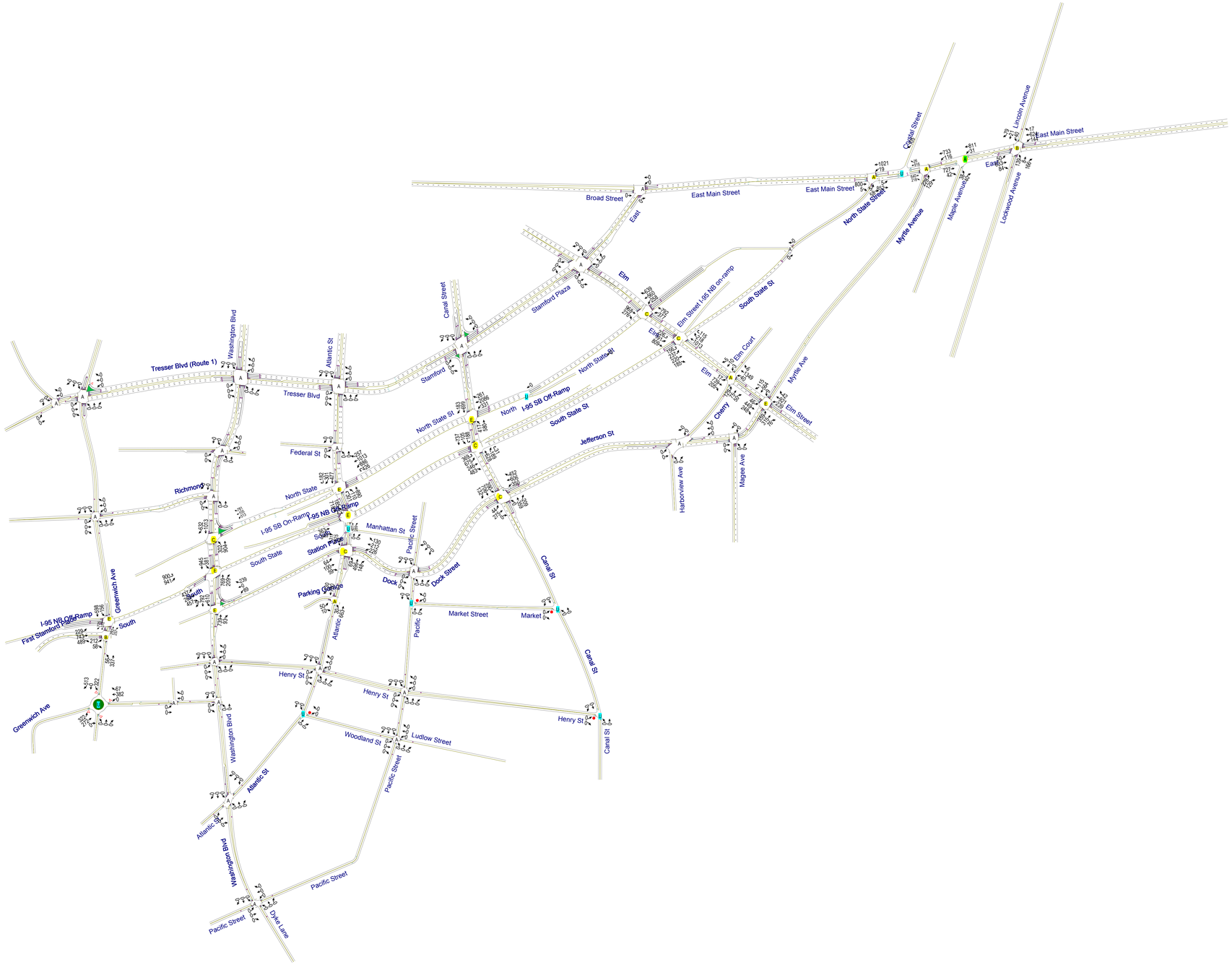
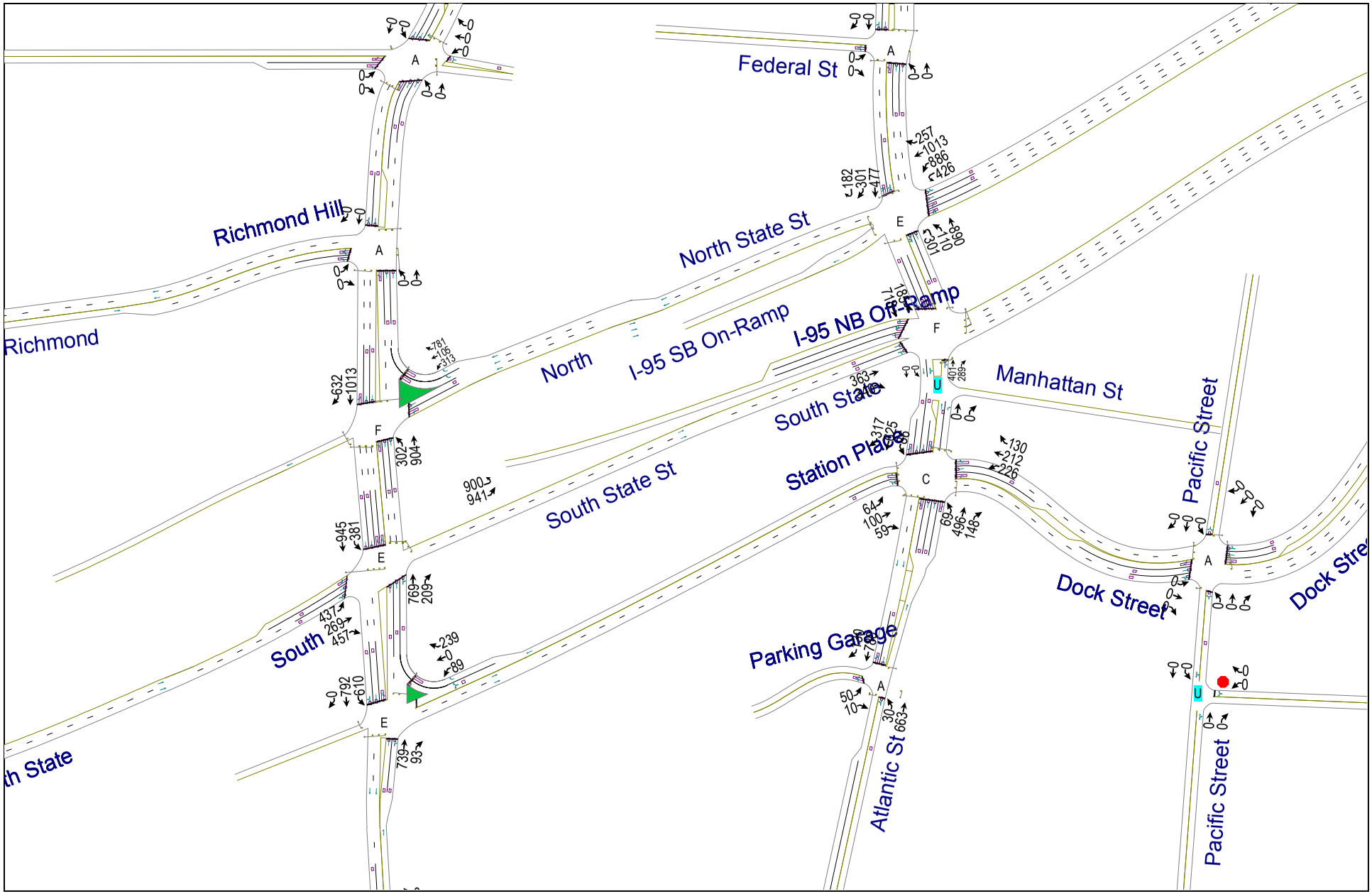

Broad Street
East Main Street
East Main Street
East Main Street
East Main Street
Canal Street
Lincoln Avenue
Middle Avenue
Lockwood Avenue
North State Street
Myrtle Avenue
Elm
Elm Street I-95 NB on-ramp
South State St
Elm Court
Myrtle Ave
Elm Street
Cherry
Jefferson St
Harborview Ave
Magee Ave
Stamford Plaza
Canal Street
Tresser Blvd (Route 1)
Washington Blvd
Atlantic St
Tresser Blvd
Stamford
North State St
North I-95 SB Off-Ramp
South State St
Federal St
Richmond
North State
I-95 SB On-Ramp
I-95 NB Off-Ramp
South State
Station Place
Manhattan St
Pacific Street
Dock
Dock Street
Parking Garage
Canal St
Market Street
Market
Pacific
Atlantic
Greenwich Ave
I-95 NB Off-Ramp
First Stamford Place
South
Henry St
Henry St
Henry St
Canal St
Greenwich Ave
Washington Blvd
Woodland St
Ludlow Street
Pacific Street
Atlantic St
Atlantic St
Washington Blvd
Pacific Street
Pacific Street
Dyke Lane


Federal St
Richmond Hill
North State St
Richmond
North
I-95 SB On-Ramp
I-95 NB On-Ramp
South State
Manhattan St
Station Place
Pacific Street
South State St
Dock Street
Parking Garage
Atlantic St
Pacific Street
South

MOVEMENT SUMMARY

Site: New Site - 1

Greenwich Avenue at Pulaski Street
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Pulaski Street											
5	T	402	2.0	0.578	10.0	LOS B	6.0	42.6	0.82	0.90	46.8
6	R	71	2.0	0.578	16.1	LOS B	6.0	42.6	0.82	0.98	43.5
Approach		473	2.0	0.578	10.9	LOS B	6.0	42.6	0.82	0.91	46.2
North: Greenwich Avenue											
7	L	339	2.0	0.781	10.1	LOS B	11.6	82.9	0.79	0.80	46.2
9	R	540	2.0	0.780	15.9	LOS B	11.6	82.9	0.79	0.87	43.0
Approach		879	2.0	0.780	13.7	LOS B	11.6	82.9	0.79	0.84	44.1
West: Greenwich Avenue											
10	L	339	2.0	0.450	5.7	LOS A	4.1	29.0	0.29	0.48	50.4
11	T	286	2.0	0.449	4.8	LOS A	4.1	29.0	0.29	0.40	51.0
Approach		625	2.0	0.450	5.3	LOS A	4.1	29.0	0.29	0.44	50.7
All Vehicles		1977	2.0	0.781	10.4	LOS B	11.6	82.9	0.64	0.73	46.5

Level of Service (Aver. Int. Delay): LOS B. Based on average delay for all vehicle movements. LOS Method: Delay (HCM).
Level of Service (Worst Movement): LOS B. LOS Method for individual vehicle movements: Delay (HCM).
Approach LOS values are based on the worst delay for any vehicle movement.
Roundabout LOS Method: Same as Signalised Intersections.
Roundabout Capacity Model: SIDRA Standard.

SIDRA INTERSECTION

DETAILED OUTPUT

Site: New Site - 1

Greenwich Avenue at Pulaski Street
Roundabout

Roundabouts

Roundabout Basic Parameters
Site:New Site - 1

Intersection ID: 1
Roundabout

Island	Cent Diam	Circ Width	Insc Diam.	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width	Circulating/Exiting Stream Flow	%HV	Adjust. Flow	%Exit Incl. Constr. Effect	Cap.	O-D Factor
	m	m	m			m	veh/h		pcu/h			
East: Pulaski Street												
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium					
	30	10	50	2	1	4.00	540	2.0	540	0	N	0.883
North: Greenwich Avenue												
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium					
	30	10	50	2	1	4.00	286	2.0	286	0	N	0.981
West: Greenwich Avenue												
Environment Factor: 1.00							Entry/Circulating Flow Adjustment: Medium					
	30	10	50	2	1	4.00	71	2.0	71	0	N	0.984

Roundabout Capacity Model: SIDRA Standard

Roundabout Gap Acceptance Parameters
Site:New Site - 1

Intersection ID: 1
Roundabout

Turn	Lane No.	Lane Type	Circulating/Exiting Stream Flow Rate	Aver Speed	Aver In-Bnch Dist	Prop Headway	Prop Bunched	Critical Gap Hdwy	Critical Gap Dist	Foll-up Headway
			pcu/h	km/h	m	sec		sec	m	sec
East: Pulaski Street										
Environment Factor: 1.00						Entry/Circulating Flow Adjustment: Medium				
Thru	1	Dominant	540	24.1	44.6	2.00	0.485	3.82	25.6	2.54
Right	1	Dominant	540	24.1	44.6	2.00	0.485	3.82	25.6	2.54
North: Greenwich Avenue										
Environment Factor: 1.00						Entry/Circulating Flow Adjustment: Medium				
Left	1	Dominant	286	39.1	136.5	2.00	0.294	3.96	43.0	2.51
Right	1	Dominant	286	39.1	136.5	2.00	0.294	3.96	43.0	2.51
West: Greenwich Avenue										
Environment Factor: 1.00						Entry/Circulating Flow Adjustment: Medium				
Left	1	Dominant	71	24.1	341.6	2.00	0.082	3.99	26.7	2.41
Thru	1	Dominant	71	24.1	341.6	2.00	0.082	3.99	26.7	2.41

Roundabout Capacity Model: SIDRA Standard
P Priority sharing is implied for some movements (Follow-up Headway plus Intra-bunch Headway is larger than the Critical Gap). The O-D Factor (Roundabout Basic Parameters table) allows for priority sharing and priority emphasis.

