2012-2013

MICHIGAN DEPARTMENT OF TRANSPORTATION

Congestion & Mobility Report

Freeway Performance Measures

Chapter 2

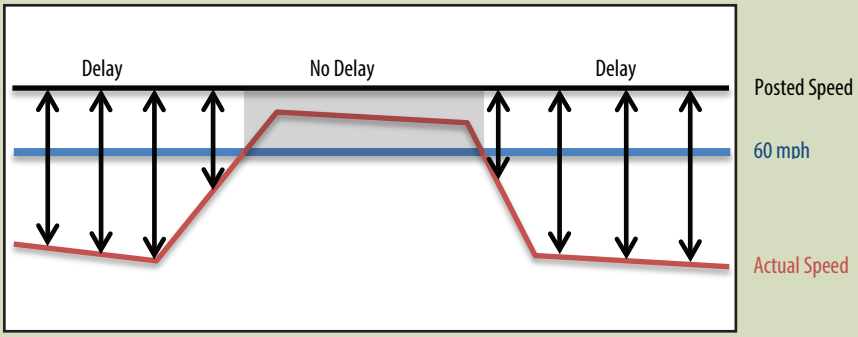
BAY REGION SUMMARY

Figure 1. . . . 4
Figure 2. . . . 5
Figure 3. . . . 6
Figure 4. . . . 7
Figure 5. . . . 8
Figure 6. . . . 9
Figure 7. . . . 10
Figure 8. . . . 11
Figure 9. . . . 12
Figure 10 13
Figure 11 14
Figure 12 15
Figure 13 16
Figure 14 17
Figure 15 18
Figure 16 19
Figure 17 20
Figure 18 21
Figure 19 22
Figure 20 23
Figure 21 24
Figure 22 25
Figure 23 26
Figure 24 27
Figure 25 28
Figure 26 29
Figure 27 30
Figure 28 31
Figure 29 32
Figure 30 33
Figure 31 34
Figure 32 35
Figure 33 36
Figure 34 37
Figure 35 38
Figure 36 39
Figure 37 40
Figure 38 41
Figure 39 42
Figure 40 43
Figure 41 44
Figure 42 45
Figure 43 46
Figure 44 47
Figure 45 48
Figure 46 49

PERFORMANCE MEASURE DEFINITIONS

Total Delay

Delay is calculated by taking the difference between actual speeds when they fall below 60 mph and the posted speed limit for freeways posted at 70 mph. This is to take out the delay caused by the lower average speeds from commercial vehicles.



Total Delay per Mile

Delay per mile is calculated by taking the total delay and dividing it by the length of the freeway. This was performed for each route in each TSC.

Non-Recurring/Recurring Delay

Non-recurring delay is calculated by taking the difference between the actual speed (any time the speed falls below 60 mph) and the average speed. Recurring is measured by taking the difference of the total delay and non-recurring delay.

Congestion

Congestion is calculated as the number of hours below 45 mph per Traffic Message Channel (TMC). A TMC is a standard for delivering real-time traffic information. They vary from tenths of a mile long to several miles long.

Weighted Congestion

Number of congestion hours multiplied by the segment length. Congestion along longer segments will get more consideration than congestion along shorter segments.

User Delay Cost

User Delay Costs (UDC) is calculated by multiplying delay x hourly volume x hourly user cost. Delay is calculated by taking the difference between actual speeds when they fall below 60 mph and the posted speed limit. Hourly volumes are derived from Average Daily Traffic (ADT) and Commercial Average Daily Traffic (CADT). Hourly user costs are based on Federal Highway Administration (FHWA) publication number FHWA-SA-98-079, "Life-Cycle Cost Analysis in Pavement Design."

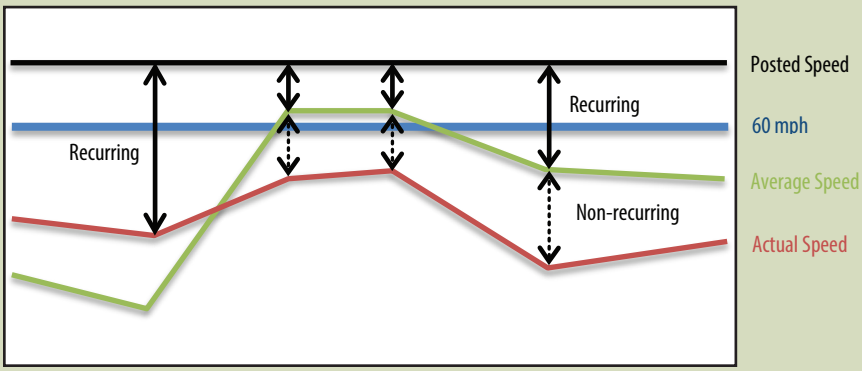


Figure 1

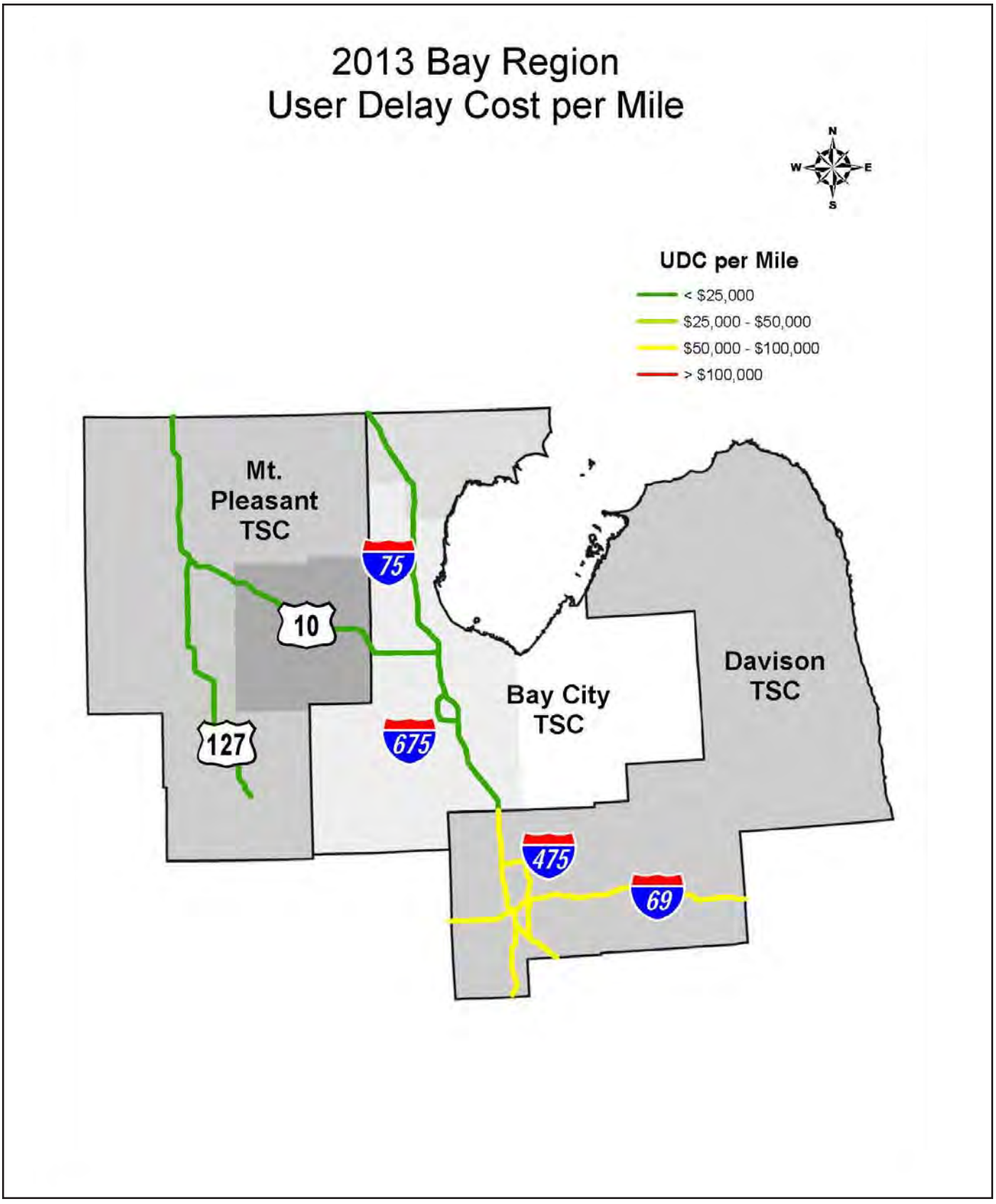

2013 Bay Region
User Delay Cost per Mile
N
W
E
S
UDC per Mile
< $25,000
$25,000 - $50,000
$50,000 - $100,000
> $100,000
Mt. Pleasant TSC
Bay City TSC
Davison TSC
75
10
127
675
475
69

Figure 2

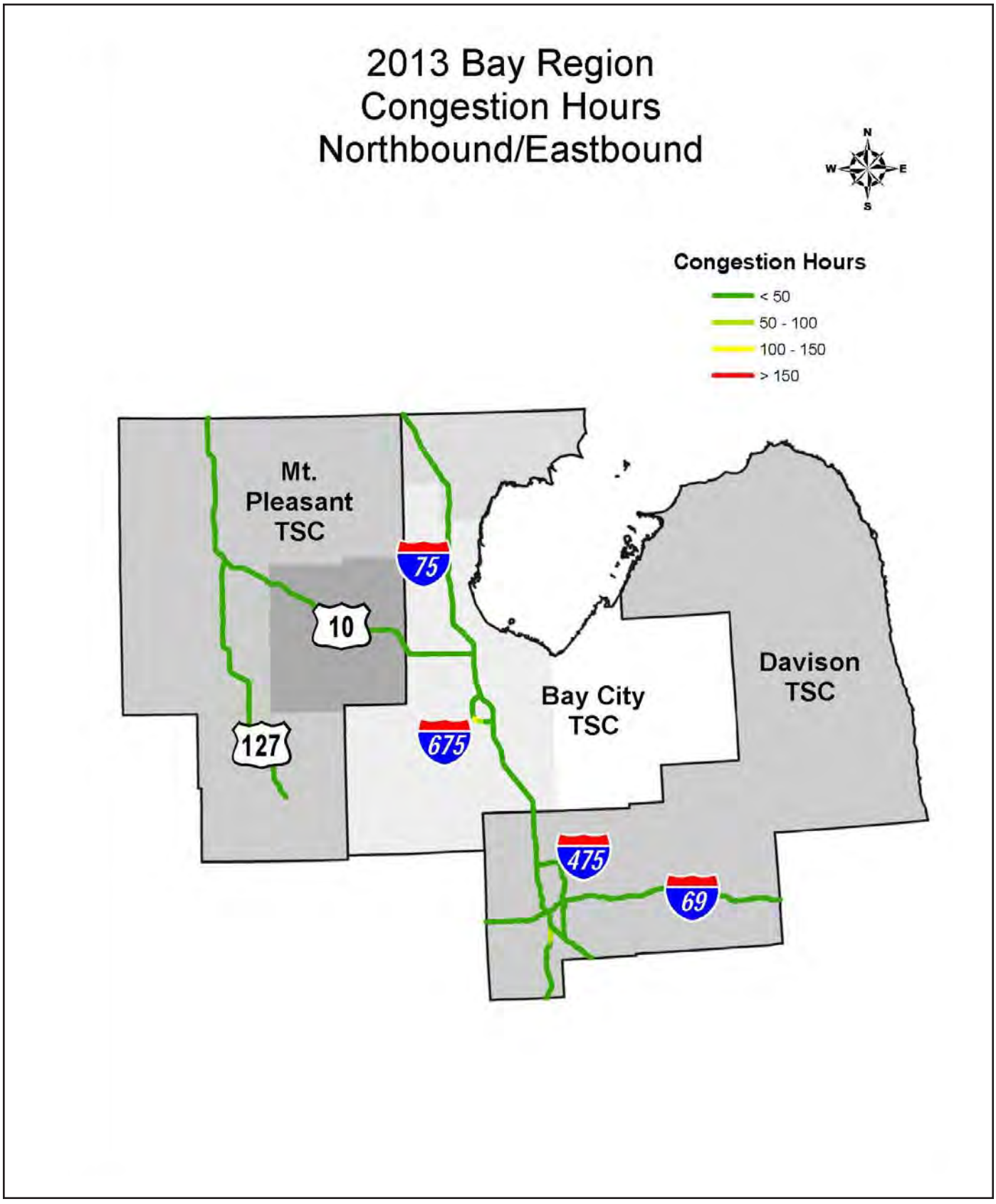

2013 Bay Region
Congestion Hours
Northbound/Eastbound
N
W
E
S
Congestion Hours
< 50
50 - 100
100 - 150
> 150
Mt.
Pleasant
TSC
75
10
127
675
Bay City
TSC
Davison
TSC
475
69

Figure 3

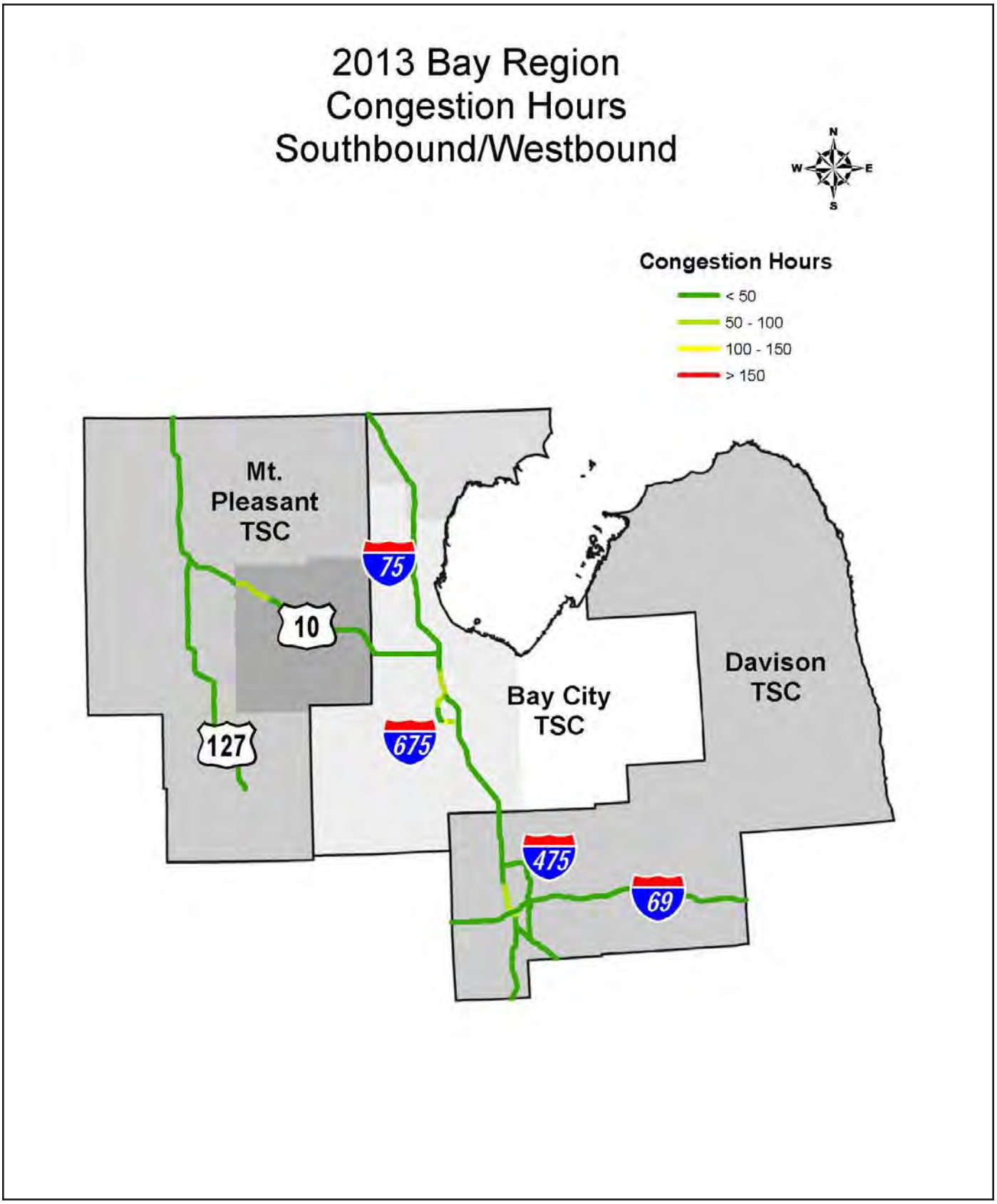
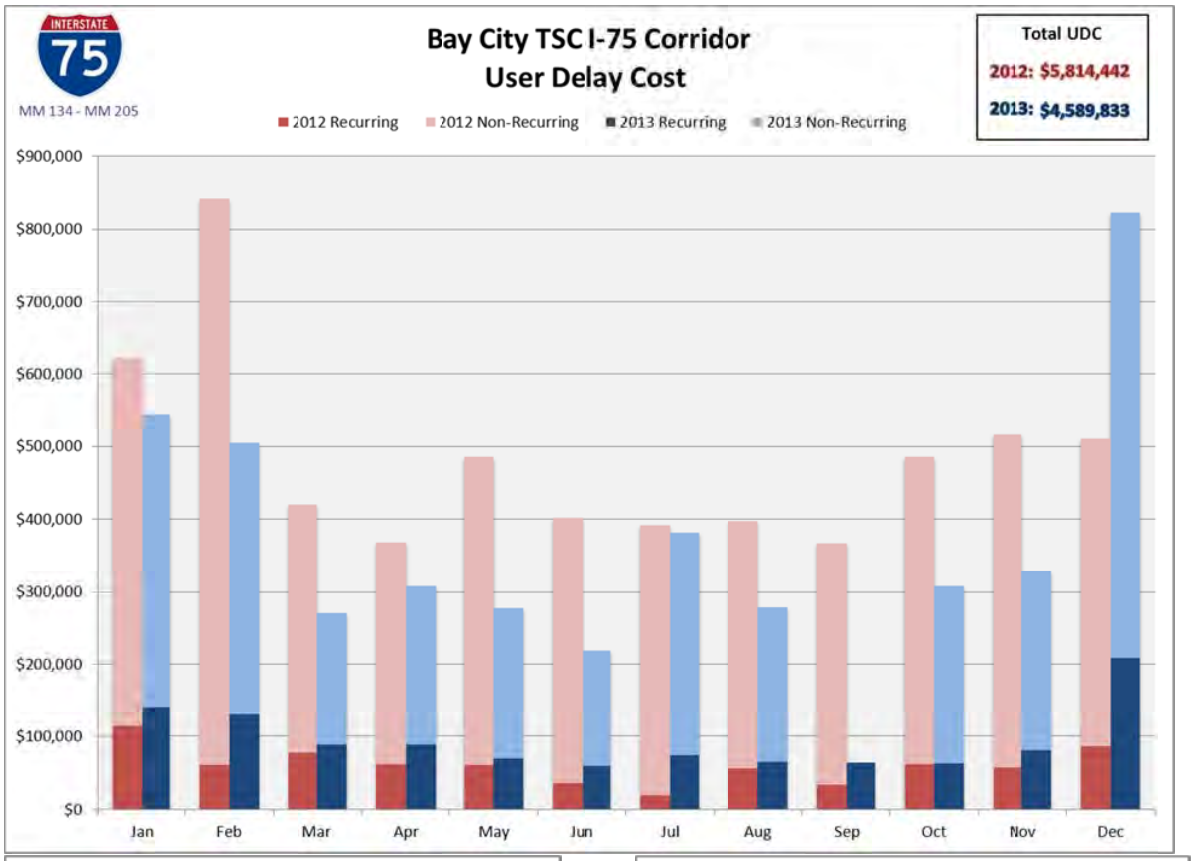
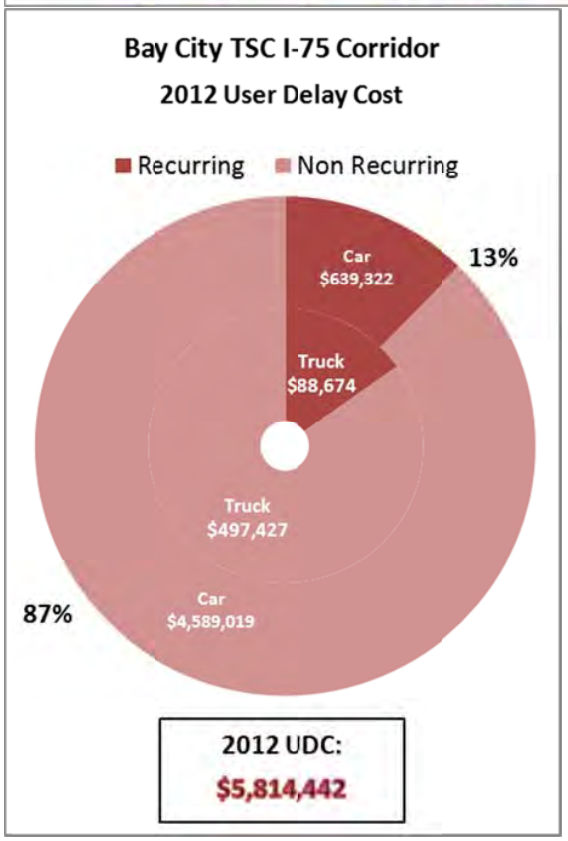

2013 Bay Region
Congestion Hours
Southbound/Westbound
N
W
E
S
Congestion Hours
< 50
50 - 100
100 - 150
> 150
Mt.
Pleasant
TSC
Bay City
TSC
Davison
TSC
75
10
127
675
475
69

Figure 4


INTERSTATE 75
MM 134 - MM 205
Bay City TSC I-75 Corridor
User Delay Cost
Total UDC
2012: $5,814,442
2013: $4,589,833
2012 Recurring
2012 Non-Recurring
2013 Recurring
2013 Non-Recurring
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Bay City TSC I-75 Corridor
2012 User Delay Cost
Recurring
Non Recurring
Car
$639,322
13%
Truck
$88,674
Truck
$497,427
87%
Car
$4,589,019
2012 UDC:
$5,814,442

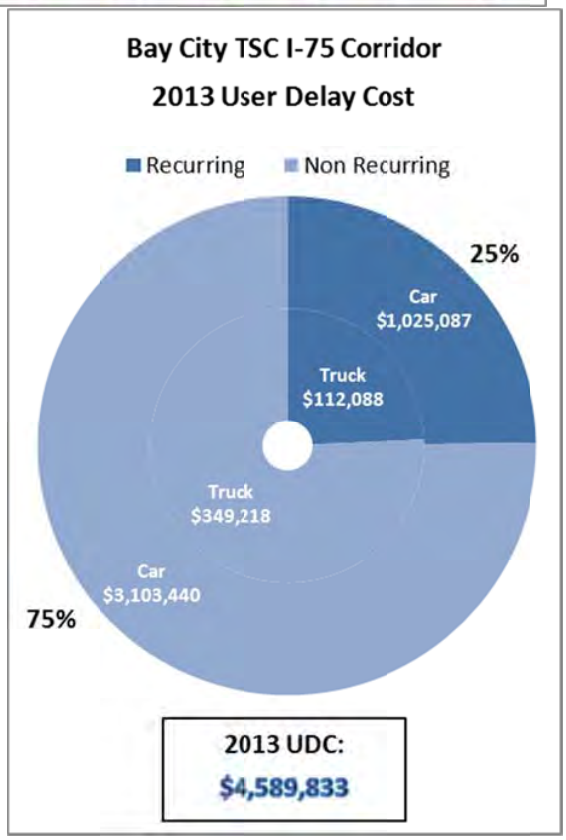
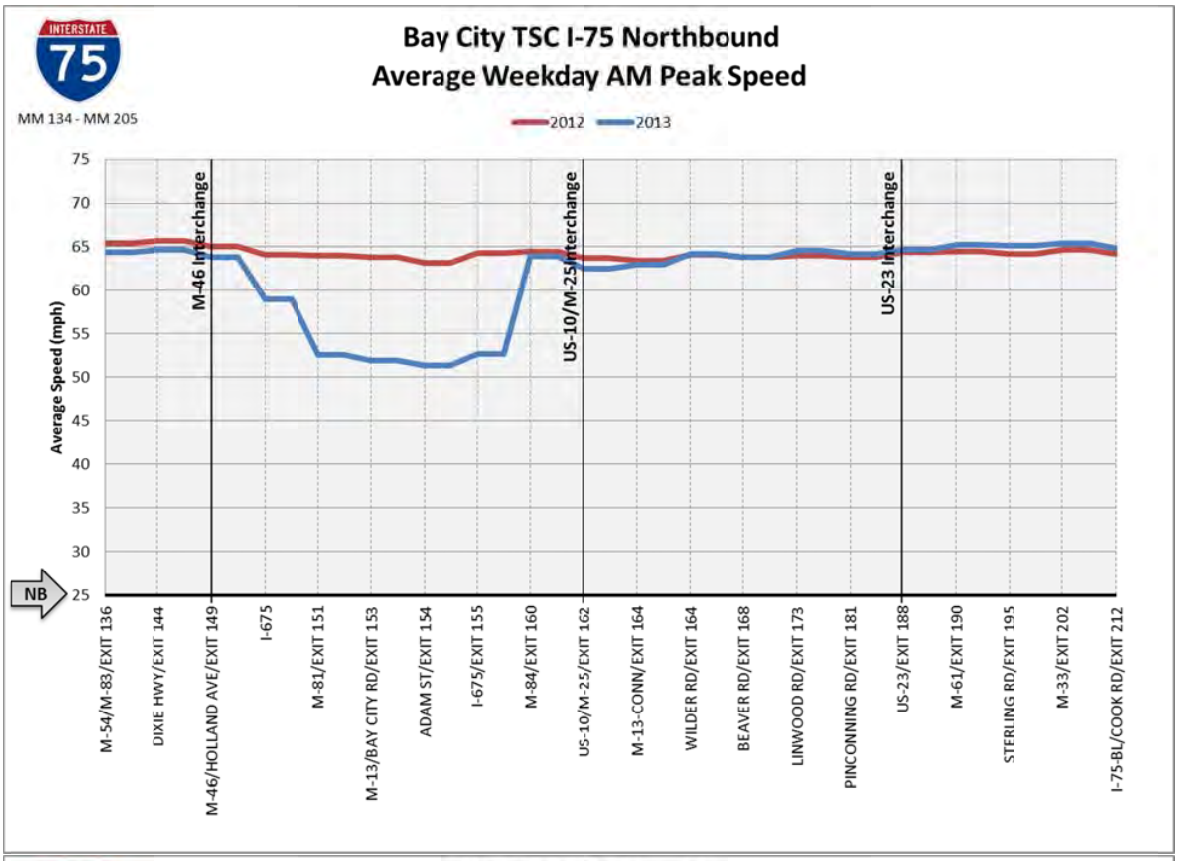

Bay City TSC I-75 Corridor
2013 User Delay Cost
Recurring
Non Recurring
25%
Car
$1,025,087
Truck
$112,088
Truck
$349,218
Car
$3,103,440
75%
2013 UDC:
$4,589,833

Figure 5


INTERSTATE 75
MM 134 - MM 205
Bay City TSC I-75 Northbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
70
65
60
55
50
45
40
35
30
25
NB
M-46 Interchange
US-10/M-25 Interchange
US-23 Interchange
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
WILDER RD/EXIT 164
BEAVER RD/EXIT 168
LINWOOD RD/EXIT 173
PINCONNING RD/EXIT 181
US-23/EXIT 188
M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202
I-75-BL/COOK RD/EXIT 212

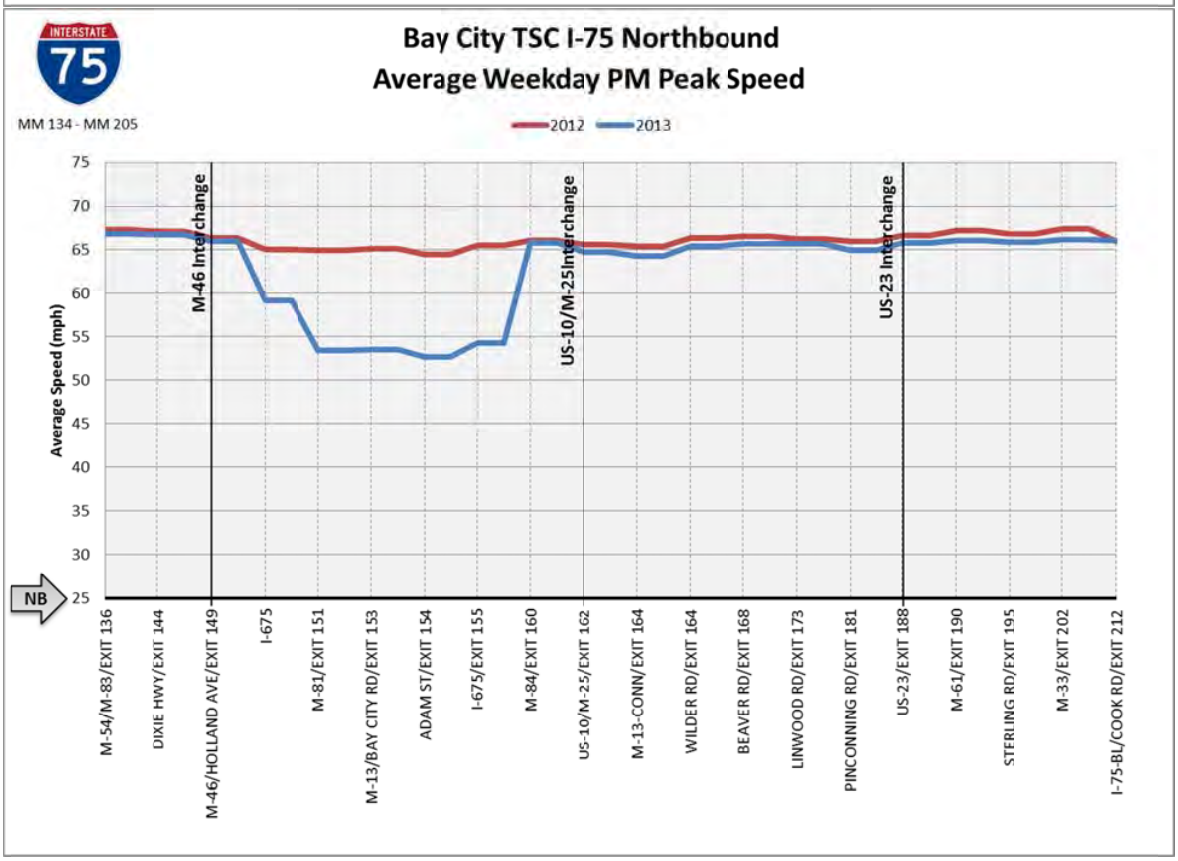
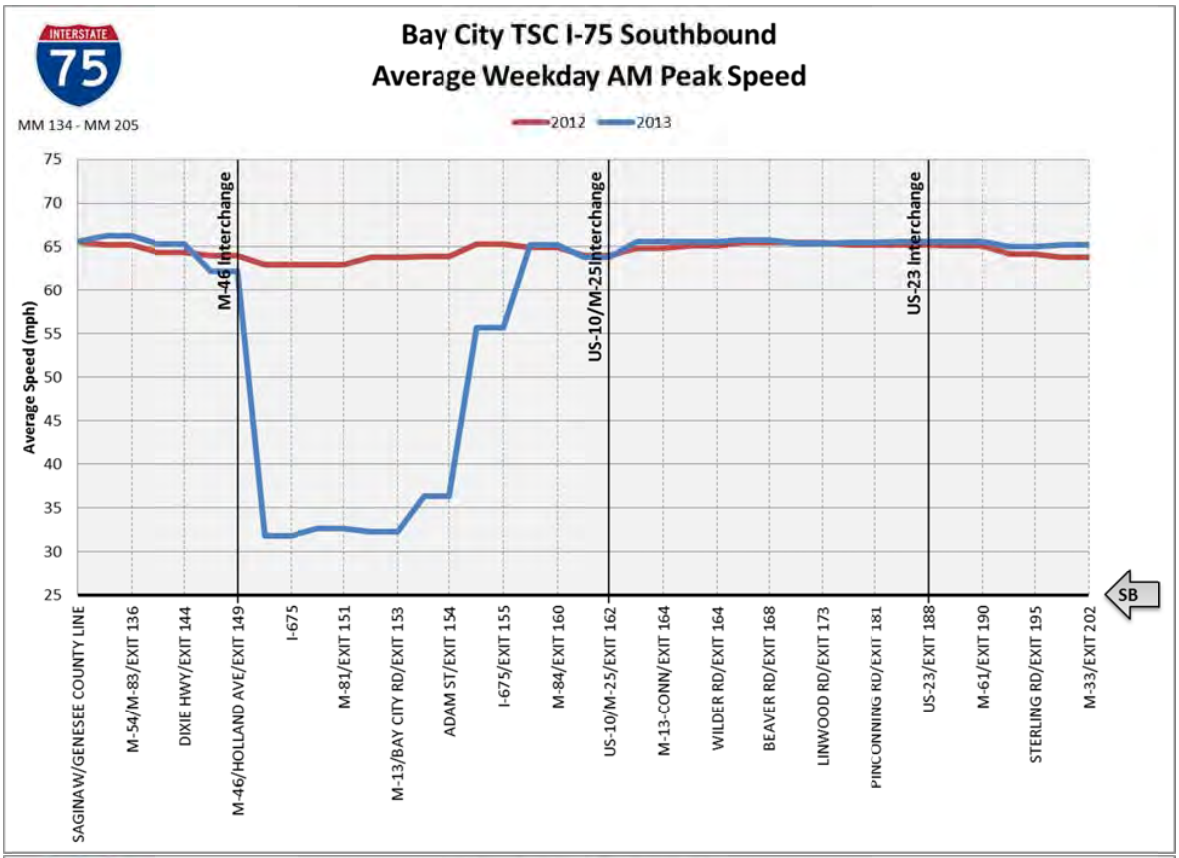

INTERSTATE 75
MM 134 - MM 205
Bay City TSC I-75 Northbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
70
65
60
55
50
45
40
35
30
25
NB
M-46 Interchange
US-10/M-25Interchange
US-23 Interchange
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
WILDER RD/EXIT 164
BEAVER RD/EXIT 168
LINWOOD RD/EXIT 173
PINCONNING RD/EXIT 181
US-23/EXIT 188
M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202
I-75-BL/COOK RD/EXIT 212

Figure 6


INTERSTATE
75
Bay City TSC I-75 Southbound
Average Weekday AM Peak Speed
MM 134 - MM 205
2012
2013
Average Speed (mph)
75
70
65
60
55
50
45
40
35
30
25
M-46 Interchange
US-10/M-25Interchange
US-23 Interchange
SB
SAGINAW/GENESEE COUNTY LINE
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
WILDER RD/EXIT 164
BEAVER RD/EXIT 168
LINWOOD RD/EXIT 173
PINCONNING RD/EXIT 181
US-23/EXIT 188
M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202

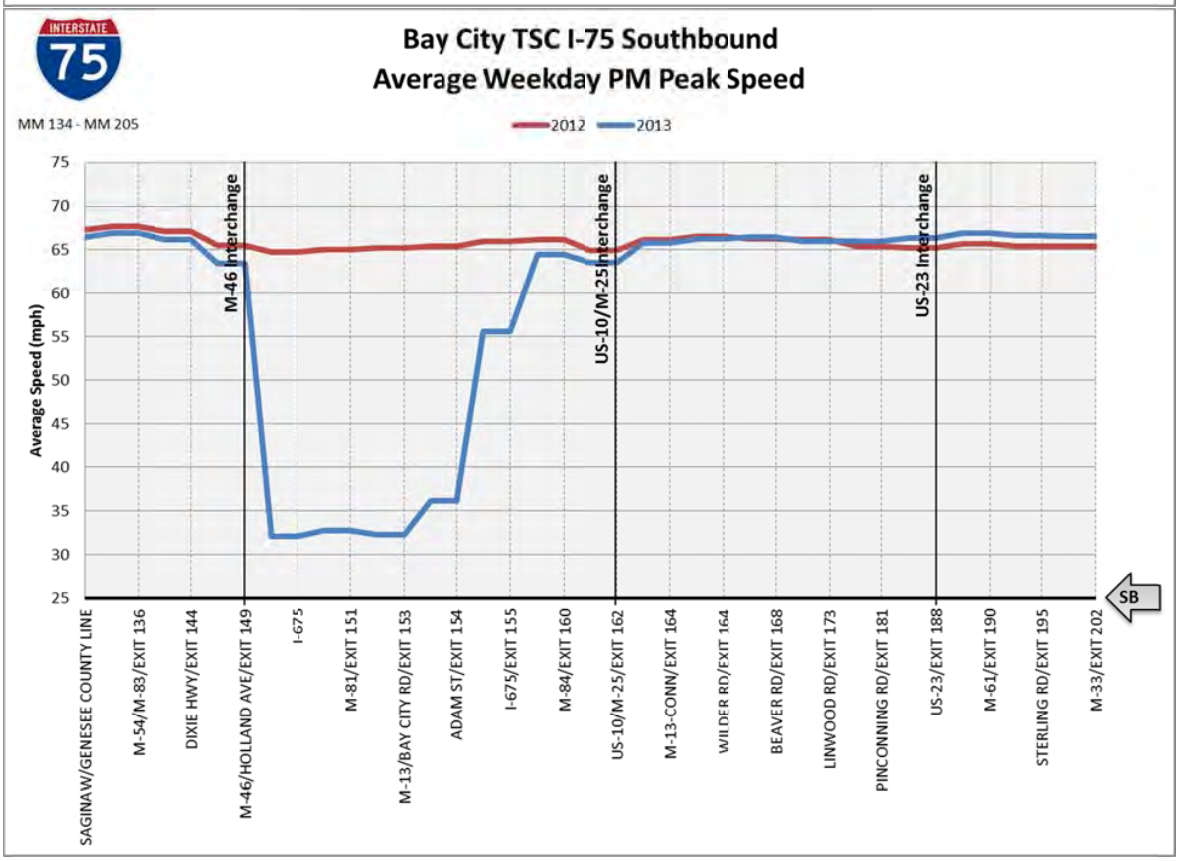
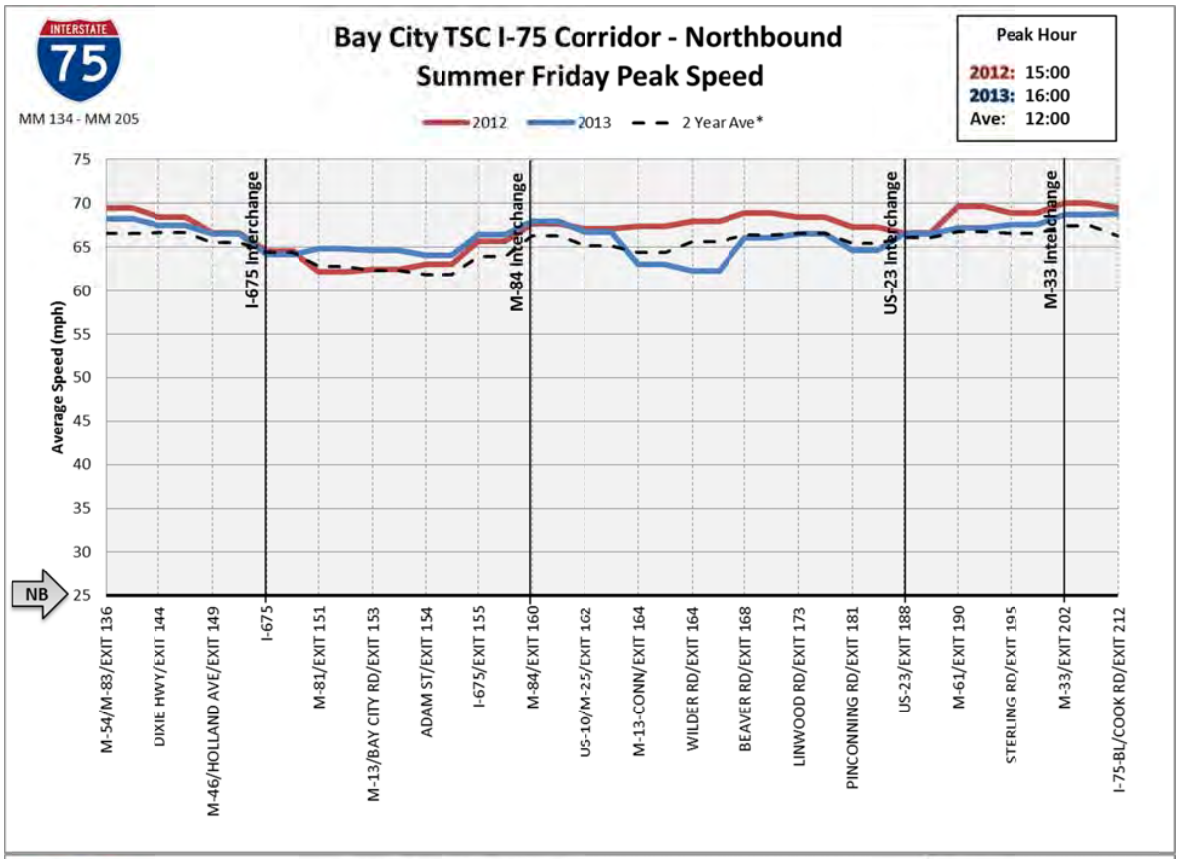

INTERSTATE
75
Bay City TSC I-75 Southbound
Average Weekday PM Peak Speed
MM 134 - MM 205
2012
2013
Average Speed (mph)
75
70
65
60
55
50
45
40
35
30
25
M-46 Interchange
US-10/M-25Interchange
US-23 Interchange
SB
SAGINAW/GENESEE COUNTY LINE
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
WILDER RD/EXIT 164
BEAVER RD/EXIT 168
LINWOOD RD/EXIT 173
PINCONNING RD/EXIT 181
US-23/EXIT 188
M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202

Figure 7


INTERSTATE 75
MM 134 - MM 205
Bay City TSC I-75 Corridor - Northbound
Summer Friday Peak Speed
2012
2013
2 Year Ave*
Peak Hour
2012: 15:00
2013: 16:00
Ave: 12:00
Average Speed (mph)
I-675 Interchange
M-84 Interchange
US-23 Interchange
M-33 Interchange
NB
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
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PINCONNING RD/EXIT 181
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M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202
I-75-BL/COOK RD/EXIT 212

