APPENDIX M
ROADWAY ANALYSES

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APPENDIX M1

ROADWAY ANALYSIS–HCS OUTPUTS

```
1985 HCM:TWO-LANE HIGHWAYS
*************************************************************

   FACILITY LOCATION.... Delevan Road
   ANALYST............. Korve Eng.
   TIME OF ANALYSIS..... Weekday
   DATE OF ANALYSIS..... 03-16-2001
   OTHER INFORMATION.... Existing scenario


A) ADJUSTMENT FACTORS
   -------------------------------------------------------------
   PERCENTAGE OF TRUCKS........................  24
   PERCENTAGE OF BUSES.........................  0
   PERCENTAGE OF RECREATIONAL VEHICLES.........  0
   DESIGN SPEED (MPH)..........................  50
   PEAK HOUR FACTOR............................  .83
   DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
   LANE WIDTH (FT).............................  10
   USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
   PERCENT NO PASSING ZONES....................  0

B) CORRECTION FACTORS
   -------------------------------------------------------------
   LEVEL TERRAIN

             E      E      E      f      f      f
   LOS        T      B      R      w      d      HV
   ---     -----  -----  -----  -----  -----  -----
    A         2    1.8    2.2    .58      1     .81

    B       2.2      2    2.5    .58      1     .78

    C       2.2      2    2.5    .58      1     .78

    D         2    1.6    1.6    .58      1     .81

    E         2    1.6    1.6    .75      1     .81

C) LEVEL OF SERVICE RESULTS
   -------------------------------------------------------------
   INPUT VOLUME(vph):    35
   ACTUAL FLOW RATE:     42
          SERVICE
   LOS   FLOW RATE    V/C
   ---   ---------   -----
    A        196      .15
    B        340      .27
    C        542      .43
    D        838      .64
    E       1694        1

   LOS FOR GIVEN CONDITIONS:  A
```

```
1985 HCM:TWO-LANE HIGHWAYS
*************************************************************

   FACILITY LOCATION.... Delevan Road
   ANALYST............... Korve Eng.
   TIME OF ANALYSIS..... Weekday
   DATE OF ANALYSIS..... 03-16-2001
   OTHER INFORMATION.... Existing plus Construction


A) ADJUSTMENT FACTORS
   -------------------------------------------------------------
   PERCENTAGE OF TRUCKS........................  3.5
   PERCENTAGE OF BUSES.........................  0
   PERCENTAGE OF RECREATIONAL VEHICLES.........  0
   DESIGN SPEED (MPH)..........................  50
   PEAK HOUR FACTOR............................  .83
   DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
   LANE WIDTH (FT).............................  10
   USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
   PERCENT NO PASSING ZONES....................  0

B) CORRECTION FACTORS
   -------------------------------------------------------------
   LEVEL TERRAIN

             E      E      E      f      f      f
   LOS        T      B      R      w      d      HV
   ---     -----  -----  -----  -----  -----  -----
    A         2    1.8    2.2    .58      1     .97

    B       2.2      2    2.5    .58      1     .96

    C       2.2      2    2.5    .58      1     .96

    D         2    1.6    1.6    .58      1     .97

    E         2    1.6    1.6    .75      1     .97

C) LEVEL OF SERVICE RESULTS
   -------------------------------------------------------------
   INPUT VOLUME(vph):   337
   ACTUAL FLOW RATE:    406
          SERVICE
   LOS   FLOW RATE    V/C
   ---   ---------   -----
    A        235      .15
    B        421      .27
    C        670      .43
    D       1004      .64
    E       2029        1

   LOS FOR GIVEN CONDITIONS:  B
```

```
1985 HCM:TWO-LANE HIGHWAYS
*************************************************************

   FACILITY LOCATION.... Delevan Road
   ANALYST............... Korve Eng.
   TIME OF ANALYSIS..... Weekday
   DATE OF ANALYSIS..... 03-16-2001
   OTHER INFORMATION.... Existing plus Operation


A) ADJUSTMENT FACTORS
   -------------------------------------------------------------
   PERCENTAGE OF TRUCKS.......................  3.5
   PERCENTAGE OF BUSES........................  0
   PERCENTAGE OF RECREATIONAL VEHICLES.........  0
   DESIGN SPEED (MPH).........................  50
   PEAK HOUR FACTOR...........................  .83
   DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
   LANE WIDTH (FT)............................  10
   USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
   PERCENT NO PASSING ZONES...................  0

B) CORRECTION FACTORS
   -------------------------------------------------------------
   LEVEL TERRAIN

             E      E      E      f      f      f
   LOS        T      B      R      w      d      HV
   ---     -----  -----  -----  -----  -----  -----
    A         2    1.8    2.2    .58      1     .97

    B       2.2      2    2.5    .58      1     .96

    C       2.2      2    2.5    .58      1     .96

    D         2    1.6    1.6    .58      1     .97

    E         2    1.6    1.6    .75      1     .97

C) LEVEL OF SERVICE RESULTS
   -------------------------------------------------------------
   INPUT VOLUME(vph):    51
   ACTUAL FLOW RATE:     61
          SERVICE
   LOS   FLOW RATE    V/C
   ---   ---------   -----
    A        235      .15
    B        421      .27
    C        670      .43
    D       1004      .64
