

**Appendix F: Freeman Square, Existing Conditions**

Freeman Square  
Existing Conditions

AM  
09/22/2023

| Intersection              |      |
|---------------------------|------|
| Intersection Delay, s/veh | 12.8 |
| Intersection LOS          | B    |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↕    |      |      |      |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 76   | 83   | 35   | 0    | 0    | 0    | 43   | 199  | 59   | 73   | 208  | 95   |
| Future Vol, veh/h   | 76   | 83   | 35   | 0    | 0    | 0    | 43   | 199  | 59   | 73   | 208  | 95   |
| Peak Hour Factor    | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 83   | 90   | 38   | 0    | 0    | 0    | 47   | 216  | 64   | 79   | 226  | 103  |
| Number of Lanes     | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | NB   | SB |
|----------------------------|------|------|----|
| Opposing Approach          |      | SB   | NB |
| Opposing Lanes             | 0    | 1    | 1  |
| Conflicting Approach Left  | SB   | EB   |    |
| Conflicting Lanes Left     | 1    | 1    | 0  |
| Conflicting Approach Right | NB   |      | EB |
| Conflicting Lanes Right    | 1    | 0    | 1  |
| HCM Control Delay          | 11.5 | 12.2 | 14 |
| HCM LOS                    | B    | B    | B  |

| Lane                   | NBLn1 | EBLn1 | SBLn1 |
|------------------------|-------|-------|-------|
| Vol Left, %            | 14%   | 39%   | 19%   |
| Vol Thru, %            | 66%   | 43%   | 55%   |
| Vol Right, %           | 20%   | 18%   | 25%   |
| Sign Control           | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 301   | 194   | 376   |
| LT Vol                 | 43    | 76    | 73    |
| Through Vol            | 199   | 83    | 208   |
| RT Vol                 | 59    | 35    | 95    |
| Lane Flow Rate         | 327   | 211   | 409   |
| Geometry Grp           | 1     | 1     | 1     |
| Degree of Util (X)     | 0.457 | 0.333 | 0.558 |
| Departure Headway (Hd) | 5.033 | 5.677 | 4.913 |
| Convergence, Y/N       | Yes   | Yes   | Yes   |
| Cap                    | 720   | 633   | 736   |
| Service Time           | 3.045 | 3.712 | 2.922 |
| HCM Lane V/C Ratio     | 0.454 | 0.333 | 0.556 |
| HCM Control Delay      | 12.2  | 11.5  | 14    |
| HCM Lane LOS           | B     | B     | B     |
| HCM 95th-tile Q        | 2.4   | 1.5   | 3.5   |

| Intersection              |      |
|---------------------------|------|
| Intersection Delay, s/veh | 24.3 |
| Intersection LOS          | C    |

| Movement            | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR  | SBL  | SBT  | SBR  |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations |      | ↕    |      |      |      |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h  | 177  | 108  | 23   | 0    | 0    | 0    | 37   | 362  | 43   | 87   | 258  | 92   |
| Future Vol, veh/h   | 177  | 108  | 23   | 0    | 0    | 0    | 37   | 362  | 43   | 87   | 258  | 92   |
| Peak Hour Factor    | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 192  | 117  | 25   | 0    | 0    | 0    | 40   | 393  | 47   | 95   | 280  | 100  |
| Number of Lanes     | 0    | 1    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 0    | 1    | 0    |

| Approach                   | EB   | NB   | SB   |
|----------------------------|------|------|------|
| Opposing Approach          |      | SB   | NB   |
| Opposing Lanes             | 0    | 1    | 1    |
| Conflicting Approach Left  | SB   | EB   |      |
| Conflicting Lanes Left     | 1    | 1    | 0    |
| Conflicting Approach Right | NB   |      | EB   |
| Conflicting Lanes Right    | 1    | 0    | 1    |
| HCM Control Delay          | 19.3 | 26.6 | 25.5 |
| HCM LOS                    | C    | D    | D    |

| Lane                   | NBLn1 | EBLn1 | SBLn1 |
|------------------------|-------|-------|-------|
| Vol Left, %            | 8%    | 57%   | 20%   |
| Vol Thru, %            | 82%   | 35%   | 59%   |
| Vol Right, %           | 10%   | 7%    | 21%   |
| Sign Control           | Stop  | Stop  | Stop  |
| Traffic Vol by Lane    | 442   | 308   | 437   |
| LT Vol                 | 37    | 177   | 87    |
| Through Vol            | 362   | 108   | 258   |
| RT Vol                 | 43    | 23    | 92    |
| Lane Flow Rate         | 480   | 335   | 475   |
| Geometry Grp           | 1     | 1     | 1     |
| Degree of Util (X)     | 0.778 | 0.606 | 0.765 |
| Departure Headway (Hd) | 5.829 | 6.518 | 5.797 |
| Convergence, Y/N       | Yes   | Yes   | Yes   |
| Cap                    | 615   | 549   | 618   |
| Service Time           | 3.922 | 4.613 | 3.891 |
| HCM Lane V/C Ratio     | 0.78  | 0.61  | 0.769 |
| HCM Control Delay      | 26.6  | 19.3  | 25.5  |
| HCM Lane LOS           | D     | C     | D     |
| HCM 95th-tile Q        | 7.3   | 4     | 7     |