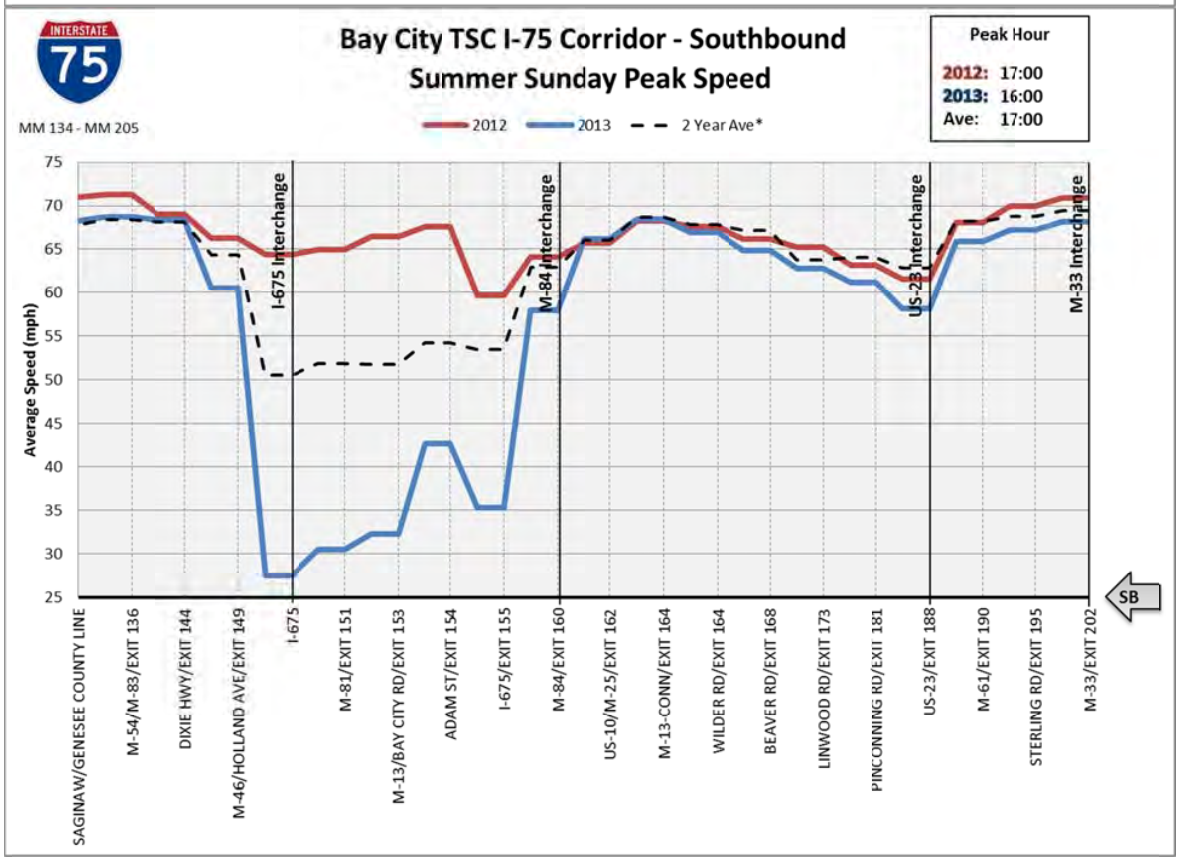
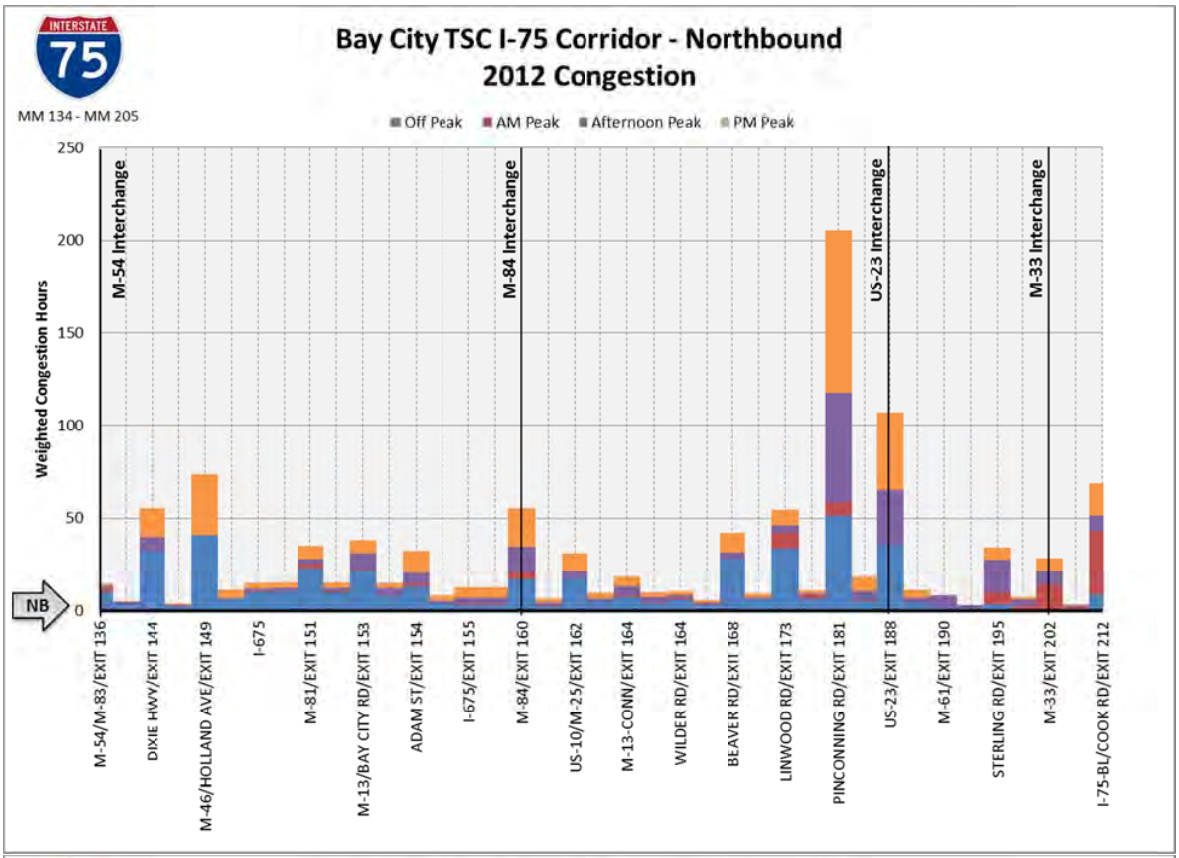

INTERSTATE 75
MM 134 - MM 205
Bay City TSC I-75 Corridor - Southbound
Summer Sunday Peak Speed
2012
2013
2 Year Ave*
Peak Hour
2012: 17:00
2013: 16:00
Ave: 17:00
Average Speed (mph)
I-675 Interchange
M-84 Interchange
US-23 Interchange
M-33 Interchange
SB
SAGINAW/GENESEE COUNTY LINE
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
WILDER RD/EXIT 164
BEAVER RD/EXIT 168
LINWOOD RD/EXIT 173
PINCONNING RD/EXIT 181
US-23/EXIT 188
M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202

Figure 8


INTERSTATE 75
Bay City TSC I-75 Corridor - Northbound
2012 Congestion
MM 134 - MM 205
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
250
200
150
100
50
0
NB
M-54 Interchange
M-84 Interchange
US-23 Interchange
M-33 Interchange
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
WILDER RD/EXIT 164
BEAVER RD/EXIT 168
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PINCONNING RD/EXIT 181
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M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202
I-75-BL/COOK RD/EXIT 212

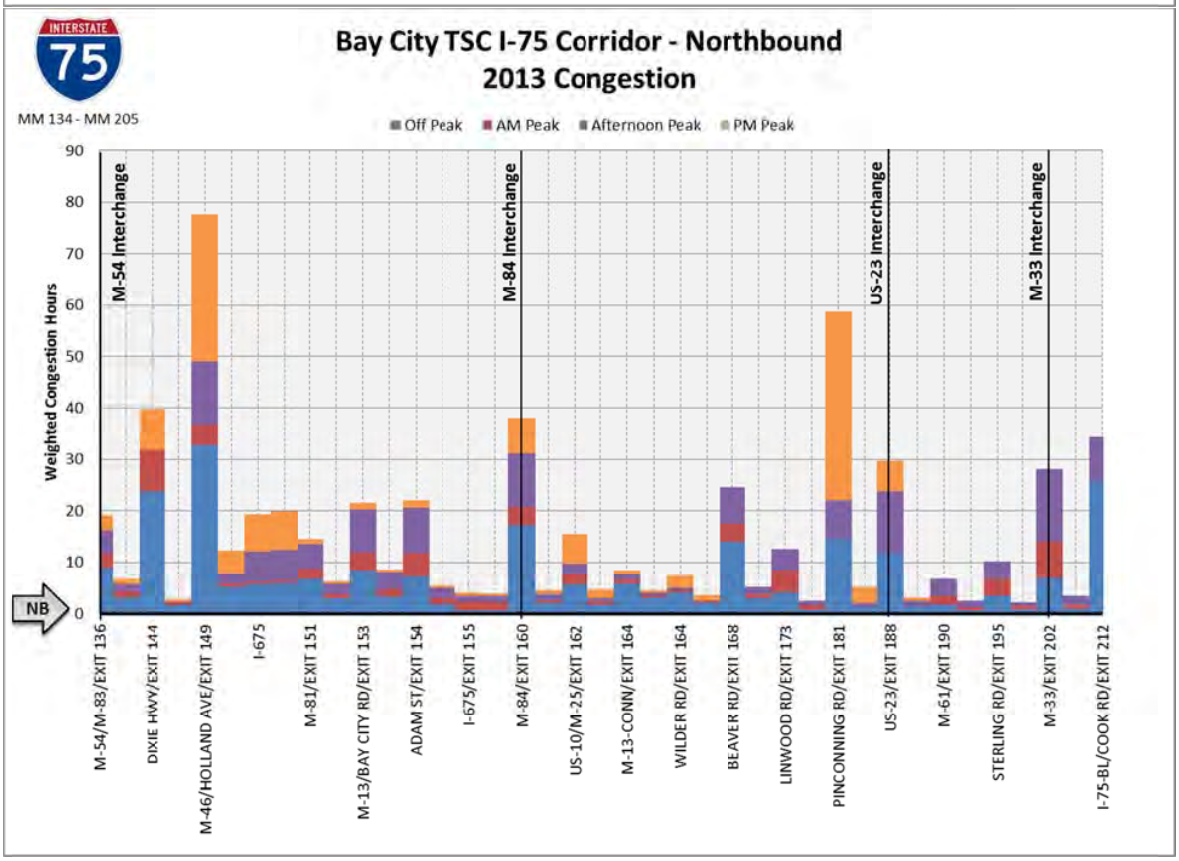
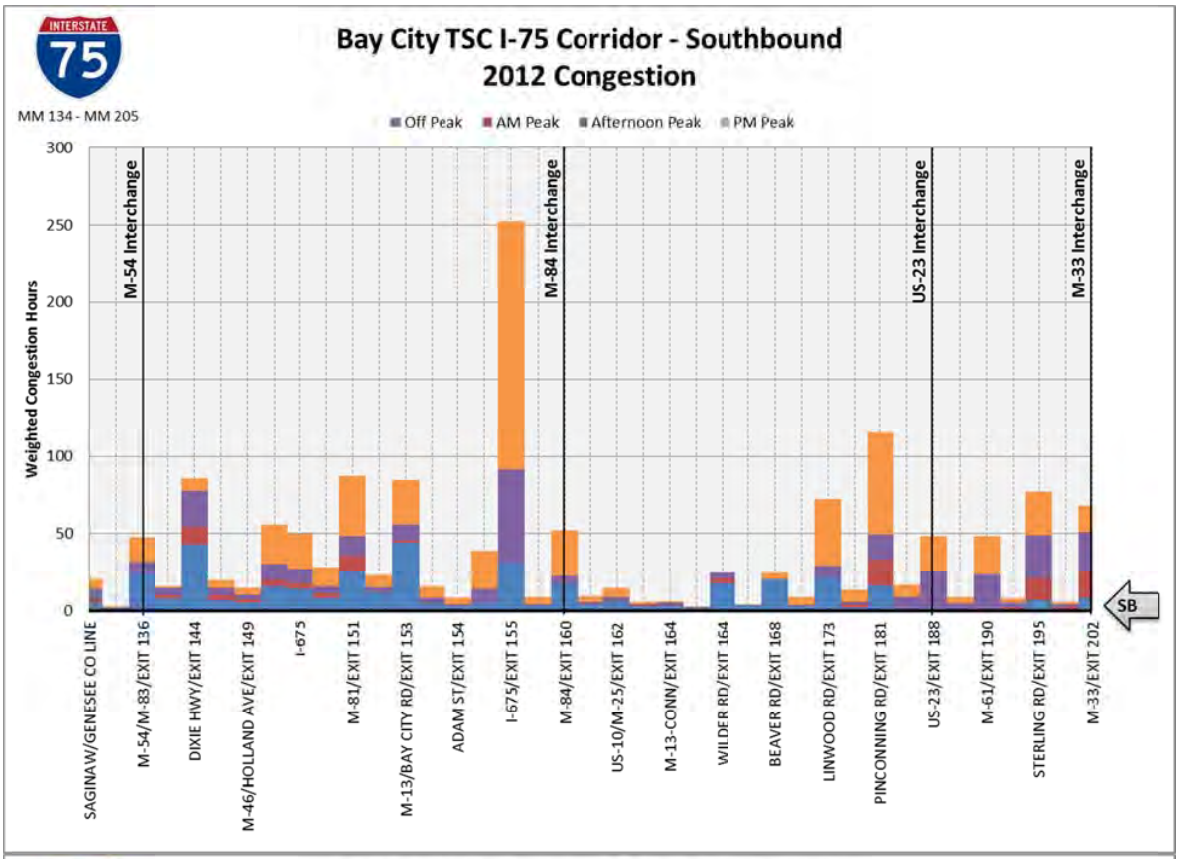

INTERSTATE 75
Bay City TSC I-75 Corridor - Northbound
2013 Congestion
MM 134 - MM 205
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
90
80
70
60
50
40
30
20
10
0
NB
M-54 Interchange
M-84 Interchange
US-23 Interchange
M-33 Interchange
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
WILDER RD/EXIT 164
BEAVER RD/EXIT 168
LINWOOD RD/EXIT 173
PINCONNING RD/EXIT 181
US-23/EXIT 188
M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202
I-75-BL/COOK RD/EXIT 212

Figure 9


INTERSTATE 75
Bay City TSC I-75 Corridor - Southbound
2012 Congestion
MM 134 - MM 205
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
300
250
200
150
100
50
0
M-54 Interchange
M-84 Interchange
US-23 Interchange
M-33 Interchange
SB
SAGINAW/GENESEE CO LINE
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
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PINCONNING RD/EXIT 181
US-23/EXIT 188
M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202

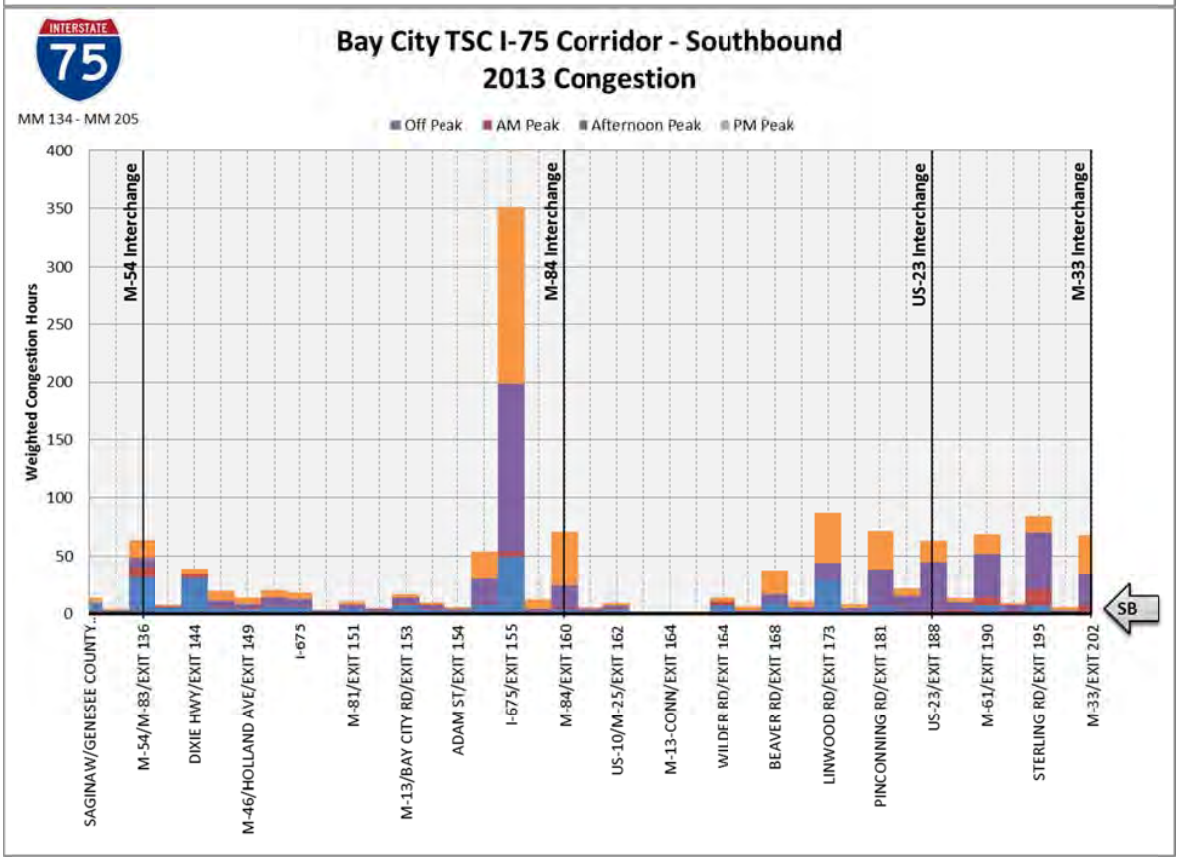
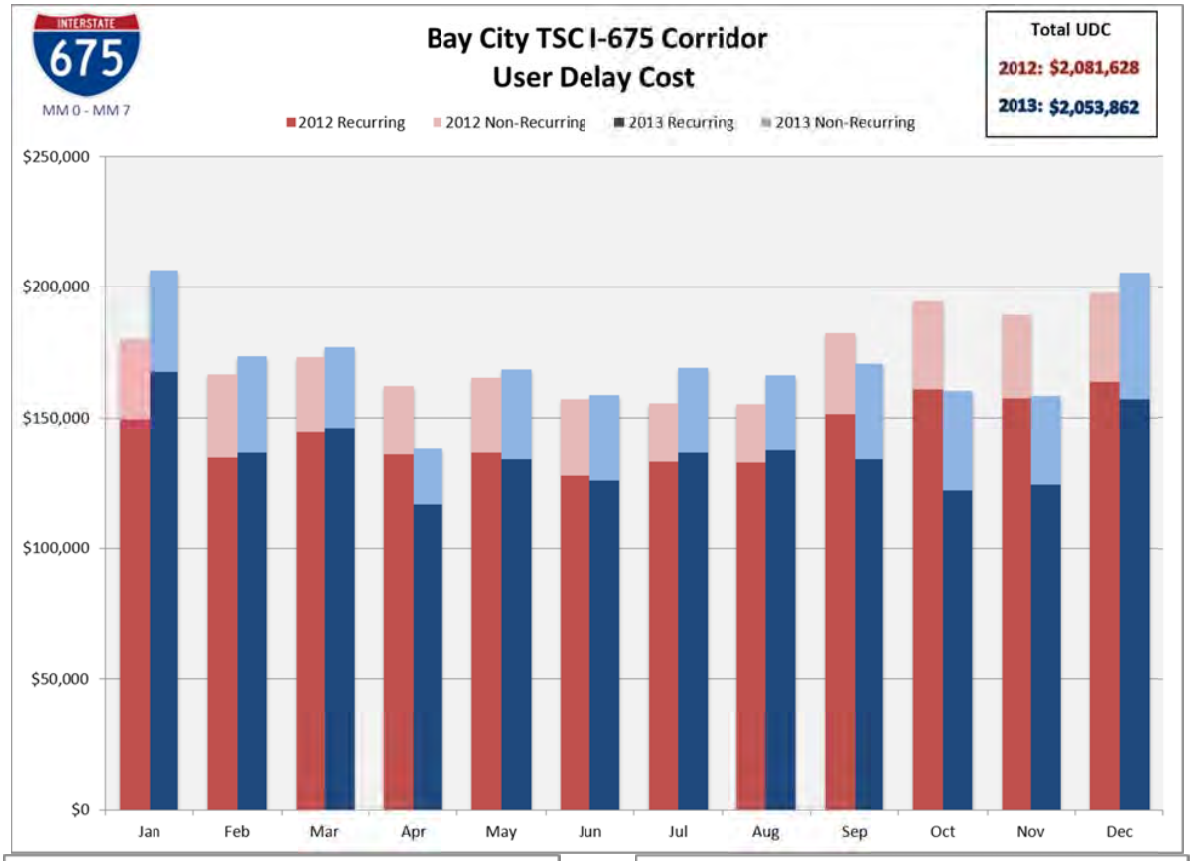
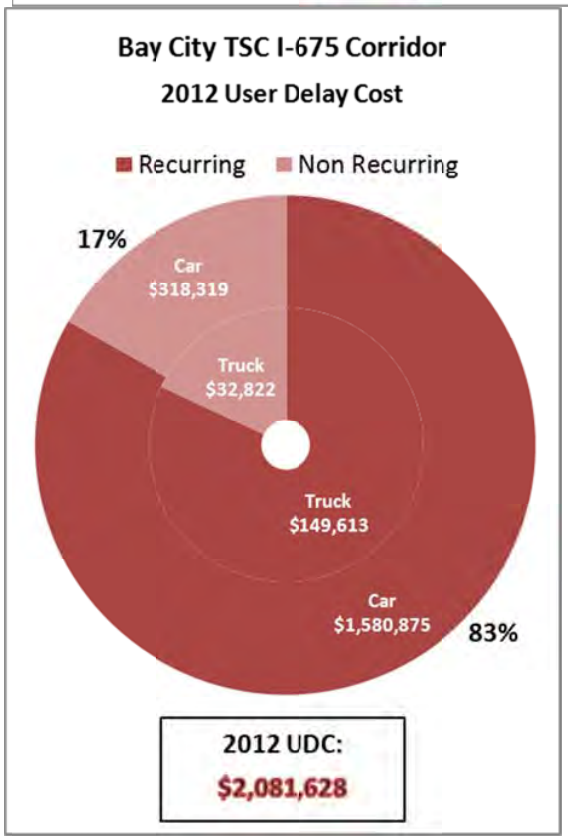

INTERSTATE 75
Bay City TSC I-75 Corridor - Southbound
2013 Congestion
MM 134 - MM 205
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
400
350
300
250
200
150
100
50
0
M-54 Interchange
M-84 Interchange
US-23 Interchange
M-33 Interchange
SB
SAGINAW/GENESEE COUNTY...
M-54/M-83/EXIT 136
DIXIE HWY/EXIT 144
M-46/HOLLAND AVE/EXIT 149
I-675
M-81/EXIT 151
M-13/BAY CITY RD/EXIT 153
ADAM ST/EXIT 154
I-675/EXIT 155
M-84/EXIT 160
US-10/M-25/EXIT 162
M-13-CONN/EXIT 164
WILDER RD/EXIT 164
BEAVER RD/EXIT 168
LINWOOD RD/EXIT 173
PINCONNING RD/EXIT 181
US-23/EXIT 188
M-61/EXIT 190
STERLING RD/EXIT 195
M-33/EXIT 202

Figure 10


INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor
User Delay Cost
Total UDC
2012: $2,081,628
2013: $2,053,862
2012 Recurring
2012 Non-Recurring
2013 Recurring
2013 Non-Recurring
$250,000
$200,000
$150,000
$100,000
$50,000
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Bay City TSC I-675 Corridor
2012 User Delay Cost
Recurring
Non Recurring
17%
Car
$318,319
Truck
$32,822
Truck
$149,613
Car
$1,580,875
83%
2012 UDC:
$2,081,628

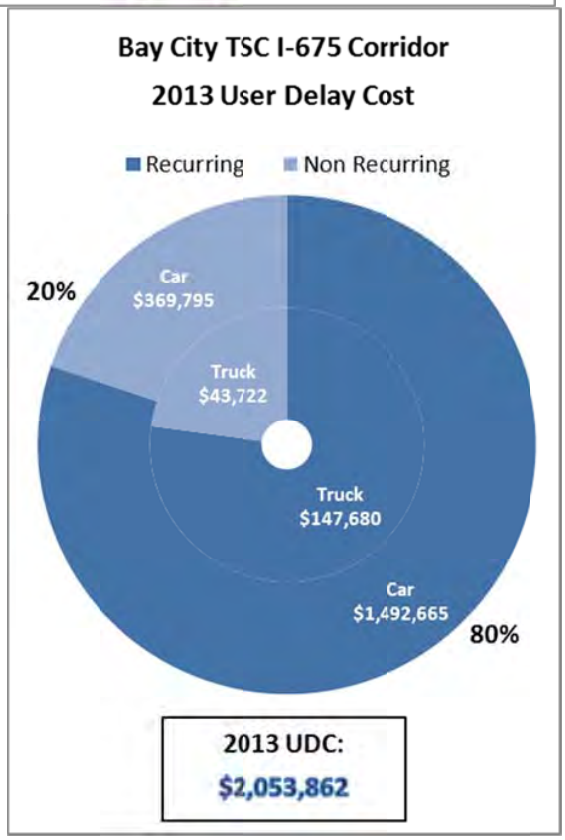
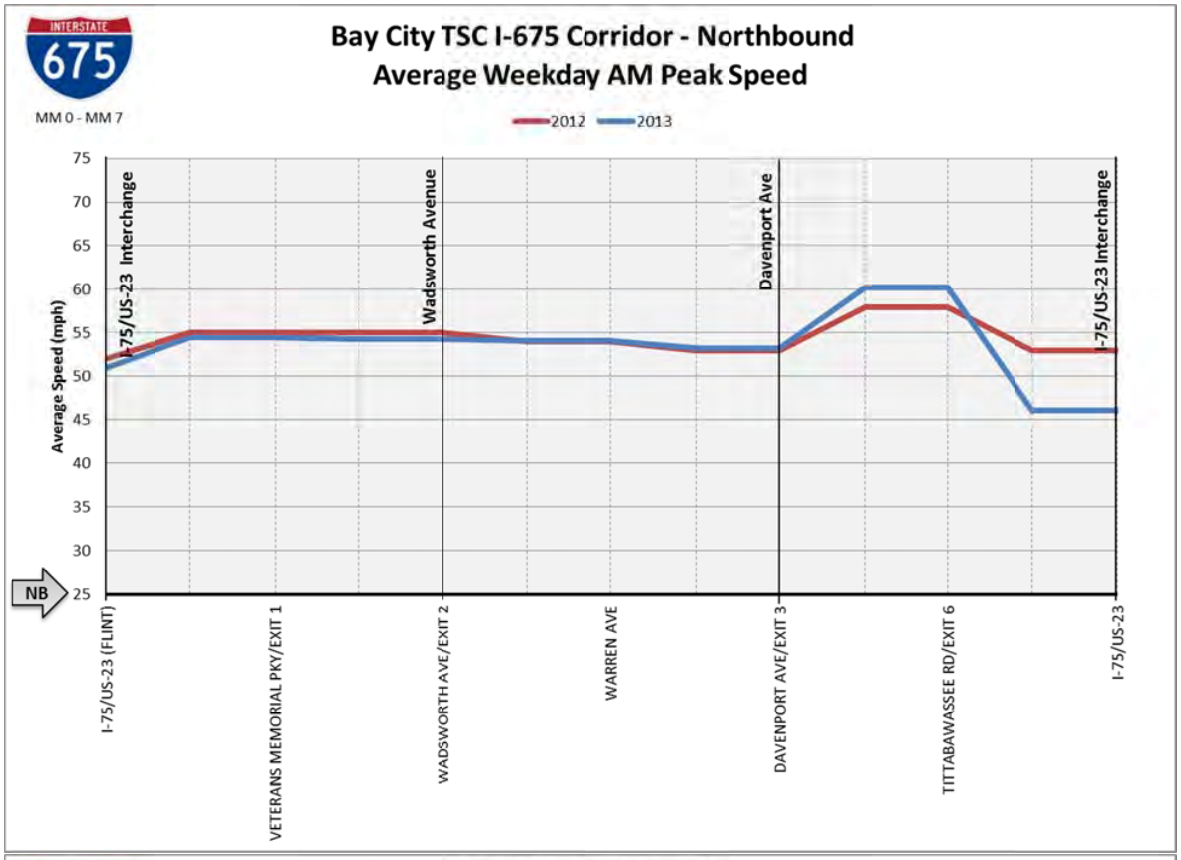

Bay City TSC I-675 Corridor
2013 User Delay Cost
Recurring
Non Recurring
20%
Car
$369,795
Truck
$43,722
Truck
$147,680
Car
$1,492,665
80%
2013 UDC:
$2,053,862

Figure 11


INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor - Northbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
70
65
60
55
50
45
40
35
30
25
NB
I-75/US-23 Interchange
Wadsworth Avenue
Davenport Ave
I-75/US-23 Interchange
I-75/US-23 (FLINT)
VETERANS MEMORIAL PKY/EXIT 1
WADSWORTH AVE/EXIT 2
WARREN AVE
DAVENPORT AVE/EXIT 3
TITTABAWASSEE RD/EXIT 6
I-75/US-23

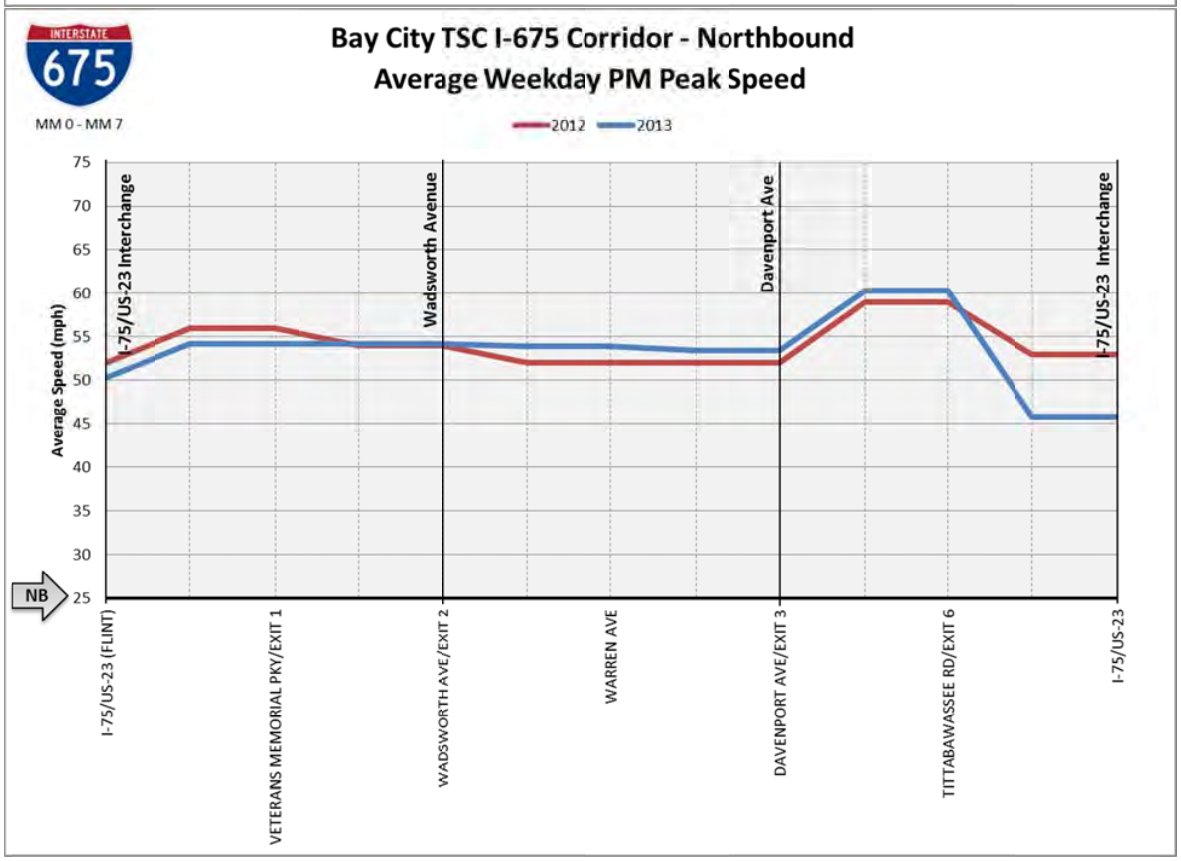
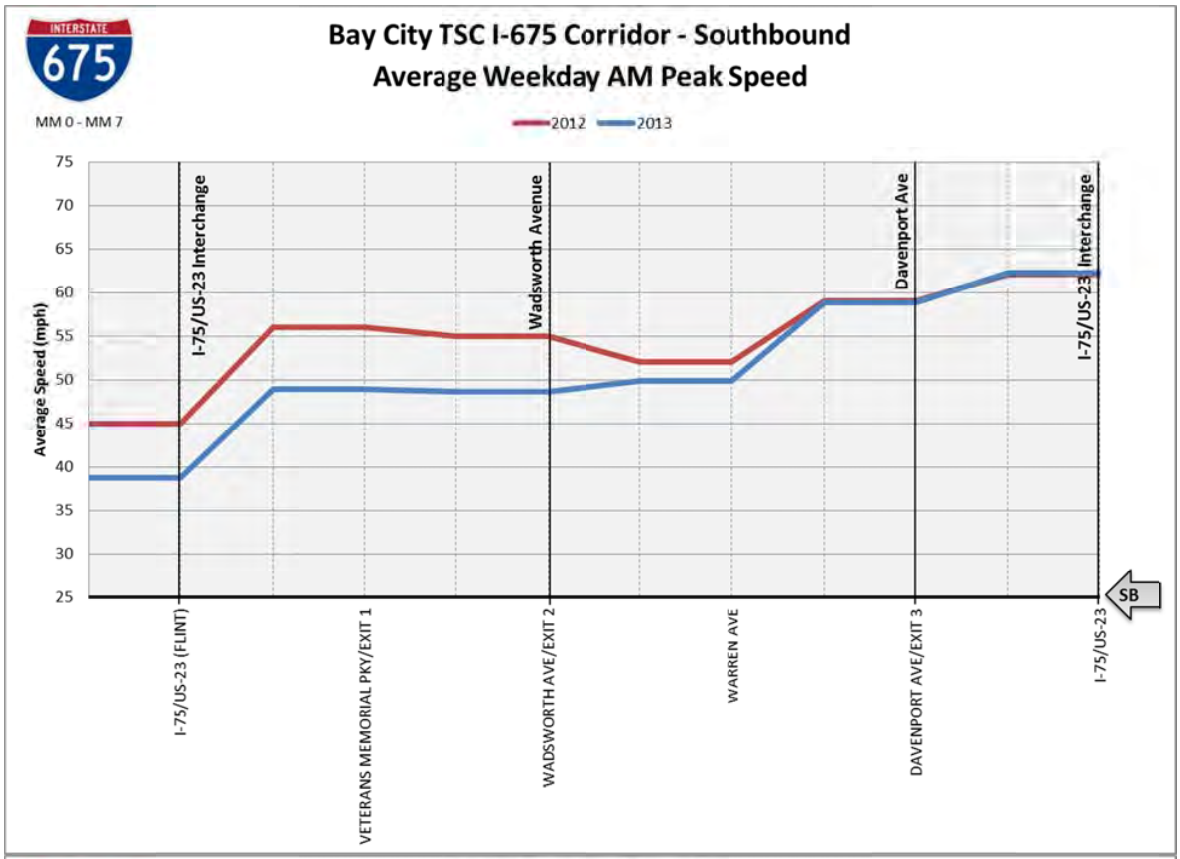

INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor - Northbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
70
65
60
55
50
45
40
35
30
25
NB
I-75/US-23 Interchange
Wadsworth Avenue
Davenport Ave
I-75/US-23 Interchange
I-75/US-23 (FLINT)
VETERANS MEMORIAL PKY/EXIT 1
WADSWORTH AVE/EXIT 2
WARREN AVE
DAVENPORT AVE/EXIT 3
TITTABAWASSEE RD/EXIT 6
I-75/US-23

Figure 12


INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor - Southbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
70
65
60
55
50
45
40
35
30
25
I-75/US-23 Interchange
Wadsworth Avenue
Davenport Ave
I-75/US-23 Interchange
SB
I-75/US-23 (FLINT)
VETERANS MEMORIAL PKY/EXIT 1
WADSWORTH AVE/EXIT 2
WARREN AVE
DAVENPORT AVE/EXIT 3
I-75/US-23

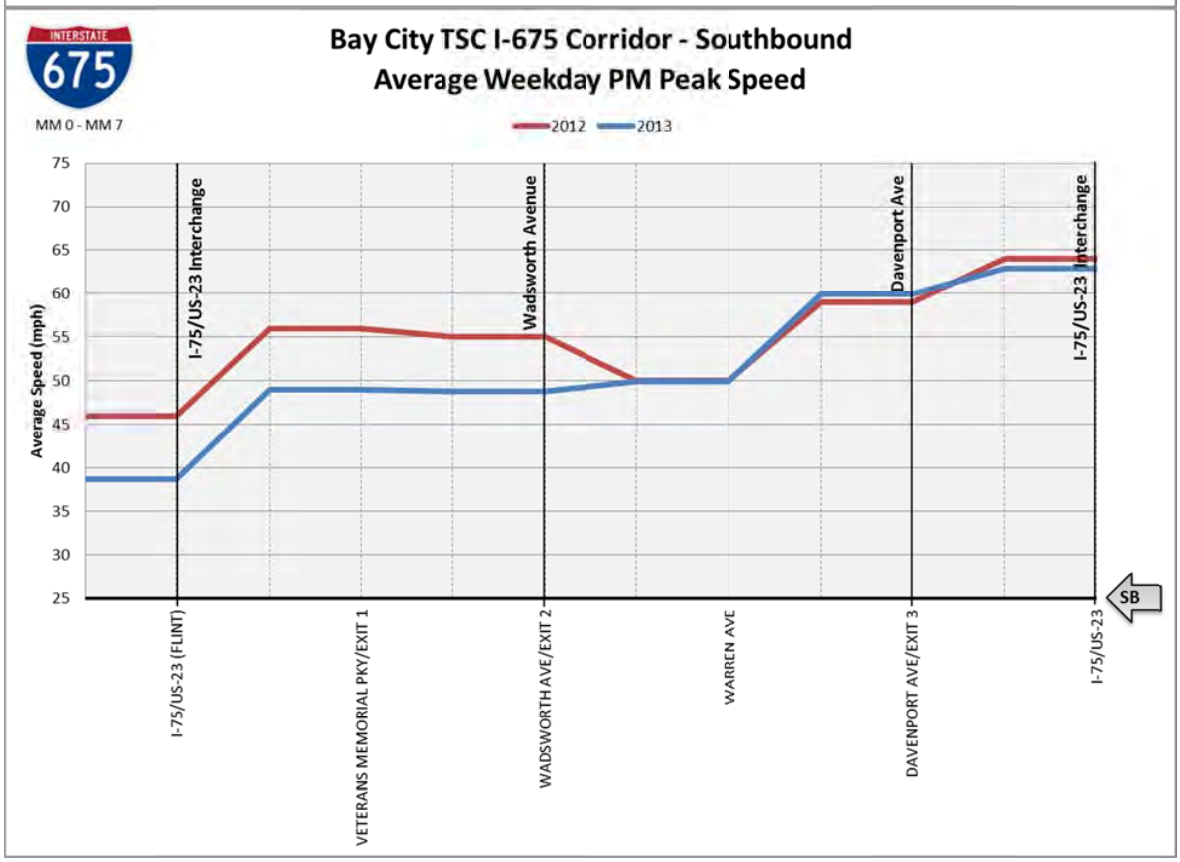
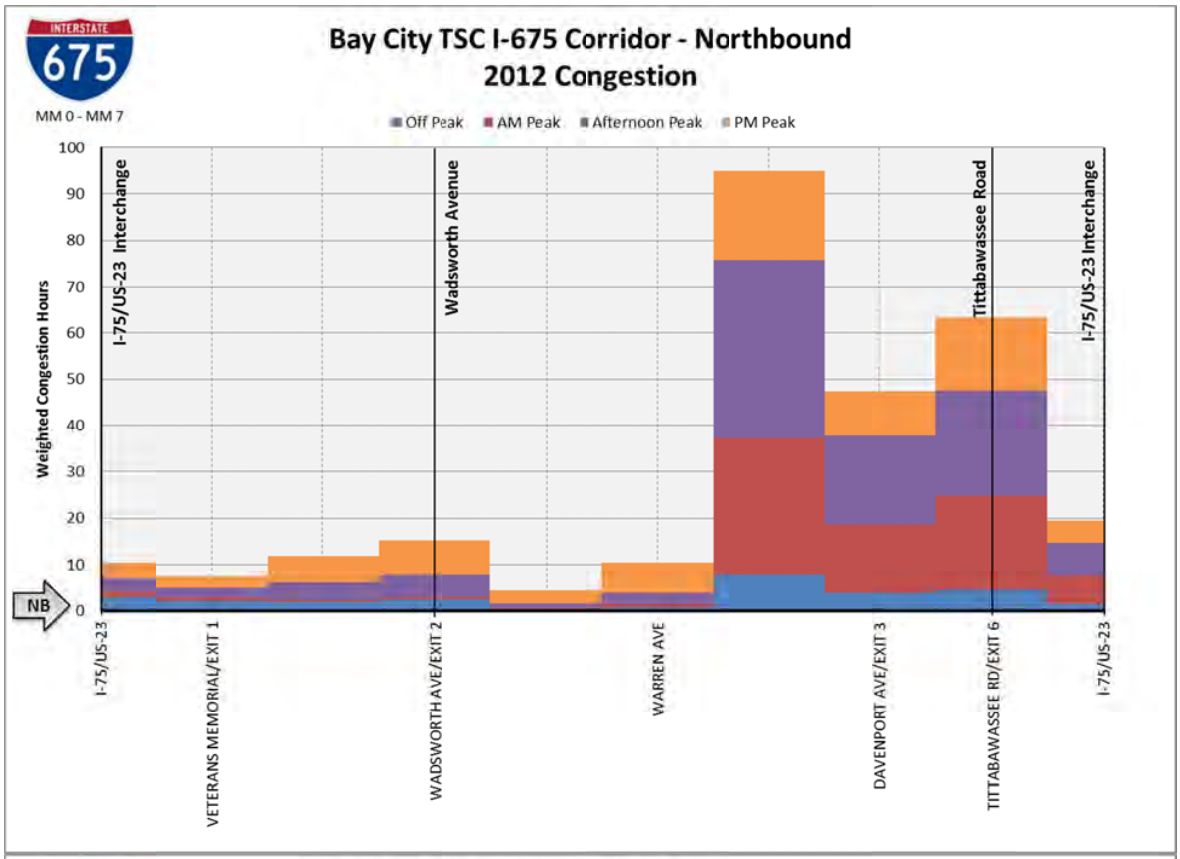

INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor - Southbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
70
65
60
55
50
45
40
35
30
25
I-75/US-23 Interchange
Wadsworth Avenue
Davenport Ave
I-75/US-23 Interchange
SB
I-75/US-23 (FLINT)
VETERANS MEMORIAL PKY/EXIT 1
WADSWORTH AVE/EXIT 2
WARREN AVE
DAVENPORT AVE/EXIT 3
I-75/US-23

Figure 13


INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor - Northbound
2012 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
100
90
80
70
60
50
40
30
20
10
0
NB
I-75/US-23 Interchange
Wadsworth Avenue
Tittabawassee Road
I-75/US-23 Interchange
I-75/US-23
VETERANS MEMORIAL/EXIT 1
WADSWORTH AVE/EXIT 2
WARREN AVE
DAVENPORT AVE/EXIT 3
TITTABAWASSEE RD/EXIT 6
I-75/US-23

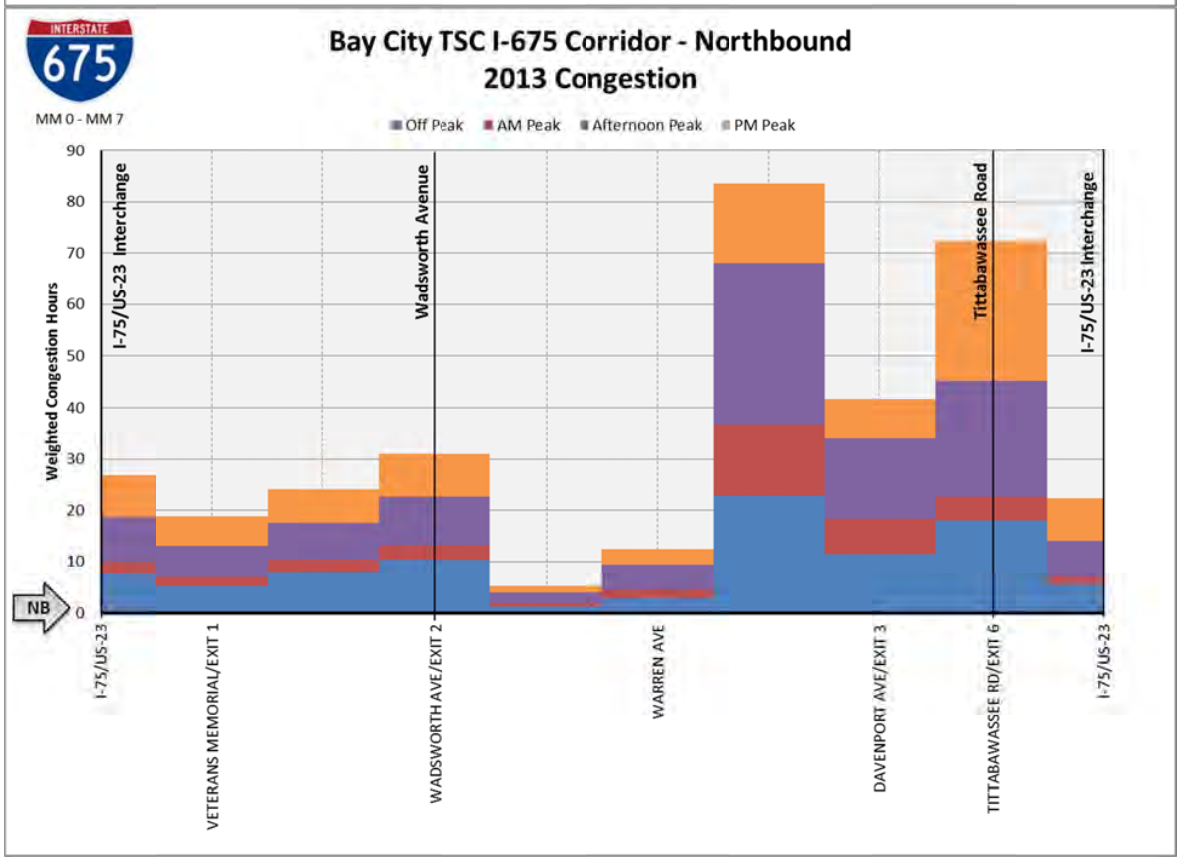
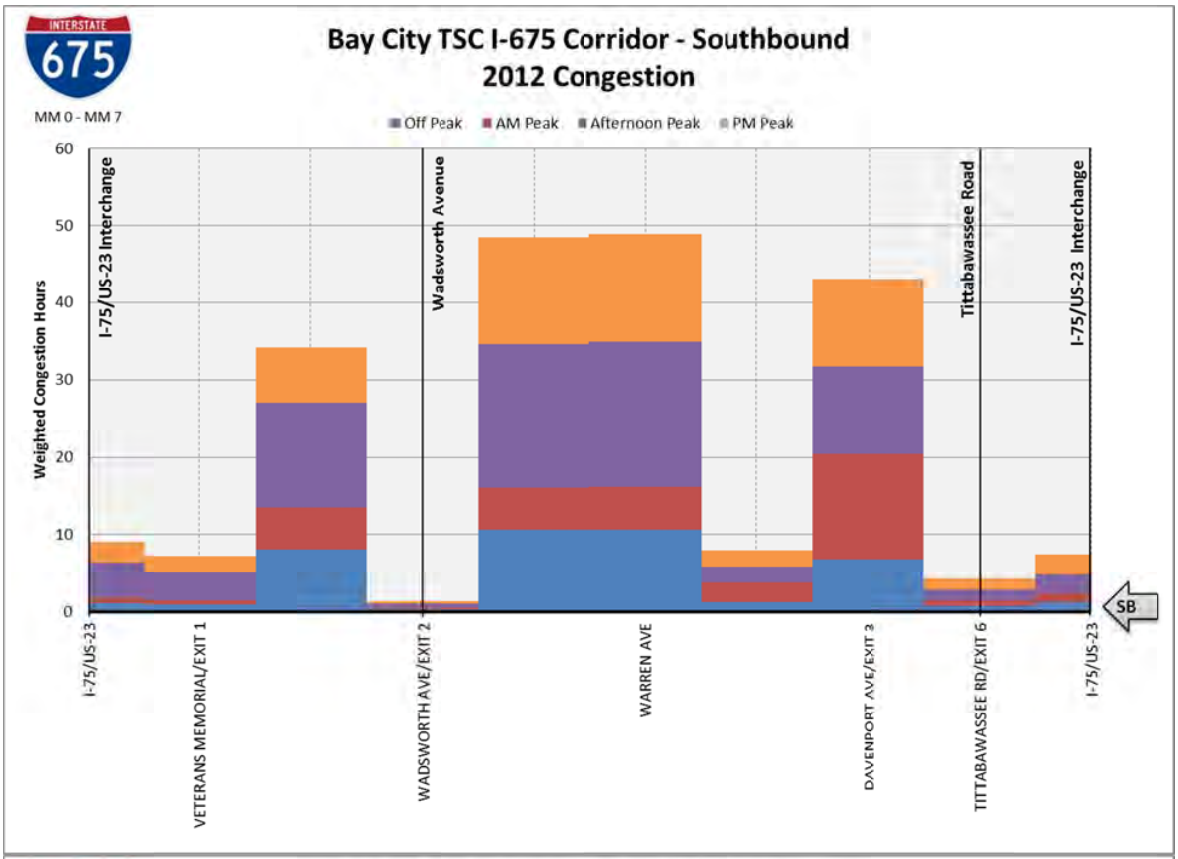

INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor - Northbound
2013 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
90
80
70
60
50
40
30
20
10
0
NB
I-75/US-23 Interchange
Wadsworth Avenue
Tittabawassee Road
I-75/US-23 Interchange
I-75/US-23
VETERANS MEMORIAL/EXIT 1
WADSWORTH AVE/EXIT 2
WARREN AVE
DAVENPORT AVE/EXIT 3
TITTABAWASSEE RD/EXIT 6
I-75/US-23

Figure 14


INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor - Southbound
2012 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
60
50
40
30
20
10
0
I-75/US-23 Interchange
Wadsworth Avenue
Tittabawassee Road
I-75/US-23 Interchange
SB
I-75/US-23
VETERANS MEMORIAL/EXIT 1
WADSWORTH AVE/EXIT 2
WARREN AVE
DAVENPORT AVE/EXIT 3
TITTABAWASSEE RD/EXIT 6
I-75/US-23

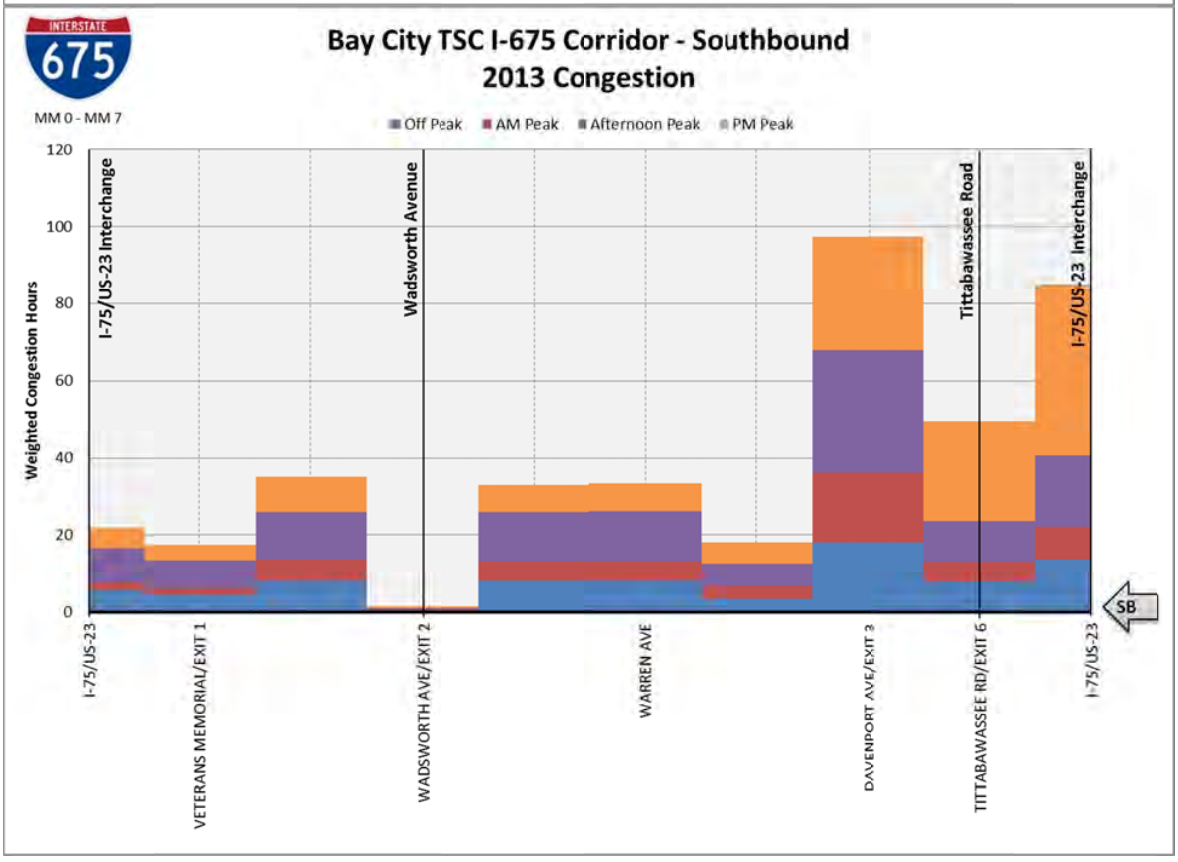
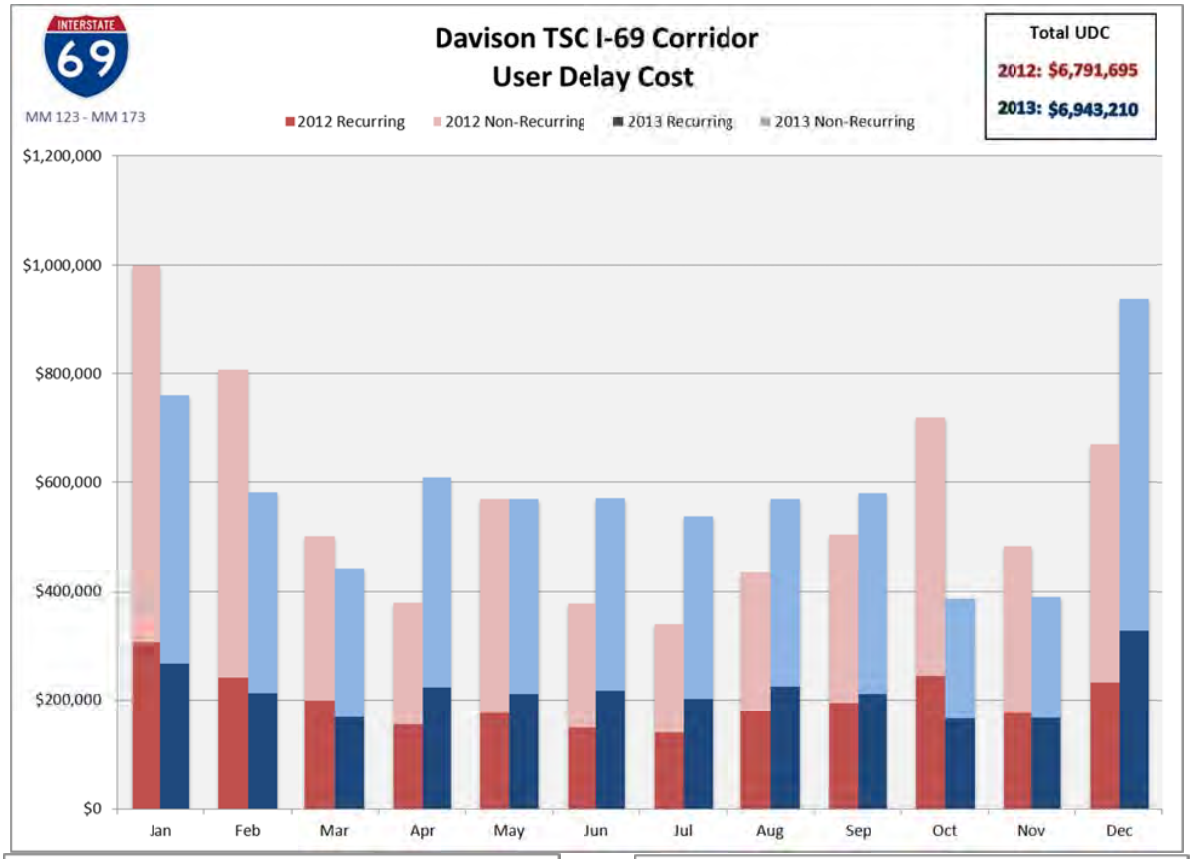
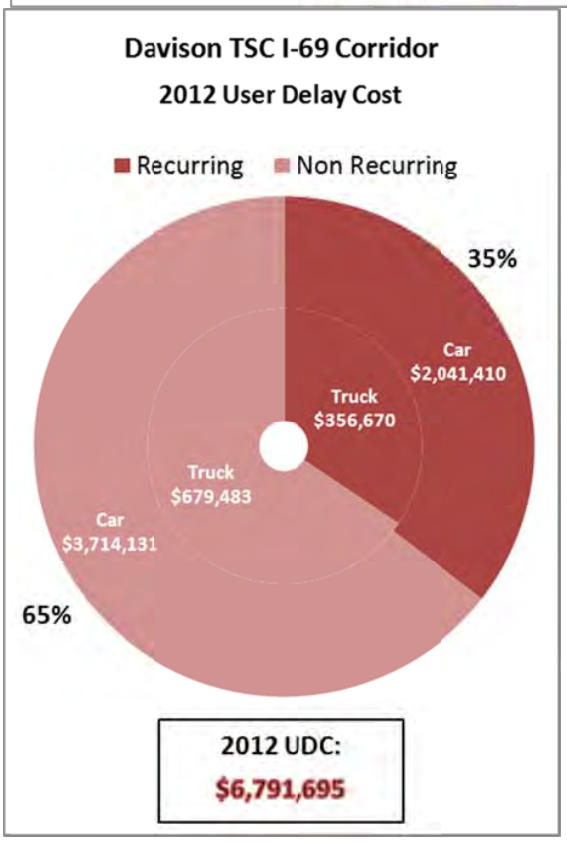

INTERSTATE
675
MM 0 - MM 7
Bay City TSC I-675 Corridor - Southbound
2013 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
120
100
80
60
40
20
0
I-75/US-23 Interchange
Wadsworth Avenue
Tittabawassee Road
I-75/US-23 Interchange
SB
I-75/US-23
VETERANS MEMORIAL/EXIT 1
WADSWORTH AVE/EXIT 2
WARREN AVE
DAVENPORT AVE/EXIT 3
TITTABAWASSEE RD/EXIT 6
I-75/US-23

Figure 15


INTERSTATE 69
MM 123 - MM 173
Davison TSC I-69 Corridor
User Delay Cost
Total UDC
2012: $6,791,695
2013: $6,943,210
2012 Recurring
2012 Non-Recurring
2013 Recurring
2013 Non-Recurring
$1,200,000
$1,000,000
$800,000
$600,000
$400,000
$200,000
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Davison TSC I-69 Corridor
2012 User Delay Cost
Recurring
Non Recurring
35%
Car
$2,041,410
Truck
$356,670
Truck
$679,483
Car
$3,714,131
65%
2012 UDC:
$6,791,695

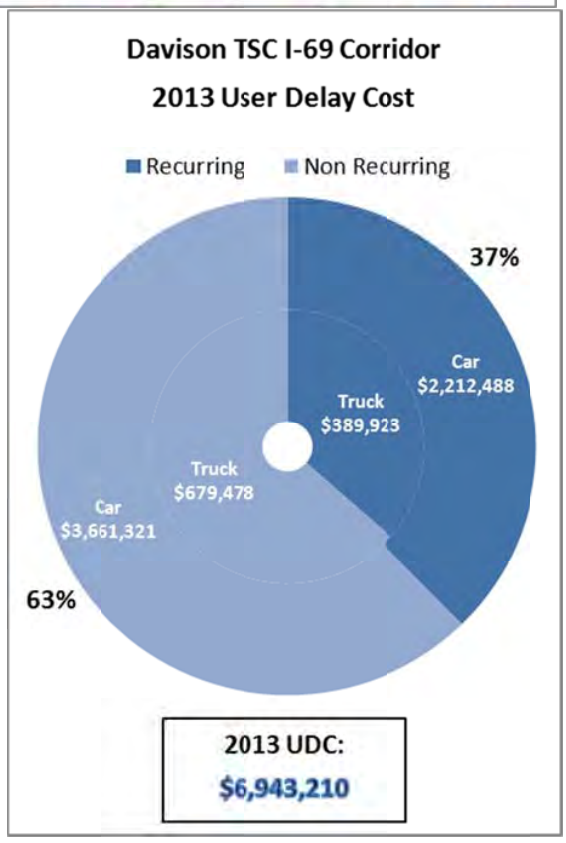
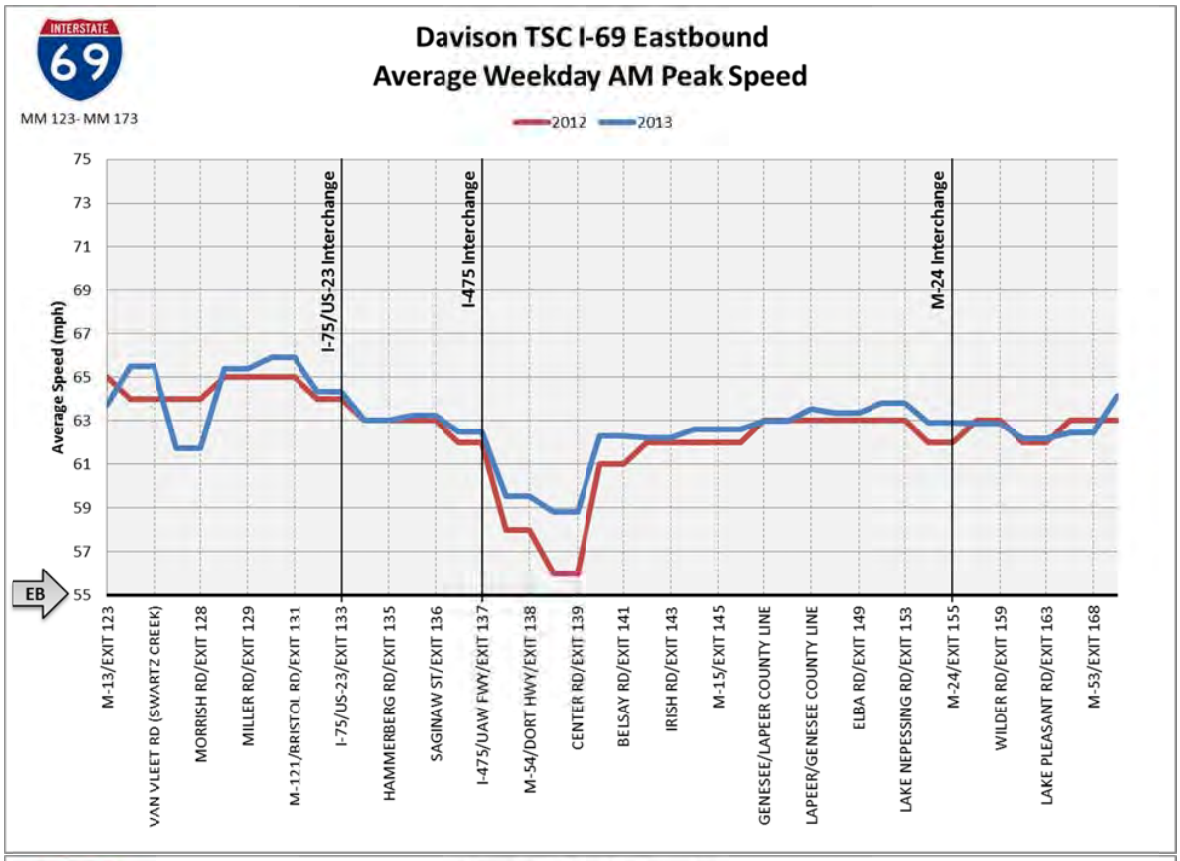

Davison TSC I-69 Corridor
2013 User Delay Cost
Recurring
Non Recurring
37%
Car
$2,212,488
Truck
$389,923
Truck
$679,478
Car
$3,661,321
63%
2013 UDC:
$6,943,210

Figure 16


INTERSTATE
69
MM 123- MM 173
Davison TSC I-69 Eastbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
EB
I-75/US-23 Interchange
I-475 Interchange
M-24 Interchange
M-13/EXIT 123
VAN VLEET RD (SWARTZ CREEK)
MORRISH RD/EXIT 128
MILLER RD/EXIT 129
M-121/BRISTOL RD/EXIT 131
I-75/US-23/EXIT 133
HAMMERBERG RD/EXIT 135
SAGINAW ST/EXIT 136
I-475/UAW FWY/EXIT 137
M-54/DORT HWY/EXIT 138
CENTER RD/EXIT 139
BELSAY RD/EXIT 141
IRISH RD/EXIT 143
M-15/EXIT 145
GENESEE/LAPEER COUNTY LINE
LAPEER/GENESEE COUNTY LINE
ELBA RD/EXIT 149
LAKE NEPESSING RD/EXIT 153
M-24/EXIT 155
WILDER RD/EXIT 159
LAKE PLEASANT RD/EXIT 163
M-53/EXIT 168

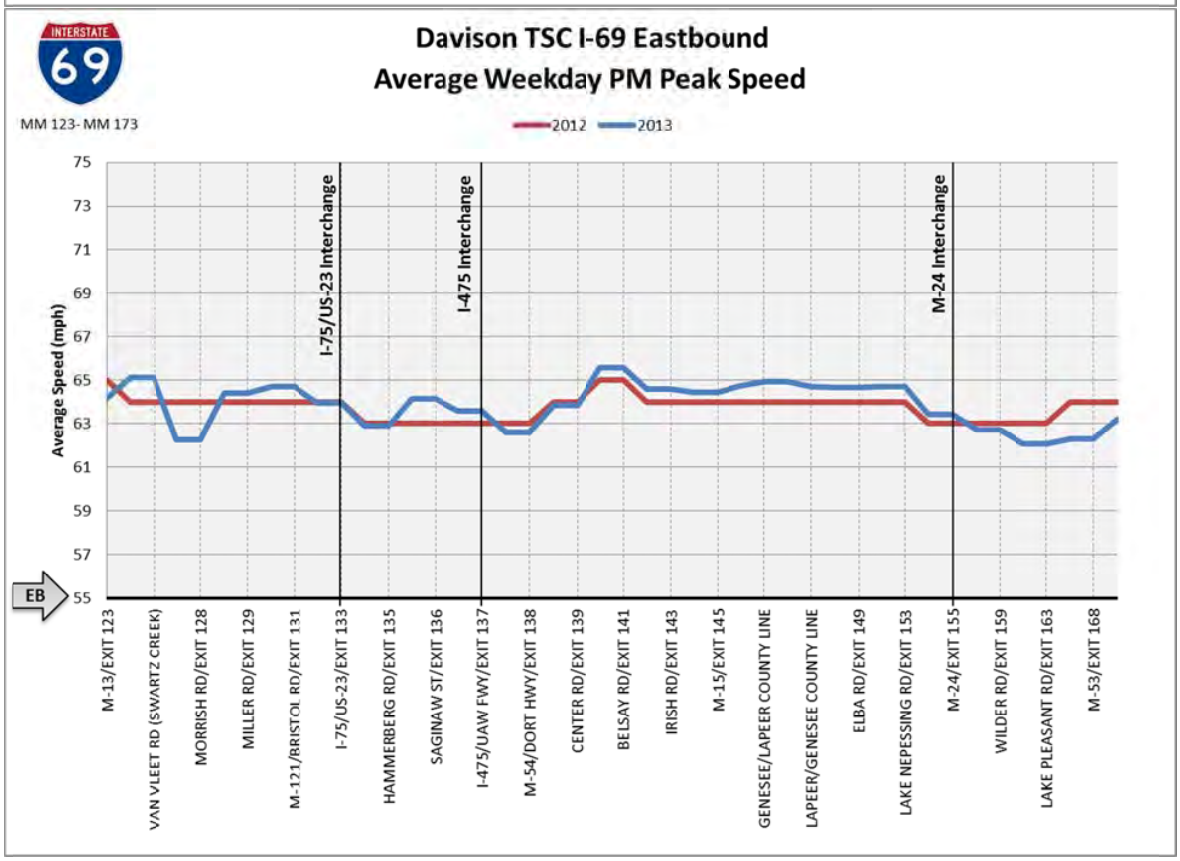
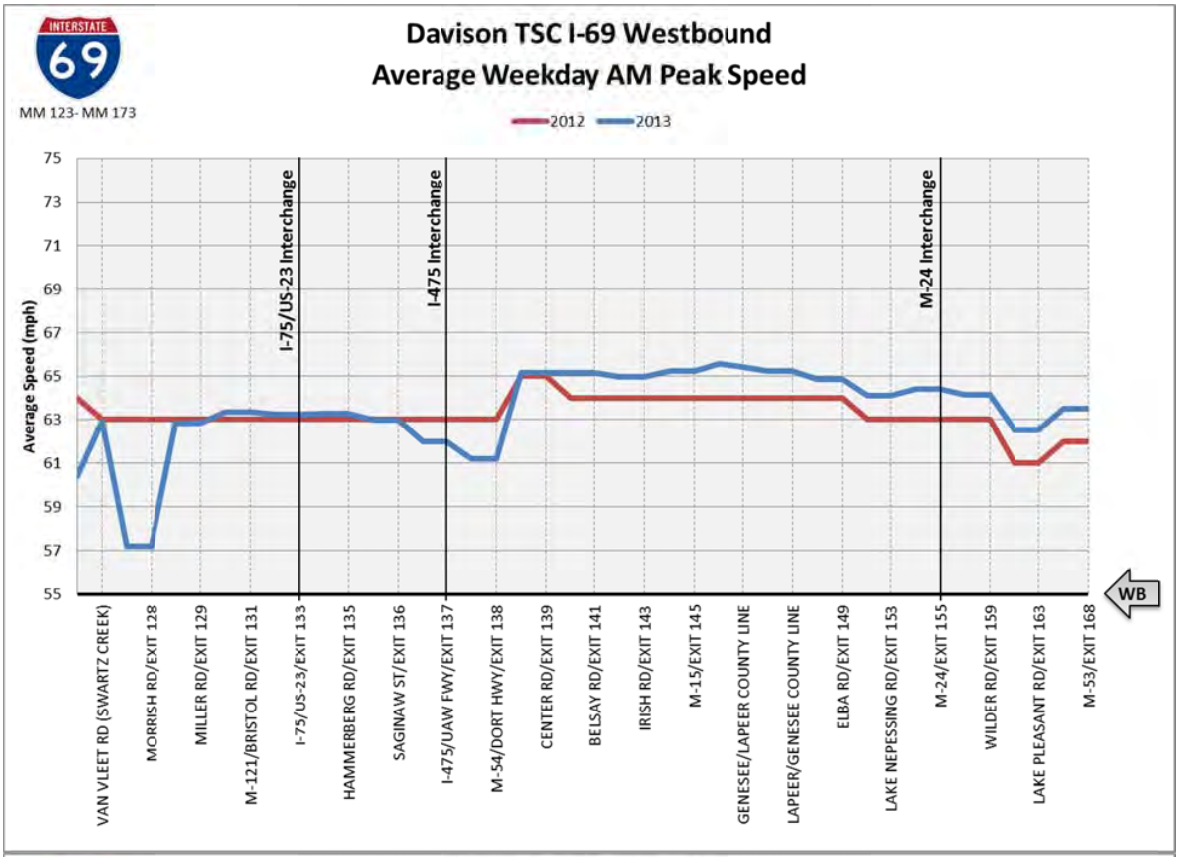

INTERSTATE
69
MM 123- MM 173
Davison TSC I-69 Eastbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
EB
I-75/US-23 Interchange
I-475 Interchange
M-24 Interchange
M-13/EXIT 123
VAN VLEET RD (SWARTZ CREEK)
MORRISH RD/EXIT 128
MILLER RD/EXIT 129
M-121/BRISTOL RD/EXIT 131
I-75/US-23/EXIT 133
HAMMERBERG RD/EXIT 135
SAGINAW ST/EXIT 136
I-475/UAW FWY/EXIT 137
M-54/DORT HWY/EXIT 138
CENTER RD/EXIT 139
BELSAY RD/EXIT 141
IRISH RD/EXIT 143
M-15/EXIT 145
GENESEE/LAPEER COUNTY LINE
LAPEER/GENESEE COUNTY LINE
ELBA RD/EXIT 149
LAKE NEPESSING RD/EXIT 153
M-24/EXIT 155
WILDER RD/EXIT 159
LAKE PLEASANT RD/EXIT 163
M-53/EXIT 168

Figure 17


INTERSTATE
69
MM 123- MM 173
Davison TSC I-69 Westbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
I-75/US-23 Interchange
I-475 Interchange
M-24 Interchange
WB
VAN VLEET RD (SWARTZ CREEK)
MORRISH RD/EXIT 128
MILLER RD/EXIT 129
M-121/BRISTOL RD/EXIT 131
I-75/US-23/EXIT 133
HAMMERBERG RD/EXIT 135
SAGINAW ST/EXIT 136
I-475/UAW FWY/EXIT 137
M-54/DORT HWY/EXIT 138
CENTER RD/EXIT 139
BELSAY RD/EXIT 141
IRISH RD/EXIT 143
M-15/EXIT 145
GENESEE/LAPEER COUNTY LINE
LAPEER/GENESEE COUNTY LINE
ELBA RD/EXIT 149
LAKE NEPESSING RD/EXIT 153
M-24/EXIT 155
WILDER RD/EXIT 159
LAKE PLEASANT RD/EXIT 163
M-53/EXIT 168

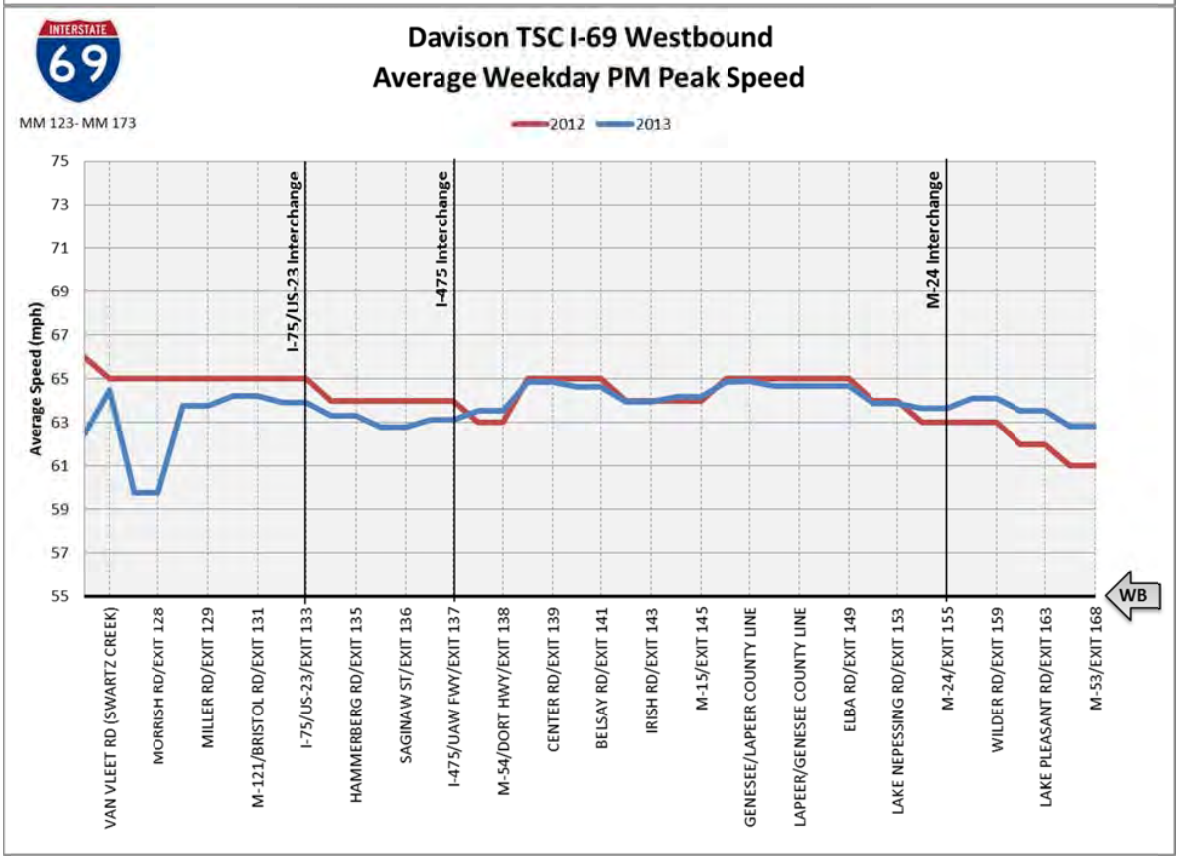
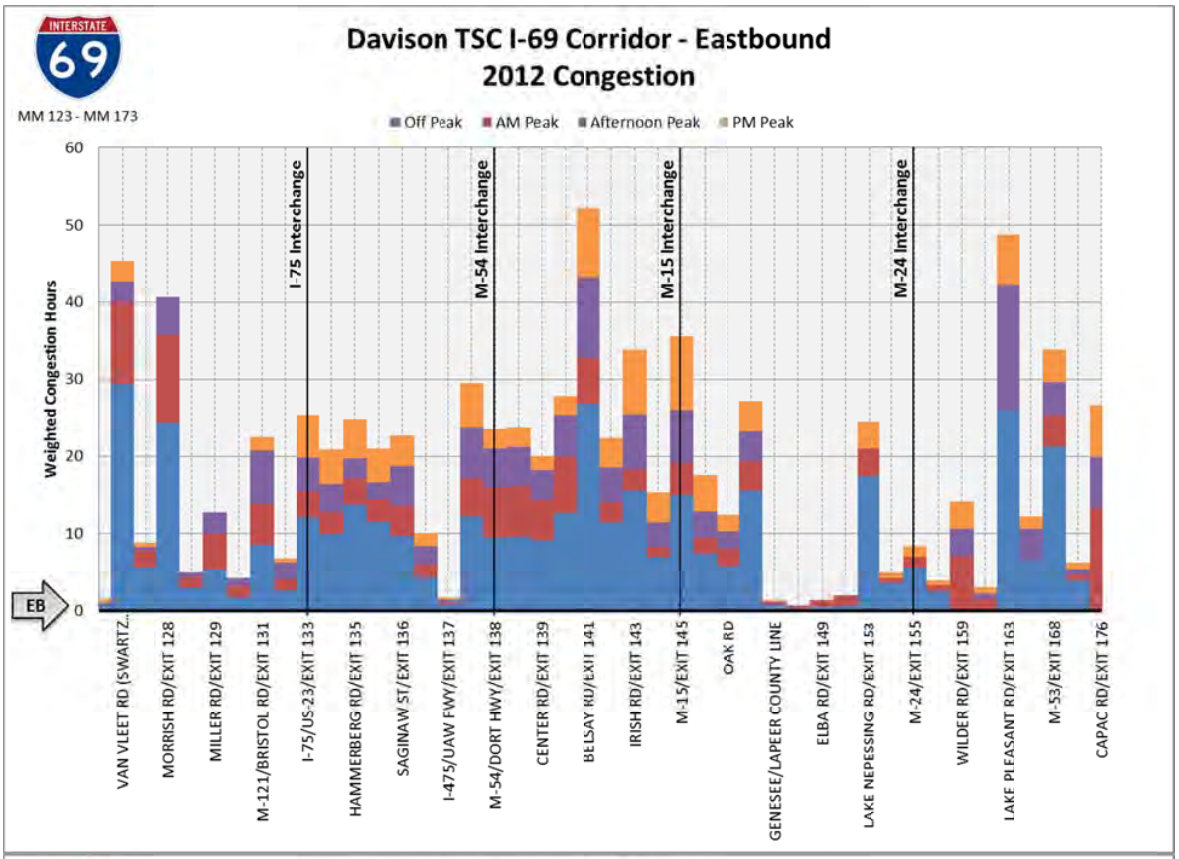

INTERSTATE
69
MM 123- MM 173
Davison TSC I-69 Westbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
I-75/US-23 Interchange
I-475 Interchange
M-24 Interchange
WB
VAN VLEET RD (SWARTZ CREEK)
MORRISH RD/EXIT 128
MILLER RD/EXIT 129
M-121/BRISTOL RD/EXIT 131
I-75/US-23/EXIT 133
HAMMERBERG RD/EXIT 135
SAGINAW ST/EXIT 136
I-475/UAW FWY/EXIT 137
M-54/DORT HWY/EXIT 138
CENTER RD/EXIT 139
BELSAY RD/EXIT 141
IRISH RD/EXIT 143
M-15/EXIT 145
GENESEE/LAPEER COUNTY LINE
LAPEER/GENESEE COUNTY LINE
ELBA RD/EXIT 149
LAKE NEPESSING RD/EXIT 153
M-24/EXIT 155
WILDER RD/EXIT 159
LAKE PLEASANT RD/EXIT 163
M-53/EXIT 168

Figure 18


INTERSTATE
69
MM 123 - MM 173
Davison TSC I-69 Corridor - Eastbound
2012 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
60
50
40
30
20
10
0
EB
I-75 Interchange
M-54 Interchange
M-15 Interchange
M-24 Interchange
VAN VLEET RD (SWARTZ..
MORRISH RD/EXIT 128
MILLER RD/EXIT 129
M-121/BRISTOL RD/EXIT 131
I-75/US-23/EXIT 133
HAMMERBERG RD/EXIT 135
SAGINAW ST/EXIT 136
I-475/UAW FWY/EXIT 137
M-54/DORT HWY/EXIT 138
CENTER RD/EXIT 139
BELSAY RD/EXIT 141
IRISH RD/EXIT 143
M-15/EXIT 145
OAK RD
GENESEE/LAPEER COUNTY LINE
ELBA RD/EXIT 149
LAKE NEPESSING RD/EXIT 153
M-24/EXIT 155
WILDER RD/EXIT 159
LAKE PLEASANT RD/EXIT 163
M-53/EXIT 168
CAPAC RD/EXIT 176

