```
Heavy vehicle adjustment, fHV              0.971      0.971
Driver population factor, fP               1.00       1.00
Flow rate, vp                              1392       71                    pcph

_____Estimation of V12 Merge Areas_____

              L   =                (Equation 25-2 or 25-3)
               EQ
              P   =    1.000    Using Equation  0
               FM
              v   = v  (P  ) =    1392    pc/h
               12    F   FM

_____Capacity Checks_____

                              Actual        Maximum           LOS F?
          v                   1463          4800              No
           FO
          v      v              0    pc/h   (Equation 25-4 or 25-5)
           3 or  av34
     Is   v      v     > 2700 pc/h?          No
           3 or  av34
     Is   v      v     > 1.5 v  /2           No
           3 or  av34        12
     If yes, v    =                          (Equation 25-8)
              12A

_____Flow Entering Merge Influence Area_____
                    Actual         Max Desirable        Violation?
          v         1392           4400                 No
           12                                                                               !
_____Level of Service Determination (if not F)_____

Density, D = 5.475 + 0.00734 v  + 0.0078 v   - 0.00627 L   =    13.4    pc/mi/ln
             R                 R           12            A
Level of service for ramp-freeway junction areas of influence  B

_____Speed Estimation_____

Intermediate speed variable,               M   = 0.299
                                            S
Space mean speed in ramp influence area,    S   = 61.6     mph
                                            R
Space mean speed in outer lanes,            S   = N/A      mph
                                            0
Space mean speed for all vehicles,          S   = 61.6     mph

_____
```

Phone: Fax:
E-mail:

_____Diverge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGNINEERING
Date performed: 3/8/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 EB
Junction: SR 29 OFF RAMP
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Diverge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   665   vph

_____Off Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-Flow speed on ramp   45.0   mph
Volume on ramp   25   vph
Length of first accel/decel lane   202   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent ramp   vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	665	25		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	185	7		v
Trucks and buses	6	22		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV          0.971      0.901
Driver population factor, fP           0.90       0.90
Flow rate, vp                          846        34                    pcph
```

_____Estimation of V12 Diverge Areas_____

$$L_{EQ} = \qquad \text{(Equation 25-8 or 25-9)}$$

$$P_{FD} = 1.000 \quad \text{Using Equation } 0$$

$$v_{12} = v_R + (v_F - v_R)\,P_{FD} = 846 \quad pc/h$$

_____Capacity Checks_____

```
                      Actual        Maximum        LOS F?
  v   = v             846           4800           No
   Fi   F
  v   = v  - v        812           4800           No
   FO   F    R
  v                   34            2100           No
   R
  v      v            0     pc/h    (Equation 25-15 or 25-16)
   3 or  av34
Is  v      v     > 2700 pc/h?       No
    3 or  av34
Is  v      v     > 1.5 v  /2        No
    3 or  av34          12
If yes, v    =                      (Equation 25-18)
         12A
```

_____Flow Entering Diverge Influence Area_____
```
                 Actual        Max Desirable      Violation?
  v              846           4600               No
   12                                                                  !
```
_____Level of Service Determination (if not F)_____

$$\text{Density,} \qquad D = 4.252 + 0.0086\,v_R - 0.009\,L_D = 9.7 \quad pc/mi/ln$$

Level of service for ramp-freeway junction areas of influence A

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.301

Space mean speed in ramp influence area, S_R = 61.6   mph

Space mean speed in outer lanes, S_0 = N/A   mph

Space mean speed for all vehicles, S = 61.6   mph

_____

Phone: Fax:
E-mail:

_____Merge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGINEERING
Date performed: 3/16/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 EB
Junction: SR 29 EB ON
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Merge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   640   vph

_____On Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-flow speed on ramp   35.0   mph
Volume on ramp   64   vph
Length of first accel/decel lane   560   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent Ramp   vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	640	64		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	178	18		v
Trucks and buses	6	22		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade		%	%	%
Length		mi	mi	mi
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV              0.971      0.901
Driver population factor, fP               0.90       0.90
Flow rate, vp                              814        88              pcph
```

_____Estimation of V12 Merge Areas_____

$$L_{EQ} = \qquad \text{(Equation 25-2 or 25-3)}$$

$$P_{FM} = 1.000 \quad \text{Using Equation} \quad 0$$

$$v_{12} = v_F (P_{FM}) = 814 \quad pc/h$$

_____Capacity Checks_____

```
                          Actual       Maximum       LOS F?
    v                     902          4800          No
     FO
    v      v              0    pc/h    (Equation 25-4 or 25-5)
     3 or  av34
Is  v      v      > 2700 pc/h?          No
     3 or  av34
Is  v      v      > 1.5 v  /2           No
     3 or  av34         12
If yes, v      =                        (Equation 25-8)
         12A
```

_____Flow Entering Merge Influence Area_____

```
                 Actual        Max Desirable      Violation?
    v            814           4400               No
     12                                                              !
```

_____Level of Service Determination (if not F)_____

$$\text{Density, } D = 5.475 + 0.00734\,v_R + 0.0078\,v_{12} - 0.00627\,L_A = 9.0 \quad pc/mi/ln$$

Level of service for ramp-freeway junction areas of influence   A

_____Speed Estimation_____

Intermediate speed variable, $M_S = 0.291$

Space mean speed in ramp influence area, $S_R = 61.8$ mph

Space mean speed in outer lanes, $S_O = N/A$ mph

Space mean speed for all vehicles, $S = 61.8$ mph

Phone: Fax:
E-mail:

_____Diverge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGNINEERING
Date performed: 3/8/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 WB
Junction: WB SR 29 OFF RAMP
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Diverge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   674   vph

_____Off Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-Flow speed on ramp   45.0   mph
Volume on ramp   94   vph
Length of first accel/decel lane   215   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent ramp   vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	674	94		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	187	26		v
Trucks and buses	6	22		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV            0.971       0.901
Driver population factor, fP             0.90        0.90
Flow rate, vp                            857         129                pcph

