ENVIRONMENTAL ANALYSIS AND EXISTING CONDITIONS ASSESSMENT REPORT FOR INTERSTATE HIGHWAY 225 (I-225) PLANNING AND ENVIRONMENTAL LINKAGES (PEL) STUDY

CDOT Project No. STA 2254-085 (19187)

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LIST OF ACRONYMS AND ABBREVIATIONS

ACM	asbestos contaminated material
ADA	Americans with Disabilities Act
AM	morning
APE	area of potential effect
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
AVC	animal-vehicle collisions
BGPA	Bald and Golden Eagle Protection Act
BMPs	best management practices
C-D	Collector-Distributor
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
CLOMR	Conditional Letters of Map Revisions
CWA	Clean Water Act
dBA	A-weighted decibels
DIA	Denver International Airport
DRCOG	Denver Regional Council of Governments
DTC	Denver Technological Center
EDR	Environmental Data Resources, Inc.
EIS	environmental impact statement
EPA	US Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHU	Felsburg Holt & Ullevig
FHWA	Federal Highway Administration
FIRM	FEMA Flood Insurance Rate Maps
GIS	geographic information system
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
I-25	Interstate 25
I-70	Interstate 70
I-225	Interstate Highway 225
IPaC	Information Planning and Conservation System
ISA	Initial Site Assessment
L_{eq}	equivalent sound level
LOS	level of service
LOMR	Letters of Map Revisions
LRT	light rail transit
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MP	milepost
mph	miles per hour
MPO	metropolitan planning organization
NAC	noise abatement criteria
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
NDIS	Natural Diversity Information
NRHP	National Register of Historic Places
PCB	polychlorinated biphenyls
pc/mi/ln	passenger cars per mile per lane

PEL	Planning and Environmental Linkages
PM	evening
RCBC	reinforced concrete box culvert
ROW	right-of-way
RTD	Regional Transportation District
s	seconds
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SH 83	State Highway 83
TAZ	transportation analysis zone
TNM	Traffic Noise Model
TOD	Transit-oriented Development
TREX	TRansportation EXpansion Project
UDFCD	Urban Drainage Flood Control District
USDOT	US Department of Transportation
USGS	US Geological Survey
USFWS	US Department of Interior Fish and Wildlife Service
UST	underground storage tank
VMS	Variable Message Sign
vpd	vehicles per day
vph	vehicles per hour
vpmpl	vehicles per mile per lane
UNCC	Utility Notification Center of Colorado
USC	US Code
USACE	US Army Corps. of Engineers
WOUS	Waters of the United States

EXECUTIVE SUMMARY

The Colorado Department of Transportation (CDOT) is conducting a PEL study for southbound I-225 between Yosemite Street and Interstate 25 (I-25) in the City and County of Denver, Colorado. CDOT is conducting the I-225 PEL (Yosemite to I-25) to assess existing conditions, identify anticipated problem areas, and develop and evaluate transportation improvements to reduce congestion, improve mobility, and enhance the safety of I-225 within the study area. CDOT, in cooperation with the Federal Highway Administration (FHWA), is preparing this PEL study in accordance with FHWA and CDOT PEL guidance for improving and streamlining the environmental process for transportation projects by conducting planning activities before the start of the National Environmental Policy Act (NEPA) process.

The traffic analysis area along I-225 between I-25 and Parker Road and along I-25 between Belleview Avenue and Hampden Avenue is shown in **Figure ES.1**. The study area extends approximately less than 2 miles along I-225 between the I-25/Yosemite Street Interchange on the east to the I-225/I-25 Interchange on the west (**Figure ES.2**).

This *Environmental Analysis and Existing Conditions Assessment Report* documents current and anticipated future conditions of the interchange in regard to land use, the transportation system, and environmental resources. The information presented in this report will be the basis for developing and evaluating possible transportation improvements at this interchange.

Land Use

The Denver Technological Center (DTC) is a major hub of employment for the Denver metropolitan area. Land use was analyzed along I-25 from Belleview Avenue to Hampden Avenue and from the I-225 Interchange east to Parker Road. As the metropolitan population continues to grow, the I-25/I-225 Interchange is a highly congested roadway during peak travel times. County and city governments along the interchange have noted its importance in the movement of workers, goods, and services.

Current Land Use

In 2010, the study area included approximately 13,000 households and more than 26,000 jobs. The study area has a higher ratio of jobs to households indicating that many workers and visitors travel to this area for employment. In addition, in the northwest quadrant of the I-225 and DTC Boulevard interchange there is a large area of commercial and retail land uses that attract trips to this area.

2035 Land Use

The Denver Regional Council of Governments (DRCOG) is the metropolitan planning organization (MPO) for the Denver metro region. DRCOG develops future land use scenarios based on a number of variables including economic forecasts and local government input, and uses these scenarios to estimate future traffic volumes. By 2035, DRCOG projects an additional estimated 9,000 households and 19,000 jobs in the study area. This projected growth is higher than the growth expected for the DRCOG region as a whole. The large area of commercial and retail land uses in the northwest quadrant of I-225 and DTC Boulevard is planned to change to mixed-use in 2035.

Figure ES.1 Traffic Analysis Area

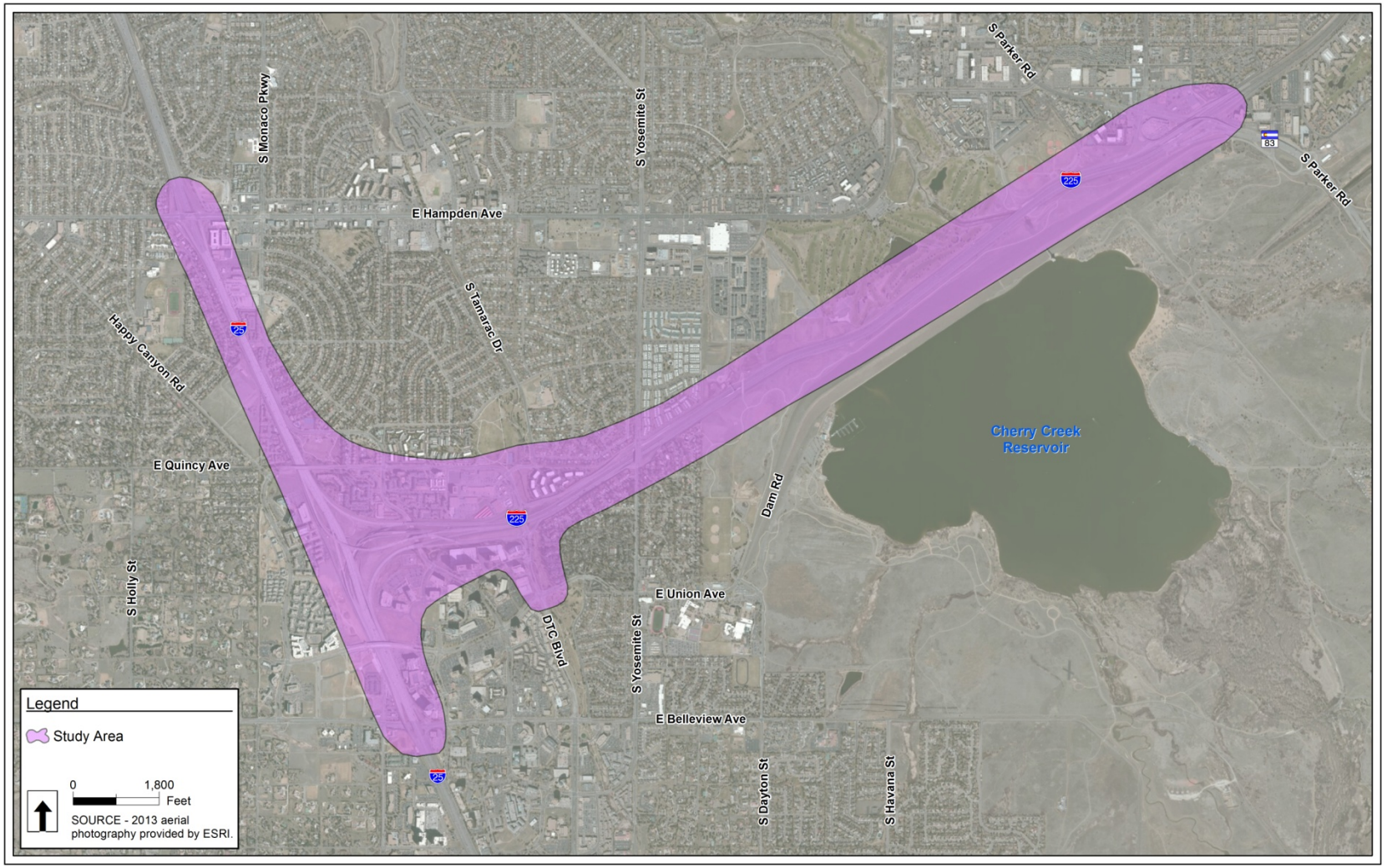
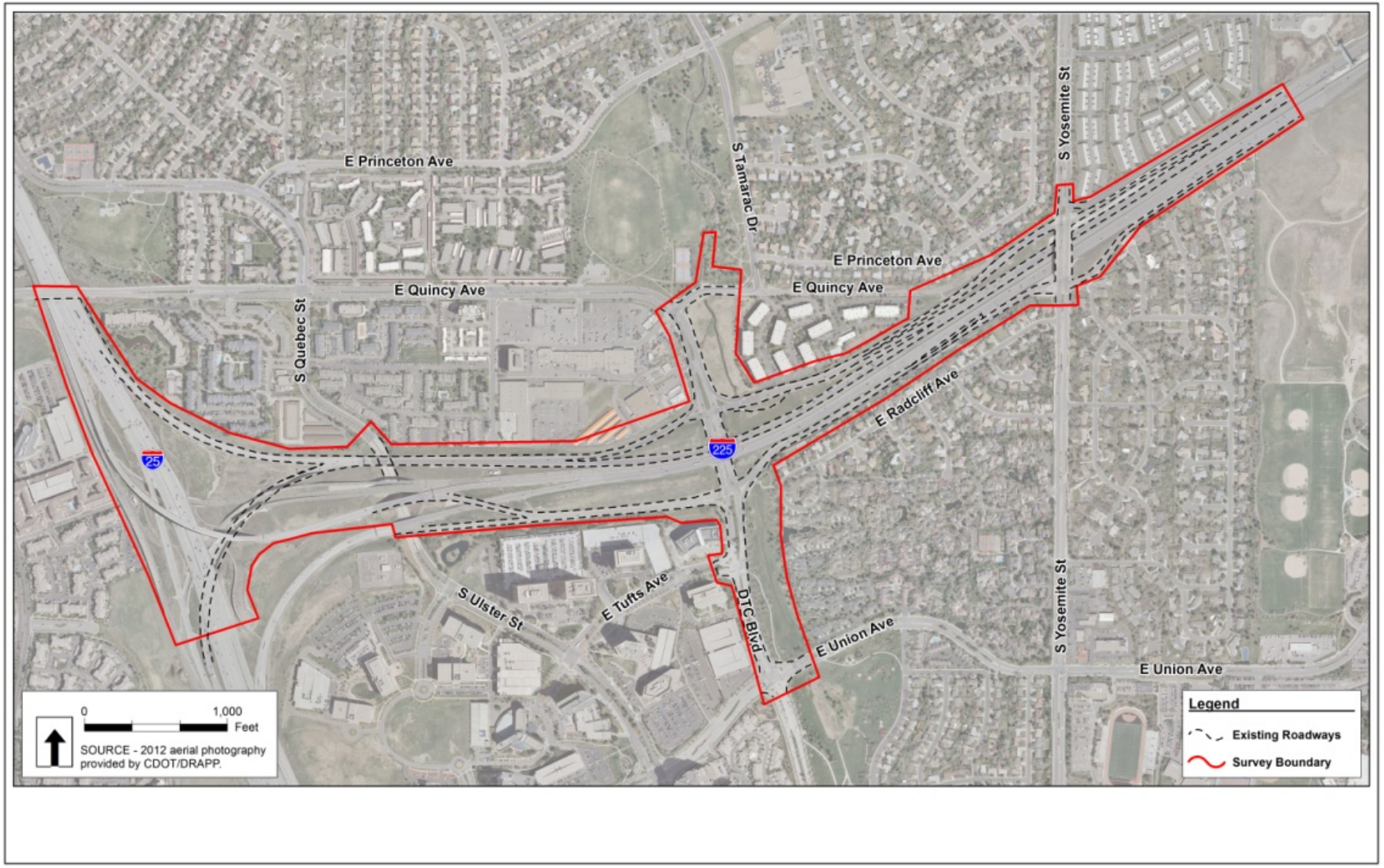


Figure ES.2 Study Area



Existing Transportation System

Within the study area of the I-225 PEL, the geometric characteristics of I-225 fluctuate due to the tapering of lanes provided along I-225. I-225 consists of six to two 12-foot travel lanes with 3- to 10-foot inside shoulders and 6- to 28-foot outside shoulders. The posted speed limit for this section of I-225 is 65 miles per hour (mph) until DTC Boulevard where the posted speed limit lowers to 55 mph up to the I-25/I-225 interchange. The barrier separated median between northbound and southbound directions is approximately 40-feet wide throughout the study corridor. Regional Transportation District (RTD) light rail transit (LRT) runs along the median through the study area.

Access Categories

I-225 is currently categorized as a limited access interstate. Within the study area, there are six interchanges: the system interchange of I-25/I-225, three interchanges on I-225 (I-225/Parker Road, I-225/DTC Boulevard, and I-225/Yosemite Street), and two interchanges on I-25 (I-25/Belleview Avenue and I-25/Hampden Avenue). Auxiliary lanes are provided for on- and off-ramps in the southbound direction.

Traffic Operations

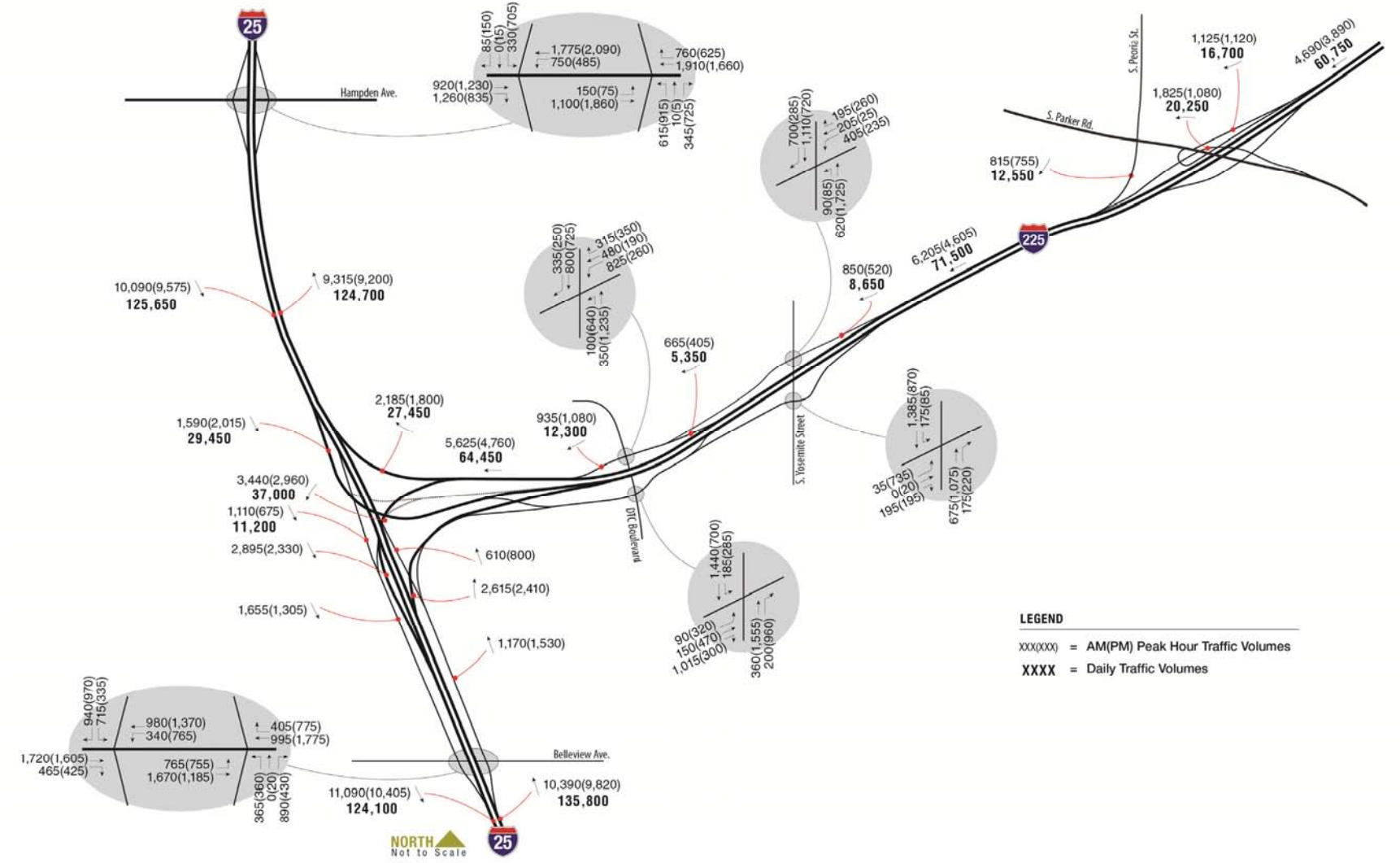
The posted speed limit along I-225 from Yosemite to DTC Boulevard is 65 mph and the posted speed limit from DTC Boulevard to I-25 is 55 mph. Actual southbound travel speeds tend to vary and are typically the lowest during peak commuter periods of travel, particularly the morning (AM) peak period. Congestion and associated low travel speeds are due to heavy traffic entering the system at the Parker Road interchange, where six lanes are provided, narrowing down to just two lanes at the DTC Boulevard bridge. This lane reduction along southbound I-225 causes a bottleneck at the DTC Boulevard bridge. This directly translates into extended queues and travel times along the corridor, particularly during the AM peak hour along southbound I-225.