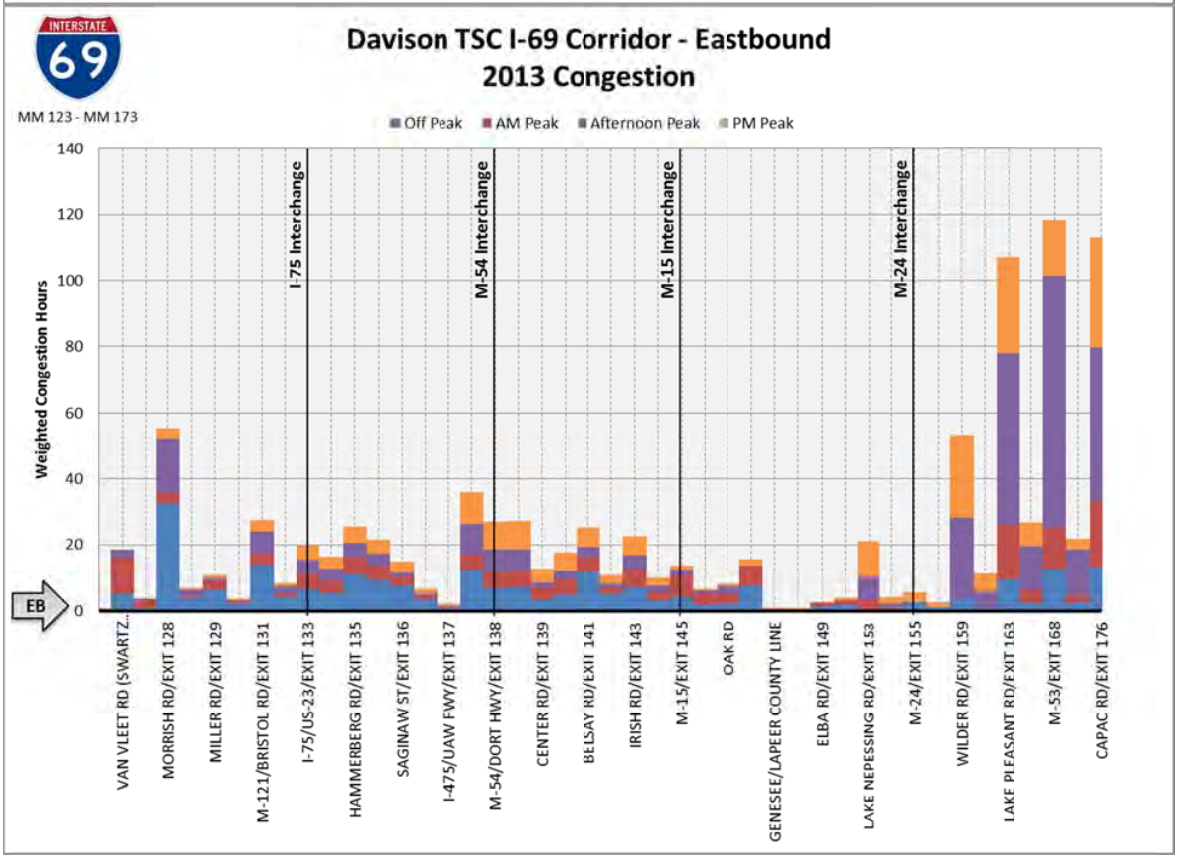
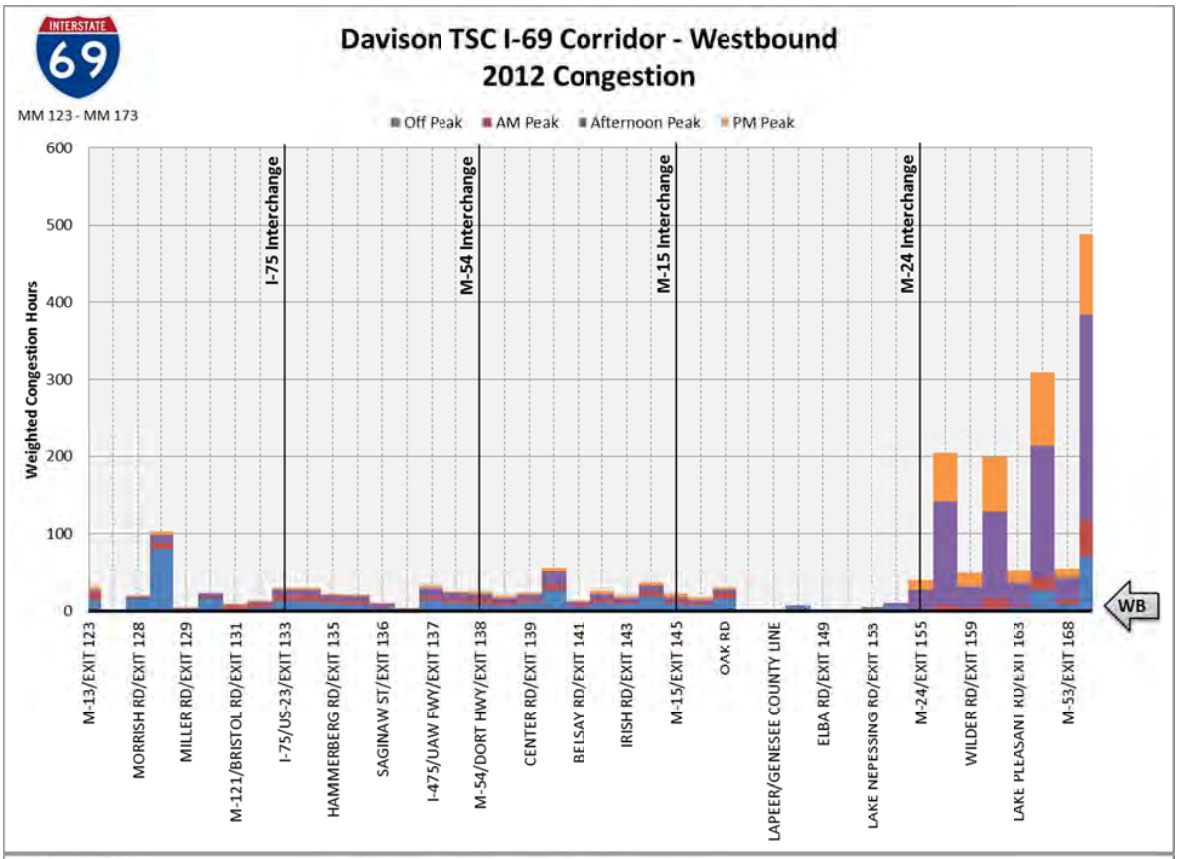

INTERSTATE
69
MM 123 - MM 173
Davison TSC I-69 Corridor - Eastbound
2013 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
140
120
100
80
60
40
20
0
EB
I-75 Interchange
M-54 Interchange
M-15 Interchange
M-24 Interchange
VAN VLEET RD (SWARTZ..
MORRISH RD/EXIT 128
MILLER RD/EXIT 129
M-121/BRISTOL RD/EXIT 131
I-75/US-23/EXIT 133
HAMMERBERG RD/EXIT 135
SAGINAW ST/EXIT 136
I-475/UAW FWY/EXIT 137
M-54/DORT HWY/EXIT 138
CENTER RD/EXIT 139
BELSAY RD/EXIT 141
IRISH RD/EXIT 143
M-15/EXIT 145
OAK RD
GENESEE/LAPEER COUNTY LINE
ELBA RD/EXIT 149
LAKE NEPESSING RD/EXIT 153
M-24/EXIT 155
WILDER RD/EXIT 159
LAKE PLEASANT RD/EXIT 163
M-53/EXIT 168
CAPAC RD/EXIT 176

Figure 19


INTERSTATE 69
Davison TSC I-69 Corridor - Westbound
2012 Congestion
MM 123 - MM 173
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
600
500
400
300
200
100
0
I-75 Interchange
M-54 Interchange
M-15 Interchange
M-24 Interchange
WB
M-13/EXIT 123
MORRISH RD/EXIT 128
MILLER RD/EXIT 129
M-121/BRISTOL RD/EXIT 131
I-75/US-23/EXIT 133
HAMMERBERG RD/EXIT 135
SAGINAW ST/EXIT 136
I-475/UAW FWY/EXIT 137
M-54/DORT HWY/EXIT 138
CENTER RD/EXIT 139
BELSAY RD/EXIT 141
IRISH RD/EXIT 143
M-15/EXIT 145
OAK RD
LAPEER/GENESEE COUNTY LINE
ELBA RD/EXIT 149
LAKE NEPESSING RD/EXIT 153
M-24/EXIT 155
WILDER RD/EXIT 159
LAKE PLEASANT RD/EXIT 163
M-53/EXIT 168

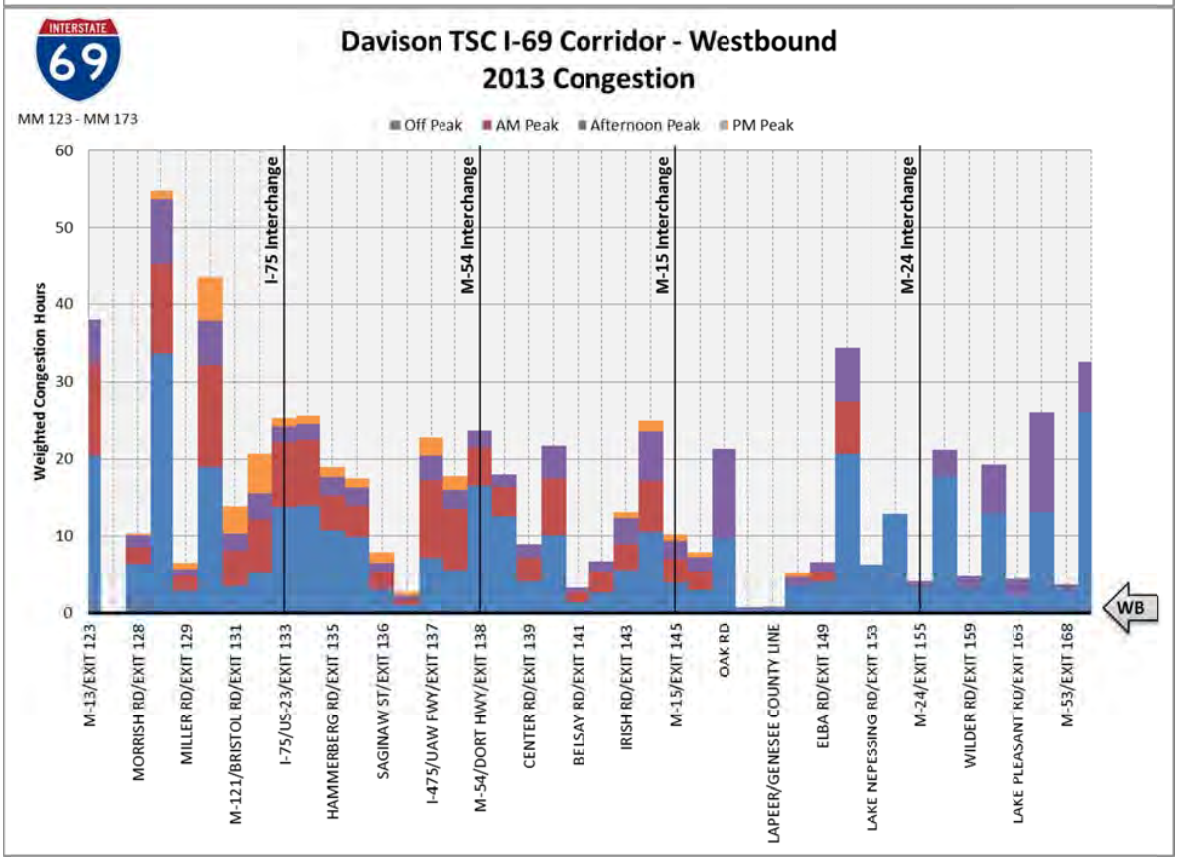
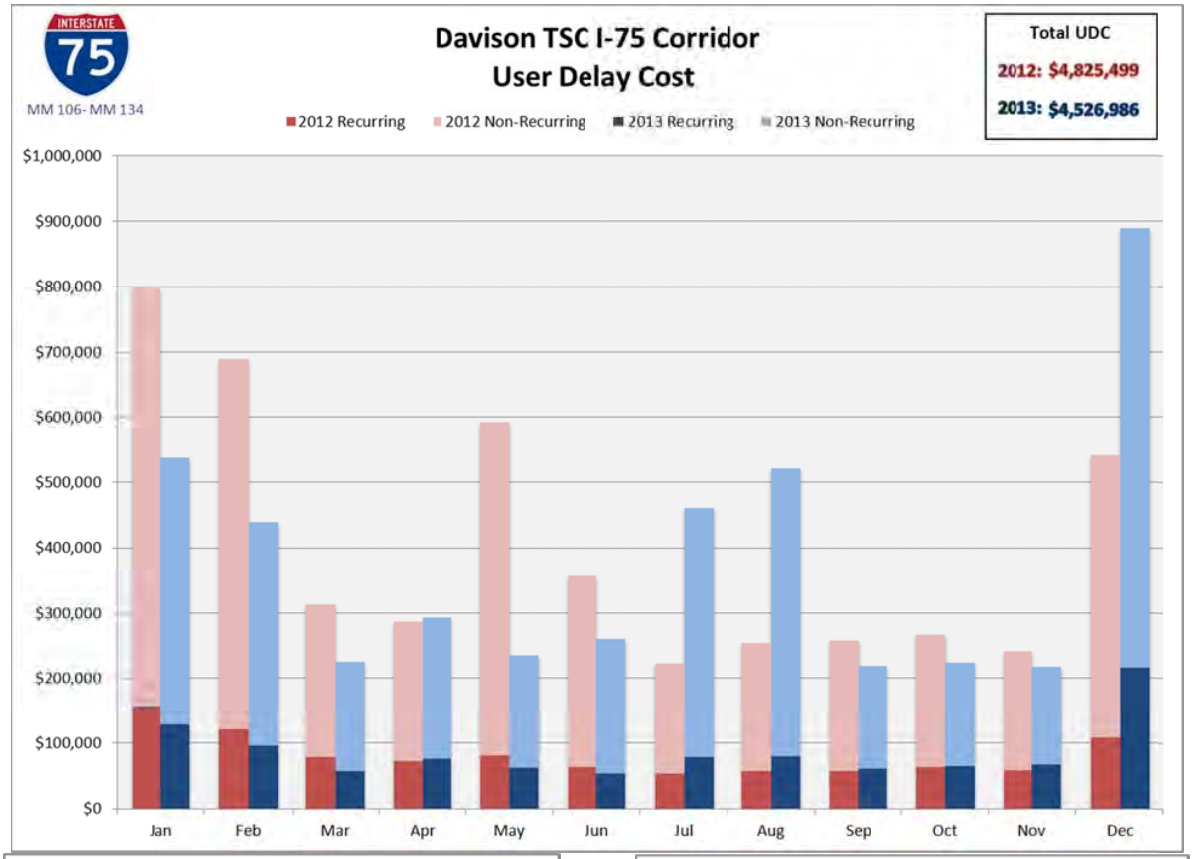
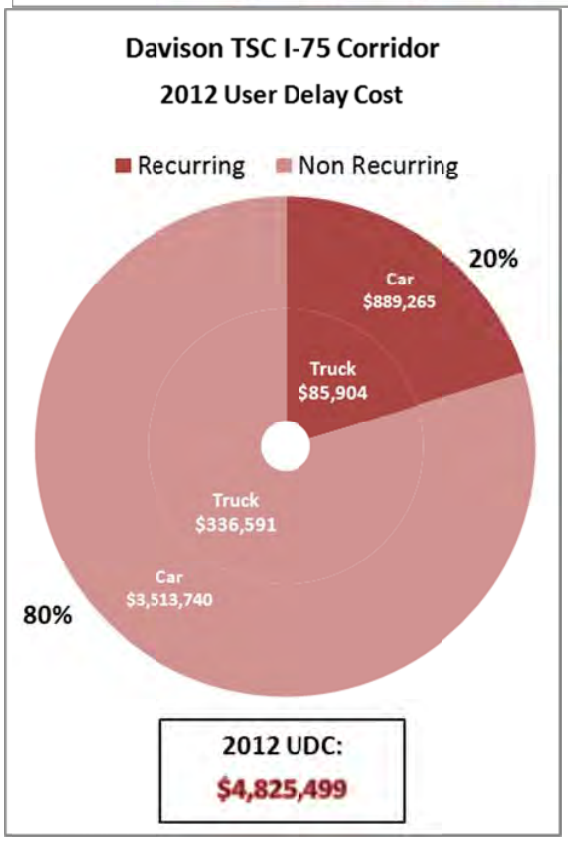

INTERSTATE 69
Davison TSC I-69 Corridor - Westbound
2013 Congestion
MM 123 - MM 173
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
60
50
40
30
20
10
0
I-75 Interchange
M-54 Interchange
M-15 Interchange
M-24 Interchange
WB
M-13/EXIT 123
MORRISH RD/EXIT 128
MILLER RD/EXIT 129
M-121/BRISTOL RD/EXIT 131
I-75/US-23/EXIT 133
HAMMERBERG RD/EXIT 135
SAGINAW ST/EXIT 136
I-475/UAW FWY/EXIT 137
M-54/DORT HWY/EXIT 138
CENTER RD/EXIT 139
BELSAY RD/EXIT 141
IRISH RD/EXIT 143
M-15/EXIT 145
OAK RD
LAPEER/GENESEE COUNTY LINE
ELBA RD/EXIT 149
LAKE NEPESSING RD/EXIT 153
M-24/EXIT 155
WILDER RD/EXIT 159
LAKE PLEASANT RD/EXIT 163
M-53/EXIT 168

Figure 20


INTERSTATE 75
MM 106- MM 134
Davison TSC I-75 Corridor
User Delay Cost
Total UDC
2012: $4,825,499
2013: $4,526,986
2012 Recurring
2012 Non-Recurring
2013 Recurring
2013 Non-Recurring
$1,000,000
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Davison TSC I-75 Corridor
2012 User Delay Cost
Recurring
Non Recurring
20%
Car
$889,265
Truck
$85,904
Truck
$336,591
Car
$3,513,740
80%
2012 UDC:
$4,825,499

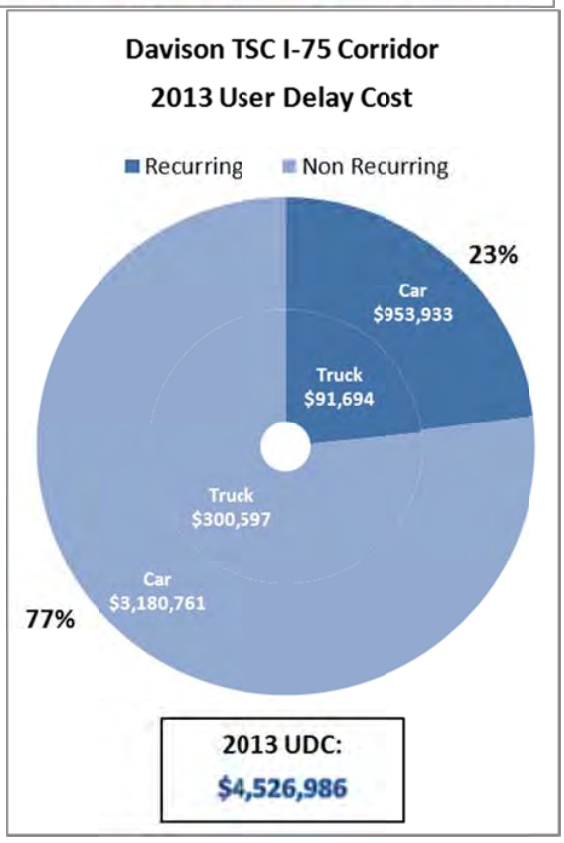
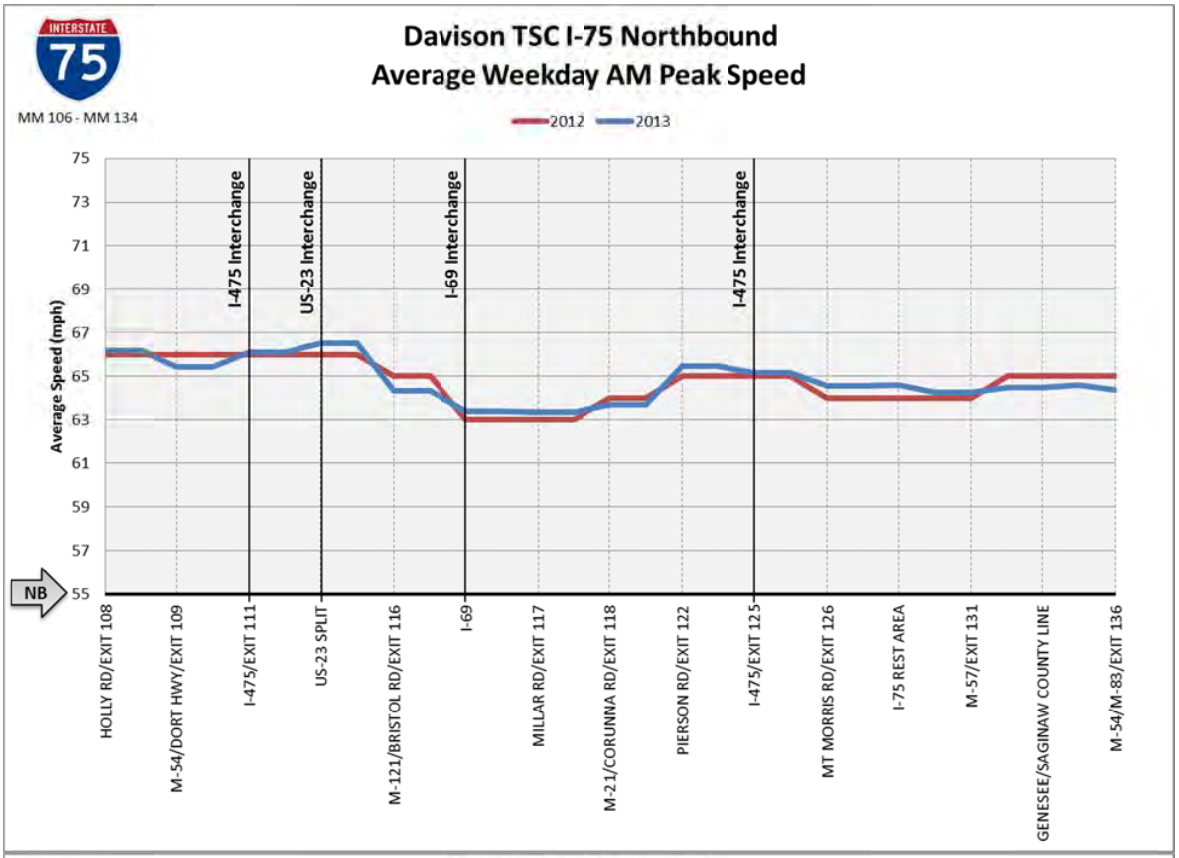

Davison TSC I-75 Corridor
2013 User Delay Cost
Recurring
Non Recurring
23%
Car
$953,933
Truck
$91,694
Truck
$300,597
Car
$3,180,761
77%
2013 UDC:
$4,526,986

Figure 21


INTERSTATE 75
MM 106 - MM 134
Davison TSC I-75 Northbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
NB
I-475 Interchange
US-23 Interchange
I-69 Interchange
I-475 Interchange
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
MT MORRIS RD/EXIT 126
I-75 REST AREA
M-57/EXIT 131
GENESEE/SAGINAW COUNTY LINE
M-54/M-83/EXIT 136

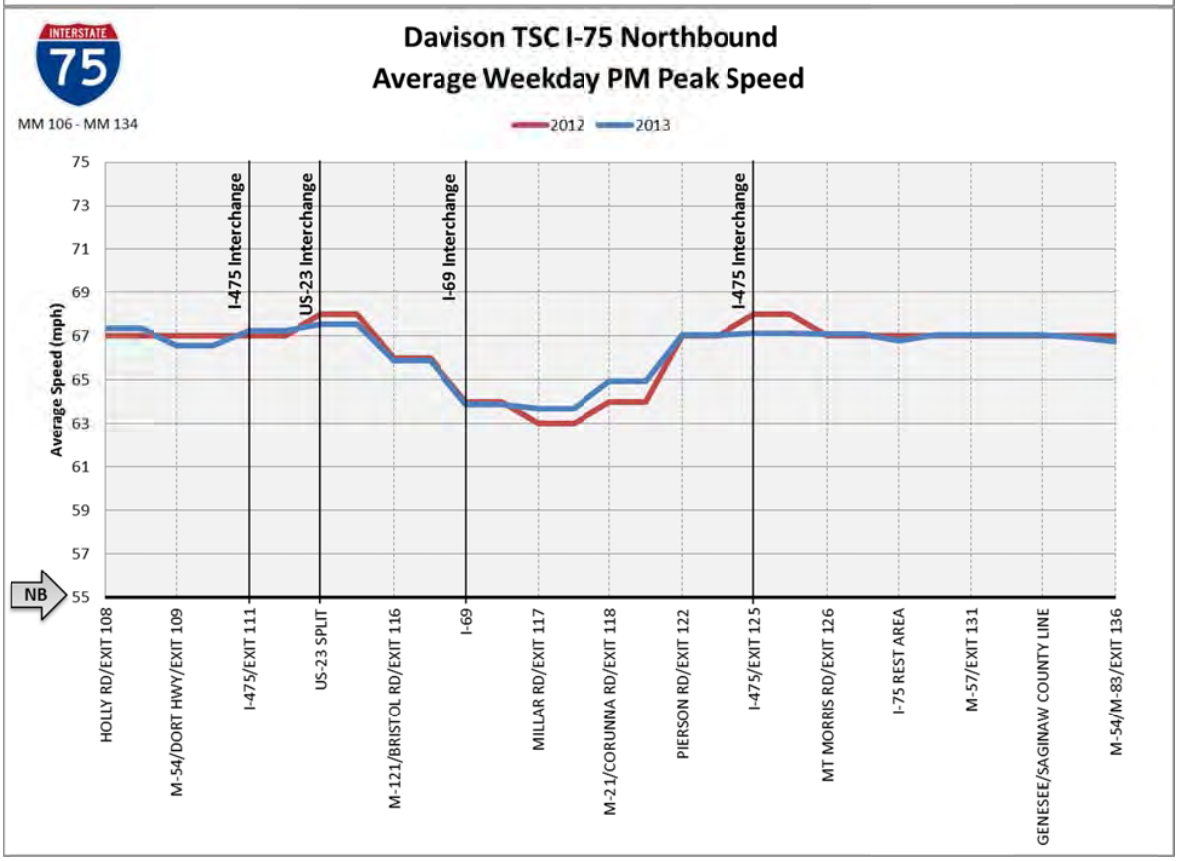
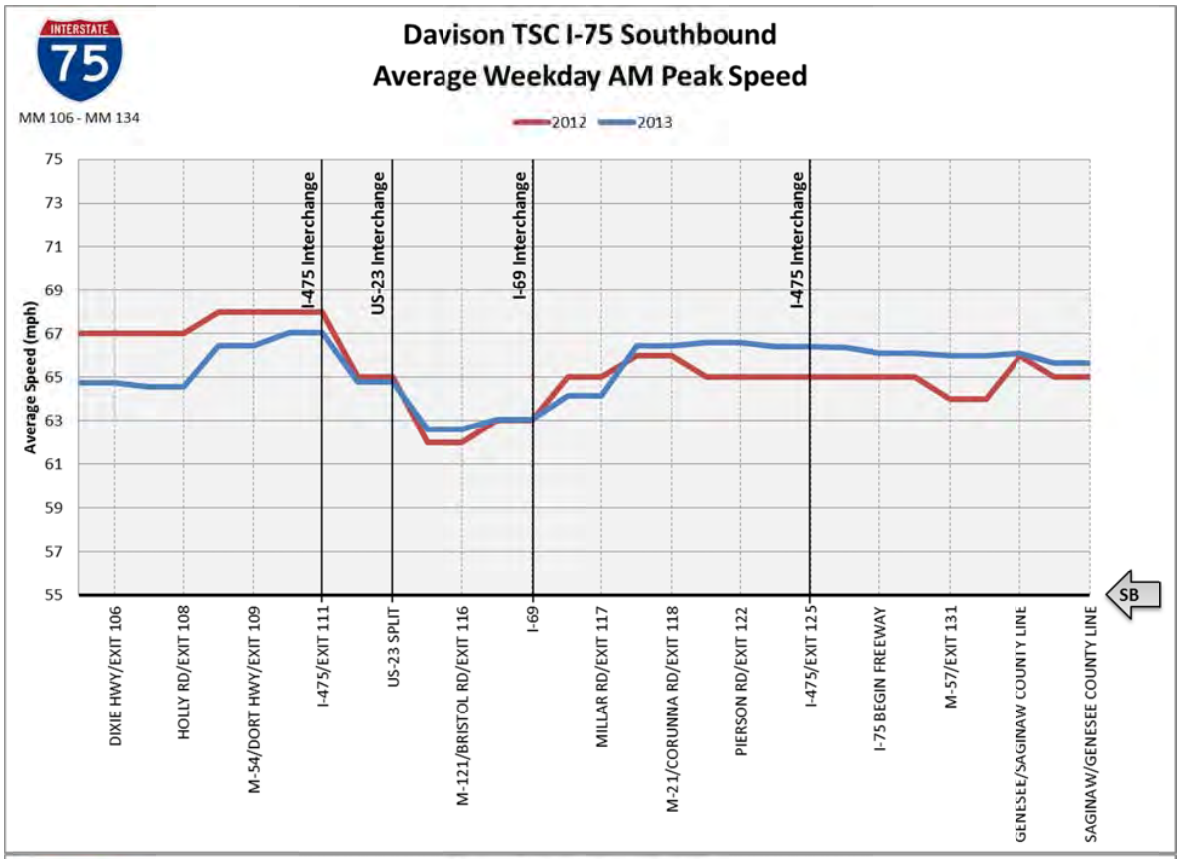

INTERSTATE 75
MM 106 - MM 134
Davison TSC I-75 Northbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
NB
I-475 Interchange
US-23 Interchange
I-69 Interchange
I-475 Interchange
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
MT MORRIS RD/EXIT 126
I-75 REST AREA
M-57/EXIT 131
GENESEE/SAGINAW COUNTY LINE
M-54/M-83/EXIT 136

Figure 22


INTERSTATE
75
MM 106 - MM 134
Davison TSC I-75 Southbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
I-475 Interchange
US-23 Interchange
I-69 Interchange
I-475 Interchange
SB
DIXIE HWY/EXIT 106
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
I-75 BEGIN FREEWAY
M-57/EXIT 131
GENESEE/SAGINAW COUNTY LINE
SAGINAW/GENESEE COUNTY LINE

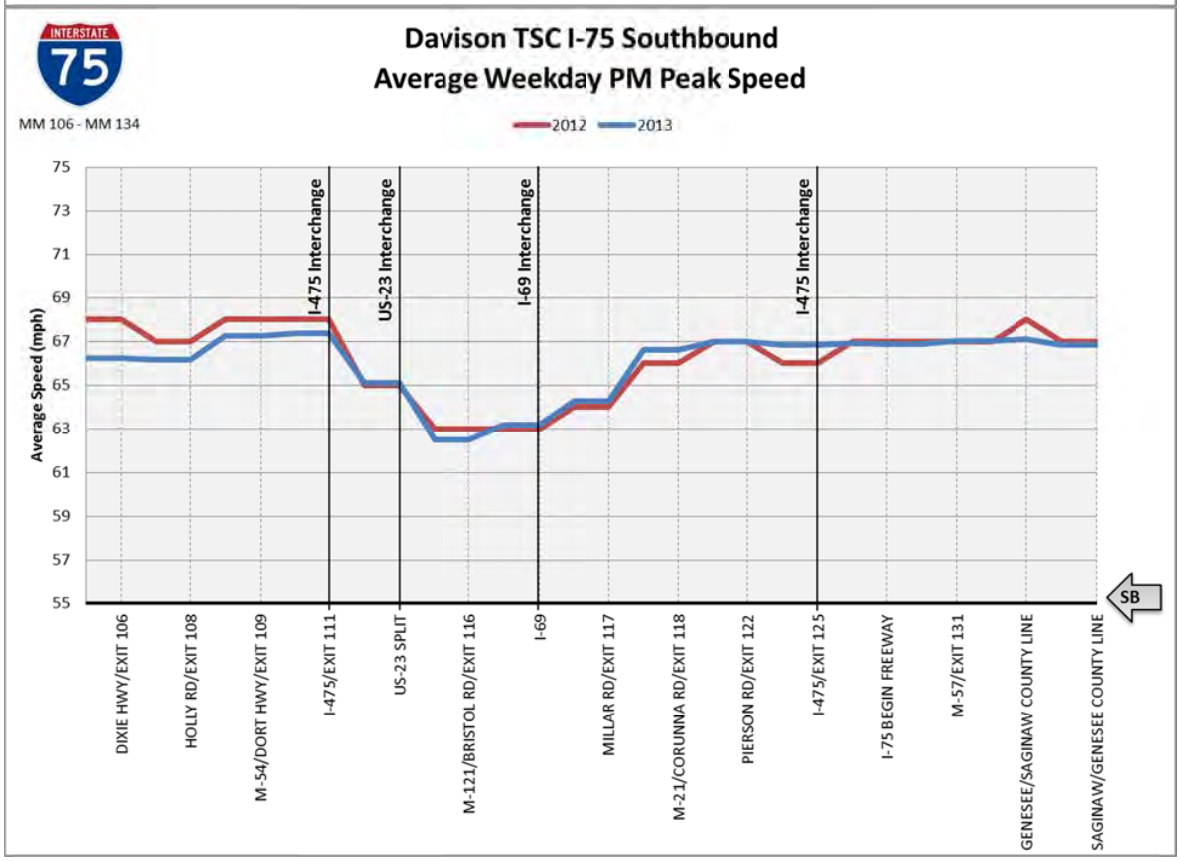
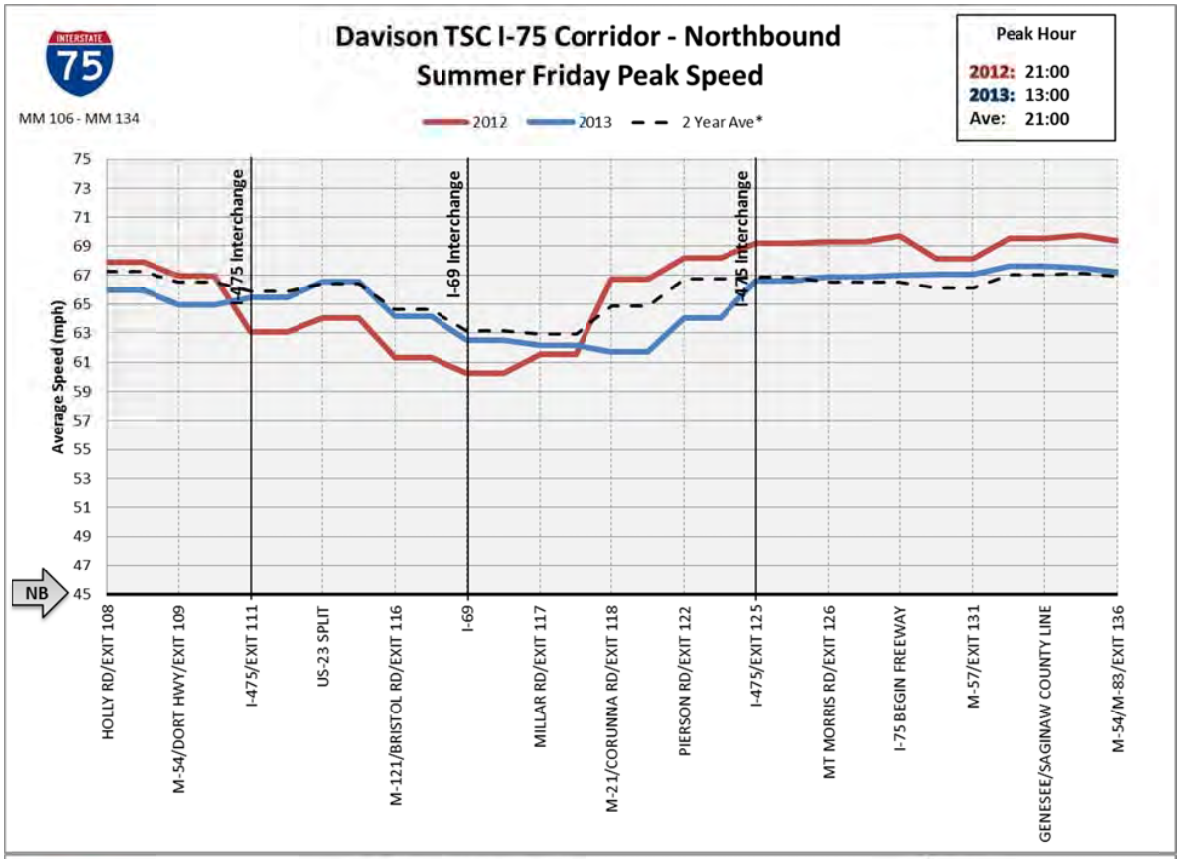

INTERSTATE
75
MM 106 - MM 134
Davison TSC I-75 Southbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
I-475 Interchange
US-23 Interchange
I-69 Interchange
I-475 Interchange
SB
DIXIE HWY/EXIT 106
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
I-75 BEGIN FREEWAY
M-57/EXIT 131
GENESEE/SAGINAW COUNTY LINE
SAGINAW/GENESEE COUNTY LINE

Figure 23


Davison TSC I-75 Corridor - Northbound
Summer Friday Peak Speed
MM 106 - MM 134
2012
2013
2 Year Ave*
Peak Hour
2012: 21:00
2013: 13:00
Ave: 21:00
Average Speed (mph)
I-475 Interchange
I-69 Interchange
I-475 Interchange
NB
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
MT MORRIS RD/EXIT 126
I-75 BEGIN FREEWAY
M-57/EXIT 131
GENESEE/SAGINAW COUNTY LINE
M-54/M-83/EXIT 136

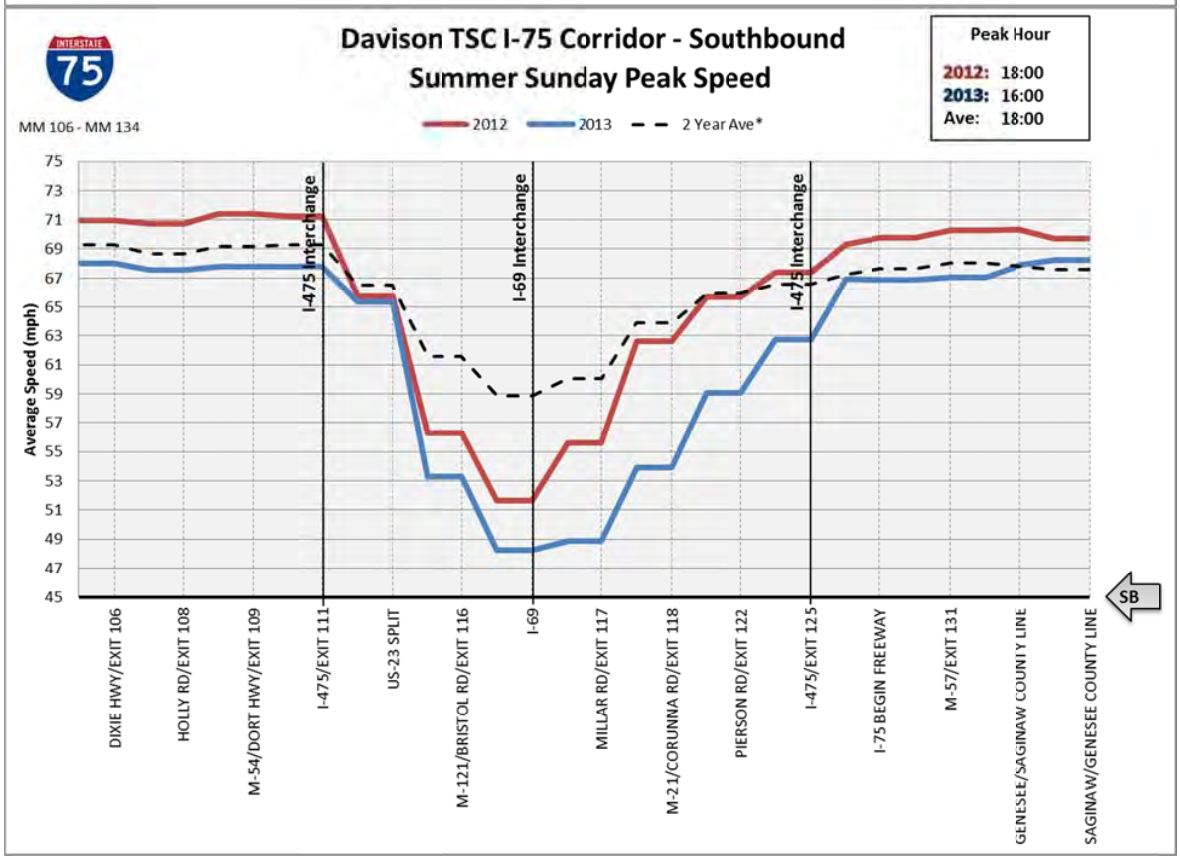
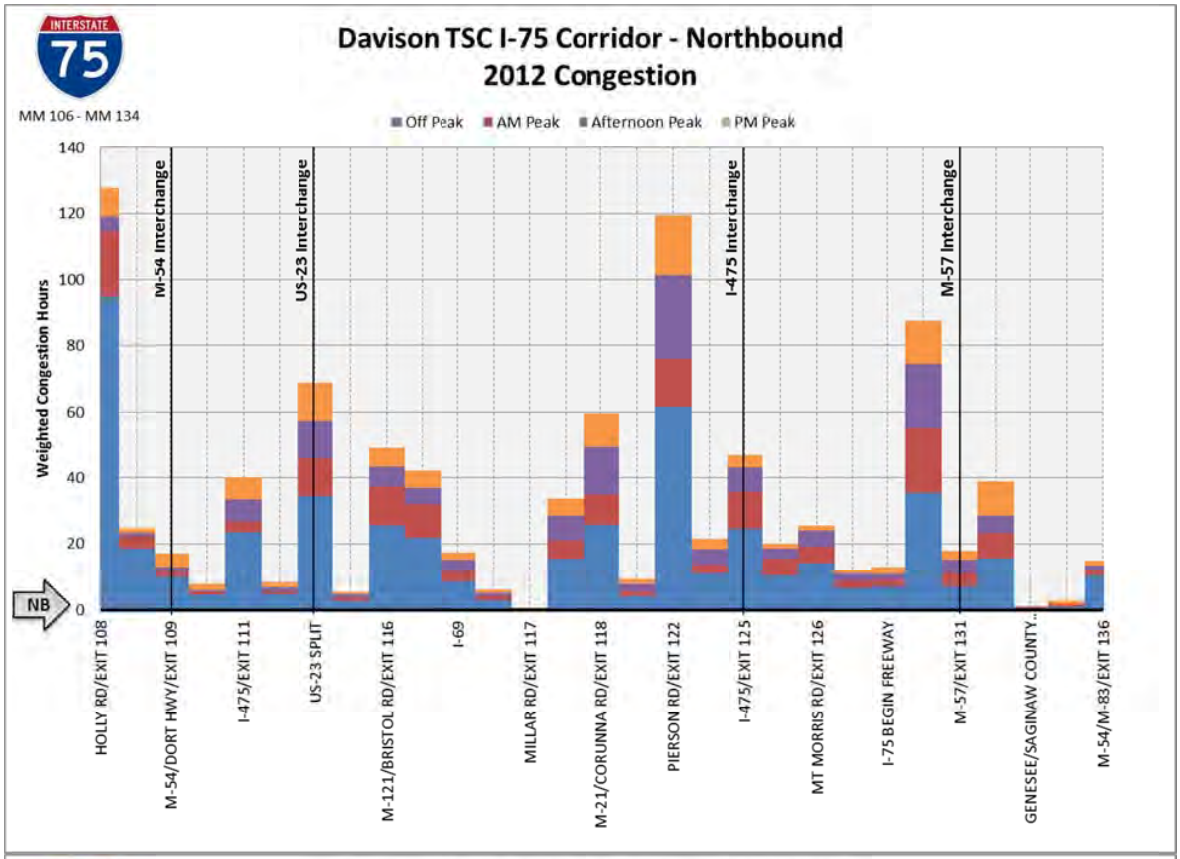