Dist (Distance): Spacing, i.e. distance between the front ends of two successive vehicles across all lanes in the circulating or exiting stream

Movements

Movement Capacity Parameters
Site:New Site - 1

Intersection ID: 1
Roundabout

Mov ID		Demand Flow veh/h	HV %	Opposing Flow veh/h	HV %	Movement Adjust. Flow pcu/h	Total Cap. veh/h	Prac. Deg. Satn xp	Prac. Spare Cap. %	Lane Util %	Deg. Satn x
East: Pulaski Street											
5	T	402	2.0	540	2.0	540	696	0.85	47	100	0.578
6	R	71	2.0	540	2.0	540	122	0.85	47	100	0.578
North: Greenwich Avenue											
7	L	339	2.0	286	2.0	286	434	0.85	9	100	0.781*
9	R	540	2.0	286	2.0	286	692	0.85	9	100	0.780
West: Greenwich Avenue											
10	L	339	2.0	71	2.0	71	754	0.85	89	100	0.450
11	T	286	2.0	71	2.0	71	637	0.85	89	100	0.449

* Maximum degree of saturation

Movement Performance
Site:New Site - 1

Intersection ID: 1
Roundabout

Mov ID		Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Eff. Stop Rate	Total Stops	Perf. Index	Tot.Trav. Distance (veh-km/h)	Tot.Trav. Time (veh-h/h)	Aver. Speed (km/h)
East: Pulaski Street										
5	T	1.12	1.34	10.0	0.90	359.9	8.89	244.5	5.2	46.8
6	R	0.32	0.38	16.1	0.98	69.1	1.76	45.7	1.1	43.5
North: Greenwich Avenue										
7	L	0.95	1.14	10.1	0.80	270.3	7.43	205.9	4.5	46.2
9	R	2.39	2.87	15.9	0.87	470.0	13.30	350.1	8.1	43.0
West: Greenwich Avenue										
10	L	0.54	0.65	5.7	0.48	162.3	5.60	205.9	4.1	50.4
11	T	0.38	0.45	4.8	0.40	114.5	4.55	175.2	3.4	51.0

Fuel Consumption, Emissions and Cost (Total)
Site:New Site - 1

Intersection ID: 1
Roundabout

Mov ID		Cost Total $/h	Fuel Total L/h	CO2 Total kg/h	CO Total kg/h	HC Total kg/h	NOX Total kg/h
East: Pulaski Street							
5	T	172.21	28.6	71.6	5.66	0.117	0.174
6	R	34.90	5.5	13.8	1.08	0.023	0.033
		207.11	34.1	85.3	6.73	0.140	0.206

```
-------------------------------------------------------------
North: Greenwich Avenue
    7 L          144.99   24.1    60.4    4.83   0.100   0.147
    9 R          267.13   42.3   105.8    8.44   0.177   0.252
               ----------------------------------------------
                 412.11   66.4   166.2   13.26   0.277   0.398
-------------------------------------------------------------
West: Greenwich Avenue
   10 L          135.12   22.3    55.8    4.10   0.089   0.132
   11 T          112.09   18.2    45.6    3.17   0.071   0.105
               ----------------------------------------------
                 247.21   40.5   101.4    7.27   0.160   0.237
-------------------------------------------------------------
 INTERSECTION:   866.44  141.1   353.0   27.26   0.576   0.842
-------------------------------------------------------------
```

Fuel Consumption, Emissions and Cost (Rate)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-------------------------------------------------------------
  Mov             Cost   Fuel     CO2      CO       HC      NOX
  ID              Rate   Rate     Rate     Rate     Rate    Rate
                 $/km   L/100km  g/km     g/km     g/km    g/km
-------------------------------------------------------------
East: Pulaski Street
    5 T            0.70   11.7   292.7   23.13   0.479   0.711
    6 R            0.76   12.0   300.7   23.52   0.498   0.713
               ----------------------------------------------
                   0.71   11.7   293.9   23.19   0.482   0.711
-------------------------------------------------------------
North: Greenwich Avenue
    7 L            0.70   11.7   293.3   23.45   0.484   0.713
    9 R            0.76   12.1   302.3   24.10   0.505   0.719
               ----------------------------------------------
                   0.74   11.9   299.0   23.86   0.497   0.717
-------------------------------------------------------------
West: Greenwich Avenue
   10 L            0.66   10.8   271.1   19.91   0.430   0.639
   11 T            0.64   10.4   260.2   18.07   0.405   0.600
               ----------------------------------------------
                   0.65   10.6   266.1   19.07   0.419   0.621
-------------------------------------------------------------
 INTERSECTION:     0.71   11.5   287.6   22.21   0.469   0.686
-------------------------------------------------------------
```

Intersection Negotiation Data
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-------------------------------------------------------------------------------
                            Negn  Negn   Negn   Appr.   Downstream  Distance
 From      To               Radius Speed  Dist.  Dist.   ----------------------
 Approach  Approach  Turn      m    km/h    m      m         m      User Spec?
-------------------------------------------------------------------------------
 East: Pulaski Street
             North   Right   16.0   24.1   62.7    500     140         No
              West   Thru    43.1   35.1   36.2    500     114         No
-------------------------------------------------------------------------------
 North: Greenwich Avenue
              East   Left    39.0   33.8   19.3    500     119         No
              West   Right   16.0   24.1   62.7    500     147         No
-------------------------------------------------------------------------------
 West: Greenwich Avenue
              East   Thru    57.3   39.1   47.1    500     120         No
             North   Left    39.0   33.8   19.3    500     106         No
```

```
--------------------------------------------------------------------------------

  Maximum Negotiation (Design) Speed =  50.0 km/h

  Downstream distance is distance travelled from the stopline until exit
  cruise speed is reached (includes negotiation distance).  Acceleration
  distance is weighted for light and heavy vehicles.  The same distance
  applies for both stopped and unstopped vehicles.
```

Movement Speeds and Geometric Delay
Site:New Site - 1

```
Intersection ID: 1
Roundabout

--------------------------------------------------------------------------------
                                    Queue Move-up
          App. Speeds    Exit Speeds  -------------  Av. Section Spd  Geom
  Mov     ------------   -----------    1st   2nd    ---------------  Delay
  ID      Cruise  Negn   Negn Cruise    Grn   Grn    Running Overall   sec
--------------------------------------------------------------------------------
 East: Pulaski Street
    5 T     60.0  35.1   35.1  60.0    20.9            46.8    46.8     5.1
    6 R     60.0  24.1   24.1  60.0    20.9            44.9    43.5    11.2
--------------------------------------------------------------------------------
 North: Greenwich Avenue
    7 L     60.0  33.8   33.8  60.0    26.3            46.2    46.2     5.4
    9 R     60.0  24.1   24.1  60.0    26.3            43.4    43.0    11.2
--------------------------------------------------------------------------------
 West: Greenwich Avenue
   10 L     60.0  33.8   33.8  60.0                    50.4    50.4     5.4
   11 T     60.0  39.1   39.1  60.0                    51.0    51.0     4.4
--------------------------------------------------------------------------------
  "Running Speed" is the average speed excluding stopped periods.
```

Lanes

Lane Performance
Site:New Site - 1

```
Intersection ID: 1
Roundabout

------------------------------------------------------------
                                        Q u e u e
          Flow   Cap  Deg.  Aver.  Eff.    95% Back      Lane
 Lane                Satn  Delay  Stop  ------------   Length
 No.      veh/h veh/h   x    sec   Rate    veh     m       m
------------------------------------------------------------
 East: Pulaski Street
 1 TR       473   818 0.578   10.9  0.91    6.0   42.6    500.0
------------------------------------------------------------
 North: Greenwich Avenue
 1 LR       879  1127 0.780   13.7  0.84   11.6   82.9    500.0
------------------------------------------------------------
 West: Greenwich Avenue
 1 LT       625  1390 0.450    5.3  0.44    4.1   29.0    500.0
------------------------------------------------------------
```

Lane Flow and Capacity Information
Site:New Site - 1

```
Intersection ID: 1
Roundabout

--------------------------------------------------
 Lane     Dem Flow (veh/h)     Min   Tot   Deg. Lane
```

No.	Lef	Thru	Rig	Tot	Cap veh/h	Cap veh/h	Satn x	Util %
East: Pulaski Street								
1 TR	0	402	71	473	150	818	0.578	100
North: Greenwich Avenue								
1 LR	339	0	540	879	150	1127	0.780	100
West: Greenwich Avenue								
1 LT	339	286	0	625	150	1390	0.450	100

The capacity value for priority and continuous movements is obtained by adjusting the basic saturation flow for heavy vehicle and turning vehicle effects. Saturation flow scale applies if specified.

Lane, Approach and Intersection Performance
Site:New Site - 1

Intersection ID: 1
Roundabout

Lane No.	Demand Flow (veh/h) L	T	R	Tot	%HV	Adj. Basic Satf.	Eff Grn (sec) 1st	2nd	Deg Sat x	Aver. Delay sec	Longest Queue m	Shrt Lane m
East: Pulaski Street												
1 TR		402	71	473	2				0.578	10.9	43	500
	0	402	71	473	2				0.578	10.9	43	
North: Greenwich Avenue												
1 LR	339		540	879	2				0.780	13.7	83	500
	339	0	540	879	2				0.780	13.7	83	
West: Greenwich Avenue												
1 LT	339	286		625	2				0.450	5.3	29	500
	339	286	0	625	2				0.450	5.3	29	
ALL VEHICLES	Total Flow 1977				% HV 2				Max X 0.781	Aver. Delay 10.4	Max Queue 83	

Peak flow period = 30 minutes.

Queue values in this table are 95% queue (metres)
Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Driver Characteristics
Site:New Site - 1

Intersection ID: 1
Roundabout

Lane No.	Satn Speed km/h	Satn Flow veh/h	Satn Hdwy sec	Satn Spacing m	Average Queue Space m	Driver Response Time sec
East: Pulaski Street						
1 TR	33.5	1418	2.54	23.60	7.12	1.77
North: Greenwich Avenue						
1 LR	27.8	1437	2.51	19.38	7.12	1.59

```
-----------------------------------------------------------
 West: Greenwich Avenue
 1 LT    36.2   1492    2.41    24.29     7.12    1.71
-----------------------------------------------------------

  Saturation Flow and Saturation Headway are derived from follow-up headway.
```

Lane Delays
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-------------------------------------------------------------------------
                --------------  Delay (seconds/veh)  ----------------
         Deg.   Stop-line Delay  Acc.    Queuing    Stopd
 Lane    Satn   1st   2nd Total  Dec.  Total MvUp (Idle) Geom Control
 No.       x     d1    d2   dSL   dn    dq   dqm    di    dig   dic
-------------------------------------------------------------------------
 East: Pulaski Street
 1 TR   0.578   3.6   1.3   4.9   4.6   0.4   0.1   0.3   6.0   10.9
-------------------------------------------------------------------------
 North: Greenwich Avenue
 1 LR   0.780   2.7   2.0   4.7   3.7   1.1   0.7   0.3   9.0   13.7
-------------------------------------------------------------------------
 West: Greenwich Avenue
 1 LT   0.450   0.4   0.0   0.4   1.8   0.0   0.0   0.0   4.9    5.3
-------------------------------------------------------------------------
  dn is average stop-start delay for all vehicles queued and unqueued
```

Lane Queues (Vehicles)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------------------------------------------------
        Deg.  Ovrfl.     Back of Queue (veh)      Queue  Prob.  P'ile   Cyc-Av. Queue
 Lane   Satn  Queue ---------------------------  Stor.  Block  Block   -------------
 No.      x    No      Nb1    Nb2    Nb     95%  Ratio     %      %     Nc     95%
-----------------------------------------------------------------------------------------
 East: Pulaski Street
 1 TR  0.578    0.2    1.7    0.3    2.0    6.0   0.09    0.0  100.0    0.6     1.6
-----------------------------------------------------------------------------------------
 North: Greenwich Avenue
 1 LR  0.780    0.5    3.0    1.0    4.0   11.6   0.17    0.0  100.0    1.1     2.8
-----------------------------------------------------------------------------------------
 West: Greenwich Avenue
 1 LT  0.450    0.0    1.3    0.0    1.3    4.1   0.06    0.0  100.0    0.1     0.2
-----------------------------------------------------------------------------------------
```

Lane Queues (Distance)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------------------------------------------------
        Deg.  Ovrfl.     Back of Queue (m)        Queue  Prob.  P'ile   Cyc-Av. Queue
 Lane   Satn  Queue ---------------------------  Stor.  Block  Block   -------------
 No.      x    No      Nb1    Nb2    Nb     95%  Ratio     %      %     Nc     95%
-----------------------------------------------------------------------------------------
 East: Pulaski Street
 1 TR  0.578    1.6   12.2    2.0   14.2   42.6   0.09    0.0  100.0    4.6    11.4
-----------------------------------------------------------------------------------------
 North: Greenwich Avenue
 1 LR  0.780    3.8   21.4    7.2   28.6   82.9   0.17    0.0  100.0    8.2    19.9
```

```
-------------------------------------------------------------------------------------
 West: Greenwich Avenue
 1 LT  0.450    0.0    9.5    0.0    9.5   29.0   0.06    0.0  100.0    0.4     1.1
-------------------------------------------------------------------------------------
```

Lane Queue Percentiles (Vehicles)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------------
        Deg.              Percentile (veh)
 Lane   Satn   ----------------------------------------
 No.      x     50%    70%    85%    90%    95%    98%
-----------------------------------------------------
 East: Pulaski Street
 1 TR  0.578    2.0    2.7    4.0    4.8    6.0    6.9
-----------------------------------------------------
 North: Greenwich Avenue
 1 LR  0.780    4.0    5.3    7.9    9.5   11.6   13.3
-----------------------------------------------------
 West: Greenwich Avenue
 1 LT  0.450    1.3    1.8    2.7    3.3    4.1    4.7
-----------------------------------------------------
```

Lane Queue Percentiles (Distance)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------------
        Deg.              Percentile (metres)
 Lane   Satn   ----------------------------------------
 No.      x     50%    70%    85%    90%    95%    98%
-----------------------------------------------------
 East: Pulaski Street
 1 TR  0.578   14.3   19.0   28.6   34.4   42.6   49.2
-----------------------------------------------------
 North: Greenwich Avenue
 1 LR  0.780   28.7   38.0   56.5   67.6   82.9   95.0
-----------------------------------------------------
 West: Greenwich Avenue
 1 LT  0.450    9.6   12.7   19.3   23.3   29.0   33.5
-----------------------------------------------------
```

Lane Stops
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-------------------------------------------------------------------------
                                                  Queue   Total
        Deg.  -- Effective Stop Rate --  Total  Move-up  Queue   Prop.
 Lane   Satn              Geom. Overall  Stops    Rate  Move-ups Queued
 No.      x    he1   he2   hig     h       H      hqm     Hqm     pq
-------------------------------------------------------------------------
 East: Pulaski Street
 1 TR  0.578  0.76  0.06  0.09   0.91    429.0    0.13    62.7   0.82
-------------------------------------------------------------------------
 North: Greenwich Avenue
 1 LR  0.780  0.63  0.08  0.13   0.84    740.2    0.15   135.7   0.79
-------------------------------------------------------------------------
```

```
 West: Greenwich Avenue
 1 LT  0.450  0.13  0.00  0.31   0.44    276.8    0.00     0.0   0.29
-------------------------------------------------------------------------
  hig is the average value for all movements in a shared lane
  hqm is average queue move-up rate for all vehicles queued and unqueued
```