Existing conditions along southbound I-225 during the AM peak period travel time from Parker Road to I-25 is approximately 8 to 15 minutes during congested periods, and the evening (PM) peak period travel time ranges from approximately 3 to 6 minutes, barring any incidents. I-225 average speeds are much greater during the PM peak hour than during the AM peak hour because the DTC Boulevard bridge is not the bottleneck during the PM peak period as it is during the morning commute. Northbound I-225 is also congested and backed up from Parker Road during the PM peak period, but this congestion may be alleviated, at least in part, once the widening of I-225 from Mississippi Avenue to Parker Road is completed (scheduled for completion in September 2014).

Traffic Volumes

An extensive amount of traffic count data has been collected along I-225 and at the interchange ramp intersections. **Figure ES.3** presents the data. I-25 and I-225 are the heaviest used roadway facilities in the immediate area serving approximately 250,000 and 140,000 vehicles per day (vpd), respectively. The southbound I-225 traffic demand during the AM peak hour is approximately 6,200 vehicles per hour (vph) just south of the Parker Road interchange. At the DTC Boulevard bridge, southbound I-225 demand is approximately 4,500 to 5,000 vph at peak times, although the amount that gets through is less. The inflow traffic at Parker Road Interchange exceeds the outflow traffic at DTC Boulevard bridge, thereby resulting in significant queues along the southbound I-225 mainline.

Figure ES.3 Existing Traffic Volumes



Summary of Existing Traffic Conditions Analysis

In order to understand how I-225 operates today, analysis was completed for the interchange intersections and freeway segments in the study area. Detail explanations of the traffic analysis tools used can be located in **Section 3.4 Traffic Operations**. The freeway segments operations were evaluated using VISSIM and the interchange intersections was evaluated utilizing Synchro/HCM.

- VISSIM uses visual animation to illustrate the traffic conditions on the roadway to better determine how different improvements will affect traffic flow when implemented. This program is a micro-simulation traffic flow model that specializes in the analysis of complex transportations systems and the interaction between system elements.
- Synchro/HCM (Highway Capacity Manual) was used to analyze the signalized intersections of the interchange terminals within the study area. This traffic analysis tool uses traffic data such as number of vehicles approaching a signal, the length of the signal cycle, and other factors to calculate how a traffic signal performs during certain periods of time and outputs this data.

These analysis procedures provide level of service (LOS) which is a qualitative measure based on average delay per vehicle at a controlled intersection or traffic density for freeway segment. Levels of service are described by a letter ranging from "A" to "F". LOS A represents minimal delay while LOS F represents excessive congestion and delay. LOS thresholds and criteria vary depending on the type of facility being evaluated. **Table 3.13**, in **Section 3.4**, summarizes the LOS thresholds for all facilities evaluated.

Intersections

The intersections in the study area were evaluated to determine how they operate today during the AM and PM commuter peak hours. The LOSs for the signalized interchange intersections were determined and are displayed in **Table ES.1**. **Figure ES.4** shows the lane configuration at each intersection in the study area and the overall results.

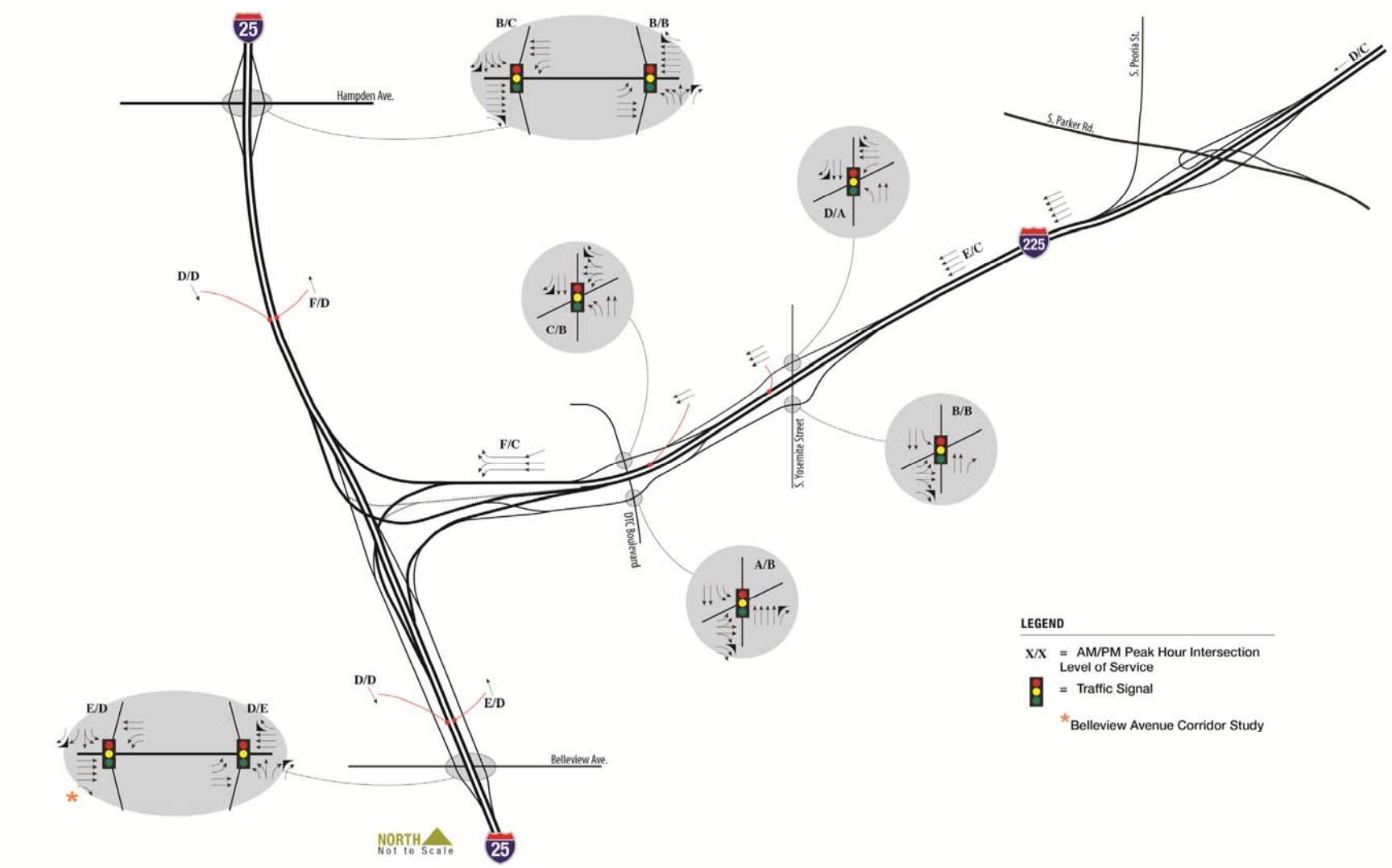
Table ES.1 Interchange Intersection Level of Service and Average Delay

Interchange / Intersection	AM Peak Hour		PM Peak Hour	
	Avg. Delay (s[1])	LOS	Avg. Delay (s[1])	LOS
I-225 / DTC Boulevard Interchange Intersections				
North Ramps	23.9	C	19.2	B
South Ramps	6.6	A	18.7	B
I-225 / Yosemite Street Interchange Intersections				
North Ramps	37.6	D	8.4	A
South Ramps	10.5	B	18.8	B
I-25 / Hampden Avenue Interchange Intersections				
West Ramps	18.8	B	30.4	C
East Ramps	19.8	B	14.1	B
I-25 /Belleview Avenue Interchange Intersections*				
West Ramps	--	E	--	D
East Ramps	--	D	--	E

* *LOS at the I-25/Belleview Avenue interchange intersections is based on traffic analyses performed for the Belleview Corridor Study.*

[1] *Seconds*

Figure ES.4 Existing Conditions 2013 Lane Geometry and Level of Service



For intersection analysis, LOS C is what is normally used for highway design, representing a roadway with traffic volumes ranging from 70 percent to 80 percent capacity. However, LOS D is considered acceptable for peak period conditions in urban and suburban areas. During the AM and PM peak hours, most intersections operate at LOS D or better. The exceptions include the intersections at the Belleview Avenue Interchange, which experience LOS E during the peak hours. These poor LOSs are due to the heavy movements turning to and from the ramps.

As in most areas, there are always alternative driving patterns during peak congestion times with drivers altering their routes in hope of avoiding congestion and longer commutes. Occasionally during the AM peak hours, southbound mainline I-225 traffic will exit at Yosemite Street and travel the Collector-Distributor(C-D) road/ramp roadway to the DTC Boulevard on-ramp as a "short-cut". This driving pattern is the result of drivers trying to avoid the mainline bottleneck. This short-cut increases delay at those intersections when this pattern is prevalent.

Freeways

Existing traffic conditions along I-225 and I-25 freeways were evaluated to understand how traffic is currently operating related to mainline flows, merges/diverges and weaving. **Table ES.2** displays the existing freeway traffic conditions along I-225 and I-25.

The I-225 mainline DTC Boulevard two-lane bottleneck operates at a LOS F during the AM peak hour. The PM peak hour operates better than the AM peak hour with LOS D or better. The southbound weave (south of DTC Boulevard), while controlled in part by ramp metering of on-ramp traffic and the limiting capacity of the two through lanes along southbound I-225, also functions at a LOS F during the AM peak hour. This tends to be related more to operations along I-25 and the merging of I-225 traffic and the associated spillback caused onto the weave section. The PM peak hour traffic flow along southbound I-225 is much better than that of the AM peak hour, with the bottleneck segment functioning at a LOS D.

The two-lane freeway section between the two DTC Boulevard Interchange ramps was also evaluated to identify how often throughout the day this specific stretch of I-225 operates at LOS F. In essence, the hourly demand for each hour of the day was considered in assessing this two-lane stretch of southbound I-225. Currently, it was found that this short stretch of I-225 operates at LOS F approximately two to three hours a day in the AM peak period.

Along northbound I-25, the southbound I-225 merge is currently operating at LOS F during the AM peak hour. The LOS F is due to the heavy northbound I-25 through traffic. Southbound I-25 overall is a LOS D or better during both AM and PM peak hours, with the exception of the I-225 south merge onto southbound I-25. This merge operates at LOS E during the AM peak hour.

Table ES.2 Existing (2013) Freeway Operations (VISSIM) – Ideal Conditions**

Location	Type	AM Peak Hour		PM Peak Hour	
		LOS	Density*	LOS	Density*
Southbound I-225					
I-225, North of Parker Interchange	Freeway	D	27.3	C	24.9
Parker Road Off-Ramp	Diverge	C	25.1	C	20.7
Parker Road Flyover On-Ramp	Merge	B	18.8	B	12.1
Parker Road/Peoria Street On-Ramp	Merge	C	22.4	B	14.8
Between Parker & Yosemite Interchanges	Freeway	E	40.0	C	18.3
Yosemite Street Off-Ramp	Diverge	E	40.0	B	18.3
DTC Boulevard Street Off-Ramp	Diverge	F	57.3	C	22.0
Between DTC Boulevard Off-Ramp & On-Ramp	Freeway	F	53.8	D	30.1
Between DTC Boulevard On-Ramp at I-25	Weave	F	52.9	C	27.7
Northbound I-25					
I-25, South of Belleview	Freeway	D	27.9	D	26.1
Belleview Avenue Off-Ramp	Diverge	C	27.9	C	26.1
Between Belleview & I-225	Freeway	E	37.7	D	31.2
I-225/Tamarac Parkway/DTC Blvd Off-Ramp	Diverge	E	37.7	D	31.2
Belleview Avenue On-Ramp	Merge	F	76.9	F	55.8
I-225 On-Ramp	Merge	F	64.1	C	27.6
Between I-225 & Hampden Avenue	Freeway	F	72.9	D	32.5
Hampden Avenue Off-Ramp	Diverge	F	72.9	D	32.5
Hampden Avenue On-Ramp	Merge	F	87.2	F	47.4
I-25, North of Hampden	Freeway	E	37.5	E	36.3
Southbound I-25					
I-25, North of Hampden	Freeway	D	27.2	D	29.4
Hampden Avenue Off-Ramp	Diverge	D	27.2	D	29.4
Hampden Avenue On-Ramp	Merge	D	30.4	D	31.2
Between Hampden Avenue & I-225	Freeway	D	30.4	D	31.2
I-225 Off-Ramp	Diverge	D	30.4	D	31.2
Belleview Avenue Off-Ramp	Diverge	D	30.4	D	31.2
Between I-225 & Belleview	Freeway	D	28.2	C	27.4
I-225 On-Ramp	Merge	E	43.0	C	26.4
Between I-225 & Belleview	Freeway	D	31.5	D	29.5
Belleview Avenue On-Ramp	Merge	D	29.4	D	31.0
I-25, South of Belleview	Freeway	D	32.4	D	32.9

* *Density reported in passenger cars per mile per lane (pc/mi/ln)*

** *Ideal conditions represent simulations of study area without any roadway incidents that can occur from time to time on I-225 and I-25.*

Safety Assessment Analysis

The project team completed a Safety Assessment Report for the I-225 PEL Study, which can be found in **Appendix A**. The Safety Assessment Report can be referenced for a detailed analysis of the study area. The safety analysis completed for this report covers a portion of southbound I-225 from milepost (MP) 0.00 to MP 4.66 (north of Parker Road). In addition, given the direct interaction that I-225 has with I-25, a portion of I-25 from Belleview Avenue (MP 199.40) to Hampden Avenue (MP 201.59) has also been reviewed as part of this analysis.

The conclusions and recommendations of the Safety Assessment Report are based on an investigation of three years of crash history. Between southbound I-225 (MP 0.00 to MP 4.66) and both directions of I-25 (MP 198.85 to MP 202.14), there were a total of 1,074 reported crashes within the project limits; 420 crashes occurred along southbound I-225, and 654 crashes occurred along I-25, including crashes on the ramps. In general, the freeway segments within the study area fall within the LOSS I or II categories, meaning the corridor as a whole has a better than expected safety performance for like facilities. However, rear-end and sideswipe crash patterns emerged along southbound I-225. There are several locations of higher than expected crash concentration and severity, primarily related to congestion.