Davison TSC I-75 Corridor - Southbound
Summer Sunday Peak Speed
MM 106 - MM 134
2012
2013
2 Year Ave*
Peak Hour
2012: 18:00
2013: 16:00
Ave: 18:00
Average Speed (mph)
I-475 Interchange
I-69 Interchange
I-475 Interchange
SB
DIXIE HWY/EXIT 106
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
I-75 BEGIN FREEWAY
M-57/EXIT 131
GENESEE/SAGINAW COUNTY LINE
SAGINAW/GENESEE COUNTY LINE

Figure 24


INTERSTATE
75
MM 106 - MM 134
Davison TSC I-75 Corridor - Northbound
2012 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
140
120
100
80
60
40
20
0
NB
M-54 Interchange
US-23 Interchange
I-475 Interchange
M-57 Interchange
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
MT MORRIS RD/EXIT 126
I-75 BEGIN FREEWAY
M-57/EXIT 131
GENESEE/SAGINAW COUNTY...
M-54/M-83/EXIT 136

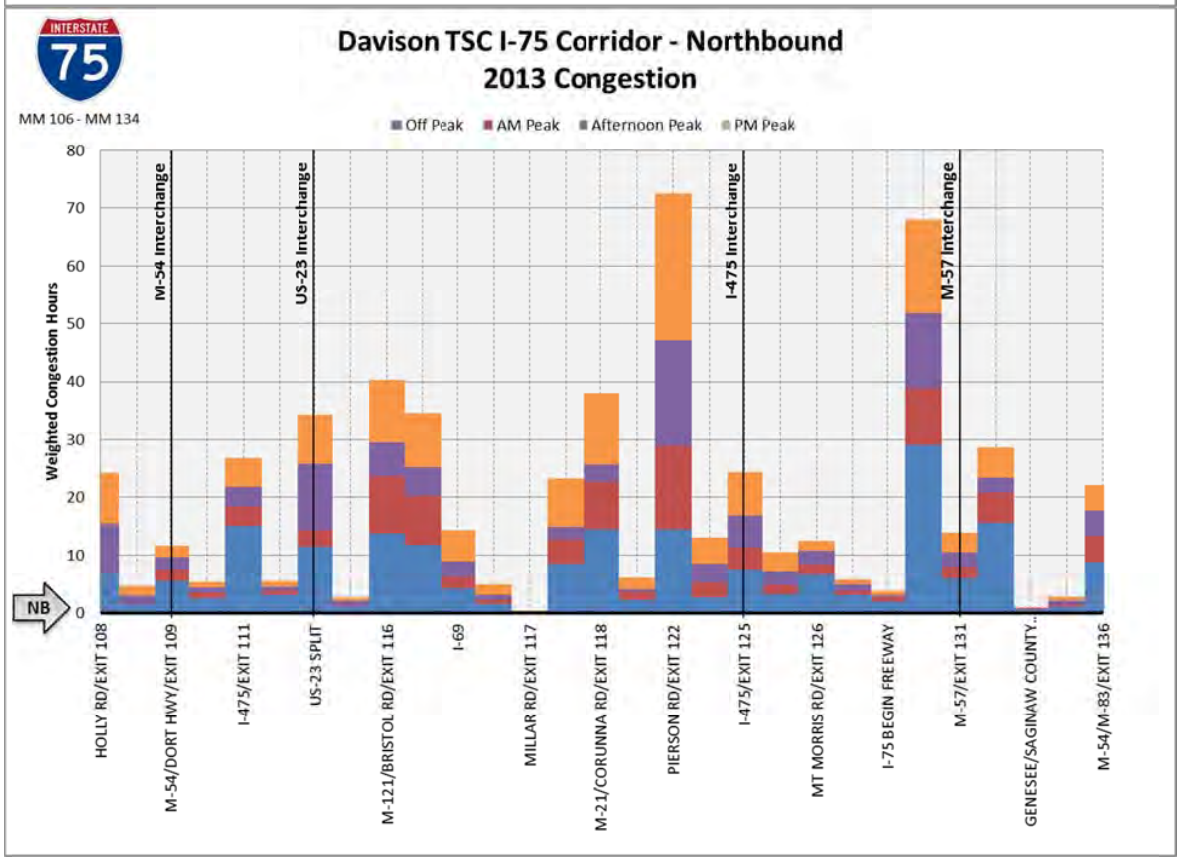
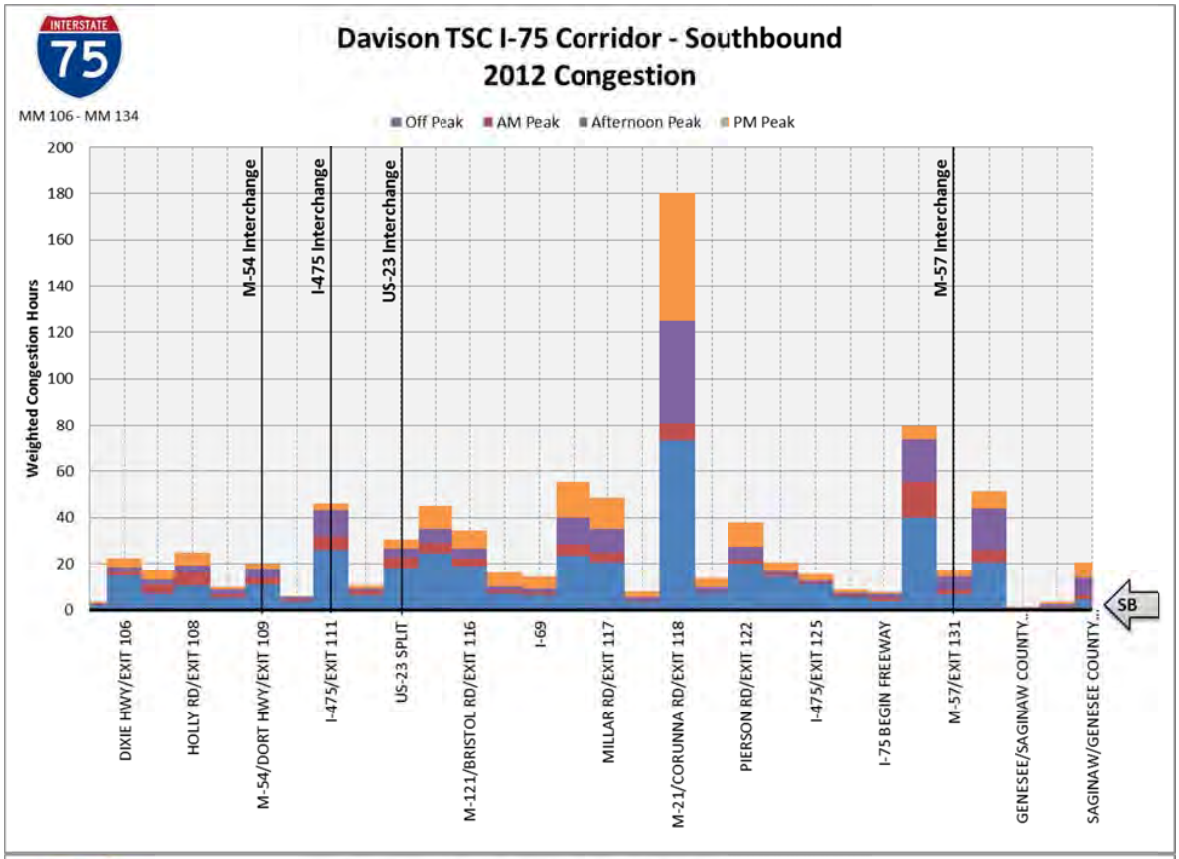

INTERSTATE
75
MM 106 - MM 134
Davison TSC I-75 Corridor - Northbound
2013 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
80
70
60
50
40
30
20
10
0
NB
M-54 Interchange
US-23 Interchange
I-475 Interchange
M-57 Interchange
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
MT MORRIS RD/EXIT 126
I-75 BEGIN FREEWAY
M-57/EXIT 131
GENESEE/SAGINAW COUNTY...
M-54/M-83/EXIT 136

Figure 25


INTERSTATE 75
Davison TSC I-75 Corridor - Southbound
2012 Congestion
MM 106 - MM 134
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
200
180
160
140
120
100
80
60
40
20
0
M-54 Interchange
I-475 Interchange
US-23 Interchange
M-57 Interchange
SB
DIXIE HWY/EXIT 106
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
I-75 BEGIN FREEWAY
M-57/EXIT 131
GENESEE/SAGINAW COUNTY...
SAGINAW/GENESEE COUNTY...

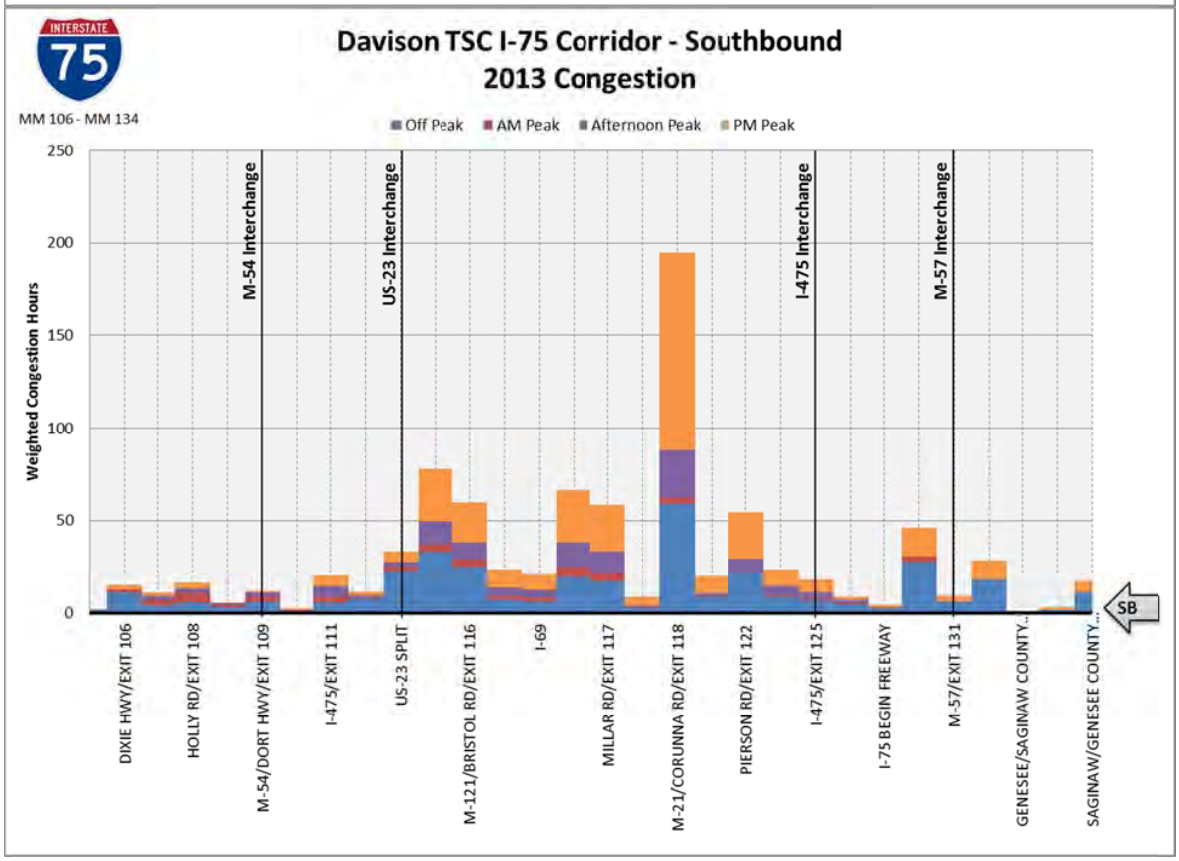
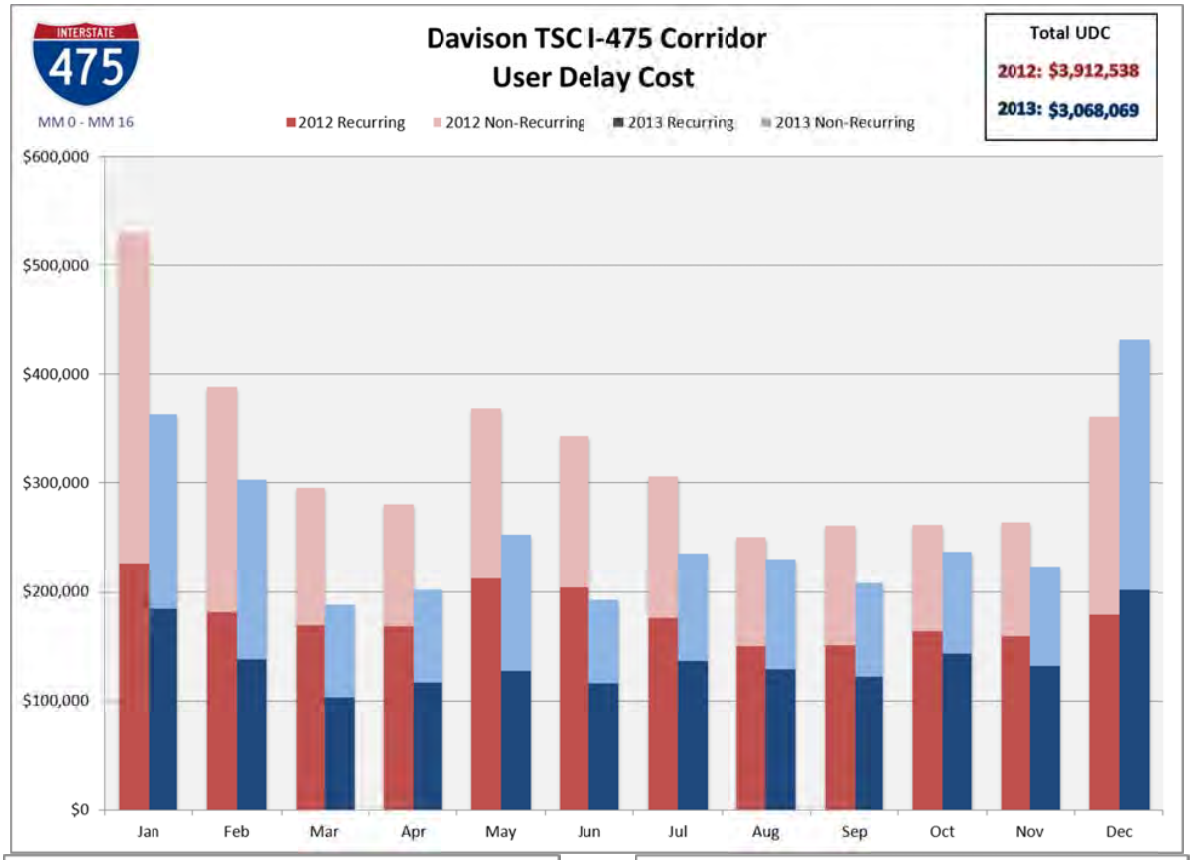
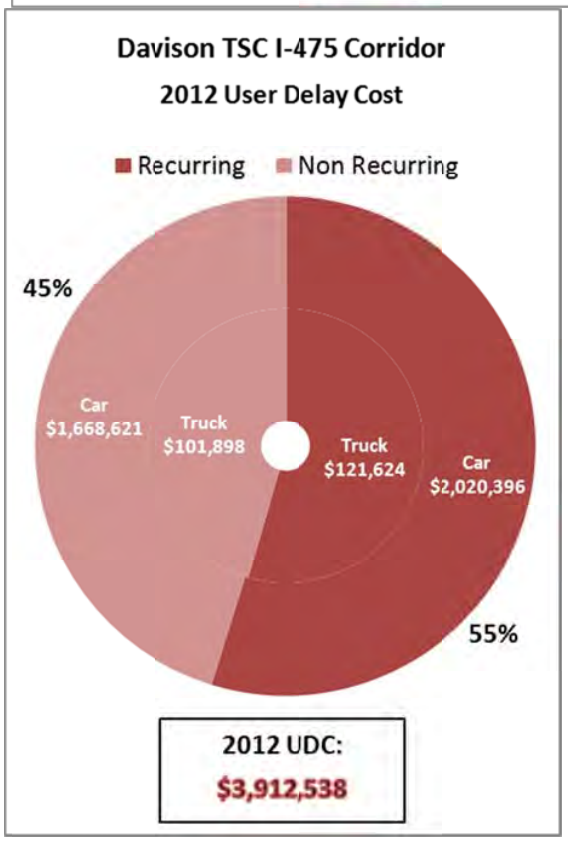

INTERSTATE 75
Davison TSC I-75 Corridor - Southbound
2013 Congestion
MM 106 - MM 134
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
250
200
150
100
50
0
M-54 Interchange
US-23 Interchange
I-475 Interchange
M-57 Interchange
SB
DIXIE HWY/EXIT 106
HOLLY RD/EXIT 108
M-54/DORT HWY/EXIT 109
I-475/EXIT 111
US-23 SPLIT
M-121/BRISTOL RD/EXIT 116
I-69
MILLAR RD/EXIT 117
M-21/CORUNNA RD/EXIT 118
PIERSON RD/EXIT 122
I-475/EXIT 125
I-75 BEGIN FREEWAY
M-57/EXIT 131
GENESEE/SAGINAW COUNTY...
SAGINAW/GENESEE COUNTY...

Figure 26


INTERSTATE
475
MM 0 - MM 16
Davison TSC I-475 Corridor
User Delay Cost
Total UDC
2012: $3,912,538
2013: $3,068,069
2012 Recurring
2012 Non-Recurring
2013 Recurring
2013 Non-Recurring
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Davison TSC I-475 Corridor
2012 User Delay Cost
Recurring
Non Recurring
45%
Car
$1,668,621
Truck
$101,898
Truck
$121,624
Car
$2,020,396
55%
2012 UDC:
$3,912,538

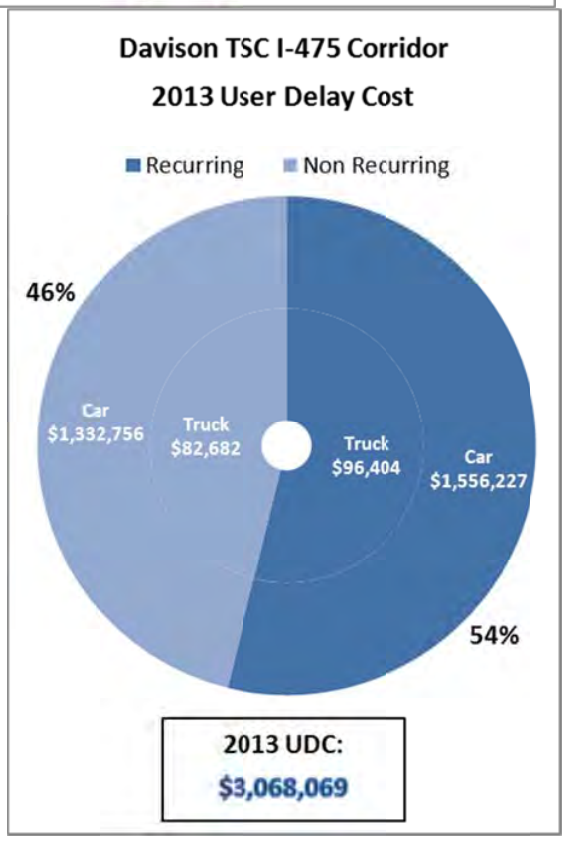
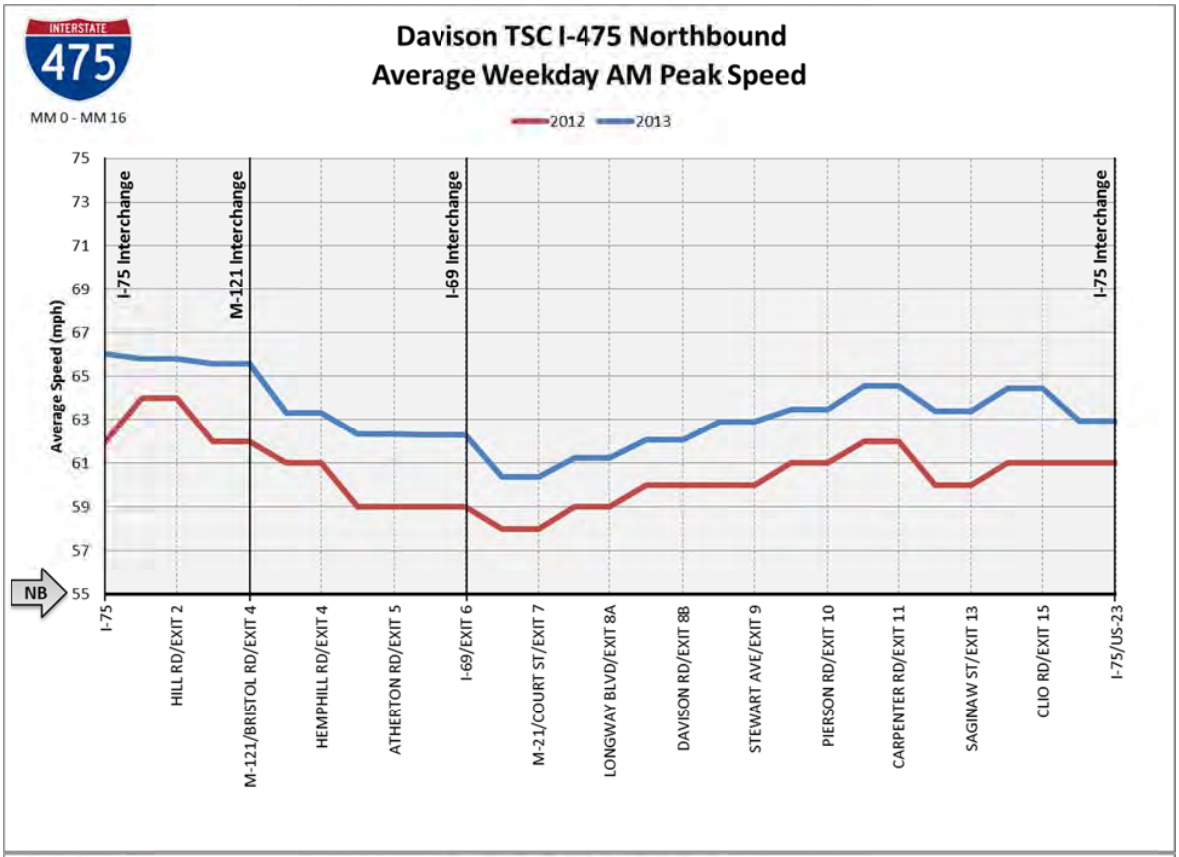

Davison TSC I-475 Corridor
2013 User Delay Cost
Recurring
Non Recurring
46%
Car
$1,332,756
Truck
$82,682
Truck
$96,404
Car
$1,556,227
54%
2013 UDC:
$3,068,069

Figure 27


INTERSTATE
475
MM 0 - MM 16
Davison TSC I-475 Northbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
NB
I-75 Interchange
M-121 Interchange
I-69 Interchange
I-75 Interchange
I-75
HILL RD/EXIT 2
M-121/BRISTOL RD/EXIT 4
HEMPHILL RD/EXIT 4
ATHERTON RD/EXIT 5
I-69/EXIT 6
M-21/COURT ST/EXIT 7
LONGWAY BLVD/EXIT 8A
DAVISON RD/EXIT 8B
STEWART AVE/EXIT 9
PIERSON RD/EXIT 10
CARPENTER RD/EXIT 11
SAGINAW ST/EXIT 13
CLIO RD/EXIT 15
I-75/US-23

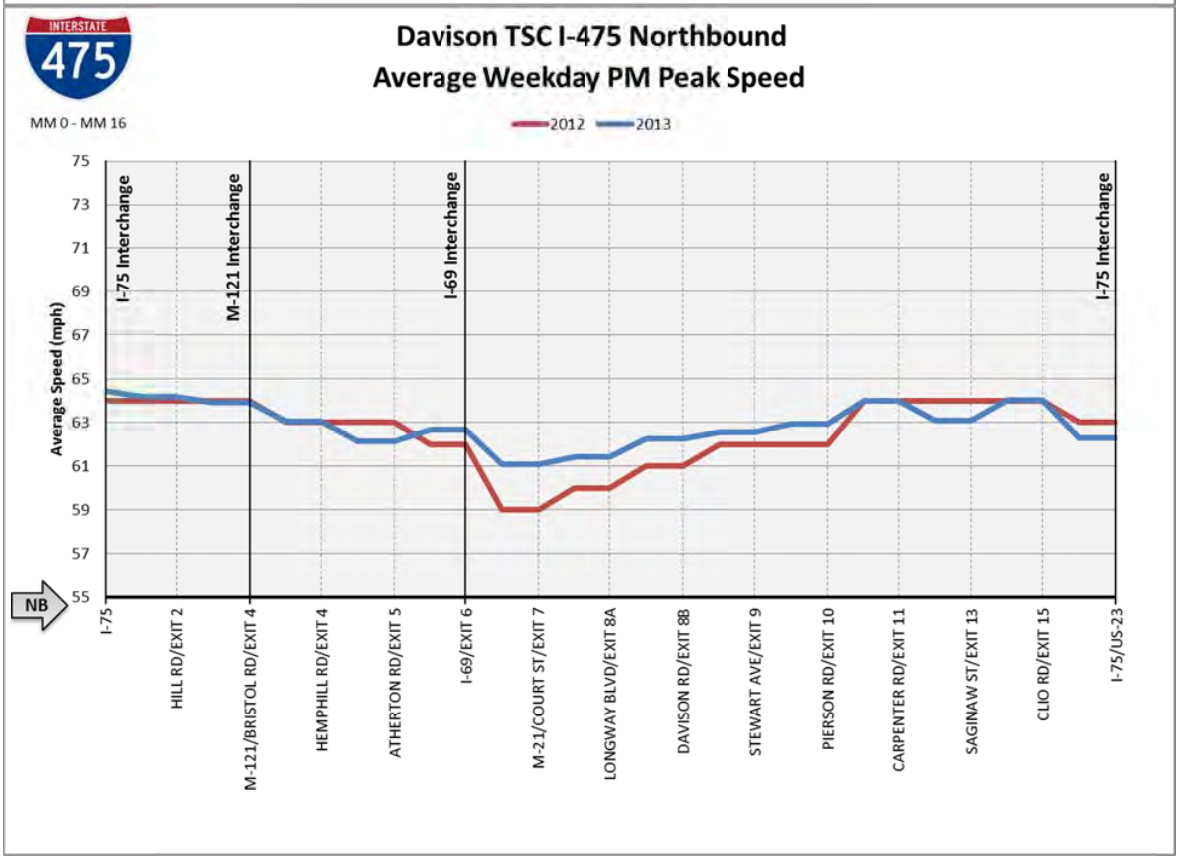
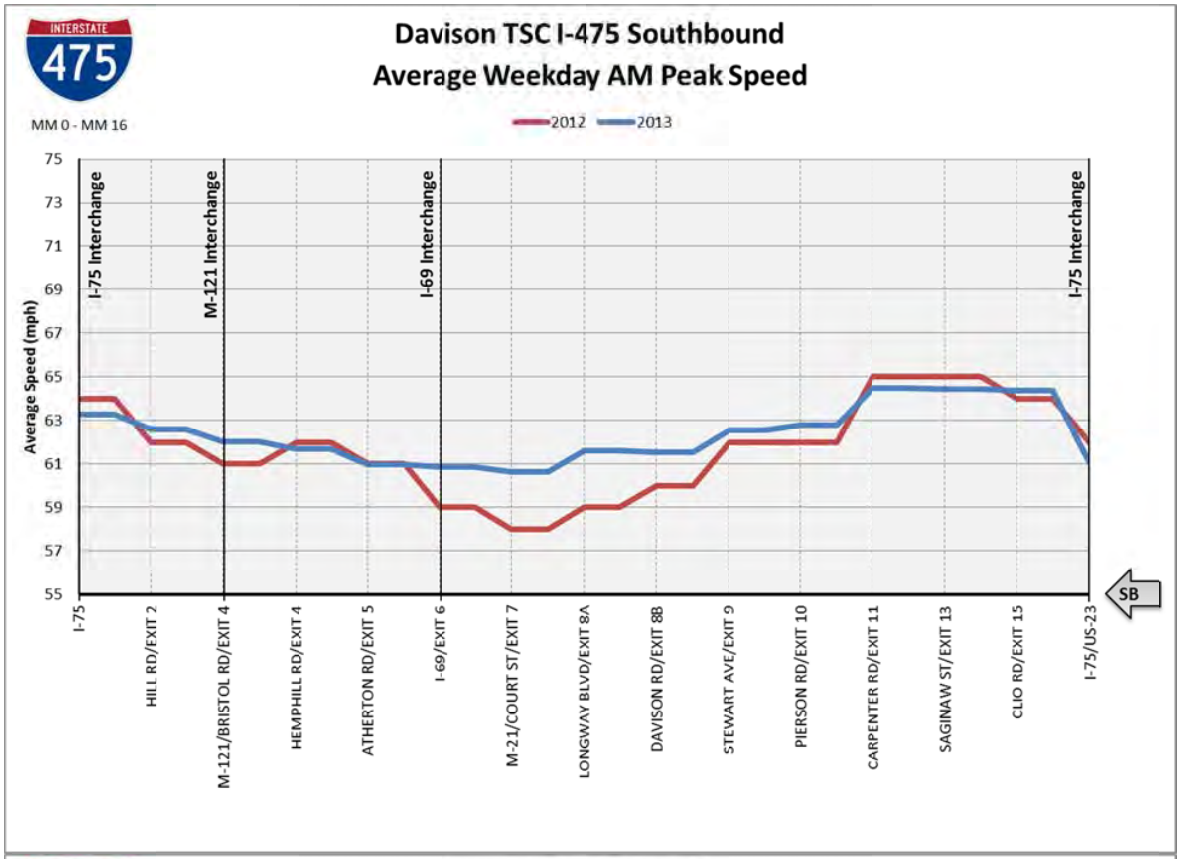

INTERSTATE
475
MM 0 - MM 16
Davison TSC I-475 Northbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
NB
I-75 Interchange
M-121 Interchange
I-69 Interchange
I-75 Interchange
I-75
HILL RD/EXIT 2
M-121/BRISTOL RD/EXIT 4
HEMPHILL RD/EXIT 4
ATHERTON RD/EXIT 5
I-69/EXIT 6
M-21/COURT ST/EXIT 7
LONGWAY BLVD/EXIT 8A
DAVISON RD/EXIT 8B
STEWART AVE/EXIT 9
PIERSON RD/EXIT 10
CARPENTER RD/EXIT 11
SAGINAW ST/EXIT 13
CLIO RD/EXIT 15
I-75/US-23

Figure 28


INTERSTATE
475
Davison TSC I-475 Southbound
Average Weekday AM Peak Speed
MM 0 - MM 16
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
I-75 Interchange
M-121 Interchange
I-69 Interchange
I-75 Interchange
I-75
HILL RD/EXIT 2
M-121/BRISTOL RD/EXIT 4
HEMPHILL RD/EXIT 4
ATHERTON RD/EXIT 5
I-69/EXIT 6
M-21/COURT ST/EXIT 7
LONGWAY BLVD/EXIT 8A
DAVISON RD/EXIT 8B
STEWART AVE/EXIT 9
PIERSON RD/EXIT 10
CARPENTER RD/EXIT 11
SAGINAW ST/EXIT 13
CLIO RD/EXIT 15
I-75/US-23
SB

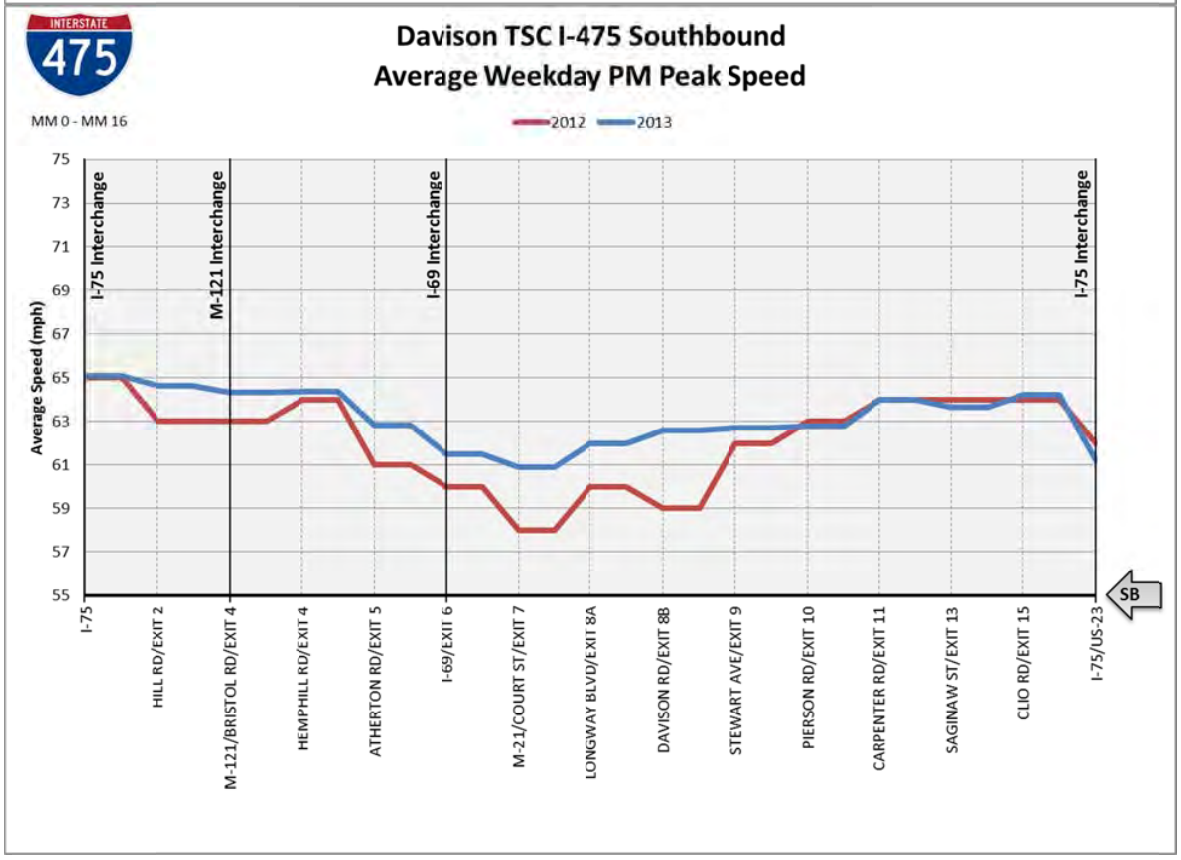
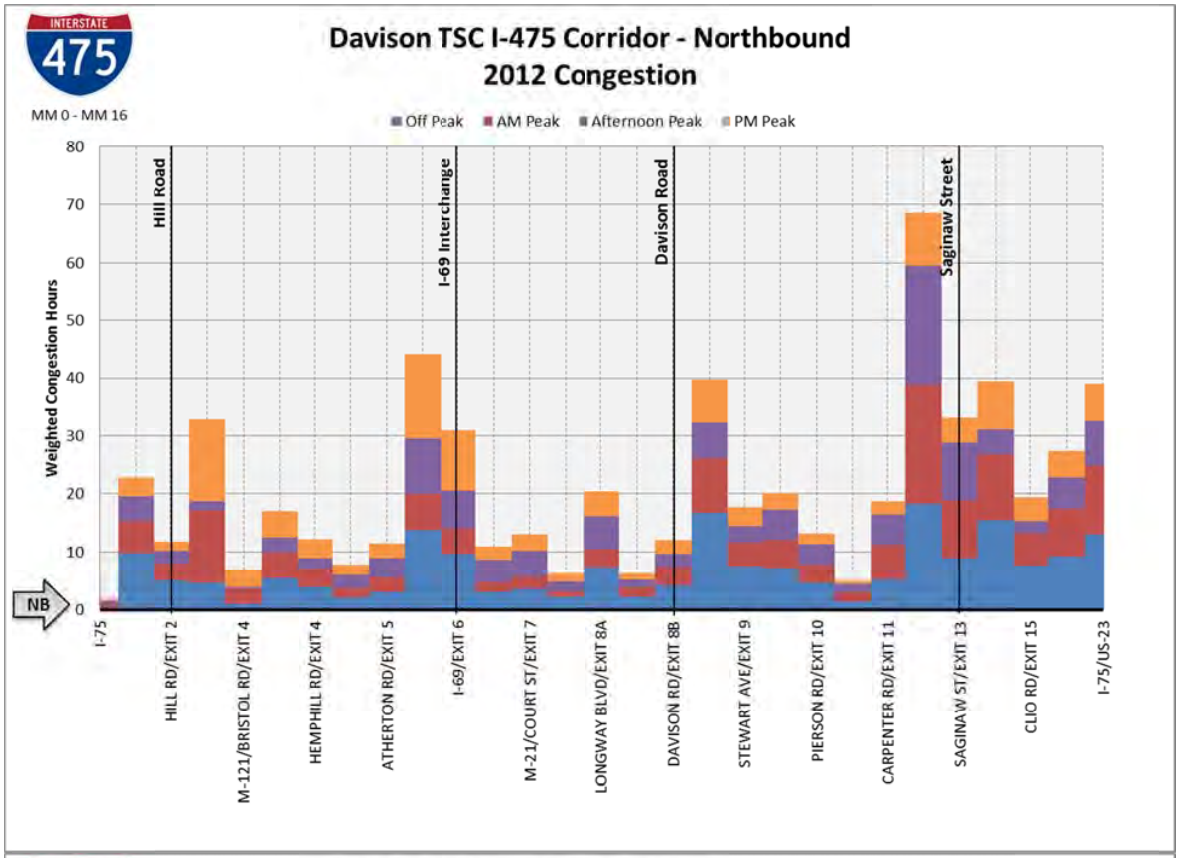

INTERSTATE
475
Davison TSC I-475 Southbound
Average Weekday PM Peak Speed
MM 0 - MM 16
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
I-75 Interchange
M-121 Interchange
I-69 Interchange
I-75 Interchange
I-75
HILL RD/EXIT 2
M-121/BRISTOL RD/EXIT 4
HEMPHILL RD/EXIT 4
ATHERTON RD/EXIT 5
I-69/EXIT 6
M-21/COURT ST/EXIT 7
LONGWAY BLVD/EXIT 8A
DAVISON RD/EXIT 8B
STEWART AVE/EXIT 9
PIERSON RD/EXIT 10
CARPENTER RD/EXIT 11
SAGINAW ST/EXIT 13
CLIO RD/EXIT 15
I-75/US-23
SB

Figure 29


INTERSTATE
475
MM 0 - MM 16
Davison TSC I-475 Corridor - Northbound
2012 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
0
10
20
30
40
50
60
70
80
NB
Hill Road
I-69 Interchange
Davison Road
Saginaw Street
I-75
HILL RD/EXIT 2
M-121/BRISTOL RD/EXIT 4
HEMPHILL RD/EXIT 4
ATHERTON RD/EXIT 5
I-69/EXIT 6
M-21/COURT ST/EXIT 7
LONGWAY BLVD/EXIT 8A
DAVISON RD/EXIT 8B
STEWART AVE/EXIT 9
PIERSON RD/EXIT 10
CARPENTER RD/EXIT 11
SAGINAW ST/EXIT 13
CLIO RD/EXIT 15
I-75/US-23