Flow Rates and Demand Analysis

Movement Definitions and Flow Rates (O-D)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-------------------------------------------------------------------------
 From      To          Mov           Flow Rate   Flow Scale   Peak Flow
 Approach  Approach    ID    Turn     LV    HV   Fixed   Var    Factor
-------------------------------------------------------------------------
 East: Pulaski Street
           North        6   Right    69     1    1.00   1.00     0.95
           West         5   Thru    394     8    1.00   1.00     0.95
-------------------------------------------------------------------------
 North: Greenwich Avenue
           East         7   Left    332     7    1.00   1.00     0.95
           West         9   Right   529    11    1.00   1.00     0.95
-------------------------------------------------------------------------
 West: Greenwich Avenue
           East        11   Thru    281     6    1.00   1.00     0.95
           North       10   Left    332     7    1.00   1.00     0.95
-------------------------------------------------------------------------
Unit Time for Volumes =  60 minutes
Peak Flow Period =  30 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor
```

Flow Rates (Separate Light and Heavy Vehicles)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

-----------------------------------------------
  Mov          Left       Through       Right
  ID        ---------    ---------    ---------
             LV    HV     LV    HV     LV    HV
-----------------------------------------------
Demand flows in veh/h as used by the program
East: Pulaski Street
    5 T       0     0    394     8      0     0
    6 R       0     0      0     0     69     1
-----------------------------------------------
North: Greenwich Avenue
    7 L     332     7      0     0      0     0
    9 R       0     0      0     0    529    11
-----------------------------------------------
West: Greenwich Avenue
   10 L     332     7      0     0      0     0
   11 T       0     0    281     6      0     0
-----------------------------------------------
Unit Time for Volumes =  60 minutes
Peak Flow Period =  30 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor
```

Flow Rates (Total Vehicles and Percent Heavy)
Site:New Site - 1

```
Intersection ID: 1
Roundabout

------------------------------------------------
  Mov          Left        Through        Right
  ID        ----------    ----------    ----------
            Total  %HV    Total  %HV    Total  %HV
------------------------------------------------
Demand flows in veh/h as used by the program
East: Pulaski Street
    5 T        0   0.0     402   2.0       0   0.0
    6 R        0   0.0       0   0.0      71   2.0
------------------------------------------------
North: Greenwich Avenue
    7 L      339   2.0       0   0.0       0   0.0
    9 R        0   0.0       0   0.0     540   2.0
------------------------------------------------
West: Greenwich Avenue
   10 L      339   2.0       0   0.0       0   0.0
   11 T        0   0.0     286   2.0       0   0.0
------------------------------------------------
Unit Time for Volumes =  60 minutes
Peak Flow Period =  30 minutes
Flow Rates include effects of Flow Scale and Peak Flow Factor
```

Other

Model Settings
Site:New Site - 1

```
Intersection ID: 1
Roundabout

* Basic Parameters:
  Intersection Type: Roundabout
  Driving on the left-hand side of the road
  Input data specified in Metric units
  Model Defaults: Standard Left
  Peak Flow Period (for performance): 30 minutes
  Unit time (for volumes): 60 minutes.
  SIDRA Standard Delay model used
  SIDRA Standard Queue model used
  Level of Service based on: Delay (HCM method)
  Queue percentile: 95%
```

Parameters Used in Cost Calculations
Site:New Site - 1

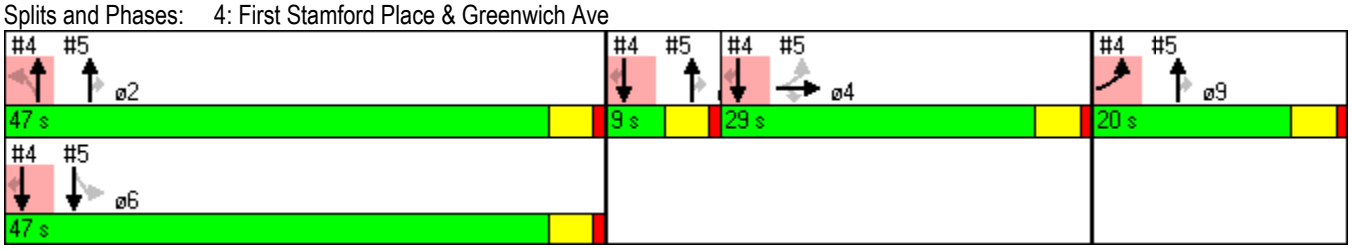
```
Intersection ID: 1
Roundabout


   Pump price of fuel ($/L)                 =     1.200
   Fuel resource cost factor                =      0.50
   Ratio of running cost to fuel cost       =       3.0
   Average income ($/h)                     =     32.00
   Time value factor                        =      0.60
   Light vehicle mass (1000 kg)             =       1.4
   Heavy vehicle mass (1000 kg)             =      11.0
   Light vehicle idle fuel rate (L/h)       =     1.350
   Heavy vehicle idle fuel rate (L/h)       =     2.000
```

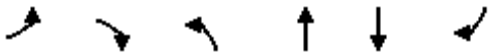
Diagnostics
Site:New Site - 1

Lane Group	EBL	NBL	NBT	SBT	SBR	ø3	ø4	ø6
Lane Configurations								
Volume (vph)	212	56	337	312	775			
Lane Group Flow (vph)	293	0	427	617	564			
Turn Type		Perm			Perm			
Protected Phases	9		2	6 3 4		3	4	6
Permitted Phases		2			6 3 4			
Detector Phase	9	2	2	6 3 4	6 3 4			
Switch Phase								
Minimum Initial (s)	8.0	12.0	12.0			2.0	12.0	12.0
Minimum Split (s)	20.0	24.5	24.5			6.5	24.5	24.5
Total Split (s)	20.0	47.0	47.0	85.0	85.0	9.0	29.0	47.0
Total Split (%)	19.0%	44.8%	44.8%	81.0%	81.0%	9%	28%	45%
Yellow Time (s)	3.5	3.5	3.5			3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0			1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5			
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0			
Lead/Lag						Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	
Recall Mode	Min	C-Min	C-Min			None	None	C-Min
v/c Ratio	0.61		0.63	0.46	0.43			
Control Delay	44.1		29.4	2.5	1.9			
Queue Delay	0.0		0.0	0.6	0.6			
Total Delay	44.1		29.4	3.1	2.4			
Queue Length 50th (ft)	86		224	32	30			
Queue Length 95th (ft)	128		341	43	45			
Internal Link Dist (ft)	173		439	64				
Turn Bay Length (ft)								
Base Capacity (vph)	537		674	1328	1306			
Starvation Cap Reductn	0		0	347	382			
Spillback Cap Reductn	0		0	0	0			
Storage Cap Reductn	0		0	0	0			
Reduced v/c Ratio	0.55		0.63	0.63	0.61			

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 4: First Stamford Place & Greenwich Ave





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	212	58	56	337	312	775
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.97			1.00	0.95	0.95
Frt	0.97			1.00	0.93	0.85
Flt Protected	0.96			0.99	1.00	1.00
Satd. Flow (prot)	3365			1850	1650	1504
Flt Permitted	0.96			0.85	1.00	1.00
Satd. Flow (perm)	3365			1576	1650	1504
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	230	63	61	366	339	842
RTOR Reduction (vph)	25	0	0	0	26	119
Lane Group Flow (vph)	268	0	0	427	591	445
Turn Type			Perm			Perm
Protected Phases	9			2	6 3 4	
Permitted Phases			2			6 3 4
Actuated Green, G (s)	13.6			44.4	82.4	82.4
Effective Green, g (s)	14.1			44.9	82.9	82.9
Actuated g/C Ratio	0.13			0.43	0.79	0.79
Clearance Time (s)	4.5			4.5		
Vehicle Extension (s)	3.0			3.5		
Lane Grp Cap (vph)	452			674	1303	1187
v/s Ratio Prot	c0.08				c0.36	
v/s Ratio Perm				c0.27		0.30
v/c Ratio	0.59			0.63	0.45	0.38
Uniform Delay, d1	42.7			23.6	3.6	3.3
Progression Factor	1.00			1.00	0.49	3.41
Incremental Delay, d2	2.1			4.5	0.2	0.2
Delay (s)	44.8			28.1	2.0	11.4
Level of Service	D			C	A	B
Approach Delay (s)	44.8			28.1	6.5	
Approach LOS	D			C	A	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	NBT	NBR	SBL	SBT	ø2	ø3	ø9
Lane Configurations										
Volume (vph)	229	743	489	292	257	156	598			
Lane Group Flow (vph)	249	808	532	317	279	170	650			
Turn Type	Perm		Perm		Perm	Perm				
Protected Phases		4		2 9 3			6	2	3	9
Permitted Phases	4		4		2 9 3	6				
Detector Phase	4	4	4	2 9 3	2 9 3	6	6			
Switch Phase										
Minimum Initial (s)	12.0	12.0	12.0			12.0	12.0	12.0	2.0	8.0
Minimum Split (s)	24.5	24.5	24.5			24.5	24.5	24.5	6.5	20.0
Total Split (s)	29.0	29.0	29.0	76.0	76.0	47.0	47.0	47.0	9.0	20.0
Total Split (%)	27.6%	27.6%	27.6%	72.4%	72.4%	44.8%	44.8%	45%	9%	19%
Yellow Time (s)	3.5	3.5	3.5			3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0			1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5			
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0			
Lead/Lag	Lag	Lag	Lag						Lead	
Lead-Lag Optimize?	Yes	Yes	Yes						Yes	
Recall Mode	None	None	None			C-Min	C-Min	C-Min	None	Min
v/c Ratio	0.59	0.96	0.75	0.25	0.26	2.39	0.43			
Control Delay	42.1	62.6	14.6	0.6	0.5	688.2	22.6			
Queue Delay	0.0	0.0	0.1	1.1	1.2	0.0	0.0			
Total Delay	42.1	62.6	14.6	1.7	1.7	688.2	22.6			
Queue Length 50th (ft)	149	283	50	2	0	~146	160			
Queue Length 95th (ft)	233	#408	184	2	0	#286	213			
Internal Link Dist (ft)		744		64			707			
Turn Bay Length (ft)	300		300			100				
Base Capacity (vph)	421	843	712	1262	1076	71	1513			
Starvation Cap Reductn	0	0	0	702	577	0	0			
Spillback Cap Reductn	0	0	6	0	0	0	50			
Storage Cap Reductn	0	0	0	0	0	0	0			
Reduced v/c Ratio	0.59	0.96	0.75	0.57	0.56	2.39	0.44			

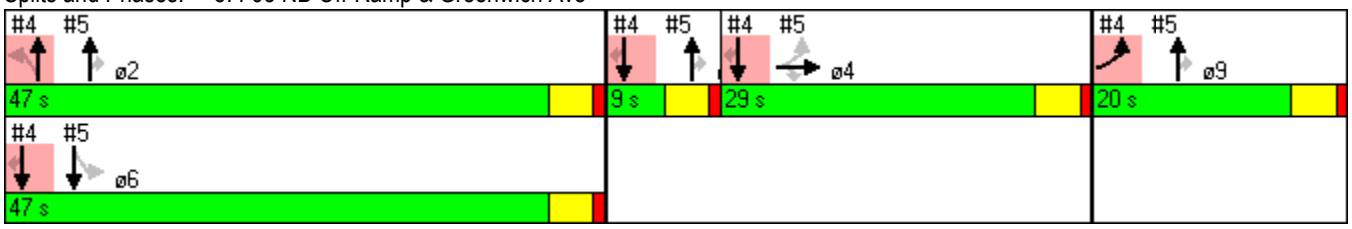
Intersection Summary

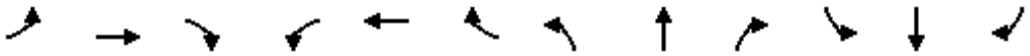
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

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

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

Splits and Phases: 5: I-95 NB Off-Ramp & Greenwich Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	229	743	489	0	0	0	0	292	257	156	598	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00					1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583					1863	1583	1770	3539	
Flt Permitted	0.95	1.00	1.00					1.00	1.00	0.09	1.00	
Satd. Flow (perm)	1770	3539	1583					1863	1583	166	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	249	808	532	0	0	0	0	317	279	170	650	0
RTOR Reduction (vph)	0	0	335	0	0	0	0	0	3	0	0	0
Lane Group Flow (vph)	249	808	197	0	0	0	0	317	276	170	650	0
Turn Type	Perm		Perm						Perm	Perm		
Protected Phases		4						2 9 3			6	
Permitted Phases	4		4						2 9 3	6		
Actuated Green, G (s)	24.5	24.5	24.5					71.5	71.5	44.4	44.4	
Effective Green, g (s)	25.0	25.0	25.0					72.0	72.0	44.9	44.9	
Actuated g/C Ratio	0.24	0.24	0.24					0.69	0.69	0.43	0.43	
Clearance Time (s)	4.5	4.5	4.5							4.5	4.5	
Vehicle Extension (s)	4.0	4.0	4.0							3.5	3.5	
Lane Grp Cap (vph)	421	843	377					1277	1085	71	1513	
v/s Ratio Prot		c0.23						0.17			0.18	
v/s Ratio Perm	0.14		0.12						c0.17	c1.02		
v/c Ratio	0.59	0.96	0.52					0.25	0.25	2.39	0.43	
Uniform Delay, d1	35.5	39.5	34.8					6.2	6.3	30.1	21.1	
Progression Factor	1.00	1.00	1.00					0.03	0.00	1.00	1.00	
Incremental Delay, d2	2.6	21.4	1.7					0.1	0.1	668.3	0.9	
Delay (s)	38.1	60.9	36.5					0.3	0.1	698.4	22.0	
Level of Service	D	E	D					A	A	F	C	
Approach Delay (s)		49.1			0.0			0.2			162.2	
Approach LOS		D			A			A			F	