    E       2029        1

   LOS FOR GIVEN CONDITIONS:  A
```

```
1985 HCM:TWO-LANE HIGHWAYS
**************************************************************

   FACILITY LOCATION.... McDermott Road
   ANALYST............... Korve Eng.
   TIME OF ANALYSIS..... Weekday
   DATE OF ANALYSIS..... 03-16-2001
   OTHER INFORMATION.... Existing scenario


A) ADJUSTMENT FACTORS
   ------------------------------------------------------------
   PERCENTAGE OF TRUCKS.......................  25
   PERCENTAGE OF BUSES........................  0
   PERCENTAGE OF RECREATIONAL VEHICLES.........  0
   DESIGN SPEED (MPH).........................  50
   PEAK HOUR FACTOR...........................  .83
   DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
   LANE WIDTH (FT)............................  10
   USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
   PERCENT NO PASSING ZONES...................  0

B) CORRECTION FACTORS
   ------------------------------------------------------------
   LEVEL TERRAIN

             E      E      E      f      f      f
   LOS        T      B      R      w      d      HV
   ---     -----  -----  -----  -----  -----  -----
    A         2    1.8    2.2    .58      1      .8

    B       2.2      2    2.5    .58      1     .77

    C       2.2      2    2.5    .58      1     .77

    D         2    1.6    1.6    .58      1      .8

    E         2    1.6    1.6    .75      1      .8

C) LEVEL OF SERVICE RESULTS
   ------------------------------------------------------------
   INPUT VOLUME(vph):    17
   ACTUAL FLOW RATE:     20
          SERVICE
   LOS   FLOW RATE    V/C
   ---   ---------   -----
    A        195      .15
    B        337      .27
    C        537      .43
    D        831      .64
    E       1680        1

   LOS FOR GIVEN CONDITIONS:  A
```

```
1985 HCM:TWO-LANE HIGHWAYS
*************************************************************

   FACILITY LOCATION.... McDermott Road
   ANALYST............... Korve Eng.
   TIME OF ANALYSIS..... Weekday
   DATE OF ANALYSIS..... 03-16-2001
   OTHER INFORMATION.... Existing plus Construction


A) ADJUSTMENT FACTORS
   -------------------------------------------------------------
   PERCENTAGE OF TRUCKS.......................  2
   PERCENTAGE OF BUSES........................  0
   PERCENTAGE OF RECREATIONAL VEHICLES.........  0
   DESIGN SPEED (MPH).........................  50
   PEAK HOUR FACTOR...........................  .83
   DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
   LANE WIDTH (FT)............................  10
   USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
   PERCENT NO PASSING ZONES...................  0

B) CORRECTION FACTORS
   -------------------------------------------------------------
   LEVEL TERRAIN

             E      E      E      f      f      f
   LOS        T      B      R      w      d      HV
   ---     -----  -----  -----  -----  -----  -----
    A         2    1.8    2.2    .58      1     .98

    B       2.2      2    2.5    .58      1     .98

    C       2.2      2    2.5    .58      1     .98

    D         2    1.6    1.6    .58      1     .98

    E         2    1.6    1.6    .75      1     .98

C) LEVEL OF SERVICE RESULTS
   -------------------------------------------------------------
   INPUT VOLUME(vph):   319
   ACTUAL FLOW RATE:    384
          SERVICE
   LOS   FLOW RATE    V/C
   ---   ---------   -----
    A        239      .15
    B        428      .27
    C        682      .43
    D       1019      .64
    E       2059        1

   LOS FOR GIVEN CONDITIONS:  B
```

```
1985 HCM:TWO-LANE HIGHWAYS
*************************************************************

   FACILITY LOCATION.... McDermott Road
   ANALYST............... Korve Eng.
   TIME OF ANALYSIS..... Weekday
   DATE OF ANALYSIS..... 03-16-2001
   OTHER INFORMATION.... Existing plus Operation


A) ADJUSTMENT FACTORS
   -------------------------------------------------------------
   PERCENTAGE OF TRUCKS.......................  2
   PERCENTAGE OF BUSES........................  0
   PERCENTAGE OF RECREATIONAL VEHICLES.........  0
   DESIGN SPEED (MPH).........................  50
   PEAK HOUR FACTOR...........................  .83
   DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
   LANE WIDTH (FT)............................  10
   USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
   PERCENT NO PASSING ZONES...................  0

B) CORRECTION FACTORS
   -------------------------------------------------------------
   LEVEL TERRAIN

             E      E      E      f      f      f
   LOS        T      B      R      w      d      HV
   ---     -----  -----  -----  -----  -----  -----
    A         2    1.8    2.2    .58      1     .98

    B       2.2      2    2.5    .58      1     .98

    C       2.2      2    2.5    .58      1     .98

    D         2    1.6    1.6    .58      1     .98

    E         2    1.6    1.6    .75      1     .98

C) LEVEL OF SERVICE RESULTS
   -------------------------------------------------------------
   INPUT VOLUME(vph):    33
   ACTUAL FLOW RATE:     40
          SERVICE
   LOS   FLOW RATE    V/C
   ---   ---------   -----
    A        239      .15
    B        428      .27
    C        682      .43
    D       1019      .64
    E       2059        1

   LOS FOR GIVEN CONDITIONS:  A
```