At the I-225/DTC Boulevard and I-225/Yosemite Street interchange intersections, LOSS ranged from LOSS I to LOSS III. The northern DTC Boulevard intersection was a LOSS III, indicating less than expected safety performance. There were a total of 103 crashes at the four intersections: 30 crashes occurred at the southern DTC Boulevard intersection; 54 crashes occurred at the northern DTC Boulevard intersection; eight crashes occurred at the southern Yosemite Street intersection; and 11 crashes occurred at the northern Yosemite Street intersection. At the northern DTC Boulevard intersection (highest concentration of intersection crashes), 22 of the 54 crashes were broadside crashes indicating the need for improvements.

The following recommendations should help reduce the number of crashes throughout the study corridor:

- **Improvements to southbound I-225 to reduce congestion along I-225** – These improvements should help to decrease the number of rear-end type and sideswipe (same direction) type crashes on the freeway. Further investigation and identification of improvements is part of the I-225 PEL Study process.
- **Parker Road flyover to southbound I-225** – Consideration should be given to reviewing the existing reflector and delineation along this flyover ramp due to the high occurrence of run-off-the-road type crashes during dry conditions.
- **Improvements to signal coordination and reviewing/updating the existing red/yellow clearance intervals** – These improvements should help reduce the frequency of broadside and rear-end type of crashes. Additionally, consideration should be given to changing left-turn phasing to allowing protected only left turns at the northern DTC Boulevard intersection.

Transit Service and Pedestrian and Bicycle Facilities

Many transit lines run through the study area, largely due to the Ulster and Tufts Bus Transfer Center and the proximity to the light rail lines/stations. Most roads in the study area have pedestrian facilities on both sides of the road, but a few segments are missing a sidewalk and protected crosswalks. Designated bike routes are limited to Ulster Street, Yosemite Street, and sections of major streets in the area. While these streets are designated as bike routes, separate physical bike infrastructure is not present.

Future Transportation Conditions

As part of evaluating existing conditions within the study area, understanding how the I-225/I-25 roadway network will operate in the future is essential to identify deficiencies and breakdowns. 2035 was chosen for developing future traffic conditions.

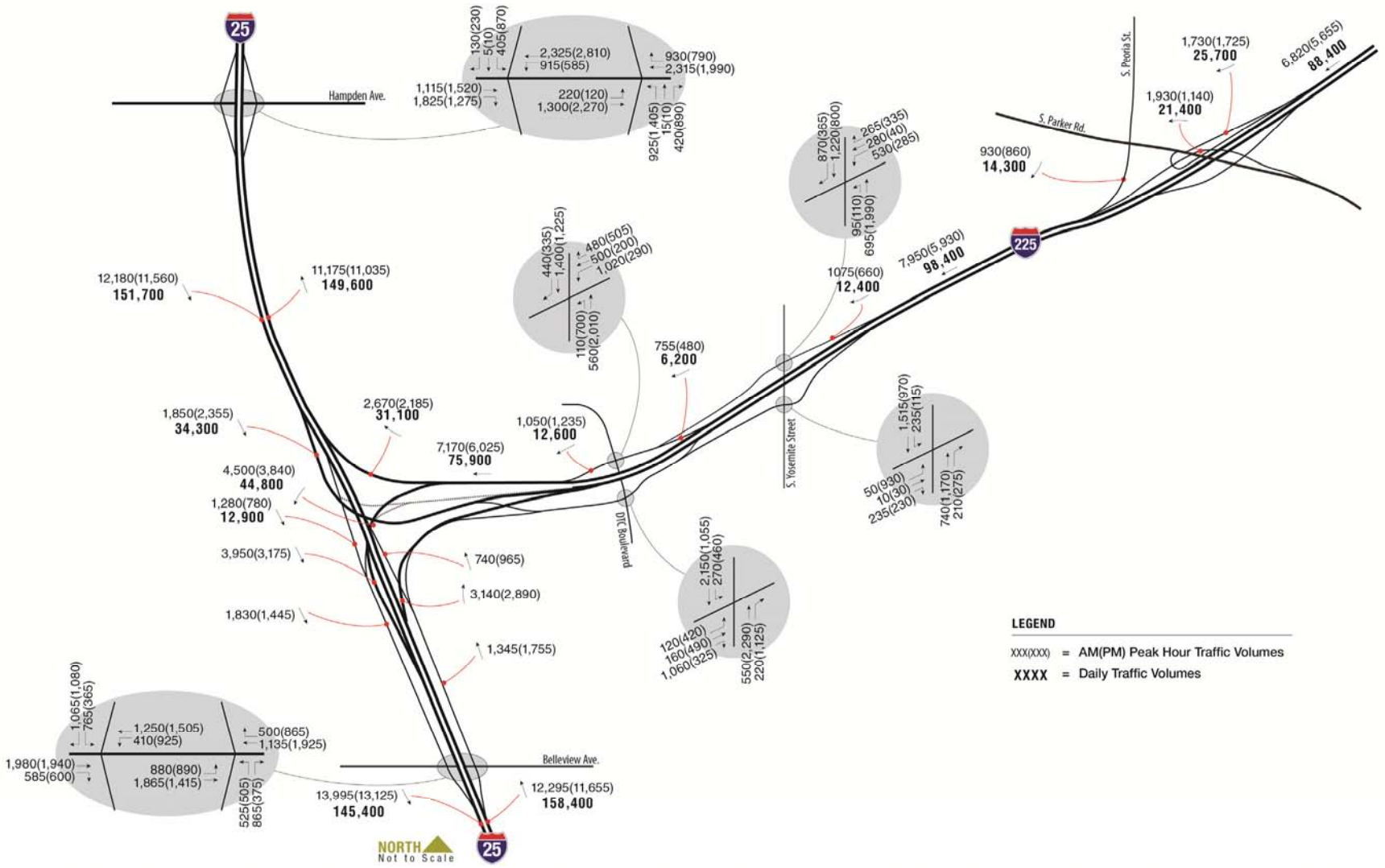
The project team used the DRCOG 2035 fiscally constrained regional travel demand model (including the 2035 land use forecasts described in **Chapter 2**) to develop the 2035 traffic forecasts. As can be seen in **Figure ES.5**, the 2035 traffic volumes reflect the demands along the southern reaches of I-225 with the heavy employment in the DTC area, and the impacts from residential and nearby retail. Overall, 2035 traffic patterns would remain similar to the existing traffic patterns, but the mainline magnitude in traffic demand is expected to increase by 20 to 30 percent.

No-Action Alternative

The No-Action Alternative reflects a scenario should CDOT select to not build any further improvements than those already being constructed. The No-Action Alternative is also used as a baseline comparison for alternative development and screening. This alternative would leave southbound I-225 with two lanes passing over the DTC Boulevard bridge, but improvements upstream along I-225 are anticipated to be in place. These would include the widening of I-225 from Parker Road to Mississippi Avenue, which is currently under construction. Upon completion, I-225 will be a six-lane facility its entire length (except for the southbound segment crossing DTC Boulevard).

One other planned/funded improvement along the I-225 corridor includes the completion of the FastTracks LRT line. Specifically, the LRT that currently terminates at Nine Mile Station (near I-225 / Parker Road) will be extended north along I-225, passing through the Aurora City Center area and the Fitzsimons/Anschutz Campus, then terminating at the East Rail Line near Peoria Street and Smith Road. The completion of this rail line will dramatically improve the level of transit service provided along I-225 and is reflected in the 2035 No-Action volumes developed from the DRCOG travel demand model.

Figure ES.5 2035 No-Action Traffic Volumes



Corridor Traffic Forecasts and Capacity Thresholds

The 2035 No-Action traffic volume forecasts for I-25 and I-225 were developed and each were projected to serve approximately 300,000 and 190,000 vpd, respectively. **Figure ES.6** shows projected traffic demands. The southbound I-225 traffic demand during the AM peak hour would be approximately 8,000 vph just south of the Parker Road Interchange. Just as in existing conditions, the inflow traffic at the Parker Road Interchange would exceed the outflow traffic at the DTC Boulevard bridge and the bottleneck constraint would be worsened by the growth along I-225. Additionally, this analysis includes the widening of I-225 from Parker Road to Mississippi Avenue. This improvement would open up the existing pinch point north of Parker Road, thereby allowing greater concentrations of traffic into the bottleneck at the DTC Boulevard Interchange.

As mentioned in **Section 3.4**, there are some pronounced turning movement patterns within the study area interchanges. By 2035, these patterns will become even more pronounced.

Freeway and Intersection Operations

The project team evaluated operating conditions for the 2035 No-Action Alternative, displayed on **Figure ES.6**. The LOSs for the signalized interchange intersections were determined for the AM and PM peak hour, and **Table ES.3** displays the LOS and average delays. In general, there will be a decrease in LOS compared to existing conditions at the intersections because the 2035 No-Action Alternative does not assume any additional improvements at the interchange intersections.

The more notable drops in LOS include the I-225 / DTC Boulevard north ramps intersection, where LOS will decrease from LOS C to LOS E during the AM peak hour. This results from the increase of westbound left-turning vehicles (1,020 vph) with limiting capacity of one left-turn lane and a shared left-turn/through lane.

At the S. Yosemite Street north ramps intersection, the LOS will decline from LOS D to LOS E. Both the westbound left-turn and northbound left-turn movements will operate at LOS F due to limited capacity.

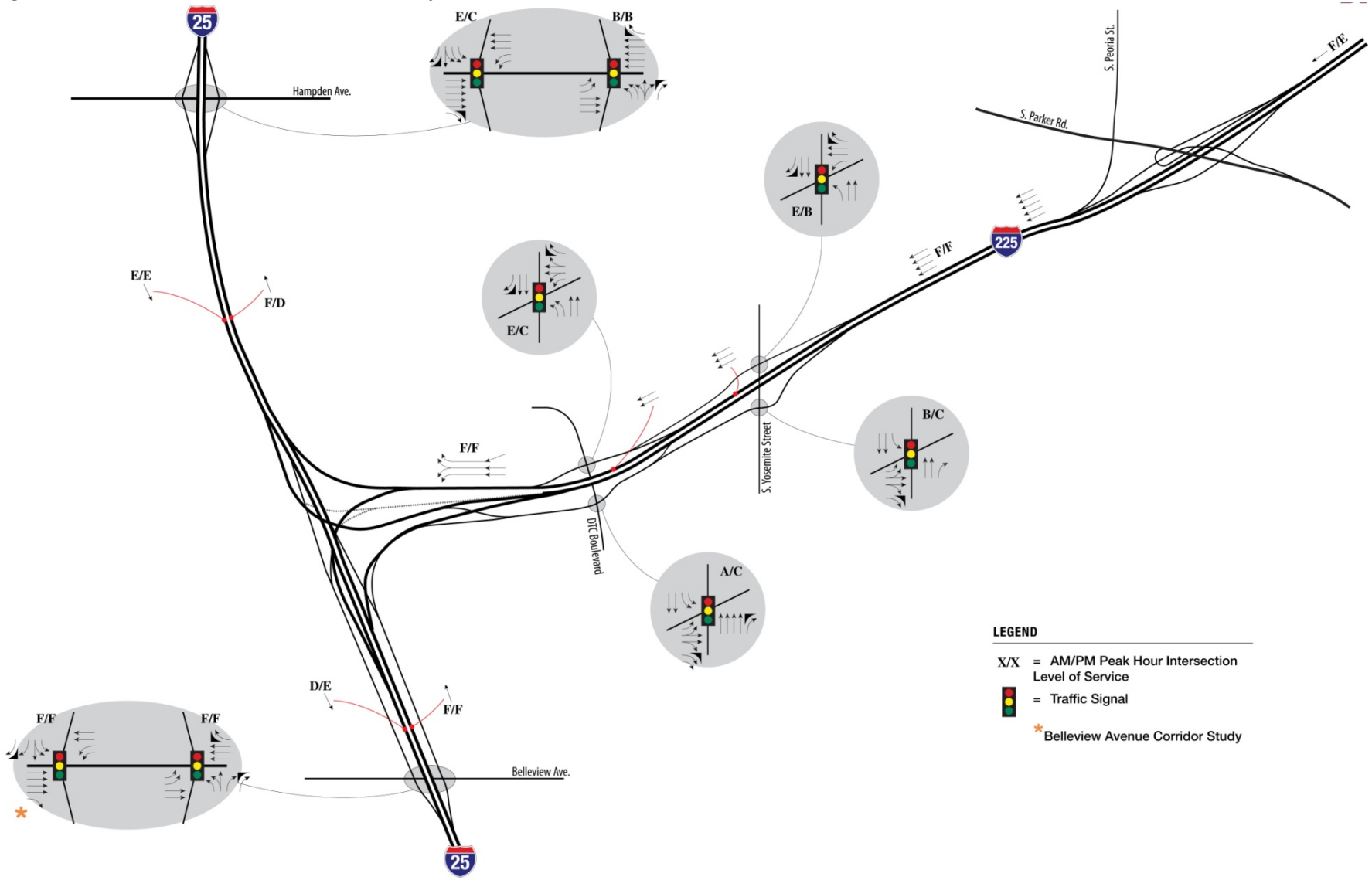
Table ES.3 Interchange Intersection Level of Service and Average Delay

Interchange / Intersection	AM Peak Hour		PM Peak Hour	
	Avg. Delay (s[1])	LOS	Avg. Delay (s[1])	LOS
I-225 / DTC Boulevard Interchange Intersections				
North Ramps	62.5	E	31.8	C
South Ramps	7.1	A	24.4	C
I-225 / Yosemite Street Interchange Intersections				
North Ramps	72.2	E	10.2	B
South Ramps	11.0	B	25.6	C
I-25 / Hampden Avenue Interchange Intersections				
West Ramps	62.5	E	29.0	C
East Ramps	18.4	B	16.6	B
I-25 / Belleview Avenue Interchange Intersections*				
West Ramps	--	F	--	F
East Ramps	--	F	--	F

* *LOS at the I-25/Belleview Avenue Interchange intersections is based on traffic analyses performed for the Belleview Corridor Study*

[1] *seconds*

Figure ES.6 No-Action 2035 Lane Geometry and Level of Service



The I-225/Hampden Avenue interchange western ramps intersection experiences a drop in LOS from LOS B to LOS E due to the very large increase in eastbound right-turn movement traffic during the AM peak hour. Additionally, the I-225/Belleview Avenue interchange intersections decline from LOS D/E to LOS F for both intersection during both AM and PM peak hours without improvements. A separate study nearing completion will identify recommended improvements to remedy this condition.

Table ES.4 displays the projected freeway conditions along I-225 and I-25 from the VISSIM simulation runs. North of the DTC Boulevard Interchange bottleneck, I-225 will continue to operate at LOS F during the AM peak hour in the southbound direction, but PM peak hour operations will also operate at LOS F in 2035. The weave along I-225 between DTC Boulevard and I-5) is projected to function at a LOS F during both peak hours.

Much of southbound I-25 will function poorly during both AM and PM peak hours. The I-225 merge with I-25 will operate at LOS F during both peak hours due to the short merging lane distances along I-25. Along northbound and southbound I-25, some of the merge/diverge points (I-225, Hampden Avenue ramps and Belleview Avenue ramps) will experience little change in operations relative to existing conditions. This is caused by congestion south and north of these areas along I-25. The high traffic volumes constrain the flow to this point along I-25 creating a metering condition. This situation exists today along I-25 during peak hours where traffic queues up then releases after each merge or diverge area providing a brief improvement in LOS until the driver reaches congestion again.

The project team used HCS to evaluate the freeway section between the two DTC Boulevard Interchange ramps in isolation to determine how often this I-225 segment would cause LOS F throughout the day (as opposed to downstream constraints causing LOS F conditions). Given the 2035 projected hourly traffic demands and realizing that unmet demand in a particular hour would exten d into the subsequent hours, this segment is projected to cause LOS F for 8 to 12 hours a day, including the AM and PM peak periods and many of the mid-day hours. Many mid-day hours currently see southbound traffic flows that are only 25 to 35 percent lower than those of the AM peak hour. The 20 to 30 percent traffic increase indicative of year 2035 traffic will push the mid-day hour traffic levels to today's AM peak hour demand level, which already overwhelms the freeway. As such, this situation could be predominant throughout the typical weekday by 2035.