_____Estimation of V12 Diverge Areas_____

              L   =                 (Equation 25-8 or 25-9)
               EQ
              P   =     1.000    Using Equation   0
               FD
              v   = v   + (v  - v )  P   =     857      pc/h
               12    R      F    R    FD

_____Capacity Checks_____

                          Actual         Maximum          LOS F?
         v   = v          857            4800             No
          Fi    F
         v   = v  - v      728            4800             No
          FO    F    R
         v                 129            2100             No
          R
         v      v           0     pc/h    (Equation 25-15 or 25-16)
          3 or  av34
   Is    v      v     > 2700 pc/h?        No
          3 or  av34
   Is    v      v     > 1.5 v  /2         No
          3 or  av34          12
   If yes, v    =                         (Equation 25-18)
            12A

_____Flow Entering Diverge Influence Area_____
                          Actual         Max Desirable     Violation?
         v                857            4600             No
          12                                                                          !
_____Level of Service Determination (if not F)_____

Density,              D = 4.252 + 0.0086 v   - 0.009 L    =    9.7      pc/mi/ln
                       R                   12          D
Level of service for ramp-freeway junction areas of influence A

_____Speed Estimation_____

Intermediate speed variable,             D   = 0.310
                                          S
Space mean speed in ramp influence area, S   = 61.3      mph
                                          R
Space mean speed in outer lanes,         S   = N/A       mph
                                          0
Space mean speed for all vehicles,       S   = 61.3      mph

_____
```

Phone: Fax:
E-mail:

_____Merge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGINEERING
Date performed: 3/16/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 WB
Junction: SR 29 WB ON
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Merge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   580   vph

_____On Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-flow speed on ramp   35.0   mph
Volume on ramp   55   vph
Length of first accel/decel lane   415   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent Ramp   vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	580	55		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	161	15		v
Trucks and buses	6	22		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV          0.971      0.901
Driver population factor, fP           0.90       0.90
Flow rate, vp                          738        75                    pcph
```

_____Estimation of V12 Merge Areas_____

$$L_{EQ} = \qquad \text{(Equation 25-2 or 25-3)}$$

$$P_{FM} = 1.000 \quad \text{Using Equation } 0$$

$$v_{12} = v_F (P_{FM}) = 738 \quad pc/h$$

_____Capacity Checks_____

```
                        Actual      Maximum        LOS F?
    v                   813         4800           No
     FO
    v     v              0    pc/h  (Equation 25-4 or 25-5)
     3 or  av34
Is  v     v      > 2700 pc/h?       No
     3 or  av34
Is  v     v      > 1.5 v  /2        No
     3 or  av34         12
If yes, v      =                    (Equation 25-8)
         12A
```

_____Flow Entering Merge Influence Area_____

```
                 Actual       Max Desirable      Violation?
    v            738          4400               No
     12                                                              !
```
_____Level of Service Determination (if not F)_____

$$\text{Density, } D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A = 9.2 \quad pc/mi/ln$$

Level of service for ramp-freeway junction areas of influence   A

_____Speed Estimation_____

Intermediate speed variable, M_S = 0.301

Space mean speed in ramp influence area, S_R = 61.6   mph

Space mean speed in outer lanes, S_0 = N/A   mph

Space mean speed for all vehicles, S = 61.6   mph

Phone: Fax:
E-mail:

_____Diverge Analysis_____

Analyst: GSR
Agency/Co.:   AIM ENGNINEERING
Date performed: 4/4/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 EB
Junction: CR 951 OFF RAMP
Jurisdiction:
Analysis Year: 2019 NO-BUILD
Description:

_____Freeway Data_____

Type of analysis   Diverge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   1232   vph

_____Off Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-Flow speed on ramp   45.0   mph
Volume on ramp   750   vph
Length of first accel/decel lane   200   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent ramp   vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1232	750		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	342	208		v
Trucks and buses	6	6		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV          0.971     0.971
Driver population factor, fP           1.00      1.00
Flow rate, vp                          1410      858                   pcph
```

_____Estimation of V12 Diverge Areas_____

$$L_{EQ} = \qquad \text{(Equation 25-8 or 25-9)}$$

$$P_{FD} = \quad 1.000 \quad \text{Using Equation} \quad 0$$

$$v_{12} = v_R + (v_F - v_R)\, P_{FD} = \quad 1410 \quad pc/h$$

_____Capacity Checks_____

```
                         Actual        Maximum         LOS F?
  v   = v               1410          4800            No
   Fi    F
  v   = v - v            552          4800            No
   FO    F   R
  v                       858          2100            No
   R
  v      v                 0    pc/h   (Equation 25-15 or 25-16)
   3 or  av34
Is  v      v     > 2700 pc/h?          No
    3 or  av34
Is  v      v     > 1.5 v  /2           No
    3 or  av34          12
If yes, v    =                         (Equation 25-18)
        12A
```

_____Flow Entering Diverge Influence Area_____
```
                    Actual        Max Desirable     Violation?
  v                1410          4600              No
   12                                                                    !
```
_____Level of Service Determination (if not F)_____

```
Density,           D = 4.252 + 0.0086 v   - 0.009 L   =   14.6   pc/mi/ln
                    R                  12          D
Level of service for ramp-freeway junction areas of influence B
```

_____Speed Estimation_____

```
Intermediate speed variable,            D  = 0.375
                                         S
Space mean speed in ramp influence area, S  = 59.5    mph
                                          R
Space mean speed in outer lanes,        S  =  N/A     mph
                                         0
Space mean speed for all vehicles,      S  = 59.5     mph
```

Phone: Fax:
E-mail:

_____Merge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGINEERING
Date performed: 3/16/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 EB
Junction: CR 951 EB ON
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Merge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   482   vph

_____On Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-flow speed on ramp   35.0   mph
Volume on ramp   183   vph
Length of first accel/decel lane   465   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent Ramp   vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	482	183		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	134	51		v
Trucks and buses	6	6		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade		%	%	%
Length		mi	mi	mi
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV           0.971      0.971
Driver population factor, fP            0.90       0.90
Flow rate, vp                          613        233                   pcph
```