Intersection Summary			
HCM Average Control Delay	70.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (vph)	313	105	781	302	904	1013	632
Lane Group Flow (vph)	340	114	849	328	983	1101	687
Turn Type	Perm		Perm	pm+pt			Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		8	2			6
Detector Phase	8	8	8	5	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	29.0	29.0	29.0	9.0	25.0	25.0	25.0
Total Split (s)	39.0	39.0	39.0	21.0	66.0	45.0	45.0
Total Split (%)	37.1%	37.1%	37.1%	20.0%	62.9%	42.9%	42.9%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	0.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lag		Lead	Lead
Lead-Lag Optimize?				Yes		Yes	Yes
Recall Mode	None	None	None	Min	C-Max	C-Max	C-Max
v/c Ratio	0.64	0.20	0.98	1.05	0.54	0.92	0.78
Control Delay	24.0	17.2	35.5	70.6	9.4	43.4	13.9
Queue Delay	0.2	0.0	0.0	632.6	28.2	108.5	2.7
Total Delay	24.2	17.2	35.5	703.2	37.5	151.8	16.6
Queue Length 50th (ft)	220	56	339	~198	143	363	85
Queue Length 95th (ft)	m218	m58	m319	m#226	m138	#500	265
Internal Link Dist (ft)		134			155	253	
Turn Bay Length (ft)							
Base Capacity (vph)	531	559	864	312	1818	1202	876
Starvation Cap Reductn	0	0	0	208	875	317	100
Spillback Cap Reductn	15	0	0	0	0	72	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.20	0.98	3.15	1.04	1.24	0.89

Intersection Summary

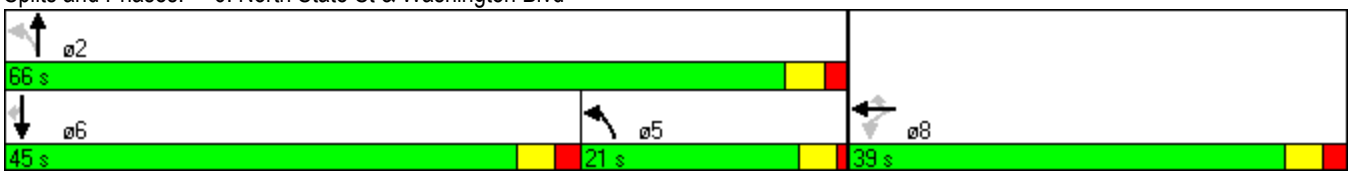
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 98 (93%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

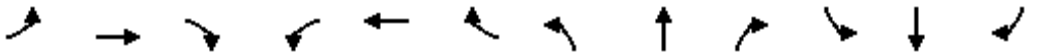
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 6: North State St & Washington Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	313	105	781	302	904	0	0	1013	632
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	13	10	11	11	11	11	12
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				1.00	1.00	0.88	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1593	1676	2592	1486	3079			3079	1425
Flt Permitted				0.95	1.00	1.00	0.11	1.00			1.00	1.00
Satd. Flow (perm)				1593	1676	2592	168	3079			3079	1425
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	340	114	849	328	983	0	0	1101	687
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	319
Lane Group Flow (vph)	0	0	0	340	114	849	328	983	0	0	1101	368
Turn Type				Perm		Perm	pm+pt					Perm
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2					6
Actuated Green, G (s)				34.0	34.0	34.0	62.0	61.0			40.0	40.0
Effective Green, g (s)				35.0	35.0	35.0	62.0	62.0			41.0	41.0
Actuated g/C Ratio				0.33	0.33	0.33	0.59	0.59			0.39	0.39
Clearance Time (s)				5.0	5.0	5.0	4.0	5.0			5.0	5.0
Vehicle Extension (s)				2.0	2.0	2.0	2.0	0.2			0.2	0.2
Lane Grp Cap (vph)				531	559	864	313	1818			1202	556
v/s Ratio Prot					0.07		c0.17	0.32			0.36	
v/s Ratio Perm				0.21		c0.33	c0.45					0.26
v/c Ratio				0.64	0.20	0.98	1.05	0.54			0.92	0.66
Uniform Delay, d1				29.7	25.0	34.7	34.3	12.9			30.4	26.3
Progression Factor				0.77	0.67	0.81	0.77	0.69			1.00	1.00
Incremental Delay, d2				0.2	0.0	5.8	38.9	0.3			12.3	6.1
Delay (s)				23.0	16.9	33.8	65.3	9.2			42.7	32.4
Level of Service				C	B	C	E	A			D	C
Approach Delay (s)		0.0			29.5			23.3			38.7	
Approach LOS		A			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	126.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	NBT	SBL	SBT	ø3
Lane Configurations						
Volume (vph)	437	269	769	381	945	
Lane Group Flow (vph)	475	789	1063	414	1027	
Turn Type	Prot			Prot		
Protected Phases	4		2	1	6	3
Permitted Phases		4				
Detector Phase	4	4	2	1	6	
Switch Phase						
Minimum Initial (s)	4.0	4.0	7.0	7.0	4.0	4.0
Minimum Split (s)	20.0	20.0	17.0	11.0	20.0	30.0
Total Split (s)	33.0	33.0	25.0	17.0	42.0	30.0
Total Split (%)	31.4%	31.4%	23.8%	16.2%	40.0%	29%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?			Yes	Yes		
Recall Mode	None	None	C-Min	None	C-Min	Ped
v/c Ratio	0.72	0.55	1.14	1.16	0.92	
Control Delay	13.6	2.4	116.3	130.9	22.3	
Queue Delay	0.2	0.2	9.7	0.0	56.1	
Total Delay	13.9	2.6	126.0	130.9	78.4	
Queue Length 50th (ft)	121	16	~252	~164	200	
Queue Length 95th (ft)	m124	m16	m#272	m#209	m#323	
Internal Link Dist (ft)		350	225		155	
Turn Bay Length (ft)	150					
Base Capacity (vph)	660	1428	932	357	1114	
Starvation Cap Reductn	0	0	8	0	201	
Spillback Cap Reductn	16	136	18	0	10	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.74	0.61	1.16	1.16	1.12	

Intersection Summary

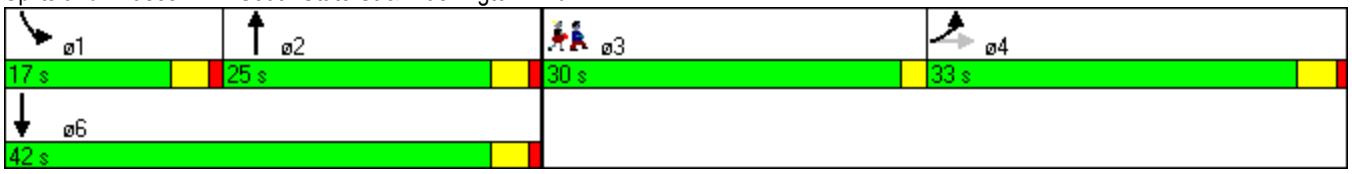
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 102 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

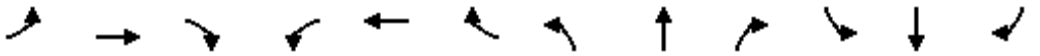
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 7: South State St & Washington Blvd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	437	269	457	0	0	0	0	769	209	381	945	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	12	12	12	12	12	12	10	11	11
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95						0.91		0.97	0.95	
Frt	1.00	0.91						0.97		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1540	2788						4430		2884	3079	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1540	2788						4430		2884	3079	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	475	292	497	0	0	0	0	836	227	414	1027	0
RTOR Reduction (vph)	0	232	0	0	0	0	0	46	0	0	0	0
Lane Group Flow (vph)	475	557	0	0	0	0	0	1017	0	414	1027	0
Turn Type	Prot									Prot		
Protected Phases	4							2		1	6	
Permitted Phases		4										
Actuated Green, G (s)	45.0	45.0						21.0		13.0	38.0	
Effective Green, g (s)	45.0	45.0						21.0		13.0	38.0	
Actuated g/C Ratio	0.43	0.43						0.20		0.12	0.36	
Clearance Time (s)	4.0	4.0						4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	660	1195						886		357	1114	
v/s Ratio Prot	c0.31							c0.23		c0.14	0.33	
v/s Ratio Perm		0.20										
v/c Ratio	0.72	0.47						1.15		1.16	0.92	
Uniform Delay, d1	24.8	21.4						42.0		46.0	32.1	
Progression Factor	0.47	0.20						1.36		1.07	0.41	
Incremental Delay, d2	0.9	0.1						72.2		86.9	7.8	
Delay (s)	12.5	4.3						129.1		136.3	20.8	
Level of Service	B	A						F		F	C	
Approach Delay (s)		7.4			0.0			129.1			54.0	
Approach LOS		A			A			F			D	

Intersection Summary			
HCM Average Control Delay	59.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	126.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBT	WBR	NBT	SBL	SBT	ø3
Lane Configurations						
Volume (vph)	0	239	739	610	792	
Lane Group Flow (vph)	183	174	904	663	861	
Turn Type		pm+ov		pm+pt		
Protected Phases	8	1	2	1	6	3
Permitted Phases		8		6		
Detector Phase	8	1	2	1	6	
Switch Phase						
Minimum Initial (s)	9.0	7.0	15.0	7.0	15.0	4.0
Minimum Split (s)	14.0	11.0	20.0	11.0	20.0	20.0
Total Split (s)	15.0	37.0	33.0	37.0	70.0	20.0
Total Split (%)	14.3%	35.2%	31.4%	35.2%	66.7%	19%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	1.0	2.0	1.0	2.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	0.0	-1.0	
Total Lost Time (s)	4.0	3.0	4.0	4.0	4.0	
Lead/Lag		Lead	Lag	Lead		
Lead-Lag Optimize?		Yes	Yes	Yes		
Recall Mode	None	None	C-Max	None	C-Max	Ped
v/c Ratio	0.73	0.25	1.07	1.17	0.43	
Control Delay	57.9	11.7	88.2	116.8	2.6	
Queue Delay	0.8	0.0	4.5	20.4	0.6	
Total Delay	58.7	11.7	92.7	137.2	3.2	
Queue Length 50th (ft)	123	62	~352	~466	37	
Queue Length 95th (ft)	#228	45	#481	m#595	m49	
Internal Link Dist (ft)	179		86		225	
Turn Bay Length (ft)						
Base Capacity (vph)	249	709	845	567	2002	
Starvation Cap Reductn	0	0	9	22	696	
Spillback Cap Reductn	7	32	0	0	0	
Storage Cap Reductn	0	0	0	0	0	
Reduced v/c Ratio	0.76	0.26	1.08	1.22	0.66	

Intersection Summary

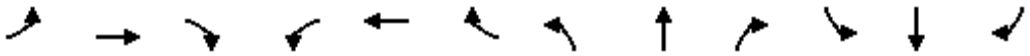
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 11 (10%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated

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

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

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

Splits and Phases: 8: Station Place & Washington Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	89	0	239	0	739	93	610	792	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	14	12	12	11	12	12	12	12
Total Lost time (s)					4.0	3.0		4.0		4.0	4.0	
Lane Util. Factor					0.95	0.95		0.95		1.00	0.95	
Frt					0.93	0.85		0.98		1.00	1.00	
Flt Protected					0.97	1.00		1.00		0.95	1.00	
Satd. Flow (prot)					1538	1354		3028		1593	3185	
Flt Permitted					0.97	1.00		1.00		0.12	1.00	
Satd. Flow (perm)					1538	1354		3028		210	3185	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	97	0	260	0	803	101	663	861	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	183	174	0	895	0	663	861	0
Turn Type				Perm		pm+ov				pm+pt		
Protected Phases					8	1		2		1	6	
Permitted Phases				8		8				6		
Actuated Green, G (s)					16.0	49.0		28.0		65.0	65.0	
Effective Green, g (s)					17.0	51.0		29.0		65.0	66.0	
Actuated g/C Ratio					0.16	0.49		0.28		0.62	0.63	
Clearance Time (s)					5.0	4.0		5.0		4.0	5.0	
Vehicle Extension (s)					2.0	2.0		2.0		2.0	2.0	
Lane Grp Cap (vph)					249	658		836		565	2002	
v/s Ratio Prot						0.09		0.30		c0.37	0.27	
v/s Ratio Perm					0.12	0.04				c0.36		
v/c Ratio					0.73	0.26		1.07		1.17	0.43	
Uniform Delay, d1					41.9	15.9		38.0		29.4	9.9	
Progression Factor					0.98	0.78		1.00		1.09	0.22	
Incremental Delay, d2					8.4	0.1		51.6		88.9	0.4	
Delay (s)					49.3	12.5		89.6		120.9	2.6	
Level of Service					D	B		F		F	A	
Approach Delay (s)		0.0			31.4			89.6			54.1	
Approach LOS		A			C			F			D	