APPENDIX M2

INTERSTATE 5 FREEWAY ANALYSIS – HCS OUTPUTS

HCS: Freeways Release 3.1a

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Suite 531
San Francisco, CA 94105
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Operational Analysis_____

Analyst:	Mario
Agency or Company:	Korve Engineering
Date Performed:	3/16/01
Analysis Time Period:	Peak
Freeway/Direction:	I-5 South of Delevan Road
From/To:	Delevan Road Interchange
Jurisdiction:	Colusa County
Analysis Year:	Existing
Description:	

Flow Inputs and Adjustments_____

Volume, V	1590	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	442	v
Trucks and buses	7	%
Recreational vehicles	5	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.957	
Driver population factor, vp	1.00	
Flow rate, vp	923	pc/h

Speed Inputs and Adjustments_____

Lane width	12.0	m
Right-shoulder lateral clearance	6.0	m
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	70.0	mi/h
	Urban Freeway	

LOS and Performance Measures_____

Flow rate, vp	923	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	13.2	pc/mi/ln
Level of service, LOS	B	

HCS: Freeways Release 3.1a

Mario Toscano
Korve Engineering, Inc.
116 New Montgomery Street
Suite 531
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E-mail: mtoscano@korve.com

Operational Analysis_____

Analyst:	Mario
Agency or Company:	Korve Engineering
Date Performed:	3/16/01
Analysis Time Period:	Peak
Freeway/Direction:	I-5 South of Delevan Road
From/To:	Delevan Road Interchange
Jurisdiction:	Colusa County
Analysis Year:	Existing plus Construction
Description:	

Flow Inputs and Adjustments_____

Volume, V	1877	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	521	v
Trucks and buses	7	%
Recreational vehicles	5	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.957	
Driver population factor, vp	1.00	
Flow rate, vp	1090	pc/h

Speed Inputs and Adjustments_____

Lane width	12.0	m
Right-shoulder lateral clearance	6.0	m
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	70.0	mi/h
	Urban Freeway	

LOS and Performance Measures_____

Flow rate, vp	1090	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	15.6	pc/mi/ln
Level of service, LOS	B	

HCS: Freeways Release 3.1a

Mario Toscano
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E-mail: mtoscano@korve.com