Table ES.4 2035 No-Action Freeway Operations (VISSIM) – Ideal Conditions**

Location	Type	AM Peak Hour		PM Peak Hour	
		LOS	Density*	LOS	Density*
Southbound I-225					
I-225, North of Parker Interchange	Freeway	F	100.9	E	36.6
Parker Road Off-Ramp	Diverge	F	95.6	E	42.0
Parker Road Flyover On-Ramp	Merge	F	162.5	F	88.8
Parker Road/Peoria Street On-Ramp	Merge	F	140.0	F	80.2
Between Parker & Yosemite Interchanges	Freeway	F	126.9	F	100.7
Yosemite Street Off-Ramp	Diverge	F	126.9	F	100.7
DTC Boulevard Street Off-Ramp	Diverge	F	119.9	F	112.5
Between DTC Boulevard Off-Ramp & On-Ramp	Freeway	F	124.2	F	122.7
Between DTC Boulevard On -Ramp & I-25	Weave	F	111.2	F	104.6
Northbound I-25					
I-25, South of Belleview	Freeway	F	84.9	F	91.1
Belleview Avenue Off-Ramp	Diverge	F	84.9	F	91.1
Between Belleview & I-225	Freeway	F	71.1	F	85.6
I-225/Tamarac Parkway/DTC Blvd Off-Ramp	Diverge	F	71.1	F	85.6
Belleview Avenue On-Ramp	Merge	F	58.1	D	33.3
I-225 On-Ramp	Merge	F	48.4	C	27.0
Between I-225 & Belleview Avenue	Freeway	F	72.5	D	32.4
Hampden Avenue Off-Ramp	Diverge	F	72.5	D	32.4
Hampden Avenue On-Ramp	Merge	F	87.9	F	62.5
I-25, North of Hampden	Freeway	E	37.0	E	36.5
Southbound I-25					
I-25, North of Hampden	Freeway	E	36.4	F	61.6
Hampden Avenue Off-Ramp	Diverge	E	36.4	F	61.6
Hampden Avenue On-Ramp	Merge	E	40.3	E	36.3
Between Hampden Avenue & I-225	Freeway	E	40.3	E	36.3
I-225 Off-Ramp	Diverge	E	42.3	D	32.0
Belleview Avenue Off-Ramp	Diverge	F	57.1	E	37.8
Between I-225 & Belleview	Freeway	F	92.7	F	83.8
I-225 On-Ramp	Merge	F	62.1	F	62.0
Between I-225 & Belleview	Freeway	D	33.0	E	35.8
Belleview Avenue On-Ramp	Merge	D	31.3	E	36.1
I-25, South of Belleview	Freeway	D	33.7	D	34.5

**Density reported in pc/mi/ln; ** Average Speed reported in mph*

*** Ideal conditions represent simulations of study area without any roadway incidents that can occur from time to time on I-225 and I-25.*

Transit

Future conditions include the extension of the LRT service north along the I-225 corridor, currently under construction. When completed, this rail line will extend north through Aurora City Center, Fitzsimons, and connect with the East Rail Line that will serve Denver International Airport (DIA) and Downtown Denver. An additional train route will be added to I-225 upon this line's completion in which direct lines will run from Lincoln Avenue in Douglas County to the East Rail Line and return. Service to/from Downtown Denver will use the I-225 line as far north as the Florida Avenue Station. The extension of the rail and the added service help to ensure a robust transit service along the I-225 corridor, thereby removing vehicular trips that would otherwise have an impact on the mainline.

With the extended rail line, bus service will also be enhanced to leverage this new asset. RTD regularly adjusts and updates its bus service in response to demand conditions as well. Many routes through the study area, such as routes 27, 46, 65, 73, 105, 121, and T, are candidates to be adjusted. In addition, there are ongoing discussions with respect to each station planned along the I-225 line to develop strong pedestrian connections. This will help encourage use of the robust transit system planned for this corridor.

Bicycle and Pedestrian

The level of traffic along the adjacent roadways has an impact on bicycle and pedestrian activity. The forecasted increase in traffic volume along the interchange cross-streets will result in some reduction in bicycle and pedestrian comfort along the interchange complex cross-streets. However, Yosemite Street will continue to be in place to accommodate bicycle and pedestrian activity.

Environmental Overview

The environmental resources studied were selected based on the characteristics of the study area and on stakeholder input. The resources considered are generally consistent with NEPA, its implementing regulations, and FHWA and CDOT NEPA/PEL guidelines. The following sections summarize resources that are considered red flag environmental resources with separate regulatory drivers, such as the Endangered Species Act (ESA) or Clean Water Act (CWA), or are typically resources of concern for the general public, such as traffic noise.

Parks and Recreation Resources

The park properties present within the study area are publicly owned. Existing park and recreation resources within the study area include:

- Eastmoor Park
- Rosamond Park
- Goldsmith Gulch North Park and North Middle Park
- George M. Wallace Park and Park North
- Goldsmith Gulch Trail
- Village Greens Park
- Cherry Creek State Park and Reservoir
- Samuels Elementary School Playground

Traffic Noise

Of general concern is the potential for noise or vibration impacts from vehicles to the receptors (that is, properties) near transportation facilities. State and federal transportation agencies have established thresholds for determining noise impacts to guide these conclusions. When impacts are identified from an improvement, mitigation actions for the affected receptors are typically considered for the project design. This is an important consideration for this project because many properties are located along the

project interchange and may be affected by noise. The study area contains many residential neighborhoods (Noise Abatement Criteria [NAC] Category B). Likewise, several Category C areas, such as Goldsmith Gulch North Middle Park and Samuels Elementary School Playground, are also spread throughout the study area. All of the residential areas adjoining I-225 have a noise abatement feature in place. Along this corridor, sound walls have demonstrated to be effective in abating traffic noise from I-225.

Cultural Resources

Historic and archaeological cultural resources are afforded consideration by Section 106 of the National Historic Preservation Act of 1966, as amended, as well as Section 4(f) of the Department of Transportation Act of 1966. Significant historic resources are those resources that are eligible for inclusion or listed on the National Register of Historic Places (NRHP). For the purpose of this study, only properties on the NRHP or those officially eligible for the NRHP are listed as previously identified historic sites. There are no known historic or archaeological sites within the study area.

Floodways, 100-year Floodplains and Water Quality

The study area contains only one Federal Emergency Management Agency (FEMA)-designated drainageway, Goldsmith Gulch. FEMA has designated Zone AE and Zone X in the Goldsmith Gulch Floodplain. It should be noted that a Zone AE designation is sensitive to changes. With this sensitivity, floodplain modeling is required to assess any improvement project.

Portions of Goldsmith Gulch flow through open channels; other sections are piped underground, such as under I-225 via 12-foot by 16-foot box culverts. According to FEMA, the full 100-year flood flow passes through these culverts. The culverts that travel under DTC Boulevard are not certified as a levee control mechanism. Thus, if a major flood event occurred (assuming no levee exists), DTC Boulevard would be in the floodway.

Wetlands and Waters of the US

Wetland resources are protected under Section 404 of the CWA and Executive Order 11990 *Protection of Wetlands*. CDOT has incorporated FHWA environmental guidance to emphasize efforts to avoid and minimize wetland impacts. Most wetlands identified within the corridor are small palustrine emergent wetlands, with most occurring in a narrow fringe in isolated locations along Goldsmith Gulch and in a stormwater pond in CDOT's right-of-way (ROW) at the I-25/I-225 Interchange.

Wildlife/Threatened and Endangered Species

Various federal laws have been established to protect wildlife, including: the ESA; the Migratory Bird Treaty Act (MBTA); and the Bald and Golden Eagle Protection Act (BGPA). Under the MBTA, the study area contains suitable habitats for Cliff Swallows (*Petrochelidon pyrrhonota)*. The field survey sighted one Black-Tailed Prairie Dog (*Cynomys ludovicianus*) colony. Habitat exists for the Preble's Meadow Jumping Mouse, but the study area is located in a block clearance zone for this species.

Hazardous Materials

Sites within the study area are identified as having known (current and historic) soil or groundwater contamination and are distinguished in this report as sites with recognized environmental conditions. Recognized environmental conditions include sites with the potential for hazardous substance release under the conditions of past release, present release, or potential release to groundwater and property surface water sources. A total of 10 sites with recognized potential environmental conditions are

identified within 1/8 mile from the existing ROW within the study area. Two of these sites are leaking underground storage tanks (LUST) that are closed and cleanup is complete. The remaining sites are associated with historical auto operations, historical dry cleaner operations, or current dry cleaner operations. These sites have previously been redeveloped, thereby making them a low risk for contamination issues.

1.0 INTRODUCTION

CDOT is conducting a PEL study for southbound I-225 between Yosemite Street and I-25 in the City and County of Denver, Colorado. CDOT is conducting the I-225 PEL (Yosemite to I-25) to assess existing conditions, identify anticipated problem areas, and develop and evaluate transportation improvements to reduce congestion and enhance the safety of I-225 within the traffic analysis area (**Figure 1.1)**. CDOT, in cooperation with FHWA, is preparing this PEL study in accordance with FHWA and CDOT PEL guidance for improving and streamlining the environmental process for transportation projects by conducting planning activities before the start of NEPA process.

This *Environmental Analysis and Existing Conditions Assessment Report* has been prepared as part of the I-225 PEL study to document current and anticipated future conditions of the interchange in regard to land use, the transportation system, and environmental resources. The information presented in this report will be the basis for developing and evaluating possible transportation improvements in the study area (**Figure 1.2 Study Area**).

This report has used information from many sources, including CDOT traffic and safety evaluations, and information obtained from other state, regional, and local agencies. Information gathering has benefited from a comprehensive agency coordination effort, which is expected to continue as the PEL study proceeds.

1.1 Study Location and Description

I-225 is a north-south freeway that is under CDOT jurisdiction. I-225 spans approximately 13 miles between Interstate 70 (I-70) to the north and I-25 to the south. The interstate provides major access to Denver, Adams, and Arapahoe counties.

The traffic analysis area along I-225 between I-25 and Parker Road and along I-25 between Belleview Avenue and Hampden Avenue is shown in **Figure 1.2 Study Area1**. The study area extends approximately less than 2 miles along I-225 between the I-25/Yosemite Street Interchange on the east to the I-225/I-25 Interchange on the west (**Figure 1.12**).

Figure 1.1 Traffic Analysis Area

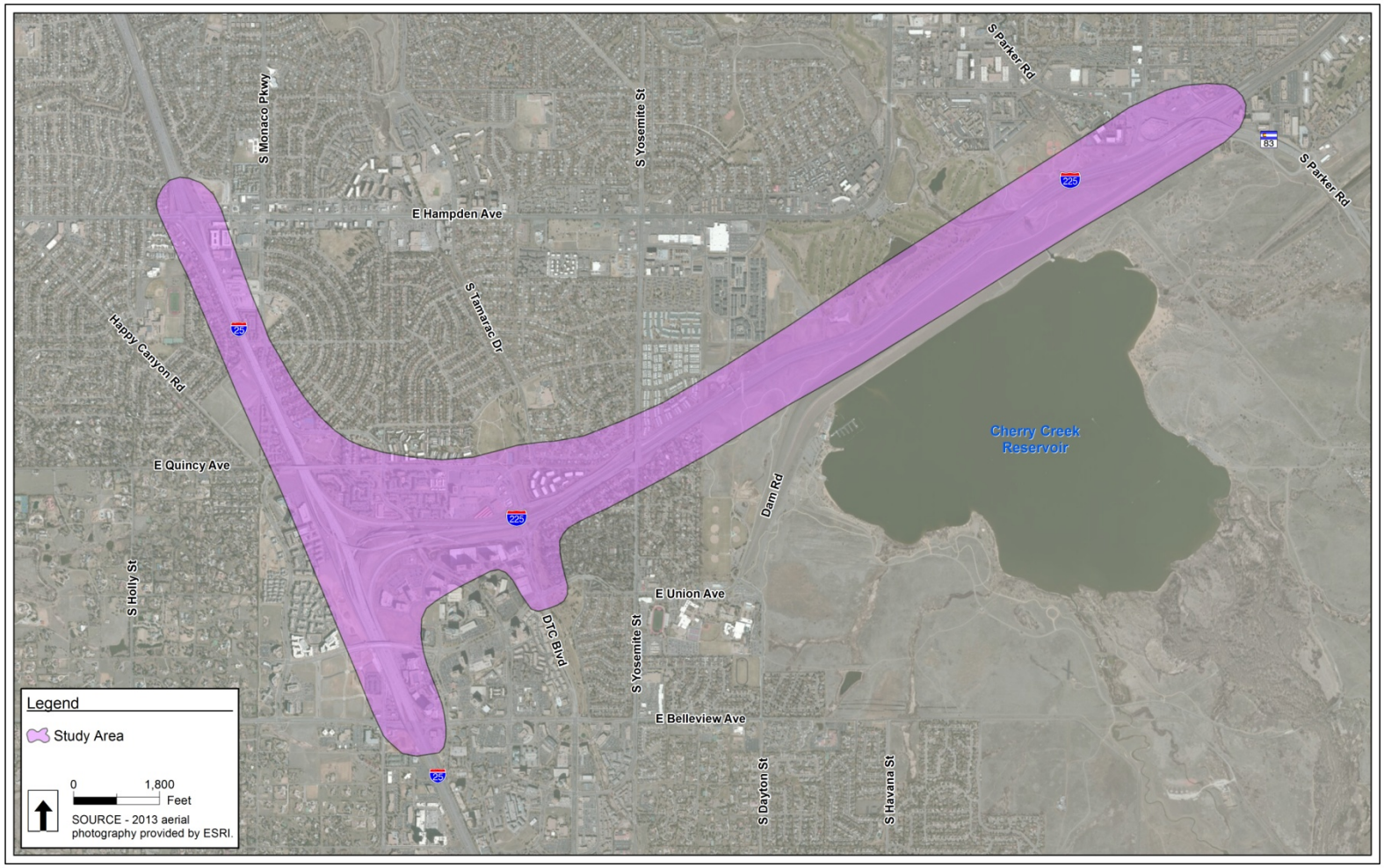
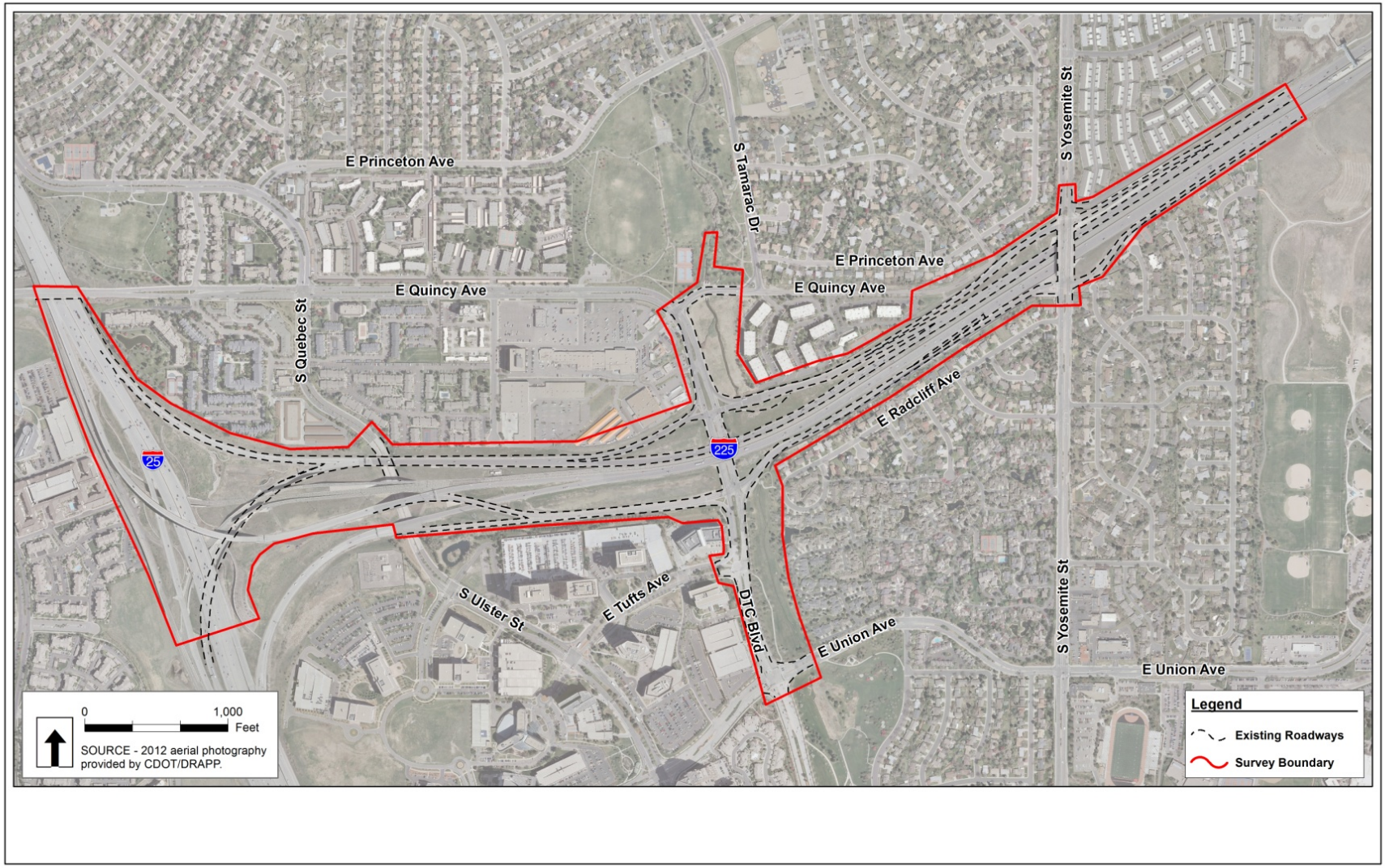