_____Estimation of V12 Merge Areas_____

$$L_{EQ} = \qquad \text{(Equation 25-2 or 25-3)}$$

$$P_{FM} = 1.000 \quad \text{Using Equation } 0$$

$$v_{12} = v_F (P_{FM}) = 613 \quad pc/h$$

_____Capacity Checks_____

```
                        Actual        Maximum        LOS F?
     v                  846           4800           No
      FO
     v      v           0     pc/h    (Equation 25-4 or 25-5)
      3 or av34
Is   v      v    > 2700 pc/h?         No
      3 or av34
Is   v      v    > 1.5 v  /2          No
      3 or av34        12
If yes, v    =                        (Equation 25-8)
        12A
```

_____Flow Entering Merge Influence Area_____

```
                    Actual        Max Desirable      Violation?
     v              613           4400               No
      12                                                                    !
```

_____Level of Service Determination (if not F)_____

$$\text{Density, } D = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A = 9.1 \quad pc/mi/ln$$

Level of service for ramp-freeway junction areas of influence   A

_____Speed Estimation_____

```
Intermediate speed variable,          M  = 0.298
                                       S
Space mean speed in ramp influence area,   S  = 61.7     mph
                                            R
Space mean speed in outer lanes,      S  = N/A     mph
                                       0
Space mean speed for all vehicles,    S  = 61.7     mph
```

Phone: Fax:
E-mail:

_____Diverge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGNINEERING
Date performed: 3/8/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 WB
Junction: CR 951 OFF RAMP
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Diverge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   635   vph

_____Off Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-Flow speed on ramp   45.0   mph
Volume on ramp   149   vph
Length of first accel/decel lane   220   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent ramp   vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	635		149			vph
Peak-hour factor, PHF	0.90		0.90			
Peak 15-min volume, v15	176		41			v
Trucks and buses	6		6			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5*		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

```
Heavy vehicle adjustment, fHV                  0.971        0.971
Driver population factor, fP                   0.90         0.90
Flow rate, vp                                  807          189                      pcph
```

_____Estimation of V12 Diverge Areas_____

$$L_{EQ} = \qquad \text{(Equation 25-8 or 25-9)}$$

$$P_{FD} = 1.000 \quad \text{Using Equation} \quad 0$$

$$v_{12} = v_R + (v_F - v_R) P_{FD} = 807 \quad pc/h$$

_____Capacity Checks_____

```
                          Actual        Maximum         LOS F?
   v   = v                807           4800            No
    Fi    F
   v   = v - v            618           4800            No
    FO    F   R
   v                      189           2100            No
    R
```

$$v_3 \text{ or } v_{av34} \qquad 0 \quad pc/h \qquad \text{(Equation 25-15 or 25-16)}$$

```
Is  v       v     > 2700 pc/h?          No
     3 or    av34
Is  v       v     > 1.5 v  /2           No
     3 or    av34        12
If yes, v      =                        (Equation 25-18)
         12A
```

_____Flow Entering Diverge Influence Area_____
```
                Actual         Max Desirable        Violation?
   v            807            4600                 No
    12                                                                    !
```
_____Level of Service Determination (if not F)_____

$$\text{Density,} \qquad D = 4.252 + 0.0086\, v_{12} - 0.009\, L_D = 9.2 \quad pc/mi/ln$$

Level of service for ramp-freeway junction areas of influence A

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.315$

Space mean speed in ramp influence area, $S_R = 61.2$ mph

Space mean speed in outer lanes, $S_0 = N/A$ mph

Space mean speed for all vehicles, $S = 61.2$ mph

_____

Phone: Fax:
E-mail:

_____Merge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGINEERING
Date performed: 3/16/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 WB
Junction: CR 951 WB ON
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Merge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   486   vph

_____On Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-flow speed on ramp   35.0   mph
Volume on ramp   931   vph
Length of first accel/decel lane   385   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent Ramp   vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	486	931		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	135	259		v
Trucks and buses	6	6		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%		%	%
Length	mi		mi	mi
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV          0.971      0.971
Driver population factor, fP           1.00       1.00
Flow rate, vp                          556        1065                  pcph
```

_____Estimation of V12 Merge Areas_____

$$L_{EQ} = \quad\quad\quad \text{(Equation 25-2 or 25-3)}$$

$$P_{FM} = \quad 1.000 \quad \text{Using Equation} \quad 0$$

$$v_{12} = v_F(P_{FM}) = \quad 556 \quad pc/h$$

_____Capacity Checks_____

	Actual	Maximum	LOS F?
v_{FO}	1621	4800	No
v_3 or v_{av34}	0 pc/h	(Equation 25-4 or 25-5)	

```
Is   v     v      > 2700 pc/h?        No
      3 or  av34
Is   v     v      > 1.5 v  /2         No
      3 or  av34        12
If yes, v     =                       (Equation 25-8)
          12A
```

_____Flow Entering Merge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12}	556	4400	No

!

_____Level of Service Determination (if not F)_____

$$\text{Density, } D_R = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A = \quad 15.2 \quad pc/mi/ln$$

Level of service for ramp-freeway junction areas of influence   B

_____Speed Estimation_____

Intermediate speed variable, $M_S = 0.314$

Space mean speed in ramp influence area, $S_R = 61.2$ mph

Space mean speed in outer lanes, $S_0 = $ N/A   mph

Space mean speed for all vehicles, $S = 61.2$ mph

Phone: Fax:
E-mail:

_____Diverge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGNINEERING
Date performed: 3/8/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 NB
Junction: GGP NB OFF RAMP
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Diverge
Number of lanes in freeway   3
Free-flow speed on freeway   70.0   mph
Volume on freeway   1417   vph

_____Off Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-Flow speed on ramp   45.0   mph
Volume on ramp   78   vph
Length of first accel/decel lane   310   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent ramp   vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1417	78		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	394	22		v
Trucks and buses	6	6		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV          0.971     0.971
Driver population factor, fP           1.00      1.00
Flow rate, vp                          1622      89                        pcph
```

_____Estimation of V12 Diverge Areas_____

$$L_{EQ} = \quad\quad\quad \text{(Equation 25-8 or 25-9)}$$

$$P_{FD} = 0.715 \quad \text{Using Equation 5}$$

$$v_{12} = v_R + (v_F - v_R)\, P_{FD} = 1186 \quad pc/h$$

_____Capacity Checks_____

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	1622	7200	No
$v_{FO} = v_F - v_R$	1533	7200	No
v_R	89	2100	No
v_3 or v_{av34}	436 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h?   No

Is v_3 or v_{av34} > 1.5 v_{12}/2   No

If yes, v_{12A} =   (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12}	1186	4600	No

!