Operational Analysis_____

Analyst:	Mario
Agency or Company:	Korve Engineering
Date Performed:	3/16/01
Analysis Time Period:	Peak
Freeway/Direction:	I-5 South of Delevan Road
From/To:	Delevan Road Interchange
Jurisdiction:	Colusa County
Analysis Year:	Existing plus Operation
Description:	

Flow Inputs and Adjustments_____

Volume, V	1605	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	446	v
Trucks and buses	7	%
Recreational vehicles	5	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.957	
Driver population factor, vp	1.00	
Flow rate, vp	932	pc/h

Speed Inputs and Adjustments_____

Lane width	12.0	m
Right-shoulder lateral clearance	6.0	m
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	70.0	mi/h
	Urban Freeway	

LOS and Performance Measures_____

Flow rate, vp	932	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	13.3	pc/mi/ln
Level of service, LOS	B	

APPENDIX M3

ROADWAY AND INTERSTATE 5 ANALYSIS FOR DETOUR ROUTE – HCS OUTPUTS

```
  1985 HCM:TWO-LANE HIGHWAYS
*************************************************************

   FACILITY LOCATION.... Delevan Road
   ANALYST............... Korve Eng.
   TIME OF ANALYSIS..... Weekday
   DATE OF ANALYSIS..... 03-16-2001
   OTHER INFORMATION.... Existing scenario


A) ADJUSTMENT FACTORS
   -------------------------------------------------------------
   PERCENTAGE OF TRUCKS........................  24
   PERCENTAGE OF BUSES.........................  0
   PERCENTAGE OF RECREATIONAL VEHICLES.........  0
   DESIGN SPEED (MPH)..........................  50
   PEAK HOUR FACTOR............................  .83
   DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
   LANE WIDTH (FT).............................  10
   USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
   PERCENT NO PASSING ZONES....................  0

B) CORRECTION FACTORS
   -------------------------------------------------------------
   LEVEL TERRAIN

             E      E      E      f      f      f
   LOS        T      B      R      w      d      HV
   ---     -----  -----  -----  -----  -----  -----
    A         2    1.8    2.2    .58      1     .81

    B       2.2      2    2.5    .58      1     .78

    C       2.2      2    2.5    .58      1     .78

    D         2    1.6    1.6    .58      1     .81

    E         2    1.6    1.6    .75      1     .81

C) LEVEL OF SERVICE RESULTS
   -------------------------------------------------------------
   INPUT VOLUME(vph):    35
   ACTUAL FLOW RATE:     42
          SERVICE
   LOS   FLOW RATE    V/C
   ---   ---------   -----
    A        196      .15
    B        340      .27
    C        542      .43
    D        838      .64
    E       1694        1

   LOS FOR GIVEN CONDITIONS: A
```

```
1985 HCM:TWO-LANE HIGHWAYS
         ***************************************************************

            FACILITY LOCATION.... Delevan Road
            ANALYST............... Korve Eng.
            TIME OF ANALYSIS..... Weekday
            DATE OF ANALYSIS..... 05-22-2001
            OTHER INFORMATION.... Existing plus Detoured Traffic

         A) ADJUSTMENT FACTORS
            ---------------------------------------------------------------
            PERCENTAGE OF TRUCKS........................  25
            PERCENTAGE OF BUSES.........................  0
            PERCENTAGE OF RECREATIONAL VEHICLES.........  0
            DESIGN SPEED (MPH)..........................  50
            PEAK HOUR FACTOR............................  .83
            DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
            LANE WIDTH (FT).............................  10
            USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
            PERCENT NO PASSING ZONES....................  0

         B) CORRECTION FACTORS
            ---------------------------------------------------------------
            LEVEL TERRAIN

                      E      E      E      f      f      f
            LOS        T      B      R      w      d      HV
            ---     -----  -----  -----  -----  -----  -----
             A        2    1.8    2.2    .58      1      .8

             B      2.2      2    2.5    .58      1     .77

             C      2.2      2    2.5    .58      1     .77

             D        2    1.6    1.6    .58      1      .8

             E        2    1.6    1.6    .75      1      .8

         C) LEVEL OF SERVICE RESULTS
            ---------------------------------------------------------------
            INPUT VOLUME(vph):    52
            ACTUAL FLOW RATE:     63
                   SERVICE
            LOS   FLOW RATE    V/C
            ---   ---------   -----
             A        195      .15
             B        337      .27
             C        537      .43
             D        831      .64
             E       1680        1

            LOS FOR GIVEN CONDITIONS: A
```

