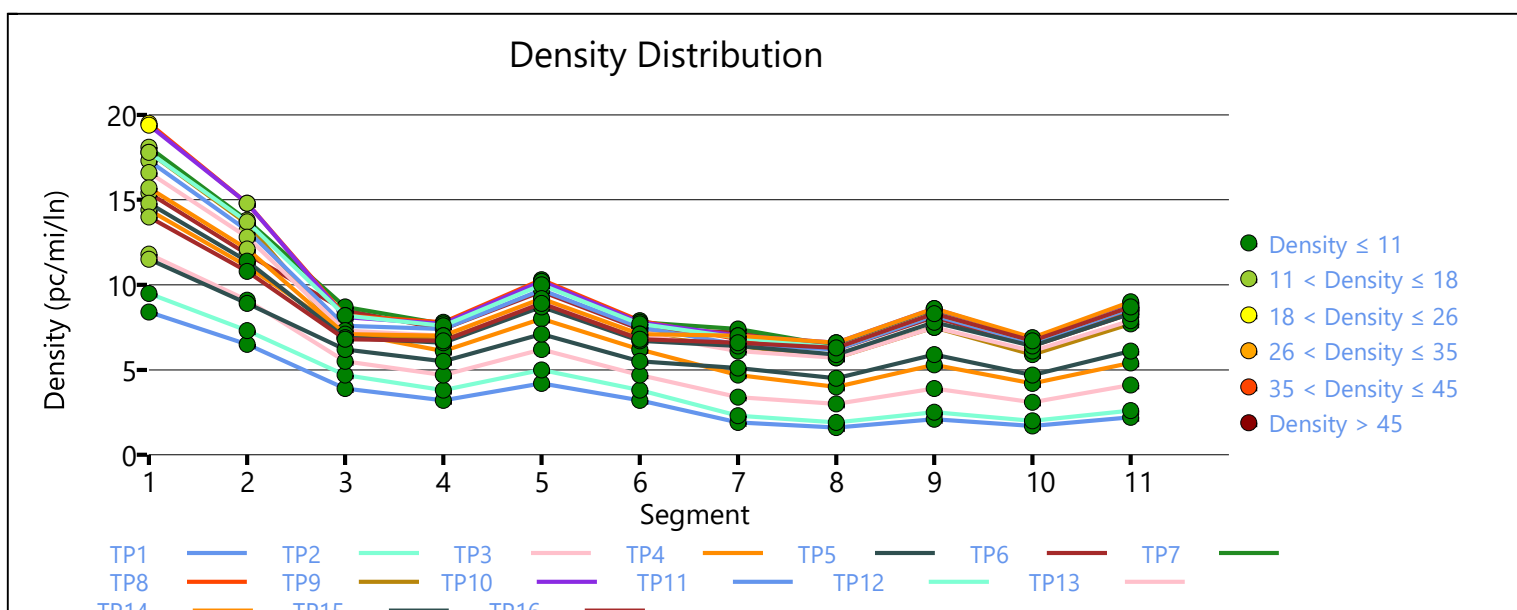
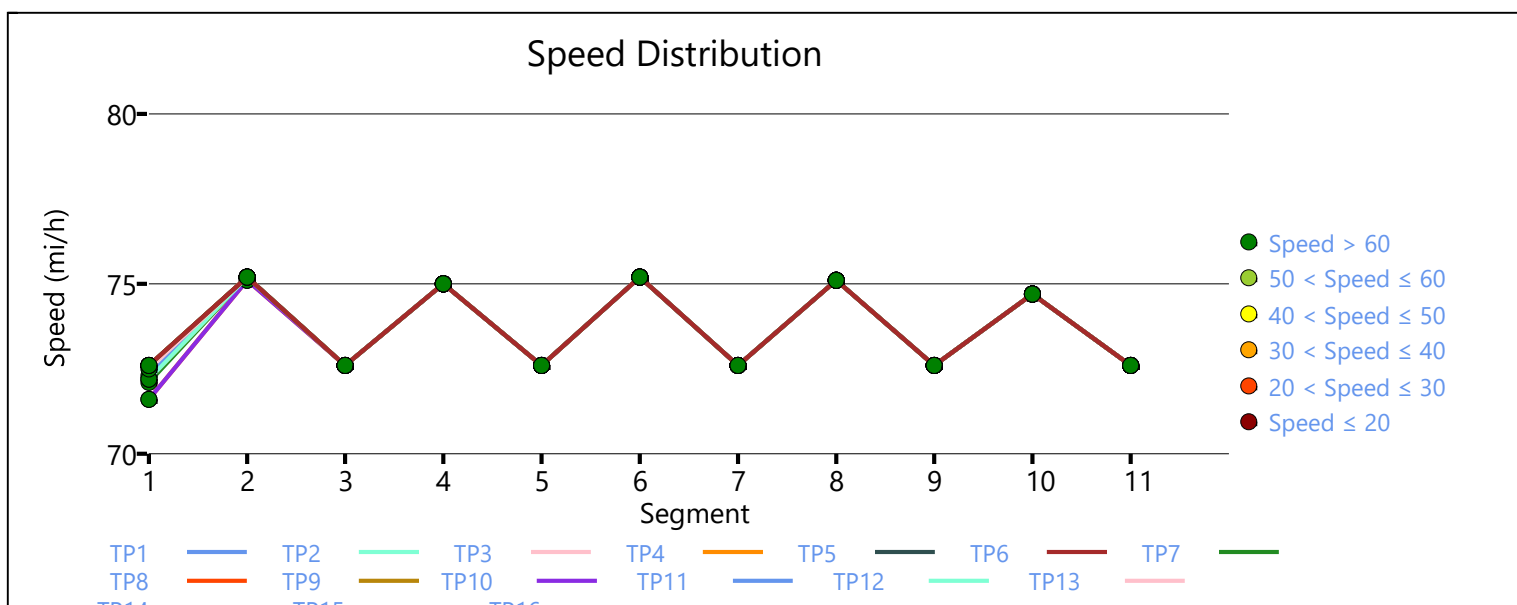
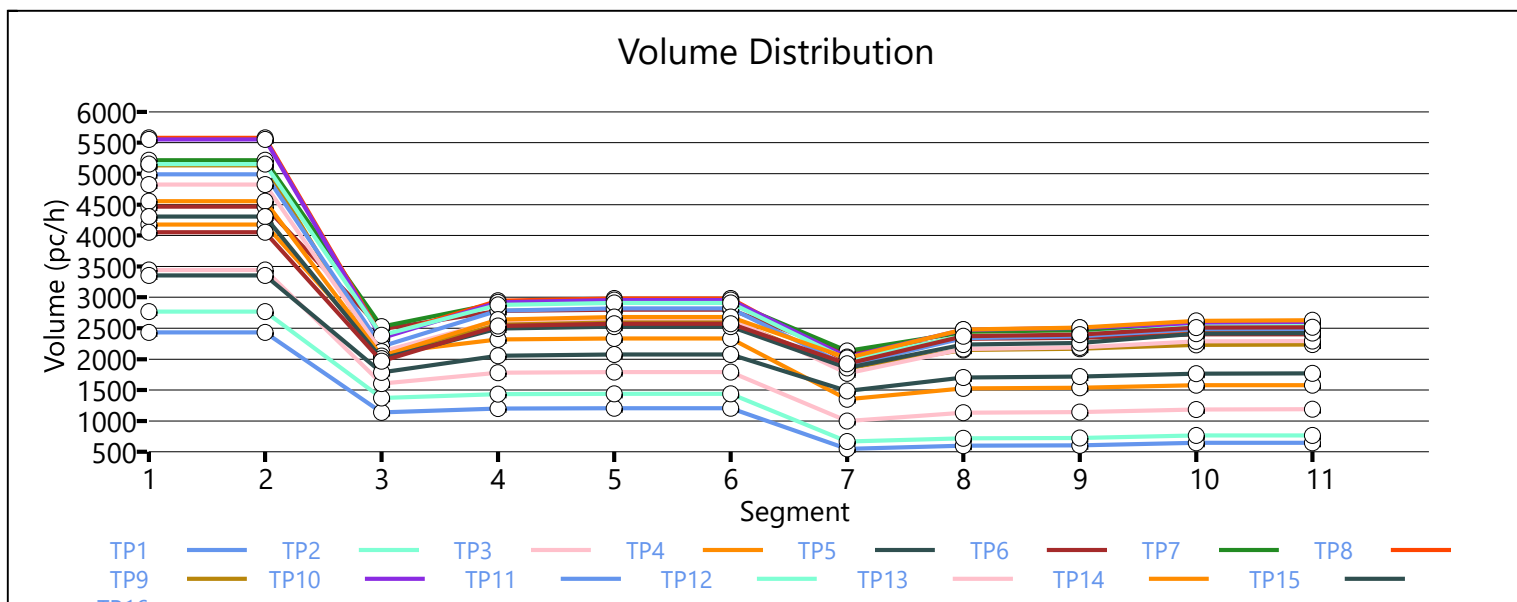
## Messages

|           |                                                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WARNING 1 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 2 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 3 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 4 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 5 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 6 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 7 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 8 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 9 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |

## Comments

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|  |
|--|





# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                       |                      |                         |
|---------------------|-------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                    | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                       | Analysis Year        | 2030                    |
| Jurisdiction        | NMDOT                                                 | Time Period Analyzed | PM Peak Period          |
| Project Description | 2030 Build, I-25 Programmed Improvements - Northbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.91  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | South of Sunport                    | 2640       | 5     |
| 2   | Diverge | Basic    | Sunport Off Ramp                    | 1500       | 5     |
| 3   | Basic   | Basic    | Bet Sunport and Gibson Off Ramps    | 1100       | 4     |
| 4   | Diverge | Basic    | Gibson Off Ramp                     | 800        | 5     |
| 5   | Basic   | Basic    | Bet Gibson Off and Sunport On Ramps | 1600       | 4     |
| 6   | Weaving | Weaving  | Bet Sunport On and ACC Off Ramps    | 2200       | 5     |
| 7   | Basic   | Basic    | North of ACC Off Ramp               | 2200       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 700        | 5     |
| 9   | Basic   | Basic    | North of Gibson On Ramp             | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2733             | 11616           | 0.24      | 70.8         | 7.7                | A   |
| 2           | 1.00 | 0.909 | 2860             | 11616           | 0.25      | 70.8         | 8.1                | A   |
| 3           | 1.00 | 0.909 | 2781             | 11616           | 0.24      | 70.8         | 7.9                | A   |
| 4           | 1.00 | 0.909 | 2922             | 11616           | 0.25      | 70.8         | 8.2                | A   |
| 5           | 1.00 | 0.909 | 2953             | 11616           | 0.25      | 70.8         | 8.3                | A   |
| 6           | 1.00 | 0.909 | 2719             | 11616           | 0.23      | 70.8         | 7.7                | A   |
| 7           | 1.00 | 0.909 | 2803             | 11616           | 0.24      | 70.8         | 7.9                | A   |
| 8           | 1.00 | 0.909 | 2777             | 11616           | 0.24      | 70.8         | 7.8                | A   |
| 9           | 1.00 | 0.909 | 2816             | 11616           | 0.24      | 70.8         | 8.0                | A   |
| 10          | 1.00 | 0.909 | 2961             | 11616           | 0.25      | 70.8         | 8.4                | A   |
| 11          | 1.00 | 0.909 | 2953             | 11616           | 0.25      | 70.8         | 8.3                | A   |
| 12          | 1.00 | 0.909 | 2983             | 11616           | 0.26      | 70.8         | 8.4                | A   |
| 13          | 1.00 | 0.909 | 2671             | 11616           | 0.23      | 70.8         | 7.5                | A   |

| 14                 | 1.00 | 0.909 |       |       | 2499             |      |                 | 11616 | 0.22      |      | 70.8         |      | 7.1                |      | A   |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|-------|-----------|------|--------------|------|--------------------|------|-----|
| 15                 | 1.00 | 0.909 |       |       | 2218             |      |                 | 11616 | 0.19      |      | 70.8         |      | 6.3                |      | A   |
| 16                 | 1.00 | 0.909 |       |       | 2257             |      |                 | 11616 | 0.19      |      | 70.8         |      | 6.4                |      | A   |
| 17                 | 1.00 | 0.909 |       |       | 2130             |      |                 | 11616 | 0.18      |      | 70.8         |      | 6.0                |      | A   |
| 18                 | 1.00 | 0.909 |       |       | 1905             |      |                 | 11616 | 0.16      |      | 70.8         |      | 5.4                |      | A   |
| 19                 | 1.00 | 0.909 |       |       | 1716             |      |                 | 11616 | 0.15      |      | 70.8         |      | 4.8                |      | A   |
| 20                 | 1.00 | 0.909 |       |       | 1624             |      |                 | 11616 | 0.14      |      | 70.8         |      | 4.6                |      | A   |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |       |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |       | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp  | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2733             | 119  | 11616           | 2033  | 0.24      | 0.06 | 73.4         | 73.5 | 7.4                | 7.4  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2860             | 128  | 11616           | 2033  | 0.25      | 0.06 | 73.4         | 73.5 | 7.8                | 7.8  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2781             | 148  | 11616           | 2033  | 0.24      | 0.07 | 73.4         | 73.5 | 7.6                | 7.6  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2922             | 148  | 11616           | 2033  | 0.25      | 0.07 | 73.4         | 73.5 | 7.9                | 7.9  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 2953             | 99   | 11616           | 2033  | 0.25      | 0.05 | 73.4         | 73.5 | 8.0                | 8.0  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2719             | 128  | 11616           | 2033  | 0.23      | 0.06 | 73.4         | 73.5 | 7.4                | 7.4  | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 2803             | 91   | 11616           | 2033  | 0.24      | 0.04 | 73.4         | 73.5 | 7.6                | 7.6  | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 2777             | 82   | 11616           | 2033  | 0.24      | 0.04 | 73.4         | 73.5 | 7.6                | 7.6  | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 2816             | 74   | 11616           | 2033  | 0.24      | 0.04 | 73.4         | 73.5 | 7.7                | 7.7  | A   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 2961             | 74   | 11616           | 2033  | 0.25      | 0.04 | 73.4         | 73.5 | 8.1                | 8.1  | A   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 2953             | 62   | 11616           | 2033  | 0.25      | 0.03 | 73.4         | 73.5 | 8.0                | 8.0  | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 2983             | 107  | 11616           | 2033  | 0.26      | 0.05 | 73.4         | 73.5 | 8.1                | 8.1  | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2671             | 107  | 11616           | 2033  | 0.23      | 0.05 | 73.4         | 73.5 | 7.3                | 7.3  | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2499             | 74   | 11616           | 2033  | 0.22      | 0.04 | 73.4         | 73.5 | 6.8                | 6.8  | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 2218             | 78   | 11616           | 2033  | 0.19      | 0.04 | 73.4         | 73.5 | 6.0                | 6.0  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2257             | 103  | 11616           | 2033  | 0.19      | 0.05 | 73.4         | 73.5 | 6.1                | 6.1  | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 2130             | 41   | 11616           | 2033  | 0.18      | 0.02 | 73.4         | 73.5 | 5.8                | 5.8  | A   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 1905             | 41   | 11616           | 2033  | 0.16      | 0.02 | 73.4         | 73.5 | 5.2                | 5.2  | A   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1716             | 54   | 11616           | 2033  | 0.15      | 0.03 | 73.4         | 73.5 | 4.7                | 4.7  | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1624             | 41   | 11616           | 2033  | 0.14      | 0.02 | 73.4         | 73.5 | 4.4                | 4.4  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |       |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |       | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2605             |      | 9293            |       | 0.28      |      | 70.8         |      | 9.2                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2724             |      | 9293            |       | 0.29      |      | 70.8         |      | 9.6                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2623             |      | 9293            |       | 0.28      |      | 70.8         |      | 9.3                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2763             |      | 9293            |       | 0.30      |      | 70.8         |      | 9.8                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2847             |      | 9293            |       | 0.31      |      | 70.8         |      | 10.1               |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 2583             |      | 9293            |       | 0.28      |      | 70.8         |      | 9.1                |      | A   |
| 7                  | 1.00 |       | 0.909 |       | 2706             |      | 9293            |       | 0.29      |      | 70.8         |      | 9.5                |      | A   |
| 8                  | 1.00 |       | 0.909 |       | 2689             |      | 9293            |       | 0.29      |      | 70.8         |      | 9.5                |      | A   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 9                  | 1.00 | 0.909 | 2737  | 9293  | 0.29             | 70.8 | 9.7             | A    |           |      |              |      |                    |      |     |
| 10                 | 1.00 | 0.909 | 2882  | 9293  | 0.31             | 70.8 | 10.2            | A    |           |      |              |      |                    |      |     |
| 11                 | 1.00 | 0.909 | 2887  | 9293  | 0.31             | 70.8 | 10.2            | A    |           |      |              |      |                    |      |     |
| 12                 | 1.00 | 0.909 | 2869  | 9293  | 0.31             | 70.8 | 10.1            | A    |           |      |              |      |                    |      |     |
| 13                 | 1.00 | 0.909 | 2557  | 9293  | 0.28             | 70.8 | 9.0             | A    |           |      |              |      |                    |      |     |
| 14                 | 1.00 | 0.909 | 2420  | 9293  | 0.26             | 70.8 | 8.5             | A    |           |      |              |      |                    |      |     |
| 15                 | 1.00 | 0.909 | 2134  | 9293  | 0.23             | 70.8 | 7.5             | A    |           |      |              |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 2147  | 9293  | 0.23             | 70.8 | 7.6             | A    |           |      |              |      |                    |      |     |
| 17                 | 1.00 | 0.909 | 2086  | 9293  | 0.22             | 70.8 | 7.4             | A    |           |      |              |      |                    |      |     |
| 18                 | 1.00 | 0.909 | 1861  | 9293  | 0.20             | 70.8 | 6.6             | A    |           |      |              |      |                    |      |     |
| 19                 | 1.00 | 0.909 | 1659  | 9293  | 0.18             | 70.8 | 5.9             | A    |           |      |              |      |                    |      |     |
| 20                 | 1.00 | 0.909 | 1580  | 9293  | 0.17             | 70.8 | 5.6             | A    |           |      |              |      |                    |      |     |
| Segment 4: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2605             | 568  | 11616           | 2033 | 0.22      | 0.28 | 72.9         | 73.5 | 7.1                | 7.1  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2724             | 552  | 11616           | 2033 | 0.23      | 0.27 | 72.9         | 73.5 | 7.4                | 7.4  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2623             | 606  | 11616           | 2033 | 0.23      | 0.30 | 72.9         | 73.5 | 7.1                | 7.1  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2763             | 639  | 11616           | 2033 | 0.24      | 0.31 | 72.9         | 73.5 | 7.5                | 7.5  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 2847             | 482  | 11616           | 2033 | 0.25      | 0.24 | 72.9         | 73.5 | 7.7                | 7.7  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2583             | 470  | 11616           | 2033 | 0.22      | 0.23 | 72.9         | 73.5 | 7.0                | 7.0  | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 2706             | 441  | 11616           | 2033 | 0.23      | 0.22 | 72.9         | 73.5 | 7.4                | 7.4  | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 2689             | 486  | 11616           | 2033 | 0.23      | 0.24 | 72.9         | 73.5 | 7.3                | 7.3  | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 2737             | 474  | 11616           | 2033 | 0.24      | 0.23 | 72.9         | 73.5 | 7.4                | 7.4  | A   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 2882             | 568  | 11616           | 2033 | 0.25      | 0.28 | 72.9         | 73.5 | 7.8                | 7.8  | A   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 2887             | 651  | 11616           | 2033 | 0.25      | 0.32 | 72.9         | 73.5 | 7.9                | 7.9  | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 2869             | 844  | 11616           | 2033 | 0.25      | 0.42 | 72.9         | 73.5 | 7.8                | 7.8  | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2557             | 503  | 11616           | 2033 | 0.22      | 0.25 | 72.9         | 73.5 | 7.0                | 7.0  | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2420             | 671  | 11616           | 2033 | 0.21      | 0.33 | 72.9         | 73.5 | 6.6                | 6.6  | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 2134             | 663  | 11616           | 2033 | 0.18      | 0.33 | 72.9         | 73.5 | 5.8                | 5.8  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2147             | 857  | 11616           | 2033 | 0.18      | 0.42 | 72.9         | 73.5 | 5.8                | 5.8  | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 2086             | 531  | 11616           | 2033 | 0.18      | 0.26 | 72.9         | 73.5 | 5.7                | 5.7  | A   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 1861             | 474  | 11616           | 2033 | 0.16      | 0.23 | 72.9         | 73.5 | 5.1                | 5.1  | A   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1659             | 383  | 11616           | 2033 | 0.14      | 0.19 | 72.9         | 73.5 | 4.5                | 4.5  | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1580             | 350  | 11616           | 2033 | 0.14      | 0.17 | 72.9         | 73.5 | 4.3                | 4.3  | A   |
| Segment 5: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1998             |      | 9293            |      | 0.22      |      | 70.8         |      | 7.1                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2134             |      | 9293            |      | 0.23      |      | 70.8         |      | 7.5                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 1976             |      | 9293            |      | 0.21      |      | 70.8         |      | 7.0                |      | A   |

|                    |      |       |                  |                 |           |              |                    |     |
|--------------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 4                  | 1.00 | 0.909 | 2081             | 9293            | 0.22      | 70.8         | 7.3                | A   |
| 5                  | 1.00 | 0.909 | 2332             | 9293            | 0.25      | 70.8         | 8.2                | A   |
| 6                  | 1.00 | 0.909 | 2081             | 9293            | 0.22      | 70.8         | 7.3                | A   |
| 7                  | 1.00 | 0.909 | 2235             | 9293            | 0.24      | 70.8         | 7.9                | A   |
| 8                  | 1.00 | 0.909 | 2169             | 9293            | 0.23      | 70.8         | 7.7                | A   |
| 9                  | 1.00 | 0.909 | 2231             | 9293            | 0.24      | 70.8         | 7.9                | A   |
| 10                 | 1.00 | 0.909 | 2275             | 9293            | 0.24      | 70.8         | 8.0                | A   |
| 11                 | 1.00 | 0.909 | 2191             | 9293            | 0.24      | 70.8         | 7.7                | A   |
| 12                 | 1.00 | 0.909 | 1967             | 9293            | 0.21      | 70.8         | 6.9                | A   |
| 13                 | 1.00 | 0.909 | 2020             | 9293            | 0.22      | 70.8         | 7.1                | A   |
| 14                 | 1.00 | 0.909 | 1703             | 9293            | 0.18      | 70.8         | 6.0                | A   |
| 15                 | 1.00 | 0.909 | 1426             | 9293            | 0.15      | 70.8         | 5.0                | A   |
| 16                 | 1.00 | 0.909 | 1232             | 9293            | 0.13      | 70.8         | 4.4                | A   |
| 17                 | 1.00 | 0.909 | 1518             | 9293            | 0.16      | 70.8         | 5.4                | A   |
| 18                 | 1.00 | 0.909 | 1355             | 9293            | 0.15      | 70.8         | 4.8                | A   |
| 19                 | 1.00 | 0.909 | 1250             | 9293            | 0.13      | 70.8         | 4.4                | A   |
| 20                 | 1.00 | 0.909 | 1206             | 9293            | 0.13      | 70.8         | 4.3                | A   |
| Segment 6: Weaving |      |       |                  |                 |           |              |                    |     |
| Time Period        | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
| 1                  | 1.00 | 0.909 | 2748             | 5681            | 0.48      | 61.8         | 8.9                | A   |
| 2                  | 1.00 | 0.909 | 2863             | 5652            | 0.51      | 61.4         | 9.3                | A   |
| 3                  | 1.00 | 0.909 | 2771             | 5428            | 0.51      | 61.4         | 9.0                | A   |
| 4                  | 1.00 | 0.909 | 2876             | 6228            | 0.46      | 62.1         | 9.3                | A   |
| 5                  | 1.00 | 0.909 | 3261             | 6212            | 0.52      | 60.8         | 10.7               | B   |
| 6                  | 1.00 | 0.909 | 2908             | 6162            | 0.47      | 61.9         | 9.4                | A   |
| 7                  | 1.00 | 0.909 | 3054             | 6853            | 0.45      | 62.2         | 9.8                | A   |
| 8                  | 1.00 | 0.909 | 2996             | 6382            | 0.47      | 61.9         | 9.7                | A   |
| 9                  | 1.00 | 0.909 | 3414             | 5531            | 0.62      | 59.4         | 11.5               | B   |
| 10                 | 1.00 | 0.909 | 3467             | 5652            | 0.61      | 59.4         | 11.7               | B   |
| 11                 | 1.00 | 0.909 | 3345             | 5709            | 0.59      | 59.9         | 11.2               | B   |
| 12                 | 1.00 | 0.909 | 2825             | 5694            | 0.50      | 61.6         | 9.2                | A   |
| 13                 | 1.00 | 0.909 | 3456             | 4665            | 0.74      | 57.8         | 12.0               | B   |
| 14                 | 1.00 | 0.909 | 2659             | 4850            | 0.55      | 60.9         | 8.7                | A   |
| 15                 | 1.00 | 0.909 | 2187             | 4637            | 0.47      | 62.1         | 7.0                | A   |
| 16                 | 1.00 | 0.909 | 1809             | 5049            | 0.36      | 64.0         | 5.7                | A   |
| 17                 | 1.00 | 0.909 | 2166             | 5625            | 0.39      | 63.6         | 6.8                | A   |
| 18                 | 1.00 | 0.909 | 2065             | 5083            | 0.41      | 63.2         | 6.5                | A   |
| 19                 | 1.00 | 0.909 | 1925             | 4800            | 0.40      | 63.3         | 6.1                | A   |
| 20                 | 1.00 | 0.909 | 1800             | 4954            | 0.36      | 63.9         | 5.6                | A   |
| Segment 7: Basic   |      |       |                  |                 |           |              |                    |     |
| Time               | PHF  | fHV   | Flow Rate        | Capacity        | d/c       | Speed        | Density            | LOS |

| Period           |      |       | (pc/h) |       | (pc/h)           |      | Ratio           |      | (mi/h)    |      | (pc/mi/ln)   |      |                    |      |     |
|------------------|------|-------|--------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 | 2451   |       | 9293             |      | 0.26            |      | 70.5      |      | 8.7          |      | A                  |      |     |
| 2                | 1.00 | 0.909 | 2495   |       | 9293             |      | 0.27            |      | 70.5      |      | 8.8          |      | A                  |      |     |
| 3                | 1.00 | 0.909 | 2460   |       | 9293             |      | 0.26            |      | 70.5      |      | 8.7          |      | A                  |      |     |
| 4                | 1.00 | 0.909 | 2671   |       | 9293             |      | 0.29            |      | 70.6      |      | 9.4          |      | A                  |      |     |
| 5                | 1.00 | 0.909 | 3054   |       | 9293             |      | 0.33            |      | 70.5      |      | 10.8         |      | A                  |      |     |
| 6                | 1.00 | 0.909 | 2715   |       | 9293             |      | 0.29            |      | 70.5      |      | 9.6          |      | A                  |      |     |
| 7                | 1.00 | 0.909 | 2909   |       | 9293             |      | 0.31            |      | 70.6      |      | 10.3         |      | A                  |      |     |
| 8                | 1.00 | 0.909 | 2807   |       | 9293             |      | 0.30            |      | 70.5      |      | 9.9          |      | A                  |      |     |
| 9                | 1.00 | 0.909 | 3261   |       | 9293             |      | 0.35            |      | 70.5      |      | 11.5         |      | B                  |      |     |
| 10               | 1.00 | 0.909 | 3331   |       | 9293             |      | 0.36            |      | 70.5      |      | 11.8         |      | B                  |      |     |
| 11               | 1.00 | 0.909 | 3230   |       | 9293             |      | 0.35            |      | 70.5      |      | 11.4         |      | B                  |      |     |
| 12               | 1.00 | 0.909 | 2609   |       | 9293             |      | 0.28            |      | 70.5      |      | 9.2          |      | A                  |      |     |
| 13               | 1.00 | 0.909 | 3287   |       | 9293             |      | 0.35            |      | 70.4      |      | 11.6         |      | B                  |      |     |
| 14               | 1.00 | 0.909 | 2429   |       | 9293             |      | 0.26            |      | 70.5      |      | 8.6          |      | A                  |      |     |
| 15               | 1.00 | 0.909 | 1927   |       | 9293             |      | 0.21            |      | 70.6      |      | 6.8          |      | A                  |      |     |
| 16               | 1.00 | 0.909 | 1611   |       | 9293             |      | 0.17            |      | 70.6      |      | 5.7          |      | A                  |      |     |
| 17               | 1.00 | 0.909 | 1980   |       | 9293             |      | 0.21            |      | 70.6      |      | 7.0          |      | A                  |      |     |
| 18               | 1.00 | 0.909 | 1897   |       | 9293             |      | 0.20            |      | 70.6      |      | 6.7          |      | A                  |      |     |
| 19               | 1.00 | 0.909 | 1734   |       | 9293             |      | 0.19            |      | 70.6      |      | 6.1          |      | A                  |      |     |
| 20               | 1.00 | 0.909 | 1606   |       | 9293             |      | 0.17            |      | 70.6      |      | 5.7          |      | A                  |      |     |
| Segment 8: Merge |      |       |        |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV    |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F      | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909  | 0.971 | 3757             | 1306 | 11616           | 2033 | 0.32      | 0.64 | 73.2         | 73.5 | 10.2               | 10.2 | A   |
| 2                | 1.00 | 1.00  | 0.909  | 0.971 | 3846             | 1351 | 11616           | 2033 | 0.33      | 0.66 | 73.2         | 73.5 | 10.5               | 10.5 | A   |
| 3                | 1.00 | 1.00  | 0.909  | 0.971 | 3914             | 1454 | 11616           | 2033 | 0.34      | 0.72 | 73.2         | 73.5 | 10.7               | 10.7 | A   |
| 4                | 1.00 | 1.00  | 0.909  | 0.971 | 4249             | 1578 | 11616           | 2033 | 0.37      | 0.78 | 73.2         | 73.5 | 11.6               | 11.6 | B   |
| 5                | 1.00 | 1.00  | 0.909  | 0.971 | 5299             | 2245 | 11616           | 2033 | 0.46      | 1.10 | 73.2         | 73.4 | 14.4               | 14.4 | B   |
| 6                | 1.00 | 1.00  | 0.909  | 0.971 | 5141             | 2426 | 11616           | 2033 | 0.44      | 1.19 | 73.2         | 73.5 | 14.0               | 14.0 | B   |
| 7                | 1.00 | 1.00  | 0.909  | 0.971 | 5747             | 2838 | 11616           | 2033 | 0.49      | 1.40 | 73.2         | 73.2 | 15.7               | 15.7 | B   |
| 8                | 1.00 | 1.00  | 0.909  | 0.971 | 5715             | 2908 | 11616           | 2033 | 0.49      | 1.43 | 73.2         | 73.2 | 15.6               | 15.6 | B   |
| 9                | 1.00 | 1.00  | 0.909  | 0.971 | 6103             | 2842 | 11616           | 2033 | 0.53      | 1.40 | 72.9         | 72.9 | 16.7               | 16.7 | B   |
| 10               | 1.00 | 1.00  | 0.909  | 0.971 | 6276             | 2945 | 11616           | 2033 | 0.54      | 1.45 | 72.7         | 72.7 | 17.3               | 17.3 | B   |
| 11               | 1.00 | 1.00  | 0.909  | 0.971 | 5718             | 2488 | 11616           | 2033 | 0.49      | 1.22 | 73.2         | 73.2 | 15.6               | 15.6 | B   |
| 12               | 1.00 | 1.00  | 0.909  | 0.971 | 5192             | 2583 | 11616           | 2033 | 0.45      | 1.27 | 73.2         | 73.5 | 14.1               | 14.1 | B   |
| 13               | 1.00 | 1.00  | 0.909  | 0.971 | 5779             | 2492 | 11616           | 2033 | 0.50      | 1.23 | 73.2         | 73.2 | 15.8               | 15.8 | B   |
| 14               | 1.00 | 1.00  | 0.909  | 0.971 | 4522             | 2093 | 11616           | 2033 | 0.39      | 1.03 | 73.2         | 73.5 | 12.3               | 12.3 | B   |
| 15               | 1.00 | 1.00  | 0.909  | 0.971 | 3665             | 1738 | 11616           | 2033 | 0.32      | 0.85 | 73.2         | 73.5 | 10.0               | 10.0 | A   |
| 16               | 1.00 | 1.00  | 0.909  | 0.971 | 2810             | 1199 | 11616           | 2033 | 0.24      | 0.59 | 73.2         | 73.5 | 7.6                | 7.6  | A   |
| 17               | 1.00 | 1.00  | 0.909  | 0.971 | 3018             | 1038 | 11616           | 2033 | 0.26      | 0.51 | 73.2         | 73.5 | 8.2                | 8.2  | A   |