_____Level of Service Determination (if not F)_____

$$\text{Density,} \quad D = 4.252 + 0.0086\, v_{12} - 0.009\, L_D = 11.7 \quad pc/mi/ln$$

Level of service for ramp-freeway junction areas of influence B

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.306

Space mean speed in ramp influence area, S_R = 61.4   mph

Space mean speed in outer lanes, S_O = 76.8   mph

Space mean speed for all vehicles, S = 64.9   mph

Phone: Fax:
E-mail:

_____Merge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGINEERING
Date performed: 3/16/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 NB
Junction: GOLDEN GATE PKWY NB ON
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Merge
Number of lanes in freeway   3
Free-flow speed on freeway   70.0   mph
Volume on freeway   1339   vph

_____On Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-flow speed on ramp   35.0   mph
Volume on ramp   1217   vph
Length of first accel/decel lane   600   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent Ramp   vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1339	1217		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	372	338		v
Trucks and buses	6	6		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV              0.971      0.971
Driver population factor, fP               1.00       1.00
Flow rate, vp                              1532       1393           pcph
```

_____Estimation of V12 Merge Areas_____

$$L_{EQ} = \qquad \text{(Equation 25-2 or 25-3)}$$

$$P_{FM} = 0.594 \quad \text{Using Equation } 1$$

$$v_{12} = v_F (P_{FM}) = 910 \quad pc/h$$

_____Capacity Checks_____

```
                         Actual      Maximum        LOS F?
     v                   2925        7200           No
      FO
     v     v             622   pc/h  (Equation 25-4 or 25-5)
      3 or  av34
Is   v     v      > 2700 pc/h?       No
      3 or  av34
Is   v     v      > 1.5 v  /2        No
      3 or  av34        12
If yes, v     =                      (Equation 25-8)
         12A
```

_____Flow Entering Merge Influence Area_____
```
                 Actual       Max Desirable       Violation?
     v           910          4400                No
      12                                                              !
```
_____Level of Service Determination (if not F)_____

$$\text{Density, } D = 5.475 + 0.00734\, v_R + 0.0078\, v_{12} - 0.00627\, L_A = 19.0 \quad pc/mi/ln$$

Level of service for ramp-freeway junction areas of influence   B

_____Speed Estimation_____

Intermediate speed variable, M_S = 0.318

Space mean speed in ramp influence area, S_R = 61.1   mph

Space mean speed in outer lanes, S_0 = 69.6   mph

Space mean speed for all vehicles, S = 62.7   mph

Phone: Fax:
E-mail:

_____Diverge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGNINEERING
Date performed: 3/8/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 SB
Junction: GGP SB OFF RAMP
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Diverge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   1875   vph

_____Off Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   2
Free-Flow speed on ramp   45.0   mph
Volume on ramp   717   vph
Length of first accel/decel lane   1500   ft
Length of second accel/decel lane   0   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent ramp   vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1875	717		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	521	199		v
Trucks and buses	6	6		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV          0.971     0.971
Driver population factor, fP           1.00      1.00
Flow rate, vp                          2146      821                    pcph

_____Estimation of V12 Diverge Areas_____

          L   =              (Equation 25-8 or 25-9)
           EQ
          P   =    1.000   Using Equation   0
           FD
          v   = v   + (v - v ) P   =   2146    pc/h
           12    R     F   R   FD

                          _____Capacity Checks_____

                           Actual        Maximum         LOS F?
          v   = v           2146          4800            No
           Fi    F
          v   = v - v        1325          4800            No
           FO    F   R
          v                  821           4100            No
           R
          v     v             0     pc/h   (Equation 25-15 or 25-16)
           3 or  av34
Is   v      v       > 2700 pc/h?              No
      3 or  av34
Is   v      v       > 1.5 v  /2              No
      3 or  av34          12
If yes, v    =                        (Equation 25-18)
         12A

_____Flow Entering Diverge Influence Area_____
                           Actual        Max Desirable   Violation?
          v                 2146          4600            No
           12                                                                      !
_____Level of Service Determination (if not F)_____

Density,        D = 4.252 + 0.0086 v   - 0.009  L    =    -4.3     pc/mi/ln
                 R                   12          D
Level of service for ramp-freeway junction areas of influence A

                        _____Speed Estimation_____

Intermediate speed variable,          D   = 0.372
                                       S
Space mean speed in ramp influence area,    S   = 59.6    mph
                                       R
Space mean speed in outer lanes,      S   = N/A    mph
                                       0
Space mean speed for all vehicles,    S   = 59.6    mph
_____
```

Phone: Fax:
E-mail:

_____Merge Analysis_____

Analyst: AL
Agency/Co.:   AIM ENGINEERING
Date performed: 3/16/2012
Analysis time period: PM
Freeway/Dir of Travel: I-75 SB
Junction: GOLDEN GATE PKWY SB ON
Jurisdiction:
Analysis Year: 2008
Description:

_____Freeway Data_____

Type of analysis   Merge
Number of lanes in freeway   2
Free-flow speed on freeway   70.0   mph
Volume on freeway   1158   vph