1985 HCM:TWO-LANE HIGHWAYS
****

```
FACILITY LOCATION.... McDermott Road North of Dirks Road
ANALYST............. Korve Eng.
TIME OF ANALYSIS..... Weekday
DATE OF ANALYSIS..... 05-29-01
OTHER INFORMATION.... Existing scenario


A) ADJUSTMENT FACTORS
   ------------------------------------------------------------
   PERCENTAGE OF TRUCKS........................  25
   PERCENTAGE OF BUSES.........................  0
   PERCENTAGE OF RECREATIONAL VEHICLES.........  0
   DESIGN SPEED (MPH)..........................  50
   PEAK HOUR FACTOR............................  .83
   DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
   LANE WIDTH (FT).............................  10
   USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
   PERCENT NO PASSING ZONES....................  0

B) CORRECTION FACTORS
   ------------------------------------------------------------
   LEVEL TERRAIN

             E      E      E      f      f      f
   LOS       T      B      R      w      d      HV
   ---     -----  -----  -----  -----  -----  -----
    A        2    1.8    2.2    .58      1      .8

    B      2.2      2    2.5    .58      1     .77

    C      2.2      2    2.5    .58      1     .77

    D        2    1.6    1.6    .58      1      .8

    E        2    1.6    1.6    .75      1      .8

C) LEVEL OF SERVICE RESULTS
   ------------------------------------------------------------
   INPUT VOLUME(vph):     5
   ACTUAL FLOW RATE:      6
          SERVICE
   LOS   FLOW RATE    V/C
   ---   ---------   -----
    A        195      .15
    B        337      .27
    C        537      .43
    D        831      .64
    E       1680        1

   LOS FOR GIVEN CONDITIONS: A
```

```
1985 HCM:TWO-LANE HIGHWAYS
         ***************************************************************

            FACILITY LOCATION.... McDermott Road North of Dirks Road
            ANALYST............... Korve Eng.
            TIME OF ANALYSIS..... Weekday
            DATE OF ANALYSIS..... 05-29-01
            OTHER INFORMATION.... Existing Scenario plus Construction and
                                  Detoured Traffic

         A) ADJUSTMENT FACTORS
            ------------------------------------------------------------
            PERCENTAGE OF TRUCKS........................  12
            PERCENTAGE OF BUSES.........................  0
            PERCENTAGE OF RECREATIONAL VEHICLES.........  0
            DESIGN SPEED (MPH)..........................  50
            PEAK HOUR FACTOR............................  .83
            DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
            LANE WIDTH (FT).............................  10
            USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
            PERCENT NO PASSING ZONES....................  0

         B) CORRECTION FACTORS
            ------------------------------------------------------------
            LEVEL TERRAIN

                      E      E      E      f      f      f
            LOS        T      B      R      w      d      HV
            ---     -----  -----  -----  -----  -----  -----
             A         2    1.8    2.2    .58      1     .89

             B       2.2      2    2.5    .58      1     .87

             C       2.2      2    2.5    .58      1     .87

             D         2    1.6    1.6    .58      1     .89

             E         2    1.6    1.6    .75      1     .89

         C) LEVEL OF SERVICE RESULTS
            ------------------------------------------------------------
            INPUT VOLUME(vph):    71
            ACTUAL FLOW RATE:     86
                   SERVICE
            LOS   FLOW RATE    V/C
            ---   ---------   -----
             A        217      .15
             B        383      .27
             C        610      .43
             D        928      .64
             E       1875        1

            LOS FOR GIVEN CONDITIONS: A
```

```
1985 HCM:TWO-LANE HIGHWAYS
         ***************************************************************

            FACILITY LOCATION.... Road 68
            ANALYST............... Korve Eng.
            TIME OF ANALYSIS..... Weekday
            DATE OF ANALYSIS..... 05-29-01
            OTHER INFORMATION.... Existing scenario


         A) ADJUSTMENT FACTORS
            ------------------------------------------------------------
            PERCENTAGE OF TRUCKS........................  25
            PERCENTAGE OF BUSES.........................  0
            PERCENTAGE OF RECREATIONAL VEHICLES.........  0
            DESIGN SPEED (MPH)..........................  50
            PEAK HOUR FACTOR............................  .83
            DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
            LANE WIDTH (FT).............................  10
            USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
            PERCENT NO PASSING ZONES....................  0

         B) CORRECTION FACTORS
            ------------------------------------------------------------
            LEVEL TERRAIN

                      E      E      E      f      f      f
            LOS        T      B      R      w      d      HV
            ---     -----  -----  -----  -----  -----  -----
             A         2    1.8    2.2    .58      1      .8

             B       2.2      2    2.5    .58      1     .77

             C       2.2      2    2.5    .58      1     .77

             D         2    1.6    1.6    .58      1      .8

             E         2    1.6    1.6    .75      1      .8

         C) LEVEL OF SERVICE RESULTS
            ------------------------------------------------------------
            INPUT VOLUME(vph):    70
            ACTUAL FLOW RATE:     84
                   SERVICE
            LOS   FLOW RATE    V/C
            ---   ---------   -----
             A        195      .15
             B        337      .27
             C        537      .43
             D        831      .64
             E       1680        1

            LOS FOR GIVEN CONDITIONS: A
```

```
1985 HCM:TWO-LANE HIGHWAYS
         ***************************************************************

            FACILITY LOCATION.... Road 68
            ANALYST............... Korve Eng.