|                              |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |     |     |
|------------------------------|-------------|------|-------|-------------------|------------------|------|--------------------|------|-----------|------------------|--------------|------|--------------------|-----|-----|
| 18                           | 1.00        | 1.00 | 0.909 | 0.971             | 2960             | 1063 | 11616              | 2033 | 0.25      | 0.52             | 73.2         | 73.5 | 8.1                | 8.1 | A   |
| 19                           | 1.00        | 1.00 | 0.909 | 0.971             | 2681             | 947  | 11616              | 2033 | 0.23      | 0.47             | 73.2         | 73.5 | 7.3                | 7.3 | A   |
| 20                           | 1.00        | 1.00 | 0.909 | 0.971             | 2624             | 1018 | 11616              | 2033 | 0.23      | 0.50             | 73.2         | 73.5 | 7.1                | 7.1 | A   |
| Segment 9: Basic             |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |     |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |      | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |     | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 3846             |      | 9293               |      | 0.41      |                  | 70.8         |      | 13.6               |     | B   |
| 2                            | 1.00        |      | 0.909 |                   | 3938             |      | 9293               |      | 0.42      |                  | 70.8         |      | 13.9               |     | B   |
| 3                            | 1.00        |      | 0.909 |                   | 4013             |      | 9293               |      | 0.43      |                  | 70.8         |      | 14.2               |     | B   |
| 4                            | 1.00        |      | 0.909 |                   | 4356             |      | 9293               |      | 0.47      |                  | 70.8         |      | 15.4               |     | B   |
| 5                            | 1.00        |      | 0.909 |                   | 5452             |      | 9293               |      | 0.59      |                  | 69.9         |      | 19.5               |     | C   |
| 6                            | 1.00        |      | 0.909 |                   | 5307             |      | 9293               |      | 0.57      |                  | 70.1         |      | 18.9               |     | C   |
| 7                            | 1.00        |      | 0.909 |                   | 5941             |      | 9293               |      | 0.64      |                  | 68.9         |      | 21.6               |     | C   |
| 8                            | 1.00        |      | 0.909 |                   | 5914             |      | 9293               |      | 0.64      |                  | 68.9         |      | 21.5               |     | C   |
| 9                            | 1.00        |      | 0.909 |                   | 6297             |      | 9293               |      | 0.68      |                  | 67.9         |      | 23.2               |     | C   |
| 10                           | 1.00        |      | 0.909 |                   | 6477             |      | 9293               |      | 0.70      |                  | 67.3         |      | 24.1               |     | C   |
| 11                           | 1.00        |      | 0.909 |                   | 5888             |      | 9293               |      | 0.63      |                  | 69.0         |      | 21.3               |     | C   |
| 12                           | 1.00        |      | 0.909 |                   | 5369             |      | 9293               |      | 0.58      |                  | 70.0         |      | 19.2               |     | C   |
| 13                           | 1.00        |      | 0.909 |                   | 5949             |      | 9293               |      | 0.64      |                  | 68.8         |      | 21.6               |     | C   |
| 14                           | 1.00        |      | 0.909 |                   | 4664             |      | 9293               |      | 0.50      |                  | 70.7         |      | 16.5               |     | B   |
| 15                           | 1.00        |      | 0.909 |                   | 3784             |      | 9293               |      | 0.41      |                  | 70.8         |      | 13.4               |     | B   |
| 16                           | 1.00        |      | 0.909 |                   | 2891             |      | 9293               |      | 0.31      |                  | 70.8         |      | 10.2               |     | A   |
| 17                           | 1.00        |      | 0.909 |                   | 3089             |      | 9293               |      | 0.33      |                  | 70.8         |      | 10.9               |     | A   |
| 18                           | 1.00        |      | 0.909 |                   | 3032             |      | 9293               |      | 0.33      |                  | 70.8         |      | 10.7               |     | A   |
| 19                           | 1.00        |      | 0.909 |                   | 2746             |      | 9293               |      | 0.30      |                  | 70.8         |      | 9.7                |     | A   |
| 20                           | 1.00        |      | 0.909 |                   | 2693             |      | 9293               |      | 0.29      |                  | 70.8         |      | 9.5                |     | A   |
| Facility Time Period Results |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |     |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |      | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |     |     |
| 1                            | 69.8        |      |       | 9.0               |                  |      | 8.2                |      |           | 2.50             |              |      | A                  |     |     |
| 2                            | 69.7        |      |       | 9.4               |                  |      | 8.5                |      |           | 2.50             |              |      | A                  |     |     |
| 3                            | 69.7        |      |       | 9.2               |                  |      | 8.4                |      |           | 2.50             |              |      | A                  |     |     |
| 4                            | 69.9        |      |       | 9.7               |                  |      | 8.9                |      |           | 2.50             |              |      | A                  |     |     |
| 5                            | 69.4        |      |       | 11.1              |                  |      | 10.0               |      |           | 2.50             |              |      | B                  |     |     |
| 6                            | 69.7        |      |       | 10.2              |                  |      | 9.3                |      |           | 2.50             |              |      | A                  |     |     |
| 7                            | 69.4        |      |       | 11.0              |                  |      | 10.0               |      |           | 2.50             |              |      | B                  |     |     |
| 8                            | 69.4        |      |       | 10.9              |                  |      | 9.9                |      |           | 2.50             |              |      | A                  |     |     |
| 9                            | 68.5        |      |       | 11.8              |                  |      | 10.7               |      |           | 2.60             |              |      | B                  |     |     |
| 10                           | 68.3        |      |       | 12.2              |                  |      | 11.1               |      |           | 2.60             |              |      | B                  |     |     |
| 11                           | 69.0        |      |       | 11.5              |                  |      | 10.5               |      |           | 2.50             |              |      | B                  |     |     |
| 12                           | 69.7        |      |       | 10.5              |                  |      | 9.5                |      |           | 2.50             |              |      | A                  |     |     |
| 13                           | 68.4        |      |       | 11.3              |                  |      | 10.3               |      |           | 2.60             |              |      | B                  |     |     |

|    |      |     |     |      |   |
|----|------|-----|-----|------|---|
| 14 | 69.7 | 9.2 | 8.3 | 2.50 | A |
| 15 | 69.9 | 7.6 | 7.0 | 2.50 | A |
| 16 | 70.4 | 6.7 | 6.1 | 2.50 | A |
| 17 | 70.1 | 7.1 | 6.5 | 2.50 | A |
| 18 | 70.0 | 6.7 | 6.1 | 2.50 | A |
| 19 | 70.0 | 6.1 | 5.5 | 2.50 | A |
| 20 | 70.1 | 5.8 | 5.3 | 2.50 | A |

Facility Overall Results

|                          |      |                    |     |
|--------------------------|------|--------------------|-----|
| Space Mean Speed, mi/h   | 69.5 | Density, veh/mi/ln | 8.5 |
| Average Travel Time, min | 2.50 | Density, pc/mi/ln  | 9.3 |

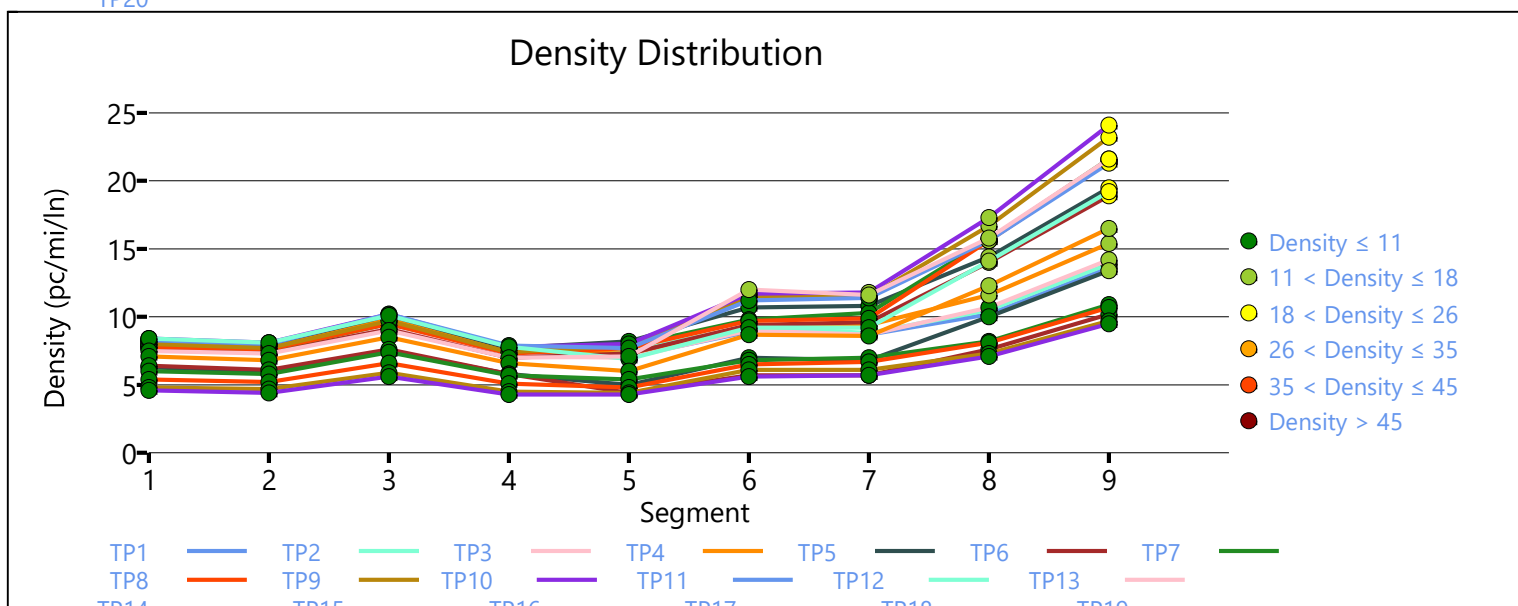
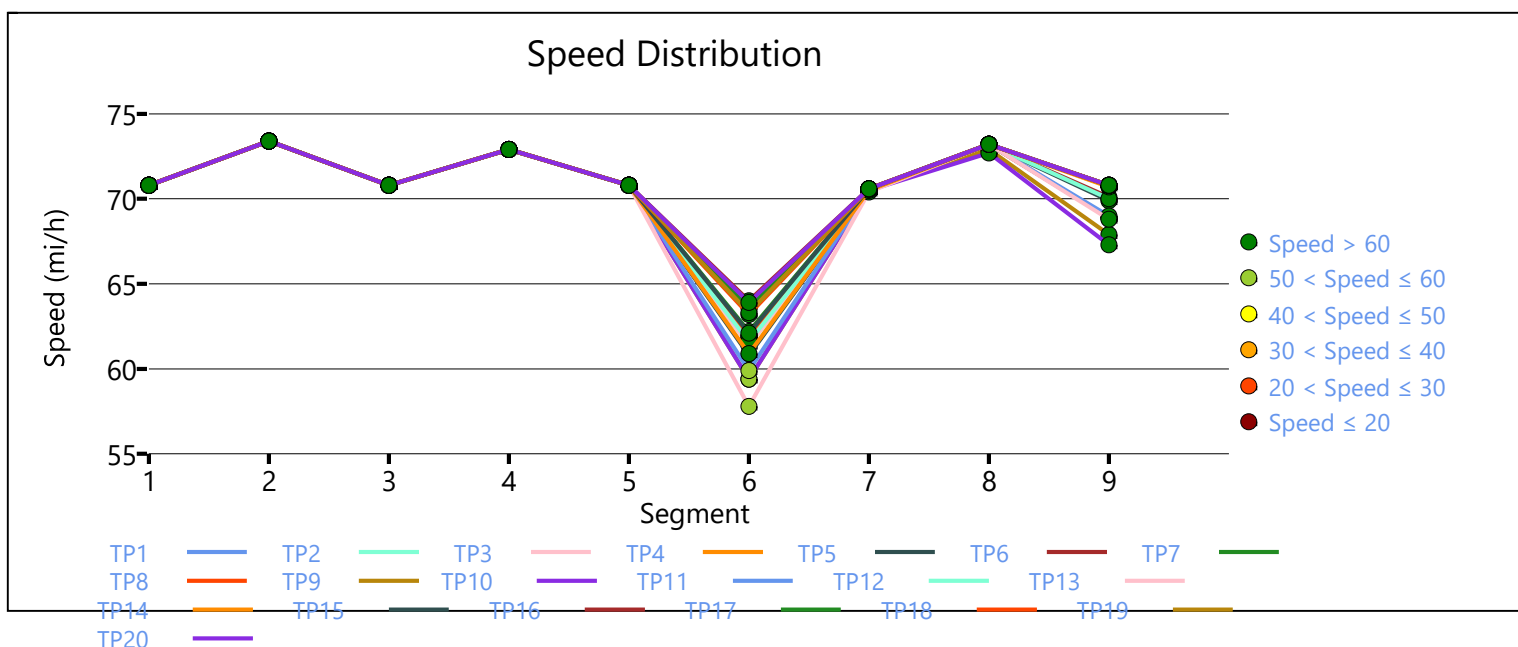
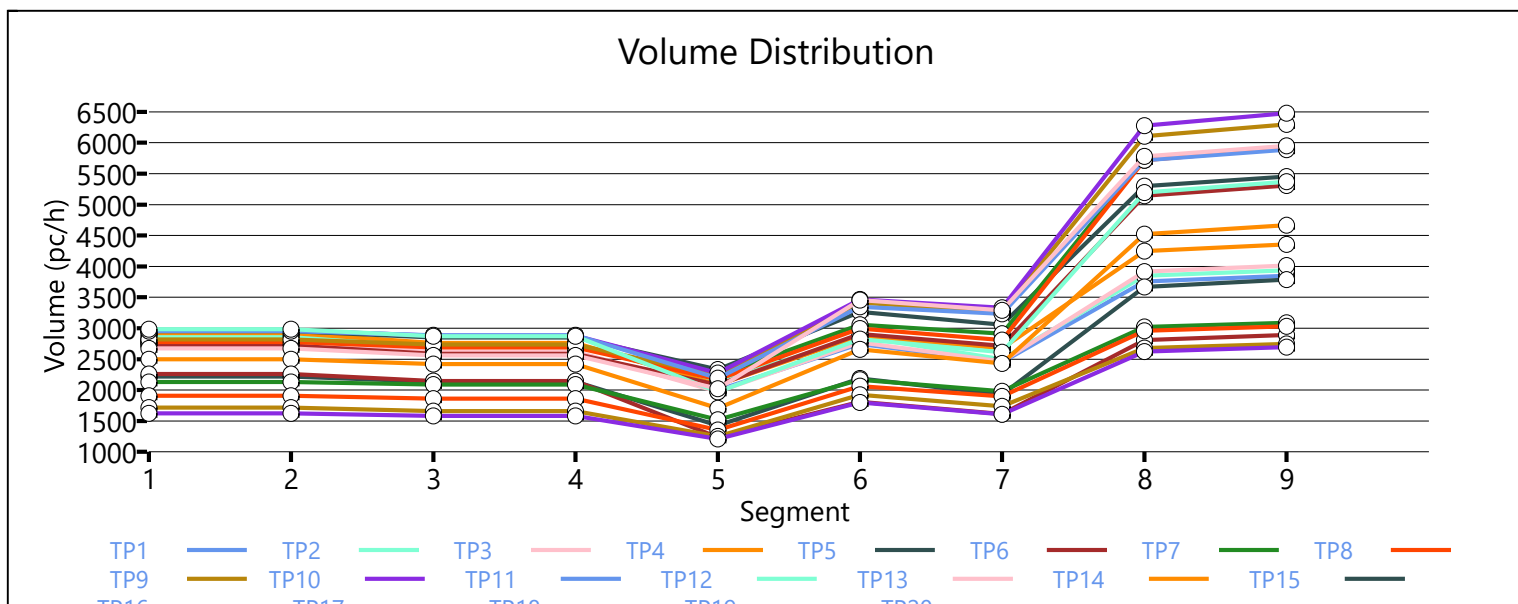
Messages

|            |                                                        |
|------------|--------------------------------------------------------|
| WARNING 1  | Merge capacity is less than merge demand on segment 8. |
| WARNING 2  | Merge capacity is less than merge demand on segment 8. |
| WARNING 3  | Merge capacity is less than merge demand on segment 8. |
| WARNING 4  | Merge capacity is less than merge demand on segment 8. |
| WARNING 5  | Merge capacity is less than merge demand on segment 8. |
| WARNING 6  | Merge capacity is less than merge demand on segment 8. |
| WARNING 7  | Merge capacity is less than merge demand on segment 8. |
| WARNING 8  | Merge capacity is less than merge demand on segment 8. |
| WARNING 9  | Merge capacity is less than merge demand on segment 8. |
| WARNING 10 | Merge capacity is less than merge demand on segment 8. |

Comments

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# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                       |                      |                         |
|---------------------|-------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                    | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                       | Analysis Year        | 2030                    |
| Jurisdiction        | NMDOT                                                 | Time Period Analyzed | PM Peak Period          |
| Project Description | 2030 Build, I-25 Programmed Improvements - Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 11   |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.98  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | North of ACC                        | 2640       | 4     |
| 2   | Diverge | Basic    | Off Ramp to Gibson                  | 600        | 5     |
| 3   | Basic   | Basic    | Bet Gibson Off and ACC On Ramps     | 1750       | 4     |
| 4   | Merge   | Basic    | ACC On-Ramp                         | 600        | 5     |
| 5   | Basic   | Basic    | Bet ACC Off and Sunport Off Ramps   | 2400       | 4     |
| 6   | Diverge | Basic    | Sunport Off Ramp                    | 600        | 5     |
| 7   | Basic   | Basic    | Bet Sunport Off and Gibson On Ramps | 2000       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 800        | 5     |
| 9   | Basic   | Basic    | Bet Gibson and Sunport On Ramps     | 900        | 4     |
| 10  | Merge   | Basic    | Sunport On Ramp                     | 800        | 5     |
| 11  | Basic   | Basic    | S of Sunport                        | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 4075             | 9293            | 0.44      | 70.8         | 14.4               | B   |
| 2           | 1.00 | 0.909 | 4066             | 9293            | 0.44      | 70.8         | 14.4               | B   |
| 3           | 1.00 | 0.909 | 4383             | 9293            | 0.47      | 70.8         | 15.5               | B   |
| 4           | 1.00 | 0.909 | 4946             | 9293            | 0.53      | 70.5         | 17.5               | B   |
| 5           | 1.00 | 0.909 | 4150             | 9293            | 0.45      | 70.8         | 14.7               | B   |
| 6           | 1.00 | 0.909 | 3802             | 9293            | 0.41      | 70.8         | 13.4               | B   |
| 7           | 1.00 | 0.909 | 3908             | 9293            | 0.42      | 70.8         | 13.8               | B   |
| 8           | 1.00 | 0.909 | 3982             | 9293            | 0.43      | 70.8         | 14.1               | B   |
| 9           | 1.00 | 0.909 | 4092             | 9293            | 0.44      | 70.8         | 14.4               | B   |
| 10          | 1.00 | 0.909 | 4251             | 9293            | 0.46      | 70.8         | 15.0               | B   |
| 11          | 1.00 | 0.909 | 3723             | 9293            | 0.40      | 70.8         | 13.1               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 12                 | 1.00 | 0.909 | 4079  |       | 9293             |      | 0.44            | 70.8 |           | 14.4 |              | B    |                    |      |     |
| 13                 | 1.00 | 0.909 | 3754  |       | 9293             |      | 0.40            | 70.8 |           | 13.2 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 4070  |       | 9293             |      | 0.44            | 70.8 |           | 14.4 |              | B    |                    |      |     |
| 15                 | 1.00 | 0.909 | 3877  |       | 9293             |      | 0.42            | 70.8 |           | 13.7 |              | B    |                    |      |     |
| 16                 | 1.00 | 0.909 | 3969  |       | 9293             |      | 0.43            | 70.8 |           | 14.0 |              | B    |                    |      |     |
| 17                 | 1.00 | 0.909 | 4066  |       | 9293             |      | 0.44            | 70.8 |           | 14.4 |              | B    |                    |      |     |
| 18                 | 1.00 | 0.909 | 3815  |       | 9293             |      | 0.41            | 70.8 |           | 13.5 |              | B    |                    |      |     |
| 19                 | 1.00 | 0.909 | 3498  |       | 9293             |      | 0.38            | 70.8 |           | 12.3 |              | B    |                    |      |     |
| 20                 | 1.00 | 0.909 | 3208  |       | 9293             |      | 0.35            | 70.8 |           | 11.3 |              | B    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 4075             | 1582 | 11616           | 2033 | 0.35      | 0.78 | 73.3         | 73.5 | 11.1               | 11.1 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 4066             | 1718 | 11616           | 2033 | 0.35      | 0.85 | 73.3         | 73.5 | 11.1               | 11.1 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 4383             | 1800 | 11616           | 2033 | 0.38      | 0.89 | 73.3         | 73.5 | 11.9               | 11.9 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4946             | 1949 | 11616           | 2033 | 0.43      | 0.96 | 73.3         | 73.5 | 13.5               | 13.5 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4150             | 1388 | 11616           | 2033 | 0.36      | 0.68 | 73.3         | 73.5 | 11.3               | 11.3 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 3802             | 1265 | 11616           | 2033 | 0.33      | 0.62 | 73.3         | 73.5 | 10.3               | 10.3 | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 3908             | 1277 | 11616           | 2033 | 0.34      | 0.63 | 73.3         | 73.5 | 10.6               | 10.6 | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 3982             | 1351 | 11616           | 2033 | 0.34      | 0.66 | 73.3         | 73.5 | 10.8               | 10.8 | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4092             | 1219 | 11616           | 2033 | 0.35      | 0.60 | 73.3         | 73.5 | 11.1               | 11.1 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4251             | 1326 | 11616           | 2033 | 0.37      | 0.65 | 73.3         | 73.5 | 11.6               | 11.6 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 3723             | 1236 | 11616           | 2033 | 0.32      | 0.61 | 73.3         | 73.5 | 10.1               | 10.1 | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4079             | 1285 | 11616           | 2033 | 0.35      | 0.63 | 73.3         | 73.5 | 11.1               | 11.1 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3754             | 1228 | 11616           | 2033 | 0.32      | 0.60 | 73.3         | 73.5 | 10.2               | 10.2 | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4070             | 1314 | 11616           | 2033 | 0.35      | 0.65 | 73.3         | 73.5 | 11.1               | 11.1 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3877             | 1162 | 11616           | 2033 | 0.33      | 0.57 | 73.3         | 73.5 | 10.5               | 10.5 | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 3969             | 1088 | 11616           | 2033 | 0.34      | 0.54 | 73.3         | 73.5 | 10.8               | 10.8 | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 4066             | 1042 | 11616           | 2033 | 0.35      | 0.51 | 73.3         | 73.5 | 11.1               | 11.1 | B   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 3815             | 882  | 11616           | 2033 | 0.33      | 0.43 | 73.3         | 73.5 | 10.4               | 10.4 | A   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3498             | 890  | 11616           | 2033 | 0.30      | 0.44 | 73.3         | 73.5 | 9.5                | 9.5  | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3208             | 964  | 11616           | 2033 | 0.28      | 0.47 | 73.3         | 73.5 | 8.7                | 8.7  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2385             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.4                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2231             |      | 9293            |      | 0.24      |      | 70.8         |      | 7.9                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2460             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.7                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2865             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.1               |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2667             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.4                |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 2451             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.7                |      | A   |

|                  |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 7                | 1.00 | 0.909 | 2543  | 9293  | 0.27             | 70.8 | 9.0             | A    |           |      |              |      |                    |      |     |
| 8                | 1.00 | 0.909 | 2539  | 9293  | 0.27             | 70.8 | 9.0             | A    |           |      |              |      |                    |      |     |
| 9                | 1.00 | 0.909 | 2790  | 9293  | 0.30             | 70.8 | 9.9             | A    |           |      |              |      |                    |      |     |
| 10               | 1.00 | 0.909 | 2834  | 9293  | 0.30             | 70.8 | 10.0            | A    |           |      |              |      |                    |      |     |
| 11               | 1.00 | 0.909 | 2403  | 9293  | 0.26             | 70.8 | 8.5             | A    |           |      |              |      |                    |      |     |
| 12               | 1.00 | 0.909 | 2706  | 9293  | 0.29             | 70.8 | 9.5             | A    |           |      |              |      |                    |      |     |
| 13               | 1.00 | 0.909 | 2442  | 9293  | 0.26             | 70.8 | 8.6             | A    |           |      |              |      |                    |      |     |
| 14               | 1.00 | 0.909 | 2667  | 9293  | 0.29             | 70.8 | 9.4             | A    |           |      |              |      |                    |      |     |
| 15               | 1.00 | 0.909 | 2636  | 9293  | 0.28             | 70.8 | 9.3             | A    |           |      |              |      |                    |      |     |
| 16               | 1.00 | 0.909 | 2807  | 9293  | 0.30             | 70.8 | 9.9             | A    |           |      |              |      |                    |      |     |
| 17               | 1.00 | 0.909 | 2953  | 9293  | 0.32             | 70.8 | 10.4            | A    |           |      |              |      |                    |      |     |
| 18               | 1.00 | 0.909 | 2873  | 9293  | 0.31             | 70.8 | 10.1            | A    |           |      |              |      |                    |      |     |
| 19               | 1.00 | 0.909 | 2548  | 9293  | 0.27             | 70.8 | 9.0             | A    |           |      |              |      |                    |      |     |
| 20               | 1.00 | 0.909 | 2178  | 9293  | 0.23             | 70.8 | 7.7             | A    |           |      |              |      |                    |      |     |
| Segment 4: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 2974             | 589  | 11616           | 2033 | 0.26      | 0.29 | 73.1         | 73.5 | 8.1                | 8.1  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 2898             | 667  | 11616           | 2033 | 0.25      | 0.33 | 73.1         | 73.5 | 7.9                | 7.9  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 3127             | 667  | 11616           | 2033 | 0.27      | 0.33 | 73.1         | 73.5 | 8.5                | 8.5  | A   |
| 4                | 1.00 | 1.00  | 0.909 | 0.971 | 3479             | 614  | 11616           | 2033 | 0.30      | 0.30 | 73.1         | 73.5 | 9.5                | 9.5  | A   |
| 5                | 1.00 | 1.00  | 0.909 | 0.971 | 3511             | 844  | 11616           | 2033 | 0.30      | 0.42 | 73.1         | 73.5 | 9.6                | 9.6  | A   |
| 6                | 1.00 | 1.00  | 0.909 | 0.971 | 3493             | 1042 | 11616           | 2033 | 0.30      | 0.51 | 73.1         | 73.5 | 9.5                | 9.5  | A   |
| 7                | 1.00 | 1.00  | 0.909 | 0.971 | 3561             | 1018 | 11616           | 2033 | 0.31      | 0.50 | 73.1         | 73.5 | 9.7                | 9.7  | A   |
| 8                | 1.00 | 1.00  | 0.909 | 0.971 | 3486             | 947  | 11616           | 2033 | 0.30      | 0.47 | 73.1         | 73.5 | 9.5                | 9.5  | A   |
| 9                | 1.00 | 1.00  | 0.909 | 0.971 | 3626             | 836  | 11616           | 2033 | 0.31      | 0.41 | 73.1         | 73.5 | 9.9                | 9.9  | A   |
| 10               | 1.00 | 1.00  | 0.909 | 0.971 | 3691             | 857  | 11616           | 2033 | 0.32      | 0.42 | 73.1         | 73.5 | 10.0               | 10.0 | A   |
| 11               | 1.00 | 1.00  | 0.909 | 0.971 | 3293             | 890  | 11616           | 2033 | 0.28      | 0.44 | 73.1         | 73.5 | 9.0                | 9.0  | A   |
| 12               | 1.00 | 1.00  | 0.909 | 0.971 | 3633             | 927  | 11616           | 2033 | 0.31      | 0.46 | 73.1         | 73.5 | 9.9                | 9.9  | A   |
| 13               | 1.00 | 1.00  | 0.909 | 0.971 | 3369             | 927  | 11616           | 2033 | 0.29      | 0.46 | 73.1         | 73.5 | 9.2                | 9.2  | A   |
| 14               | 1.00 | 1.00  | 0.909 | 0.971 | 3594             | 927  | 11616           | 2033 | 0.31      | 0.46 | 73.1         | 73.5 | 9.8                | 9.8  | A   |
| 15               | 1.00 | 1.00  | 0.909 | 0.971 | 3563             | 927  | 11616           | 2033 | 0.31      | 0.46 | 73.1         | 73.5 | 9.7                | 9.7  | A   |
| 16               | 1.00 | 1.00  | 0.909 | 0.971 | 3549             | 742  | 11616           | 2033 | 0.31      | 0.37 | 73.1         | 73.5 | 9.7                | 9.7  | A   |
| 17               | 1.00 | 1.00  | 0.909 | 0.971 | 3517             | 564  | 11616           | 2033 | 0.30      | 0.28 | 73.1         | 73.5 | 9.6                | 9.6  | A   |
| 18               | 1.00 | 1.00  | 0.909 | 0.971 | 3417             | 544  | 11616           | 2033 | 0.29      | 0.27 | 73.1         | 73.5 | 9.3                | 9.3  | A   |
| 19               | 1.00 | 1.00  | 0.909 | 0.971 | 2960             | 412  | 11616           | 2033 | 0.25      | 0.20 | 73.1         | 73.5 | 8.1                | 8.1  | A   |
| 20               | 1.00 | 1.00  | 0.909 | 0.971 | 2631             | 453  | 11616           | 2033 | 0.23      | 0.22 | 73.1         | 73.5 | 7.2                | 7.2  | A   |
| Segment 5: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |       | 0.909 |       | 3014             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.6               |      | A   |

|    |      |       |      |      |      |      |      |   |
|----|------|-------|------|------|------|------|------|---|
| 2  | 1.00 | 0.909 | 2944 | 9293 | 0.32 | 70.8 | 10.4 | A |
| 3  | 1.00 | 0.909 | 3173 | 9293 | 0.34 | 70.8 | 11.2 | B |
| 4  | 1.00 | 0.909 | 3520 | 9293 | 0.38 | 70.8 | 12.4 | B |
| 5  | 1.00 | 0.909 | 3569 | 9293 | 0.38 | 70.8 | 12.6 | B |
| 6  | 1.00 | 0.909 | 3564 | 9293 | 0.38 | 70.8 | 12.6 | B |
| 7  | 1.00 | 0.909 | 3630 | 9293 | 0.39 | 70.8 | 12.8 | B |
| 8  | 1.00 | 0.909 | 3551 | 9293 | 0.38 | 70.8 | 12.5 | B |
| 9  | 1.00 | 0.909 | 3683 | 9293 | 0.40 | 70.8 | 13.0 | B |
| 10 | 1.00 | 0.909 | 3749 | 9293 | 0.40 | 70.8 | 13.2 | B |
| 11 | 1.00 | 0.909 | 3353 | 9293 | 0.36 | 70.8 | 11.8 | B |
| 12 | 1.00 | 0.909 | 3696 | 9293 | 0.40 | 70.8 | 13.1 | B |
| 13 | 1.00 | 0.909 | 3432 | 9293 | 0.37 | 70.8 | 12.1 | B |
| 14 | 1.00 | 0.909 | 3657 | 9293 | 0.39 | 70.8 | 12.9 | B |
| 15 | 1.00 | 0.909 | 3626 | 9293 | 0.39 | 70.8 | 12.8 | B |
| 16 | 1.00 | 0.909 | 3600 | 9293 | 0.39 | 70.8 | 12.7 | B |
| 17 | 1.00 | 0.909 | 3556 | 9293 | 0.38 | 70.8 | 12.6 | B |
| 18 | 1.00 | 0.909 | 3454 | 9293 | 0.37 | 70.8 | 12.2 | B |
| 19 | 1.00 | 0.909 | 2988 | 9293 | 0.32 | 70.8 | 10.6 | A |
| 20 | 1.00 | 0.909 | 2662 | 9293 | 0.29 | 70.8 | 9.4  | A |