_____On Ramp Data_____

Side of freeway   Right
Number of lanes in ramp   1
Free-flow speed on ramp   35.0   mph
Volume on ramp   74   vph
Length of first accel/decel lane   550   ft
Length of second accel/decel lane   ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?   No
Volume on adjacent Ramp   vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp   ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1158	74		vph
Peak-hour factor, PHF	0.90	0.90		
Peak 15-min volume, v15	322	21		v
Trucks and buses	6	6		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade		%	%	%
Length		mi	mi	mi
Trucks and buses PCE, ET	1.5*	1.5		
Recreational vehicle PCE, ER	1.2	1.2		

```
Heavy vehicle adjustment, fHV            0.971      0.971
Driver population factor, fP             1.00       1.00
Flow rate, vp                            1325       85              pcph
```

_____Estimation of V12 Merge Areas_____

```
        L   =                  (Equation 25-2 or 25-3)
         EQ
        P   =     1.000   Using Equation   0
         FM
        v   = v  (P  ) =   1325    pc/h
         12    F   FM
```

_____Capacity Checks_____

```
                          Actual      Maximum         LOS F?
        v                 1410        4800            No
         FO
        v      v            0    pc/h   (Equation 25-4 or 25-5)
         3 or  av34
Is      v      v     > 2700 pc/h?        No
         3 or  av34
Is      v      v     > 1.5 v  /2         No
         3 or  av34         12
If yes, v     =                          (Equation 25-8)
         12A
```

_____Flow Entering Merge Influence Area_____
```
                 Actual         Max Desirable        Violation?
        v        1325           4400                 No
         12                                                              !
```
_____Level of Service Determination (if not F)_____

```
Density, D = 5.475 + 0.00734 v  + 0.0078 v   - 0.00627 L   =   13.0    pc/mi/ln
           R                  R           12           A
Level of service for ramp-freeway junction areas of influence   B
```

_____Speed Estimation_____

```
Intermediate speed variable,             M  = 0.298
                                          S
Space mean speed in ramp influence area, S  = 61.6    mph
                                          R
Space mean speed in outer lanes,         S  = N/A     mph
                                          O
Space mean speed for all vehicles,       S  = 61.6    mph
```

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	AL		
Agency/Co.	AIM ENGR		
Date Performed	4/10/2012		
Analysis Time Period	AM		

Site Information

Intersection	WB OFF @ SR 29
Jurisdiction	
Analysis Year	2008 EXISTING

Project Description

East/West Street: I-75 WB OFF Ramp   North/South Street: SR 29

Intersection Orientation: North-South   Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	7	17			122	
Peak-Hour Factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74
Hourly Flow Rate, HFR (veh/h)	9	22	0	0	164	0
Percent Heavy Vehicles	22	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	0	1	0
Configuration	L	T			T	
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				14		
Peak-Hour Factor, PHF	0.74	0.74	0.74	0.74	0.74	0.74
Hourly Flow Rate, HFR (veh/h)	0	0	0	18	0	0
Percent Heavy Vehicles	0	0	0	22	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	0
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L		L					
v (veh/h)	9		18					
C (m) (veh/h)	1302		737					
v/c	0.01		0.02					
95% queue length	0.02		0.08					
Control Delay (s/veh)	7.8		10.0					
LOS	A		B					
Approach Delay (s/veh)	--	--	10.0					
Approach LOS	--	--	B					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	AL
Agency/Co.	AIM ENGR
Date Performed	4/10/2012
Analysis Time Period	AM

Site Information

Intersection	I-75 EB OFF@ SR 29
Jurisdiction	
Analysis Year	2008 EXISTING

Project Description			
East/West Street: I-75 Ramps		North/South Street: SR 29	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		15		91	45	
Peak-Hour Factor, PHF	0.95	0.74	1.00	0.74	0.74	1.00
Hourly Flow Rate, HFR (veh/h)	0	20	0	122	60	0
Percent Heavy Vehicles	6	--	--	22	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	1	1	0
Configuration		T		L	T	
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	9					
Peak-Hour Factor, PHF	0.74	1.00	1.00	0.95	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	12	0	0	0	0	0
Percent Heavy Vehicles	22	0	0	6	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	0	0	0	0
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L				L		
v (veh/h)		122				12		
C (m) (veh/h)		1475				579		
v/c		0.08				0.02		
95% queue length		0.27				0.06		
Control Delay (s/veh)		7.7				11.3		
LOS		A				B		
Approach Delay (s/veh)	--	--					11.3	
Approach LOS	--	--					B	

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SHORT REPORT

General Information	Site Information
Analyst Amanda Correia Agency or Co. AIM Engineering & Surveying Date Performed 06/12/2008 Time Period AM Peak Hour	Intersection WB I-75 & Collier Blvd Area Type All other areas Jurisdiction Collier County Analysis Year Existing

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				1			2	2			2	
Lane Group				L			L	T			T	
Volume (vph)				63			543	613			1140	
% Heavy Vehicles				16			9	9			8	
PHF				0.74			0.90	0.90			0.93	
Pretimed/Actuated (P/A)				A			A	A			A	
Startup Lost Time				2.0			2.0	2.0			2.0	
Extension of Effective Green				2.0			2.0	2.0			2.0	
Arrival Type				3			4	4			5	
Unit Extension				4.0			4.0	4.0			4.0	
Ped/Bike/RTOR Volume				0	0		0	0		0	0	
Lane Width				12.0			12.0	12.0			12.0	
Parking/Grade/Parking				N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour				0			0	0			0	
Minimum Pedestrian Time					3.2			3.2			3.2	

Phasing	WB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 28.0	G = 50.0	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 5	Y = 6	Y =	Y =