Figure 1.2 Study Area



1.2 Transportation Planning Context

Many transportation plans have been developed that relate to the study area. These plans include:

- Arapahoe County, *2035 Transportation Plan* (2010)
- City of Aurora, *2009 Comprehensive Plan* (2009)
- City of Aurora, *2012 Nine Mile Station Area Plan* (2012)
- City of Greenwood Village, *Comprehensive Plan* (2004, as amended)
- *2035 Metro Vision Regional Transportation Plan* (Denver Regional Council of Governments [DRCOG], 2007, as amended)

The following briefly summarizes the relevant aspects of each plan.

Arapahoe County, 2035 Transportation Plan

Arapahoe County completed a *2035 Transportation Plan* in November 2010. The *2035 Transportation Plan* evaluates future road needs based on land use projection, population growth, daily traffic volumes, and commuting destinations. Only 11 percent of county residents commute to work within Arapahoe County and nearly 50 percent work within the Denver metro area.

The plan identifies the need for study documentation of the following:

- Corridor studies along Arapahoe Road and Parker Road south of I-225 (Arapahoe County, 2009)
- Recommendation for bikeway improvement access to the Cherry Creek Trail (Arapahoe County et al., 2010)

City of Aurora, 2009 Comprehensive Plan

The City of Aurora updated its comprehensive plan in 2009. The *Comprehensive Plan* contains sections devoted to major transportation corridors and interchanges. I-225 is identified as Aurora's geographic center and connects several distinct neighborhoods. Communities along I-225 have access to commercial developments, recreational access to the south, and many multi-family housing units. I-225 allows access to the Nine Mile and Dayton LRT stations, and future links to the Fitzsimons and Aurora City Center.

City of Aurora, 2012 Nine Mile Station Area Plan

The Nine Mile LRT Station is located at the intersection of I-225 and Parker Road. The City of Aurora has begun planning for a Transit-Oriented Development (TOD) project at this elevated station. Nine Mile Station is currently an end of line transit station providing more than 1,200 commuter parking spaces and multiple bus line connections. The Nine Mile Station is accessible via Parker Road or by vehicle and bus on Peoria Street.

City of Greenwood Village, Comprehensive Plan

The Greenwood Village City Council adopted its *Comprehensive Plan* in December 2004 and has made subsequent amendments, with the last being in 2012. The *Comprehensive Plan* recognizes the I-25/I-225 interchange as a key area of potential intermodal transportation improvements.

The *Comprehensive Plan* stated the following:

- Plan to strengthen working relationships with adjacent municipalities to address mutual traffic issues
- Improve safety and access for cyclists and pedestrians across busy roadways and to the LRT stations
- Highlight the importance of the I-25/I-225 complex adjacent to the municipality as a hub of employment and transit opportunities

DRCOG 2035 Metro Vision Regional Transportation Plan

In its *2035 Metro Vision Regional Transportation Plan*, DRCOG recommends:

- Two lane additions from Parker Road to Mississippi Avenue along I-225, under construction – Expected completion date of July 2014
- 9.4 mile LRT Extension from Nine Mile to Peoria Station along I-225

1.3 Other Transportation Projects in the Vicinity

In addition to the interchange-specific, citywide, and metropolitan area plans that include the study area, a series of transportation projects are planned or under construction within the vicinity of the study area:

- RTD *I-225 Light Rail Transit Environmental Evaluation* (RTD, 2009)
- *Parker Corridor Study* (Arapahoe County, 2009)

RTD I-225 LRT

Construction has begun for the I-225 LRT extension from the Nine Mile Station at the interchange of Parker Road and I-225 to the Peoria Station at I-70. Construction is expected to be completed and operational in 2016 (RTD, 2009). Currently, the H line operates from downtown Denver and terminates at the Nine Mile Station.

Parker Corridor Study, Arapahoe County

Arapahoe County conducted a corridor study of State Highway 83 (SH 83), Parker Road, south of I-225. Study recommendations included the following:

- Re-stripe and provide overhead signage for southbound and northbound Parker Road traffic to/from I-225
- Add a new park-n-Ride at the intersection of Parker Road and Arapahoe Road to supplement parking utilization at Nine Mile Station
- Add a pedestrian underpass between Belleview Avenue and Quincy Avenue
- Add a multi-use path along Cherry Creek State Park and Parker Road

2.0 LAND USE

Chapter 2 describes the existing and future land use conditions along I-225 from Parker Road to I-25.

2.1 Current Land Use

For transportation planning purposes, DRCOG has divided the entire Denver metropolitan region into Transportation Analysis Zones (TAZ). DRCOG estimates socioeconomic variables, including population, household, employment, and income, for each TAZ. These factors are projected through 2035 for local and regional planning purposes. DRCOG incorporates many variables in their estimates and projections, including, but not limited to, overall regional growth, each jurisdiction's potential share of future growth, and current and long-range development plans.

The study area covers areas of the City and County of Denver, the City of Aurora, and the City of Greenwood Village. Within these three municipalities are the counties of Denver and Arapahoe. Each local government has a comprehensive plan that discusses current and future land uses within each respective boundary.

Households, Employment, and Demographic Characteristics

In 2010, the study area included approximately 13,000 households and more than 26,000 jobs. This is a higher ratio of jobs to households compared to the entire DRCOG region, indicating that many workers travel to this area for employment. **Table 2.1** compares households, employment, and employment-to-households ratio for the study area with the entire DRCOG region.

Table 2.1 2010 Households and Employment

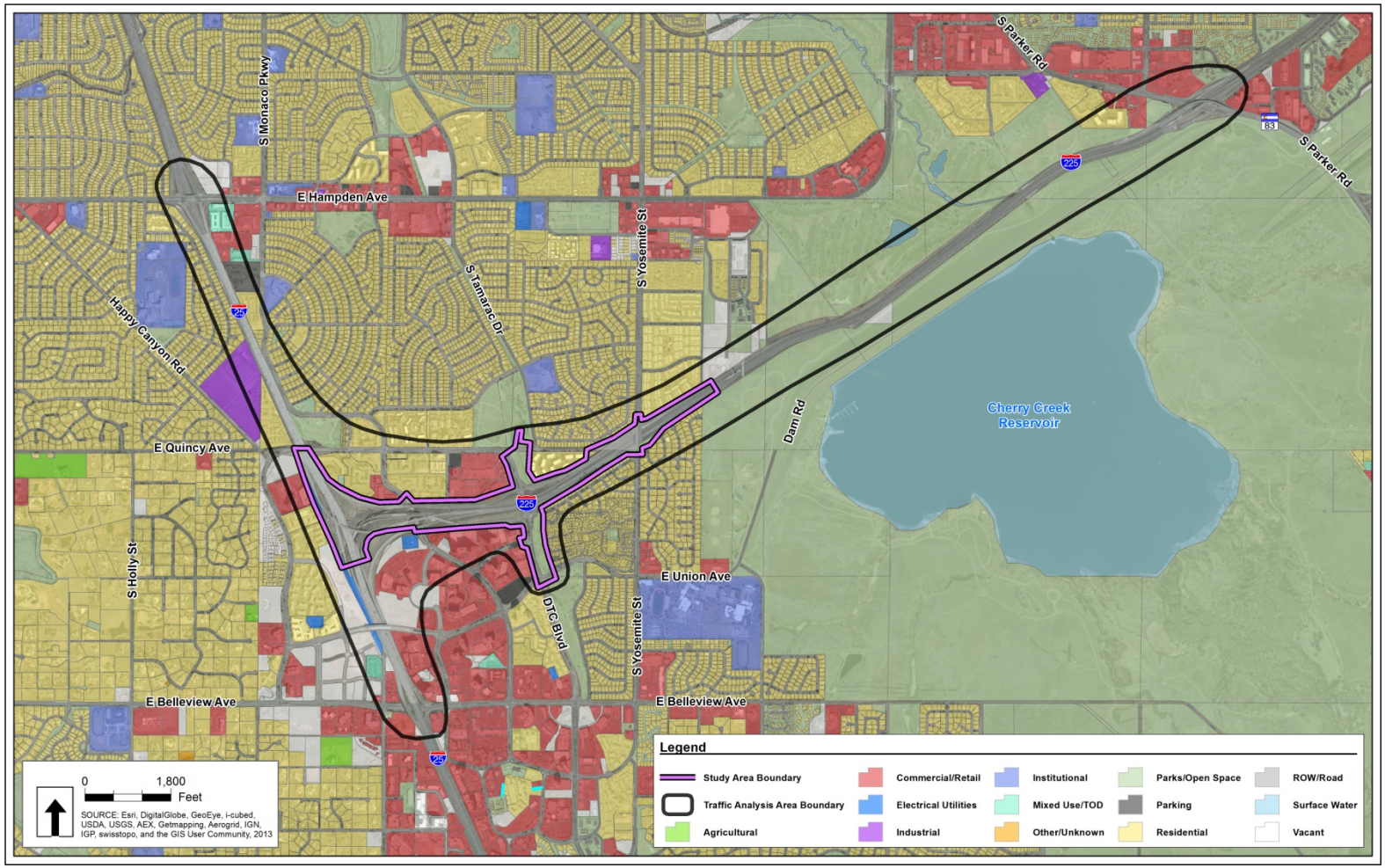
Area	2010 Households	2010 Employment	Employment/Households Ratio
Study Area	13,029	26,565	2.04
DRCOG Region	1,163,778	1,351,473	1.16

Source: DRCOG, 2010

Existing Conditions

Figure 2.1 shows generalized existing land uses along the interchange. The map reflects current conditions along the corridor. Southeast of the I-25/I-225 Interchange, Denver Technological Center (DTC) has one of the highest concentrations of commercial and retail uses in the area. The northwest quadrant of the I-225 and DTC Boulevard interchange has a large area of commercial and retail land uses that attract trips to this area. Residential land uses are also found adjacent to I-225 and I-25. In **Figure** 2.1, parks and open space uses are the next prominent land use, with the proximity of the Cherry Creek State Park and Reservoir and the trails along Goldsmith Gulch and Cherry Creek.

Figure 2.1 Current Land Use



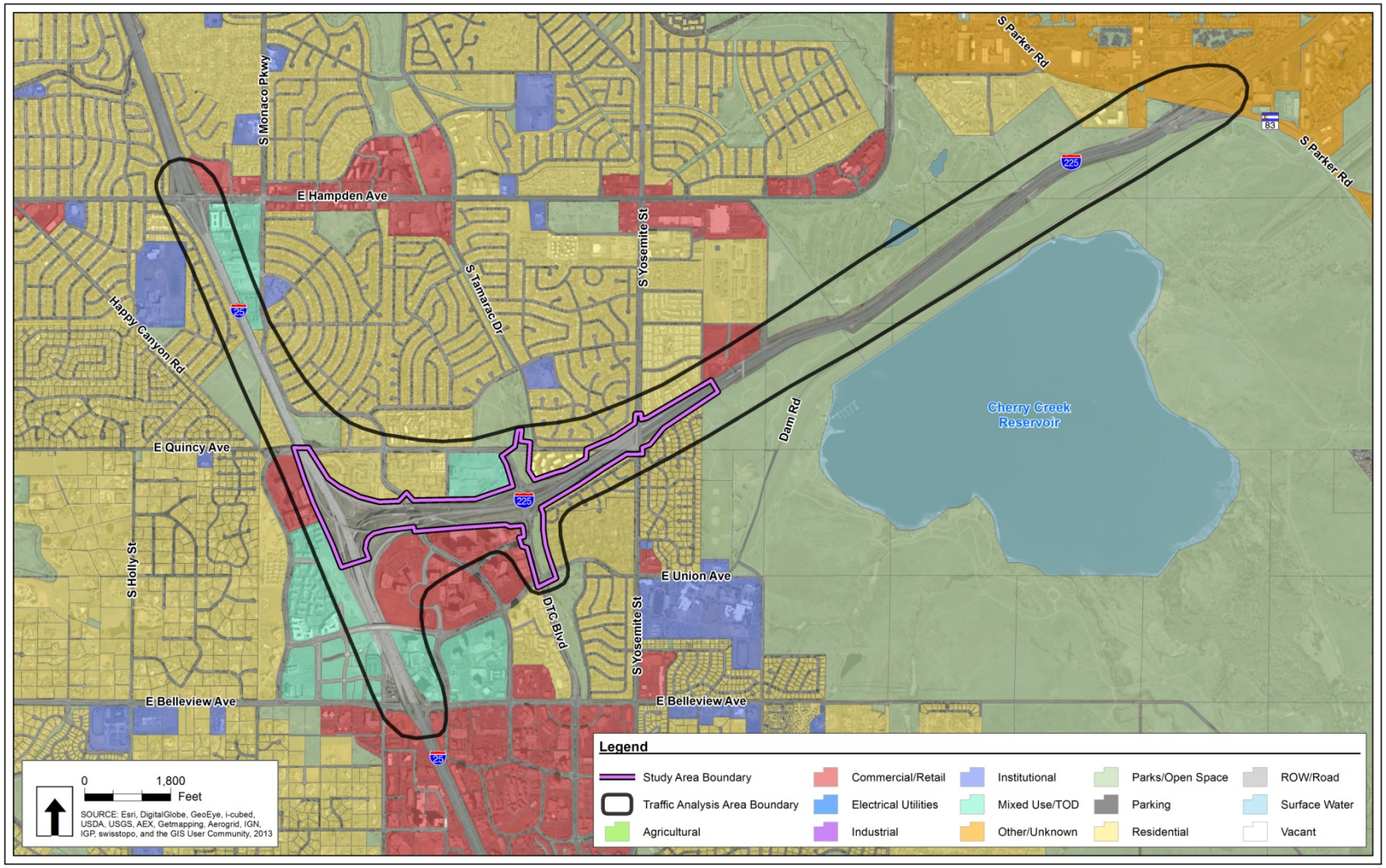
2.2 2035 Land Use

Figure 2.2 depicts how communities along I-225 from Parker Road to the I-25 Interchange are envisioned to build out with locations of future land uses based on each community's comprehensive plan.