Segment 6: Diverge

| Time Period | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|-------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
|             | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1           | 1.00 | 1.00 | 0.909 | 0.971 | 3014             | 647  | 11616           | 2033 | 0.26      | 0.32 | 73.3         | 73.5 | 8.2                | 8.2  | A   |
| 2           | 1.00 | 1.00 | 0.909 | 0.971 | 2944             | 577  | 11616           | 2033 | 0.25      | 0.28 | 73.3         | 73.5 | 8.0                | 8.0  | A   |
| 3           | 1.00 | 1.00 | 0.909 | 0.971 | 3173             | 643  | 11616           | 2033 | 0.27      | 0.32 | 73.3         | 73.5 | 8.6                | 8.6  | A   |
| 4           | 1.00 | 1.00 | 0.909 | 0.971 | 3520             | 597  | 11616           | 2033 | 0.30      | 0.29 | 73.3         | 73.5 | 9.6                | 9.6  | A   |
| 5           | 1.00 | 1.00 | 0.909 | 0.971 | 3569             | 651  | 11616           | 2033 | 0.31      | 0.32 | 73.3         | 73.5 | 9.7                | 9.7  | A   |
| 6           | 1.00 | 1.00 | 0.909 | 0.971 | 3564             | 606  | 11616           | 2033 | 0.31      | 0.30 | 73.3         | 73.5 | 9.7                | 9.7  | A   |
| 7           | 1.00 | 1.00 | 0.909 | 0.971 | 3630             | 659  | 11616           | 2033 | 0.31      | 0.32 | 73.3         | 73.5 | 9.9                | 9.9  | A   |
| 8           | 1.00 | 1.00 | 0.909 | 0.971 | 3551             | 667  | 11616           | 2033 | 0.31      | 0.33 | 73.3         | 73.5 | 9.7                | 9.7  | A   |
| 9           | 1.00 | 1.00 | 0.909 | 0.971 | 3683             | 746  | 11616           | 2033 | 0.32      | 0.37 | 73.3         | 73.5 | 10.0               | 10.0 | A   |
| 10          | 1.00 | 1.00 | 0.909 | 0.971 | 3749             | 634  | 11616           | 2033 | 0.32      | 0.31 | 73.3         | 73.5 | 10.2               | 10.2 | A   |
| 11          | 1.00 | 1.00 | 0.909 | 0.971 | 3353             | 593  | 11616           | 2033 | 0.29      | 0.29 | 73.3         | 73.5 | 9.1                | 9.1  | A   |
| 12          | 1.00 | 1.00 | 0.909 | 0.971 | 3696             | 618  | 11616           | 2033 | 0.32      | 0.30 | 73.3         | 73.5 | 10.1               | 10.1 | A   |
| 13          | 1.00 | 1.00 | 0.909 | 0.971 | 3432             | 474  | 11616           | 2033 | 0.30      | 0.23 | 73.3         | 73.5 | 9.3                | 9.3  | A   |
| 14          | 1.00 | 1.00 | 0.909 | 0.971 | 3657             | 531  | 11616           | 2033 | 0.31      | 0.26 | 73.3         | 73.5 | 9.9                | 9.9  | A   |
| 15          | 1.00 | 1.00 | 0.909 | 0.971 | 3626             | 486  | 11616           | 2033 | 0.31      | 0.24 | 73.3         | 73.5 | 9.9                | 9.9  | A   |
| 16          | 1.00 | 1.00 | 0.909 | 0.971 | 3600             | 465  | 11616           | 2033 | 0.31      | 0.23 | 73.3         | 73.5 | 9.8                | 9.8  | A   |
| 17          | 1.00 | 1.00 | 0.909 | 0.971 | 3556             | 416  | 11616           | 2033 | 0.31      | 0.20 | 73.3         | 73.5 | 9.7                | 9.7  | A   |
| 18          | 1.00 | 1.00 | 0.909 | 0.971 | 3454             | 391  | 11616           | 2033 | 0.30      | 0.19 | 73.3         | 73.5 | 9.4                | 9.4  | A   |
| 19          | 1.00 | 1.00 | 0.909 | 0.971 | 2988             | 354  | 11616           | 2033 | 0.26      | 0.17 | 73.3         | 73.5 | 8.1                | 8.1  | A   |

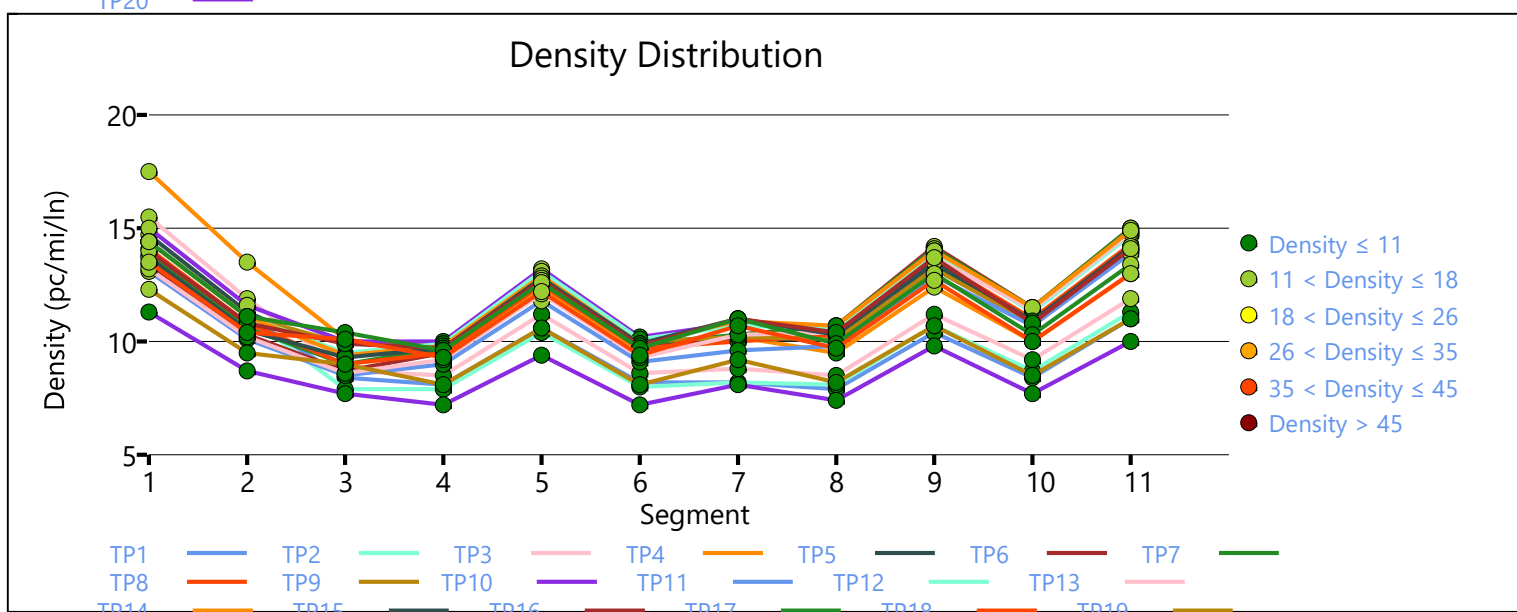
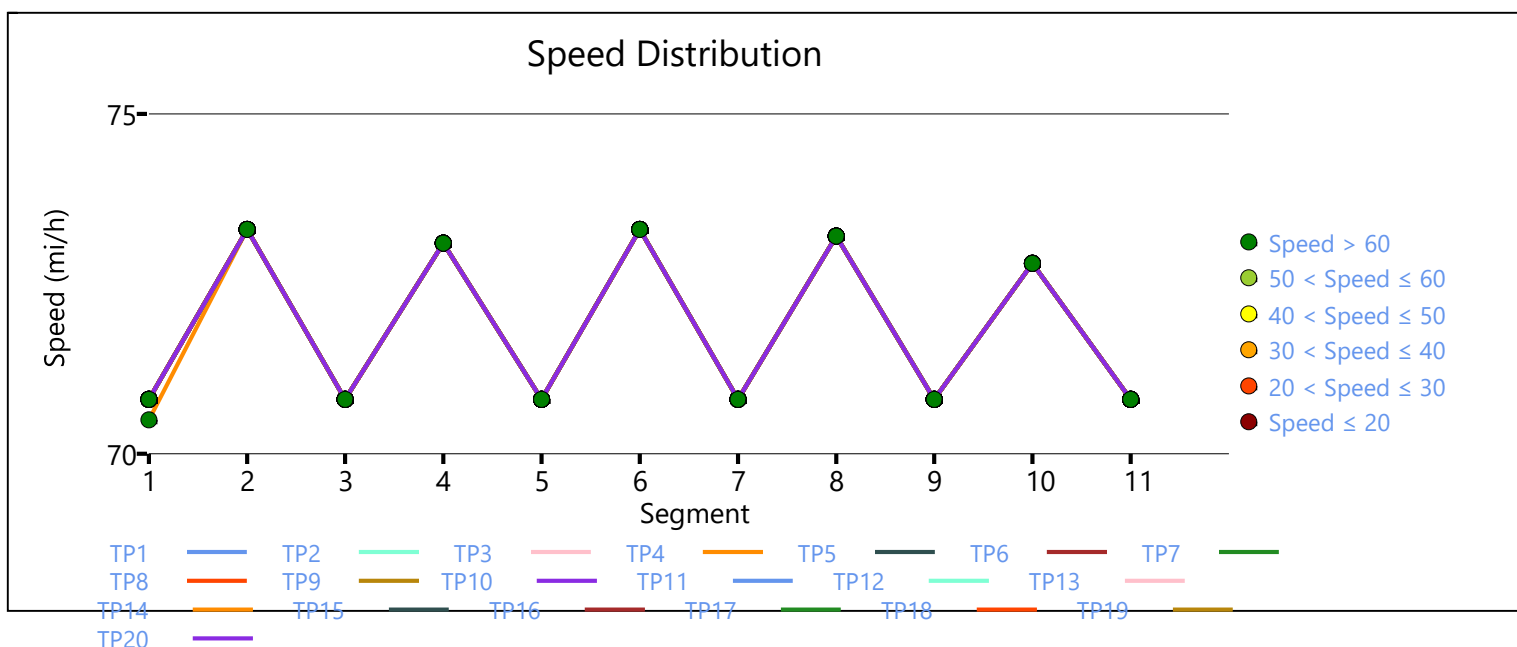
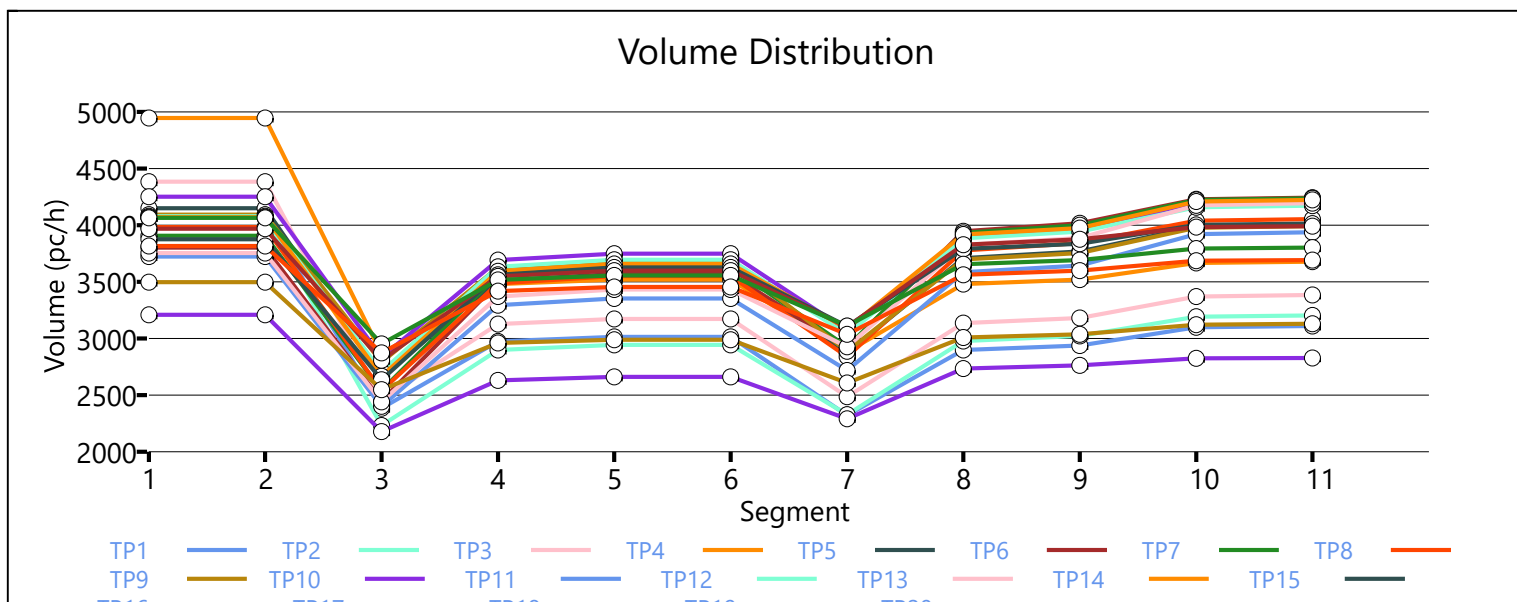
| 20               | 1.00 | 1.00 | 0.909 | 0.971 | 2662             | 346  | 11616           | 2033 | 0.23      | 0.17 | 73.3         | 73.5 | 7.2                | 7.2  | A   |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Segment 7: Basic |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |      | 0.909 |       | 2323             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.2                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 2328             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.2                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 2486             |      | 9293            |      | 0.27      |      | 70.8         |      | 8.8                |      | A   |
| 4                | 1.00 |      | 0.909 |       | 2882             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.2               |      | A   |
| 5                | 1.00 |      | 0.909 |       | 2873             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.1               |      | A   |
| 6                | 1.00 |      | 0.909 |       | 2917             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.3               |      | A   |
| 7                | 1.00 |      | 0.909 |       | 2926             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.3               |      | A   |
| 8                | 1.00 |      | 0.909 |       | 2838             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.0               |      | A   |
| 9                | 1.00 |      | 0.909 |       | 2887             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.2               |      | A   |
| 10               | 1.00 |      | 0.909 |       | 3072             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.8               |      | A   |
| 11               | 1.00 |      | 0.909 |       | 2719             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.6                |      | A   |
| 12               | 1.00 |      | 0.909 |       | 3036             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.7               |      | A   |
| 13               | 1.00 |      | 0.909 |       | 2926             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.3               |      | A   |
| 14               | 1.00 |      | 0.909 |       | 3089             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.9               |      | A   |
| 15               | 1.00 |      | 0.909 |       | 3107             |      | 9293            |      | 0.33      |      | 70.8         |      | 11.0               |      | A   |
| 16               | 1.00 |      | 0.909 |       | 3102             |      | 9293            |      | 0.33      |      | 70.8         |      | 11.0               |      | A   |
| 17               | 1.00 |      | 0.909 |       | 3111             |      | 9293            |      | 0.33      |      | 70.8         |      | 11.0               |      | A   |
| 18               | 1.00 |      | 0.909 |       | 3036             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.7               |      | A   |
| 19               | 1.00 |      | 0.909 |       | 2609             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.2                |      | A   |
| 20               | 1.00 |      | 0.909 |       | 2293             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.1                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 2900             | 577  | 11616           | 2033 | 0.25      | 0.28 | 73.2         | 73.5 | 7.9                | 7.9  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 2979             | 651  | 11616           | 2033 | 0.26      | 0.32 | 73.2         | 73.5 | 8.1                | 8.1  | A   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 3137             | 651  | 11616           | 2033 | 0.27      | 0.32 | 73.2         | 73.5 | 8.5                | 8.5  | A   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 3479             | 597  | 11616           | 2033 | 0.30      | 0.29 | 73.2         | 73.5 | 9.5                | 9.5  | A   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 3709             | 836  | 11616           | 2033 | 0.32      | 0.41 | 73.2         | 73.5 | 10.1               | 10.1 | A   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 3947             | 1030 | 11616           | 2033 | 0.34      | 0.51 | 73.2         | 73.5 | 10.7               | 10.7 | A   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 3931             | 1005 | 11616           | 2033 | 0.34      | 0.49 | 73.2         | 73.5 | 10.7               | 10.7 | A   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 3777             | 939  | 11616           | 2033 | 0.33      | 0.46 | 73.2         | 73.5 | 10.3               | 10.3 | A   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 3699             | 812  | 11616           | 2033 | 0.32      | 0.40 | 73.2         | 73.5 | 10.1               | 10.1 | A   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 3908             | 836  | 11616           | 2033 | 0.34      | 0.41 | 73.2         | 73.5 | 10.6               | 10.6 | A   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 3584             | 865  | 11616           | 2033 | 0.31      | 0.43 | 73.2         | 73.5 | 9.8                | 9.8  | A   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 3885             | 849  | 11616           | 2033 | 0.33      | 0.42 | 73.2         | 73.5 | 10.6               | 10.6 | A   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 3824             | 898  | 11616           | 2033 | 0.33      | 0.44 | 73.2         | 73.5 | 10.4               | 10.4 | A   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 3917             | 828  | 11616           | 2033 | 0.34      | 0.41 | 73.2         | 73.5 | 10.7               | 10.7 | A   |

|                   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|-------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 15                | 1.00 | 1.00 | 0.909 | 0.971 | 3791             | 684  | 11616           | 2033 | 0.33      | 0.34 | 73.2         | 73.5 | 10.3               | 10.3 | A   |
| 16                | 1.00 | 1.00 | 0.909 | 0.971 | 3827             | 725  | 11616           | 2033 | 0.33      | 0.36 | 73.2         | 73.5 | 10.4               | 10.4 | A   |
| 17                | 1.00 | 1.00 | 0.909 | 0.971 | 3655             | 544  | 11616           | 2033 | 0.31      | 0.27 | 73.2         | 73.5 | 9.9                | 9.9  | A   |
| 18                | 1.00 | 1.00 | 0.909 | 0.971 | 3563             | 527  | 11616           | 2033 | 0.31      | 0.26 | 73.2         | 73.5 | 9.7                | 9.7  | A   |
| 19                | 1.00 | 1.00 | 0.909 | 0.971 | 3009             | 400  | 11616           | 2033 | 0.26      | 0.20 | 73.2         | 73.5 | 8.2                | 8.2  | A   |
| 20                | 1.00 | 1.00 | 0.909 | 0.971 | 2734             | 441  | 11616           | 2033 | 0.24      | 0.22 | 73.2         | 73.5 | 7.4                | 7.4  | A   |
| Segment 9: Basic  |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                 | 1.00 |      | 0.909 |       | 2939             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.4               |      | A   |
| 2                 | 1.00 |      | 0.909 |       | 3023             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.7               |      | A   |
| 3                 | 1.00 |      | 0.909 |       | 3182             |      | 9293            |      | 0.34      |      | 70.8         |      | 11.2               |      | B   |
| 4                 | 1.00 |      | 0.909 |       | 3520             |      | 9293            |      | 0.38      |      | 70.8         |      | 12.4               |      | B   |
| 5                 | 1.00 |      | 0.909 |       | 3767             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.3               |      | B   |
| 6                 | 1.00 |      | 0.909 |       | 4018             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.2               |      | B   |
| 7                 | 1.00 |      | 0.909 |       | 4000             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.1               |      | B   |
| 8                 | 1.00 |      | 0.909 |       | 3842             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.6               |      | B   |
| 9                 | 1.00 |      | 0.909 |       | 3754             |      | 9293            |      | 0.40      |      | 70.8         |      | 13.2               |      | B   |
| 10                | 1.00 |      | 0.909 |       | 3965             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.0               |      | B   |
| 11                | 1.00 |      | 0.909 |       | 3644             |      | 9293            |      | 0.39      |      | 70.8         |      | 12.9               |      | B   |
| 12                | 1.00 |      | 0.909 |       | 3943             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.9               |      | B   |
| 13                | 1.00 |      | 0.909 |       | 3886             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.7               |      | B   |
| 14                | 1.00 |      | 0.909 |       | 3974             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.0               |      | B   |
| 15                | 1.00 |      | 0.909 |       | 3837             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.5               |      | B   |
| 16                | 1.00 |      | 0.909 |       | 3877             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.7               |      | B   |
| 17                | 1.00 |      | 0.909 |       | 3692             |      | 9293            |      | 0.40      |      | 70.8         |      | 13.0               |      | B   |
| 18                | 1.00 |      | 0.909 |       | 3600             |      | 9293            |      | 0.39      |      | 70.8         |      | 12.7               |      | B   |
| 19                | 1.00 |      | 0.909 |       | 3036             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.7               |      | A   |
| 20                | 1.00 |      | 0.909 |       | 2763             |      | 9293            |      | 0.30      |      | 70.8         |      | 9.8                |      | A   |
| Segment 10: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                   | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 3100             | 161  | 11616           | 2033 | 0.27      | 0.08 | 72.8         | 73.5 | 8.4                | 8.4  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 3192             | 169  | 11616           | 2033 | 0.27      | 0.08 | 72.8         | 73.5 | 8.7                | 8.7  | A   |
| 3                 | 1.00 | 1.00 | 0.909 | 0.971 | 3371             | 189  | 11616           | 2033 | 0.29      | 0.09 | 72.8         | 73.5 | 9.2                | 9.2  | A   |
| 4                 | 1.00 | 1.00 | 0.909 | 0.971 | 3668             | 148  | 11616           | 2033 | 0.32      | 0.07 | 72.8         | 73.5 | 10.0               | 10.0 | A   |
| 5                 | 1.00 | 1.00 | 0.909 | 0.971 | 3985             | 218  | 11616           | 2033 | 0.34      | 0.11 | 72.8         | 73.5 | 10.8               | 10.8 | A   |
| 6                 | 1.00 | 1.00 | 0.909 | 0.971 | 4228             | 210  | 11616           | 2033 | 0.36      | 0.10 | 72.8         | 73.5 | 11.5               | 11.5 | B   |
| 7                 | 1.00 | 1.00 | 0.909 | 0.971 | 4222             | 222  | 11616           | 2033 | 0.36      | 0.11 | 72.8         | 73.5 | 11.5               | 11.5 | B   |
| 8                 | 1.00 | 1.00 | 0.909 | 0.971 | 4040             | 198  | 11616           | 2033 | 0.35      | 0.10 | 72.8         | 73.5 | 11.0               | 11.0 | A   |
| 9                 | 1.00 | 1.00 | 0.909 | 0.971 | 3976             | 222  | 11616           | 2033 | 0.34      | 0.11 | 72.8         | 73.5 | 10.8               | 10.8 | A   |

|                              |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
|------------------------------|-------------|------|-------|-------------------|------------------|-----|--------------------|------|-----------|------------------|--------------|------|--------------------|------|-----|
| 10                           | 1.00        | 1.00 | 0.909 | 0.971             | 4175             | 210 | 11616              | 2033 | 0.36      | 0.10             | 72.8         | 73.5 | 11.4               | 11.4 | B   |
| 11                           | 1.00        | 1.00 | 0.909 | 0.971             | 3920             | 276 | 11616              | 2033 | 0.34      | 0.14             | 72.8         | 73.5 | 10.7               | 10.7 | A   |
| 12                           | 1.00        | 1.00 | 0.909 | 0.971             | 4157             | 214 | 11616              | 2033 | 0.36      | 0.11             | 72.8         | 73.5 | 11.3               | 11.3 | B   |
| 13                           | 1.00        | 1.00 | 0.909 | 0.971             | 4174             | 288 | 11616              | 2033 | 0.36      | 0.14             | 72.8         | 73.5 | 11.4               | 11.4 | B   |
| 14                           | 1.00        | 1.00 | 0.909 | 0.971             | 4209             | 235 | 11616              | 2033 | 0.36      | 0.12             | 72.8         | 73.5 | 11.5               | 11.5 | B   |
| 15                           | 1.00        | 1.00 | 0.909 | 0.971             | 4002             | 165 | 11616              | 2033 | 0.34      | 0.08             | 72.8         | 73.5 | 10.9               | 10.9 | A   |
| 16                           | 1.00        | 1.00 | 0.909 | 0.971             | 3984             | 107 | 11616              | 2033 | 0.34      | 0.05             | 72.8         | 73.5 | 10.8               | 10.8 | A   |
| 17                           | 1.00        | 1.00 | 0.909 | 0.971             | 3795             | 103 | 11616              | 2033 | 0.33      | 0.05             | 72.8         | 73.5 | 10.3               | 10.3 | A   |
| 18                           | 1.00        | 1.00 | 0.909 | 0.971             | 3687             | 87  | 11616              | 2033 | 0.32      | 0.04             | 72.8         | 73.5 | 10.0               | 10.0 | A   |
| 19                           | 1.00        | 1.00 | 0.909 | 0.971             | 3123             | 87  | 11616              | 2033 | 0.27      | 0.04             | 72.8         | 73.5 | 8.5                | 8.5  | A   |
| 20                           | 1.00        | 1.00 | 0.909 | 0.971             | 2825             | 62  | 11616              | 2033 | 0.24      | 0.03             | 72.8         | 73.5 | 7.7                | 7.7  | A   |
| Segment 11: Basic            |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |     | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 3111             |     | 9293               |      | 0.33      |                  | 70.8         |      | 11.0               |      | A   |
| 2                            | 1.00        |      | 0.909 |                   | 3204             |     | 9293               |      | 0.34      |                  | 70.8         |      | 11.3               |      | B   |
| 3                            | 1.00        |      | 0.909 |                   | 3384             |     | 9293               |      | 0.36      |                  | 70.8         |      | 11.9               |      | B   |
| 4                            | 1.00        |      | 0.909 |                   | 3679             |     | 9293               |      | 0.40      |                  | 70.8         |      | 13.0               |      | B   |
| 5                            | 1.00        |      | 0.909 |                   | 4000             |     | 9293               |      | 0.43      |                  | 70.8         |      | 14.1               |      | B   |
| 6                            | 1.00        |      | 0.909 |                   | 4242             |     | 9293               |      | 0.46      |                  | 70.8         |      | 15.0               |      | B   |
| 7                            | 1.00        |      | 0.909 |                   | 4238             |     | 9293               |      | 0.46      |                  | 70.8         |      | 15.0               |      | B   |
| 8                            | 1.00        |      | 0.909 |                   | 4053             |     | 9293               |      | 0.44      |                  | 70.8         |      | 14.3               |      | B   |
| 9                            | 1.00        |      | 0.909 |                   | 3991             |     | 9293               |      | 0.43      |                  | 70.8         |      | 14.1               |      | B   |
| 10                           | 1.00        |      | 0.909 |                   | 4189             |     | 9293               |      | 0.45      |                  | 70.8         |      | 14.8               |      | B   |
| 11                           | 1.00        |      | 0.909 |                   | 3938             |     | 9293               |      | 0.42      |                  | 70.8         |      | 13.9               |      | B   |
| 12                           | 1.00        |      | 0.909 |                   | 4172             |     | 9293               |      | 0.45      |                  | 70.8         |      | 14.7               |      | B   |
| 13                           | 1.00        |      | 0.909 |                   | 4194             |     | 9293               |      | 0.45      |                  | 70.8         |      | 14.8               |      | B   |
| 14                           | 1.00        |      | 0.909 |                   | 4224             |     | 9293               |      | 0.45      |                  | 70.8         |      | 14.9               |      | B   |
| 15                           | 1.00        |      | 0.909 |                   | 4013             |     | 9293               |      | 0.43      |                  | 70.8         |      | 14.2               |      | B   |
| 16                           | 1.00        |      | 0.909 |                   | 3991             |     | 9293               |      | 0.43      |                  | 70.8         |      | 14.1               |      | B   |
| 17                           | 1.00        |      | 0.909 |                   | 3802             |     | 9293               |      | 0.41      |                  | 70.8         |      | 13.4               |      | B   |
| 18                           | 1.00        |      | 0.909 |                   | 3692             |     | 9293               |      | 0.40      |                  | 70.8         |      | 13.0               |      | B   |
| 19                           | 1.00        |      | 0.909 |                   | 3129             |     | 9293               |      | 0.34      |                  | 70.8         |      | 11.0               |      | A   |
| 20                           | 1.00        |      | 0.909 |                   | 2829             |     | 9293               |      | 0.30      |                  | 70.8         |      | 10.0               |      | A   |
| Facility Time Period Results |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |      |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |     | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |      |     |
| 1                            | 71.3        |      |       | 10.2              |                  |     | 9.3                |      |           | 2.50             |              |      | A                  |      |     |
| 2                            | 71.3        |      |       | 10.2              |                  |     | 9.3                |      |           | 2.50             |              |      | A                  |      |     |
| 3                            | 71.3        |      |       | 11.0              |                  |     | 10.0               |      |           | 2.50             |              |      | A                  |      |     |
| 4                            | 71.2        |      |       | 12.3              |                  |     | 11.2               |      |           | 2.50             |              |      | B                  |      |     |
| 5                            | 71.3        |      |       | 12.0              |                  |     | 10.9               |      |           | 2.50             |              |      | B                  |      |     |



|                          |      |      |                    |      |      |
|--------------------------|------|------|--------------------|------|------|
| 6                        | 71.3 | 12.0 | 10.9               | 2.50 | B    |
| 7                        | 71.3 | 12.1 | 11.0               | 2.50 | B    |
| 8                        | 71.3 | 11.9 | 10.8               | 2.50 | B    |
| 9                        | 71.3 | 12.1 | 11.0               | 2.50 | B    |
| 10                       | 71.3 | 12.5 | 11.4               | 2.50 | B    |
| 11                       | 71.3 | 11.3 | 10.2               | 2.50 | B    |
| 12                       | 71.3 | 12.3 | 11.2               | 2.50 | B    |
| 13                       | 71.3 | 11.7 | 10.7               | 2.50 | B    |
| 14                       | 71.3 | 12.3 | 11.2               | 2.50 | B    |
| 15                       | 71.3 | 12.0 | 10.9               | 2.50 | B    |
| 16                       | 71.3 | 12.1 | 11.0               | 2.50 | B    |
| 17                       | 71.3 | 12.0 | 10.9               | 2.50 | B    |
| 18                       | 71.3 | 11.5 | 10.5               | 2.50 | B    |
| 19                       | 71.3 | 10.1 | 9.2                | 2.50 | A    |
| 20                       | 71.3 | 9.0  | 8.2                | 2.50 | A    |
| Facility Overall Results |      |      |                    |      |      |
| Space Mean Speed, mi/h   |      | 71.3 | Density, veh/mi/ln |      | 10.5 |
| Average Travel Time, min |      | 2.50 | Density, pc/mi/ln  |      | 11.5 |
| Messages                 |      |      |                    |      |      |
| Comments                 |      |      |                    |      |      |
|                          |      |      |                    |      |      |



# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                                        |                      |                         |
|---------------------|------------------------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                                     | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                                        | Analysis Year        | 2040                    |
| Jurisdiction        | NMDOT                                                                  | Time Period Analyzed | AM Peak Period          |
| Project Description | 2030 Build + 10 years, I-25<br>Programmed Improvements -<br>Northbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.91  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | South of Sunport                    | 2640       | 5     |
| 2   | Diverge | Basic    | Sunport Off Ramp                    | 1500       | 5     |
| 3   | Basic   | Basic    | Bet Sunport and Gibson Off Ramps    | 1100       | 4     |
| 4   | Diverge | Basic    | Gibson Off Ramp                     | 800        | 5     |
| 5   | Basic   | Basic    | Bet Gibson Off and Sunport On Ramps | 1600       | 4     |
| 6   | Weaving | Weaving  | Bet Sunport On and ACC Off Ramps    | 2200       | 5     |
| 7   | Basic   | Basic    | North of ACC Off Ramp               | 2200       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 700        | 5     |
| 9   | Basic   | Basic    | North of Gibson On Ramp             | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 1602             | 11616           | 0.14      | 70.8         | 4.5                | A   |
| 2           | 1.00 | 0.909 | 2376             | 11616           | 0.20      | 70.8         | 6.7                | A   |
| 3           | 1.00 | 0.909 | 2772             | 11616           | 0.24      | 70.8         | 7.8                | A   |
| 4           | 1.00 | 0.909 | 2517             | 11616           | 0.22      | 70.8         | 7.1                | A   |
| 5           | 1.00 | 0.909 | 3507             | 11616           | 0.30      | 70.8         | 9.9                | A   |
| 6           | 1.00 | 0.909 | 4493             | 11616           | 0.39      | 70.8         | 12.7               | B   |
| 7           | 1.00 | 0.909 | 5223             | 11616           | 0.45      | 70.8         | 14.8               | B   |
| 8           | 1.00 | 0.909 | 4660             | 11616           | 0.40      | 70.8         | 13.2               | B   |
| 9           | 1.00 | 0.909 | 5712             | 11616           | 0.49      | 70.8         | 16.1               | B   |
| 10          | 1.00 | 0.909 | 6583             | 11616           | 0.57      | 70.2         | 18.8               | C   |
| 11          | 1.00 | 0.909 | 5738             | 11616           | 0.49      | 70.8         | 16.2               | B   |
| 12          | 1.00 | 0.909 | 4070             | 11616           | 0.35      | 70.8         | 11.5               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 4101  | 11616 | 0.35             | 70.8 | 11.6            | B    |           |      |              |      |                    |      |     |
| 14                 | 1.00 | 0.909 | 4062  | 11616 | 0.35             | 70.8 | 11.5            | B    |           |      |              |      |                    |      |     |
| 15                 | 1.00 | 0.909 | 3912  | 11616 | 0.34             | 70.8 | 11.0            | A    |           |      |              |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 3050  | 11616 | 0.26             | 70.8 | 8.6             | A    |           |      |              |      |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1602             | 54   | 11616           | 2033 | 0.14      | 0.03 | 73.4         | 73.5 | 4.4                | 4.4  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2376             | 82   | 11616           | 2033 | 0.20      | 0.04 | 73.4         | 73.5 | 6.5                | 6.5  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2772             | 103  | 11616           | 2033 | 0.24      | 0.05 | 73.4         | 73.5 | 7.5                | 7.5  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2517             | 115  | 11616           | 2033 | 0.22      | 0.06 | 73.4         | 73.5 | 6.8                | 6.8  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3507             | 99   | 11616           | 2033 | 0.30      | 0.05 | 73.4         | 73.5 | 9.5                | 9.5  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4493             | 111  | 11616           | 2033 | 0.39      | 0.05 | 73.4         | 73.5 | 12.2               | 12.2 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 5223             | 124  | 11616           | 2033 | 0.45      | 0.06 | 73.4         | 73.5 | 14.2               | 14.2 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4660             | 140  | 11616           | 2033 | 0.40      | 0.07 | 73.4         | 73.5 | 12.7               | 12.7 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5712             | 103  | 11616           | 2033 | 0.49      | 0.05 | 73.2         | 73.2 | 15.6               | 15.6 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 6583             | 152  | 11616           | 2033 | 0.57      | 0.07 | 72.2         | 72.2 | 18.2               | 18.2 | C   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 5738             | 210  | 11616           | 2033 | 0.49      | 0.10 | 73.2         | 73.2 | 15.7               | 15.7 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4070             | 202  | 11616           | 2033 | 0.35      | 0.10 | 73.4         | 73.5 | 11.1               | 11.1 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4101             | 165  | 11616           | 2033 | 0.35      | 0.08 | 73.4         | 73.5 | 11.2               | 11.2 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4062             | 165  | 11616           | 2033 | 0.35      | 0.08 | 73.4         | 73.5 | 11.0               | 11.0 | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3912             | 165  | 11616           | 2033 | 0.34      | 0.08 | 73.4         | 73.5 | 10.6               | 10.6 | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 3050             | 136  | 11616           | 2033 | 0.26      | 0.07 | 73.4         | 73.5 | 8.3                | 8.3  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1545             |      | 9293            |      | 0.17      |      | 70.8         |      | 5.5                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2288             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.1                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2662             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.4                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2394             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.4                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 3402             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.0               |      | B   |
| 6                  | 1.00 |       | 0.909 |       | 4374             |      | 9293            |      | 0.47      |      | 70.8         |      | 15.5               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 5091             |      | 9293            |      | 0.55      |      | 70.4         |      | 18.1               |      | C   |
| 8                  | 1.00 |       | 0.909 |       | 4510             |      | 9293            |      | 0.49      |      | 70.8         |      | 15.9               |      | B   |
| 9                  | 1.00 |       | 0.909 |       | 5602             |      | 9293            |      | 0.60      |      | 69.6         |      | 20.1               |      | C   |
| 10                 | 1.00 |       | 0.909 |       | 6420             |      | 9293            |      | 0.69      |      | 67.5         |      | 23.8               |      | C   |
| 11                 | 1.00 |       | 0.909 |       | 5514             |      | 9293            |      | 0.59      |      | 69.8         |      | 19.7               |      | C   |
| 12                 | 1.00 |       | 0.909 |       | 3855             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.6               |      | B   |
| 13                 | 1.00 |       | 0.909 |       | 3925             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.9               |      | B   |
| 14                 | 1.00 |       | 0.909 |       | 3886             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.7               |      | B   |
| 15                 | 1.00 |       | 0.909 |       | 3736             |      | 9293            |      | 0.40      |      | 70.8         |      | 13.2               |      | B   |

| 16                 | 1.00 | 0.909 | 2904  |       | 9293             |      | 0.31            | 70.8 |           | 10.3 |              | A    |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Segment 4: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 1545             | 358  | 11616           | 2033 | 0.13      | 0.18 | 72.9         | 73.5 | 4.2                | 4.2  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2288             | 428  | 11616           | 2033 | 0.20      | 0.21 | 72.9         | 73.5 | 6.2                | 6.2  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2662             | 597  | 11616           | 2033 | 0.23      | 0.29 | 72.9         | 73.5 | 7.2                | 7.2  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 2394             | 618  | 11616           | 2033 | 0.21      | 0.30 | 72.9         | 73.5 | 6.5                | 6.5  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3402             | 395  | 11616           | 2033 | 0.29      | 0.19 | 72.9         | 73.5 | 9.3                | 9.3  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4374             | 536  | 11616           | 2033 | 0.38      | 0.26 | 72.9         | 73.5 | 11.9               | 11.9 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 5091             | 684  | 11616           | 2033 | 0.44      | 0.34 | 72.8         | 73.5 | 13.9               | 13.9 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4510             | 820  | 11616           | 2033 | 0.39      | 0.40 | 72.9         | 73.5 | 12.3               | 12.3 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5602             | 997  | 11616           | 2033 | 0.48      | 0.49 | 72.7         | 73.3 | 15.3               | 15.3 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 6420             | 939  | 11616           | 2033 | 0.55      | 0.46 | 72.2         | 72.5 | 17.7               | 17.7 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 5514             | 952  | 11616           | 2033 | 0.47      | 0.47 | 72.7         | 73.4 | 15.0               | 15.0 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3855             | 1178 | 11616           | 2033 | 0.33      | 0.58 | 72.9         | 73.5 | 10.5               | 10.5 | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 3925             | 939  | 11616           | 2033 | 0.34      | 0.46 | 72.9         | 73.5 | 10.7               | 10.7 | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 3886             | 927  | 11616           | 2033 | 0.33      | 0.46 | 72.9         | 73.5 | 10.6               | 10.6 | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 3736             | 791  | 11616           | 2033 | 0.32      | 0.39 | 72.9         | 73.5 | 10.2               | 10.2 | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2904             | 1005 | 11616           | 2033 | 0.25      | 0.49 | 72.9         | 73.5 | 7.9                | 7.9  | A   |
| Segment 5: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1162             |      | 9293            |      | 0.13      |      | 70.8         |      | 4.1                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1831             |      | 9293            |      | 0.20      |      | 70.8         |      | 6.5                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2024             |      | 9293            |      | 0.22      |      | 70.8         |      | 7.1                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 1734             |      | 9293            |      | 0.19      |      | 70.8         |      | 6.1                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 2979             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.5               |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 3802             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.4               |      | B   |
| 7                  | 1.00 |       | 0.909 |       | 4361             |      | 9293            |      | 0.47      |      | 70.8         |      | 15.4               |      | B   |
| 8                  | 1.00 |       | 0.909 |       | 3635             |      | 9293            |      | 0.39      |      | 70.8         |      | 12.8               |      | B   |
| 9                  | 1.00 |       | 0.909 |       | 4537             |      | 9293            |      | 0.49      |      | 70.8         |      | 16.0               |      | B   |
| 10                 | 1.00 |       | 0.909 |       | 5417             |      | 9293            |      | 0.58      |      | 69.9         |      | 19.4               |      | C   |
| 11                 | 1.00 |       | 0.909 |       | 4497             |      | 9293            |      | 0.48      |      | 70.8         |      | 15.9               |      | B   |
| 12                 | 1.00 |       | 0.909 |       | 2596             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.2                |      | A   |
| 13                 | 1.00 |       | 0.909 |       | 2922             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.3               |      | A   |
| 14                 | 1.00 |       | 0.909 |       | 2895             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.2               |      | A   |
| 15                 | 1.00 |       | 0.909 |       | 2891             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.2               |      | A   |
| 16                 | 1.00 |       | 0.909 |       | 1831             |      | 9293            |      | 0.20      |      | 70.8         |      | 6.5                |      | A   |
| Segment 6: Weaving |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time               | PHF  |       | fHV   |       | Flow Rate        |      | Capacity        |      | d/c       |      | Speed        |      | Density            |      | LOS |

| Period           |      |       |       |       | (pc/h)           |      | (pc/h)          |      | Ratio     |      | (mi/h)       |      | (pc/mi/ln)         |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 | 0.909 |       |       | 1606             |      | 4819            |      | 0.33      |      | 64.4         |      | 5.0                |      | A   |
| 2                | 1.00 | 0.909 |       |       | 2300             |      | 6179            |      | 0.37      |      | 63.9         |      | 7.2                |      | A   |
| 3                | 1.00 | 0.909 |       |       | 2327             |      | 6313            |      | 0.37      |      | 63.9         |      | 7.3                |      | A   |
| 4                | 1.00 | 0.909 |       |       | 2159             |      | 5029            |      | 0.43      |      | 62.8         |      | 6.9                |      | A   |
| 5                | 1.00 | 0.909 |       |       | 3541             |      | 8867            |      | 0.40      |      | 62.6         |      | 11.3               |      | B   |
| 6                | 1.00 | 0.909 |       |       | 4235             |      | 10304           |      | 0.41      |      | 62.0         |      | 13.7               |      | B   |
| 7                | 1.00 | 0.909 |       |       | 4711             |      | 10349           |      | 0.46      |      | 61.3         |      | 15.4               |      | B   |
| 8                | 1.00 | 0.909 |       |       | 4004             |      | 7518            |      | 0.53      |      | 60.2         |      | 13.3               |      | B   |
| 9                | 1.00 | 0.909 |       |       | 5050             |      | 8510            |      | 0.59      |      | 58.4         |      | 17.3               |      | B   |
| 10               | 1.00 | 0.909 |       |       | 5856             |      | 10294           |      | 0.57      |      | 58.2         |      | 20.1               |      | C   |
| 11               | 1.00 | 0.909 |       |       | 5048             |      | 8267            |      | 0.61      |      | 58.1         |      | 17.4               |      | B   |
| 12               | 1.00 | 0.909 |       |       | 3042             |      | 4601            |      | 0.66      |      | 59.1         |      | 10.3               |      | B   |
| 13               | 1.00 | 0.909 |       |       | 3394             |      | 5867            |      | 0.58      |      | 60.0         |      | 11.3               |      | B   |
| 14               | 1.00 | 0.909 |       |       | 3203             |      | 6382            |      | 0.50      |      | 61.2         |      | 10.5               |      | B   |
| 15               | 1.00 | 0.909 |       |       | 3376             |      | 6453            |      | 0.52      |      | 60.8         |      | 11.1               |      | B   |
| 16               | 1.00 | 0.909 |       |       | 2447             |      | 3682            |      | 0.66      |      | 59.1         |      | 8.3                |      | A   |
| Segment 7: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 | 0.909 |       |       | 1329             |      | 9293            |      | 0.14      |      | 70.6         |      | 4.7                |      | A   |
| 2                | 1.00 | 0.909 |       |       | 1963             |      | 9293            |      | 0.21      |      | 70.6         |      | 6.9                |      | A   |
| 3                | 1.00 | 0.909 |       |       | 1831             |      | 9293            |      | 0.20      |      | 70.6         |      | 6.5                |      | A   |
| 4                | 1.00 | 0.909 |       |       | 1655             |      | 9293            |      | 0.18      |      | 70.6         |      | 5.8                |      | A   |
| 5                | 1.00 | 0.909 |       |       | 3239             |      | 9293            |      | 0.35      |      | 70.6         |      | 11.4               |      | B   |
| 6                | 1.00 | 0.909 |       |       | 3802             |      | 9293            |      | 0.41      |      | 70.6         |      | 13.4               |      | B   |
| 7                | 1.00 | 0.909 |       |       | 4145             |      | 9293            |      | 0.45      |      | 70.5         |      | 14.6               |      | B   |
| 8                | 1.00 | 0.909 |       |       | 3221             |      | 9293            |      | 0.35      |      | 70.5         |      | 11.4               |      | B   |
| 9                | 1.00 | 0.909 |       |       | 4277             |      | 9293            |      | 0.46      |      | 70.4         |      | 15.1               |      | B   |
| 10               | 1.00 | 0.909 |       |       | 5078             |      | 9293            |      | 0.55      |      | 70.4         |      | 18.0               |      | B   |
| 11               | 1.00 | 0.909 |       |       | 4277             |      | 9293            |      | 0.46      |      | 70.4         |      | 15.1               |      | B   |
| 12               | 1.00 | 0.909 |       |       | 2055             |      | 9293            |      | 0.22      |      | 70.5         |      | 7.3                |      | A   |
| 13               | 1.00 | 0.909 |       |       | 2614             |      | 9293            |      | 0.28      |      | 70.5         |      | 9.2                |      | A   |
| 14               | 1.00 | 0.909 |       |       | 2425             |      | 9293            |      | 0.26      |      | 70.5         |      | 8.6                |      | A   |
| 15               | 1.00 | 0.909 |       |       | 2728             |      | 9293            |      | 0.29      |      | 70.5         |      | 9.6                |      | A   |
| 16               | 1.00 | 0.909 |       |       | 1624             |      | 9293            |      | 0.17      |      | 70.5         |      | 5.7                |      | A   |
| Segment 8: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 1547             | 218  | 11616           | 2033 | 0.13      | 0.11 | 73.2         | 73.5 | 4.2                | 4.2  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 2214             | 251  | 11616           | 2033 | 0.19      | 0.12 | 73.2         | 73.5 | 6.0                | 6.0  | A   |

|                              |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |      |     |
|------------------------------|-------------|------|-------|-------------------|------------------|------|--------------------|------|-----------|------------------|--------------|------|--------------------|------|-----|
| 3                            | 1.00        | 1.00 | 0.909 | 0.971             | 2152             | 321  | 11616              | 2033 | 0.19      | 0.16             | 73.2         | 73.5 | 5.9                | 5.9  | A   |
| 4                            | 1.00        | 1.00 | 0.909 | 0.971             | 2063             | 408  | 11616              | 2033 | 0.18      | 0.20             | 73.2         | 73.5 | 5.6                | 5.6  | A   |
| 5                            | 1.00        | 1.00 | 0.909 | 0.971             | 3762             | 523  | 11616              | 2033 | 0.32      | 0.26             | 73.2         | 73.5 | 10.2               | 10.2 | A   |
| 6                            | 1.00        | 1.00 | 0.909 | 0.971             | 4515             | 713  | 11616              | 2033 | 0.39      | 0.35             | 73.2         | 73.5 | 12.3               | 12.3 | B   |
| 7                            | 1.00        | 1.00 | 0.909 | 0.971             | 5035             | 890  | 11616              | 2033 | 0.43      | 0.44             | 73.2         | 73.5 | 13.7               | 13.7 | B   |
| 8                            | 1.00        | 1.00 | 0.909 | 0.971             | 4164             | 943  | 11616              | 2033 | 0.36      | 0.46             | 73.2         | 73.5 | 11.3               | 11.3 | B   |
| 9                            | 1.00        | 1.00 | 0.909 | 0.971             | 5443             | 1166 | 11616              | 2033 | 0.47      | 0.57             | 73.2         | 73.4 | 14.8               | 14.8 | B   |
| 10                           | 1.00        | 1.00 | 0.909 | 0.971             | 6227             | 1149 | 11616              | 2033 | 0.54      | 0.57             | 72.7         | 72.7 | 17.1               | 17.1 | B   |
| 11                           | 1.00        | 1.00 | 0.909 | 0.971             | 5599             | 1322 | 11616              | 2033 | 0.48      | 0.65             | 73.2         | 73.3 | 15.3               | 15.3 | B   |
| 12                           | 1.00        | 1.00 | 0.909 | 0.971             | 3353             | 1298 | 11616              | 2033 | 0.29      | 0.64             | 73.2         | 73.5 | 9.1                | 9.1  | A   |
| 13                           | 1.00        | 1.00 | 0.909 | 0.971             | 3763             | 1149 | 11616              | 2033 | 0.32      | 0.57             | 73.2         | 73.5 | 10.2               | 10.2 | A   |
| 14                           | 1.00        | 1.00 | 0.909 | 0.971             | 3653             | 1228 | 11616              | 2033 | 0.31      | 0.60             | 73.2         | 73.5 | 9.9                | 9.9  | A   |
| 15                           | 1.00        | 1.00 | 0.909 | 0.971             | 3919             | 1191 | 11616              | 2033 | 0.34      | 0.59             | 73.2         | 73.5 | 10.7               | 10.7 | A   |
| 16                           | 1.00        | 1.00 | 0.909 | 0.971             | 2852             | 1228 | 11616              | 2033 | 0.25      | 0.60             | 73.2         | 73.5 | 7.8                | 7.8  | A   |
| Segment 9: Basic             |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |      |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |      | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 1562             |      | 9293               |      | 0.17      |                  | 70.8         |      | 5.5                |      | A   |
| 2                            | 1.00        |      | 0.909 |                   | 2231             |      | 9293               |      | 0.24      |                  | 70.8         |      | 7.9                |      | A   |
| 3                            | 1.00        |      | 0.909 |                   | 2174             |      | 9293               |      | 0.23      |                  | 70.8         |      | 7.7                |      | A   |
| 4                            | 1.00        |      | 0.909 |                   | 2090             |      | 9293               |      | 0.22      |                  | 70.8         |      | 7.4                |      | A   |
| 5                            | 1.00        |      | 0.909 |                   | 3798             |      | 9293               |      | 0.41      |                  | 70.8         |      | 13.4               |      | B   |
| 6                            | 1.00        |      | 0.909 |                   | 4563             |      | 9293               |      | 0.49      |                  | 70.8         |      | 16.1               |      | B   |
| 7                            | 1.00        |      | 0.909 |                   | 5096             |      | 9293               |      | 0.55      |                  | 70.4         |      | 18.1               |      | C   |
| 8                            | 1.00        |      | 0.909 |                   | 4229             |      | 9293               |      | 0.46      |                  | 70.8         |      | 14.9               |      | B   |
| 9                            | 1.00        |      | 0.909 |                   | 5523             |      | 9293               |      | 0.59      |                  | 69.8         |      | 19.8               |      | C   |
| 10                           | 1.00        |      | 0.909 |                   | 6306             |      | 9293               |      | 0.68      |                  | 67.9         |      | 23.2               |      | C   |
| 11                           | 1.00        |      | 0.909 |                   | 5690             |      | 9293               |      | 0.61      |                  | 69.4         |      | 20.5               |      | C   |
| 12                           | 1.00        |      | 0.909 |                   | 3441             |      | 9293               |      | 0.37      |                  | 70.8         |      | 12.1               |      | B   |
| 13                           | 1.00        |      | 0.909 |                   | 3842             |      | 9293               |      | 0.41      |                  | 70.8         |      | 13.6               |      | B   |
| 14                           | 1.00        |      | 0.909 |                   | 3736             |      | 9293               |      | 0.40      |                  | 70.8         |      | 13.2               |      | B   |
| 15                           | 1.00        |      | 0.909 |                   | 4000             |      | 9293               |      | 0.43      |                  | 70.8         |      | 14.1               |      | B   |
| 16                           | 1.00        |      | 0.909 |                   | 2935             |      | 9293               |      | 0.32      |                  | 70.8         |      | 10.4               |      | A   |
| Facility Time Period Results |             |      |       |                   |                  |      |                    |      |           |                  |              |      |                    |      |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |      | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |      |     |
| 1                            | 70.2        |      |       | 4.7               |                  |      | 4.3                |      |           | 2.50             |              |      | A                  |      |     |
| 2                            | 70.1        |      |       | 7.0               |                  |      | 6.3                |      |           | 2.50             |              |      | A                  |      |     |
| 3                            | 70.2        |      |       | 7.4               |                  |      | 6.7                |      |           | 2.50             |              |      | A                  |      |     |
| 4                            | 70.0        |      |       | 6.8               |                  |      | 6.2                |      |           | 2.50             |              |      | A                  |      |     |
| 5                            | 69.9        |      |       | 11.0              |                  |      | 10.0               |      |           | 2.50             |              |      | A                  |      |     |
| 6                            | 69.8        |      |       | 13.6              |                  |      | 12.4               |      |           | 2.50             |              |      | B                  |      |     |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 7  | 69.6 | 15.5 | 14.1 | 2.50 | B |
| 8  | 69.5 | 13.2 | 12.0 | 2.50 | B |
| 9  | 68.9 | 16.8 | 15.3 | 2.50 | B |
| 10 | 68.0 | 19.7 | 17.9 | 2.60 | C |
| 11 | 68.8 | 16.9 | 15.4 | 2.50 | B |
| 12 | 69.4 | 10.6 | 9.6  | 2.50 | A |
| 13 | 69.5 | 11.4 | 10.4 | 2.50 | B |
| 14 | 69.8 | 11.1 | 10.1 | 2.50 | B |
| 15 | 69.7 | 11.3 | 10.2 | 2.50 | B |
| 16 | 69.4 | 8.3  | 7.5  | 2.50 | A |