Duration of Analysis (hrs) = 0.25	Cycle Length C = 110.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB	
Adjusted Flow Rate				85			603	681		1226	
Lane Group Capacity				212			819	2504		1523	
v/c Ratio				0.40			0.74	0.27		0.80	
Green Ratio				0.14			0.25	0.75		0.45	
Uniform Delay d_1				43.4			37.6	4.2		25.8	
Delay Factor k				0.15			0.32	0.15		0.36	
Incremental Delay d_2				1.7			3.0	0.1		2.4	
PF Factor				1.000			1.000	0.234		0.444	
Control Delay				45.1			40.6	1.0		13.9	
Lane Group LOS				D			D	A		B	
Approach Delay				45.1			19.6			13.9	
Approach LOS				D			B			B	
Intersection Delay	17.8			Intersection LOS						B	

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SHORT REPORT

General Information		Site Information	
Analyst	*Amanda Correia*	Intersection	*EB I-75 & Collier Blvd*
Agency or Co.	*AIM Engineering & Surveying*	Area Type	*All other areas*
		Jurisdiction	*Collier County*
Date Performed	*06/13/2008*	Analysis Year	*Existing*
Time Period	*AM Peak Hour*		

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1		2					2		1	2	
Lane Group	L		R					T		L	T	
Volume (vph)	108		681					1048		20	1183	
% Heavy Vehicles	11		11					9		7	7	
PHF	0.91		0.91					0.92		0.88	0.88	
Pretimed/Actuated (P/A)	A		A					A		A	A	
Startup Lost Time	2.0		2.0					2.0		2.0	2.0	
Extension of Effective Green	2.0		2.0					2.0		2.0	2.0	
Arrival Type	3		3					5		3	5	
Unit Extension	4.0		4.0					4.0		4.0	4.0	
Ped/Bike/RTOR Volume	0	0	0				0	0		0	0	
Lane Width	12.0		12.0					12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N				N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour	0		0					0		0	0	
Minimum Pedestrian Time		3.2						3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	NB Only	NS Perm	08
Timing	G = 15.0	G =	G =	G =	G = 54.0	G = 9.0	G = 10.0	G =
	Y = 5	Y =	Y =	Y =	Y = 6	Y = 6	Y = 5	Y =

Duration of Analysis (hrs) = 0.25		Cycle Length C = 110.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	119		748				1139			23	1344	
Lane Group Capacity	222		1053				2082			153	1660	
v/c Ratio	0.54		0.71				0.55			0.15	0.81	
Green Ratio	0.14		0.41				0.63			0.09	0.49	
Uniform Delay d_1	44.3		27.1				11.6			46.1	23.7	
Delay Factor k	0.18		0.30				0.18			0.15	0.37	
Incremental Delay d_2	3.2		2.4				0.3			0.4	2.1	
PF Factor	1.000		1.000				0.134			1.000	0.357	
Control Delay	47.5		29.5				1.8			46.5	10.5	
Lane Group LOS	D		C				A			D	B	
Approach Delay		32.0						1.8			11.1	
Approach LOS		C						A			B	
Intersection Delay		13.3			Intersection LOS						B	

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SHORT REPORT

General Information		Site Information	
Analyst	*Niki Lewis*	Intersection	*Golden Gate Pkwy & NB I-75*
Agency or Co.	*AIM Engineering & Surveying*	Area Type	*All other areas*
Date Performed *06/10/2008*		Jurisdiction	*Collier County*
Time Period	*AM Peak Hour*	Analysis Year	*2008*

Volume and Timing Input

		EB			WB			NB			SB	
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		3			3		2		1			
Lane Group		T			T		L		R			
Volume (vph)		664			1339		76		15			
% Heavy Vehicles		4			2		13		13			
PHF		0.90			0.90		0.77		0.77			
Pretimed/Actuated (P/A)		A			A		A		A			
Startup Lost Time		2.0			2.0		2.0		2.0			
Extension of Effective Green		2.0			2.0		2.0		2.0			
Arrival Type		3			3		3		3			
Unit Extension		4.0			4.0		4.0		4.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0			
Lane Width		12.0			12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	Thru & RT		02		03		04		NB Only		06		07		08	
Timing	G = 34.0	G =		G =		G =		G = 15.0		G =		G =		G =	
	Y = 6	Y =		Y =		Y =		Y = 5		Y =		Y =		Y =	
Duration of Analysis (hrs) = 0.25								Cycle Length C = 60.0							

Lane Group Capacity, Control Delay, and LOS Determination

	EB		WB		NB			SB		
Adjusted Flow Rate	738		1488		99		19			
Lane Group Capacity	2820		2875		776		357			
v/c Ratio	0.26		0.52		0.13		0.05			
Green Ratio	0.57		0.57		0.25		0.25			
Uniform Delay d_1	6.6		8.0		17.4		17.1			
Delay Factor k	0.15		0.16		0.15		0.15			
Incremental Delay d_2	0.1		0.2		0.1		0.1			
PF Factor	1.000		1.000		1.000		1.000			
Control Delay	6.7		8.2		17.5		17.2			
Lane Group LOS	A		A		B		B			
Approach Delay	6.7		8.2		17.5					
Approach LOS	A		A		B					
Intersection Delay	8.2		Intersection LOS					A		

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SHORT REPORT

General Information

Analyst	*Niki Lewis*
Agency or Co.	*AIM Engineering & Surveying*
Date Performed	*06/10/2008*
Time Period	*AM Peak Hour*

Site Information

Intersection	*Golden Gate Pkwy & SB I-75*
Area Type	*All other areas*
Jurisdiction	*Collier County*
Analysis Year	*Existing*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		3		1	3					1		2
Lane Group		T		L	T					L		R
Volume (vph)		728		12	1403					236		1048
% Heavy Vehicles		6		2	2					3		3
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		4.0		4.0	4.0					4.0		4.0
Ped/Bike/RTOR Volume	0	0		0	0					0	0	84
Lane Width		12.0		12.0	12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N				N	0	N
Parking/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2						3.2	