Each community has its own land use categories. For purposes of this analysis, some categories have been combined to provide consistency across communities. For example, regional and neighborhood commercial have been combined into "Commercial/Retail." Most communities have single family and multifamily residential categories; these have been included as "Residential." The "Mixed Use/TOD" category often designates areas near a future transit hub or town center area. Future land use data was not available for the portion of Aurora north of Parker Road; however, the Nine Mile LRT Station is designated as a TOD for the City of Aurora (City of Aurora, 2012). For the station, they plan to encourage mixed-use building types (retail and residential buildings), transit-supportive housing, and central public space for local community members and businesses.

The future land use map (**Figure 2.2**) shows that the communities along the I-225 corridor are forecast to fill in with additional commercial and mixed uses. The large area of commercial and retail land uses in the northwest quadrant of I-225 and DTC Boulevard is planned to change to mixed-use in 2035. Many areas currently designated as "Vacant" are planned for future development.

Figure 2.2 2035 Future Land Use



Household and Employment Growth

Table 2.2 shows the projections for household growth in the study area and the region based on DRCOG projections for growth.

Table 2.2 Household and Employment Growth, 2010–2035

	2010	2035	Growth 2010–2035	Percentage Growth 2010–2035	Annual Growth Rate
Households					
Study Area	13,029	22,374	9,345	72%	2.2%
DRCOG Region	1,163,778	1,822,209	658,431	57%	1.8%
Employment					
Study Area	26,565	45,647	19,082	72%	2.2%
DRCOG Region	1,351,473	2,243,784	892,311	66%	2.0%

Source: DRCOG, 2010

Between 2010 and 2035, DRCOG projects an additional estimated 9,000 households and 19,000 jobs in the study area. This projected growth is higher than the expected growth for the DRCOG region as a whole, which means the study area may experience a heightened demand for transportation.

Figure 2.3 shows projected household growth between 2010 and 2035 in each TAZ. In general, the darker the color, the greater the number of additional households forecast. The section directly southeast of the I-25/I-225 Interchange is an employment center and does not contain any housing units.

Figure 2.4 shows projected employment growth between 2010 and 2035 in each TAZ. As with the household maps, the darker the color, the greater the number of additional jobs forecast. Only one section southwest of the interchange is expected to have employment growth. Accounting for the TAZs in the study area, employment growth is predicted to be at 2.2 percent.

Figure 2.3 Transportation Analysis Zone Household Growth from 2010 to 2035

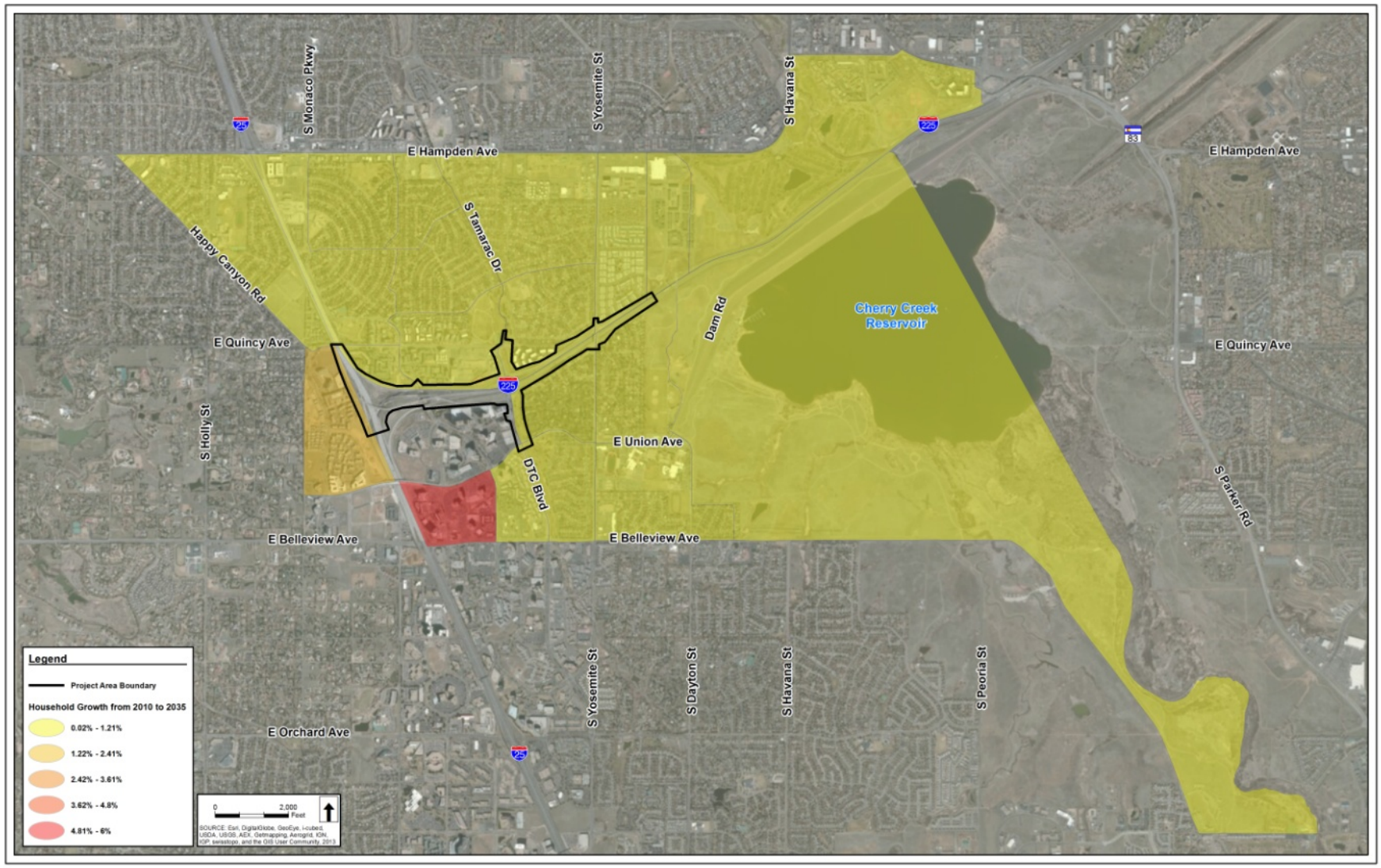
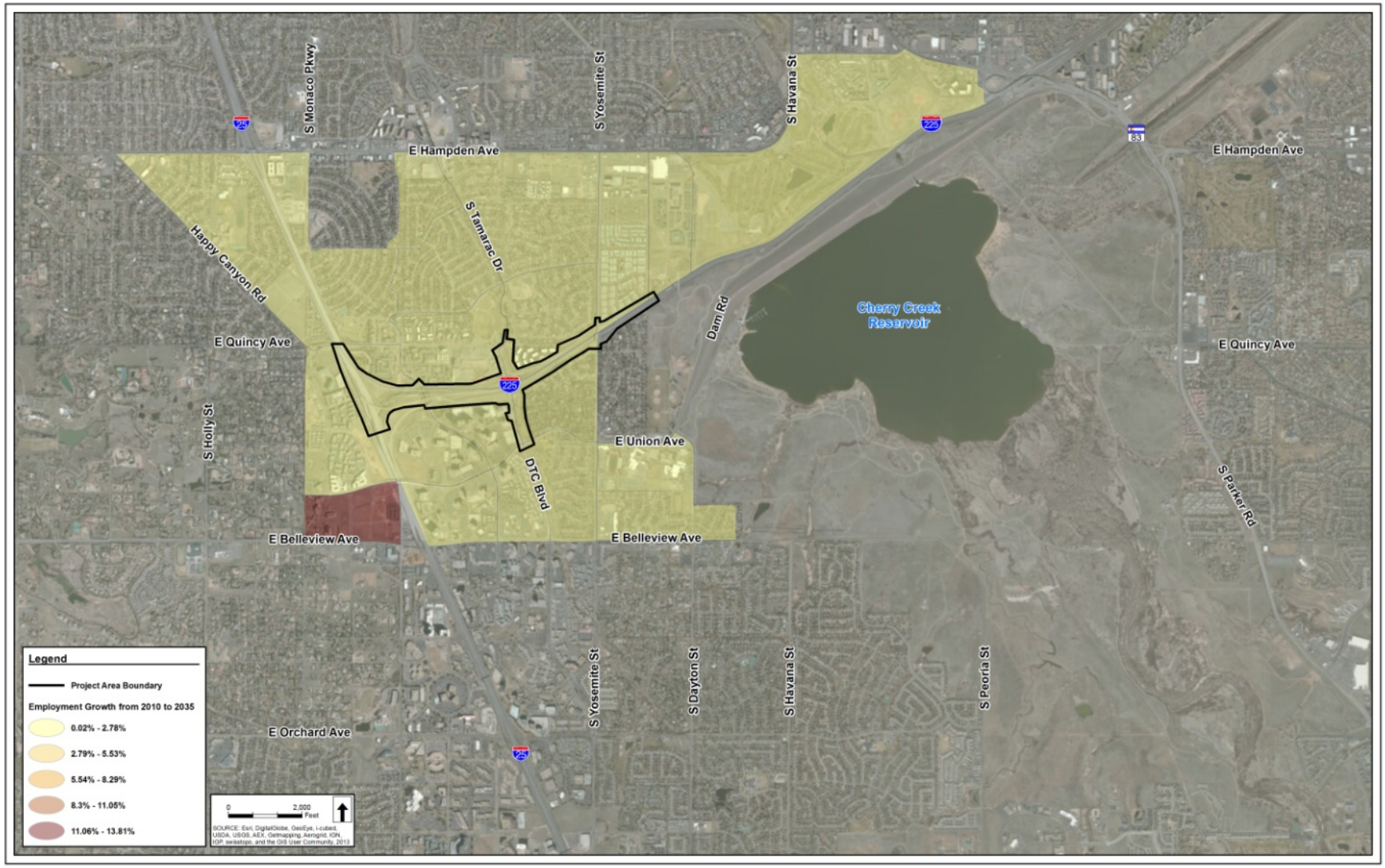


Figure 2.4 Transportation Analysis Zone Employment Growth from 2010 to 2035



3.0 EXISTING TRANSPORTATION SYSTEM

Chapter 3 documents the existing transportation system in the study area, including roadway characteristics, travel characteristics, traffic operations, transit, and bicycle/pedestrian facilities and operations.

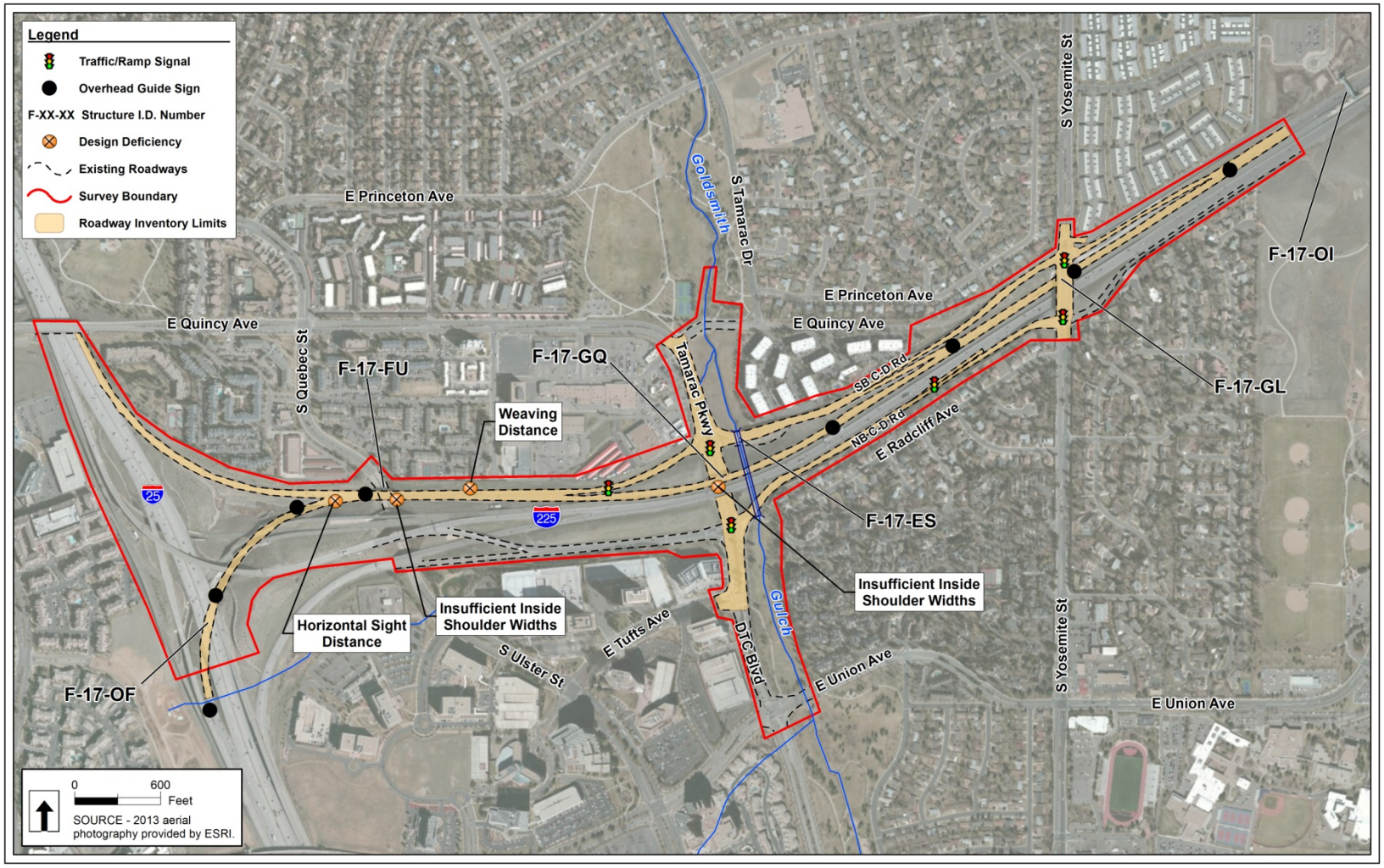
3.1 Roadway Characteristics

The project team reviewed several roadways within the study area in regard to existing conditions and design deficiencies. **Figure 3.1** displays the key features and the following roadways and roadway inventory limits:

- Southbound I-225 from the Yosemite Street exit ramp to I-25
- Southbound I-225 Yosemite exit ramp
- Southbound Yosemite to DTC Boulevard/Tamarac Parkway (DTC/Tamarac) C-D Road (Southbound C-D Road)
- Southbound I-225 DTC/Tamarac exit slip ramp
- Southbound I-225 DTC/Tamarac entrance ramp
- Northbound DTC/Tamarac to Yosemite C-D road (Northbound C-D Road)
- Northbound I-225 DTC/Tamarac entrance slip ramp
- DTC/Tamarac from East Tufts Avenue to East Quincy Avenue
- Yosemite from East Radcliff Avenue to East Oxford Drive

The project team conducted several field visits between February 2013 and May 2013 to obtain information about roadway features. The specific features include lanes, shoulder, curb and gutter, median treatments, sidewalks, guardrail, noise/retaining walls, fence, lighting, ramp meters and guide signs, signals, major structures, and design deficiencies.

Figure 3.1 Existing Roadway Features and Design Deficiencies



Roadway Facilities

Lanes, Shoulder, and Curb and Gutter

The interstate highway, ramps, and C-D roads are characterized by general purpose and auxiliary lanes and paved shoulders, whereas DTC/Tamarac and Yosemite are delineated by general purpose lanes, turn lanes, vertical curb and gutter inside and outside the roadway, and limited shoulders. **Table 3.1** describes information for I-225, associated ramps, and C-D roads.