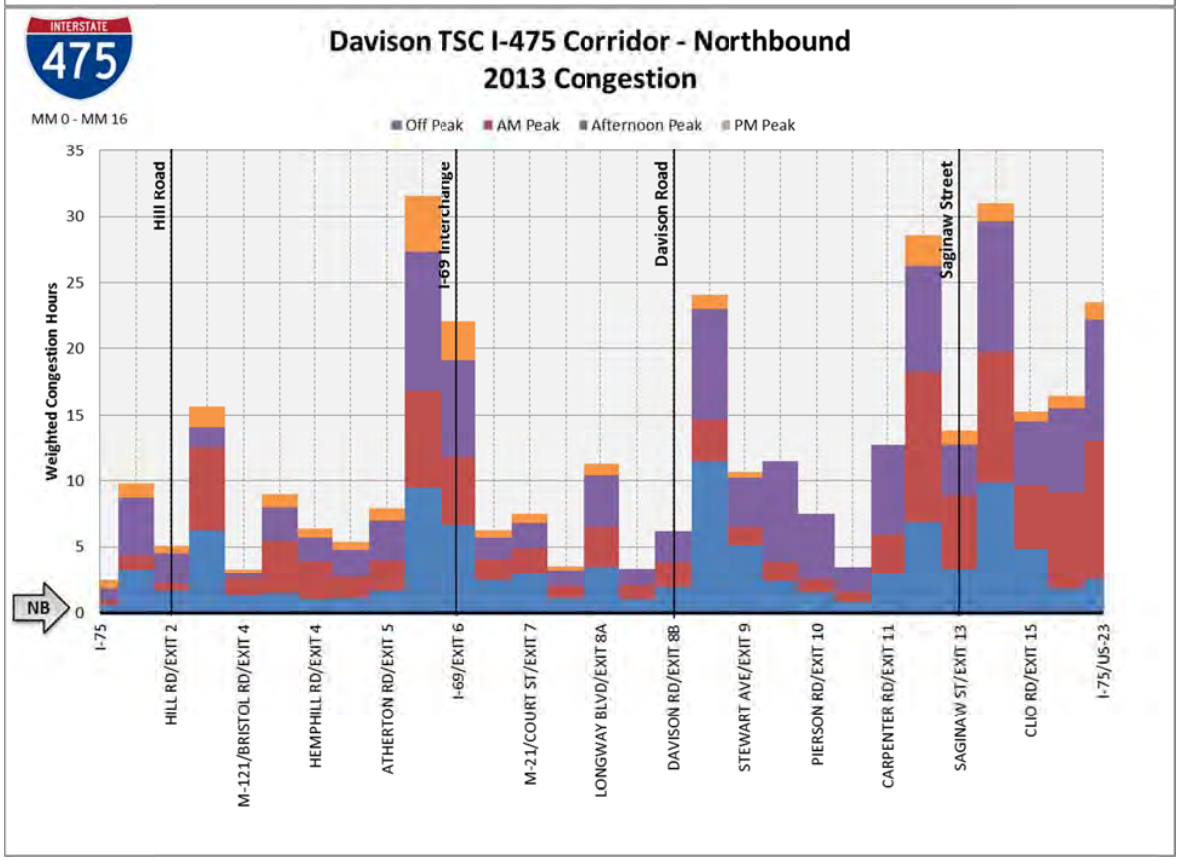
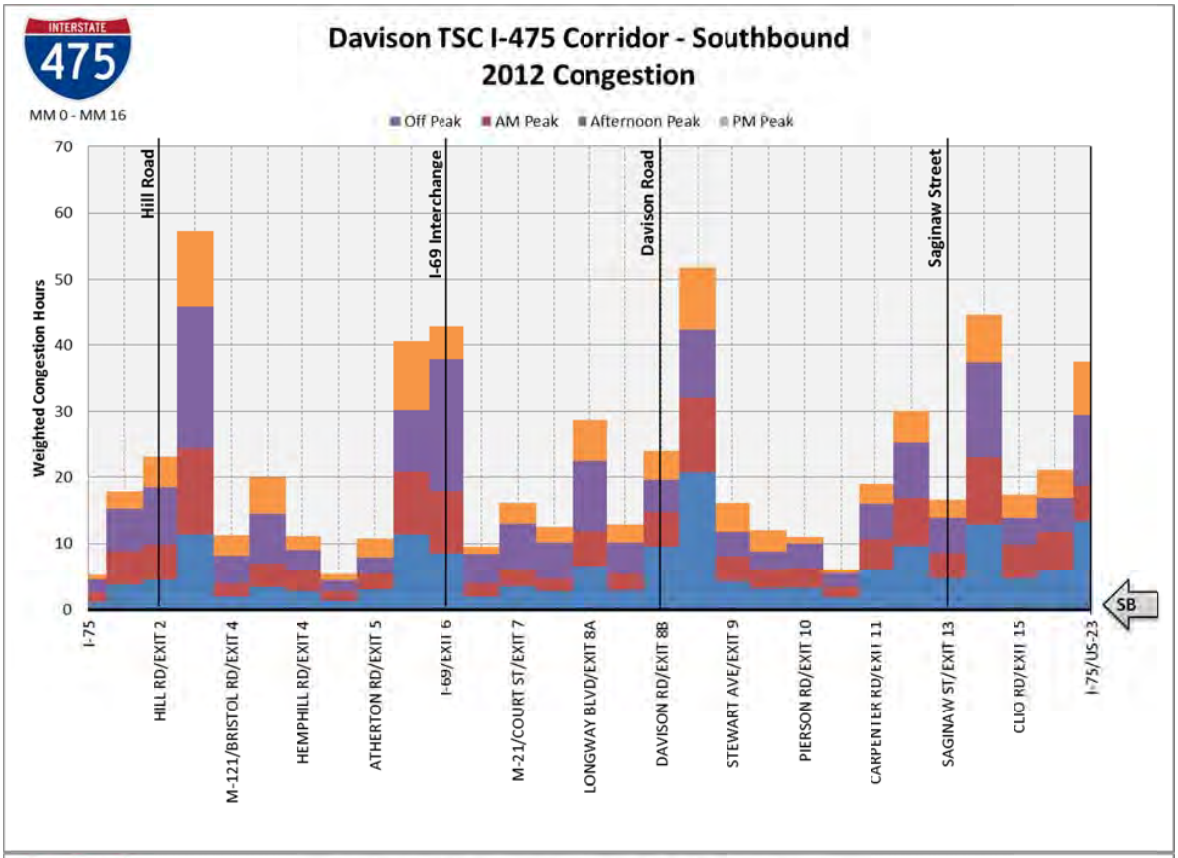

INTERSTATE
475
MM 0 - MM 16
Davison TSC I-475 Corridor - Northbound
2013 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
0
5
10
15
20
25
30
35
NB
Hill Road
I-69 Interchange
Davison Road
Saginaw Street
I-75
HILL RD/EXIT 2
M-121/BRISTOL RD/EXIT 4
HEMPHILL RD/EXIT 4
ATHERTON RD/EXIT 5
I-69/EXIT 6
M-21/COURT ST/EXIT 7
LONGWAY BLVD/EXIT 8A
DAVISON RD/EXIT 8B
STEWART AVE/EXIT 9
PIERSON RD/EXIT 10
CARPENTER RD/EXIT 11
SAGINAW ST/EXIT 13
CLIO RD/EXIT 15
I-75/US-23

Figure 30


INTERSTATE
475
Davison TSC I-475 Corridor - Southbound
2012 Congestion
MM 0 - MM 16
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
0
10
20
30
40
50
60
70
Hill Road
I-69 Interchange
Davison Road
Saginaw Street
I-75
HILL RD/EXIT 2
M-121/BRISTOL RD/EXIT 4
HEMPHILL RD/EXIT 4
ATHERTON RD/EXIT 5
I-69/EXIT 6
M-21/COURT ST/EXIT 7
LONGWAY BLVD/EXIT 8A
DAVISON RD/EXIT 8B
STEWART AVE/EXIT 9
PIERSON RD/EXIT 10
CARPENTER RD/EXIT 11
SAGINAW ST/EXIT 13
CLIO RD/EXIT 15
I-75/US-23
SB

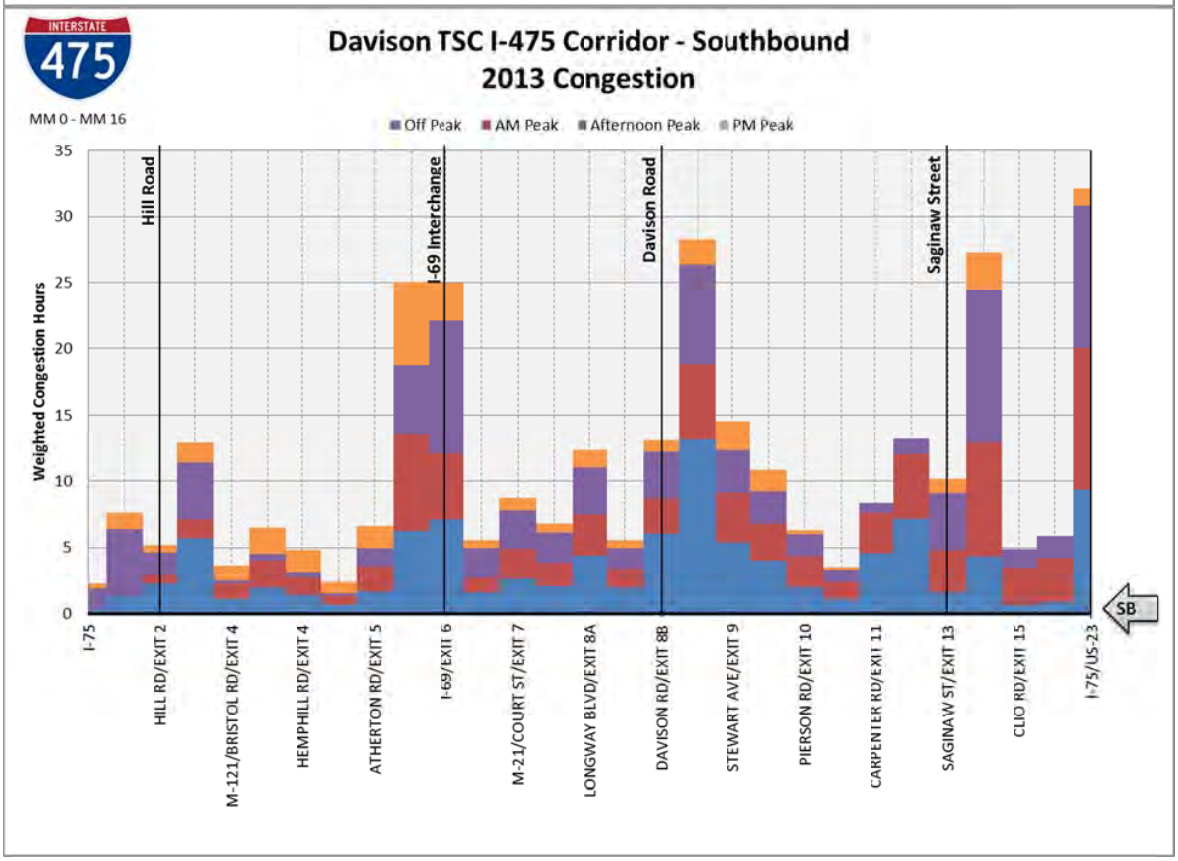
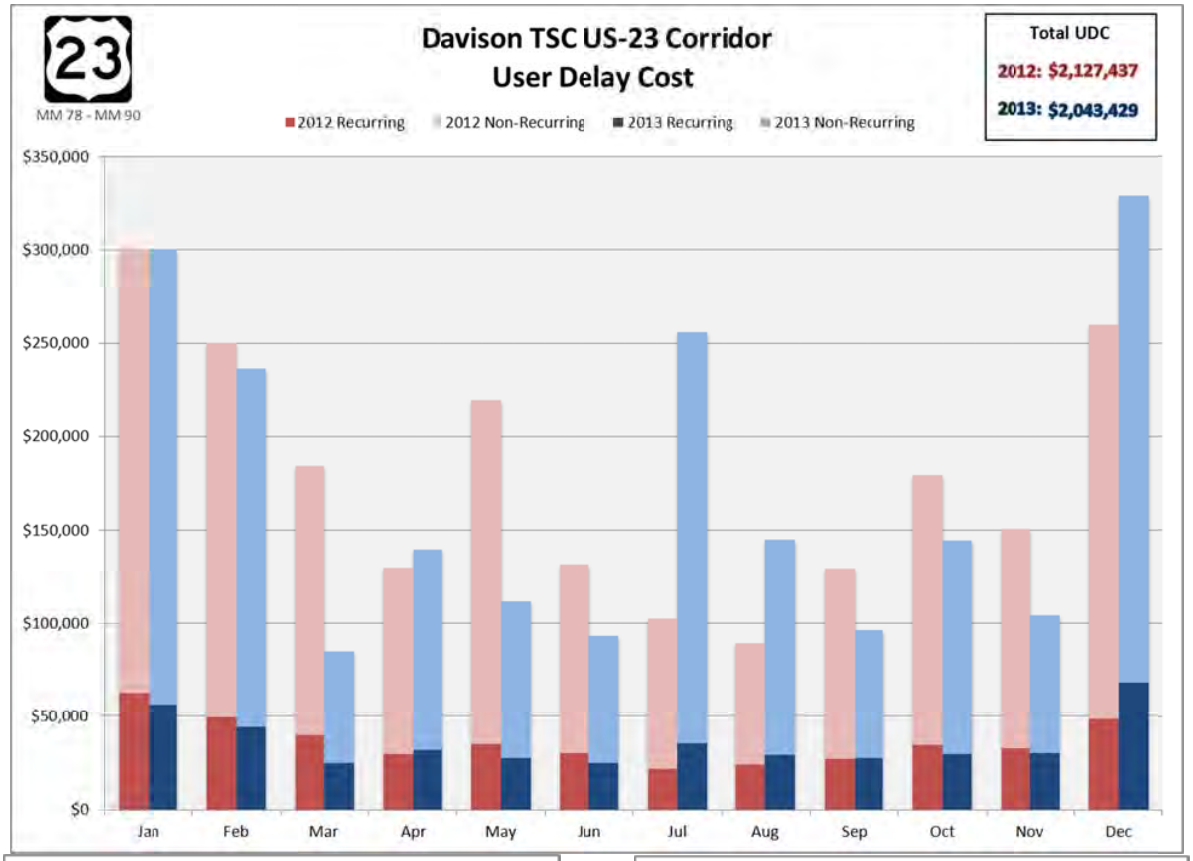
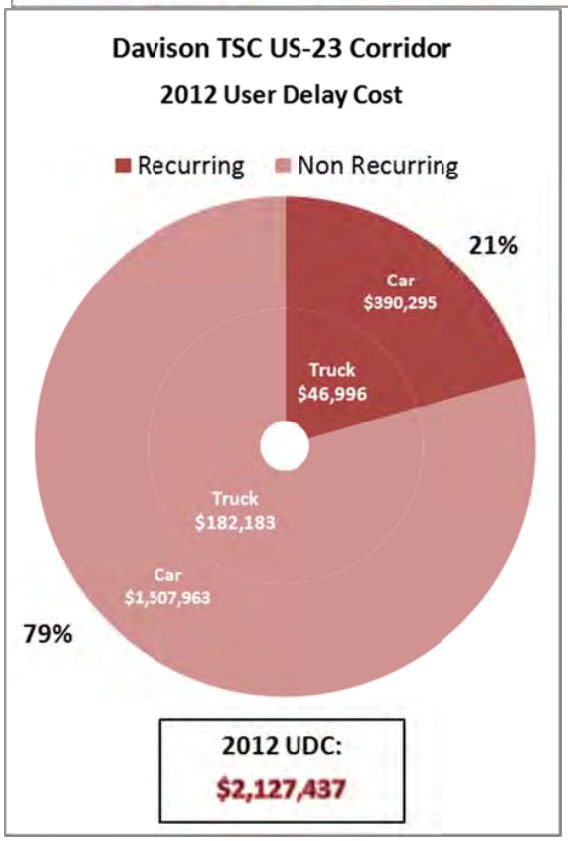

INTERSTATE
475
Davison TSC I-475 Corridor - Southbound
2013 Congestion
MM 0 - MM 16
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
0
5
10
15
20
25
30
35
Hill Road
I-69 Interchange
Davison Road
Saginaw Street
I-75
HILL RD/EXIT 2
M-121/BRISTOL RD/EXIT 4
HEMPHILL RD/EXIT 4
ATHERTON RD/EXIT 5
I-69/EXIT 6
M-21/COURT ST/EXIT 7
LONGWAY BLVD/EXIT 8A
DAVISON RD/EXIT 8B
STEWART AVE/EXIT 9
PIERSON RD/EXIT 10
CARPENTER RD/EXIT 11
SAGINAW ST/EXIT 13
CLIO RD/EXIT 15
I-75/US-23
SB

Figure 31


23
MM 78 - MM 90
Davison TSC US-23 Corridor
User Delay Cost
Total UDC
2012: $2,127,437
2013: $2,043,429
2012 Recurring
2012 Non-Recurring
2013 Recurring
2013 Non-Recurring
$350,000
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Davison TSC US-23 Corridor
2012 User Delay Cost
Recurring
Non Recurring
21%
Car
$390,295
Truck
$46,996
Truck
$182,183
Car
$1,507,963
79%
2012 UDC:
$2,127,437

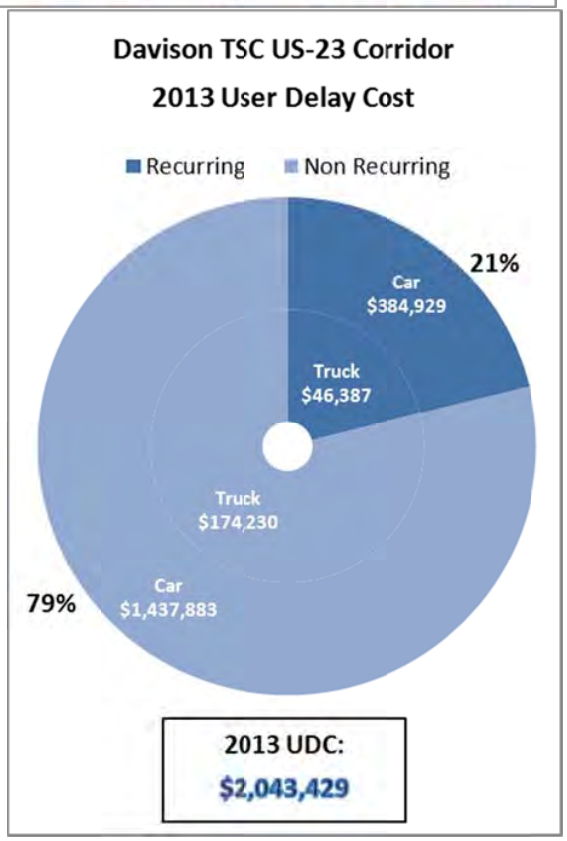
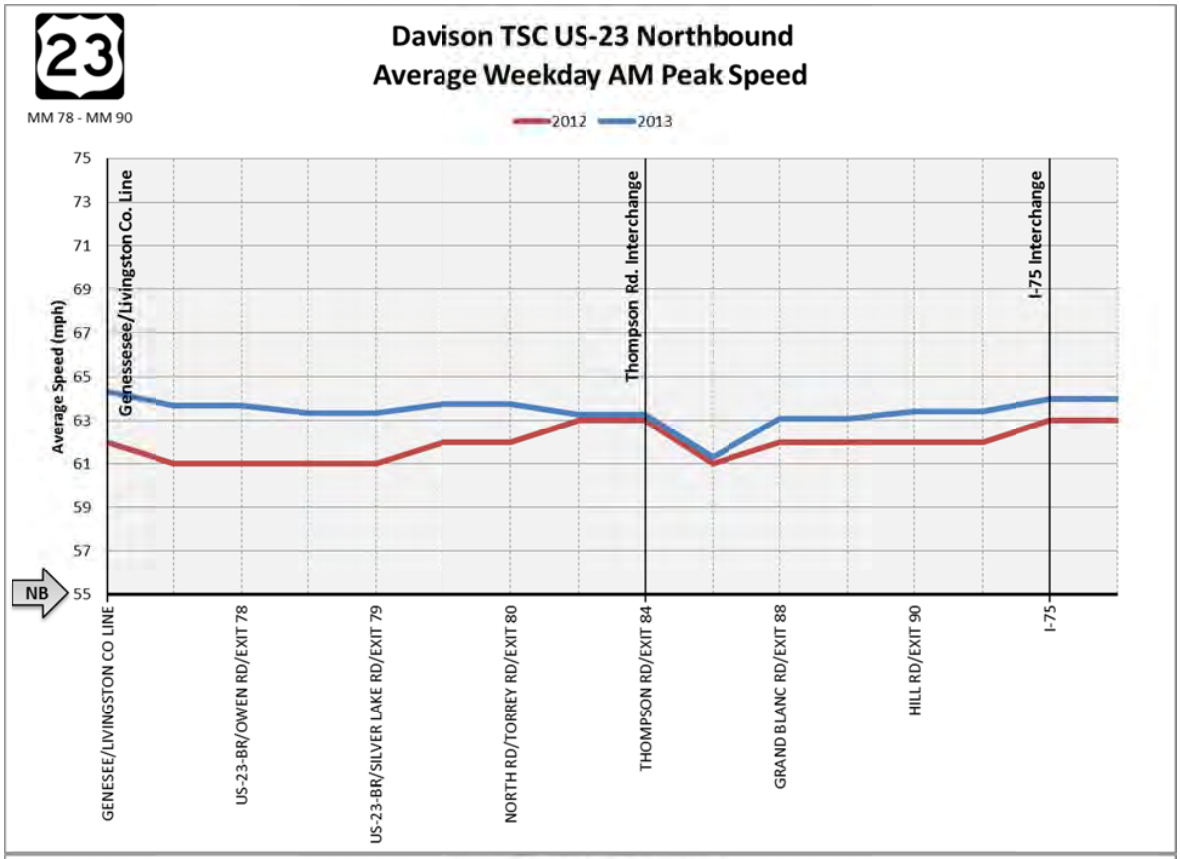

Davison TSC US-23 Corridor
2013 User Delay Cost
Recurring
Non Recurring
21%
Car
$384,929
Truck
$46,387
Truck
$174,230
Car
$1,437,883
79%
2013 UDC:
$2,043,429

Figure 32


23
MM 78 - MM 90
Davison TSC US-23 Northbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
NB
Genessesee/Livingston Co. Line
Thompson Rd. Interchange
I-75 Interchange
GENESEE/LIVINGSTON CO LINE
US-23-BR/OWEN RD/EXIT 78
US-23-BR/SILVER LAKE RD/EXIT 79
NORTH RD/TORREY RD/EXIT 80
THOMPSON RD/EXIT 84
GRAND BLANC RD/EXIT 88
HILL RD/EXIT 90
I-75

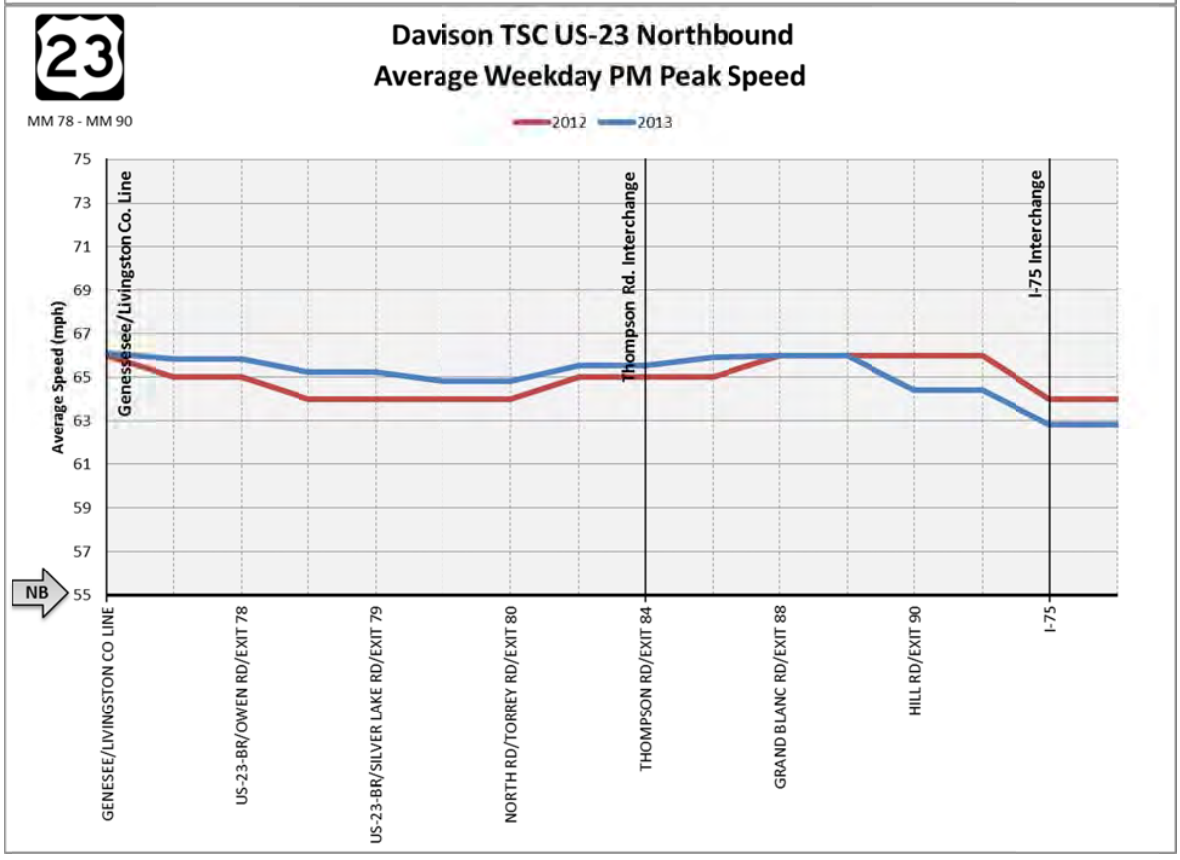
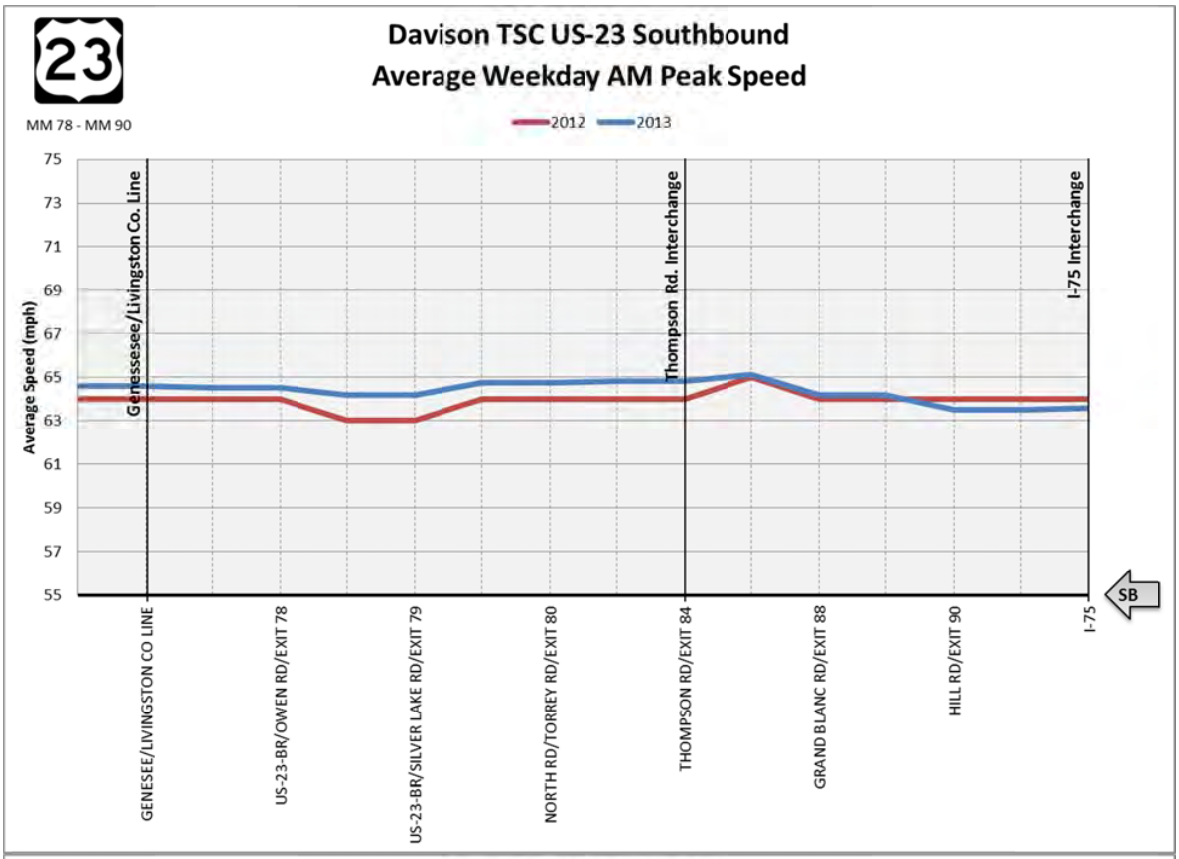

23
MM 78 - MM 90
Davison TSC US-23 Northbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
NB
Genessesee/Livingston Co. Line
Thompson Rd. Interchange
I-75 Interchange
GENESEE/LIVINGSTON CO LINE
US-23-BR/OWEN RD/EXIT 78
US-23-BR/SILVER LAKE RD/EXIT 79
NORTH RD/TORREY RD/EXIT 80
THOMPSON RD/EXIT 84
GRAND BLANC RD/EXIT 88
HILL RD/EXIT 90
I-75

Figure 33


Davison TSC US-23 Southbound
Average Weekday AM Peak Speed
MM 78 - MM 90
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
Genessesee/Livingston Co. Line
Thompson Rd. Interchange
I-75 Interchange
SB
GENESEE/LIVINGSTON CO LINE
US-23-BR/OWEN RD/EXIT 78
US-23-BR/SILVER LAKE RD/EXIT 79
NORTH RD/TORREY RD/EXIT 80
THOMPSON RD/EXIT 84
GRAND BLANC RD/EXIT 88
HILL RD/EXIT 90
I-75

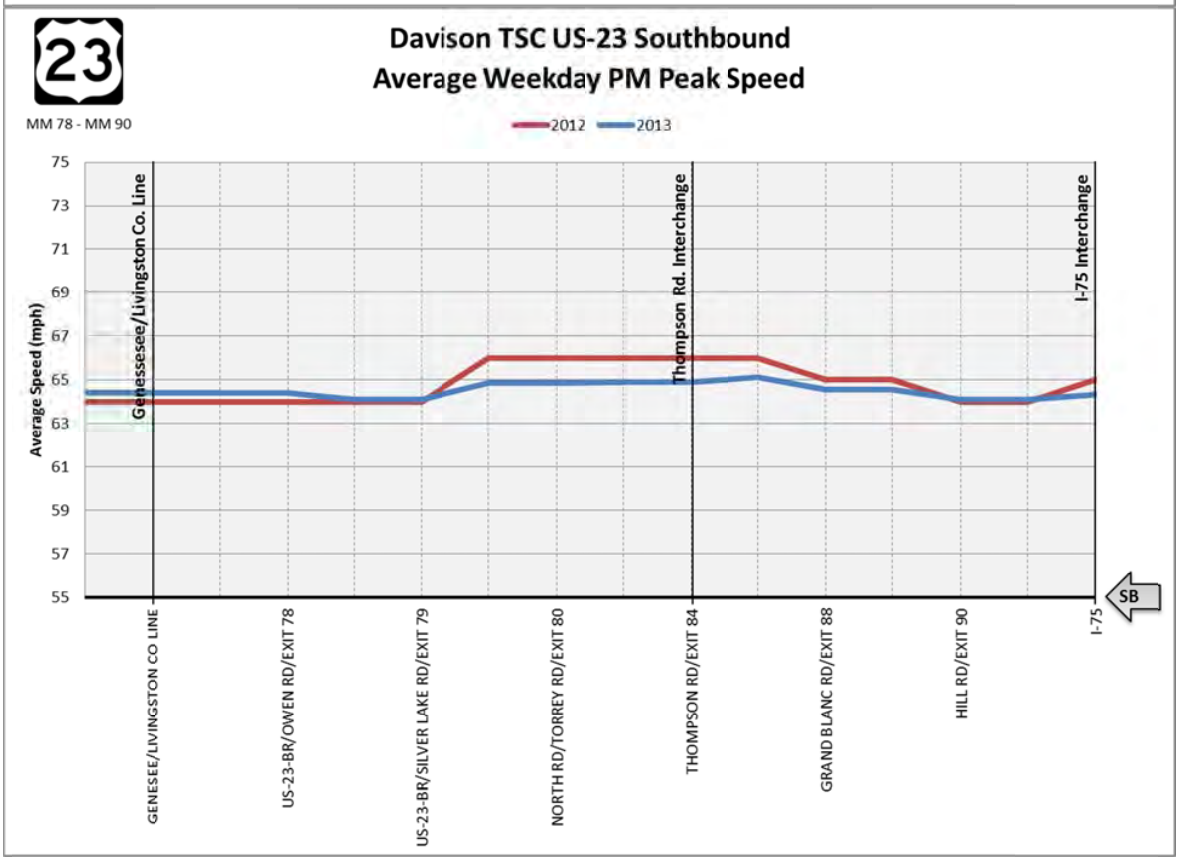
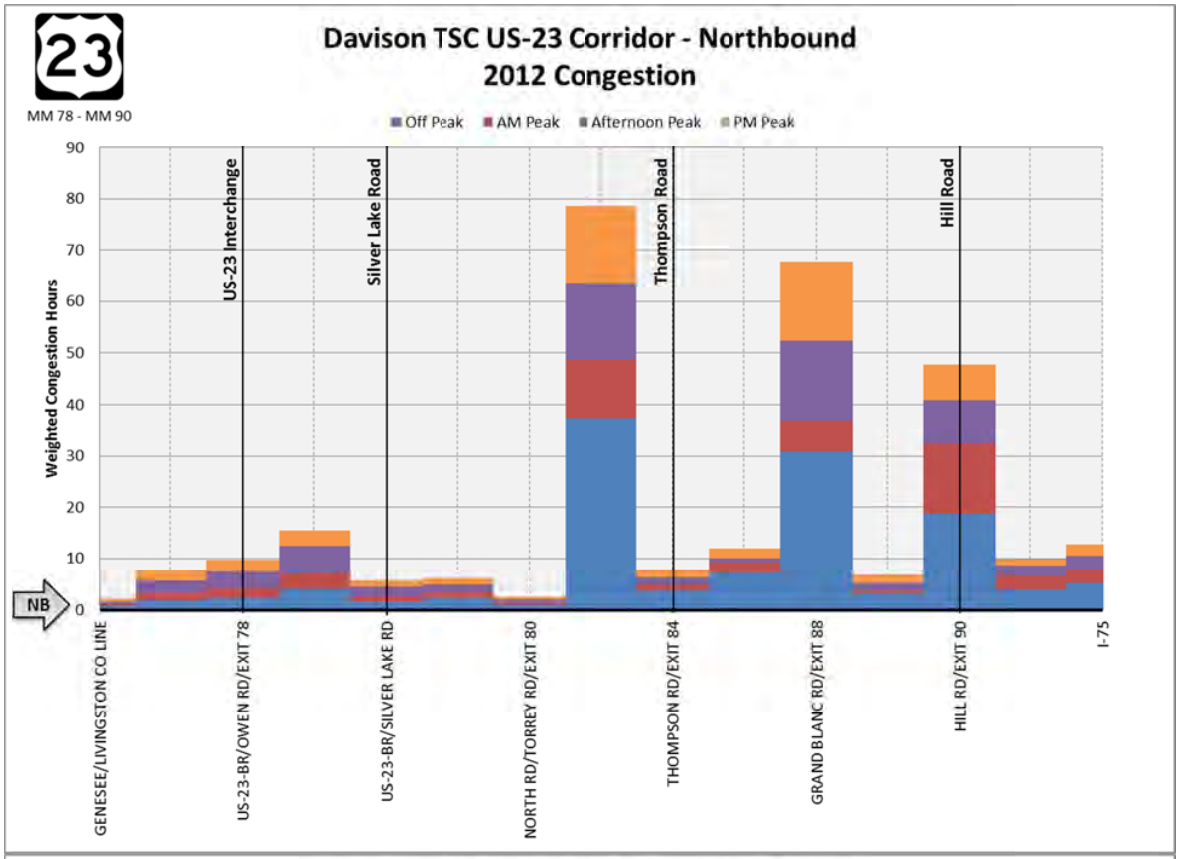

Davison TSC US-23 Southbound
Average Weekday PM Peak Speed
MM 78 - MM 90
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
Genessesee/Livingston Co. Line
Thompson Rd. Interchange
I-75 Interchange
SB
GENESEE/LIVINGSTON CO LINE
US-23-BR/OWEN RD/EXIT 78
US-23-BR/SILVER LAKE RD/EXIT 79
NORTH RD/TORREY RD/EXIT 80
THOMPSON RD/EXIT 84
GRAND BLANC RD/EXIT 88
HILL RD/EXIT 90
I-75

Figure 34


23
MM 78 - MM 90
Davison TSC US-23 Corridor - Northbound
2012 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
0
10
20
30
40
50
60
70
80
90
NB
US-23 Interchange
Silver Lake Road
Thompson Road
Hill Road
GENESEE/LIVINGSTON CO LINE
US-23-BR/OWEN RD/EXIT 78
US-23-BR/SILVER LAKE RD
NORTH RD/TORREY RD/EXIT 80
THOMPSON RD/EXIT 84
GRAND BLANC RD/EXIT 88
HILL RD/EXIT 90
I-75

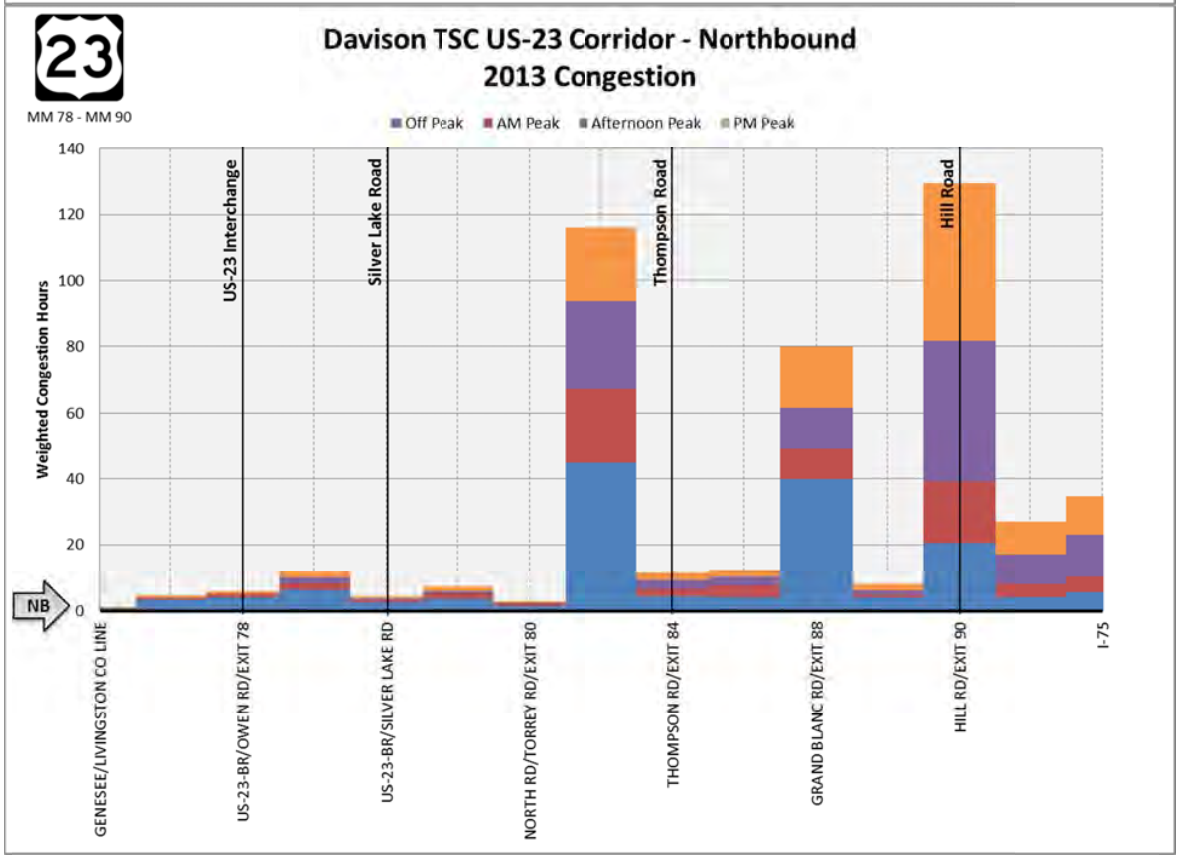
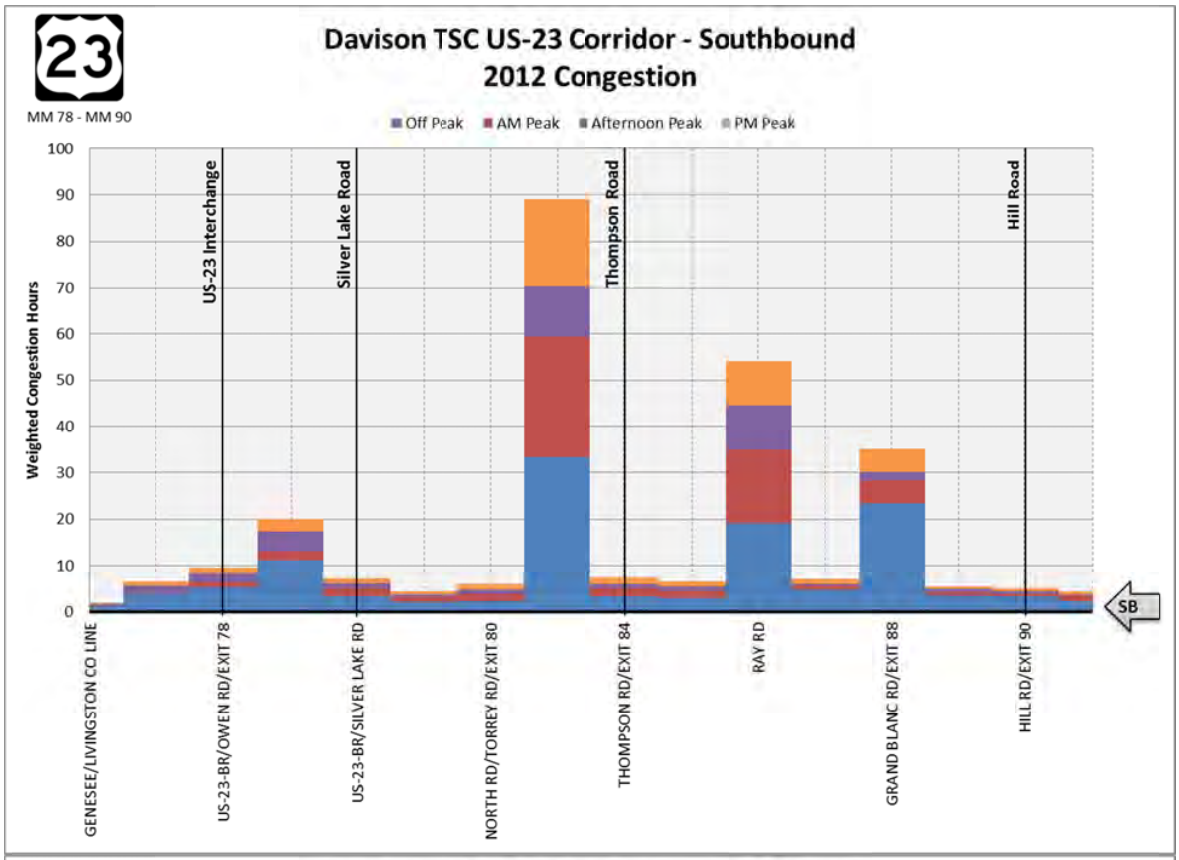