Phasing	WB Only	EW Perm	03	04	SB Only	06	07	08
Timing	G = 7.0	G = 25.0	G =	G =	G = 36.0	G =	G =	G =
	Y = 6	Y = 6	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 85.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate		809		13	1559					262		1071
Lane Group Capacity		1436		286	2268					742		1175
v/c Ratio		0.56		0.05	0.69					0.35		0.91
Green Ratio		0.29		0.45	0.45					0.42		0.42
Uniform Delay d_1		25.4		13.9	18.8					16.6		23.0
Delay Factor k		0.19		0.15	0.28					0.15		0.44
Incremental Delay d_2		0.6		0.1	1.0					0.4		10.9
PF Factor		1.000		1.000	1.000					1.000		1.000
Control Delay		26.0		14.0	19.7					17.0		33.9
Lane Group LOS		C		B	B					B		C
Approach Delay		26.0			19.7						30.6	
Approach LOS		C			B						C	
Intersection Delay		25.0			Intersection LOS						C	

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TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	AL	Intersection	I-75 WB OFF @ SR 29
Agency/Co.	AIM ENGR	Jurisdiction	
Date Performed	4/10/2012	Analysis Year	2008 EXISTING
Analysis Time Period	PM		

Project Description

East/West Street: I-75 WB OFF Ramp	North/South Street: SR 29
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	39	65			60	
Peak-Hour Factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Hourly Flow Rate, HFR (veh/h)	45	75	0	0	69	0
Percent Heavy Vehicles	11	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	1	1	0	0	1	0
Configuration	L	T			T	
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)				5		
Peak-Hour Factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Hourly Flow Rate, HFR (veh/h)	0	0	0	5	0	0
Percent Heavy Vehicles	0	0	0	11	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	0
Configuration				L		

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L		L					
v (veh/h)	45		5					
C (m) (veh/h)	1477		713					
v/c	0.03		0.01					
95% queue length	0.09		0.02					
Control Delay (s/veh)	7.5		10.1					
LOS	A		B					
Approach Delay (s/veh)	--	--	10.1					
Approach LOS	--	--	B					

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	AL
Agency/Co.	AIM ENGR
Date Performed	4/10/2012
Analysis Time Period	PM

Site Information

Intersection	I-75 EB OFF@ SR 29
Jurisdiction	
Analysis Year	2008 EXISTING

Project Description

East/West Street: I-75 Ramps   North/South Street: SR 29

Intersection Orientation: North-South   Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		94		41	24	
Peak-Hour Factor, PHF	0.95	0.86	1.00	0.86	0.86	1.00
Hourly Flow Rate, HFR (veh/h)	0	109	0	47	27	0
Percent Heavy Vehicles	6	--	--	11	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	1	1	0
Configuration		T		L	T	
Upstream Signal		0			0	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	10					
Peak-Hour Factor, PHF	0.86	1.00	1.00	0.95	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	11	0	0	0	0	0
Percent Heavy Vehicles	11	0	0	6	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	0	0	0	0
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L				L		
v (veh/h)		47				11		
C (m) (veh/h)		1427				715		
v/c		0.03				0.02		
95% queue length		0.10				0.05		
Control Delay (s/veh)		7.6				10.1		
LOS		A				B		
Approach Delay (s/veh)	--	--				10.1		
Approach LOS	--	--				B		

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SHORT REPORT

General Information		Site Information	
Analyst	*Amanda Correia*	Intersection	*WB I-75 & Collier Blvd*
Agency or Co.	*AIM Engineering & Surveying*	Area Type	*All other areas*
		Jurisdiction	*Collier County*
Date Performed	*06/12/2008*	Analysis Year	*Existing*
Time Period	*PM Peak Hour*		

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes				1			2	2			2	
Lane Group				L			L	T			T	
Volume (vph)				112			811	1194			772	
% Heavy Vehicles				5			5	5			4	
PHF				0.85			0.90	0.90			0.97	
Pretimed/Actuated (P/A)				A			A	A			A	
Startup Lost Time				2.0			2.0	2.0			2.0	
Extension of Effective Green				2.0			2.0	2.0			2.0	
Arrival Type				3			4	4			4	
Unit Extension				4.0			4.0	4.0			4.0	
Ped/Bike/RTOR Volume				0	0		0	0		0	0	
Lane Width				12.0			12.0	12.0			12.0	
Parking/Grade/Parking				N	0	N	N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour				0			0	0			0	
Minimum Pedestrian Time				3.2				3.2			3.2	

Phasing	WB Only	02	03	04	Thru & RT	NB Only	07	08
Timing	G = 17.0	G =	G =	G =	G = 46.0	G = 50.0	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 6	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate				132			901	1327			796	
Lane Group Capacity				225			1284	2703			1231	
v/c Ratio				0.59			0.70	0.49			0.65	
Green Ratio				0.13			0.38	0.78			0.35	
Uniform Delay d_1				53.2			33.7	4.9			35.2	
Delay Factor k				0.21			0.29	0.15			0.25	
Incremental Delay d_2				4.7			0.4	0.0			1.0	
PF Factor				1.000			0.910	0.267			0.940	
Control Delay				57.9			31.1	1.4			34.1	
Lane Group LOS				E			C	A			C	
Approach Delay				57.9			13.4			34.1		
Approach LOS				E			B			C		
Intersection Delay	20.5			Intersection LOS				C				

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SHORT REPORT

General Information		Site Information	
Analyst	*Amanda Correia*	Intersection	*EB I-75 & Collier Blvd*
Agency or Co.	*AIM Engineering & Surveying*	Area Type	*All other areas*
		Jurisdiction	*Collier County*
Date Performed *06/13/2008*		Analysis Year	*Existing*
Time Period	*PM Peak Hour*		

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes	1		2					2		1	2	
Lane Group	L		R					T		L	T	
Volume (vph)	71		679					1934		17	867	
% Heavy Vehicles	2		2					3		2	2	
PHF	0.87		0.87					0.90		0.92	0.92	
Pretimed/Actuated (P/A)	A		A					A		A	A	
Startup Lost Time	2.0		2.0					2.0		2.0	2.0	
Extension of Effective Green	2.0		2.0					2.0		2.0	2.0	
Arrival Type	3		3					5		2	6	
Unit Extension	4.0		4.0					4.0		4.0	4.0	
Ped/Bike/RTOR Volume	0	0	0				0	0		0	0	
Lane Width	12.0		12.0					12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N				N	0	N	N	0	N
Parking/Hour												
Bus Stops/Hour	0		0					0		0	0	
Minimum Pedestrian Time		3.2						3.2			3.2	