            TIME OF ANALYSIS..... Weekday
            DATE OF ANALYSIS..... 05-22-2001
            OTHER INFORMATION.... Existing plus Construction plus Detoured
                                  Traffic

         A) ADJUSTMENT FACTORS
            ------------------------------------------------------------
            PERCENTAGE OF TRUCKS........................  13
            PERCENTAGE OF BUSES.........................  0
            PERCENTAGE OF RECREATIONAL VEHICLES.........  0
            DESIGN SPEED (MPH)..........................  50
            PEAK HOUR FACTOR............................  .83
            DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
            LANE WIDTH (FT).............................  10
            USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
            PERCENT NO PASSING ZONES....................  0

         B) CORRECTION FACTORS
            ------------------------------------------------------------
            LEVEL TERRAIN

                      E      E      E      f      f      f
            LOS        T      B      R      w      d      HV
            ---     -----  -----  -----  -----  -----  -----
             A         2    1.8    2.2    .58      1     .88

             B       2.2      2    2.5    .58      1     .87

             C       2.2      2    2.5    .58      1     .87

             D         2    1.6    1.6    .58      1     .88

             E         2    1.6    1.6    .75      1     .88

         C) LEVEL OF SERVICE RESULTS
            ------------------------------------------------------------
            INPUT VOLUME(vph):    77
            ACTUAL FLOW RATE:     93
                   SERVICE
            LOS   FLOW RATE    V/C
            ---   ---------   -----
             A        216      .15
             B        379      .27
             C        604      .43
             D        920      .64
             E       1858        1

            LOS FOR GIVEN CONDITIONS: A
```

```
1985 HCM:TWO-LANE HIGHWAYS
         ***************************************************************

            FACILITY LOCATION.... Old 99W
            ANALYST............... Korve Eng.
            TIME OF ANALYSIS..... Weekday
            DATE OF ANALYSIS..... 05-22-2001
            OTHER INFORMATION.... Existing scenario


         A) ADJUSTMENT FACTORS
            ------------------------------------------------------------
            PERCENTAGE OF TRUCKS........................  25
            PERCENTAGE OF BUSES.........................  0
            PERCENTAGE OF RECREATIONAL VEHICLES.........  0
            DESIGN SPEED (MPH)..........................  50
            PEAK HOUR FACTOR............................  .83
            DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
            LANE WIDTH (FT).............................  10
            USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
            PERCENT NO PASSING ZONES....................  0

         B) CORRECTION FACTORS
            ------------------------------------------------------------
            LEVEL TERRAIN

                      E      E      E      f      f      f
            LOS        T      B      R      w      d      HV
            ---     -----  -----  -----  -----  -----  -----
             A         2    1.8    2.2    .58      1      .8

             B       2.2      2    2.5    .58      1     .77

             C       2.2      2    2.5    .58      1     .77

             D         2    1.6    1.6    .58      1      .8

             E         2    1.6    1.6    .75      1      .8

         C) LEVEL OF SERVICE RESULTS
            ------------------------------------------------------------
            INPUT VOLUME(vph):    49
            ACTUAL FLOW RATE:     59
                   SERVICE
            LOS   FLOW RATE    V/C
            ---   ---------   -----
             A        195      .15
             B        337      .27
             C        537      .43
             D        831      .64
             E       1680        1

            LOS FOR GIVEN CONDITIONS: A
```

```
1985 HCM:TWO-LANE HIGHWAYS
         ***************************************************************

            FACILITY LOCATION.... Old 99W
            ANALYST............... Korve Eng.
            TIME OF ANALYSIS..... Weekday
            DATE OF ANALYSIS..... 05-22-2001
            OTHER INFORMATION.... Existing plus Detoured Traffic


         A) ADJUSTMENT FACTORS
            -------------------------------------------------------------
            PERCENTAGE OF TRUCKS........................  25
            PERCENTAGE OF BUSES.........................  0
            PERCENTAGE OF RECREATIONAL VEHICLES.........  0
            DESIGN SPEED (MPH)..........................  50
            PEAK HOUR FACTOR............................  .83
            DIRECTIONAL DISTRIBUTION (UP/DOWN)..........  50 / 50
            LANE WIDTH (FT).............................  10
            USABLE SHOULDER WIDTH (AVG. WIDTH IN FT.)...  0
            PERCENT NO PASSING ZONES....................  0

         B) CORRECTION FACTORS
            -------------------------------------------------------------
            LEVEL TERRAIN

                      E      E      E      f      f      f
            LOS        T      B      R      w      d      HV
            ---     -----  -----  -----  -----  -----  -----
             A         2    1.8    2.2    .58      1      .8

             B       2.2      2    2.5    .58      1     .77

             C       2.2      2    2.5    .58      1     .77

             D         2    1.6    1.6    .58      1      .8

             E         2    1.6    1.6    .75      1      .8

         C) LEVEL OF SERVICE RESULTS
            -------------------------------------------------------------
            INPUT VOLUME(vph):    62
            ACTUAL FLOW RATE:     75
                   SERVICE
            LOS   FLOW RATE    V/C
            ---   ---------   -----
             A        195      .15
             B        337      .27
             C        537      .43
             D        831      .64
             E       1680        1

            LOS FOR GIVEN CONDITIONS: A
```