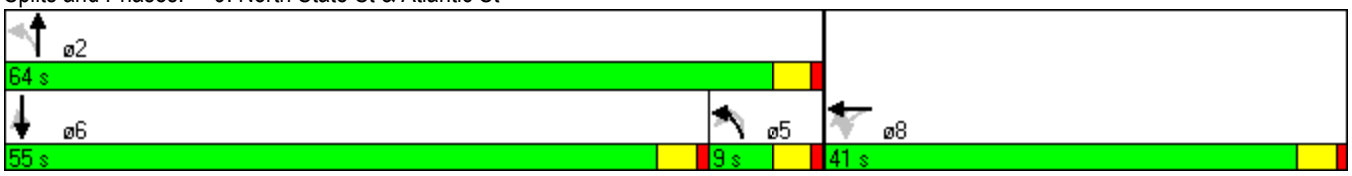
Intersection Summary			
HCM Average Control Delay	62.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	WBL	WBT	NBL2	NBL	NBT	SBT	SBR
Lane Configurations							
Volume (vph)	886	1013	301	110	890	477	301
Lane Group Flow (vph)	1381	1337	0	0	1370	543	468
Turn Type	Perm		custom	pm+pt			Perm
Protected Phases		8		5	2	6	
Permitted Phases	8		5	2			6
Detector Phase	8	8	5	5	2	6	6
Switch Phase							
Minimum Initial (s)	12.0	12.0	5.0	5.0	15.0	15.0	15.0
Minimum Split (s)	26.0	26.0	9.0	9.0	22.0	22.0	22.0
Total Split (s)	41.0	41.0	9.0	9.0	64.0	55.0	55.0
Total Split (%)	39.0%	39.0%	8.6%	8.6%	61.0%	52.4%	52.4%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lag		Lead	Lead
Lead-Lag Optimize?			Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	1.14	1.09			1.26dl	0.54	0.53
Control Delay	84.4	58.8			86.9	16.5	15.0
Queue Delay	0.0	0.0			6.9	19.2	7.4
Total Delay	84.4	58.8			93.8	35.7	22.4
Queue Length 50th (ft)	~547	~215			~585	224	171
Queue Length 95th (ft)	m#494	m#116			m#586	325	266
Internal Link Dist (ft)		1065			128	237	
Turn Bay Length (ft)							
Base Capacity (vph)	1210	1231			1185	1000	879
Starvation Cap Reductn	0	0			16	454	360
Spillback Cap Reductn	0	0			0	257	0
Storage Cap Reductn	0	0			0	0	0
Reduced v/c Ratio	1.14	1.09			1.17	0.99	0.90

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 59 (56%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 9: North State St & Atlantic St

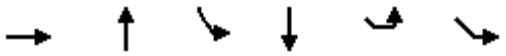


Movement	WBL2	WBL	WBT	WBR	NBL2	NBL	NBT	SBT	SBR	SBR2
Lane Configurations										
Volume (vph)	426	886	1013	257	301	110	890	477	301	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0				4.0	4.0	4.0	
Lane Util. Factor		0.97	0.95				0.95	0.95	0.95	
Frt		1.00	0.97				1.00	0.99	0.85	
Flt Protected		0.95	1.00				0.98	1.00	1.00	
Satd. Flow (prot)		3433	3432				3484	1750	1504	
Flt Permitted		0.95	1.00				0.59	1.00	1.00	
Satd. Flow (perm)		3433	3432				2073	1750	1504	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	448	933	1066	271	317	116	937	502	317	192
RTOR Reduction (vph)	0	0	21	0	0	0	0	0	20	0
Lane Group Flow (vph)	0	1381	1316	0	0	0	1370	543	448	0
Turn Type	Perm	Perm			custom	pm+pt			Perm	
Protected Phases			8			5	2	6		
Permitted Phases	8	8			5	2			6	
Actuated Green, G (s)		37.0	37.0				60.0	60.0	60.0	
Effective Green, g (s)		37.0	37.0				60.0	60.0	60.0	
Actuated g/C Ratio		0.35	0.35				0.57	0.57	0.57	
Clearance Time (s)		4.0	4.0				4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		1210	1209				1185	1000	859	
v/s Ratio Prot			0.38					0.31		
v/s Ratio Perm		c0.40					c0.66		0.30	
v/c Ratio		1.14	1.09				1.26dl	0.54	0.52	
Uniform Delay, d1		34.0	34.0				22.5	14.0	13.7	
Progression Factor		0.49	0.47				0.49	1.00	1.00	
Incremental Delay, d2		64.7	41.3				71.3	2.1	2.3	
Delay (s)		81.2	57.3				82.2	16.1	16.0	
Level of Service		F	E				F	B	B	
Approach Delay (s)			69.5				82.2	16.1		
Approach LOS			E				F	B		

Intersection Summary			
HCM Average Control Delay	62.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Lane Group	EBT	NBT	SBL	SBT	SEL2	SEL	ø3	ø6	ø8
Lane Configurations									
Volume (vph)	363	401	185	718	900	941			
Lane Group Flow (vph)	765	750	201	780	665	1336			
Turn Type			pm+pt		Split				
Protected Phases		2	1	1 6	3 8	3 8	3	6	8
Permitted Phases	4		1 6						
Detector Phase	4	2	1	1 6	3 8	3 8			
Switch Phase									
Minimum Initial (s)	12.0	15.0	6.0				3.0	4.0	4.0
Minimum Split (s)	20.0	25.0	10.0				5.0	25.0	29.0
Total Split (s)	23.0	36.0	16.0	68.0	83.0	83.0	30.0	52.0	53.0
Total Split (%)	21.9%	34.3%	15.2%	64.8%	79.0%	79.0%	29%	50%	50%
Yellow Time (s)	3.0	3.0	3.0				2.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0				0.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	2.0	0.0			
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	2.0			
Lead/Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes				Yes		
Recall Mode	None	C-Max	None				None	C-Max	None
v/c Ratio	1.01	1.34	0.38	0.92	0.89	0.85			
Control Delay	65.4	194.9	18.7	36.8	41.2	30.5			
Queue Delay	0.0	275.4	0.5	249.0	2.4	0.3			
Total Delay	65.4	470.2	19.2	285.8	43.6	30.8			
Queue Length 50th (ft)	~232	~646	36	414	432	418			
Queue Length 95th (ft)	m217	#880	m44	m469	#687	526			
Internal Link Dist (ft)	392	25		128		750			
Turn Bay Length (ft)					250	250			
Base Capacity (vph)	754	560	530	852	751	1564			
Starvation Cap Reductn	0	139	97	352	0	0			
Spillback Cap Reductn	0	176	0	0	31	31			
Storage Cap Reductn	0	0	0	0	0	0			
Reduced v/c Ratio	1.01	1.95	0.46	1.56	0.92	0.87			

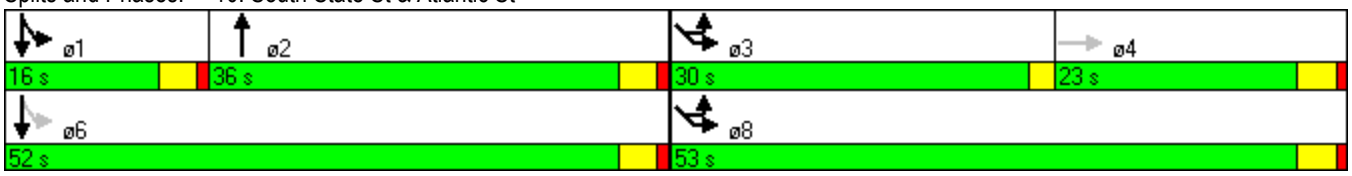
Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 9 (9%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

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

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

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

Splits and Phases: 10: South State St & Atlantic St



Movement	EBT	EBR	NBT	NBR	SBL	SBT	SEL2	SEL
Lane Configurations								
Volume (vph)	363	340	401	289	185	718	900	941
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0	4.0	2.0
Lane Util. Factor	0.95		1.00		0.97	1.00	0.91	0.91
Frt	0.93		0.94		1.00	1.00	1.00	1.00
Flt Protected	1.00		1.00		0.95	1.00	0.95	0.95
Satd. Flow (prot)	3282		1757		3433	1863	1610	3221
Flt Permitted	1.00		1.00		0.11	1.00	0.95	0.95
Satd. Flow (perm)	3282		1757		402	1863	1610	3221
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	395	370	436	314	201	780	978	1023
RTOR Reduction (vph)	161	0	25	0	0	0	0	0
Lane Group Flow (vph)	604	0	725	0	201	780	665	1336
Turn Type					pm+pt		Split	
Protected Phases			2		1	1 6	3 8	3 8
Permitted Phases	4				1 6			
Actuated Green, G (s)	19.0		32.0		48.0	48.0	49.0	49.0
Effective Green, g (s)	19.0		32.0		48.0	48.0	47.0	49.0
Actuated g/C Ratio	0.18		0.30		0.46	0.46	0.45	0.47
Clearance Time (s)	4.0		4.0		4.0			
Vehicle Extension (s)	3.0		3.0		3.0			
Lane Grp Cap (vph)	594		535		530	852	721	1503
v/s Ratio Prot			c0.41		0.04	c0.42	c0.41	0.41
v/s Ratio Perm	c0.18				0.13			
v/c Ratio	1.02		1.36		0.38	0.92	0.92	0.89
Uniform Delay, d1	43.0		36.5		21.6	26.6	27.3	25.5
Progression Factor	1.42		1.00		1.06	0.95	1.00	1.00
Incremental Delay, d2	24.6		171.7		0.3	9.1	17.3	6.8
Delay (s)	85.5		208.2		23.2	34.3	44.6	32.3
Level of Service	F		F		C	C	D	C
Approach Delay (s)	85.5		208.2			32.0		36.4
Approach LOS	F		F			C		D

Intersection Summary			
HCM Average Control Delay	72.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	113.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

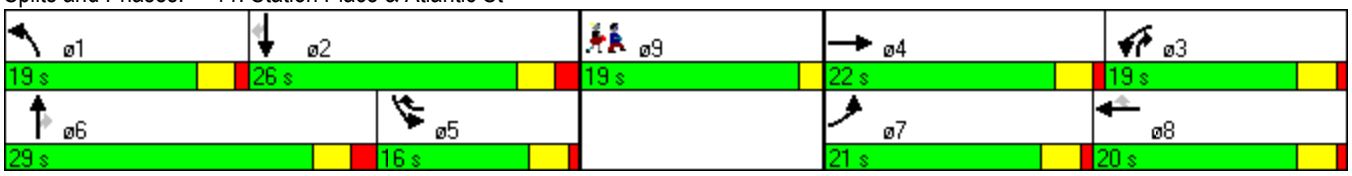
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	ø9
Lane Configurations												
Volume (vph)	64	100	226	212	130	69	496	148	86	625	317	
Lane Group Flow (vph)	70	173	246	230	141	75	539	161	93	679	345	
Turn Type	Prot		Prot		pm+ov	Prot		pm+ov	Prot		Perm	
Protected Phases	7	4	3	8	5	1	6	3	5	2		9
Permitted Phases					8			6			2	
Detector Phase	7	4	3	8	5	1	6	3	5	2	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0	5.0	5.0	15.0	15.0	7.0
Minimum Split (s)	21.0	21.0	9.0	20.0	9.0	19.0	21.0	9.0	9.0	21.0	21.0	19.0
Total Split (s)	21.0	22.0	19.0	20.0	16.0	19.0	29.0	19.0	16.0	26.0	26.0	19.0
Total Split (%)	20.0%	21.0%	18.1%	19.0%	15.2%	18.1%	27.6%	18.1%	15.2%	24.8%	24.8%	18%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	1.0	2.0	2.0	0.0
Lost Time Adjust (s)	-1.0	0.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0	
Total Lost Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	
Lead/Lag	Lead	Lead	Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max	C-Max	None
v/c Ratio	0.40	0.68	0.73	0.49	0.21	0.28	0.41	0.16	0.46	0.50	0.51	
Control Delay	52.0	43.2	54.1	38.8	3.0	42.0	24.9	3.2	51.5	30.3	22.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	
Total Delay	52.0	43.2	54.1	38.8	3.0	42.0	24.9	3.2	51.5	31.6	23.5	
Queue Length 50th (ft)	44	90	152	131	0	40	103	0	59	189	113	
Queue Length 95th (ft)	m26	m39	#324	227	22	77	195	34	111	#344	#288	
Internal Link Dist (ft)		765		481			121			95		
Turn Bay Length (ft)			150			100		100	50		50	
Base Capacity (vph)	303	322	339	468	679	270	1325	1019	202	1352	682	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	431	164	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.23	0.54	0.73	0.49	0.21	0.28	0.41	0.16	0.46	0.74	0.67	

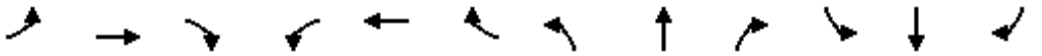
Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 45 (43%), Referenced to phase 2:SBT and 6:NBT, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

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

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

Splits and Phases: 11: Station Place & Atlantic St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	100	59	226	212	130	69	496	148	86	625	317
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0		4.0	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1759		1770	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1759		1770	1863	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	109	64	246	230	141	75	539	161	93	679	345
RTOR Reduction (vph)	0	21	0	0	0	88	0	0	75	0	0	82
Lane Group Flow (vph)	70	152	0	246	230	53	75	539	86	93	679	263
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		Perm
Protected Phases	7	4		3	8	5	1	6	3	5	2	
Permitted Phases						8			6			2
Actuated Green, G (s)	8.3	13.8		20.9	26.4	39.2	12.0	35.1	56.0	12.8	35.9	35.9
Effective Green, g (s)	9.3	13.8		20.9	26.4	39.2	13.0	36.1	56.0	12.8	36.9	36.9
Actuated g/C Ratio	0.09	0.13		0.20	0.25	0.37	0.12	0.34	0.53	0.12	0.35	0.35
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0	4.0	4.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	157	231		352	468	591	219	1217	905	216	1244	556
v/s Ratio Prot	0.04	c0.09		c0.14	0.12	0.01	0.04	c0.15	0.02	0.05	c0.19	
v/s Ratio Perm						0.02			0.04			0.17
v/c Ratio	0.45	0.66		0.70	0.49	0.09	0.34	0.44	0.09	0.43	0.55	0.47
Uniform Delay, d1	45.4	43.4		39.1	33.6	21.3	42.1	26.7	12.0	42.7	27.3	26.5
Progression Factor	1.18	1.14		1.00	1.00	1.00	0.99	0.91	1.10	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.6		6.0	0.8	0.1	0.8	1.0	0.0	1.4	1.7	2.9
Delay (s)	53.8	49.9		45.1	34.4	21.4	42.6	25.3	13.2	44.1	29.0	29.4
Level of Service	D	D		D	C	C	D	C	B	D	C	C
Approach Delay (s)		51.1			35.7			24.4			30.4	
Approach LOS		D			D			C			C	