23
MM 78 - MM 90
Davison TSC US-23 Corridor - Northbound
2013 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
0
20
40
60
80
100
120
140
NB
US-23 Interchange
Silver Lake Road
Thompson Road
Hill Road
GENESEE/LIVINGSTON CO LINE
US-23-BR/OWEN RD/EXIT 78
US-23-BR/SILVER LAKE RD
NORTH RD/TORREY RD/EXIT 80
THOMPSON RD/EXIT 84
GRAND BLANC RD/EXIT 88
HILL RD/EXIT 90
I-75

Figure 35


23
Davison TSC US-23 Corridor - Southbound
2012 Congestion
MM 78 - MM 90
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
100
90
80
70
60
50
40
30
20
10
0
US-23 Interchange
Silver Lake Road
Thompson Road
Hill Road
SB
GENESEE/LIVINGSTON CO LINE
US-23-BR/OWEN RD/EXIT 78
US-23-BR/SILVER LAKE RD
NORTH RD/TORREY RD/EXIT 80
THOMPSON RD/EXIT 84
RAY RD
GRAND BLANC RD/EXIT 88
HILL RD/EXIT 90

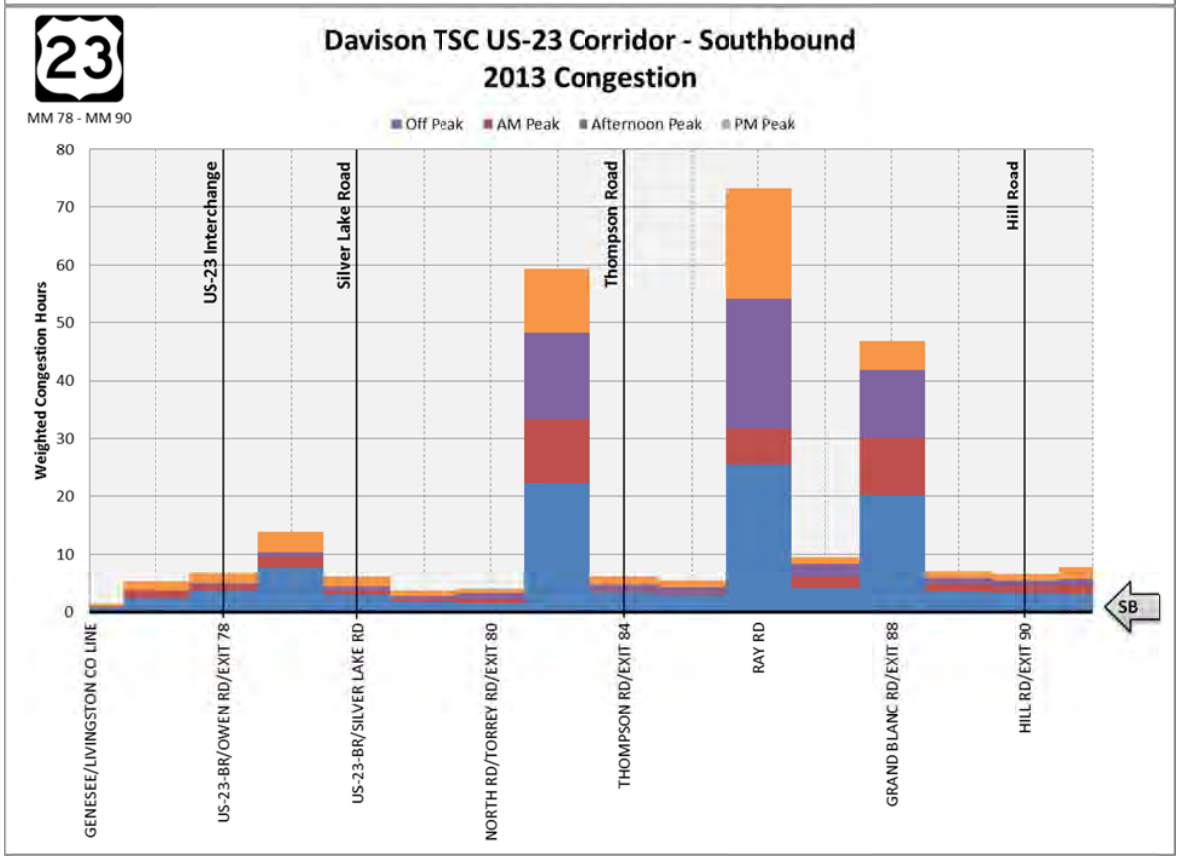
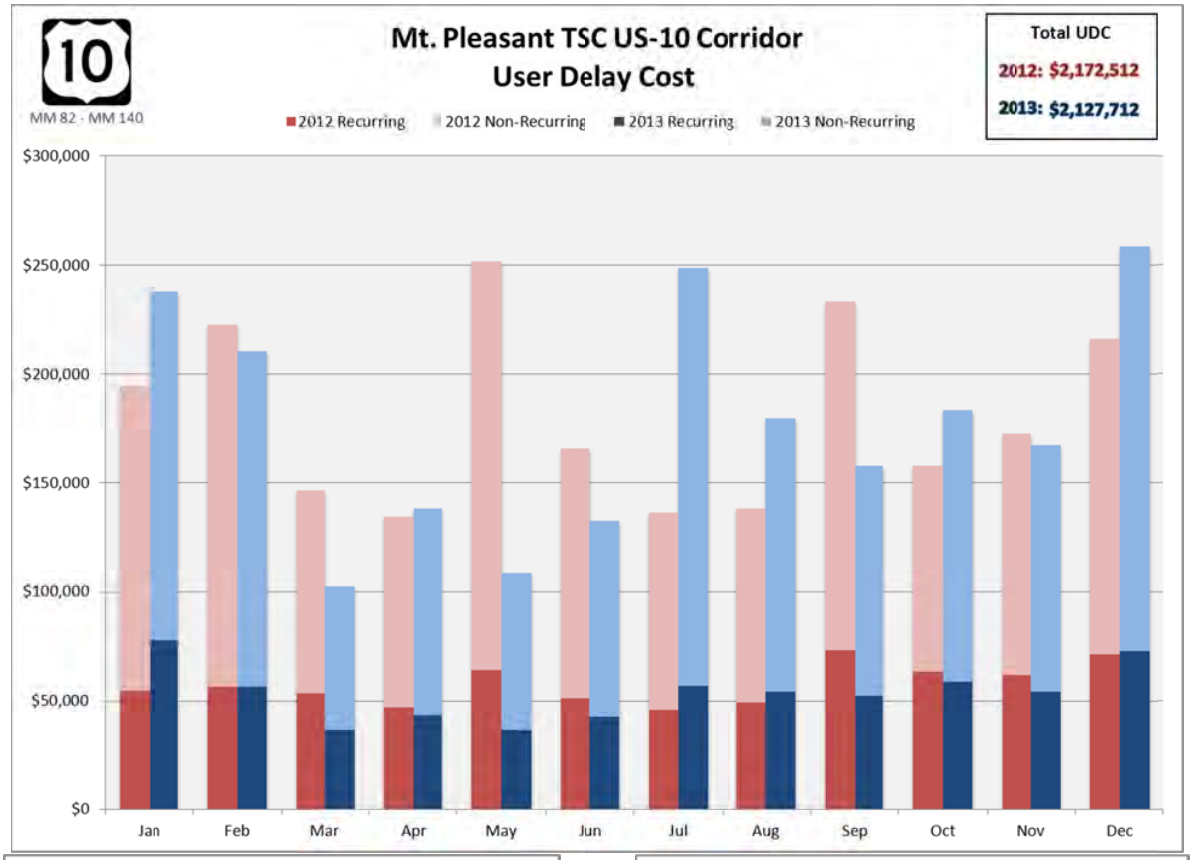
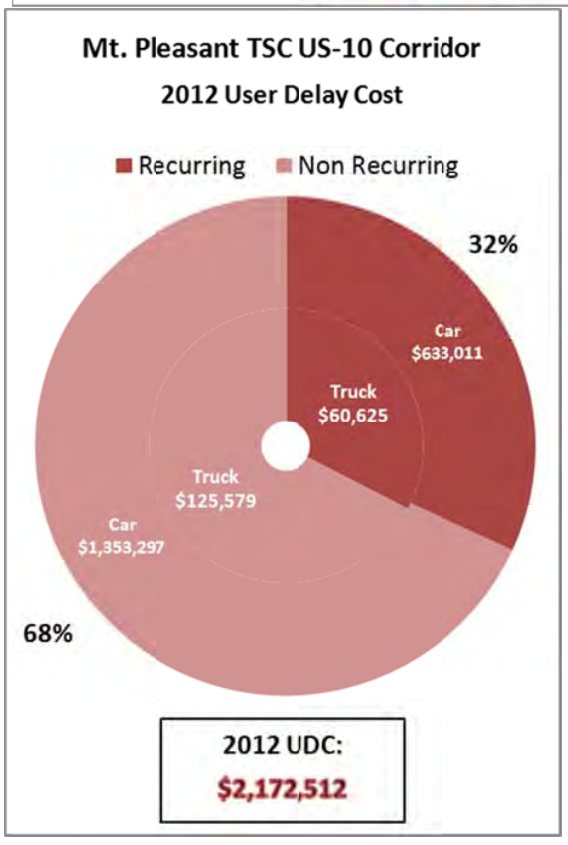

23
Davison TSC US-23 Corridor - Southbound
2013 Congestion
MM 78 - MM 90
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
80
70
60
50
40
30
20
10
0
US-23 Interchange
Silver Lake Road
Thompson Road
Hill Road
SB
GENESEE/LIVINGSTON CO LINE
US-23-BR/OWEN RD/EXIT 78
US-23-BR/SILVER LAKE RD
NORTH RD/TORREY RD/EXIT 80
THOMPSON RD/EXIT 84
RAY RD
GRAND BLANC RD/EXIT 88
HILL RD/EXIT 90

Figure 36


10
MM 82 - MM 140
Mt. Pleasant TSC US-10 Corridor
User Delay Cost
Total UDC
2012: $2,172,512
2013: $2,127,712
2012 Recurring
2012 Non-Recurring
2013 Recurring
2013 Non-Recurring
$300,000
$250,000
$200,000
$150,000
$100,000
$50,000
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Mt. Pleasant TSC US-10 Corridor
2012 User Delay Cost
Recurring
Non Recurring
32%
Car
$633,011
Truck
$60,625
Truck
$125,579
Car
$1,353,297
68%
2012 UDC:
$2,172,512

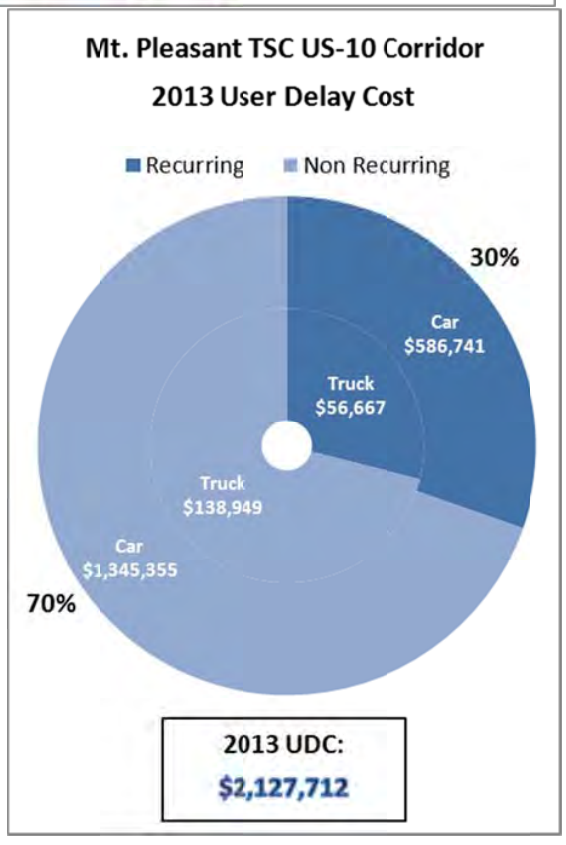
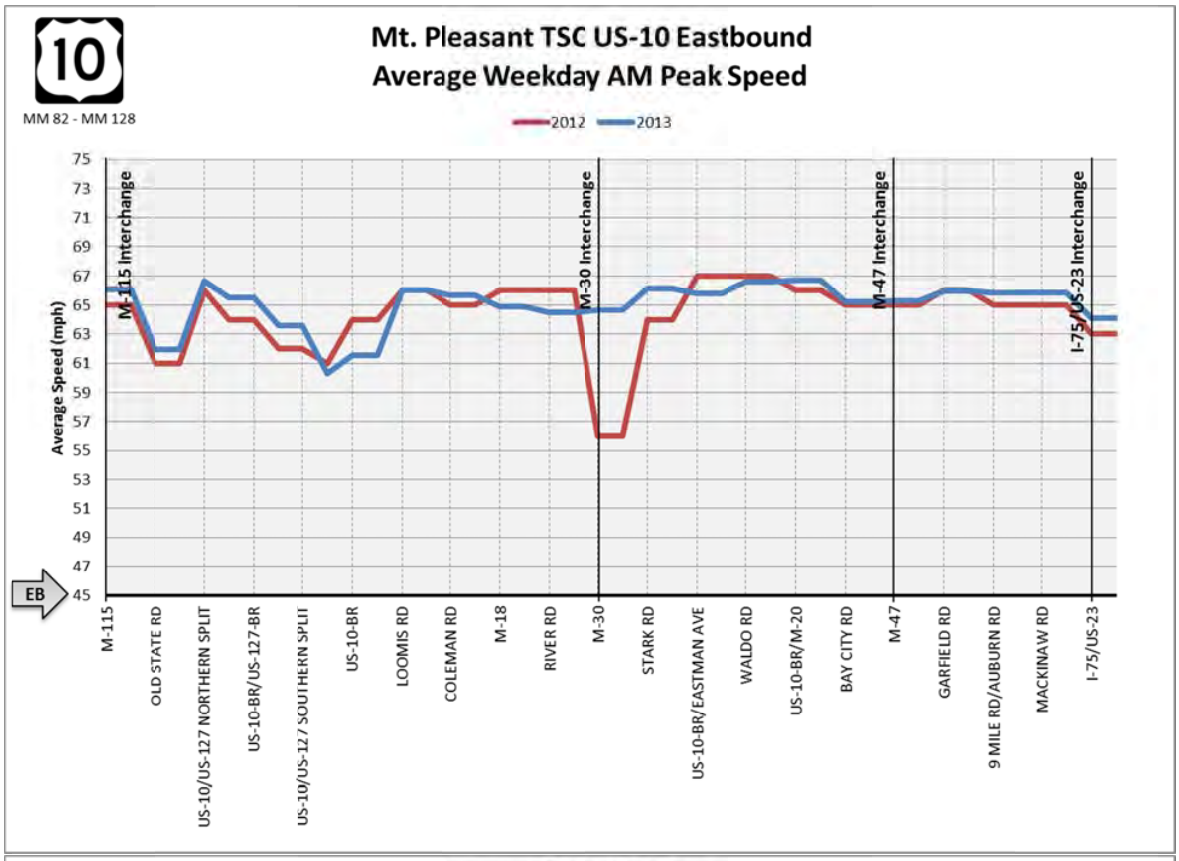

Mt. Pleasant TSC US-10 Corridor
2013 User Delay Cost
Recurring
Non Recurring
30%
Car
$586,741
Truck
$56,667
Truck
$138,949
Car
$1,345,355
70%
2013 UDC:
$2,127,712

Figure 37


10
MM 82 - MM 128
Mt. Pleasant TSC US-10 Eastbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
53
51
49
47
45
EB
M-115 Interchange
M-30 Interchange
M-47 Interchange
I-75/US-23 Interchange
M-115
OLD STATE RD
US-10/US-127 NORTHERN SPLIT
US-10-BR/US-127-BR
US-10/US-127 SOUTHERN SPLIT
US-10-BR
LOOMIS RD
COLEMAN RD
M-18
RIVER RD
M-30
STARK RD
US-10-BR/EASTMAN AVE
WALDO RD
US-10-BR/M-20
BAY CITY RD
M-47
GARFIELD RD
9 MILE RD/AUBURN RD
MACKINAW RD
I-75/US-23

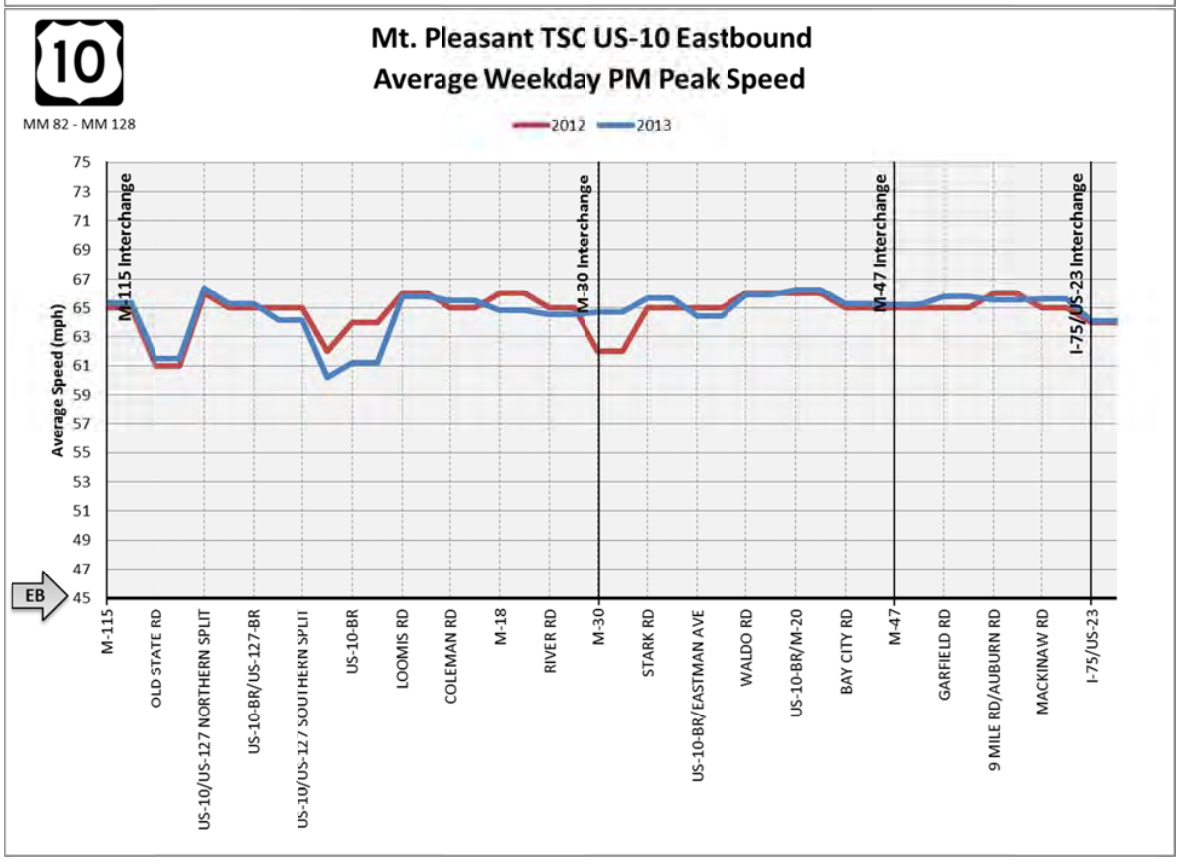
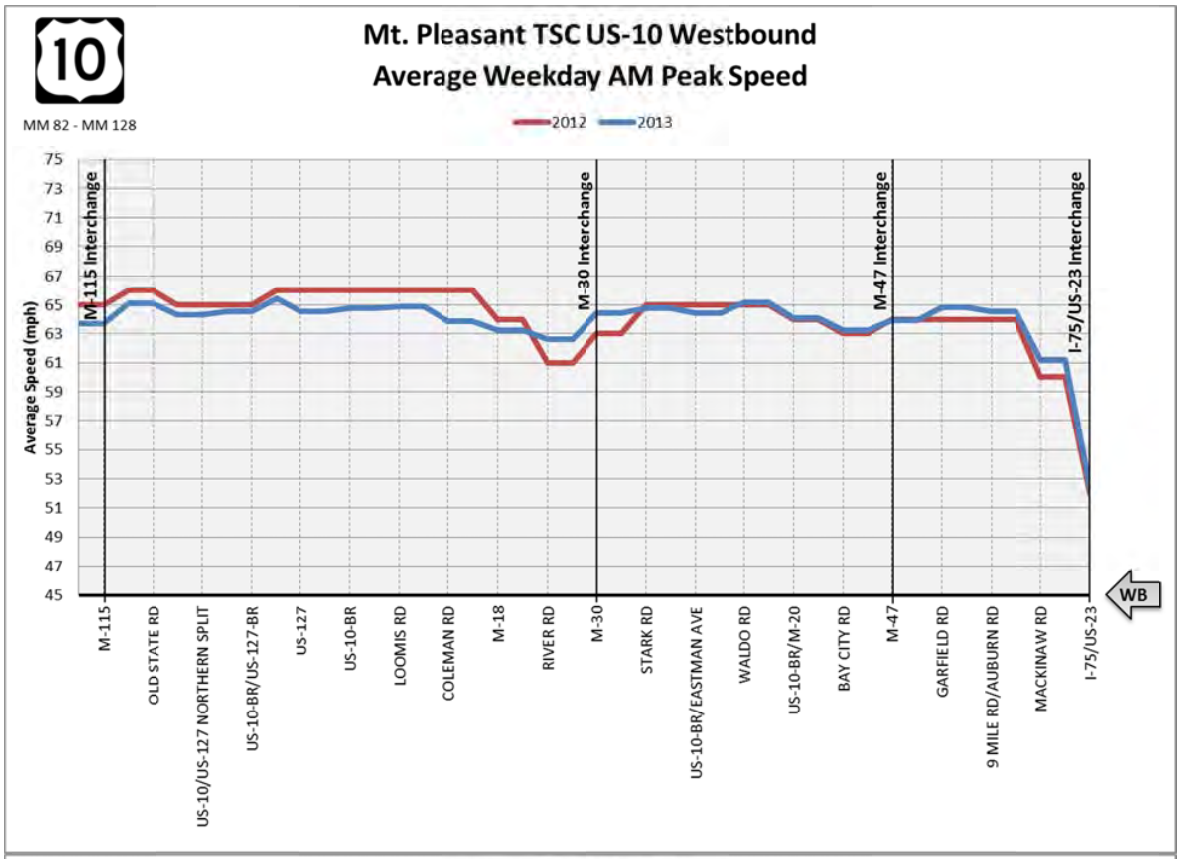

10
MM 82 - MM 128
Mt. Pleasant TSC US-10 Eastbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
53
51
49
47
45
EB
M-115 Interchange
M-30 Interchange
M-47 Interchange
I-75/US-23 Interchange
M-115
OLD STATE RD
US-10/US-127 NORTHERN SPLIT
US-10-BR/US-127-BR
US-10/US-127 SOUTHERN SPLIT
US-10-BR
LOOMIS RD
COLEMAN RD
M-18
RIVER RD
M-30
STARK RD
US-10-BR/EASTMAN AVE
WALDO RD
US-10-BR/M-20
BAY CITY RD
M-47
GARFIELD RD
9 MILE RD/AUBURN RD
MACKINAW RD
I-75/US-23

Figure38


10
Mt. Pleasant TSC US-10 Westbound
Average Weekday AM Peak Speed
MM 82 - MM 128
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
53
51
49
47
45
M-115 Interchange
M-30 Interchange
M-47 Interchange
I-75/US-23 Interchange
M-115
OLD STATE RD
US-10/US-127 NORTHERN SPLIT
US-10-BR/US-127-BR
US-127
US-10-BR
LOOMIS RD
COLEMAN RD
M-18
RIVER RD
M-30
STARK RD
US-10-BR/EASTMAN AVE
WALDO RD
US-10-BR/M-20
BAY CITY RD
M-47
GARFIELD RD
9 MILE RD/AUBURN RD
MACKINAW RD
I-75/US-23
WB

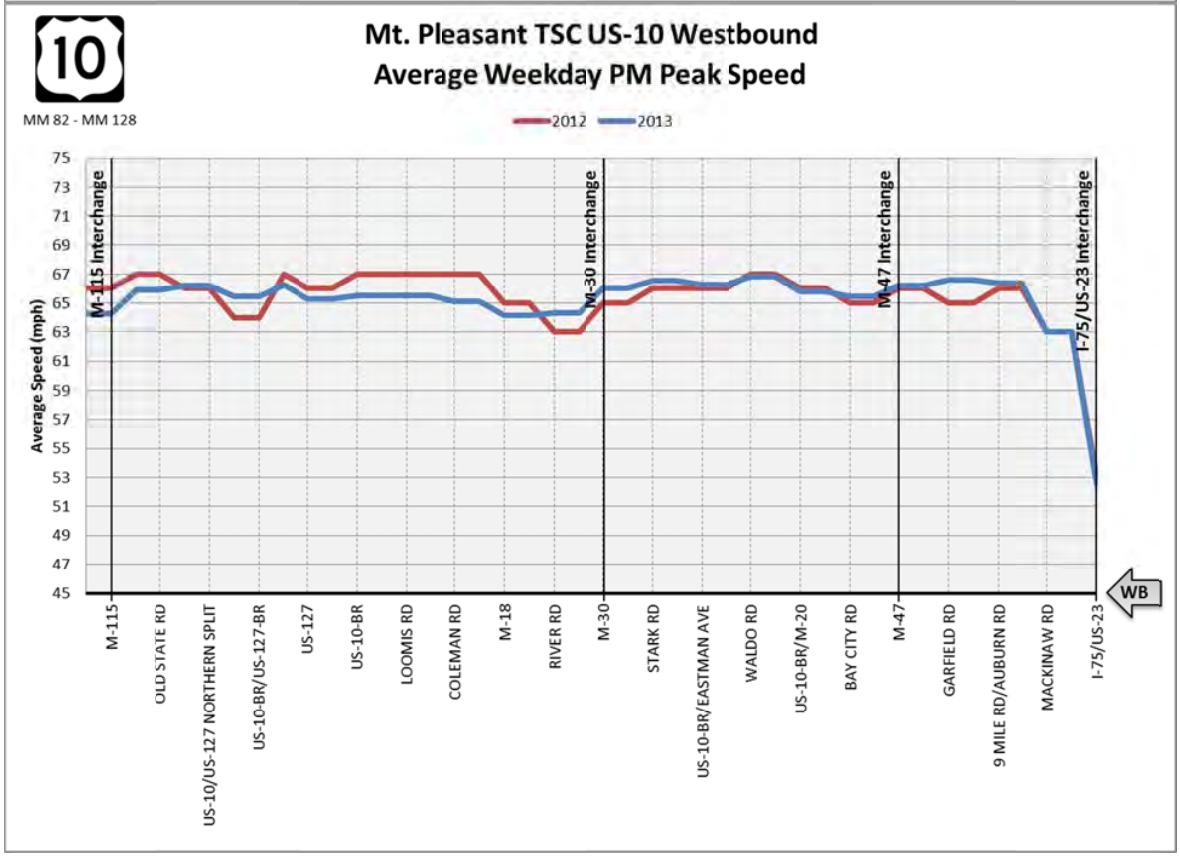
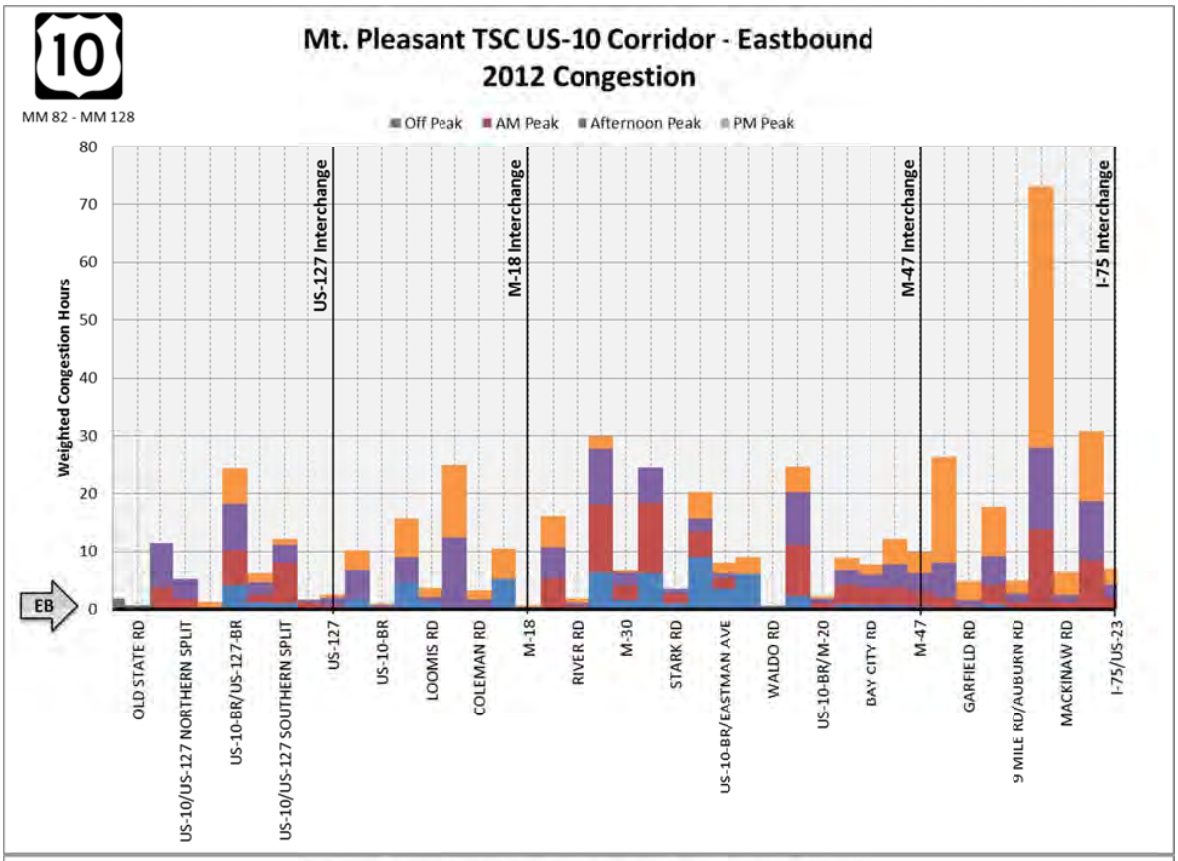

10
Mt. Pleasant TSC US-10 Westbound
Average Weekday PM Peak Speed
MM 82 - MM 128
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
53
51
49
47
45
M-115 Interchange
M-30 Interchange
M-47 Interchange
I-75/US-23 Interchange
M-115
OLD STATE RD
US-10/US-127 NORTHERN SPLIT
US-10-BR/US-127-BR
US-127
US-10-BR
LOOMIS RD
COLEMAN RD
M-18
RIVER RD
M-30
STARK RD
US-10-BR/EASTMAN AVE
WALDO RD
US-10-BR/M-20
BAY CITY RD
M-47
GARFIELD RD
9 MILE RD/AUBURN RD
MACKINAW RD
I-75/US-23
WB

Figure 39


10
MM 82 - MM 128
Mt. Pleasant TSC US-10 Corridor - Eastbound
2012 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
EB
US-127 Interchange
M-18 Interchange
M-47 Interchange
I-75 Interchange
OLD STATE RD
US-10/US-127 NORTHERN SPLIT
US-10-BR/US-127-BR
US-10/US-127 SOUTHERN SPLIT
US-127
US-10-BR
LOOMIS RD
COLEMAN RD
M-18
RIVER RD
M-30
STARK RD
US-10-BR/EASTMAN AVE
WALDO RD
US-10-BR/M-20
BAY CITY RD
M-47
GARFIELD RD
9 MILE RD/AUBURN RD
MACKINAW RD
I-75/US-23

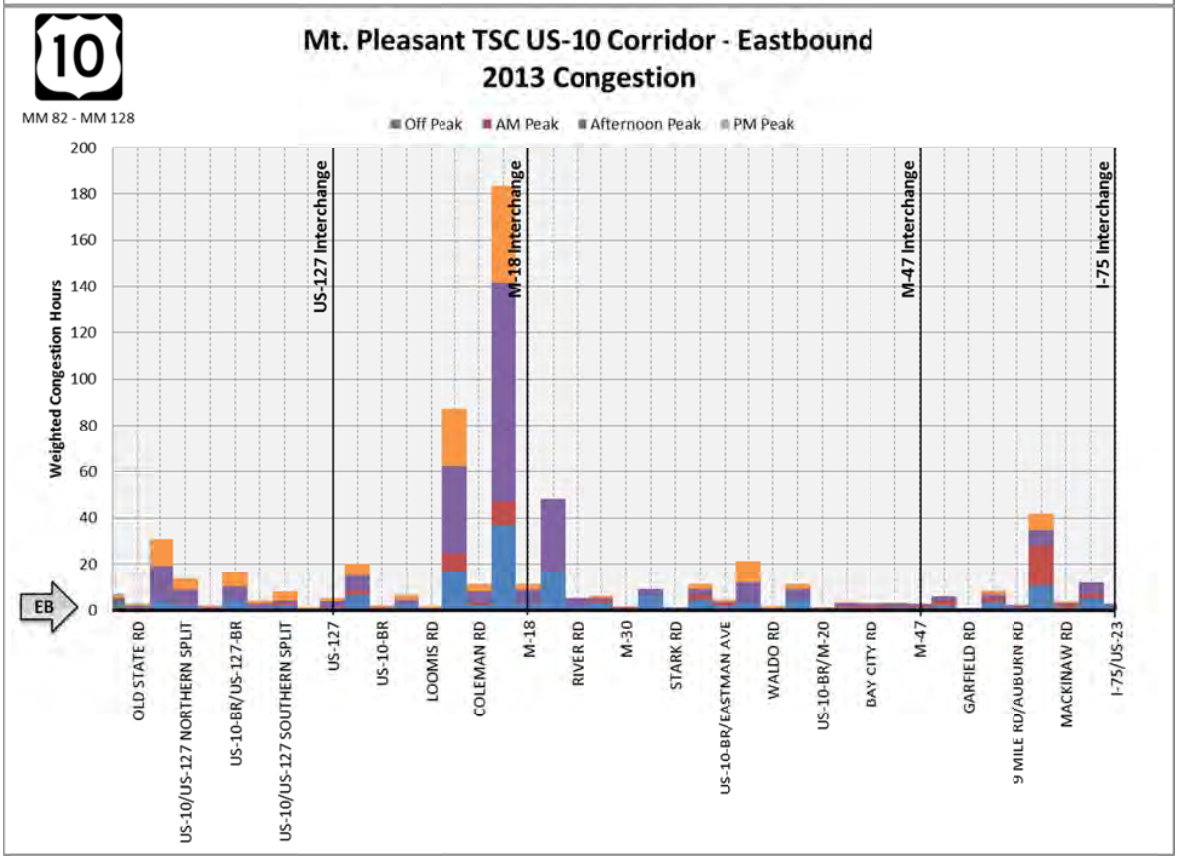
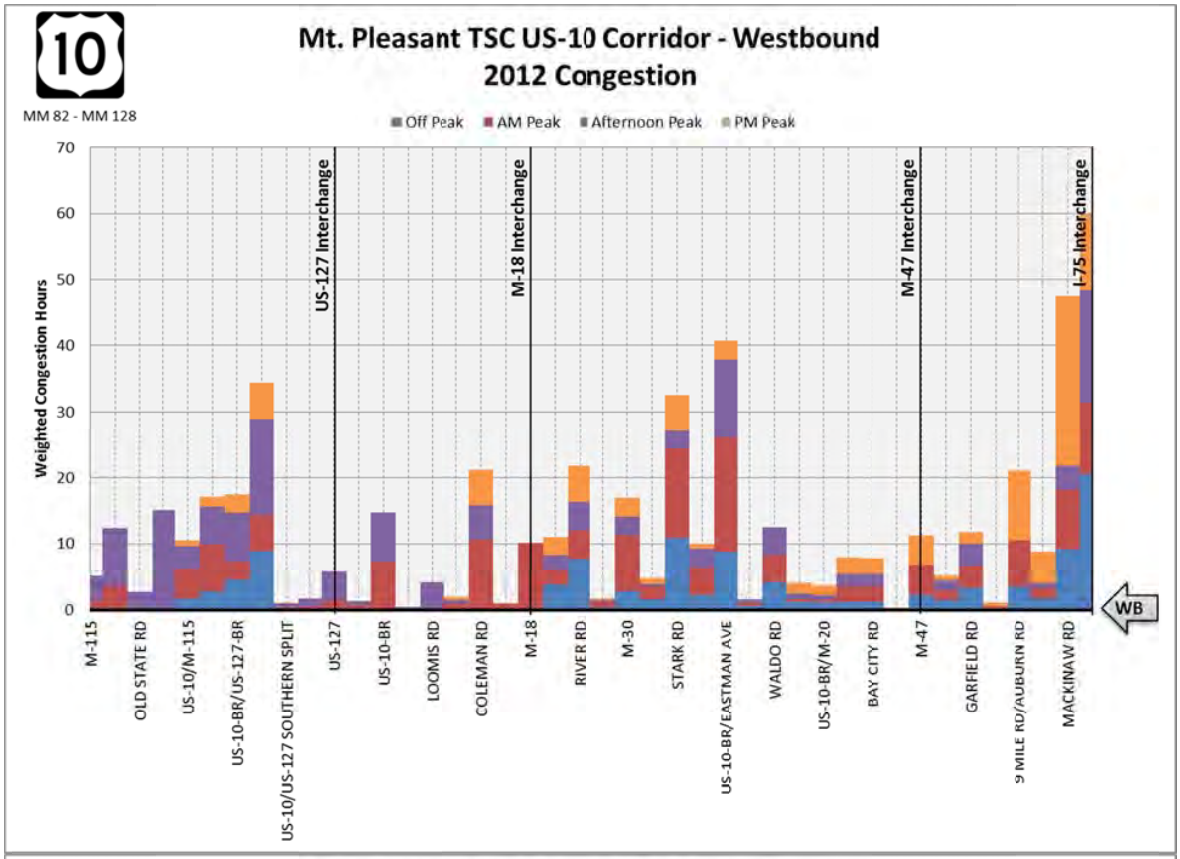

10
MM 82 - MM 128
Mt. Pleasant TSC US-10 Corridor - Eastbound
2013 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
EB
US-127 Interchange
M-18 Interchange
M-47 Interchange
I-75 Interchange
OLD STATE RD
US-10/US-127 NORTHERN SPLIT
US-10-BR/US-127-BR
US-10/US-127 SOUTHERN SPLIT
US-127
US-10-BR
LOOMIS RD
COLEMAN RD
M-18
RIVER RD
M-30
STARK RD
US-10-BR/EASTMAN AVE
WALDO RD
US-10-BR/M-20
BAY CITY RD
M-47
GARFIELD RD
9 MILE RD/AUBURN RD
MACKINAW RD
I-75/US-23

Figure 40


10
Mt. Pleasant TSC US-10 Corridor - Westbound
2012 Congestion
MM 82 - MM 128
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
70
60
50
40
30
20
10
0
US-127 Interchange
M-18 Interchange
M-47 Interchange
I-75 Interchange
WB
M-115
OLD STATE RD
US-10/M-115
US-10-BR/US-127-BR
US-10/US-127 SOUTHERN SPLIT
US-127
US-10-BR
LOOMIS RD
COLEMAN RD
M-18
RIVER RD
M-30
STARK RD
US-10-BR/EASTMAN AVE
WALDO RD
US-10-BR/M-20
BAY CITY RD
M-47
GARFIELD RD
9 MILE RD/AUBURN RD
MACKINAW RD