HCS: Freeways Release 3.1a

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Operational Analysis_____

Analyst:	
Agency or Company:	Korve Engineering
Date Performed:	5/21/01
Analysis Time Period:	Peak
Freeway/Direction:	I-5 South of Road 68
From/To:	Road 68 Interchange
Jurisdiction:	Glenn County
Analysis Year:	Existing
Description:	

Flow Inputs and Adjustments_____

Volume, V	1530	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	425	v
Trucks and buses	7	%
Recreational vehicles	5	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.957	
Driver population factor, vp	1.00	
Flow rate, vp	888	pc/h

Speed Inputs and Adjustments_____

Lane width	12.0	m
Right-shoulder lateral clearance	6.0	m
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	70.0	mi/h

Urban Freeway

LOS and Performance Measures_____

Flow rate, vp	888	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.7	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS: Freeways Release 3.1a

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Operational Analysis_____

Analyst:	
Agency or Company:	Korve Engineering
Date Performed:	5/22/01
Analysis Time Period:	Peak
Freeway/Direction:	I-5 South of Route 68
From/To:	Route 68 Interchange
Jurisdiction:	Glenn County
Analysis Year:	Existing plus Construction plus Detoured Traffic
Description:	

Flow Inputs and Adjustments_____

Volume, V	1581	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	439	v
Trucks and buses	7	%
Recreational vehicles	5	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.957	
Driver population factor, vp	1.00	
Flow rate, vp	918	pc/h

Speed Inputs and Adjustments_____

Lane width	12.0	m
Right-shoulder lateral clearance	6.0	m
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	70.0	mi/h

Urban Freeway

LOS and Performance Measures_____

Flow rate, vp	918	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	13.1	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.