Phasing	EB Only	02	03	04	Thru & RT	NB Only	NS Perm	08
Timing	G = *16.0*	G =	G =	G =	G = *57.0*	G = *25.0*	G = *10.0*	G =
	Y = *5*	Y =	Y =	Y =	Y = *6*	Y = *6*	Y = *5*	Y =
Duration of Analysis (hrs) = *0.25*						Cycle Length C = *130.0*		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adjusted Flow Rate	82		780				2149			18	942	
Lane Group Capacity	218		1337				2377			136	1555	
v/c Ratio	0.38		0.58				0.90			0.13	0.61	
Green Ratio	0.12		0.48				0.68			0.08	0.44	
Uniform Delay d_1	52.4		24.6				17.5			56.0	27.9	
Delay Factor k	0.15		0.21				0.43			0.15	0.22	
Incremental Delay d_2	1.5		0.8				0.5			0.4	0.6	
PF Factor	1.000		1.000				0.155			1.000	0.219	
Control Delay	53.9		25.4				3.3			56.4	6.7	
Lane Group LOS	D		C				A			E	A	
Approach Delay		28.1						3.3			7.6	
Approach LOS		C						A			A	
Intersection Delay		9.7			Intersection LOS						A	

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SHORT REPORT

General Information		Site Information	
Analyst	*NL*	Intersection	*Golden Gate Pkwy & NB I-75*
Agency or Co.	*AIM Engineering & Surveying*	Area Type	*All other areas*
Date Performed	*06/13/2008*	Jurisdiction	*Collier County*
Time Period	*PM Peak Hour*	Analysis Year	*2008*

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		3			3		2		1			
Lane Group		T			T		L		R			
Volume (vph)		1642			609		68		10			
% Heavy Vehicles		1			2		10		10			
PHF		0.87			0.80		0.68		0.68			
Pretimed/Actuated (P/A)		A			A		A		A			
Startup Lost Time		2.0			2.0		2.0		2.0			
Extension of Effective Green		2.0			2.0		2.0		2.0			
Arrival Type		3			3		3		3			
Unit Extension		4.0			4.0		4.0		4.0			
Ped/Bike/RTOR Volume	0	0		0	0		0	0	0			
Lane Width		12.0			12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N			
Parking/Hour												
Bus Stops/Hour		0			0		0		0			
Minimum Pedestrian Time		3.2			3.2			3.2				

Phasing	Thru & RT	02	03	04	NB Only	06	07	08
Timing	G = 34.0	G =	G =	G =	G = 15.0	G =	G =	G =
	Y = 6	Y =	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25	Cycle Length C = 60.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB		WB		NB		SB	
Adjusted Flow Rate	1887		761		100	15		
Lane Group Capacity	2904		2875		797	367		
v/c Ratio	0.65		0.26		0.13	0.04		
Green Ratio	0.57		0.57		0.25	0.25		
Uniform Delay d_1	8.9		6.6		17.4	17.0		
Delay Factor k	0.25		0.15		0.15	0.15		
Incremental Delay d_2	0.6		0.1		0.1	0.1		
PF Factor	1.000		1.000		1.000	1.000		
Control Delay	9.5		6.7		17.5	17.1		
Lane Group LOS	A		A		B	B		
Approach Delay	9.5		6.7		17.5			
Approach LOS	A		A		B			
Intersection Delay	9.1		Intersection LOS				A	

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SHORT REPORT

General Information		Site Information	
Analyst	NL	Intersection	Golden Gate Pkwy & SB I-75
Agency or Co.	AIM Engineering & Surveying	Area Type	All other areas
Date Performed 06/13/2008		Jurisdiction	Collier County
Time Period PM Peak Hour		Analysis Year	Existing

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of Lanes		3		1	3					1		2
Lane Group		T		L	T					L		R
Volume (vph)		2363		3	674					274		443
% Heavy Vehicles		1		3	3					2		2
PHF		0.90		0.90	0.90					0.90		0.90
Pretimed/Actuated (P/A)		A		A	A					A		A
Startup Lost Time		2.0		2.0	2.0					2.0		2.0
Extension of Effective Green		2.0		2.0	2.0					2.0		2.0
Arrival Type		3		3	3					3		3
Unit Extension		4.0		4.0	4.0					4.0		4.0
Ped/Bike/RTOR Volume	0	0		0	0					0	0	76
Lane Width		12.0		12.0	12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N				N	0	N
Parking/Hour												
Bus Stops/Hour		0		0	0					0		0
Minimum Pedestrian Time		3.2			3.2						3.2	

Phasing	WB Only	EW Perm	03	04	SB Only	06	07	08
Timing	G = 7.0	G = 53.0	G =	G =	G = 18.0	G =	G =	G =
	Y = 6	Y = 6	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 95.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB		WB		NB			SB		
Adjusted Flow Rate	2626		3	749				304		408
Lane Group Capacity	2859		207	3491				335		531
v/c Ratio	0.92		0.01	0.21				0.91		0.77
Green Ratio	0.56		0.69	0.69				0.19		0.19
Uniform Delay d_1	19.0		16.8	5.2				37.7		36.5
Delay Factor k	0.44		0.15	0.15				0.44		0.34
Incremental Delay d_2	5.5		0.0	0.0				27.6		7.1
PF Factor	1.000		1.000	1.000				1.000		1.000
Control Delay	24.5		16.9	5.2				65.3		43.6
Lane Group LOS	C		B	A				E		D
Approach Delay	24.5		5.3					52.9		
Approach LOS	C		A					D		
Intersection Delay	25.9		Intersection LOS					C		

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