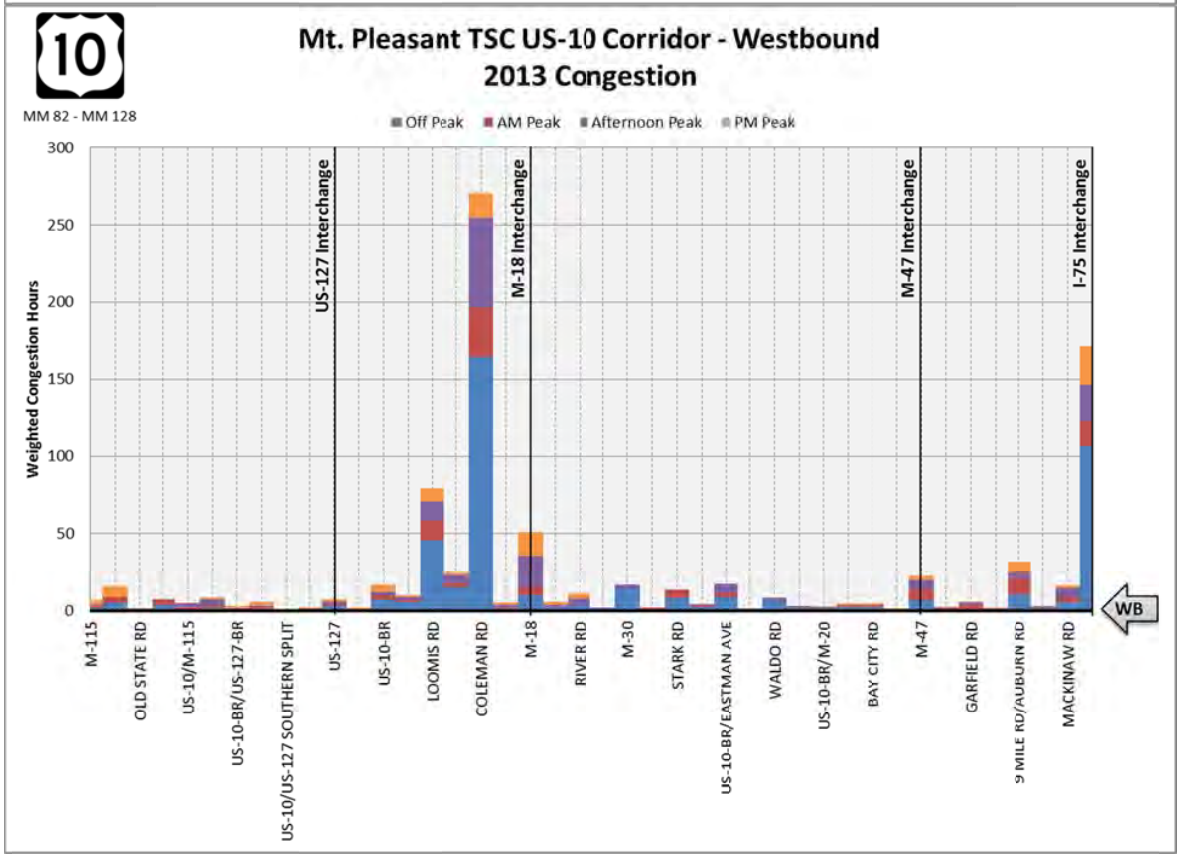
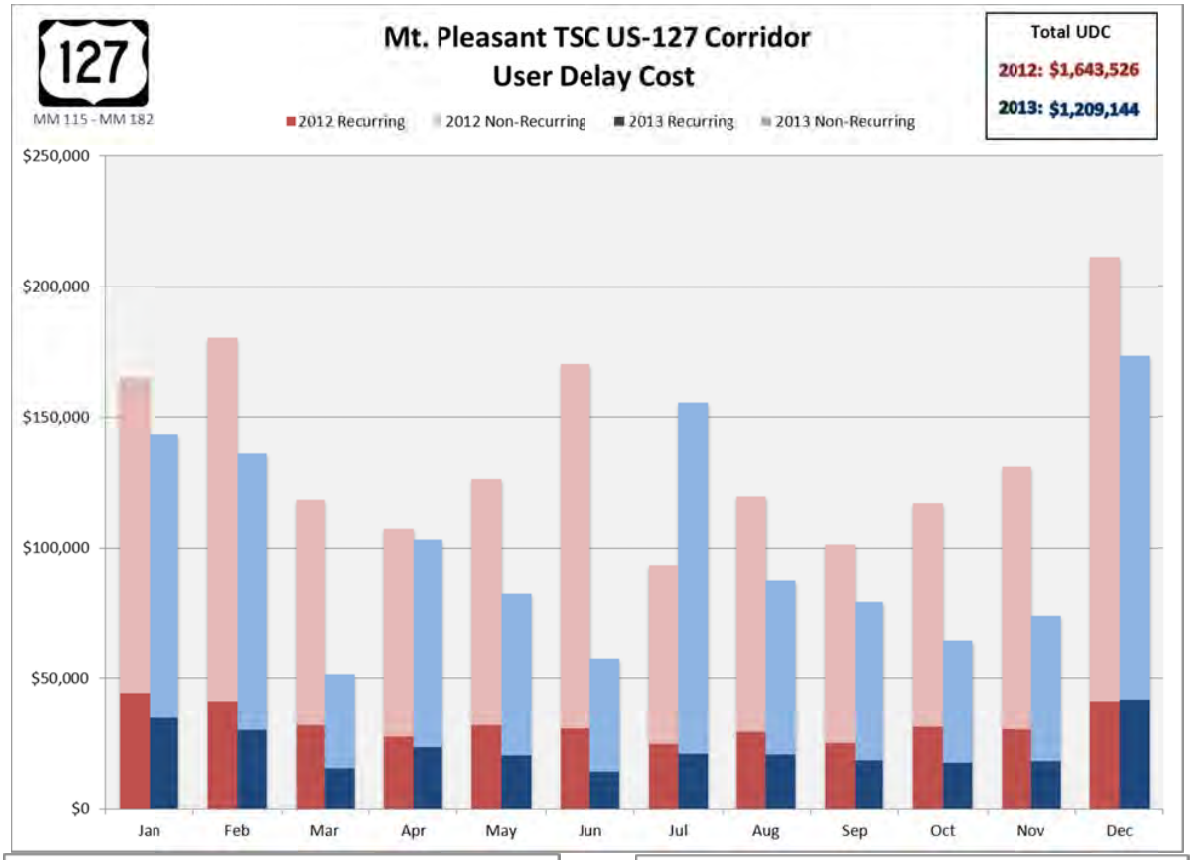
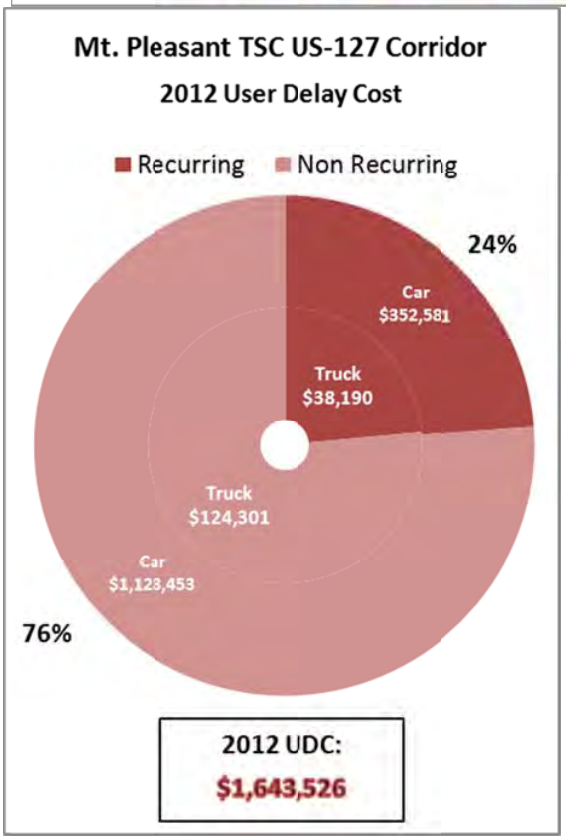

10
Mt. Pleasant TSC US-10 Corridor - Westbound
2013 Congestion
MM 82 - MM 128
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
300
250
200
150
100
50
0
US-127 Interchange
M-18 Interchange
M-47 Interchange
I-75 Interchange
WB
M-115
OLD STATE RD
US-10/M-115
US-10-BR/US-127-BR
US-10/US-127 SOUTHERN SPLIT
US-127
US-10-BR
LOOMIS RD
COLEMAN RD
M-18
RIVER RD
M-30
STARK RD
US-10-BR/EASTMAN AVE
WALDO RD
US-10-BR/M-20
BAY CITY RD
M-47
GARFIELD RD
9 MILE RD/AUBURN RD
MACKINAW RD

Figure 41


127
MM 115 - MM 182
Mt. Pleasant TSC US-127 Corridor
User Delay Cost
2012 Recurring
2012 Non-Recurring
2013 Recurring
2013 Non-Recurring
Total UDC
2012: $1,643,526
2013: $1,209,144
$250,000
$200,000
$150,000
$100,000
$50,000
$0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec


Mt. Pleasant TSC US-127 Corridor
2012 User Delay Cost
Recurring
Non Recurring
24%
Car
$352,581
Truck
$38,190
Truck
$124,301
Car
$1,123,453
76%
2012 UDC:
$1,643,526

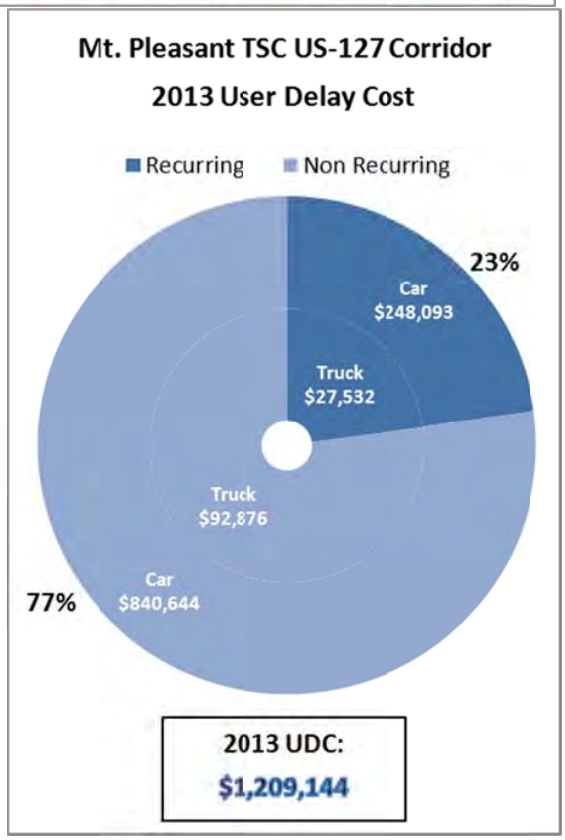
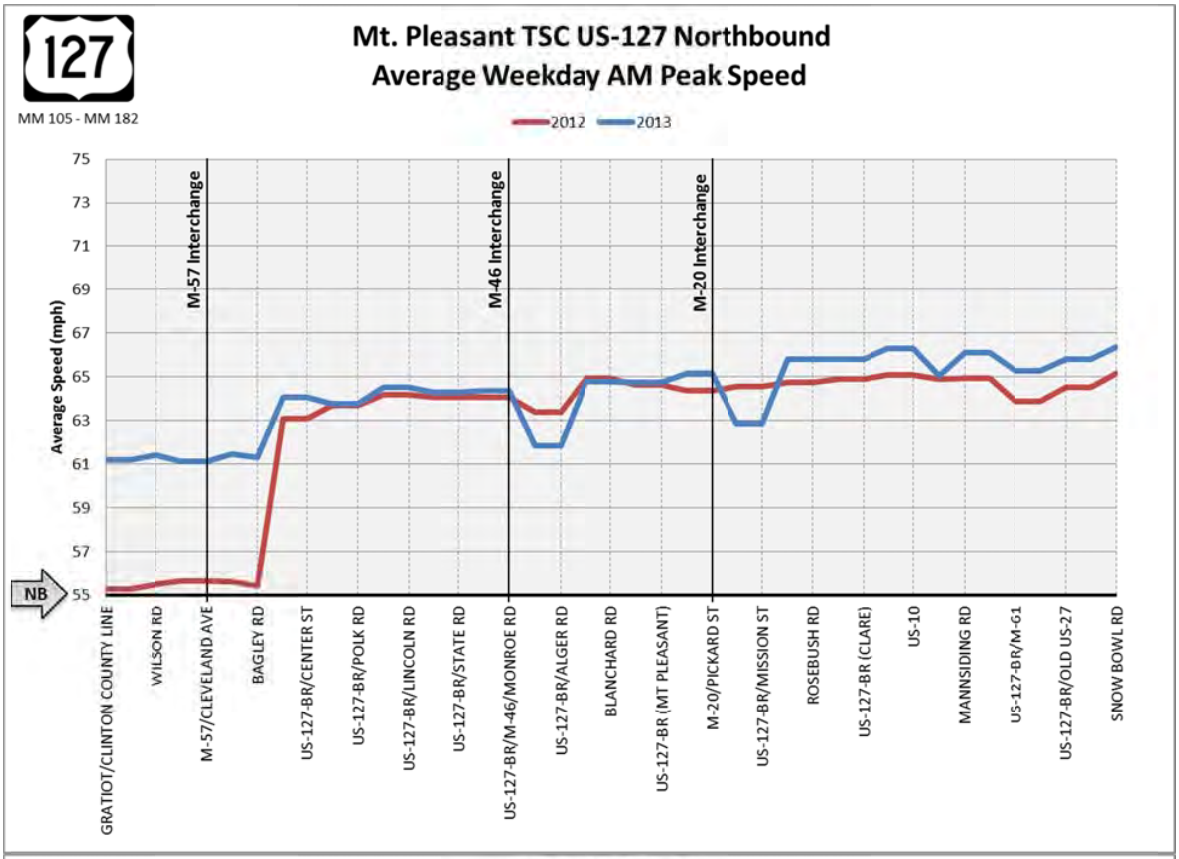

Mt. Pleasant TSC US-127 Corridor
2013 User Delay Cost
Recurring
Non Recurring
23%
Car
$248,093
Truck
$27,532
Truck
$92,876
Car
$840,644
77%
2013 UDC:
$1,209,144

Figure 42


127
MM 105 - MM 182
Mt. Pleasant TSC US-127 Northbound
Average Weekday AM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
NB
M-57 Interchange
M-46 Interchange
M-20 Interchange
GRATIOT/CLINTON COUNTY LINE
WILSON RD
M-57/CLEVELAND AVE
BAGLEY RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27
SNOW BOWL RD

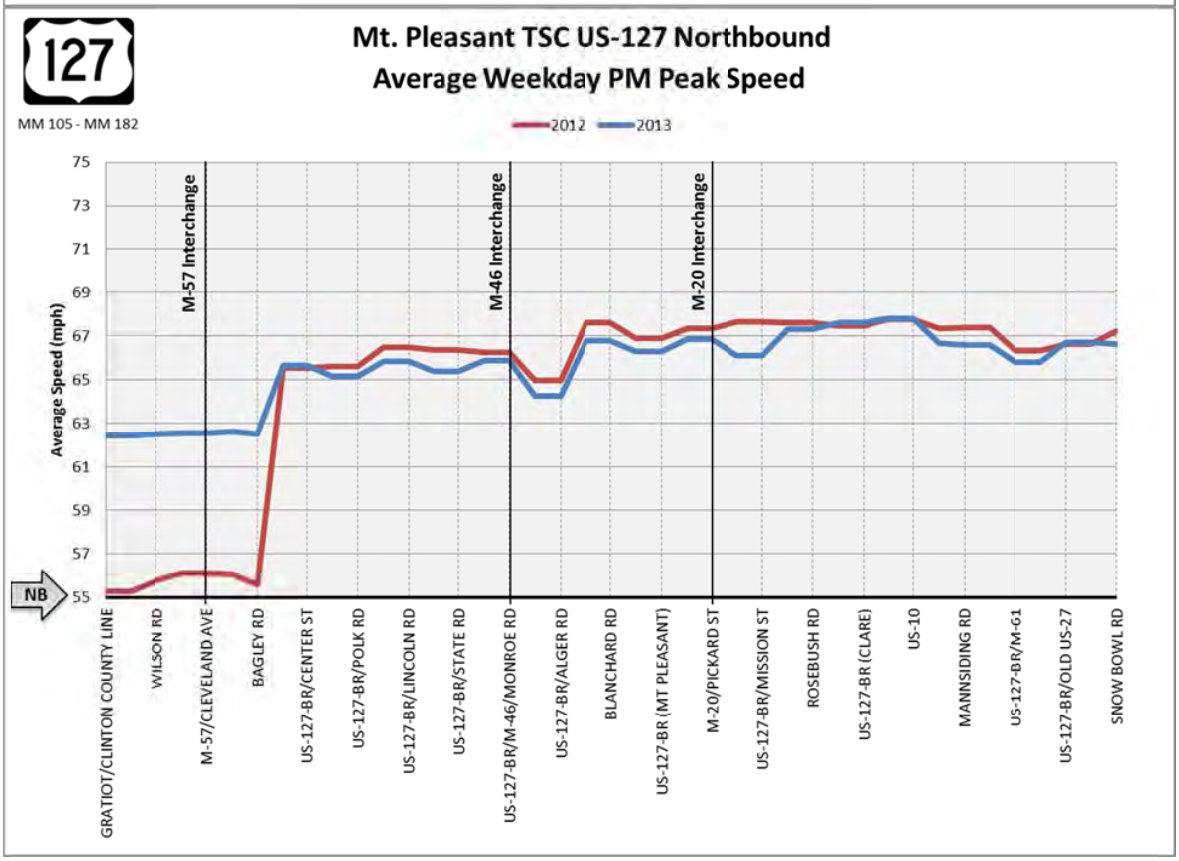
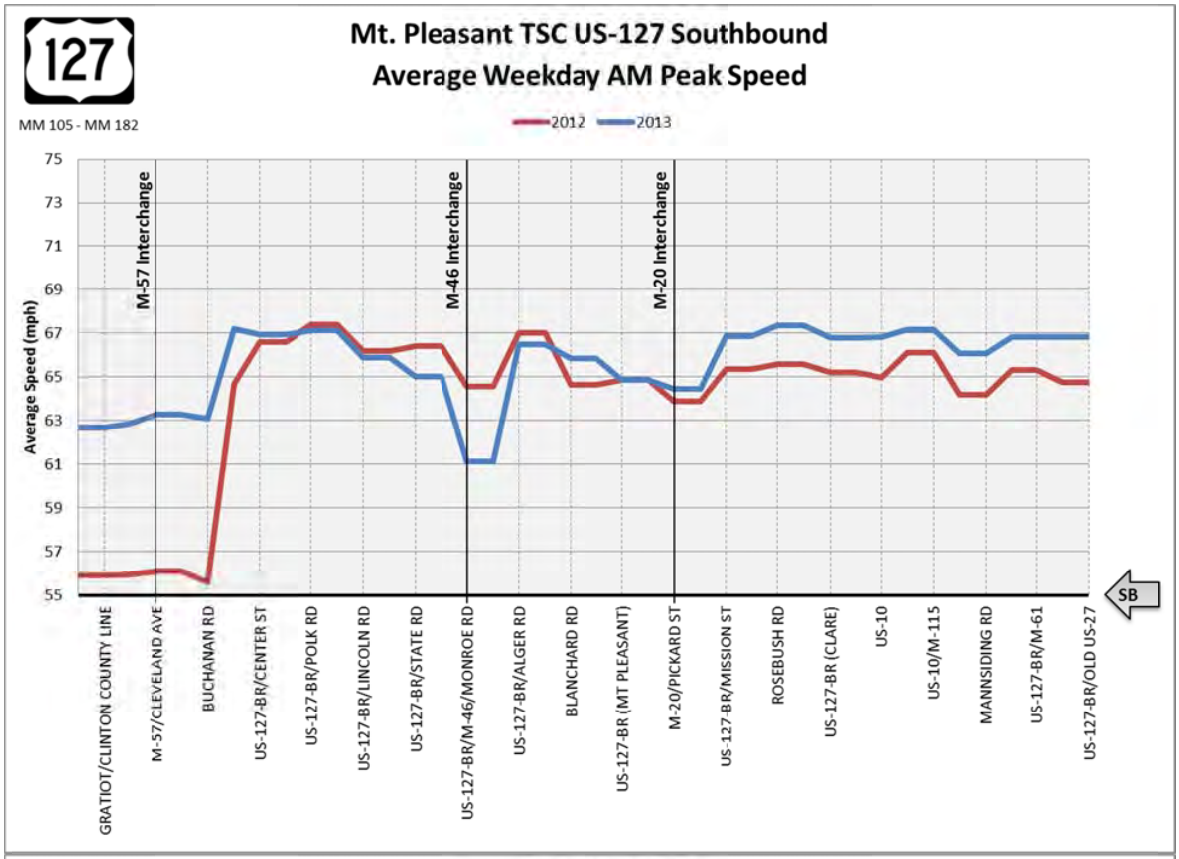

127
MM 105 - MM 182
Mt. Pleasant TSC US-127 Northbound
Average Weekday PM Peak Speed
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
NB
M-57 Interchange
M-46 Interchange
M-20 Interchange
GRATIOT/CLINTON COUNTY LINE
WILSON RD
M-57/CLEVELAND AVE
BAGLEY RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27
SNOW BOWL RD

Figure 43


127
Mt. Pleasant TSC US-127 Southbound
Average Weekday AM Peak Speed
MM 105 - MM 182
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
M-57 Interchange
M-46 Interchange
M-20 Interchange
SB
GRATIOT/CLINTON COUNTY LINE
M-57/CLEVELAND AVE
BUCHANAN RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
US-10/M-115
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27

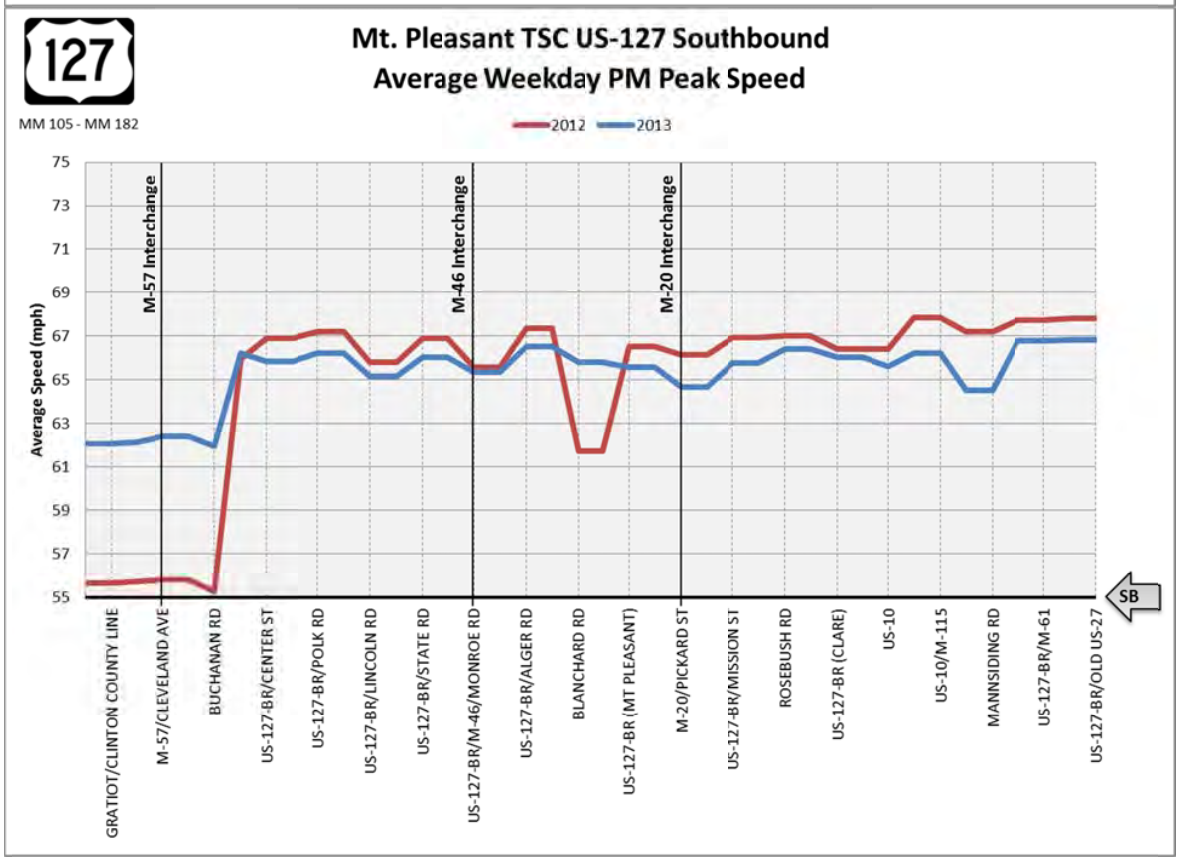
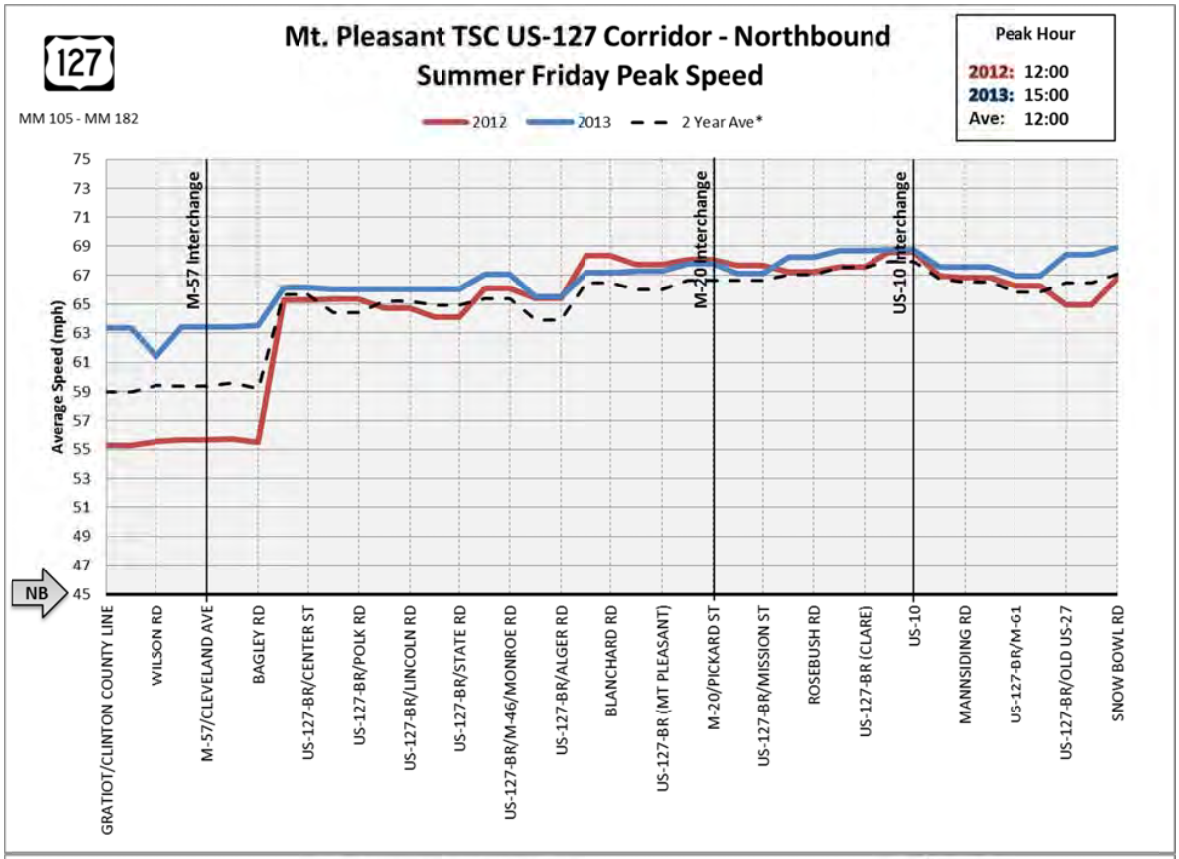

127
Mt. Pleasant TSC US-127 Southbound
Average Weekday PM Peak Speed
MM 105 - MM 182
2012
2013
Average Speed (mph)
75
73
71
69
67
65
63
61
59
57
55
M-57 Interchange
M-46 Interchange
M-20 Interchange
SB
GRATIOT/CLINTON COUNTY LINE
M-57/CLEVELAND AVE
BUCHANAN RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
US-10/M-115
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27

Figure 44


127
Mt. Pleasant TSC US-127 Corridor - Northbound
Summer Friday Peak Speed
MM 105 - MM 182
2012
2013
2 Year Ave*
Peak Hour
2012: 12:00
2013: 15:00
Ave: 12:00
Average Speed (mph)
M-57 Interchange
M-20 Interchange
US-10 Interchange
NB
GRATIOT/CLINTON COUNTY LINE
WILSON RD
M-57/CLEVELAND AVE
BAGLEY RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27
SNOW BOWL RD

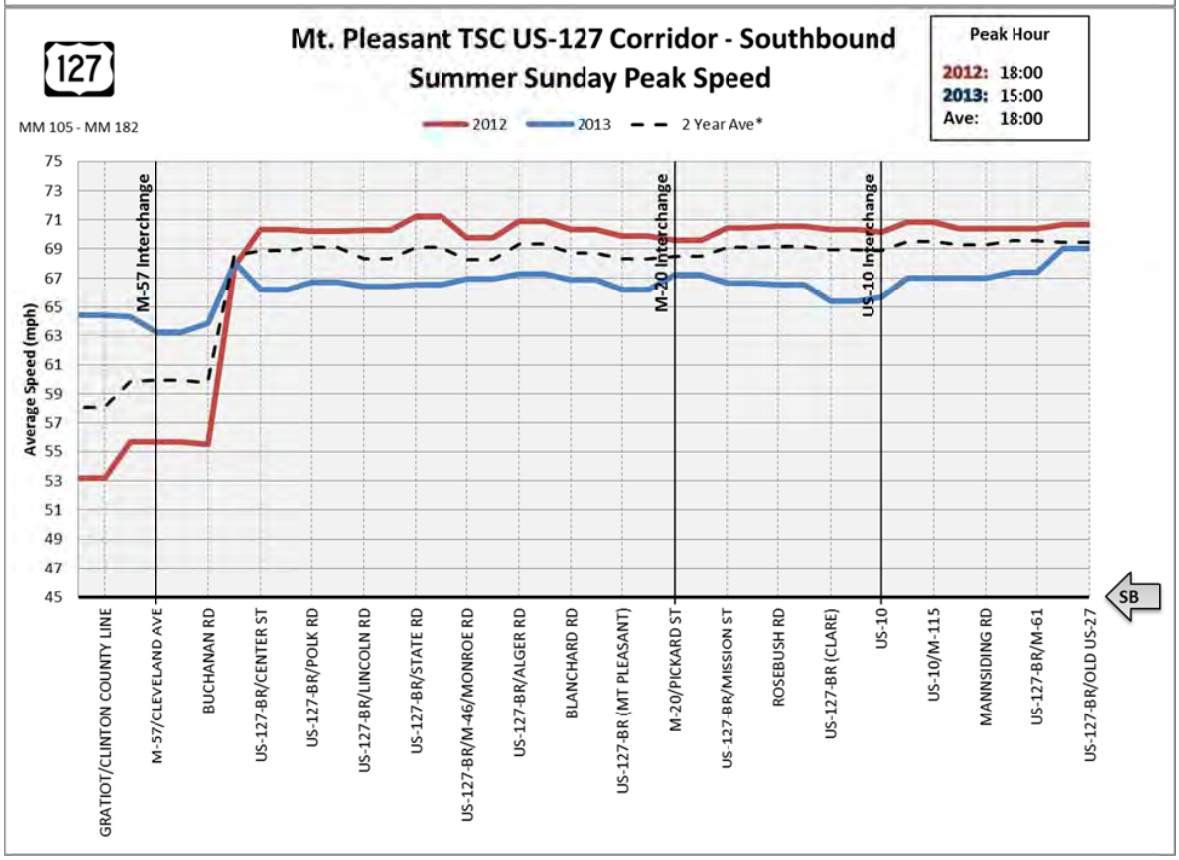

127
Mt. Pleasant TSC US-127 Corridor - Southbound
Summer Sunday Peak Speed
MM 105 - MM 182
2012
2013
2 Year Ave*
Peak Hour
2012: 18:00
2013: 15:00
Ave: 18:00
Average Speed (mph)
M-57 Interchange
M-20 Interchange
US-10 Interchange
SB
GRATIOT/CLINTON COUNTY LINE
M-57/CLEVELAND AVE
BUCHANAN RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
US-10/M-115
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27

Figure 45

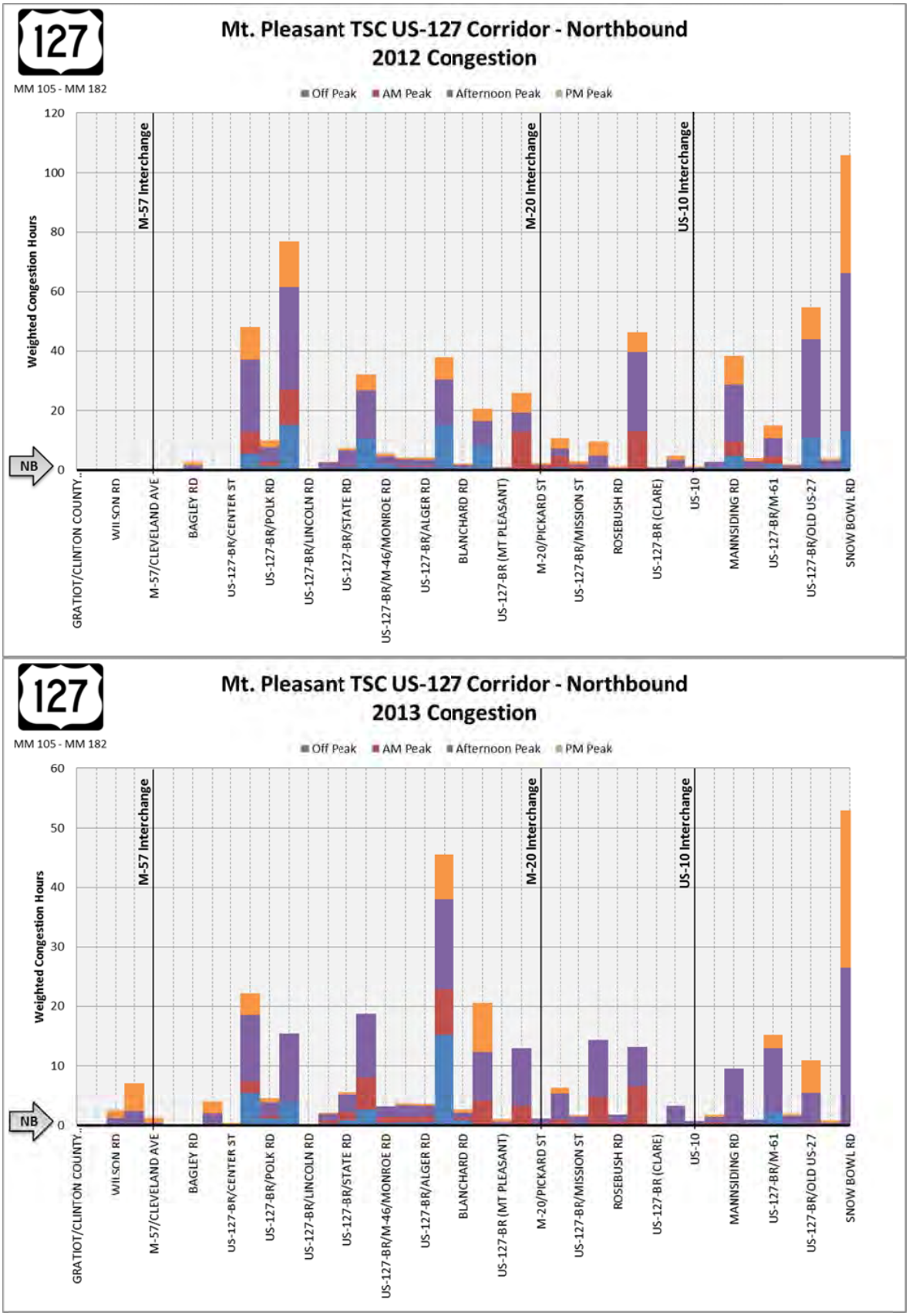
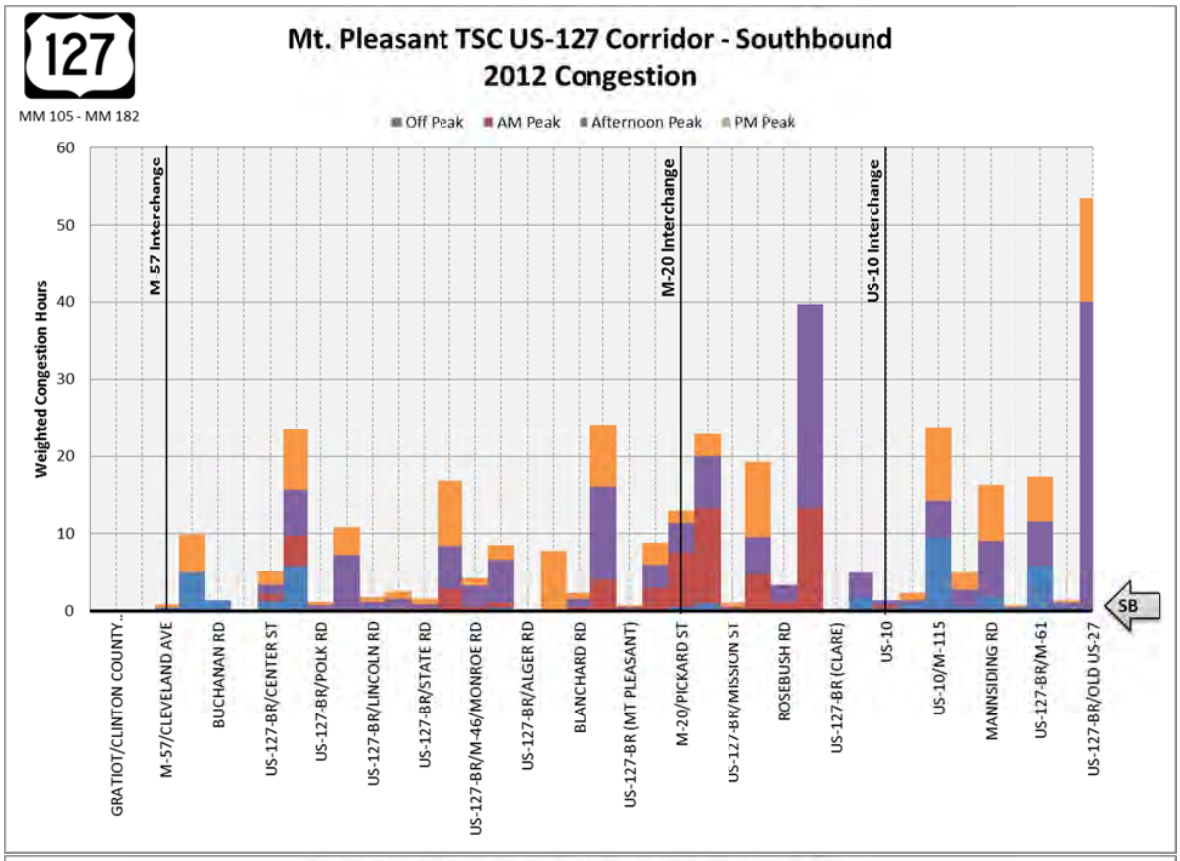

127
MM 105 - MM 182
Mt. Pleasant TSC US-127 Corridor - Northbound
2012 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
NB
M-57 Interchange
M-20 Interchange
US-10 Interchange
GRATIOT/CLINTON COUNTY
WILSON RD
M-57/CLEVELAND AVE
BAGLEY RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27
SNOW BOWL RD
127
MM 105 - MM 182
Mt. Pleasant TSC US-127 Corridor - Northbound
2013 Congestion
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
NB
M-57 Interchange
M-20 Interchange
US-10 Interchange
GRATIOT/CLINTON COUNTY
WILSON RD
M-57/CLEVELAND AVE
BAGLEY RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27
SNOW BOWL RD

Figure 46


127
Mt. Pleasant TSC US-127 Corridor - Southbound
2012 Congestion
MM 105 - MM 182
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
0
10
20
30
40
50
60
M 57 Interchange
M-20 Interchange
US-10 Interchange
SB
GRATIOT/CLINTON COUNTY ...
M-57/CLEVELAND AVE
BUCHANAN RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
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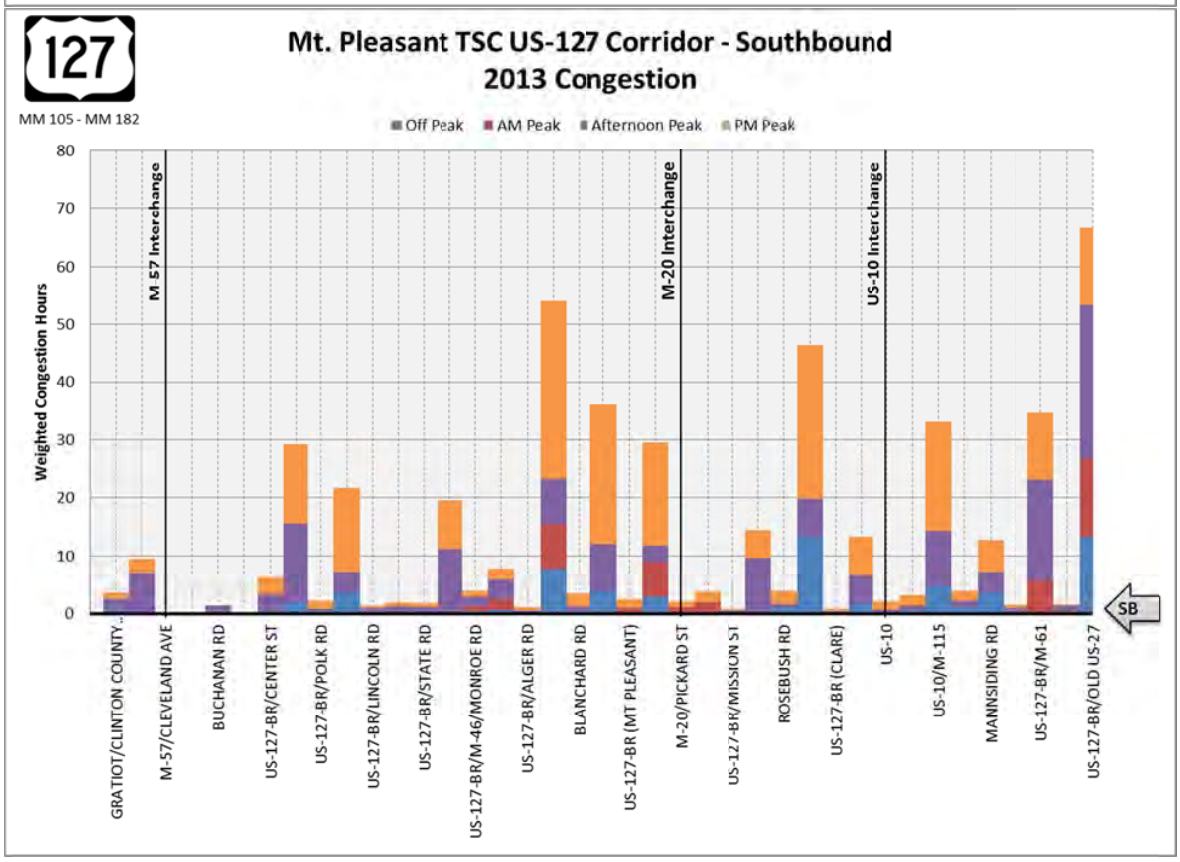
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
US-10/M-115
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27


127
Mt. Pleasant TSC US-127 Corridor - Southbound
2013 Congestion
MM 105 - MM 182
Off Peak
AM Peak
Afternoon Peak
PM Peak
Weighted Congestion Hours
0
10
20
30
40
50
60
70
80
M 57 Interchange
M-20 Interchange
US-10 Interchange
SB
GRATIOT/CLINTON COUNTY ...
M-57/CLEVELAND AVE
BUCHANAN RD
US-127-BR/CENTER ST
US-127-BR/POLK RD
US-127-BR/LINCOLN RD
US-127-BR/STATE RD
US-127-BR/M-46/MONROE RD
US-127-BR/ALGER RD
BLANCHARD RD
US-127-BR (MT PLEASANT)
M-20/PICKARD ST
US-127-BR/MISSION ST
ROSEBUSH RD
US-127-BR (CLARE)
US-10
US-10/M-115
MANNSIDING RD
US-127-BR/M-61
US-127-BR/OLD US-27

Notes

MDOT
Michigan Department of Transportation

Providing the highest quality integrated transportation
services for economic benefit and improved quality of life.