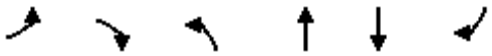
Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	21.4
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Configurations					
Volume (vph)	50	30	663	780	130
Lane Group Flow (vph)	65	0	754	848	141
Turn Type		pm+pt			Perm
Protected Phases	4	5	2	6	
Permitted Phases		2			6
Detector Phase	4	5	2	6	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	24.0	9.0	25.0	25.0	25.0
Total Split (s)	24.0	9.0	81.0	72.0	72.0
Total Split (%)	22.9%	8.6%	77.1%	68.6%	68.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	5.0	5.0
Lead/Lag		Lead		Lag	Lag
Lead-Lag Optimize?		Yes		Yes	Yes
Recall Mode	None	Min	C-Max	C-Max	C-Max
v/c Ratio	0.39		0.51	0.61	0.12
Control Delay	44.3		5.1	10.9	1.0
Queue Delay	0.0		1.1	1.1	0.0
Total Delay	44.3		6.2	12.0	1.0
Queue Length 50th (ft)	37		104	158	6
Queue Length 95th (ft)	72		289	259	m4
Internal Link Dist (ft)	170		445	110	
Turn Bay Length (ft)					
Base Capacity (vph)	323		1472	1393	1219
Starvation Cap Reductn	0		457	297	0
Spillback Cap Reductn	0		0	0	0
Storage Cap Reductn	0		0	0	0
Reduced v/c Ratio	0.20		0.74	0.77	0.12

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 24 (23%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated

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

Splits and Phases: 12: Parking Garage & Atlantic St



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	50	10	30	663	780	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0			5.0	5.0	5.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	0.98			1.00	1.00	0.85
Flt Protected	0.96			1.00	1.00	1.00
Satd. Flow (prot)	1748			1859	1863	1583
Flt Permitted	0.96			0.95	1.00	1.00
Satd. Flow (perm)	1748			1763	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	11	33	721	848	141
RTOR Reduction (vph)	8	0	0	0	0	37
Lane Group Flow (vph)	57	0	0	754	848	104
Turn Type			pm+pt			Perm
Protected Phases	4		5	2	6	
Permitted Phases			2			6
Actuated Green, G (s)	8.5			86.5	77.5	77.5
Effective Green, g (s)	8.5			86.5	77.5	77.5
Actuated g/C Ratio	0.08			0.82	0.74	0.74
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	2.0			0.2	0.2	0.2
Lane Grp Cap (vph)	142			1457	1375	1168
v/s Ratio Prot	c0.03			c0.02	c0.46	
v/s Ratio Perm				0.40		0.07
v/c Ratio	0.40			0.52	0.62	0.09
Uniform Delay, d1	45.8			2.8	6.6	3.9
Progression Factor	1.00			1.00	1.14	0.73
Incremental Delay, d2	0.7			0.1	1.7	0.1
Delay (s)	46.5			3.0	9.3	2.9
Level of Service	D			A	A	A
Approach Delay (s)	46.5			3.0	8.4	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBT	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	2086	417	580	699
Lane Group Flow (vph)	2819	439	611	929
Turn Type		pm+pt		
Protected Phases	8	5	2	6
Permitted Phases		2		
Detector Phase	8	5	2	6
Switch Phase				
Minimum Initial (s)	12.0	6.0	15.0	15.0
Minimum Split (s)	22.0	19.0	27.0	27.0
Total Split (s)	48.0	25.0	57.0	32.0
Total Split (%)	45.7%	23.8%	54.3%	30.5%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	5.0	5.0
Lead/Lag		Lead		Lag
Lead-Lag Optimize?		Yes		Yes
Recall Mode	None	None	C-Min	C-Min
v/c Ratio	1.06	1.03	0.35	1.03
Control Delay	68.0	84.3	7.3	75.1
Queue Delay	35.1	234.5	2.4	23.8
Total Delay	103.1	318.7	9.7	98.9
Queue Length 50th (ft)	~607	~258	79	~344
Queue Length 95th (ft)	#681	m#454	m91	#473
Internal Link Dist (ft)	377		118	106
Turn Bay Length (ft)				
Base Capacity (vph)	2647	427	1753	904
Starvation Cap Reductn	0	149	982	0
Spillback Cap Reductn	187	0	0	53
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.15	1.58	0.79	1.09

Intersection Summary

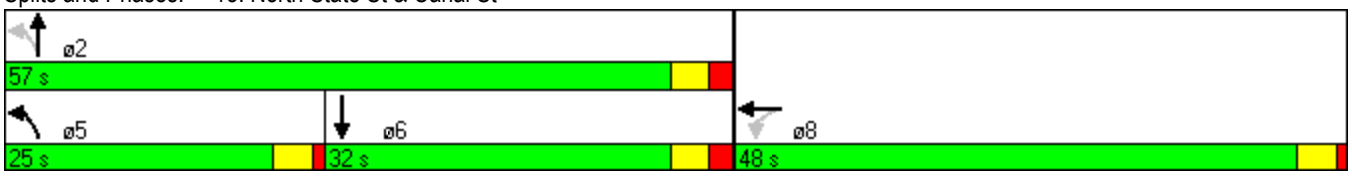
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 7 (7%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated

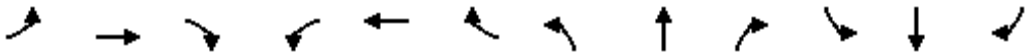
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 13: North State St & Canal St





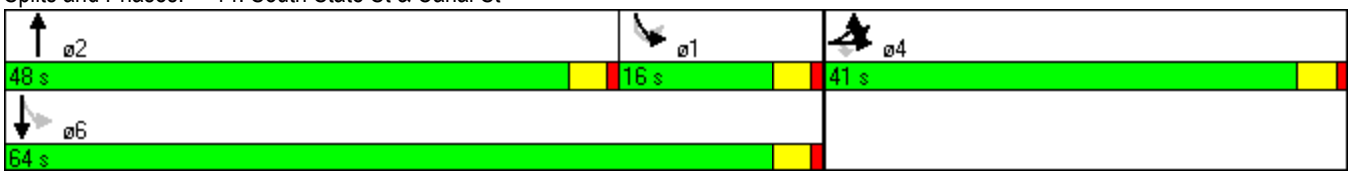
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	331	2086	261	417	580	0	0	699	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	5.0			5.0	
Lane Util. Factor					0.86		1.00	0.95			0.95	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					6275		1770	3539			3429	
Flt Permitted					0.99		0.13	1.00			1.00	
Satd. Flow (perm)					6275		240	3539			3429	
Peak-hour factor, PHF	0.92	0.92	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	348	2196	275	439	611	0	0	736	193
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	0	0	22	0
Lane Group Flow (vph)	0	0	0	0	2802	0	439	611	0	0	907	0
Turn Type				Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					44.0		52.0	52.0			27.0	
Effective Green, g (s)					44.0		52.0	52.0			27.0	
Actuated g/C Ratio					0.42		0.50	0.50			0.26	
Clearance Time (s)					4.0		4.0	5.0			5.0	
Vehicle Extension (s)					5.0		1.0	0.2			0.2	
Lane Grp Cap (vph)					2630		425	1753			882	
v/s Ratio Prot							c0.21	0.17			0.26	
v/s Ratio Perm					0.45		c0.30					
v/c Ratio					1.07		1.03	0.35			1.03	
Uniform Delay, d1					30.5		31.1	16.2			39.0	
Progression Factor					1.00		1.31	0.42			1.00	
Incremental Delay, d2					38.0		49.1	0.5			37.7	
Delay (s)					68.5		89.7	7.2			76.7	
Level of Service					E		F	A			E	
Approach Delay (s)		0.0			68.5			41.7			76.7	
Approach LOS		A			E			D			E	

Intersection Summary			
HCM Average Control Delay	64.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	EBT	EBR	NBT	SBL2	SBL	SBT
Lane Configurations								
Volume (vph)	369	675	246	483	628	188	105	737
Lane Group Flow (vph)	361	517	524	525	922	0	0	1119
Turn Type	Split	Split		Perm		custom	pm+pt	
Protected Phases	4	4	4		2		1	6
Permitted Phases				4		1	6	
Detector Phase	4	4	4	4	2	1	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	25.0	5.0	5.0	25.0
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	16.0	16.0	29.0
Total Split (s)	41.0	41.0	41.0	41.0	48.0	16.0	16.0	64.0
Total Split (%)	39.0%	39.0%	39.0%	39.0%	45.7%	15.2%	15.2%	61.0%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead	Lag	Lag	
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	None	None	C-Min
v/c Ratio	0.60	0.90	0.89	0.77	0.48			1.23dl
Control Delay	19.2	32.5	31.0	13.3	10.5			29.9
Queue Delay	0.7	17.7	0.0	0.0	1.0			109.3
Total Delay	20.0	50.2	31.0	13.3	11.5			139.2
Queue Length 50th (ft)	167	364	364	149	178			~408
Queue Length 95th (ft)	m165	m409	m404	m142	m198			m103
Internal Link Dist (ft)			1037		363			118
Turn Bay Length (ft)								
Base Capacity (vph)	597	572	588	685	1935			1104
Starvation Cap Reductn	0	0	0	0	694			228
Spillback Cap Reductn	65	62	0	0	106			0
Storage Cap Reductn	0	0	0	0	0			0
Reduced v/c Ratio	0.68	1.01	0.89	0.77	0.74			1.28

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 40 (38%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 14: South State St & Canal St

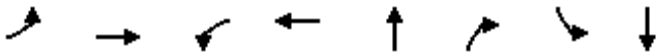


Movement	EBL2	EBL	EBT	EBR	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations										
Volume (vph)	369	675	246	483	628	189	31	188	105	737
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0					4.0
Lane Util. Factor	0.95	0.91	0.91	1.00	0.95					0.95
Frt	1.00	1.00	1.00	0.85	0.96					1.00
Flt Protected	0.95	0.95	0.98	1.00	1.00					0.99
Satd. Flow (prot)	1681	1610	1655	1583	3402					3490
Flt Permitted	0.95	0.95	0.98	1.00	1.00					0.55
Satd. Flow (perm)	1681	1610	1655	1583	3402					1931
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	401	734	267	525	683	205	34	204	114	801
RTOR Reduction (vph)	0	0	0	123	2	0	0	0	0	0
Lane Group Flow (vph)	361	517	524	402	920	0	0	0	0	1119
Turn Type	Split	Split		Perm				custom	pm+pt	
Protected Phases	4	4	4		2				1	6
Permitted Phases				4				1	6	
Actuated Green, G (s)	37.3	37.3	37.3	37.3	59.7					59.7
Effective Green, g (s)	37.3	37.3	37.3	37.3	59.7					59.7
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.57					0.57
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0					4.0
Vehicle Extension (s)	3.5	3.5	3.5	3.5	0.2					0.2
Lane Grp Cap (vph)	597	572	588	562	1934					1098
v/s Ratio Prot	0.21	c0.32	0.32		0.27					
v/s Ratio Perm				0.25						c0.58
v/c Ratio	0.60	0.90	0.89	0.72	0.48					1.23dl
Uniform Delay, d1	27.8	32.1	31.9	29.3	13.4					22.6
Progression Factor	0.61	0.66	0.66	0.51	0.73					0.62
Incremental Delay, d2	0.7	8.2	7.1	1.8	0.6					13.6
Delay (s)	17.7	29.3	28.0	16.7	10.4					27.7
Level of Service	B	C	C	B	B					C
Approach Delay (s)			23.4		10.4					27.7
Approach LOS			C		B					C

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

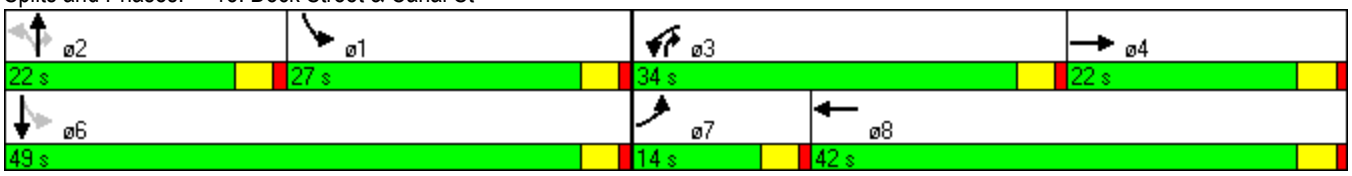


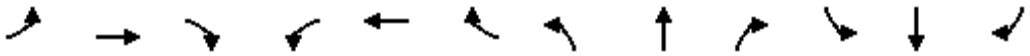
Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Configurations								
Volume (vph)	44	275	350	606	359	209	390	706
Lane Group Flow (vph)	48	299	380	1150	390	227	424	910
Turn Type	Prot		Prot			pm+ov	pm+pt	
Protected Phases	7	4	3	8	2	3	1	6
Permitted Phases						2	6	
Detector Phase	7	4	3	8	2	3	1	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	5.0	5.0	10.0
Minimum Split (s)	14.0	20.0	14.0	20.0	21.0	14.0	15.0	15.0
Total Split (s)	14.0	22.0	34.0	42.0	22.0	34.0	27.0	49.0
Total Split (%)	13.3%	21.0%	32.4%	40.0%	21.0%	32.4%	25.7%	46.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Max	None	None	C-Max
v/c Ratio	0.28	0.51	0.82	0.87	0.53	0.27	0.76	0.56
Control Delay	49.0	42.9	51.0	34.0	41.2	3.9	32.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Total Delay	49.0	42.9	51.0	34.0	41.2	3.9	32.0	20.3
Queue Length 50th (ft)	31	96	232	317	128	14	177	199
Queue Length 95th (ft)	68	140	#350	#414	178	36	m211	m225
Internal Link Dist (ft)		841		1377	257			363
Turn Bay Length (ft)			150			100		
Base Capacity (vph)	169	629	506	1327	738	871	560	1623
Starvation Cap Reductn	0	0	0	0	0	0	0	379
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.48	0.75	0.87	0.53	0.26	0.76	0.73

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 5 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