Facility Overall Results

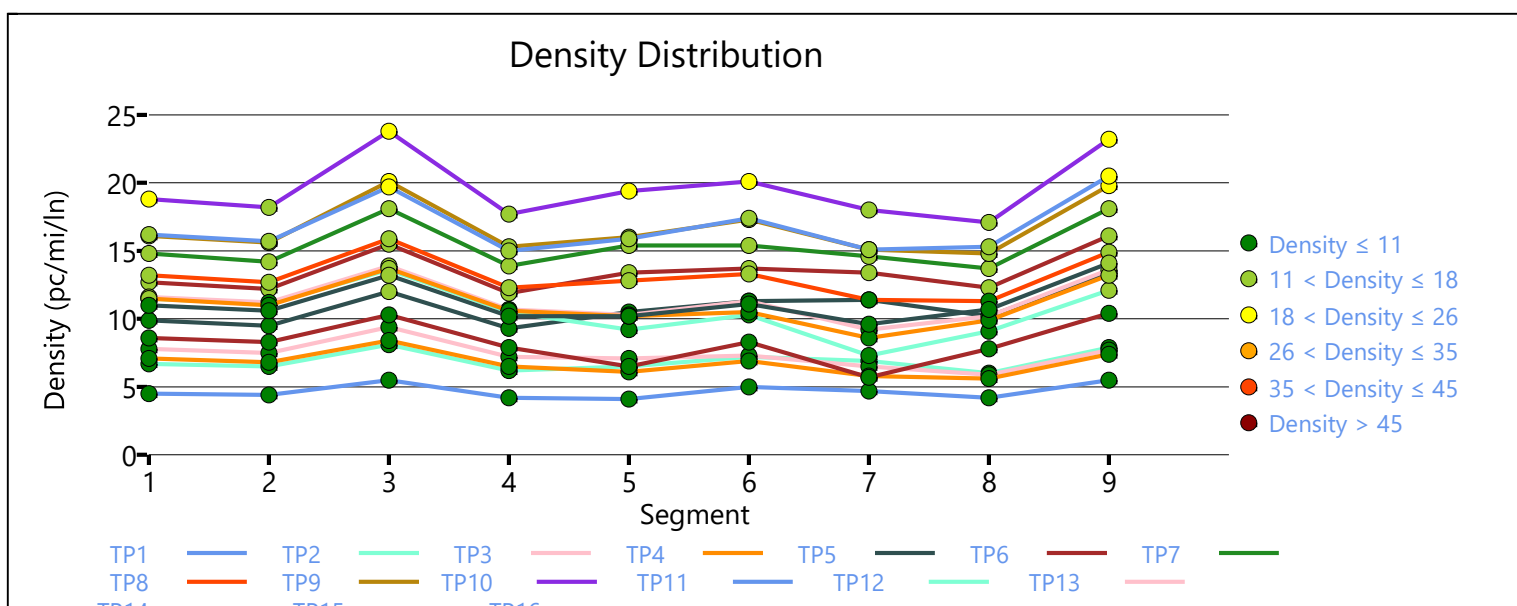
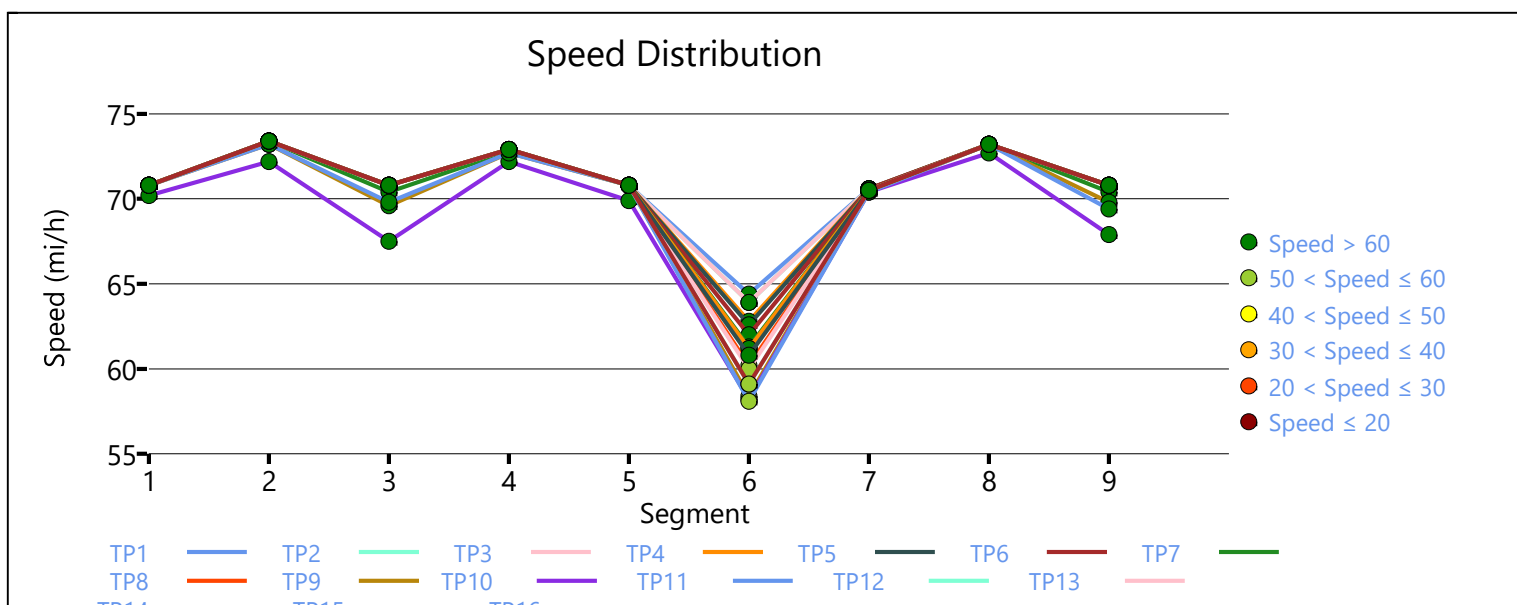
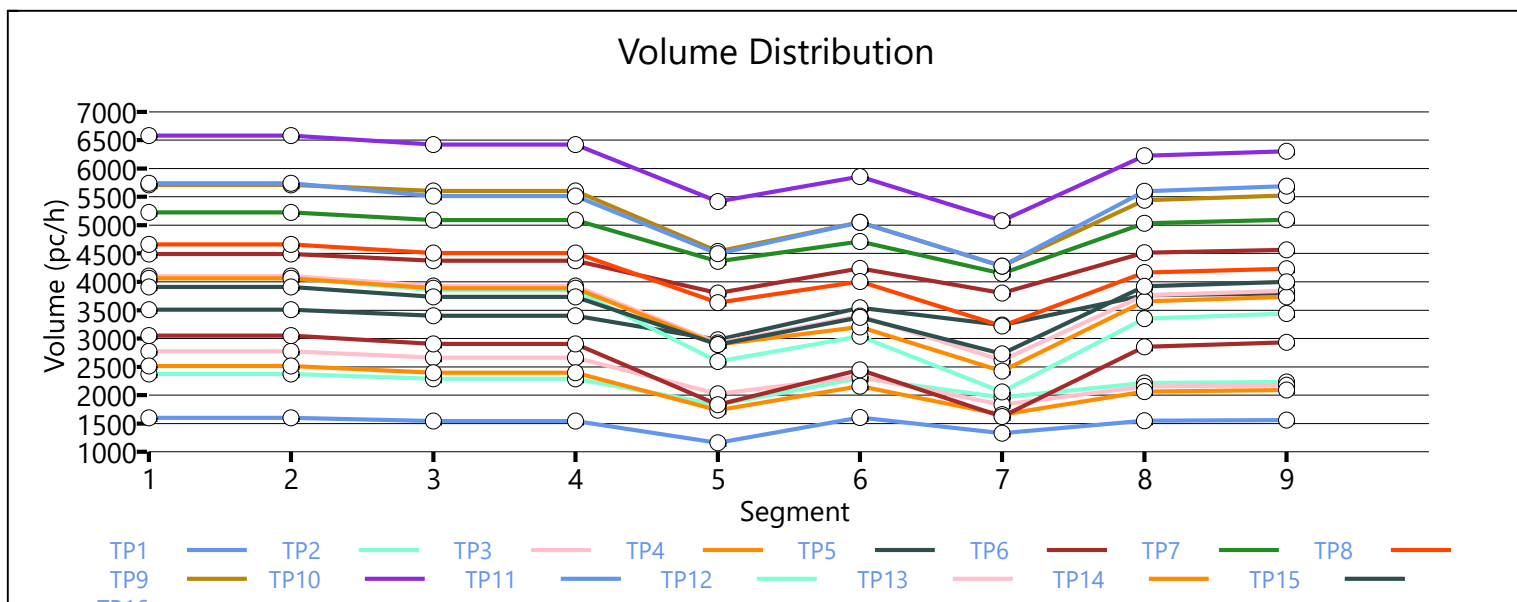
|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 69.4 | Density, veh/mi/ln | 10.5 |
| Average Travel Time, min | 2.50 | Density, pc/mi/ln  | 11.6 |

Messages

Comments

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# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                                        |                      |                         |
|---------------------|------------------------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                                     | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                                        | Analysis Year        | 2040                    |
| Jurisdiction        | NMDOT                                                                  | Time Period Analyzed | AM Peak Period          |
| Project Description | 2030 Build + 10 Years, I-25<br>Programmed Improvements -<br>Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 11   |
| Total Time Periods               | 16    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.98  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | North of ACC                        | 2640       | 4     |
| 2   | Diverge | Basic    | Off Ramp to Gibson                  | 600        | 5     |
| 3   | Basic   | Basic    | Bet Gibson Off and ACC On Ramps     | 1750       | 4     |
| 4   | Merge   | Basic    | ACC On-ramp                         | 600        | 5     |
| 5   | Basic   | Basic    | Bet ACC On and Sunport Off Ramps    | 2400       | 4     |
| 6   | Diverge | Basic    | Sunport Off Ramp                    | 600        | 5     |
| 7   | Basic   | Basic    | Bet Sunport Off and Gibson On Ramps | 2000       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 800        | 5     |
| 9   | Basic   | Basic    | Bet Gibson and Sunport On Ramps     | 900        | 4     |
| 10  | Merge   | Basic    | Sunport On Ramp                     | 800        | 5     |
| 11  | Basic   | Basic    | S of Sunport                        | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2583             | 9600            | 0.27      | 72.6         | 8.9                | A   |
| 2           | 1.00 | 0.909 | 2948             | 9600            | 0.31      | 72.6         | 10.2               | A   |
| 3           | 1.00 | 0.909 | 3683             | 9600            | 0.38      | 72.6         | 12.7               | B   |
| 4           | 1.00 | 0.909 | 4484             | 9600            | 0.47      | 72.6         | 15.4               | B   |
| 5           | 1.00 | 0.909 | 3657             | 9600            | 0.38      | 72.6         | 12.6               | B   |
| 6           | 1.00 | 0.909 | 4871             | 9600            | 0.51      | 72.4         | 16.8               | B   |
| 7           | 1.00 | 0.909 | 5694             | 9600            | 0.59      | 71.4         | 19.9               | C   |
| 8           | 1.00 | 0.909 | 6086             | 9600            | 0.63      | 70.5         | 21.6               | C   |
| 9           | 1.00 | 0.909 | 5589             | 9600            | 0.58      | 71.6         | 19.5               | C   |
| 10          | 1.00 | 0.909 | 6037             | 9600            | 0.63      | 70.7         | 21.3               | C   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 11                 | 1.00 | 0.909 | 5421  | 9600  | 0.56             | 71.8 | 18.9            | C    |           |      |              |      |                    |      |     |
| 12                 | 1.00 | 0.909 | 5606  | 9600  | 0.58             | 71.5 | 19.6            | C    |           |      |              |      |                    |      |     |
| 13                 | 1.00 | 0.909 | 5237  | 9600  | 0.55             | 72.1 | 18.2            | C    |           |      |              |      |                    |      |     |
| 14                 | 1.00 | 0.909 | 4942  | 9600  | 0.51             | 72.4 | 17.1            | B    |           |      |              |      |                    |      |     |
| 15                 | 1.00 | 0.909 | 4664  | 9600  | 0.49             | 72.5 | 16.1            | B    |           |      |              |      |                    |      |     |
| 16                 | 1.00 | 0.909 | 4400  | 9600  | 0.46             | 72.6 | 15.2            | B    |           |      |              |      |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2583             | 1252 | 12000           | 2033 | 0.22      | 0.62 | 75.2         | 75.4 | 6.9                | 6.9  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2948             | 1355 | 12000           | 2033 | 0.25      | 0.67 | 75.2         | 75.4 | 7.8                | 7.8  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 3683             | 1808 | 12000           | 2033 | 0.31      | 0.89 | 75.2         | 75.4 | 9.8                | 9.8  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 4484             | 2056 | 12000           | 2033 | 0.37      | 1.01 | 75.2         | 75.4 | 11.9               | 11.9 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3657             | 1590 | 12000           | 2033 | 0.30      | 0.78 | 75.2         | 75.4 | 9.7                | 9.7  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4871             | 2019 | 12000           | 2033 | 0.41      | 0.99 | 75.2         | 75.4 | 12.9               | 12.9 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 5694             | 2744 | 12000           | 2033 | 0.47      | 1.35 | 75.1         | 75.1 | 15.2               | 15.2 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 6086             | 3275 | 12000           | 2033 | 0.51      | 1.61 | 74.8         | 74.8 | 16.3               | 16.3 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 5589             | 3168 | 12000           | 2033 | 0.47      | 1.56 | 75.1         | 75.2 | 14.9               | 14.9 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 6037             | 3258 | 12000           | 2033 | 0.50      | 1.60 | 74.9         | 74.9 | 16.1               | 16.1 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 5421             | 2822 | 12000           | 2033 | 0.45      | 1.39 | 75.1         | 75.3 | 14.4               | 14.4 | B   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 5606             | 2801 | 12000           | 2033 | 0.47      | 1.38 | 75.1         | 75.2 | 14.9               | 14.9 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 5237             | 2727 | 12000           | 2033 | 0.44      | 1.34 | 75.2         | 75.4 | 13.9               | 13.9 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4942             | 2525 | 12000           | 2033 | 0.41      | 1.24 | 75.2         | 75.4 | 13.1               | 13.1 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4664             | 2311 | 12000           | 2033 | 0.39      | 1.14 | 75.2         | 75.4 | 12.4               | 12.4 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4400             | 2097 | 12000           | 2033 | 0.37      | 1.03 | 75.2         | 75.4 | 11.7               | 11.7 | B   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 1245             |      | 9600            |      | 0.13      |      | 72.6         |      | 4.3                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 1501             |      | 9600            |      | 0.16      |      | 72.6         |      | 5.2                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 1751             |      | 9600            |      | 0.18      |      | 72.6         |      | 6.0                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 2288             |      | 9600            |      | 0.24      |      | 72.6         |      | 7.9                |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 1958             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.7                |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 2715             |      | 9600            |      | 0.28      |      | 72.6         |      | 9.4                |      | A   |
| 7                  | 1.00 |       | 0.909 |       | 2763             |      | 9600            |      | 0.29      |      | 72.6         |      | 9.5                |      | A   |
| 8                  | 1.00 |       | 0.909 |       | 2587             |      | 9600            |      | 0.27      |      | 72.6         |      | 8.9                |      | A   |
| 9                  | 1.00 |       | 0.909 |       | 2205             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.6                |      | A   |
| 10                 | 1.00 |       | 0.909 |       | 2557             |      | 9600            |      | 0.27      |      | 72.6         |      | 8.8                |      | A   |
| 11                 | 1.00 |       | 0.909 |       | 2407             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.3                |      | A   |
| 12                 | 1.00 |       | 0.909 |       | 2614             |      | 9600            |      | 0.27      |      | 72.6         |      | 9.0                |      | A   |
| 13                 | 1.00 |       | 0.909 |       | 2323             |      | 9600            |      | 0.24      |      | 72.6         |      | 8.0                |      | A   |

|                  |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 14               | 1.00 | 0.909 | 2244  |       | 9600             |      | 0.23            | 72.6 |           | 7.7  |              | A    |                    |      |     |
| 15               | 1.00 | 0.909 | 2196  |       | 9600             |      | 0.23            | 72.6 |           | 7.6  |              | A    |                    |      |     |
| 16               | 1.00 | 0.909 | 2161  |       | 9600             |      | 0.23            | 72.6 |           | 7.4  |              | A    |                    |      |     |
| Segment 4: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 1315             | 70   | 12000           | 2033 | 0.11      | 0.03 | 75.0         | 75.4 | 3.5                | 3.5  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 1571             | 70   | 12000           | 2033 | 0.13      | 0.03 | 75.0         | 75.4 | 4.2                | 4.2  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 1945             | 194  | 12000           | 2033 | 0.16      | 0.10 | 75.0         | 75.4 | 5.2                | 5.2  | A   |
| 4                | 1.00 | 1.00  | 0.909 | 0.971 | 2535             | 247  | 12000           | 2033 | 0.21      | 0.12 | 75.0         | 75.4 | 6.7                | 6.7  | A   |
| 5                | 1.00 | 1.00  | 0.909 | 0.971 | 2255             | 297  | 12000           | 2033 | 0.19      | 0.15 | 75.0         | 75.4 | 6.0                | 6.0  | A   |
| 6                | 1.00 | 1.00  | 0.909 | 0.971 | 3045             | 330  | 12000           | 2033 | 0.25      | 0.16 | 75.0         | 75.4 | 8.1                | 8.1  | A   |
| 7                | 1.00 | 1.00  | 0.909 | 0.971 | 3179             | 416  | 12000           | 2033 | 0.26      | 0.20 | 75.0         | 75.4 | 8.4                | 8.4  | A   |
| 8                | 1.00 | 1.00  | 0.909 | 0.971 | 3226             | 639  | 12000           | 2033 | 0.27      | 0.31 | 75.0         | 75.4 | 8.6                | 8.6  | A   |
| 9                | 1.00 | 1.00  | 0.909 | 0.971 | 2844             | 639  | 12000           | 2033 | 0.24      | 0.31 | 75.0         | 75.4 | 7.5                | 7.5  | A   |
| 10               | 1.00 | 1.00  | 0.909 | 0.971 | 3196             | 639  | 12000           | 2033 | 0.27      | 0.31 | 75.0         | 75.4 | 8.5                | 8.5  | A   |
| 11               | 1.00 | 1.00  | 0.909 | 0.971 | 3046             | 639  | 12000           | 2033 | 0.25      | 0.31 | 75.0         | 75.4 | 8.1                | 8.1  | A   |
| 12               | 1.00 | 1.00  | 0.909 | 0.971 | 3154             | 540  | 12000           | 2033 | 0.26      | 0.27 | 75.0         | 75.4 | 8.4                | 8.4  | A   |
| 13               | 1.00 | 1.00  | 0.909 | 0.971 | 2879             | 556  | 12000           | 2033 | 0.24      | 0.27 | 75.0         | 75.4 | 7.6                | 7.6  | A   |
| 14               | 1.00 | 1.00  | 0.909 | 0.971 | 2895             | 651  | 12000           | 2033 | 0.24      | 0.32 | 75.0         | 75.4 | 7.7                | 7.7  | A   |
| 15               | 1.00 | 1.00  | 0.909 | 0.971 | 2732             | 536  | 12000           | 2033 | 0.23      | 0.26 | 75.0         | 75.4 | 7.2                | 7.2  | A   |
| 16               | 1.00 | 1.00  | 0.909 | 0.971 | 2787             | 626  | 12000           | 2033 | 0.23      | 0.31 | 75.0         | 75.4 | 7.4                | 7.4  | A   |
| Segment 5: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |       | 0.909 |       | 1320             |      | 9600            |      | 0.14      |      | 72.6         |      | 4.5                |      | A   |
| 2                | 1.00 |       | 0.909 |       | 1575             |      | 9600            |      | 0.16      |      | 72.6         |      | 5.4                |      | A   |
| 3                | 1.00 |       | 0.909 |       | 1958             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.7                |      | A   |
| 4                | 1.00 |       | 0.909 |       | 2552             |      | 9600            |      | 0.27      |      | 72.6         |      | 8.8                |      | A   |
| 5                | 1.00 |       | 0.909 |       | 2275             |      | 9600            |      | 0.24      |      | 72.6         |      | 7.8                |      | A   |
| 6                | 1.00 |       | 0.909 |       | 3067             |      | 9600            |      | 0.32      |      | 72.6         |      | 10.6               |      | A   |
| 7                | 1.00 |       | 0.909 |       | 3208             |      | 9600            |      | 0.33      |      | 72.6         |      | 11.0               |      | A   |
| 8                | 1.00 |       | 0.909 |       | 3270             |      | 9600            |      | 0.34      |      | 72.6         |      | 11.3               |      | B   |
| 9                | 1.00 |       | 0.909 |       | 2887             |      | 9600            |      | 0.30      |      | 72.6         |      | 9.9                |      | A   |
| 10               | 1.00 |       | 0.909 |       | 3239             |      | 9600            |      | 0.34      |      | 72.6         |      | 11.2               |      | B   |
| 11               | 1.00 |       | 0.909 |       | 3089             |      | 9600            |      | 0.32      |      | 72.6         |      | 10.6               |      | A   |
| 12               | 1.00 |       | 0.909 |       | 3190             |      | 9600            |      | 0.33      |      | 72.6         |      | 11.0               |      | A   |
| 13               | 1.00 |       | 0.909 |       | 2917             |      | 9600            |      | 0.30      |      | 72.6         |      | 10.0               |      | A   |
| 14               | 1.00 |       | 0.909 |       | 2939             |      | 9600            |      | 0.31      |      | 72.6         |      | 10.1               |      | A   |
| 15               | 1.00 |       | 0.909 |       | 2768             |      | 9600            |      | 0.29      |      | 72.6         |      | 9.5                |      | A   |
| 16               | 1.00 |       | 0.909 |       | 2829             |      | 9600            |      | 0.29      |      | 72.6         |      | 9.7                |      | A   |

| Segment 6: Diverge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00 | 0.909 | 0.971 | 1320             | 671  | 12000           | 2033 | 0.11      | 0.33 | 75.2         | 75.4 | 3.5                | 3.5  | A   |
| 2                  | 1.00 | 1.00 | 0.909 | 0.971 | 1575             | 791  | 12000           | 2033 | 0.13      | 0.39 | 75.2         | 75.4 | 4.2                | 4.2  | A   |
| 3                  | 1.00 | 1.00 | 0.909 | 0.971 | 1958             | 812  | 12000           | 2033 | 0.16      | 0.40 | 75.2         | 75.4 | 5.2                | 5.2  | A   |
| 4                  | 1.00 | 1.00 | 0.909 | 0.971 | 2552             | 1005 | 12000           | 2033 | 0.21      | 0.49 | 75.2         | 75.4 | 6.8                | 6.8  | A   |
| 5                  | 1.00 | 1.00 | 0.909 | 0.971 | 2275             | 601  | 12000           | 2033 | 0.19      | 0.30 | 75.2         | 75.4 | 6.0                | 6.0  | A   |
| 6                  | 1.00 | 1.00 | 0.909 | 0.971 | 3067             | 721  | 12000           | 2033 | 0.26      | 0.35 | 75.2         | 75.4 | 8.1                | 8.1  | A   |
| 7                  | 1.00 | 1.00 | 0.909 | 0.971 | 3208             | 812  | 12000           | 2033 | 0.27      | 0.40 | 75.2         | 75.4 | 8.5                | 8.5  | A   |
| 8                  | 1.00 | 1.00 | 0.909 | 0.971 | 3270             | 1046 | 12000           | 2033 | 0.27      | 0.51 | 75.2         | 75.4 | 8.7                | 8.7  | A   |
| 9                  | 1.00 | 1.00 | 0.909 | 0.971 | 2887             | 795  | 12000           | 2033 | 0.24      | 0.39 | 75.2         | 75.4 | 7.7                | 7.7  | A   |
| 10                 | 1.00 | 1.00 | 0.909 | 0.971 | 3239             | 947  | 12000           | 2033 | 0.27      | 0.47 | 75.2         | 75.4 | 8.6                | 8.6  | A   |
| 11                 | 1.00 | 1.00 | 0.909 | 0.971 | 3089             | 952  | 12000           | 2033 | 0.26      | 0.47 | 75.2         | 75.4 | 8.2                | 8.2  | A   |
| 12                 | 1.00 | 1.00 | 0.909 | 0.971 | 3190             | 939  | 12000           | 2033 | 0.27      | 0.46 | 75.2         | 75.4 | 8.5                | 8.5  | A   |
| 13                 | 1.00 | 1.00 | 0.909 | 0.971 | 2917             | 910  | 12000           | 2033 | 0.24      | 0.45 | 75.2         | 75.4 | 7.7                | 7.7  | A   |
| 14                 | 1.00 | 1.00 | 0.909 | 0.971 | 2939             | 676  | 12000           | 2033 | 0.24      | 0.33 | 75.2         | 75.4 | 7.8                | 7.8  | A   |
| 15                 | 1.00 | 1.00 | 0.909 | 0.971 | 2768             | 684  | 12000           | 2033 | 0.23      | 0.34 | 75.2         | 75.4 | 7.3                | 7.3  | A   |
| 16                 | 1.00 | 1.00 | 0.909 | 0.971 | 2829             | 667  | 12000           | 2033 | 0.24      | 0.33 | 75.2         | 75.4 | 7.5                | 7.5  | A   |
| Segment 7: Basic   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |      | 0.909 |       | 603              |      | 9600            |      | 0.06      |      | 72.6         |      | 2.1                |      | A   |
| 2                  | 1.00 |      | 0.909 |       | 730              |      | 9600            |      | 0.08      |      | 72.6         |      | 2.5                |      | A   |
| 3                  | 1.00 |      | 0.909 |       | 1091             |      | 9600            |      | 0.11      |      | 72.6         |      | 3.8                |      | A   |
| 4                  | 1.00 |      | 0.909 |       | 1479             |      | 9600            |      | 0.15      |      | 72.6         |      | 5.1                |      | A   |
| 5                  | 1.00 |      | 0.909 |       | 1633             |      | 9600            |      | 0.17      |      | 72.6         |      | 5.6                |      | A   |
| 6                  | 1.00 |      | 0.909 |       | 2297             |      | 9600            |      | 0.24      |      | 72.6         |      | 7.9                |      | A   |
| 7                  | 1.00 |      | 0.909 |       | 2341             |      | 9600            |      | 0.24      |      | 72.6         |      | 8.1                |      | A   |
| 8                  | 1.00 |      | 0.909 |       | 2152             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.4                |      | A   |
| 9                  | 1.00 |      | 0.909 |       | 2037             |      | 9600            |      | 0.21      |      | 72.6         |      | 7.0                |      | A   |
| 10                 | 1.00 |      | 0.909 |       | 2227             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.7                |      | A   |
| 11                 | 1.00 |      | 0.909 |       | 2073             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.1                |      | A   |
| 12                 | 1.00 |      | 0.909 |       | 2187             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.5                |      | A   |
| 13                 | 1.00 |      | 0.909 |       | 1945             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.7                |      | A   |
| 14                 | 1.00 |      | 0.909 |       | 2218             |      | 9600            |      | 0.23      |      | 72.6         |      | 7.6                |      | A   |
| 15                 | 1.00 |      | 0.909 |       | 2037             |      | 9600            |      | 0.21      |      | 72.6         |      | 7.0                |      | A   |
| 16                 | 1.00 |      | 0.909 |       | 2117             |      | 9600            |      | 0.22      |      | 72.6         |      | 7.3                |      | A   |
| Segment 8: Merge   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |

|                   | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
|-------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 657              | 54   | 12000           | 2033 | 0.05      | 0.03 | 75.1         | 75.4 | 1.7                | 1.7  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 784              | 54   | 12000           | 2033 | 0.07      | 0.03 | 75.1         | 75.4 | 2.1                | 2.1  | A   |
| 3                 | 1.00 | 1.00 | 0.909 | 0.971 | 1239             | 148  | 12000           | 2033 | 0.10      | 0.07 | 75.1         | 75.4 | 3.3                | 3.3  | A   |
| 4                 | 1.00 | 1.00 | 0.909 | 0.971 | 1668             | 189  | 12000           | 2033 | 0.14      | 0.09 | 75.1         | 75.4 | 4.4                | 4.4  | A   |
| 5                 | 1.00 | 1.00 | 0.909 | 0.971 | 1860             | 227  | 12000           | 2033 | 0.16      | 0.11 | 75.1         | 75.4 | 4.9                | 4.9  | A   |
| 6                 | 1.00 | 1.00 | 0.909 | 0.971 | 2548             | 251  | 12000           | 2033 | 0.21      | 0.12 | 75.1         | 75.4 | 6.8                | 6.8  | A   |
| 7                 | 1.00 | 1.00 | 0.909 | 0.971 | 2658             | 317  | 12000           | 2033 | 0.22      | 0.16 | 75.1         | 75.4 | 7.1                | 7.1  | A   |
| 8                 | 1.00 | 1.00 | 0.909 | 0.971 | 2597             | 445  | 12000           | 2033 | 0.22      | 0.22 | 75.1         | 75.4 | 6.9                | 6.9  | A   |
| 9                 | 1.00 | 1.00 | 0.909 | 0.971 | 2354             | 317  | 12000           | 2033 | 0.20      | 0.16 | 75.1         | 75.4 | 6.2                | 6.2  | A   |
| 10                | 1.00 | 1.00 | 0.909 | 0.971 | 2705             | 478  | 12000           | 2033 | 0.23      | 0.24 | 75.1         | 75.4 | 7.2                | 7.2  | A   |
| 11                | 1.00 | 1.00 | 0.909 | 0.971 | 2559             | 486  | 12000           | 2033 | 0.21      | 0.24 | 75.1         | 75.4 | 6.8                | 6.8  | A   |
| 12                | 1.00 | 1.00 | 0.909 | 0.971 | 2599             | 412  | 12000           | 2033 | 0.22      | 0.20 | 75.1         | 75.4 | 6.9                | 6.9  | A   |
| 13                | 1.00 | 1.00 | 0.909 | 0.971 | 2369             | 424  | 12000           | 2033 | 0.20      | 0.21 | 75.1         | 75.4 | 6.3                | 6.3  | A   |
| 14                | 1.00 | 1.00 | 0.909 | 0.971 | 2712             | 494  | 12000           | 2033 | 0.23      | 0.24 | 75.1         | 75.4 | 7.2                | 7.2  | A   |
| 15                | 1.00 | 1.00 | 0.909 | 0.971 | 2445             | 408  | 12000           | 2033 | 0.20      | 0.20 | 75.1         | 75.4 | 6.5                | 6.5  | A   |
| 16                | 1.00 | 1.00 | 0.909 | 0.971 | 2595             | 478  | 12000           | 2033 | 0.22      | 0.24 | 75.1         | 75.4 | 6.9                | 6.9  | A   |
| Segment 9: Basic  |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                 | 1.00 |      | 0.909 |       | 660              |      | 9600            |      | 0.07      |      | 72.6         |      | 2.3                |      | A   |
| 2                 | 1.00 |      | 0.909 |       | 788              |      | 9600            |      | 0.08      |      | 72.6         |      | 2.7                |      | A   |
| 3                 | 1.00 |      | 0.909 |       | 1250             |      | 9600            |      | 0.13      |      | 72.6         |      | 4.3                |      | A   |
| 4                 | 1.00 |      | 0.909 |       | 1681             |      | 9600            |      | 0.18      |      | 72.6         |      | 5.8                |      | A   |
| 5                 | 1.00 |      | 0.909 |       | 1875             |      | 9600            |      | 0.20      |      | 72.6         |      | 6.5                |      | A   |
| 6                 | 1.00 |      | 0.909 |       | 2565             |      | 9600            |      | 0.27      |      | 72.6         |      | 8.8                |      | A   |
| 7                 | 1.00 |      | 0.909 |       | 2680             |      | 9600            |      | 0.28      |      | 72.6         |      | 9.2                |      | A   |
| 8                 | 1.00 |      | 0.909 |       | 2627             |      | 9600            |      | 0.27      |      | 72.6         |      | 9.0                |      | A   |
| 9                 | 1.00 |      | 0.909 |       | 2376             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.2                |      | A   |
| 10                | 1.00 |      | 0.909 |       | 2737             |      | 9600            |      | 0.29      |      | 72.6         |      | 9.4                |      | A   |
| 11                | 1.00 |      | 0.909 |       | 2592             |      | 9600            |      | 0.27      |      | 72.6         |      | 8.9                |      | A   |
| 12                | 1.00 |      | 0.909 |       | 2627             |      | 9600            |      | 0.27      |      | 72.6         |      | 9.0                |      | A   |
| 13                | 1.00 |      | 0.909 |       | 2398             |      | 9600            |      | 0.25      |      | 72.6         |      | 8.3                |      | A   |
| 14                | 1.00 |      | 0.909 |       | 2746             |      | 9600            |      | 0.29      |      | 72.6         |      | 9.4                |      | A   |
| 15                | 1.00 |      | 0.909 |       | 2473             |      | 9600            |      | 0.26      |      | 72.6         |      | 8.5                |      | A   |
| 16                | 1.00 |      | 0.909 |       | 2627             |      | 9600            |      | 0.27      |      | 72.6         |      | 9.0                |      | A   |
| Segment 10: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                   | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 705              | 45   | 12000           | 2033 | 0.06      | 0.02 | 74.7         | 75.4 | 1.9                | 1.9  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 833              | 45   | 12000           | 2033 | 0.07      | 0.02 | 74.7         | 75.4 | 2.2                | 2.2  | A   |