Figure 3.2 Southbound I-225 East of Yosemite

Table 3.1 I-225 Lanes and Shoulders

Roadway Section	Lanes	Shoulders
Southbound I-225		
At the Yosemite Exit Ramp	Three general purpose lanes, one auxiliary lane	12-foot inside shoulder, 12-foot outside shoulder (the outside shoulder does transition to about 28 feet at the RTD substation access)
At the DTC/Tamarac Exit Ramp	Two general purpose lanes, one auxiliary lane	12-foot inside shoulder, 12-foot outside shoulder
Between DTC/Tamarac Exit Ramp and Entrance Ramp	Two general purpose lanes	3-foot to 12-foot inside shoulder, 12-foot outside shoulder
At the Tamarac Entrance Ramp	Two general purpose lanes, one auxiliary lane	Varies 12-foot to 6-foot inside shoulder, varies 8-foot to 12-foot outside shoulder
Southbound I-225 Yosemite Exit Ramp		
Along Ramp	Dual exit lanes that flare to three lanes, including a flared free right-turn lane at intersection (Note: No signs on span wires or pavement markings indicating lane types – just advanced signs)	4-foot inside shoulders, 8-foot outside shoulders
Southbound C-D Road		
Along Southbound C-D Road	Dual lanes, including a free right-turn lane, merge at intersection that narrows to single lane before southbound I-225 DTC/Tamarac exit slip ramp	4-foot inside shoulders, 8-foot outside shoulders
Southbound I-225 DTC/Tamarac Exit Slip Ramp		
Along Ramp	Dual exit lanes merge with single lane from C-D road and a right-turn lane is added before intersection (Note: Pavement marking clearly identifies lane designation)	4-foot inside shoulders, 8-foot outside shoulders
Southbound I-225 Tamarac Entrance Ramp		
Along Ramp	Dual lanes, including a free right-turn lane, merge at intersection that extends to ramp meter and then narrows to single lane before southbound I-225 to northbound I-25 ramp	4-foot inside shoulders, 6-foot outside shoulders (Note: Outside shoulder is not clearly striped)

Roadway Section	Lanes	Shoulders
Northbound C-D Road		
Along Northbound C-D Road	Dual lanes, including a free right-turn lane, merge at intersection that separates to single lane to Yosemite and a single lane to northbound I-225 DTC/Tamarac entrance slip ramp – C-D road expands to three lanes and a free right-turn lane at intersection	4-foot inside shoulders, 8-foot outside shoulders
Northbound I-225 DTC/Tamarac Entrance Slip Ramp		
Along Ramp	Single ramp lane is an added auxiliary lane to northbound I-225	4-foot inside shoulders, 6-foot outside shoulders
Outside Study Area Limits		
Southbound I-225		
Parker to Yosemite Exit Ramp	Three general purpose lanes, three auxiliary lanes	Varies 12-foot to 5-foot inside shoulder, 12-foot outside shoulder (the outside shoulder does transition to about 28 feet at the RTD substation access)

Source: Google Earth and field visit by Felsburg Holt & Ullevig (FHU), May 2013

DTC/Tamarac

On DTC/Tamarac, there are two general purpose lanes in each direction and one to two turn lanes at the intersections. There are full length dual left-turn lanes in each direction under the I-225 Bridge. A 7-foot-wide shoulder is provided northbound along DTC/Tamarac under the bridge between the ramp intersections. DTC/Tamarac has vertical curb and gutter along the inside and outside the roadway within the project limits. No bike lanes are provided along DTC/Tamarac.

Yosemite

There are two general purpose lanes in each direction with right-turn lanes south of the northbound ramp intersection. North of the southbound ramp intersection, there are three general purpose lanes in each direction with the southbound outside lane transitioning to a right-turn lane at the ramp intersection. Across the Yosemite Bridge over I-225, there are two general purpose lanes in each direction and a full length single left-turn lane in each direction. Yosemite has vertical curb and gutter along the inside and outside of the roadway within the project limits. There are wider than 12-foot shoulders on each side of the bridge. Along Yosemite Street, bike lanes are provided. **Section 3.6** describes bicycle facilities in detail.

Figure 3.3 Raised Median on Yosemite, South of I-225

Medians

The RTD LRT envelope occupies the 40-foot median along I-225 from Parker to I-25. Several substations within the I-225 ROW support the LRT and a concrete barrier protects it. DTC/Tamarac and Yosemite both include raised medians, with many of these landscaped with trees and bushes while others are grassed. **Table 3.2** describes information about the medians for DTC/Tamarac and Yosemite.

Table 3.2 Existing Medians

Location	Description
DTC/Tamarac	
North Side of I-225	8-foot to 40-foot raised grassed medians
Under I-225	16-foot raised grassed median under bridge
South Side of I-225	16-foot to 32-foot raised landscaped median
Yosemite	
North Side of I-225	24-foot raised landscaped median
Over I-225	No median across bridge
South Side of I-225	24-foot raised landscaped median

Sidewalks

I-225 is a limited access interstate with no pedestrian or bike facilities. Sidewalks are provided along both sides of DTC/Tamarac and Yosemite (**Table 3.3**). **Section 3.6** includes detailed descriptions of sidewalks and pedestrian amenities.

Table 3.3 Existing Sidewalks

Location	Description
DTC/Tamarac	
North Side of I-225	8-foot sidewalks, segment of 5-foot sidewalk on southbound side approaching ramp intersection
Under I-225	8-foot sidewalks under bridge
South Side of I-225	8-foot sidewalks
Yosemite	
North Side of I-225	8-foot sidewalks
Over I-225	8-foot sidewalks
South Side of I-225	8-foot minimum sidewalks

Figure 3.4 8-foot Sidewalks Along Tamarac

Guardrail

Both Type 3 and Type 7 guardrails are provided along I-225 to protect obstacles such as signs, bridges, and walls. The Type 3 guardrail is the metal W-beam guardrail set on wood or metal posts whereas the Type 7 guardrail is a concrete barrier, both types are shown in **Figure 3.5**. A barrier within the median of I-225 for the entire stretch from Parker Road to I-25 protects the LRT corridor. Yosemite has a Type 3 guardrail across the I-225 Bridge. DTC/Tamarac does not provide any guardrail. The study area contains many gores that provide a triangular zone of lanes splitting or merging that allow drivers to match the speed of through traffic. **Table 3.4** identifies the segments of guardrail that have been located and quantified.

Figure 3.5 Guardrail Along Southbound C-D Road

Table 3.4 Existing Type 3 and Type 7 Guardrail

Location	Type	Approximate Length	Purpose
Southbound I-225 Including Ramps			
East of the Yosemite Exit, East of Roadway Bridge	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
East of the Yosemite Exit, East Roadway Bridge to Just West of LRT Pedestrian Bridge	Type 7 Guardrail	736 feet	Protect video camera support, embankment, vertical bridge abutment, and pedestrian bridge supports
East of the Yosemite Exit	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
From East of the Yosemite Exit to Just East of the Yosemite Exit Ramp Intersection	Type 7 Guardrail	1200 feet	Protect sign bridge supports and sound wall
From West of the Yosemite Exit to Just East of the Yosemite Exit Ramp Intersection	Type 7 Guardrail	700 feet	Protect embankment and signs
From West of the Yosemite Exit to the Yosemite Exit Ramp Intersection	Type 3 Guardrail	240 feet	Protect end of Type 7 Barrier, embankment, and signs
From Yosemite Exit to West of the Yosemite Bridge	Type 7 Guardrail	1300 feet	Protect embankment and bridge concrete slope abutments
Just East of DTC/Tamarac Exit	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
Just East of DTC/Tamarac Exit	Type 7 Guardrail	180 feet	Protect cantilever sign supports
From West of DTC/Tamarac Exit to DTC/Tamarac Bridge	Type 3 Guardrail	140 feet	Protect end of Type 7 Barrier at bridge – includes flared section
Across DTC/Tamarac Bridge	Type 7 Guardrail	450 feet	Protect bridge drop-off, video camera support, and embankment

Location	Type	Approximate Length	Purpose
From DTC/Tamarac Bridge to RTD Substation – Inside Roadway Edge	Type 7 Guardrail	900 feet	Protect LRT, substation, and embankment
From RTD Substation to Quebec Street Bridge	Type 7 Guardrail	900 feet	Protect substation, sign bridge supports, embankment, and bridge drop-off
East End of Quebec Bridge	Type 3 Guardrail	170 feet	Protect end of Type 7 Barrier at bridge – includes flared section
From East End of Quebec Bridge to West End of Bridge	Type 7 Guardrail	270 feet	Protect sign bridge supports, embankment, and bridge drop-off
Southbound I-225 to Southbound I-25			
East of the I-25 Exit – Inside Roadway Edge	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
From East of the I-25 Exit to Just Outside I-25 Ramp Tunnel – Inside Roadway Edge	Type 7 Guardrail	1600 feet	Protect retaining wall, tunnel walls, and bridge abutments
East of the I-25 Exit – Outside Roadway Edge	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
From East of the I-25 Exit to Just Outside I-25 Southbound LRT Pier – Outside Roadway Edge	Type 7 Guardrail	300 feet	Protect signs, equipment, and bridge abutments
From Just West of I-25 Southbound LRT Pier – Outside Roadway Edge	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
From Just West of I-25 Southbound LRT Pier to Belleview Avenue Ramp – Outside Roadway Edge	Type 7 Guardrail	1000 feet	Protect signs, tunnel walls, and bridge abutments
Southbound I-225 to Northbound I-25			
North of the I-25 Entrance – Outside Roadway Edge	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
North of the I-25 Entrance to Quincy Bridge – Outside Roadway Edge	Type 7 Guardrail	400 feet	Protect video camera support and bridge abutments
Southbound C-D Road			
Yosemite/C-D Road Intersection	Type 3 Guardrail	100 feet	Protect embankment
West of the Yosemite/C-D Road Intersection	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
West of the Yosemite/C-D Road Intersection	Type 7 Guardrail	760 feet	Protect sound wall
East of the DTC/Tamarac Ramp	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier
East of the DTC/Tamarac Ramp to the DTC/Tamarac and C-D Road Intersection	Type 7 Guardrail	1300 feet	Protect sound wall and embankment
At the DTC/Tamarac and C-D Road Intersection	Type 3 Guardrail	80 feet	Protect end of Type 7 Barrier
West of the DTC/Tamarac Ramp to the DTC/Tamarac and C-D	Type 3 Guardrail	70 feet	Protect end of Type 7 Barrier

Location	Type	Approximate Length	Purpose
Road Intersection			
At the DTC/Tamarac and C-D Road Intersection – Inside Roadway Edge	Type 7 Guardrail	140 feet	Protect drainage area
Northbound C-D Road			
West of the Northbound DTC/Tamarac Slip Ramp	Type 3 Guardrail	100 feet	Protect end of Type 7 Barrier
West of the DTC/Tamarac Slip Ramp to West of the Yosemite/ C-D Road Intersection	Type 7 Guardrail	1150 feet	Protect retaining and sound walls
West of the Yosemite/C-D Road Intersection – Inside Roadway Edge	Type 7 Guardrail	900 feet	Protect sound wall and embankment
At the Yosemite/C-D Road Intersection	Type 3 Guardrail	100 feet	Protect end of Type 7 Barrier and embankment
Yosemite			
Across I-225 Bridge	Type 3 Guardrail	300 feet	Protect bridge drop-off – west side
Across I-225 Bridge	Type 3 Guardrail	400 feet	Protect bridge drop-off – east side

Fence

Within the study area, different types of fence delineate the ROW, drainage, and other areas. **Table 3.5** lists the types of fence found within the study area.

Table 3.5 Existing Fence

Roadway Section	Fence Type
I-225	
Southbound Mainline	RTD fence atop ballast walls, Chain link fence
Southbound I-225 Yosemite Exit Ramp	None
Southbound C-D Road	Chain link fence
Southbound I-225 DTC/Tamarac Entrance Ramp	Chain link fence
Southbound I-225 to Northbound I-25	Chain link fence
Southbound I-225 to Southbound I-25	RTD fence around LRT substation and along LRT, steel fence on top of retaining walls adjacent to roadway and drainage areas
Northbound C-D Road	None

Figure 3.6 Fence Along LRT

Roadway Section	Fence Type
Local Roads	
DTC	None
Tamarac	Chain link fence (portion on east side for drainage), split rail fence
Yosemite	Wood fence on west side

Figure 3.7 Privacy Fence Along Yosemite

Southbound I-225 contains significant lengths of chain link fence. In addition to the fencing along the highway, several types of fencing are located on private property, adjacent to the project. All fences on the local roads are located behind sidewalk or curb and gutter and offset from the roadway.

In addition to the fencing listed above, the study area contains various types of pedestrian and snow fence atop the bridges and walls.

Walls

Both retaining walls and noise walls are located along I-225 within the study area. **Table 3.6** identifies the types of walls found within the study area.

Table 3.6 Existing Walls

Roadway Section	Wall Type
I-225	
Southbound Mainline	Noise walls, RTD ballast walls
Northbound C-D Road	Privacy masonry wall
Southbound I-225 Yosemite Exit Ramp	Concrete noise wall on concrete retaining wall
Southbound C-D Road	Concrete noise wall
Southbound I-225 Tamarac Entrance Ramp	None
Southbound I-225 to Northbound I-25	Outside roadway noise walls, stone retaining walls in infield for drainage
Southbound I-225 to Southbound I-25	Roadway retaining walls, tunnel under I-25, stone retaining walls in infield for drainage
Local Roads	
DTC	Stone retaining walls and barrier landscape walls for drainage
Tamarac	Retaining wall for drainage
Yosemite	Privacy brick walls on east side

Figure 3.8 Sound Walls Along Southbound C-D Road

There are significant lengths of noise walls along this section of I-225 and adjacent to the local roads such as Yosemite. **Section 5.2** discusses in detail the located noise walls along I-225. Some lengths of retaining wall are a significant height. Some of the walls identified in **Table 3.6** are associated with drainage and landscaping and may not be structural.

Lighting

The study area contains high mast lighting along I-225 and at the interchanges, as indicated in **Table 3.7**.

Table 3.7 Existing Lighting

Roadway Section	Lighting Type
I-225	
Southbound Mainline	High mast lighting in the median and in the infield at interchanges
Northbound C-D Road	None
Southbound I-225 Yosemite Exit Ramp	None
Southbound C-D Road	None
Southbound I-225 DTC/Tamarac Entrance Ramp	High mast lighting in infield
Southbound I-225 to Northbound I-25	High mast lighting in infield
Southbound I-225 to Southbound I-25	High mast lighting in infield, underpass lighting
Local Roads	
DTC	Specialty street lighting, underpass lighting
Tamarac	Standard street lighting
Yosemite	Standard street lighting

Figure 3.9 Standard Lighting Along Tamarac

I-225 is continuously lit throughout the study area by high mast lighting in the median and at the interchanges. While the Yosemite Interchange does not appear to specifically have high mast interchange lighting, it seems the interchange is lit through the I-225 median lighting and supplemental street lighting.

Figure 3.10 New Mast Arm Signals at DTC/Tamarac & I-225

Ramp Meters and Traffic Signals

The study area contains traffic signals and ramp meters. **Table 3.8** identifies the location and signal types. The span wire signal poles at DTC/Tamarac and the northbound and southbound ramps had shown signs of rust and corrosion. These were recently replaced with mast arm signals in spring 2013. Lights are located on each signal pole. **Figure 3.10** shows these locations.

Table 3.8 Existing Project Traffic Signals

Location/Intersection	Description
DTC/Tamarac and I-225 Westbound Ramp/C-D Road	Four signal poles with new mast arms (May 2013)
DTC/Tamarac and I-225 Eastbound Ramp/C-D Road	Four signal poles with new mast arms (May 2013)
Yosemite and I-225 Southbound Ramp/C-D Road	Four signal poles with span wires
Yosemite and I-225 Northbound Ramp/C-D Road	Four signal poles with span wires
Southbound I-225 DTC/Tamarac Entrance Ramp	Ramp meter with two sets of signals
Northbound I-225 DTC/Tamarac Entrance Slip Ramp	Ramp meter with two sets of signals

Guide Signs

On I-225, several large signs guide motorists along the interstate to their connections. Guide signs are the large highway signs with a green background and white lettering that provide driver information on directions and roadway connections. **Table 3.9** lists the project guide signs.