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

Splits and Phases: 15: Dock Street & Canal St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	44	275	0	350	606	452	0	359	209	390	706	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			3.0	3.0	3.0	3.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95	1.00	1.00	0.95	
Frt	1.00	1.00		1.00	0.94			1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539		1770	3313			3539	1583	1770	3456	
Flt Permitted	0.95	1.00		0.95	1.00			1.00	1.00	0.35	1.00	
Satd. Flow (perm)	1770	3539		1770	3313			3539	1583	657	3456	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	299	0	380	659	491	0	390	227	424	767	143
RTOR Reduction (vph)	0	0	0	0	128	0	0	0	77	0	14	0
Lane Group Flow (vph)	48	299	0	380	1022	0	0	390	150	424	896	0
Turn Type	Prot			Prot			Perm		pm+ov	pm+pt		
Protected Phases	7	4		3	8			2	3	1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)	8.0	18.3		27.6	37.9			20.1	47.7	47.1	47.1	
Effective Green, g (s)	8.0	18.3		27.6	37.9			21.1	49.7	48.1	48.1	
Actuated g/C Ratio	0.08	0.17		0.26	0.36			0.20	0.47	0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0			0.2	5.0	5.0	0.2	
Lane Grp Cap (vph)	135	617		465	1196			711	749	555	1583	
v/s Ratio Prot	0.03	0.08		c0.21	c0.31			0.11	0.05	c0.17	0.26	
v/s Ratio Perm									0.04	c0.18		
v/c Ratio	0.36	0.48		0.82	0.85			0.55	0.20	0.76	0.57	
Uniform Delay, d1	46.1	39.1		36.3	31.0			37.7	16.1	27.9	20.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	0.92	0.92	
Incremental Delay, d2	3.3	1.3		12.0	6.7			3.0	0.3	3.0	0.6	
Delay (s)	49.4	40.4		48.3	37.7			40.7	16.4	28.6	19.7	
Level of Service	D	D		D	D			D	B	C	B	
Approach Delay (s)		41.6			40.3			31.7			22.5	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

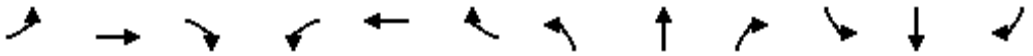
Lane Group	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations						
Volume (vph)	258	560	639	377	792	968
Lane Group Flow (vph)	280	901	403	410	861	1352
Turn Type	Perm		Perm	pm+pt		
Protected Phases		8		5	2	6
Permitted Phases	8		8	2		
Detector Phase	8	8	8	5	2	6
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	6.0	20.0	20.0
Minimum Split (s)	22.0	22.0	22.0	10.0	24.0	24.0
Total Split (s)	37.0	37.0	37.0	31.0	68.0	37.0
Total Split (%)	35.2%	35.2%	35.2%	29.5%	64.8%	35.2%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lead		Lag
Lead-Lag Optimize?				Yes		Yes
Recall Mode	None	None	None	None	C-Min	C-Min
v/c Ratio	0.53	0.89	0.73	0.94	0.39	0.71
Control Delay	34.4	43.9	27.0	68.5	9.1	30.1
Queue Delay	0.4	0.0	0.0	14.3	0.5	0.0
Total Delay	34.8	43.9	27.0	82.8	9.6	30.1
Queue Length 50th (ft)	150	282	148	254	91	284
Queue Length 95th (ft)	235	#379	280	m294	m130	355
Internal Link Dist (ft)		759			227	555
Turn Bay Length (ft)	500		500			
Base Capacity (vph)	560	1070	573	518	2220	1912
Starvation Cap Reductn	0	0	0	96	862	0
Spillback Cap Reductn	59	0	0	0	0	3
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.84	0.70	0.97	0.63	0.71

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 35 (33%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

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

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

Splits and Phases: 16: North State St & Elm Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	258	560	639	377	792	0	0	968	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor				1.00	0.91	0.91	1.00	0.95			0.91	
Frt				1.00	0.95	0.85	1.00	1.00			0.97	
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)				1770	3225	1441	1770	3539			4916	
Flt Permitted				0.95	1.00	1.00	0.09	1.00			1.00	
Satd. Flow (perm)				1770	3225	1441	170	3539			4916	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	280	609	695	410	861	0	0	1052	300
RTOR Reduction (vph)	0	0	0	0	50	120	0	0	0	0	44	0
Lane Group Flow (vph)	0	0	0	280	851	283	410	861	0	0	1308	0
Turn Type				Perm		Perm	pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8		8	2					
Actuated Green, G (s)				31.4	31.4	31.4	65.6	65.6			39.9	
Effective Green, g (s)				31.4	31.4	31.4	65.6	65.6			39.9	
Actuated g/C Ratio				0.30	0.30	0.30	0.62	0.62			0.38	
Clearance Time (s)				4.0	4.0	4.0	4.0	4.0			4.0	
Vehicle Extension (s)				1.0	1.0	1.0	1.0	0.2			0.2	
Lane Grp Cap (vph)				529	964	431	437	2211			1868	
v/s Ratio Prot					c0.26		c0.19	0.24			0.27	
v/s Ratio Perm				0.16		0.20	c0.39					
v/c Ratio				0.53	0.88	0.66	0.94	0.39			0.70	
Uniform Delay, d1				30.6	35.0	32.1	30.7	9.8			27.5	
Progression Factor				1.00	1.00	1.00	1.72	0.87			1.00	
Incremental Delay, d2				0.4	9.3	2.8	19.3	0.3			2.2	
Delay (s)				31.1	44.4	34.9	72.0	8.8			29.7	
Level of Service				C	D	C	E	A			C	
Approach Delay (s)		0.0			39.6			29.2			29.7	
Approach LOS		A			D			C			C	

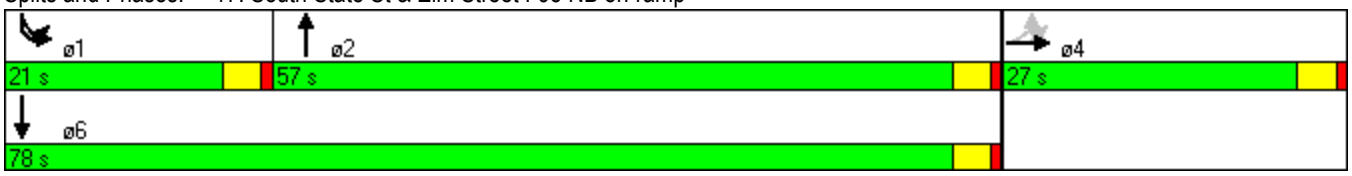
Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBT	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	156	220	1013	191	809
Lane Group Flow (vph)	170	698	1463	454	879
Turn Type	Perm			Prot	
Protected Phases		4	2	1	6
Permitted Phases	4				
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	12.0	12.0	15.0	6.0	15.0
Minimum Split (s)	22.0	22.0	22.0	10.0	22.0
Total Split (s)	27.0	27.0	57.0	21.0	78.0
Total Split (%)	25.7%	25.7%	54.3%	20.0%	74.3%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
v/c Ratio	0.40	0.83	0.87	0.92dl	0.69
Control Delay	36.4	43.9	19.4	65.8	16.7
Queue Delay	0.7	0.0	1.1	0.0	6.3
Total Delay	37.1	43.9	20.6	65.8	23.0
Queue Length 50th (ft)	101	224	224	169	182
Queue Length 95th (ft)	m144	m#302	291	#236	358
Internal Link Dist (ft)		1681	420		227
Turn Bay Length (ft)					
Base Capacity (vph)	426	840	1741	556	1313
Starvation Cap Reductn	0	0	110	0	378
Spillback Cap Reductn	82	0	1	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.83	0.90	0.82	0.94

Intersection Summary

Cycle Length: 105
Actuated Cycle Length: 105
Offset: 40 (38%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 17: South State St & Elm Street I-95 NB on-ramp



Movement	EBL2	EBL	EBT	EBR	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations										
Volume (vph)	156	237	220	185	1013	218	115	226	191	809
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0				4.0	4.0
Lane Util. Factor	1.00		0.95		0.95				0.97	1.00
Frt	1.00		0.96		0.96				1.00	1.00
Flt Protected	0.95		0.98		1.00				0.95	1.00
Satd. Flow (prot)	1770		3325		3408				3433	1863
Flt Permitted	0.95		0.98		1.00				0.95	1.00
Satd. Flow (perm)	1770		3325		3408				3433	1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	170	258	239	201	1101	237	125	246	208	879
RTOR Reduction (vph)	0	0	40	0	7	0	0	0	0	0
Lane Group Flow (vph)	170	0	658	0	1456	0	0	0	454	879
Turn Type	Perm	Perm						Prot	Prot	
Protected Phases			4		2			1	1	6
Permitted Phases	4	4								
Actuated Green, G (s)	25.2		25.2		51.9				15.9	71.8
Effective Green, g (s)	25.2		25.2		51.9				15.9	71.8
Actuated g/C Ratio	0.24		0.24		0.49				0.15	0.68
Clearance Time (s)	4.0		4.0		4.0				4.0	4.0
Vehicle Extension (s)	5.0		5.0		0.2				1.0	0.2
Lane Grp Cap (vph)	425		798		1685				520	1274
v/s Ratio Prot					c0.43				c0.13	0.47
v/s Ratio Perm	0.10		0.20							
v/c Ratio	0.40		0.82		0.86				0.92dl	0.69
Uniform Delay, d1	33.5		37.8		23.4				43.6	9.9
Progression Factor	0.98		0.98		0.62				1.18	1.41
Incremental Delay, d2	1.2		7.2		4.6				11.3	2.3
Delay (s)	33.9		44.2		19.1				62.9	16.3
Level of Service	C		D		B				E	B
Approach Delay (s)			42.2		19.1					32.2
Approach LOS			D		B					C

Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

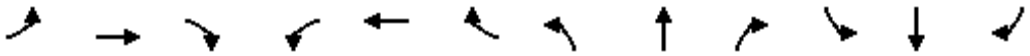
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	129	75	3	10	40	1349	17	739
Lane Group Flow (vph)	0	276	0	19	0	1516	0	1044
Turn Type	Perm		Perm		Perm		Perm	
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	33.0	33.0	33.0	33.0	72.0	72.0	72.0	72.0
Total Split (%)	31.4%	31.4%	31.4%	31.4%	68.6%	68.6%	68.6%	68.6%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
v/c Ratio		0.78		0.05		0.68		0.47
Control Delay		51.4		23.5		3.4		4.7
Queue Delay		0.0		0.0		0.7		0.2
Total Delay		51.4		23.5		4.1		5.0
Queue Length 50th (ft)		166		7		56		66
Queue Length 95th (ft)		245		25		m74		90
Internal Link Dist (ft)		565		410		256		420
Turn Bay Length (ft)								
Base Capacity (vph)		439		497		2236		2244
Starvation Cap Reductn		0		0		351		445
Spillback Cap Reductn		0		0		0		0
Storage Cap Reductn		0		0		0		0
Reduced v/c Ratio		0.63		0.04		0.80		0.58

Intersection Summary

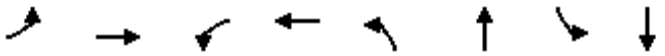
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 85 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 18: Cherry Street & Elm Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	75	50	3	10	5	40	1349	6	17	739	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.97			0.96			1.00			0.97	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1769			1782			3532			3423	
Flt Permitted		0.83			0.96			0.89			0.91	
Satd. Flow (perm)		1505			1728			3132			3113	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	140	82	54	3	11	5	43	1466	7	18	803	223
RTOR Reduction (vph)	0	9	0	0	4	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	267	0	0	15	0	0	1516	0	0	1025	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		23.0			23.0			74.0			74.0	
Effective Green, g (s)		24.0			24.0			75.0			75.0	
Actuated g/C Ratio		0.23			0.23			0.71			0.71	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		344			395			2237			2224	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.01			c0.48			0.33	
v/c Ratio		0.78			0.04			0.68			0.46	
Uniform Delay, d1		38.0			31.5			8.3			6.4	
Progression Factor		1.00			1.00			0.28			0.64	
Incremental Delay, d2		10.4			0.0			0.8			0.5	
Delay (s)		48.4			31.6			3.1			4.6	
Level of Service		D			C			A			A	
Approach Delay (s)		48.4			31.6			3.1			4.6	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	359	315	9	564	239	921	46	449
Lane Group Flow (vph)	378	412	9	715	252	1013	48	734
Turn Type	pm+pt		pm+pt		pm+pt		Perm	
Protected Phases	7	4	3	8	5	2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.0	21.0	14.0	21.0	14.0	21.0	21.0	21.0
Total Split (s)	21.0	49.0	14.0	42.0	14.0	42.0	28.0	28.0
Total Split (%)	20.0%	46.7%	13.3%	40.0%	13.3%	40.0%	26.7%	26.7%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	-1.0	0.0	-1.0	0.0	-1.0	0.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead		Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	1.07	0.42	0.02	1.08	1.00	0.79	0.59	0.88
Control Delay	97.4	16.0	10.4	86.6	86.5	35.5	62.6	44.5
Queue Delay	0.0	2.4	0.0	0.0	0.0	0.0	0.0	1.9
Total Delay	97.4	18.4	10.4	86.6	86.5	35.5	62.6	46.4
Queue Length 50th (ft)	~234	143	2	~534	125	315	34	219
Queue Length 95th (ft)	#421	266	m8	#760	#278	398	m#86	#210
Internal Link Dist (ft)		290		495		389		256
Turn Bay Length (ft)	200		150		250		225	
Base Capacity (vph)	354	988	520	664	252	1275	82	838
Starvation Cap Reductn	0	434	0	0	0	0	0	35
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.74	0.02	1.08	1.00	0.79	0.59	0.91

Intersection Summary

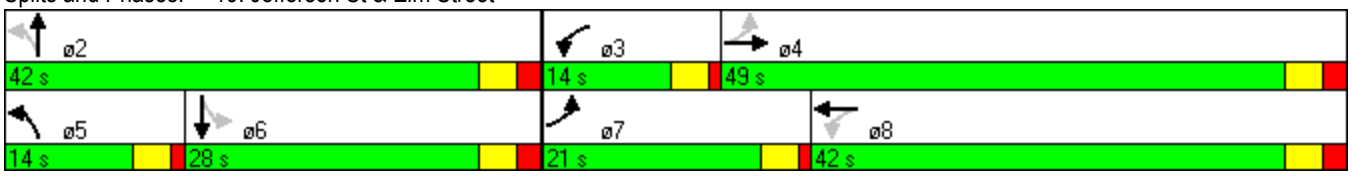
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 19 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