|                              |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |     |     |
|------------------------------|-------------|------|-------|-------------------|------------------|-----|--------------------|------|-----------|------------------|--------------|------|--------------------|-----|-----|
| 3                            | 1.00        | 1.00 | 0.909 | 0.971             | 1295             | 45  | 12000              | 2033 | 0.11      | 0.02             | 74.7         | 75.4 | 3.4                | 3.4 | A   |
| 4                            | 1.00        | 1.00 | 0.909 | 0.971             | 1726             | 45  | 12000              | 2033 | 0.14      | 0.02             | 74.7         | 75.4 | 4.6                | 4.6 | A   |
| 5                            | 1.00        | 1.00 | 0.909 | 0.971             | 1929             | 54  | 12000              | 2033 | 0.16      | 0.03             | 74.7         | 75.4 | 5.1                | 5.1 | A   |
| 6                            | 1.00        | 1.00 | 0.909 | 0.971             | 2623             | 58  | 12000              | 2033 | 0.22      | 0.03             | 74.7         | 75.4 | 7.0                | 7.0 | A   |
| 7                            | 1.00        | 1.00 | 0.909 | 0.971             | 2742             | 62  | 12000              | 2033 | 0.23      | 0.03             | 74.7         | 75.4 | 7.3                | 7.3 | A   |
| 8                            | 1.00        | 1.00 | 0.909 | 0.971             | 2685             | 58  | 12000              | 2033 | 0.22      | 0.03             | 74.7         | 75.4 | 7.1                | 7.1 | A   |
| 9                            | 1.00        | 1.00 | 0.909 | 0.971             | 2442             | 66  | 12000              | 2033 | 0.20      | 0.03             | 74.7         | 75.4 | 6.5                | 6.5 | A   |
| 10                           | 1.00        | 1.00 | 0.909 | 0.971             | 2819             | 82  | 12000              | 2033 | 0.23      | 0.04             | 74.7         | 75.4 | 7.5                | 7.5 | A   |
| 11                           | 1.00        | 1.00 | 0.909 | 0.971             | 2716             | 124 | 12000              | 2033 | 0.23      | 0.06             | 74.7         | 75.4 | 7.2                | 7.2 | A   |
| 12                           | 1.00        | 1.00 | 0.909 | 0.971             | 2763             | 136 | 12000              | 2033 | 0.23      | 0.07             | 74.7         | 75.4 | 7.3                | 7.3 | A   |
| 13                           | 1.00        | 1.00 | 0.909 | 0.971             | 2501             | 103 | 12000              | 2033 | 0.21      | 0.05             | 74.7         | 75.4 | 6.6                | 6.6 | A   |
| 14                           | 1.00        | 1.00 | 0.909 | 0.971             | 2865             | 119 | 12000              | 2033 | 0.24      | 0.06             | 74.7         | 75.4 | 7.6                | 7.6 | A   |
| 15                           | 1.00        | 1.00 | 0.909 | 0.971             | 2634             | 161 | 12000              | 2033 | 0.22      | 0.08             | 74.7         | 75.4 | 7.0                | 7.0 | A   |
| 16                           | 1.00        | 1.00 | 0.909 | 0.971             | 2746             | 119 | 12000              | 2033 | 0.23      | 0.06             | 74.7         | 75.4 | 7.3                | 7.3 | A   |
| Segment 11: Basic            |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |     |     |
| Time Period                  | PHF         |      | fHV   |                   | Flow Rate (pc/h) |     | Capacity (pc/h)    |      | d/c Ratio |                  | Speed (mi/h) |      | Density (pc/mi/ln) |     | LOS |
| 1                            | 1.00        |      | 0.909 |                   | 708              |     | 9600               |      | 0.07      |                  | 72.6         |      | 2.4                |     | A   |
| 2                            | 1.00        |      | 0.909 |                   | 836              |     | 9600               |      | 0.09      |                  | 72.6         |      | 2.9                |     | A   |
| 3                            | 1.00        |      | 0.909 |                   | 1298             |     | 9600               |      | 0.14      |                  | 72.6         |      | 4.5                |     | A   |
| 4                            | 1.00        |      | 0.909 |                   | 1729             |     | 9600               |      | 0.18      |                  | 72.6         |      | 6.0                |     | A   |
| 5                            | 1.00        |      | 0.909 |                   | 1932             |     | 9600               |      | 0.20      |                  | 72.6         |      | 6.7                |     | A   |
| 6                            | 1.00        |      | 0.909 |                   | 2627             |     | 9600               |      | 0.27      |                  | 72.6         |      | 9.0                |     | A   |
| 7                            | 1.00        |      | 0.909 |                   | 2746             |     | 9600               |      | 0.29      |                  | 72.6         |      | 9.4                |     | A   |
| 8                            | 1.00        |      | 0.909 |                   | 2689             |     | 9600               |      | 0.28      |                  | 72.6         |      | 9.3                |     | A   |
| 9                            | 1.00        |      | 0.909 |                   | 2447             |     | 9600               |      | 0.25      |                  | 72.6         |      | 8.4                |     | A   |
| 10                           | 1.00        |      | 0.909 |                   | 2825             |     | 9600               |      | 0.29      |                  | 72.6         |      | 9.7                |     | A   |
| 11                           | 1.00        |      | 0.909 |                   | 2724             |     | 9600               |      | 0.28      |                  | 72.6         |      | 9.4                |     | A   |
| 12                           | 1.00        |      | 0.909 |                   | 2772             |     | 9600               |      | 0.29      |                  | 72.6         |      | 9.5                |     | A   |
| 13                           | 1.00        |      | 0.909 |                   | 2508             |     | 9600               |      | 0.26      |                  | 72.6         |      | 8.6                |     | A   |
| 14                           | 1.00        |      | 0.909 |                   | 2873             |     | 9600               |      | 0.30      |                  | 72.6         |      | 9.9                |     | A   |
| 15                           | 1.00        |      | 0.909 |                   | 2645             |     | 9600               |      | 0.28      |                  | 72.6         |      | 9.1                |     | A   |
| 16                           | 1.00        |      | 0.909 |                   | 2755             |     | 9600               |      | 0.29      |                  | 72.6         |      | 9.5                |     | A   |
| Facility Time Period Results |             |      |       |                   |                  |     |                    |      |           |                  |              |      |                    |     |     |
| T                            | Speed, mi/h |      |       | Density, pc/mi/ln |                  |     | Density, veh/mi/ln |      |           | Travel Time, min |              |      | LOS                |     |     |
| 1                            | 73.1        |      |       | 4.1               |                  |     | 3.8                |      |           | 2.40             |              |      | A                  |     |     |
| 2                            | 73.1        |      |       | 4.9               |                  |     | 4.4                |      |           | 2.40             |              |      | A                  |     |     |
| 3                            | 73.1        |      |       | 6.4               |                  |     | 5.8                |      |           | 2.40             |              |      | A                  |     |     |
| 4                            | 73.1        |      |       | 8.1               |                  |     | 7.4                |      |           | 2.40             |              |      | F                  |     |     |
| 5                            | 73.1        |      |       | 7.5               |                  |     | 6.9                |      |           | 2.40             |              |      | A                  |     |     |
| 6                            | 73.1        |      |       | 10.2              |                  |     | 9.3                |      |           | 2.40             |              |      | A                  |     |     |

|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 7  | 72.8 | 11.1 | 10.1 | 2.50 | F |
| 8  | 72.5 | 11.2 | 10.2 | 2.50 | F |
| 9  | 72.8 | 10.1 | 9.2  | 2.50 | F |
| 10 | 72.5 | 11.3 | 10.3 | 2.50 | F |
| 11 | 72.9 | 10.5 | 9.5  | 2.50 | F |
| 12 | 72.8 | 10.9 | 9.9  | 2.50 | F |
| 13 | 73.0 | 9.9  | 9.0  | 2.40 | F |
| 14 | 73.1 | 10.2 | 9.3  | 2.40 | F |
| 15 | 73.1 | 9.5  | 8.7  | 2.40 | F |
| 16 | 73.1 | 9.6  | 8.7  | 2.40 | F |

## Facility Overall Results

|                          |      |                    |     |
|--------------------------|------|--------------------|-----|
| Space Mean Speed, mi/h   | 72.9 | Density, veh/mi/ln | 8.3 |
| Average Travel Time, min | 2.50 | Density, pc/mi/ln  | 9.1 |

## Messages

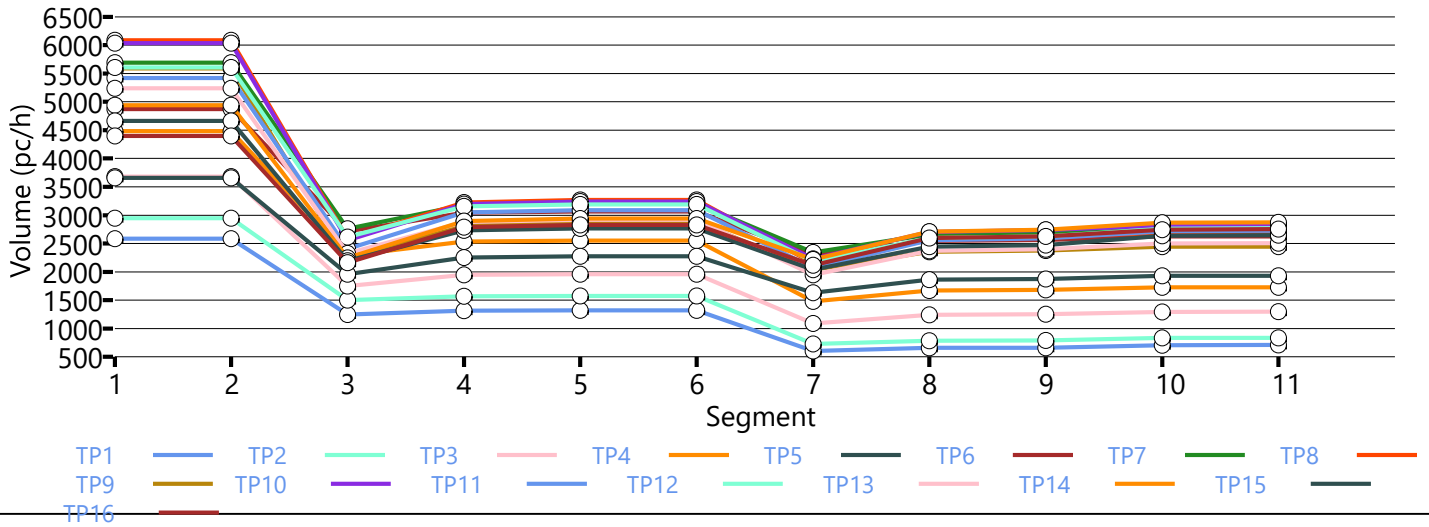
|            |                                                                                                                                                                                                                      |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WARNING 1  | Oversaturated conditions currently exist in boundary time period 16. Results may not be reliable. Consider expanding analysis in time and/or space to resolve this warning.                                          |
| WARNING 2  | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 3  | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 4  | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 5  | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 6  | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 7  | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 8  | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 9  | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 10 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 11 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |
| WARNING 12 | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |

## Comments

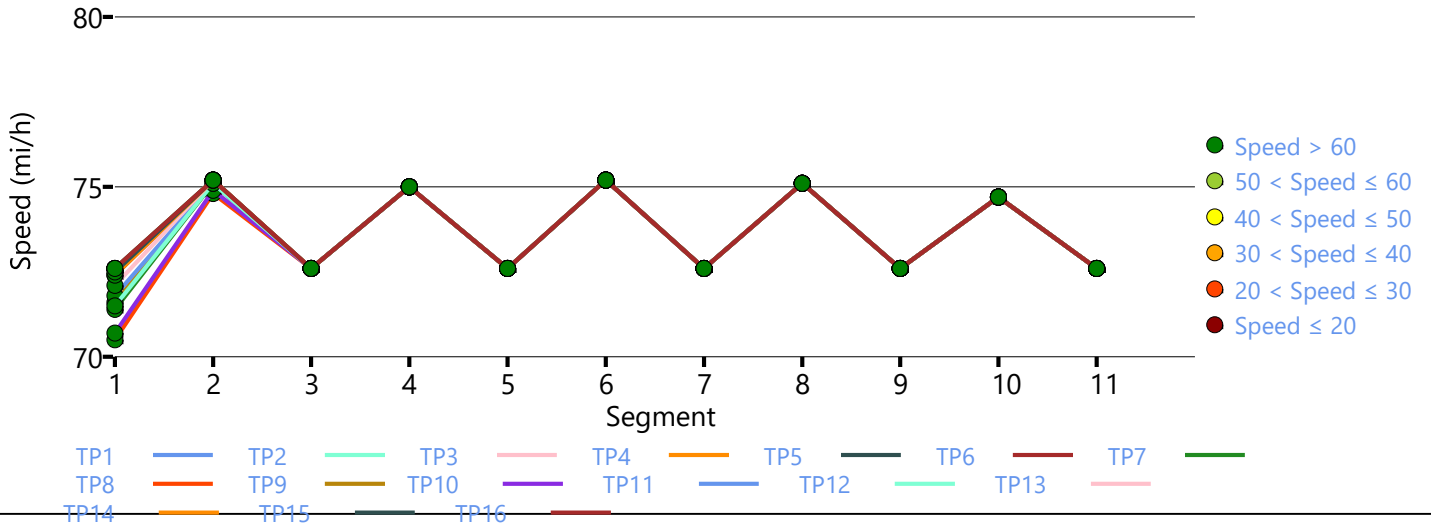


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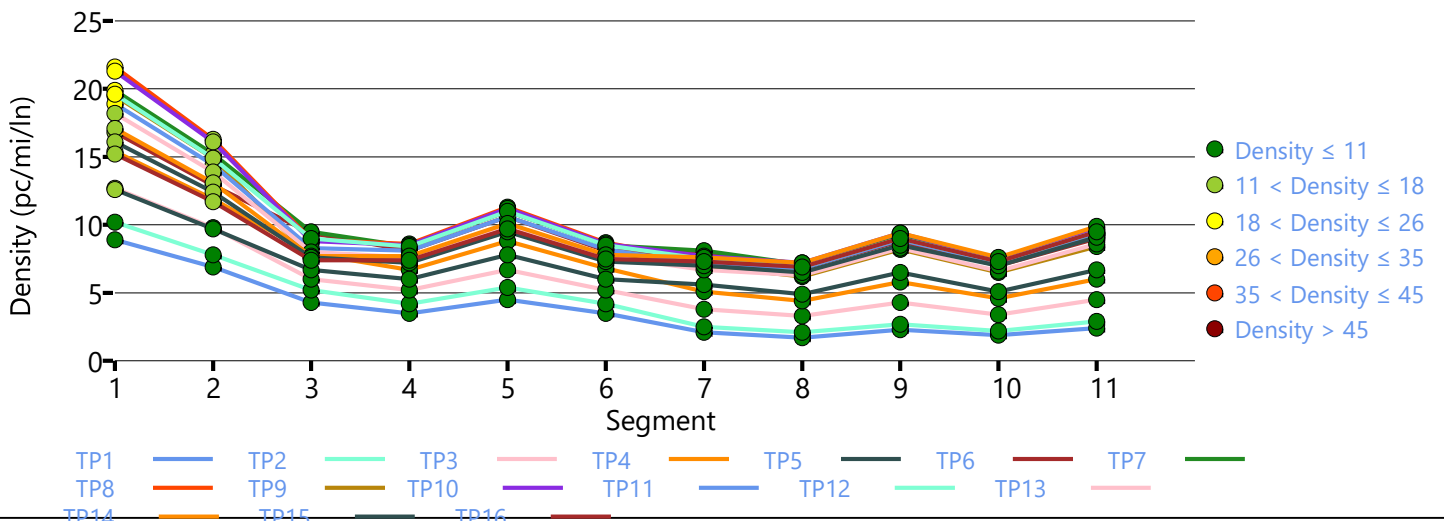
## Volume Distribution



## Speed Distribution



## Density Distribution



# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                                     |                      |                         |
|---------------------|---------------------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                                  | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                                     | Analysis Year        | 2040                    |
| Jurisdiction        | NMDOT                                                               | Time Period Analyzed | PM Peak Period          |
| Project Description | 2030 No-Build + 10 Years, I-25 Programmed Improvements - Northbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 9    |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.91  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | South of Sunport                    | 2640       | 5     |
| 2   | Diverge | Basic    | Sunport Off Ramp                    | 1500       | 5     |
| 3   | Basic   | Basic    | Bet Sunport and Gibson Off Ramps    | 1100       | 4     |
| 4   | Diverge | Basic    | Gibson Off Ramp                     | 800        | 5     |
| 5   | Basic   | Basic    | Bet Gibson Off and Sunport On Ramps | 1600       | 4     |
| 6   | Weaving | Weaving  | Bet Sunport On and ACC Off Ramps    | 2200       | 5     |
| 7   | Basic   | Basic    | North of ACC Off Ramp               | 2200       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 700        | 5     |
| 9   | Basic   | Basic    | North of Gibson On Ramp             | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 2975             | 11616           | 0.26      | 70.8         | 8.4                | A   |
| 2           | 1.00 | 0.909 | 3116             | 11616           | 0.27      | 70.8         | 8.8                | A   |
| 3           | 1.00 | 0.909 | 3028             | 11616           | 0.26      | 70.8         | 8.6                | A   |
| 4           | 1.00 | 0.909 | 3186             | 11616           | 0.27      | 70.8         | 9.0                | A   |
| 5           | 1.00 | 0.909 | 3226             | 11616           | 0.28      | 70.8         | 9.1                | A   |
| 6           | 1.00 | 0.909 | 2970             | 11616           | 0.26      | 70.8         | 8.4                | A   |
| 7           | 1.00 | 0.909 | 3063             | 11616           | 0.26      | 70.8         | 8.7                | A   |
| 8           | 1.00 | 0.909 | 3036             | 11616           | 0.26      | 70.8         | 8.6                | A   |
| 9           | 1.00 | 0.909 | 3080             | 11616           | 0.27      | 70.8         | 8.7                | A   |
| 10          | 1.00 | 0.909 | 3239             | 11616           | 0.28      | 70.8         | 9.2                | A   |
| 11          | 1.00 | 0.909 | 3230             | 11616           | 0.28      | 70.8         | 9.1                | A   |
| 12          | 1.00 | 0.909 | 3265             | 11616           | 0.28      | 70.8         | 9.2                | A   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 13                 | 1.00 | 0.909 | 2922  |       | 11616            |      | 0.25            | 70.8 |           | 8.2  |              | A    |                    |      |     |
| 14                 | 1.00 | 0.909 | 2733  |       | 11616            |      | 0.24            | 70.8 |           | 7.7  |              | A    |                    |      |     |
| 15                 | 1.00 | 0.909 | 2425  |       | 11616            |      | 0.21            | 70.8 |           | 6.9  |              | A    |                    |      |     |
| 16                 | 1.00 | 0.909 | 2469  |       | 11616            |      | 0.21            | 70.8 |           | 7.0  |              | A    |                    |      |     |
| 17                 | 1.00 | 0.909 | 2332  |       | 11616            |      | 0.20            | 70.8 |           | 6.6  |              | A    |                    |      |     |
| 18                 | 1.00 | 0.909 | 2086  |       | 11616            |      | 0.18            | 70.8 |           | 5.9  |              | A    |                    |      |     |
| 19                 | 1.00 | 0.909 | 1879  |       | 11616            |      | 0.16            | 70.8 |           | 5.3  |              | A    |                    |      |     |
| 20                 | 1.00 | 0.909 | 1778  |       | 11616            |      | 0.15            | 70.8 |           | 5.0  |              | A    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2975             | 132  | 11616           | 2033 | 0.26      | 0.06 | 73.4         | 73.5 | 8.1                | 8.1  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 3116             | 140  | 11616           | 2033 | 0.27      | 0.07 | 73.4         | 73.5 | 8.5                | 8.5  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 3028             | 161  | 11616           | 2033 | 0.26      | 0.08 | 73.4         | 73.5 | 8.2                | 8.2  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 3186             | 161  | 11616           | 2033 | 0.27      | 0.08 | 73.4         | 73.5 | 8.7                | 8.7  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3226             | 107  | 11616           | 2033 | 0.28      | 0.05 | 73.4         | 73.5 | 8.8                | 8.8  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2970             | 140  | 11616           | 2033 | 0.26      | 0.07 | 73.4         | 73.5 | 8.1                | 8.1  | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 3063             | 99   | 11616           | 2033 | 0.26      | 0.05 | 73.4         | 73.5 | 8.3                | 8.3  | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 3036             | 91   | 11616           | 2033 | 0.26      | 0.04 | 73.4         | 73.5 | 8.3                | 8.3  | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 3080             | 82   | 11616           | 2033 | 0.27      | 0.04 | 73.4         | 73.5 | 8.4                | 8.4  | A   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 3239             | 82   | 11616           | 2033 | 0.28      | 0.04 | 73.4         | 73.5 | 8.8                | 8.8  | A   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 3230             | 66   | 11616           | 2033 | 0.28      | 0.03 | 73.4         | 73.5 | 8.8                | 8.8  | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3265             | 115  | 11616           | 2033 | 0.28      | 0.06 | 73.4         | 73.5 | 8.9                | 8.9  | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2922             | 115  | 11616           | 2033 | 0.25      | 0.06 | 73.4         | 73.5 | 7.9                | 7.9  | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2733             | 82   | 11616           | 2033 | 0.24      | 0.04 | 73.4         | 73.5 | 7.4                | 7.4  | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 2425             | 87   | 11616           | 2033 | 0.21      | 0.04 | 73.4         | 73.5 | 6.6                | 6.6  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2469             | 111  | 11616           | 2033 | 0.21      | 0.05 | 73.4         | 73.5 | 6.7                | 6.7  | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 2332             | 45   | 11616           | 2033 | 0.20      | 0.02 | 73.4         | 73.5 | 6.3                | 6.3  | A   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 2086             | 45   | 11616           | 2033 | 0.18      | 0.02 | 73.4         | 73.5 | 5.7                | 5.7  | A   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1879             | 58   | 11616           | 2033 | 0.16      | 0.03 | 73.4         | 73.5 | 5.1                | 5.1  | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1778             | 45   | 11616           | 2033 | 0.15      | 0.02 | 73.4         | 73.5 | 4.8                | 4.8  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2834             |      | 9293            |      | 0.30      |      | 70.8         |      | 10.0               |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2966             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.5               |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2856             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.1               |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 3014             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.6               |      | A   |
| 5                  | 1.00 |       | 0.909 |       | 3111             |      | 9293            |      | 0.33      |      | 70.8         |      | 11.0               |      | A   |
| 6                  | 1.00 |       | 0.909 |       | 2821             |      | 9293            |      | 0.30      |      | 70.8         |      | 10.0               |      | A   |
| 7                  | 1.00 |       | 0.909 |       | 2957             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.4               |      | A   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 8                  | 1.00 | 0.909 | 2939  |       | 9293             |      | 0.32            |      | 70.8      |      | 10.4         |      | A                  |      |     |
| 9                  | 1.00 | 0.909 | 2992  |       | 9293             |      | 0.32            |      | 70.8      |      | 10.6         |      | A                  |      |     |
| 10                 | 1.00 | 0.909 | 3151  |       | 9293             |      | 0.34            |      | 70.8      |      | 11.1         |      | B                  |      |     |
| 11                 | 1.00 | 0.909 | 3160  |       | 9293             |      | 0.34            |      | 70.8      |      | 11.2         |      | B                  |      |     |
| 12                 | 1.00 | 0.909 | 3142  |       | 9293             |      | 0.34            |      | 70.8      |      | 11.1         |      | B                  |      |     |
| 13                 | 1.00 | 0.909 | 2799  |       | 9293             |      | 0.30            |      | 70.8      |      | 9.9          |      | A                  |      |     |
| 14                 | 1.00 | 0.909 | 2645  |       | 9293             |      | 0.28            |      | 70.8      |      | 9.3          |      | A                  |      |     |
| 15                 | 1.00 | 0.909 | 2332  |       | 9293             |      | 0.25            |      | 70.8      |      | 8.2          |      | A                  |      |     |
| 16                 | 1.00 | 0.909 | 2350  |       | 9293             |      | 0.25            |      | 70.8      |      | 8.3          |      | A                  |      |     |
| 17                 | 1.00 | 0.909 | 2284  |       | 9293             |      | 0.25            |      | 70.8      |      | 8.1          |      | A                  |      |     |
| 18                 | 1.00 | 0.909 | 2037  |       | 9293             |      | 0.22            |      | 70.8      |      | 7.2          |      | A                  |      |     |
| 19                 | 1.00 | 0.909 | 1817  |       | 9293             |      | 0.20            |      | 70.8      |      | 6.4          |      | A                  |      |     |
| 20                 | 1.00 | 0.909 | 1729  |       | 9293             |      | 0.19            |      | 70.8      |      | 6.1          |      | A                  |      |     |
| Segment 4: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 2834             | 606  | 11616           | 2033 | 0.24      | 0.30 | 72.9         | 73.5 | 7.7                | 7.7  | A   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 2966             | 589  | 11616           | 2033 | 0.26      | 0.29 | 72.9         | 73.5 | 8.1                | 8.1  | A   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 2856             | 647  | 11616           | 2033 | 0.25      | 0.32 | 72.9         | 73.5 | 7.8                | 7.8  | A   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 3014             | 684  | 11616           | 2033 | 0.26      | 0.34 | 72.9         | 73.5 | 8.2                | 8.2  | A   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 3111             | 519  | 11616           | 2033 | 0.27      | 0.26 | 72.9         | 73.5 | 8.5                | 8.5  | A   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 2821             | 507  | 11616           | 2033 | 0.24      | 0.25 | 72.9         | 73.5 | 7.7                | 7.7  | A   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 2957             | 474  | 11616           | 2033 | 0.25      | 0.23 | 72.9         | 73.5 | 8.0                | 8.0  | A   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 2939             | 523  | 11616           | 2033 | 0.25      | 0.26 | 72.9         | 73.5 | 8.0                | 8.0  | A   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 2992             | 511  | 11616           | 2033 | 0.26      | 0.25 | 72.9         | 73.5 | 8.1                | 8.1  | A   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 3151             | 614  | 11616           | 2033 | 0.27      | 0.30 | 72.9         | 73.5 | 8.6                | 8.6  | A   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 3160             | 704  | 11616           | 2033 | 0.27      | 0.35 | 72.9         | 73.5 | 8.6                | 8.6  | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 3142             | 919  | 11616           | 2033 | 0.27      | 0.45 | 72.9         | 73.5 | 8.5                | 8.5  | A   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 2799             | 544  | 11616           | 2033 | 0.24      | 0.27 | 72.9         | 73.5 | 7.6                | 7.6  | A   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 2645             | 729  | 11616           | 2033 | 0.23      | 0.36 | 72.9         | 73.5 | 7.2                | 7.2  | A   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 2332             | 721  | 11616           | 2033 | 0.20      | 0.35 | 72.9         | 73.5 | 6.3                | 6.3  | A   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 2350             | 931  | 11616           | 2033 | 0.20      | 0.46 | 72.9         | 73.5 | 6.4                | 6.4  | A   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 2284             | 577  | 11616           | 2033 | 0.20      | 0.28 | 72.9         | 73.5 | 6.2                | 6.2  | A   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 2037             | 515  | 11616           | 2033 | 0.18      | 0.25 | 72.9         | 73.5 | 5.5                | 5.5  | A   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 1817             | 416  | 11616           | 2033 | 0.16      | 0.20 | 72.9         | 73.5 | 4.9                | 4.9  | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 1729             | 379  | 11616           | 2033 | 0.15      | 0.19 | 72.9         | 73.5 | 4.7                | 4.7  | A   |
| Segment 5: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                  | 1.00 |       | 0.909 |       | 2187             |      | 9293            |      | 0.24      |      | 70.8         |      | 7.7                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2337             |      | 9293            |      | 0.25      |      | 70.8         |      | 8.2                |      | A   |



| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 1                | 1.00 |      | 0.909 |       | 2680             |      | 9293            |      | 0.29      |      | 70.5         |      | 9.5                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 2724             |      | 9293            |      | 0.29      |      | 70.5         |      | 9.6                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 2689             |      | 9293            |      | 0.29      |      | 70.5         |      | 9.5                |      | A   |
| 4                | 1.00 |      | 0.909 |       | 2926             |      | 9293            |      | 0.31      |      | 70.5         |      | 10.3               |      | A   |
| 5                | 1.00 |      | 0.909 |       | 3344             |      | 9293            |      | 0.36      |      | 70.5         |      | 11.8               |      | B   |
| 6                | 1.00 |      | 0.909 |       | 2970             |      | 9293            |      | 0.32      |      | 70.5         |      | 10.5               |      | A   |
| 7                | 1.00 |      | 0.909 |       | 3186             |      | 9293            |      | 0.34      |      | 70.5         |      | 11.2               |      | B   |
| 8                | 1.00 |      | 0.909 |       | 3072             |      | 9293            |      | 0.33      |      | 70.5         |      | 10.8               |      | A   |
| 9                | 1.00 |      | 0.909 |       | 3573             |      | 9293            |      | 0.38      |      | 70.4         |      | 12.6               |      | B   |
| 10               | 1.00 |      | 0.909 |       | 3648             |      | 9293            |      | 0.39      |      | 70.4         |      | 12.9               |      | B   |
| 11               | 1.00 |      | 0.909 |       | 3542             |      | 9293            |      | 0.38      |      | 70.5         |      | 12.5               |      | B   |
| 12               | 1.00 |      | 0.909 |       | 2860             |      | 9293            |      | 0.31      |      | 70.5         |      | 10.1               |      | A   |
| 13               | 1.00 |      | 0.909 |       | 3600             |      | 9293            |      | 0.39      |      | 70.4         |      | 12.7               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 2658             |      | 9293            |      | 0.29      |      | 70.5         |      | 9.4                |      | A   |
| 15               | 1.00 |      | 0.909 |       | 2108             |      | 9293            |      | 0.23      |      | 70.5         |      | 7.4                |      | A   |
| 16               | 1.00 |      | 0.909 |       | 1769             |      | 9293            |      | 0.19      |      | 70.6         |      | 6.2                |      | A   |
| 17               | 1.00 |      | 0.909 |       | 2169             |      | 9293            |      | 0.23      |      | 70.6         |      | 7.7                |      | A   |
| 18               | 1.00 |      | 0.909 |       | 2081             |      | 9293            |      | 0.22      |      | 70.6         |      | 7.3                |      | A   |
| 19               | 1.00 |      | 0.909 |       | 1901             |      | 9293            |      | 0.20      |      | 70.6         |      | 6.7                |      | A   |
| 20               | 1.00 |      | 0.909 |       | 1760             |      | 9293            |      | 0.19      |      | 70.6         |      | 6.2                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 4076             | 1396 | 11616           | 2033 | 0.35      | 0.69 | 73.2         | 73.5 | 11.1               | 11.1 | B   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 4170             | 1446 | 11616           | 2033 | 0.36      | 0.71 | 73.2         | 73.5 | 11.3               | 11.3 | B   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 4250             | 1561 | 11616           | 2033 | 0.37      | 0.77 | 73.2         | 73.5 | 11.6               | 11.6 | B   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 4623             | 1697 | 11616           | 2033 | 0.40      | 0.83 | 73.2         | 73.5 | 12.6               | 12.6 | B   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 5729             | 2385 | 11616           | 2033 | 0.49      | 1.17 | 73.2         | 73.2 | 15.7               | 15.7 | B   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 5553             | 2583 | 11616           | 2033 | 0.48      | 1.27 | 73.2         | 73.3 | 15.2               | 15.2 | B   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 6222             | 3036 | 11616           | 2033 | 0.54      | 1.49 | 72.7         | 72.7 | 17.1               | 17.1 | B   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 6186             | 3114 | 11616           | 2033 | 0.53      | 1.53 | 72.8         | 72.8 | 17.0               | 17.0 | B   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 6642             | 3069 | 11616           | 2033 | 0.57      | 1.51 | 72.1         | 72.1 | 18.4               | 18.4 | C   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 6828             | 3180 | 11616           | 2033 | 0.59      | 1.56 | 71.8         | 71.8 | 19.0               | 19.0 | C   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 6220             | 2678 | 11616           | 2033 | 0.54      | 1.32 | 72.7         | 72.7 | 17.1               | 17.1 | B   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 5645             | 2785 | 11616           | 2033 | 0.49      | 1.37 | 73.2         | 73.3 | 15.4               | 15.4 | B   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 6286             | 2686 | 11616           | 2033 | 0.54      | 1.32 | 72.6         | 72.6 | 17.3               | 17.3 | B   |
| 14               | 1.00 | 1.00 | 0.909 | 0.971 | 4903             | 2245 | 11616           | 2033 | 0.42      | 1.10 | 73.2         | 73.5 | 13.3               | 13.3 | B   |
| 15               | 1.00 | 1.00 | 0.909 | 0.971 | 3966             | 1858 | 11616           | 2033 | 0.34      | 0.91 | 73.2         | 73.5 | 10.8               | 10.8 | A   |
| 16               | 1.00 | 1.00 | 0.909 | 0.971 | 3038             | 1269 | 11616           | 2033 | 0.26      | 0.62 | 73.2         | 73.5 | 8.3                | 8.3  | A   |

|    |      |      |       |       |      |      |       |      |      |      |      |      |     |     |   |
|----|------|------|-------|-------|------|------|-------|------|------|------|------|------|-----|-----|---|
| 17 | 1.00 | 1.00 | 0.909 | 0.971 | 3285 | 1116 | 11616 | 2033 | 0.28 | 0.55 | 73.2 | 73.5 | 8.9 | 8.9 | A |
| 18 | 1.00 | 1.00 | 0.909 | 0.971 | 3226 | 1145 | 11616 | 2033 | 0.28 | 0.56 | 73.2 | 73.5 | 8.8 | 8.8 | A |
| 19 | 1.00 | 1.00 | 0.909 | 0.971 | 2919 | 1018 | 11616 | 2033 | 0.25 | 0.50 | 73.2 | 73.5 | 7.9 | 7.9 | A |
| 20 | 1.00 | 1.00 | 0.909 | 0.971 | 2856 | 1096 | 11616 | 2033 | 0.25 | 0.54 | 73.2 | 73.5 | 7.8 | 7.8 | A |