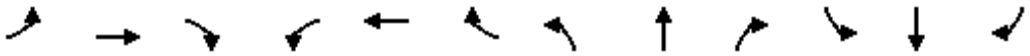
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

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

Splits and Phases: 19: Jefferson St & Elm Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	359	315	76	9	564	115	239	921	42	46	449	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		5.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1808		1770	1815		1770	3516		1770	3350	
Flt Permitted	0.09	1.00		0.52	1.00		0.17	1.00		0.20	1.00	
Satd. Flow (perm)	169	1808		970	1815		313	3516		376	3350	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	378	332	80	9	594	121	252	969	44	48	473	261
RTOR Reduction (vph)	0	6	0	0	7	0	0	3	0	0	75	0
Lane Group Flow (vph)	378	406	0	9	708	0	252	1010	0	48	659	0
Turn Type	pm+pt			pm+pt			pm+pt			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	61.2	55.9		41.5	40.2		33.8	33.8		19.8	19.8	
Effective Green, g (s)	61.2	56.9		41.5	41.2		33.8	34.8		19.8	20.8	
Actuated g/C Ratio	0.58	0.54		0.40	0.39		0.32	0.33		0.19	0.20	
Clearance Time (s)	4.0	5.0		4.0	5.0		4.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	358	980		393	712		240	1165		71	664	
v/s Ratio Prot	c0.17	0.22		0.00	0.39		c0.10	0.29			0.20	
v/s Ratio Perm	c0.45			0.01			c0.24			0.13		
v/c Ratio	1.06	0.41		0.02	0.99		1.05	0.87		0.68	0.99	
Uniform Delay, d1	33.2	14.2		19.3	31.8		31.7	32.9		39.6	42.0	
Progression Factor	1.00	1.00		0.92	0.86		1.00	1.00		0.94	0.96	
Incremental Delay, d2	63.0	0.3		0.0	32.0		71.8	8.8		37.6	31.4	
Delay (s)	96.3	14.5		17.7	59.5		103.5	41.7		74.8	71.7	
Level of Service	F	B		B	E		F	D		E	E	
Approach Delay (s)		53.6			59.0			54.0			71.9	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM Average Control Delay	58.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	105.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Volume (vph)	800	19	1021	5
Lane Group Flow (vph)	875	0	1131	68
Turn Type		Perm		
Protected Phases	2		6	8
Permitted Phases		6		
Detector Phase	2	6	6	8
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	7.0
Minimum Split (s)	20.0	20.0	20.0	22.0
Total Split (s)	78.0	78.0	78.0	27.0
Total Split (%)	74.3%	74.3%	74.3%	25.7%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Min	C-Min	C-Min	None
v/c Ratio	0.25		0.35	0.34
Control Delay	2.0		2.2	17.0
Queue Delay	0.0		0.2	0.0
Total Delay	2.0		2.4	17.0
Queue Length 50th (ft)	36		5	3
Queue Length 95th (ft)	98		184	41
Internal Link Dist (ft)	848		136	779
Turn Bay Length (ft)				
Base Capacity (vph)	3470		3227	405
Starvation Cap Reductn	0		979	0
Spillback Cap Reductn	0		0	0
Storage Cap Reductn	0		0	0
Reduced v/c Ratio	0.25		0.50	0.17

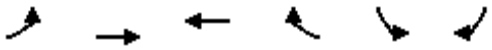
Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 20 (19%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 20: East Main Street & North State Street

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	800	5	19	1021	5	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	16	16	16	16	12	12
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	0.95			0.95	1.00	
Frt	1.00			1.00	0.87	
Flt Protected	1.00			1.00	1.00	
Satd. Flow (prot)	4008			4007	1624	
Flt Permitted	1.00			0.93	1.00	
Satd. Flow (perm)	4008			3728	1624	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	870	5	21	1110	5	63
RTOR Reduction (vph)	0	0	0	0	58	0
Lane Group Flow (vph)	875	0	0	1131	10	0
Turn Type			Perm			
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	89.3			89.3	7.7	
Effective Green, g (s)	89.3			89.3	7.7	
Actuated g/C Ratio	0.85			0.85	0.07	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	0.2			0.2	3.0	
Lane Grp Cap (vph)	3409			3171	119	
v/s Ratio Prot	0.22				c0.01	
v/s Ratio Perm				c0.30		
v/c Ratio	0.26			0.36	0.08	
Uniform Delay, d1	1.5			1.7	45.4	
Progression Factor	1.00			0.92	1.00	
Incremental Delay, d2	0.2			0.3	0.3	
Delay (s)	1.7			1.8	45.6	
Level of Service	A			A	D	
Approach Delay (s)	1.7			1.8	45.6	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	3.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	852	916	26	0	105
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	926	996	28	0	114
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		216	192			
pX, platoon unblocked	0.92				0.94	0.92
vC, conflicting volume	1024				1484	512
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	841				1169	281
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	83
cM capacity (veh/h)	723				173	655

Direction, Lane #	EB 1	EB 2	WB 1	WB 2
Volume Total	314	617	664	360
Volume Left	5	0	0	0
Volume Right	0	0	0	28
cSH	723	1700	1700	1700
Volume to Capacity	0.01	0.36	0.39	0.21
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	0.3	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	0.1		0.0	
Approach LOS				

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations					
Volume (vph)	640	116	733	228	129
Lane Group Flow (vph)	933	0	923	248	140
Turn Type		Perm			Perm
Protected Phases	2		6	8	
Permitted Phases		6			8
Detector Phase	2	6	6	8	8
Switch Phase					
Minimum Initial (s)	7.0	5.0	5.0	7.0	7.0
Minimum Split (s)	22.0	20.0	20.0	22.0	22.0
Total Split (s)	73.0	73.0	73.0	32.0	32.0
Total Split (%)	69.5%	69.5%	69.5%	30.5%	30.5%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
v/c Ratio	0.37		0.53	0.74	0.34
Control Delay	4.3		15.0	44.0	2.9
Queue Delay	0.1		1.4	0.0	0.0
Total Delay	4.5		16.4	44.0	2.9
Queue Length 50th (ft)	91		192	102	2
Queue Length 95th (ft)	174		242	m144	m5
Internal Link Dist (ft)	112		226	1534	
Turn Bay Length (ft)				250	
Base Capacity (vph)	2525		1754	472	525
Starvation Cap Reductn	587		591	0	0
Spillback Cap Reductn	9		0	0	0
Storage Cap Reductn	0		0	0	0
Reduced v/c Ratio	0.48		0.79	0.53	0.27

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 6 (6%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

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

Splits and Phases: 22: East Main Street & Myrtle Avenue

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	640	218	116	733	228	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	0.96			1.00	1.00	0.85
Flt Protected	1.00			0.99	0.95	1.00
Satd. Flow (prot)	3404			3515	1770	1583
Flt Permitted	1.00			0.67	0.95	1.00
Satd. Flow (perm)	3404			2388	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	696	237	126	797	248	140
RTOR Reduction (vph)	25	0	0	0	0	113
Lane Group Flow (vph)	908	0	0	923	248	27
Turn Type			Perm			Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	77.1			77.1	19.9	19.9
Effective Green, g (s)	77.1			77.1	19.9	19.9
Actuated g/C Ratio	0.73			0.73	0.19	0.19
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	0.2			0.2	3.0	3.0
Lane Grp Cap (vph)	2500			1753	335	300
v/s Ratio Prot	0.27				c0.14	
v/s Ratio Perm				c0.39		0.02
v/c Ratio	0.36			0.53	0.74	0.09
Uniform Delay, d1	5.1			6.0	40.1	35.1
Progression Factor	0.78			2.00	0.81	0.16
Incremental Delay, d2	0.4			1.1	7.7	0.1
Delay (s)	4.3			13.1	40.0	5.7
Level of Service	A			B	D	A
Approach Delay (s)	4.3			13.1	27.6	
Approach LOS	A			B	C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Volume (vph)	727	31	811	38
Lane Group Flow (vph)	836	0	916	84
Turn Type		Perm		
Protected Phases	2		6	8
Permitted Phases		6		
Detector Phase	2	6	6	8
Switch Phase				
Minimum Initial (s)	15.0	15.0	15.0	5.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	78.0	78.0	78.0	27.0
Total Split (%)	74.3%	74.3%	74.3%	25.7%
Yellow Time (s)	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	C-Max	Max
v/c Ratio	0.34		0.41	0.21
Control Delay	7.5		8.9	19.8
Queue Delay	0.5		0.6	0.0
Total Delay	8.0		9.5	19.9
Queue Length 50th (ft)	88		84	22
Queue Length 95th (ft)	199		288	63
Internal Link Dist (ft)	226		325	1016
Turn Bay Length (ft)				
Base Capacity (vph)	2479		2235	404
Starvation Cap Reductn	1111		831	0
Spillback Cap Reductn	0		237	15
Storage Cap Reductn	0		0	0
Reduced v/c Ratio	0.61		0.65	0.22

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 25 (24%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 23: East Main Street & Maple Avenue

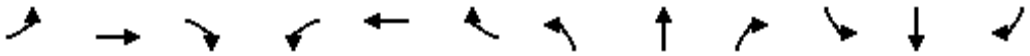
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	727	42	31	811	38	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	0.95			0.95	1.00	
Frt	0.99			1.00	0.93	
Flt Protected	1.00			1.00	0.98	
Satd. Flow (prot)	3510			3533	1693	
Flt Permitted	1.00			0.90	0.98	
Satd. Flow (perm)	3510			3171	1693	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	790	46	34	882	41	43
RTOR Reduction (vph)	4	0	0	0	34	0
Lane Group Flow (vph)	832	0	0	916	50	0
Turn Type			Perm			
Protected Phases	2			6	8	
Permitted Phases			6			
Actuated Green, G (s)	74.0			74.0	23.0	
Effective Green, g (s)	74.0			74.0	23.0	
Actuated g/C Ratio	0.70			0.70	0.22	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2474			2235	371	
v/s Ratio Prot	0.24				c0.03	
v/s Ratio Perm				c0.29		
v/c Ratio	0.34			0.41	0.14	
Uniform Delay, d1	6.0			6.4	33.0	
Progression Factor	1.19			1.28	1.00	
Incremental Delay, d2	0.4			0.5	0.8	
Delay (s)	7.5			8.8	33.8	
Level of Service	A			A	C	
Approach Delay (s)	7.5			8.8	33.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	50	633	144	624	139	8	166	40	21
Lane Group Flow (vph)	54	779	157	696	0	160	180	0	152
Turn Type	pm+pt		pm+pt		Perm		Perm	Perm	
Protected Phases	5	2	1	6		8			4
Permitted Phases	2		6		8		8	4	
Detector Phase	5	2	1	6	8	8	8	4	4
Switch Phase									
Minimum Initial (s)	4.0	8.0	4.0	8.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	8.0	20.0	8.0	20.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	9.0	46.0	20.0	57.0	39.0	39.0	39.0	39.0	39.0
Total Split (%)	8.6%	43.8%	19.0%	54.3%	37.1%	37.1%	37.1%	37.1%	37.1%
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None
v/c Ratio	0.10	0.37	0.32	0.30		0.81	0.39		0.44
Control Delay	12.2	20.1	7.1	9.7		68.7	7.3		23.3
Queue Delay	0.0	0.5	0.0	0.0		0.0	0.0		0.0
Total Delay	12.2	20.6	7.1	9.7		68.7	7.3		23.3
Queue Length 50th (ft)	16	160	27	100		104	0		49
Queue Length 95th (ft)	43	275	65	175		163	50		99
Internal Link Dist (ft)		325		1546		1598			1086
Turn Bay Length (ft)	120		180						
Base Capacity (vph)	523	2119	584	2304		334	648		533
Starvation Cap Reductn	0	859	0	0		0	0		0
Spillback Cap Reductn	0	0	0	0		0	0		0
Storage Cap Reductn	0	0	0	0		0	0		0
Reduced v/c Ratio	0.10	0.62	0.27	0.30		0.48	0.28		0.29

Intersection Summary
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 91 (87%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 24: East Main Street & Lincoln Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	633	84	144	624	17	139	8	166	40	21	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	
Frt	1.00	0.98		1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1770	3477		1770	3525			1779	1583		1696	
Flt Permitted	0.38	1.00		0.29	1.00			0.54	1.00		0.85	
Satd. Flow (perm)	704	3477		545	3525			1001	1583		1464	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	688	91	157	678	18	151	9	180	43	23	86
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	145	0	54	0
Lane Group Flow (vph)	54	773	0	157	695	0	0	160	35	0	98	0
Turn Type	pm+pt			pm+pt			Perm		Perm	Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8		8	4		
Actuated Green, G (s)	68.4	63.8		76.4	67.8			20.6	20.6		20.6	
Effective Green, g (s)	68.4	63.8		76.4	67.8			20.6	20.6		20.6	
Actuated g/C Ratio	0.65	0.61		0.73	0.65			0.20	0.20		0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	2.0	0.2		2.0	0.2			3.0	3.0		3.0	
Lane Grp Cap (vph)	505	2113		497	2276			196	311		287	
v/s Ratio Prot	0.00	c0.22		c0.03	0.20							
v/s Ratio Perm	0.06			0.20				c0.16	0.02		0.07	
v/c Ratio	0.11	0.37		0.32	0.31			0.82	0.11		0.34	
Uniform Delay, d1	6.6	10.4		5.2	8.2			40.4	34.7		36.4	
Progression Factor	2.00	1.67		1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.0	0.5		0.1	0.3			22.4	0.2		0.7	
Delay (s)	13.2	17.8		5.3	8.6			62.7	34.9		37.1	
Level of Service	B	B		A	A			E	C		D	
Approach Delay (s)		17.5			8.0			48.0			37.1	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			