Segment 9: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 4172             | 9293            | 0.45      | 70.8         | 14.7               | B   |
| 2           | 1.00 | 0.909 | 4268             | 9293            | 0.46      | 70.8         | 15.1               | B   |
| 3           | 1.00 | 0.909 | 4356             | 9293            | 0.47      | 70.8         | 15.4               | B   |
| 4           | 1.00 | 0.909 | 4739             | 9293            | 0.51      | 70.7         | 16.8               | B   |
| 5           | 1.00 | 0.909 | 5892             | 9293            | 0.63      | 69.0         | 21.3               | C   |
| 6           | 1.00 | 0.909 | 5729             | 9293            | 0.62      | 69.4         | 20.6               | C   |
| 7           | 1.00 | 0.909 | 6429             | 9293            | 0.69      | 67.5         | 23.8               | C   |
| 8           | 1.00 | 0.909 | 6398             | 9293            | 0.69      | 67.6         | 23.7               | C   |
| 9           | 1.00 | 0.909 | 6851             | 9293            | 0.74      | 65.9         | 26.0               | C   |
| 10          | 1.00 | 0.909 | 7045             | 9293            | 0.76      | 65.2         | 27.0               | D   |
| 11          | 1.00 | 0.909 | 6403             | 9293            | 0.69      | 67.5         | 23.7               | C   |
| 12          | 1.00 | 0.909 | 5835             | 9293            | 0.63      | 69.1         | 21.1               | C   |
| 13          | 1.00 | 0.909 | 6469             | 9293            | 0.70      | 67.3         | 24.0               | C   |
| 14          | 1.00 | 0.909 | 5056             | 9293            | 0.54      | 70.4         | 18.0               | B   |
| 15          | 1.00 | 0.909 | 4092             | 9293            | 0.44      | 70.8         | 14.4               | B   |
| 16          | 1.00 | 0.909 | 3124             | 9293            | 0.34      | 70.8         | 11.0               | A   |
| 17          | 1.00 | 0.909 | 3362             | 9293            | 0.36      | 70.8         | 11.9               | B   |
| 18          | 1.00 | 0.909 | 3305             | 9293            | 0.36      | 70.8         | 11.7               | B   |
| 19          | 1.00 | 0.909 | 2988             | 9293            | 0.32      | 70.8         | 10.6               | A   |
| 20          | 1.00 | 0.909 | 2931             | 9293            | 0.32      | 70.8         | 10.4               | A   |

Facility Time Period Results

| T  | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|----|-------------|-------------------|--------------------|------------------|-----|
| 1  | 69.6        | 9.8               | 8.9                | 2.50             | A   |
| 2  | 69.5        | 10.2              | 9.3                | 2.50             | A   |
| 3  | 69.6        | 10.0              | 9.1                | 2.50             | A   |
| 4  | 69.7        | 10.7              | 9.7                | 2.50             | A   |
| 5  | 69.0        | 12.1              | 11.0               | 2.50             | B   |
| 6  | 69.4        | 11.2              | 10.2               | 2.50             | B   |
| 7  | 68.8        | 12.1              | 11.0               | 2.50             | B   |
| 8  | 68.8        | 12.0              | 10.9               | 2.50             | B   |
| 9  | 67.6        | 13.0              | 11.8               | 2.60             | B   |
| 10 | 67.4        | 13.5              | 12.3               | 2.60             | B   |
| 11 | 68.3        | 12.7              | 11.6               | 2.60             | B   |
| 12 | 69.3        | 11.5              | 10.5               | 2.50             | B   |



|    |      |      |      |      |   |
|----|------|------|------|------|---|
| 13 | 67.6 | 12.5 | 11.3 | 2.60 | B |
| 14 | 69.4 | 10.0 | 9.1  | 2.50 | A |
| 15 | 69.8 | 8.3  | 7.6  | 2.50 | A |
| 16 | 70.2 | 7.3  | 6.6  | 2.50 | A |
| 17 | 70.0 | 7.8  | 7.1  | 2.50 | A |
| 18 | 69.9 | 7.3  | 6.6  | 2.50 | A |
| 19 | 69.9 | 6.6  | 6.0  | 2.50 | A |
| 20 | 70.0 | 6.3  | 5.7  | 2.50 | A |

Facility Overall Results

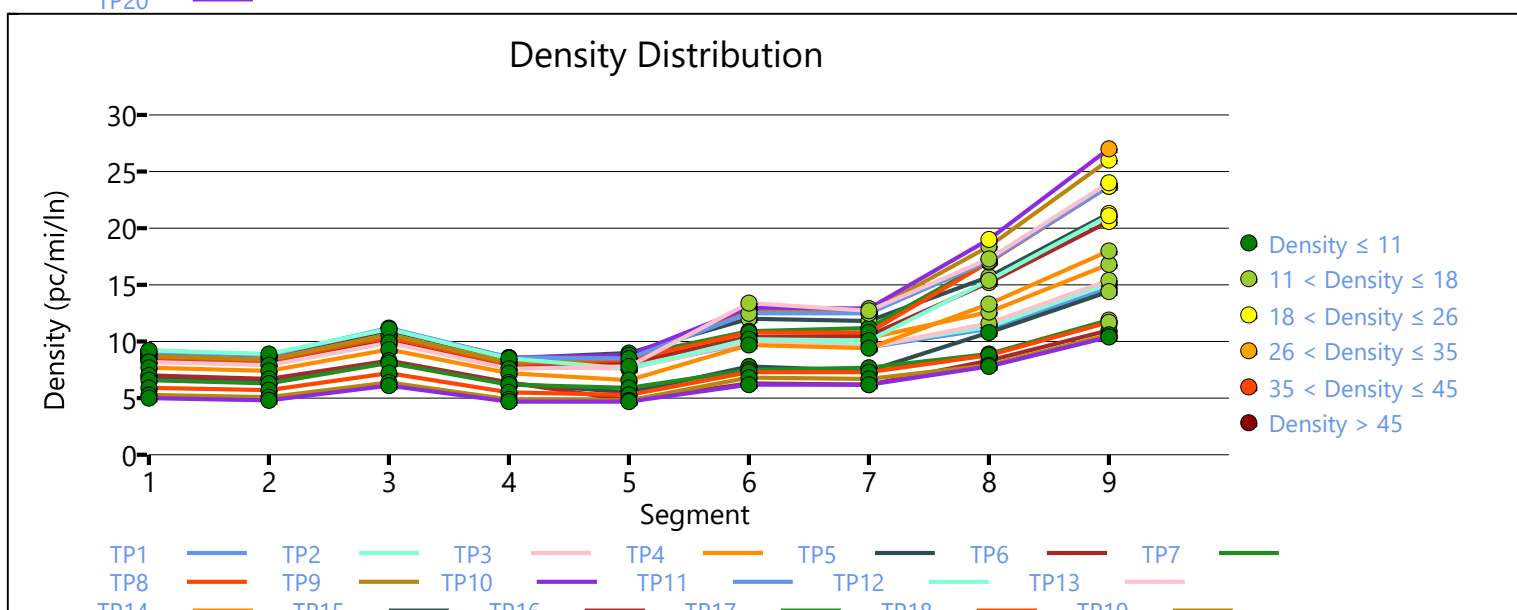
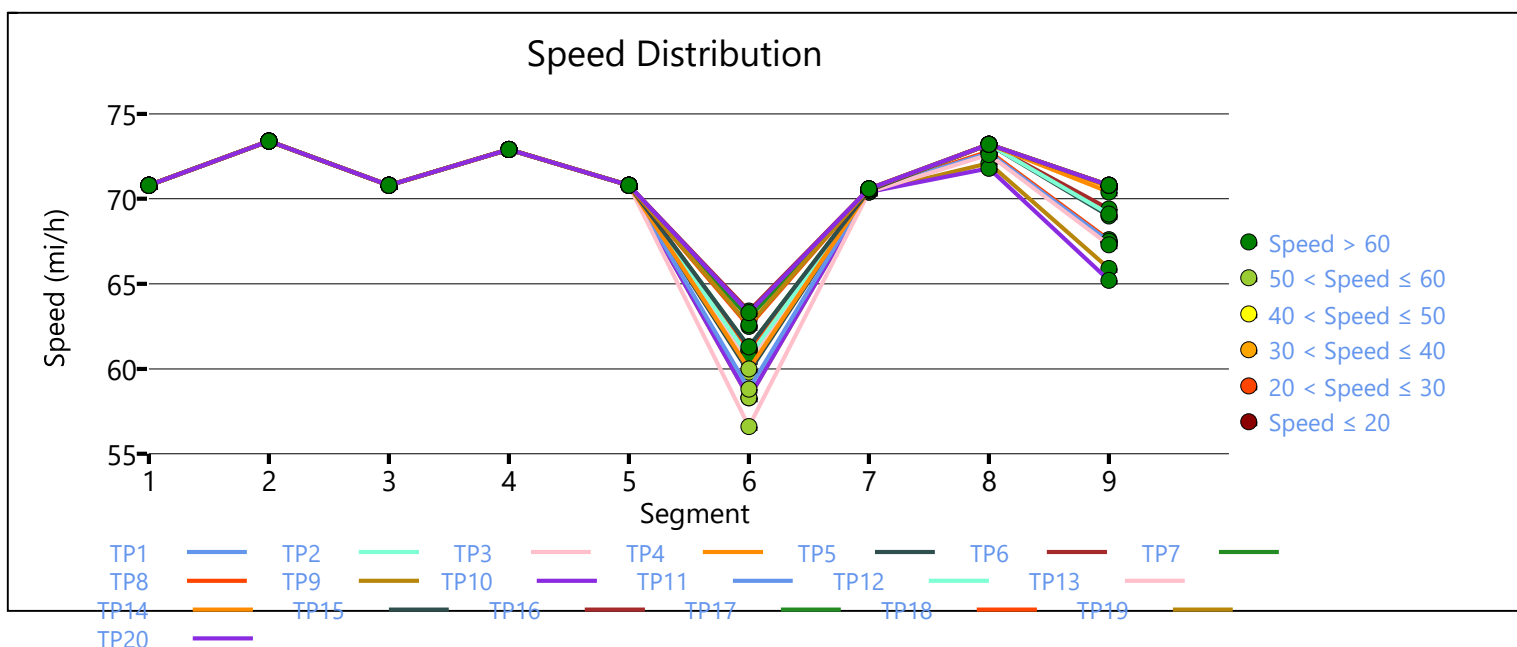
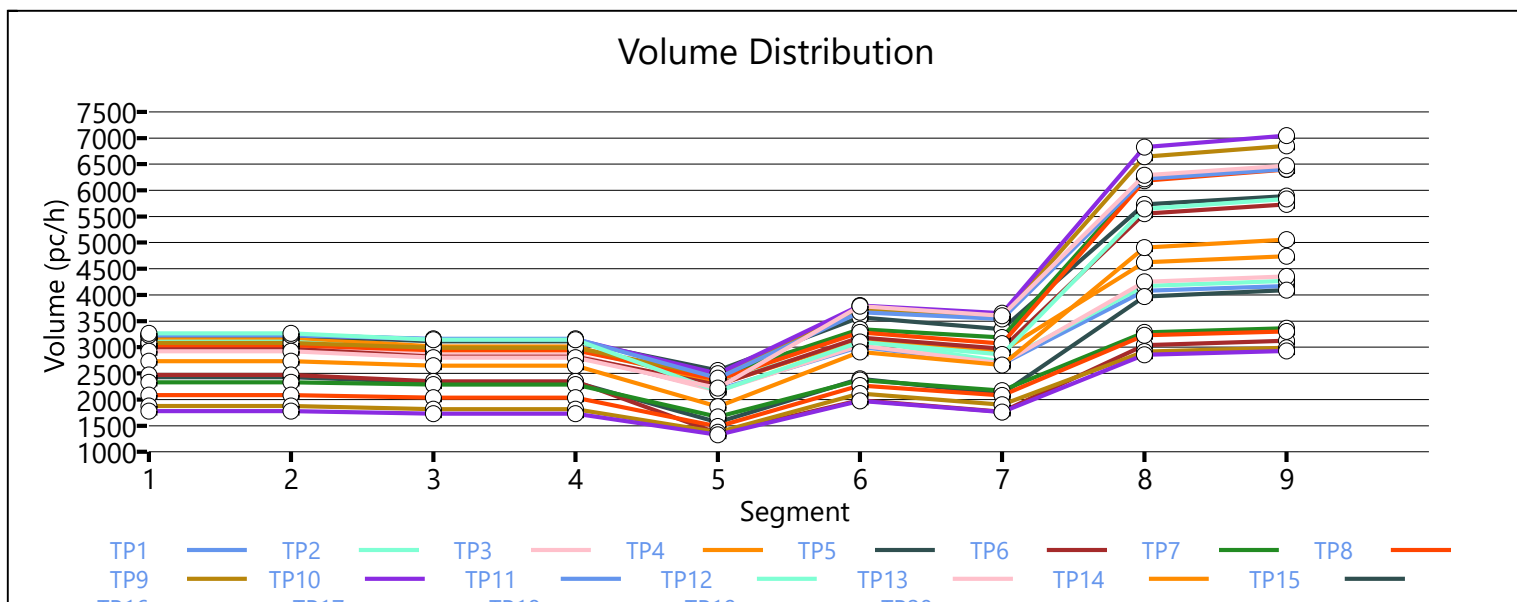
|                          |      |                    |      |
|--------------------------|------|--------------------|------|
| Space Mean Speed, mi/h   | 69.0 | Density, veh/mi/ln | 9.3  |
| Average Travel Time, min | 2.50 | Density, pc/mi/ln  | 10.3 |

Messages

|            |                                                        |
|------------|--------------------------------------------------------|
| WARNING 1  | Merge capacity is less than merge demand on segment 8. |
| WARNING 2  | Merge capacity is less than merge demand on segment 8. |
| WARNING 3  | Merge capacity is less than merge demand on segment 8. |
| WARNING 4  | Merge capacity is less than merge demand on segment 8. |
| WARNING 5  | Merge capacity is less than merge demand on segment 8. |
| WARNING 6  | Merge capacity is less than merge demand on segment 8. |
| WARNING 7  | Merge capacity is less than merge demand on segment 8. |
| WARNING 8  | Merge capacity is less than merge demand on segment 8. |
| WARNING 9  | Merge capacity is less than merge demand on segment 8. |
| WARNING 10 | Merge capacity is less than merge demand on segment 8. |

Comments

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# HCS7 Freeway Facilities Report

## Project Information

|                     |                                                                     |                      |                         |
|---------------------|---------------------------------------------------------------------|----------------------|-------------------------|
| Analyst             | PG                                                                  | Date                 | 10/15/2020              |
| Agency              | Lee Engineering                                                     | Analysis Year        | 2040                    |
| Jurisdiction        | NMDOT                                                               | Time Period Analyzed | PM Peak Period          |
| Project Description | 2030 No-Build + 10 Years, I-25 Programmed Improvements - Southbound | Unit                 | United States Customary |

## Facility Global Input

|                                  |       |                               |      |
|----------------------------------|-------|-------------------------------|------|
| Jam Density, pc/mi/ln            | 190.0 | Density at Capacity, pc/mi/ln | 45.0 |
| Queue Discharge Capacity Drop, % | 7     | Total Segments                | 11   |
| Total Time Periods               | 20    | Time Period Duration, min     | 15   |
| Facility Length, mi              | 2.98  |                               |      |

## Facility Segment Data

| No. | Coded   | Analyzed | Name                                | Length, ft | Lanes |
|-----|---------|----------|-------------------------------------|------------|-------|
| 1   | Basic   | Basic    | North of ACC                        | 2640       | 4     |
| 2   | Diverge | Basic    | Off Ramp to Gibson                  | 600        | 5     |
| 3   | Basic   | Basic    | Bet Gibson Off and ACC On Ramps     | 1750       | 4     |
| 4   | Merge   | Basic    | ACC On-Ramp                         | 600        | 5     |
| 5   | Basic   | Basic    | Bet ACC Off and Sunport Off Ramps   | 2400       | 4     |
| 6   | Diverge | Basic    | Sunport Off Ramp                    | 600        | 5     |
| 7   | Basic   | Basic    | Bet Sunport Off and Gibson On Ramps | 2000       | 4     |
| 8   | Merge   | Basic    | Gibson On Ramp                      | 800        | 5     |
| 9   | Basic   | Basic    | Bet Gibson and Sunport On Ramps     | 900        | 4     |
| 10  | Merge   | Basic    | Sunport On Ramp                     | 800        | 5     |
| 11  | Basic   | Basic    | S of Sunport                        | 2640       | 4     |

## Facility Segment Data

### Segment 1: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 4400             | 9293            | 0.47      | 70.8         | 15.5               | B   |
| 2           | 1.00 | 0.909 | 4387             | 9293            | 0.47      | 70.8         | 15.5               | B   |
| 3           | 1.00 | 0.909 | 4744             | 9293            | 0.51      | 70.7         | 16.8               | B   |
| 4           | 1.00 | 0.909 | 5355             | 9293            | 0.58      | 70.0         | 19.1               | C   |
| 5           | 1.00 | 0.909 | 4532             | 9293            | 0.49      | 70.8         | 16.0               | B   |
| 6           | 1.00 | 0.909 | 4150             | 9293            | 0.45      | 70.8         | 14.7               | B   |
| 7           | 1.00 | 0.909 | 4264             | 9293            | 0.46      | 70.8         | 15.1               | B   |
| 8           | 1.00 | 0.909 | 4348             | 9293            | 0.47      | 70.8         | 15.4               | B   |
| 9           | 1.00 | 0.909 | 4462             | 9293            | 0.48      | 70.8         | 15.8               | B   |
| 10          | 1.00 | 0.909 | 4642             | 9293            | 0.50      | 70.7         | 16.4               | B   |

|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|--------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 11                 | 1.00 | 0.909 | 4062  |       | 9293             |      | 0.44            | 70.8 |           | 14.4 |              | B    |                    |      |     |
| 12                 | 1.00 | 0.909 | 4444  |       | 9293             |      | 0.48            | 70.8 |           | 15.7 |              | B    |                    |      |     |
| 13                 | 1.00 | 0.909 | 4097  |       | 9293             |      | 0.44            | 70.8 |           | 14.5 |              | B    |                    |      |     |
| 14                 | 1.00 | 0.909 | 4440  |       | 9293             |      | 0.48            | 70.8 |           | 15.7 |              | B    |                    |      |     |
| 15                 | 1.00 | 0.909 | 4229  |       | 9293             |      | 0.46            | 70.8 |           | 14.9 |              | B    |                    |      |     |
| 16                 | 1.00 | 0.909 | 4330  |       | 9293             |      | 0.47            | 70.8 |           | 15.3 |              | B    |                    |      |     |
| 17                 | 1.00 | 0.909 | 4444  |       | 9293             |      | 0.48            | 70.8 |           | 15.7 |              | B    |                    |      |     |
| 18                 | 1.00 | 0.909 | 4167  |       | 9293             |      | 0.45            | 70.8 |           | 14.7 |              | B    |                    |      |     |
| 19                 | 1.00 | 0.909 | 3824  |       | 9293             |      | 0.41            | 70.8 |           | 13.5 |              | B    |                    |      |     |
| 20                 | 1.00 | 0.909 | 3507  |       | 9293             |      | 0.38            | 70.8 |           | 12.4 |              | B    |                    |      |     |
| Segment 2: Diverge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                  | 1.00 | 1.00  | 0.909 | 0.971 | 4400             | 1673 | 11616           | 2033 | 0.38      | 0.82 | 73.3         | 73.5 | 12.0               | 12.0 | B   |
| 2                  | 1.00 | 1.00  | 0.909 | 0.971 | 4387             | 1821 | 11616           | 2033 | 0.38      | 0.90 | 73.3         | 73.5 | 11.9               | 11.9 | B   |
| 3                  | 1.00 | 1.00  | 0.909 | 0.971 | 4744             | 1916 | 11616           | 2033 | 0.41      | 0.94 | 73.3         | 73.5 | 12.9               | 12.9 | B   |
| 4                  | 1.00 | 1.00  | 0.909 | 0.971 | 5355             | 2076 | 11616           | 2033 | 0.46      | 1.02 | 73.2         | 73.4 | 14.6               | 14.6 | B   |
| 5                  | 1.00 | 1.00  | 0.909 | 0.971 | 4532             | 1504 | 11616           | 2033 | 0.39      | 0.74 | 73.3         | 73.5 | 12.3               | 12.3 | B   |
| 6                  | 1.00 | 1.00  | 0.909 | 0.971 | 4150             | 1368 | 11616           | 2033 | 0.36      | 0.67 | 73.3         | 73.5 | 11.3               | 11.3 | B   |
| 7                  | 1.00 | 1.00  | 0.909 | 0.971 | 4264             | 1384 | 11616           | 2033 | 0.37      | 0.68 | 73.3         | 73.5 | 11.6               | 11.6 | B   |
| 8                  | 1.00 | 1.00  | 0.909 | 0.971 | 4348             | 1462 | 11616           | 2033 | 0.37      | 0.72 | 73.3         | 73.5 | 11.8               | 11.8 | B   |
| 9                  | 1.00 | 1.00  | 0.909 | 0.971 | 4462             | 1318 | 11616           | 2033 | 0.38      | 0.65 | 73.3         | 73.5 | 12.1               | 12.1 | B   |
| 10                 | 1.00 | 1.00  | 0.909 | 0.971 | 4642             | 1434 | 11616           | 2033 | 0.40      | 0.71 | 73.3         | 73.5 | 12.6               | 12.6 | B   |
| 11                 | 1.00 | 1.00  | 0.909 | 0.971 | 4062             | 1339 | 11616           | 2033 | 0.35      | 0.66 | 73.3         | 73.5 | 11.0               | 11.0 | A   |
| 12                 | 1.00 | 1.00  | 0.909 | 0.971 | 4444             | 1388 | 11616           | 2033 | 0.38      | 0.68 | 73.3         | 73.5 | 12.1               | 12.1 | B   |
| 13                 | 1.00 | 1.00  | 0.909 | 0.971 | 4097             | 1326 | 11616           | 2033 | 0.35      | 0.65 | 73.3         | 73.5 | 11.1               | 11.1 | B   |
| 14                 | 1.00 | 1.00  | 0.909 | 0.971 | 4440             | 1421 | 11616           | 2033 | 0.38      | 0.70 | 73.3         | 73.5 | 12.1               | 12.1 | B   |
| 15                 | 1.00 | 1.00  | 0.909 | 0.971 | 4229             | 1252 | 11616           | 2033 | 0.36      | 0.62 | 73.3         | 73.5 | 11.5               | 11.5 | B   |
| 16                 | 1.00 | 1.00  | 0.909 | 0.971 | 4330             | 1174 | 11616           | 2033 | 0.37      | 0.58 | 73.3         | 73.5 | 11.8               | 11.8 | B   |
| 17                 | 1.00 | 1.00  | 0.909 | 0.971 | 4444             | 1133 | 11616           | 2033 | 0.38      | 0.56 | 73.3         | 73.5 | 12.1               | 12.1 | B   |
| 18                 | 1.00 | 1.00  | 0.909 | 0.971 | 4167             | 956  | 11616           | 2033 | 0.36      | 0.47 | 73.3         | 73.5 | 11.3               | 11.3 | B   |
| 19                 | 1.00 | 1.00  | 0.909 | 0.971 | 3824             | 964  | 11616           | 2033 | 0.33      | 0.47 | 73.3         | 73.5 | 10.4               | 10.4 | A   |
| 20                 | 1.00 | 1.00  | 0.909 | 0.971 | 3507             | 1046 | 11616           | 2033 | 0.30      | 0.51 | 73.3         | 73.5 | 9.5                | 9.5  | A   |
| Segment 3: Basic   |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period        | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                    |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| 1                  | 1.00 |       | 0.909 |       | 2614             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.2                |      | A   |
| 2                  | 1.00 |       | 0.909 |       | 2442             |      | 9293            |      | 0.26      |      | 70.8         |      | 8.6                |      | A   |
| 3                  | 1.00 |       | 0.909 |       | 2697             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.5                |      | A   |
| 4                  | 1.00 |       | 0.909 |       | 3138             |      | 9293            |      | 0.34      |      | 70.8         |      | 11.1               |      | B   |
| 5                  | 1.00 |       | 0.909 |       | 2926             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.3               |      | A   |

|                  |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|------------------|------|-------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 6                | 1.00 | 0.909 | 2689  |       | 9293             |      | 0.29            | 70.8 |           | 9.5  |              | A    |                    |      |     |
| 7                | 1.00 | 0.909 | 2785  |       | 9293             |      | 0.30            | 70.8 |           | 9.8  |              | A    |                    |      |     |
| 8                | 1.00 | 0.909 | 2785  |       | 9293             |      | 0.30            | 70.8 |           | 9.8  |              | A    |                    |      |     |
| 9                | 1.00 | 0.909 | 3054  |       | 9293             |      | 0.33            | 70.8 |           | 10.8 |              | A    |                    |      |     |
| 10               | 1.00 | 0.909 | 3111  |       | 9293             |      | 0.33            | 70.8 |           | 11.0 |              | A    |                    |      |     |
| 11               | 1.00 | 0.909 | 2631  |       | 9293             |      | 0.28            | 70.8 |           | 9.3  |              | A    |                    |      |     |
| 12               | 1.00 | 0.909 | 2961  |       | 9293             |      | 0.32            | 70.8 |           | 10.5 |              | A    |                    |      |     |
| 13               | 1.00 | 0.909 | 2680  |       | 9293             |      | 0.29            | 70.8 |           | 9.5  |              | A    |                    |      |     |
| 14               | 1.00 | 0.909 | 2922  |       | 9293             |      | 0.31            | 70.8 |           | 10.3 |              | A    |                    |      |     |
| 15               | 1.00 | 0.909 | 2891  |       | 9293             |      | 0.31            | 70.8 |           | 10.2 |              | A    |                    |      |     |
| 16               | 1.00 | 0.909 | 3076  |       | 9293             |      | 0.33            | 70.8 |           | 10.9 |              | A    |                    |      |     |
| 17               | 1.00 | 0.909 | 3234  |       | 9293             |      | 0.35            | 70.8 |           | 11.4 |              | B    |                    |      |     |
| 18               | 1.00 | 0.909 | 3146  |       | 9293             |      | 0.34            | 70.8 |           | 11.1 |              | B    |                    |      |     |
| 19               | 1.00 | 0.909 | 2794  |       | 9293             |      | 0.30            | 70.8 |           | 9.9  |              | A    |                    |      |     |
| 20               | 1.00 | 0.909 | 2389  |       | 9293             |      | 0.26            | 70.8 |           | 8.4  |              | A    |                    |      |     |
| Segment 4: Merge |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R     | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00  | 0.909 | 0.971 | 3265             | 651  | 11616           | 2033 | 0.28      | 0.32 | 73.1         | 73.5 | 8.9                | 8.9  | A   |
| 2                | 1.00 | 1.00  | 0.909 | 0.971 | 3179             | 737  | 11616           | 2033 | 0.27      | 0.36 | 73.1         | 73.5 | 8.7                | 8.7  | A   |
| 3                | 1.00 | 1.00  | 0.909 | 0.971 | 3434             | 737  | 11616           | 2033 | 0.30      | 0.36 | 73.1         | 73.5 | 9.3                | 9.3  | A   |
| 4                | 1.00 | 1.00  | 0.909 | 0.971 | 3818             | 680  | 11616           | 2033 | 0.33      | 0.33 | 73.1         | 73.5 | 10.4               | 10.4 | A   |
| 5                | 1.00 | 1.00  | 0.909 | 0.971 | 3857             | 931  | 11616           | 2033 | 0.33      | 0.46 | 73.1         | 73.5 | 10.5               | 10.5 | A   |
| 6                | 1.00 | 1.00  | 0.909 | 0.971 | 3842             | 1153 | 11616           | 2033 | 0.33      | 0.57 | 73.1         | 73.5 | 10.5               | 10.5 | A   |
| 7                | 1.00 | 1.00  | 0.909 | 0.971 | 3910             | 1125 | 11616           | 2033 | 0.34      | 0.55 | 73.1         | 73.5 | 10.6               | 10.6 | A   |
| 8                | 1.00 | 1.00  | 0.909 | 0.971 | 3831             | 1046 | 11616           | 2033 | 0.33      | 0.51 | 73.1         | 73.5 | 10.4               | 10.4 | A   |
| 9                | 1.00 | 1.00  | 0.909 | 0.971 | 3977             | 923  | 11616           | 2033 | 0.34      | 0.45 | 73.1         | 73.5 | 10.8               | 10.8 | A   |
| 10               | 1.00 | 1.00  | 0.909 | 0.971 | 4058             | 947  | 11616           | 2033 | 0.35      | 0.47 | 73.1         | 73.5 | 11.0               | 11.0 | A   |
| 11               | 1.00 | 1.00  | 0.909 | 0.971 | 3616             | 985  | 11616           | 2033 | 0.31      | 0.48 | 73.1         | 73.5 | 9.8                | 9.8  | A   |
| 12               | 1.00 | 1.00  | 0.909 | 0.971 | 3983             | 1022 | 11616           | 2033 | 0.34      | 0.50 | 73.1         | 73.5 | 10.8               | 10.8 | A   |
| 13               | 1.00 | 1.00  | 0.909 | 0.971 | 3702             | 1022 | 11616           | 2033 | 0.32      | 0.50 | 73.1         | 73.5 | 10.1               | 10.1 | A   |
| 14               | 1.00 | 1.00  | 0.909 | 0.971 | 3944             | 1022 | 11616           | 2033 | 0.34      | 0.50 | 73.1         | 73.5 | 10.7               | 10.7 | A   |
| 15               | 1.00 | 1.00  | 0.909 | 0.971 | 3913             | 1022 | 11616           | 2033 | 0.34      | 0.50 | 73.1         | 73.5 | 10.6               | 10.6 | A   |
| 16               | 1.00 | 1.00  | 0.909 | 0.971 | 3896             | 820  | 11616           | 2033 | 0.34      | 0.40 | 73.1         | 73.5 | 10.6               | 10.6 | A   |
| 17               | 1.00 | 1.00  | 0.909 | 0.971 | 3856             | 622  | 11616           | 2033 | 0.33      | 0.31 | 73.1         | 73.5 | 10.5               | 10.5 | A   |
| 18               | 1.00 | 1.00  | 0.909 | 0.971 | 3747             | 601  | 11616           | 2033 | 0.32      | 0.30 | 73.1         | 73.5 | 10.2               | 10.2 | A   |
| 19               | 1.00 | 1.00  | 0.909 | 0.971 | 3247             | 453  | 11616           | 2033 | 0.28      | 0.22 | 73.1         | 73.5 | 8.8                | 8.8  | A   |
| 20               | 1.00 | 1.00  | 0.909 | 0.971 | 2887             | 498  | 11616           | 2033 | 0.25      | 0.24 | 73.1         | 73.5 | 7.9                | 7.9  | A   |
| Segment 5: Basic |      |       |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |       | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |

|    |      |       |      |      |      |      |      |   |
|----|------|-------|------|------|------|------|------|---|
| 1  | 1.00 | 0.909 | 3309 | 9293 | 0.36 | 70.8 | 11.7 | B |
| 2  | 1.00 | 0.909 | 3230 | 9293 | 0.35 | 70.8 | 11.4 | B |
| 3  | 1.00 | 0.909 | 3485 | 9293 | 0.38 | 70.8 | 12.3 | B |
| 4  | 1.00 | 0.909 | 3864 | 9293 | 0.42 | 70.8 | 13.6 | B |
| 5  | 1.00 | 0.909 | 3921 | 9293 | 0.42 | 70.8 | 13.8 | B |
| 6  | 1.00 | 0.909 | 3921 | 9293 | 0.42 | 70.8 | 13.8 | B |
| 7  | 1.00 | 0.909 | 3987 | 9293 | 0.43 | 70.8 | 14.1 | B |
| 8  | 1.00 | 0.909 | 3903 | 9293 | 0.42 | 70.8 | 13.8 | B |
| 9  | 1.00 | 0.909 | 4040 | 9293 | 0.43 | 70.8 | 14.3 | B |
| 10 | 1.00 | 0.909 | 4123 | 9293 | 0.44 | 70.8 | 14.6 | B |
| 11 | 1.00 | 0.909 | 3683 | 9293 | 0.40 | 70.8 | 13.0 | B |
| 12 | 1.00 | 0.909 | 4053 | 9293 | 0.44 | 70.8 | 14.3 | B |
| 13 | 1.00 | 0.909 | 3771 | 9293 | 0.41 | 70.8 | 13.3 | B |
| 14 | 1.00 | 0.909 | 4013 | 9293 | 0.43 | 70.8 | 14.2 | B |
| 15 | 1.00 | 0.909 | 3982 | 9293 | 0.43 | 70.8 | 14.1 | B |
| 16 | 1.00 | 0.909 | 3952 | 9293 | 0.43 | 70.8 | 14.0 | B |
| 17 | 1.00 | 0.909 | 3899 | 9293 | 0.42 | 70.8 | 13.8 | B |
| 18 | 1.00 | 0.909 | 3789 | 9293 | 0.41 | 70.8 | 13.4 | B |
| 19 | 1.00 | 0.909 | 3278 | 9293 | 0.35 | 70.8 | 11.6 | B |
| 20 | 1.00 | 0.909 | 2922 | 9293 | 0.31 | 70.8 | 10.3 | A |

Segment 6: Diverge

| Time Period | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|-------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
|             | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1           | 1.00 | 1.00 | 0.909 | 0.971 | 3309             | 709  | 11616           | 2033 | 0.28      | 0.35 | 73.3         | 73.5 | 9.0                | 9.0  | A   |
| 2           | 1.00 | 1.00 | 0.909 | 0.971 | 3230             | 630  | 11616           | 2033 | 0.28      | 0.31 | 73.3         | 73.5 | 8.8                | 8.8  | A   |
| 3           | 1.00 | 1.00 | 0.909 | 0.971 | 3485             | 704  | 11616           | 2033 | 0.30      | 0.35 | 73.3         | 73.5 | 9.5                | 9.5  | A   |
| 4           | 1.00 | 1.00 | 0.909 | 0.971 | 3864             | 655  | 11616           | 2033 | 0.33      | 0.32 | 73.3         | 73.5 | 10.5               | 10.5 | A   |
| 5           | 1.00 | 1.00 | 0.909 | 0.971 | 3921             | 713  | 11616           | 2033 | 0.34      | 0.35 | 73.3         | 73.5 | 10.7               | 10.7 | A   |
| 6           | 1.00 | 1.00 | 0.909 | 0.971 | 3921             | 663  | 11616           | 2033 | 0.34      | 0.33 | 73.3         | 73.5 | 10.7               | 10.7 | A   |
| 7           | 1.00 | 1.00 | 0.909 | 0.971 | 3987             | 721  | 11616           | 2033 | 0.34      | 0.35 | 73.3         | 73.5 | 10.8               | 10.8 | A   |
| 8           | 1.00 | 1.00 | 0.909 | 0.971 | 3903             | 729  | 11616           | 2033 | 0.34      | 0.36 | 73.3         | 73.5 | 10.6               | 10.6 | A   |
| 9           | 1.00 | 1.00 | 0.909 | 0.971 | 4040             | 816  | 11616           | 2033 | 0.35      | 0.40 | 73.3         | 73.5 | 11.0               | 11.0 | A   |
| 10          | 1.00 | 1.00 | 0.909 | 0.971 | 4123             | 696  | 11616           | 2033 | 0.35      | 0.34 | 73.3         | 73.5 | 11.2               | 11.2 | B   |
| 11          | 1.00 | 1.00 | 0.909 | 0.971 | 3683             | 651  | 11616           | 2033 | 0.32      | 0.32 | 73.3         | 73.5 | 10.0               | 10.0 | A   |
| 12          | 1.00 | 1.00 | 0.909 | 0.971 | 4053             | 676  | 11616           | 2033 | 0.35      | 0.33 | 73.3         | 73.5 | 11.0               | 11.0 | A   |
| 13          | 1.00 | 1.00 | 0.909 | 0.971 | 3771             | 519  | 11616           | 2033 | 0.32      | 0.26 | 73.3         | 73.5 | 10.3               | 10.3 | A   |
| 14          | 1.00 | 1.00 | 0.909 | 0.971 | 4013             | 581  | 11616           | 2033 | 0.35      | 0.29 | 73.3         | 73.5 | 10.9               | 10.9 | A   |
| 15          | 1.00 | 1.00 | 0.909 | 0.971 | 3982             | 531  | 11616           | 2033 | 0.34      | 0.26 | 73.3         | 73.5 | 10.8               | 10.8 | A   |
| 16          | 1.00 | 1.00 | 0.909 | 0.971 | 3952             | 511  | 11616           | 2033 | 0.34      | 0.25 | 73.3         | 73.5 | 10.7               | 10.7 | A   |
| 17          | 1.00 | 1.00 | 0.909 | 0.971 | 3899             | 457  | 11616           | 2033 | 0.34      | 0.22 | 73.3         | 73.5 | 10.6               | 10.6 | A   |
| 18          | 1.00 | 1.00 | 0.909 | 0.971 | 3789             | 428  | 11616           | 2033 | 0.33      | 0.21 | 73.3         | 73.5 | 10.3               | 10.3 | A   |

| 19               | 1.00 | 1.00 | 0.909 | 0.971 | 3278             | 387  | 11616           | 2033 | 0.28      | 0.19 | 73.3         | 73.5 | 8.9                | 8.9  | A   |
|------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 20               | 1.00 | 1.00 | 0.909 | 0.971 | 2922             | 379  | 11616           | 2033 | 0.25      | 0.19 | 73.3         | 73.5 | 7.9                | 7.9  | A   |
| Segment 7: Basic |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                | 1.00 |      | 0.909 |       | 2552             |      | 9293            |      | 0.27      |      | 70.8         |      | 9.0                |      | A   |
| 2                | 1.00 |      | 0.909 |       | 2557             |      | 9293            |      | 0.28      |      | 70.8         |      | 9.0                |      | A   |
| 3                | 1.00 |      | 0.909 |       | 2733             |      | 9293            |      | 0.29      |      | 70.8         |      | 9.6                |      | A   |
| 4                | 1.00 |      | 0.909 |       | 3164             |      | 9293            |      | 0.34      |      | 70.8         |      | 11.2               |      | B   |
| 5                | 1.00 |      | 0.909 |       | 3160             |      | 9293            |      | 0.34      |      | 70.8         |      | 11.2               |      | B   |
| 6                | 1.00 |      | 0.909 |       | 3212             |      | 9293            |      | 0.35      |      | 70.8         |      | 11.3               |      | B   |
| 7                | 1.00 |      | 0.909 |       | 3217             |      | 9293            |      | 0.35      |      | 70.8         |      | 11.4               |      | B   |
| 8                | 1.00 |      | 0.909 |       | 3124             |      | 9293            |      | 0.34      |      | 70.8         |      | 11.0               |      | A   |
| 9                | 1.00 |      | 0.909 |       | 3168             |      | 9293            |      | 0.34      |      | 70.8         |      | 11.2               |      | B   |
| 10               | 1.00 |      | 0.909 |       | 3380             |      | 9293            |      | 0.36      |      | 70.8         |      | 11.9               |      | B   |
| 11               | 1.00 |      | 0.909 |       | 2988             |      | 9293            |      | 0.32      |      | 70.8         |      | 10.6               |      | A   |
| 12               | 1.00 |      | 0.909 |       | 3331             |      | 9293            |      | 0.36      |      | 70.8         |      | 11.8               |      | B   |
| 13               | 1.00 |      | 0.909 |       | 3217             |      | 9293            |      | 0.35      |      | 70.8         |      | 11.4               |      | B   |
| 14               | 1.00 |      | 0.909 |       | 3393             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.0               |      | B   |
| 15               | 1.00 |      | 0.909 |       | 3415             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.1               |      | B   |
| 16               | 1.00 |      | 0.909 |       | 3406             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.0               |      | B   |
| 17               | 1.00 |      | 0.909 |       | 3410             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.0               |      | B   |
| 18               | 1.00 |      | 0.909 |       | 3331             |      | 9293            |      | 0.36      |      | 70.8         |      | 11.8               |      | B   |
| 19               | 1.00 |      | 0.909 |       | 2865             |      | 9293            |      | 0.31      |      | 70.8         |      | 10.1               |      | A   |
| 20               | 1.00 |      | 0.909 |       | 2517             |      | 9293            |      | 0.27      |      | 70.8         |      | 8.9                |      | A   |
| Segment 8: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period      | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                  | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                | 1.00 | 1.00 | 0.909 | 0.971 | 3170             | 618  | 11616           | 2033 | 0.27      | 0.30 | 73.2         | 73.5 | 8.6                | 8.6  | A   |
| 2                | 1.00 | 1.00 | 0.909 | 0.971 | 3257             | 700  | 11616           | 2033 | 0.28      | 0.34 | 73.2         | 73.5 | 8.9                | 8.9  | A   |
| 3                | 1.00 | 1.00 | 0.909 | 0.971 | 3433             | 700  | 11616           | 2033 | 0.30      | 0.34 | 73.2         | 73.5 | 9.3                | 9.3  | A   |
| 4                | 1.00 | 1.00 | 0.909 | 0.971 | 3807             | 643  | 11616           | 2033 | 0.33      | 0.32 | 73.2         | 73.5 | 10.4               | 10.4 | A   |
| 5                | 1.00 | 1.00 | 0.909 | 0.971 | 4042             | 882  | 11616           | 2033 | 0.35      | 0.43 | 73.2         | 73.5 | 11.0               | 11.0 | A   |
| 6                | 1.00 | 1.00 | 0.909 | 0.971 | 4304             | 1092 | 11616           | 2033 | 0.37      | 0.54 | 73.2         | 73.5 | 11.7               | 11.7 | B   |
| 7                | 1.00 | 1.00 | 0.909 | 0.971 | 4284             | 1067 | 11616           | 2033 | 0.37      | 0.52 | 73.2         | 73.5 | 11.7               | 11.7 | B   |
| 8                | 1.00 | 1.00 | 0.909 | 0.971 | 4117             | 993  | 11616           | 2033 | 0.35      | 0.49 | 73.2         | 73.5 | 11.2               | 11.2 | B   |
| 9                | 1.00 | 1.00 | 0.909 | 0.971 | 4041             | 873  | 11616           | 2033 | 0.35      | 0.43 | 73.2         | 73.5 | 11.0               | 11.0 | A   |
| 10               | 1.00 | 1.00 | 0.909 | 0.971 | 4278             | 898  | 11616           | 2033 | 0.37      | 0.44 | 73.2         | 73.5 | 11.6               | 11.6 | B   |
| 11               | 1.00 | 1.00 | 0.909 | 0.971 | 3919             | 931  | 11616           | 2033 | 0.34      | 0.46 | 73.2         | 73.5 | 10.7               | 10.7 | A   |
| 12               | 1.00 | 1.00 | 0.909 | 0.971 | 4246             | 915  | 11616           | 2033 | 0.37      | 0.45 | 73.2         | 73.5 | 11.6               | 11.6 | B   |
| 13               | 1.00 | 1.00 | 0.909 | 0.971 | 4185             | 968  | 11616           | 2033 | 0.36      | 0.48 | 73.2         | 73.5 | 11.4               | 11.4 | B   |

|                   |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
|-------------------|------|------|-------|-------|------------------|------|-----------------|------|-----------|------|--------------|------|--------------------|------|-----|
| 14                | 1.00 | 1.00 | 0.909 | 0.971 | 4283             | 890  | 11616           | 2033 | 0.37      | 0.44 | 73.2         | 73.5 | 11.7               | 11.7 | B   |
| 15                | 1.00 | 1.00 | 0.909 | 0.971 | 4148             | 733  | 11616           | 2033 | 0.36      | 0.36 | 73.2         | 73.5 | 11.3               | 11.3 | B   |
| 16                | 1.00 | 1.00 | 0.909 | 0.971 | 4185             | 779  | 11616           | 2033 | 0.36      | 0.38 | 73.2         | 73.5 | 11.4               | 11.4 | B   |
| 17                | 1.00 | 1.00 | 0.909 | 0.971 | 3999             | 589  | 11616           | 2033 | 0.34      | 0.29 | 73.2         | 73.5 | 10.9               | 10.9 | A   |
| 18                | 1.00 | 1.00 | 0.909 | 0.971 | 3899             | 568  | 11616           | 2033 | 0.34      | 0.28 | 73.2         | 73.5 | 10.6               | 10.6 | A   |
| 19                | 1.00 | 1.00 | 0.909 | 0.971 | 3293             | 428  | 11616           | 2033 | 0.28      | 0.21 | 73.2         | 73.5 | 9.0                | 9.0  | A   |
| 20                | 1.00 | 1.00 | 0.909 | 0.971 | 2991             | 474  | 11616           | 2033 | 0.26      | 0.23 | 73.2         | 73.5 | 8.1                | 8.1  | A   |
| Segment 9: Basic  |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
| 1                 | 1.00 |      | 0.909 |       | 3212             |      | 9293            |      | 0.35      |      | 70.8         |      | 11.3               |      | B   |
| 2                 | 1.00 |      | 0.909 |       | 3305             |      | 9293            |      | 0.36      |      | 70.8         |      | 11.7               |      | B   |
| 3                 | 1.00 |      | 0.909 |       | 3481             |      | 9293            |      | 0.37      |      | 70.8         |      | 12.3               |      | B   |
| 4                 | 1.00 |      | 0.909 |       | 3850             |      | 9293            |      | 0.41      |      | 70.8         |      | 13.6               |      | B   |
| 5                 | 1.00 |      | 0.909 |       | 4101             |      | 9293            |      | 0.44      |      | 70.8         |      | 14.5               |      | B   |
| 6                 | 1.00 |      | 0.909 |       | 4378             |      | 9293            |      | 0.47      |      | 70.8         |      | 15.5               |      | B   |
| 7                 | 1.00 |      | 0.909 |       | 4356             |      | 9293            |      | 0.47      |      | 70.8         |      | 15.4               |      | B   |
| 8                 | 1.00 |      | 0.909 |       | 4185             |      | 9293            |      | 0.45      |      | 70.8         |      | 14.8               |      | B   |
| 9                 | 1.00 |      | 0.909 |       | 4101             |      | 9293            |      | 0.44      |      | 70.8         |      | 14.5               |      | B   |
| 10                | 1.00 |      | 0.909 |       | 4339             |      | 9293            |      | 0.47      |      | 70.8         |      | 15.3               |      | B   |
| 11                | 1.00 |      | 0.909 |       | 3982             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.1               |      | B   |
| 12                | 1.00 |      | 0.909 |       | 4308             |      | 9293            |      | 0.46      |      | 70.8         |      | 15.2               |      | B   |
| 13                | 1.00 |      | 0.909 |       | 4251             |      | 9293            |      | 0.46      |      | 70.8         |      | 15.0               |      | B   |
| 14                | 1.00 |      | 0.909 |       | 4343             |      | 9293            |      | 0.47      |      | 70.8         |      | 15.3               |      | B   |
| 15                | 1.00 |      | 0.909 |       | 4198             |      | 9293            |      | 0.45      |      | 70.8         |      | 14.8               |      | B   |
| 16                | 1.00 |      | 0.909 |       | 4238             |      | 9293            |      | 0.46      |      | 70.8         |      | 15.0               |      | B   |
| 17                | 1.00 |      | 0.909 |       | 4040             |      | 9293            |      | 0.43      |      | 70.8         |      | 14.3               |      | B   |
| 18                | 1.00 |      | 0.909 |       | 3938             |      | 9293            |      | 0.42      |      | 70.8         |      | 13.9               |      | B   |
| 19                | 1.00 |      | 0.909 |       | 3322             |      | 9293            |      | 0.36      |      | 70.8         |      | 11.7               |      | B   |
| 20                | 1.00 |      | 0.909 |       | 3023             |      | 9293            |      | 0.33      |      | 70.8         |      | 10.7               |      | A   |
| Segment 10: Merge |      |      |       |       |                  |      |                 |      |           |      |              |      |                    |      |     |
| Time Period       | PHF  |      | fHV   |       | Flow Rate (pc/h) |      | Capacity (pc/h) |      | d/c Ratio |      | Speed (mi/h) |      | Density (pc/mi/ln) |      | LOS |
|                   | F    | R    | F     | R     | Freeway          | Ramp | Freeway         | Ramp | F         | R    | F            | R    | Freeway            | Ramp |     |
| 1                 | 1.00 | 1.00 | 0.909 | 0.971 | 3389             | 177  | 11616           | 2033 | 0.29      | 0.09 | 72.8         | 73.5 | 9.2                | 9.2  | A   |
| 2                 | 1.00 | 1.00 | 0.909 | 0.971 | 3490             | 185  | 11616           | 2033 | 0.30      | 0.09 | 72.8         | 73.5 | 9.5                | 9.5  | A   |
| 3                 | 1.00 | 1.00 | 0.909 | 0.971 | 3687             | 206  | 11616           | 2033 | 0.32      | 0.10 | 72.8         | 73.5 | 10.0               | 10.0 | A   |
| 4                 | 1.00 | 1.00 | 0.909 | 0.971 | 4011             | 161  | 11616           | 2033 | 0.35      | 0.08 | 72.8         | 73.5 | 10.9               | 10.9 | A   |
| 5                 | 1.00 | 1.00 | 0.909 | 0.971 | 4336             | 235  | 11616           | 2033 | 0.37      | 0.12 | 72.8         | 73.5 | 11.8               | 11.8 | B   |
| 6                 | 1.00 | 1.00 | 0.909 | 0.971 | 4600             | 222  | 11616           | 2033 | 0.40      | 0.11 | 72.8         | 73.5 | 12.5               | 12.5 | B   |
| 7                 | 1.00 | 1.00 | 0.909 | 0.971 | 4595             | 239  | 11616           | 2033 | 0.40      | 0.12 | 72.8         | 73.5 | 12.5               | 12.5 | B   |
| 8                 | 1.00 | 1.00 | 0.909 | 0.971 | 4395             | 210  | 11616           | 2033 | 0.38      | 0.10 | 72.8         | 73.5 | 12.0               | 12.0 | B   |



|    |      |      |       |       |      |     |       |      |      |      |      |      |      |      |   |
|----|------|------|-------|-------|------|-----|-------|------|------|------|------|------|------|------|---|
| 9  | 1.00 | 1.00 | 0.909 | 0.971 | 4344 | 243 | 11616 | 2033 | 0.37 | 0.12 | 72.8 | 73.5 | 11.8 | 11.8 | B |
| 10 | 1.00 | 1.00 | 0.909 | 0.971 | 4566 | 227 | 11616 | 2033 | 0.39 | 0.11 | 72.8 | 73.5 | 12.4 | 12.4 | B |
| 11 | 1.00 | 1.00 | 0.909 | 0.971 | 4283 | 301 | 11616 | 2033 | 0.37 | 0.15 | 72.8 | 73.5 | 11.7 | 11.7 | B |
| 12 | 1.00 | 1.00 | 0.909 | 0.971 | 4543 | 235 | 11616 | 2033 | 0.39 | 0.12 | 72.8 | 73.5 | 12.4 | 12.4 | B |
| 13 | 1.00 | 1.00 | 0.909 | 0.971 | 4564 | 313 | 11616 | 2033 | 0.39 | 0.15 | 72.8 | 73.5 | 12.4 | 12.4 | B |
| 14 | 1.00 | 1.00 | 0.909 | 0.971 | 4598 | 255 | 11616 | 2033 | 0.40 | 0.13 | 72.8 | 73.5 | 12.5 | 12.5 | B |
| 15 | 1.00 | 1.00 | 0.909 | 0.971 | 4375 | 177 | 11616 | 2033 | 0.38 | 0.09 | 72.8 | 73.5 | 11.9 | 11.9 | B |
| 16 | 1.00 | 1.00 | 0.909 | 0.971 | 4353 | 115 | 11616 | 2033 | 0.37 | 0.06 | 72.8 | 73.5 | 11.8 | 11.8 | B |
| 17 | 1.00 | 1.00 | 0.909 | 0.971 | 4151 | 111 | 11616 | 2033 | 0.36 | 0.05 | 72.8 | 73.5 | 11.3 | 11.3 | B |
| 18 | 1.00 | 1.00 | 0.909 | 0.971 | 4033 | 95  | 11616 | 2033 | 0.35 | 0.05 | 72.8 | 73.5 | 11.0 | 11.0 | A |
| 19 | 1.00 | 1.00 | 0.909 | 0.971 | 3417 | 95  | 11616 | 2033 | 0.29 | 0.05 | 72.8 | 73.5 | 9.3  | 9.3  | A |
| 20 | 1.00 | 1.00 | 0.909 | 0.971 | 3089 | 66  | 11616 | 2033 | 0.27 | 0.03 | 72.8 | 73.5 | 8.4  | 8.4  | A |

Segment 11: Basic

| Time Period | PHF  | fHV   | Flow Rate (pc/h) | Capacity (pc/h) | d/c Ratio | Speed (mi/h) | Density (pc/mi/ln) | LOS |
|-------------|------|-------|------------------|-----------------|-----------|--------------|--------------------|-----|
| 1           | 1.00 | 0.909 | 3402             | 9293            | 0.37      | 70.8         | 12.0               | B   |
| 2           | 1.00 | 0.909 | 3503             | 9293            | 0.38      | 70.8         | 12.4               | B   |
| 3           | 1.00 | 0.909 | 3701             | 9293            | 0.40      | 70.8         | 13.1               | B   |
| 4           | 1.00 | 0.909 | 4022             | 9293            | 0.43      | 70.8         | 14.2               | B   |
| 5           | 1.00 | 0.909 | 4352             | 9293            | 0.47      | 70.8         | 15.4               | B   |
| 6           | 1.00 | 0.909 | 4616             | 9293            | 0.50      | 70.8         | 16.3               | B   |
| 7           | 1.00 | 0.909 | 4612             | 9293            | 0.50      | 70.8         | 16.3               | B   |
| 8           | 1.00 | 0.909 | 4409             | 9293            | 0.47      | 70.8         | 15.6               | B   |
| 9           | 1.00 | 0.909 | 4361             | 9293            | 0.47      | 70.8         | 15.4               | B   |
| 10          | 1.00 | 0.909 | 4581             | 9293            | 0.49      | 70.8         | 16.2               | B   |
| 11          | 1.00 | 0.909 | 4304             | 9293            | 0.46      | 70.8         | 15.2               | B   |
| 12          | 1.00 | 0.909 | 4559             | 9293            | 0.49      | 70.8         | 16.1               | B   |
| 13          | 1.00 | 0.909 | 4585             | 9293            | 0.49      | 70.8         | 16.2               | B   |
| 14          | 1.00 | 0.909 | 4616             | 9293            | 0.50      | 70.8         | 16.3               | B   |
| 15          | 1.00 | 0.909 | 4387             | 9293            | 0.47      | 70.8         | 15.5               | B   |
| 16          | 1.00 | 0.909 | 4361             | 9293            | 0.47      | 70.8         | 15.4               | B   |
| 17          | 1.00 | 0.909 | 4158             | 9293            | 0.45      | 70.8         | 14.7               | B   |
| 18          | 1.00 | 0.909 | 4040             | 9293            | 0.43      | 70.8         | 14.3               | B   |
| 19          | 1.00 | 0.909 | 3424             | 9293            | 0.37      | 70.8         | 12.1               | B   |
| 20          | 1.00 | 0.909 | 3094             | 9293            | 0.33      | 70.8         | 10.9               | A   |

Facility Time Period Results

| T | Speed, mi/h | Density, pc/mi/ln | Density, veh/mi/ln | Travel Time, min | LOS |
|---|-------------|-------------------|--------------------|------------------|-----|
| 1 | 71.3        | 11.2              | 10.2               | 2.50             | B   |
| 2 | 71.3        | 11.2              | 10.2               | 2.50             | B   |
| 3 | 71.3        | 12.0              | 10.9               | 2.50             | B   |
| 4 | 71.1        | 13.4              | 12.2               | 2.50             | F   |

|                          |      |                                                                                                                                                                                                                      |                    |      |      |
|--------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------|------|
| 5                        | 71.3 | 13.1                                                                                                                                                                                                                 | 11.9               | 2.50 | B    |
| 6                        | 71.3 | 13.1                                                                                                                                                                                                                 | 11.9               | 2.50 | B    |
| 7                        | 71.3 | 13.2                                                                                                                                                                                                                 | 12.0               | 2.50 | B    |
| 8                        | 71.3 | 13.0                                                                                                                                                                                                                 | 11.8               | 2.50 | B    |
| 9                        | 71.3 | 13.2                                                                                                                                                                                                                 | 12.0               | 2.50 | B    |
| 10                       | 71.3 | 13.8                                                                                                                                                                                                                 | 12.5               | 2.50 | B    |
| 11                       | 71.3 | 12.4                                                                                                                                                                                                                 | 11.2               | 2.50 | B    |
| 12                       | 71.3 | 13.5                                                                                                                                                                                                                 | 12.2               | 2.50 | B    |
| 13                       | 71.3 | 12.9                                                                                                                                                                                                                 | 11.7               | 2.50 | B    |
| 14                       | 71.3 | 13.5                                                                                                                                                                                                                 | 12.3               | 2.50 | B    |
| 15                       | 71.3 | 13.1                                                                                                                                                                                                                 | 11.9               | 2.50 | B    |
| 16                       | 71.3 | 13.2                                                                                                                                                                                                                 | 12.0               | 2.50 | B    |
| 17                       | 71.3 | 13.1                                                                                                                                                                                                                 | 11.9               | 2.50 | B    |
| 18                       | 71.3 | 12.7                                                                                                                                                                                                                 | 11.5               | 2.50 | B    |
| 19                       | 71.3 | 11.0                                                                                                                                                                                                                 | 10.0               | 2.50 | B    |
| 20                       | 71.3 | 9.9                                                                                                                                                                                                                  | 9.0                | 2.50 | A    |
| Facility Overall Results |      |                                                                                                                                                                                                                      |                    |      |      |
| Space Mean Speed, mi/h   |      | 71.3                                                                                                                                                                                                                 | Density, veh/mi/ln |      | 11.5 |
| Average Travel Time, min |      | 2.50                                                                                                                                                                                                                 | Density, pc/mi/ln  |      | 12.6 |
| Messages                 |      |                                                                                                                                                                                                                      |                    |      |      |
| WARNING 1                |      | Diverge capacity is less than diverge demand on segment 2. This may result in an off-ramp queue affecting the mainline flow. This is not currently modeled in HCM methodologies. Use caution when reviewing results. |                    |      |      |
| Comments                 |      |                                                                                                                                                                                                                      |                    |      |      |
|                          |      |                                                                                                                                                                                                                      |                    |      |      |