Electric-powered lights illuminate many of these signs, which are not retroreflective. There are a few bridge mounted signs on I-225; however, CDOT no longer prefers these types of signs. Regulatory, warning, and other types of signs such as State Law and Clean Colorado signs are provided along the project roadways; however, these are not listed in **Table 3.9**. Some of these signs have deteriorated or faded over time. Regulatory speed limit signs are included for informational purposes in **Table 3.9** and shown in italics. **Table 3.9** shows the overhead guide sign locations (which include sign bridges, cantilever signs, and bridge-mounted signs).

Table 3.9 Existing Guide Signs

Location	Description
Southbound I-225	
Southbound I-225 East of Yosemite Exit	Greenwood Village City Limit Sign – Ground Mounted (2 posts)
Southbound I-225 East of Yosemite Exit	Exit 2A Yosemite and Exit 2B DTC Signs – Sign Bridge – Concrete Barrier Protection
Southbound I-225 at Yosemite Exit	Exit 2B Arrow Sign – Ground Mounted (2 posts) into Concrete Gore
Southbound I-225 East of DTC/Tamarac Exit	Exit 1A – 1B I-25 1 Miles Signs – Bridge Mounted – Illuminated
Southbound I-225 East of DTC/Tamarac Exit	Exit 2A Yosemite Sign – Cantilever - Illuminated – Concrete Barrier Protection
Southbound I-225 at DTC/Tamarac Exit	Exit 2A Arrow Sign – Ground Mounted (2 posts) at Gore
Southbound I-225 East of DTC/Tamarac Entrance	Exit 1A I-25 South and Exit 1B I-25 North Signs – Sign Bridge – Concrete Barrier Protection (Left) and Outside 30' Clear Zone (Right)
Southbound I-225 East of DTC/Tamarac Entrance	*55 mph Signs– Attached to Sign Bridge Above Each Side of Highway*
Southbound I-225 East of I-25 Exit	*55 mph Signs– Ground Mounted (1 post) Each Side of Highway*
Southbound I-225 East of I-25 Exit	Exit 1A I-25 South and Exit 1B I-25 North Signs – Truss Sign Bridge – Concrete Barrier Protection
Southbound I-225 Yosemite Exit Ramp	
Mid Ramp	Tamarac Street DTC Boulevard Ahead and Yosemite Left and Right Arrows Sign – Ground Mounted (2 posts)

Location	Description
Southbound C-D Road	
At DTC/Tamarac Intersection	I-225 Denver Colorado Springs Ahead and Tamarac St Right Arrows Sign – Ground Mounted (2 posts)
At DTC/Tamarac Intersection	DTC Left Arrows Sign – Ground Mounted (2 posts)
Southbound I-225 to Southbound I-25	
Near I-225 Gore	Variable message sign (VMS) Sign – Cantilever - Illuminated – Outside Clear Zone
West of Gore	Exit 199 Belleview Avenue ¼ Mile Sign – Ground Mounted (2 posts)
Just Before I-25 Tunnel	Digital Lane Closure Sign – Cantilever – Concrete Barrier Protected
Near Belleview Ramp Gore	Exit 199 Belleview Avenue Arrow Sign – Cantilever – Concrete Barrier Protected
Southbound I-225 to NB I-25	
Mid Ramp	Exit 201 Hampden Avenue 1 Mile Sign – Ground Mounted (2 posts)
Yosemite	
1500 Feet South of Northbound Ramp Intersection (Northbound Lanes – Right Side)	*35 mph Speed Limit Sign with Your Speed Digital Sign – Ground Mounted (1 Post)*
At Northbound Entrance Ramp	I-225 North Right and I-225 South Ahead Sign - Ground Mounted (2 posts)
At Southbound C-D Road	I-225 South Right Tamarac Street DTC Boulevard and I-225 North Ahead Sign – Ground Mounted (2 posts)
2200 Feet and 500 Feet from Southbound Ramp Intersection (Southbound Lanes – Median)	I-225 North Left Lane South Right Arrow Sign – Ground Mounted (2 posts)
1400 Feet North of Southbound Ramp Intersection (Southbound Lanes – Median)	*35 mph Speed Limit Sign – Ground Mounted (1 Post)*
DTC/Tamarac	
At Northbound C-D Road	I-225 South Ahead and I-225 North Right Sign – Ground Mounted (2 posts)
At Southbound Entrance Ramp	I-225 Denver Colorado Springs Left Arrow Sign – Ground Mounted (2 posts)
At East Quincy Avenue Intersection	To North Tamarac Dr Sign –Mounted on Light Pole
3000 Feet North of Southbound Ramp Intersection (Southbound Lanes – Right Side)	*35 mph Speed Limit Sign – Mounted on Light Pole*
1200 Feet North of Northbound Ramp Intersection (Southbound Lanes – Right Side)	I-225 North Left-turn Lane and South Right Lane – Ground Mounted (2 posts)
400 Feet North of Southbound Ramp Intersection (Southbound Lanes – Right Side)	End Quincy Avenue Begin S Tamarac Parkway sign – Mounted on Light Pole
400 Feet North of Southbound Ramp Intersection (Southbound Lanes – Right Side)	*35 mph Speed Limit Sign – Mounted on Light Pole*
At Southbound Entrance Ramp (West Side)	I-225 South Right Denver Colorado Springs and I-225 North Ahead Sign – Ground Mounted (2 posts)
At Northbound C-D Road (West Side)	I-225 North Left Sign – Ground Mounted (2 posts)

Location	Description
Northbound C-D Road	
At DTC/Tamarac	Yosemite Street Right Lane Sign – Ground Mounted (2 posts)
At DTC/Tamarac	North I-225 Left Lane Sign – Ground Mounted (1 post)
Mid C-D Road	*40 mph Sign– Ground Mounted (1 post) Right Side of Highway*
At Northbound Entrance Ramp	I-225 North Ahead and Yosemite Street Left and Right Arrows Sign – Ground Mounted (2 posts)
Outside Study Area Limits	
Southbound I-225	
Southbound I-225 East of Yosemite Exit	Yosemite Street ½ Mile Exit Sign – Cantilever – Illuminated – Concrete Barrier Protection
Southbound I-225 East of Yosemite Exit	*65 mph Sign– Ground Mounted (2 posts)*
Southbound I-225 East of Yosemite Exit	Exit 1A – 1B I-25 – Bridge Mounted – Illuminated

Major Structures

The study area contains many major structures, including roadway and pedestrian bridges, drainage culverts, and tunnels. **Table 3.10** lists project structures.

Table 3.10 Existing Structures

Structure ID	Milepost	Description
Southbound I-225		
F-17-GM	1.842	Future roadway bridge over I-225 – Used as pedestrian bridge
F-17-OI	1.802	Dayton Station LRT Pedestrian Bridge over I-225
F-17-GL	1.333	Yosemite over I-225
F-17-GQ	0.785	Southbound I-225 over DTC/Tamarac
F-17-ES	0.859	Goldsmith Gulch Culvert under I-225, east of DTC/Tamarac
F-17-OF	0.382	Southbound I-25 ramp tunnel
F-17-FU	0.325	Southbound I-225 over Quebec

Figure 3.11 Southbound I-225 over Quebec

Design Deficiencies

Figure 3.12 Sight Distance at Southbound I-25 Exit Ramp

The project team investigated existing design deficiencies for the project. The project team reviewed horizontal and vertical sight distance, weaving, shoulder widths, guardrail, side slopes, and clear zone/obstructions for potential deficiencies. The off-ramps within the study area have horizontal and/or vertical sight distance concerns; however, these have been addressed with advisory exit ramp speed limit signs and signal ahead signs. **Table 3.11** describes the location and deficiency and **Figure 3.1** shows the locations of the deficiencies.

Table 3.11 Design Deficiencies

Location	Deficiency Type	Issue
Southbound I-225		
Southbound I-225 to Southbound I-25	Sight Distance	Limited sight distance for off-ramp
Southbound I-225 Between Southbound I-225 DTC/Tamarac Entrance Ramp and I-25 Exit Gore	Weaving	Insufficient weaving distance
Southbound I-225 Between Southbound I-225 DTC/Tamarac Exit Ramp and I-25 Exit Gore	Shoulder Widths	The inside shoulder is less than 4 feet with two lanes and less than 10 feet with three lanes in sections

3.2 Utilities

Public and private utilities are typically located within a roadway corridor within separate utility easements or within the ROW. These often include water, sewer, reclaimed water, electrical (distribution and transmission), natural gas, communications, and fiber optic, located either aboveground or underground. Because utilities generally parallel or are located within the roadway ROW, impacts are a common occurrence with roadway improvements and require coordination early in the process. If impacts do occur, they need to be adjusted or relocated. Adjustments and relocations need to be designed and verified with the utility company during the preliminary and final design process.

The study area contains several utilities, including electrical, lighting, telephone and communication (including fiber optic), gas, irrigation, water, and sewer. The project team obtained utility owner information from Colorado 811, Utility Notification Center of Colorado (UNCC) (see **Table 3.12**). The project team also obtained utility information from the TRansportation EXpansion Project (TREX) Southeast Corridor Multi-Modal Project Utility Maps dated February 9, 2007. Based on these plans, the project team developed the list that follows to identify the known utilities that exist along the project corridor limits.

I-225 Northbound

- XCEL telecommunications underground telephone and television line along DTC Boulevard to Yosemite Street C-D Road shoulder
- Public Services Company underground electric line along DTC Boulevard to Yosemite Street C-D Road shoulder
- Qwest underground telephone line along DTC Boulevard to Yosemite Street C-D Road shoulder
- 24-inch by 36-inch reinforced concrete pipe stormwater line along DTC Boulevard to Yosemite Street Ramp
- Cherry Creek Valley Water and Sanitation District line just north of Yosemite Street along sound wall

I-225 Southbound

- ICG fiber optic line along sound wall
- US West fiber optic line along the sound wall
- Public Services Company underground electric line along southbound shoulder
- Public Services Company 20-inch Metro Wastewater, intermediate pressure gas line along sound wall
- MCI fiber optic line along sound wall
- XCEL telecommunications underground telephone and television line along sound wall
- CenturyLink underground telephone line along sound wall
- Denver Water Department 12-inch and 36-inch water line
- Qwest underground telephone line along sound wall
- ICG underground fiber optic line east of Yosemite Street along ramp shoulder
- RTD Traction Power Substation/Relay House alternating current power feeds located approximately 300 feet west of Boston Street

I-225 Crossings

- Denver Water Department 42-inch steel pipe and 24-inch steel pipe with casing abandoned
- Denver Water Department 42-inch steel pipe and 24-inch steel pipe with casing abandoned between DTC Boulevard and Yosemite Street
- Metropolitan Water Reclamation District 8-inch concrete piping between DTC Boulevard and Yosemite Street just east of Denver Water Department 24-inch steel pipe
- Metropolitan Water Reclamation District 8-inch concrete piping between DTC Boulevard and Yosemite Street just east of Denver Water Department 20-inch pipe
- Denver Water Department 12-inch water between DTC Boulevard and Yosemite Street just east of Denver Water Department 24-inch steel pipe
- Cherry Creek Valley Water District 8-inch sanitary sewer line connecting to Boston Street on the north side of I-225
- CDOT 5-foot by 4-foot concrete box culvert drainage crossing approximately 500 feet east of Boston Street
- Public Services Company 230 kiloVolt overhead transmission line located along a diagonal across I-225 just east of the northbound I-225 to DTC Boulevard ramp gore
- RTD Traction Power Substation #29 Relay House located near the Public Services Company 230 kiloVolt overhead transmission line
- US West fiber optic crossing underneath RTD Traction Power Substation #29 Relay House
- CDOT 4-inch irrigation just north of RTD Traction Power Substation #29 Relay House

- City & County of Denver Wastewater Management Division reinforced concrete pipe just north of RTD Traction Power Substation #29 Relay House
- CDOT irrigation just west of DTC Boulevard.
- CDOT irrigation just east of DTC Boulevard

Ulster Street

- RTD Traction Power Substation/Relay House alternating current power feeds located between LRT and northbound I-225
- RTD transformer between northbound I-225 and DTC exit ramp

DTC Boulevard

- Denver Water Management reinforced concrete pipe just east of DTC Boulevard Bridge
- Denver Water Management two, 6-foot by 12-foot concrete box culverts approximately 150 feet east of DTC Boulevard Bridge
- MCI Communications fiber optic line along bridge across I-225 (east side)
- XO Communications fiber optic line along bridge across I-225 (west side)
- Metropolitan Water Reclamation District 30-inch vitrified clay pipe along bridge (east side)
- Public Services Company electric line suspended from bridge
- ICG underground fiber optic line (west side)
- XO underground telephone line (west side)
- Metropolitan Water Reclamation District 30-inch vitrified clay pipe suspended from bridge
- MCI fiber optic line (east side)

Yosemite Street

- Public Services Company 3-phase electric line suspended from bridge
- Public Services Company 20-inch Metro Wastewater high pressure gas line suspended from bridge
- RTD Traction Power Substation/Relay House alternating current power feeds located at northeast and southeast quadrants of the interchange

Table 3.12 Existing Utilities

Owner	Utility Type	Contact Number
CDOT R6		303-489-0672
Fiber Optic Backbone	ITS	720-202-6441
Comcast	Telephone/Fiber Optic	303-603-5682
Cogent Communications	Fiber Optic	303-906-5156
Crown Castle	Wireless Infrastructure	303-728-4900
Goldsmith Gulch Sanitation District	Sanitary	303-847-9217
City of Greenwood Village Traffic	Traffic	303-708-6146
Level 3 Communications	Telephone/Fiber Optic	303-326-7595
MCI Communications	Telephone/Fiber Optic	800-289-3427
ICG	Fiber Optic	610-727-6900
New Century Energy	Oil/Gas	303-650-8604
Xcel Energy	High Pressure Gas	303-571-3926
Xcel Energy	Electric Transmission	303-571-3926
Xcel Energy	Distribution	303-671-3919
CenturyLink (Qwest)	Telephone	970-622-9792
Reliance Globalcom	Fiber Optic	877-740-6600
TW Telecom	Fiber Optic	801-364-1063
XO Communications	Telephone/Fiber Optic	303-539-1022
Zayo Bandwidth	Fiber Optic	303-228-7679
Local Government Agencies		
City of Aurora	Water and Storm	303-739-7499
Cherry Creek Village Water District	Water	303-381-4960
Cherry Creek Village Water & Sanitation District	Water	303-755-4474
Cherry Creek School District #5		720-554-4522
Denver Water Department	Water	303-628-6666
Denver Wastewater Management	Wastewater/Storm	303-446-3400
Denver Parks & Recreation		720-865-0393
Denver Suburban Water District	Water	303-790-1498
Denver Traffic Engineering Operations		720-865-4001
Goldsmith Metropolitan District		303-790-1498
Metro Wastewater Reclamation District	Wastewater	303-286-3432
Southgate Water and Sanitation District	Water and Wastewater	303-779-0261
South I-25 Urban Corridor Transportation Management Association		303-531-8378
City & County of Denver Wastewater Management Division	Wastewater	303-446-3588

3.3 Drainage

I-225 from Yosemite to I-25 lies within the Goldsmith Gulch and Cherry Creek major drainage basins. Drainage within these basins passes into a system of inlets and storm sewers that were constructed as a part of the TREX Southeast Corridor project. Most of the storm sewers are tributary to Goldsmith Gulch, and a small section of the east edge is tributary to Cherry Creek. The study area lies within the City and County of Denver and Greenwood Village and is within the Urban Drainage and Flood Control District (UDFCD) boundary. Similar to Denver and Greenwood Village, CDOT's standards are based on UDFCD criteria and apply to the study area. The various storm sewer systems within the corridor are described below.

Major Storm Sewer Systems

I-225 System at I-25

Runoff from I-25, I-225, and adjacent areas passes into a system of inlets. These inlets connect to a system of storm sewers that vary in size from 18 inches to 42 inches in diameter. This system directs the flows north and northeast to the ultimate outfalls at Goldsmith Gulch. The Stanford Tributary to Goldsmith Gulch conveys offsite flows in a northeast direction under I-225 to Goldsmith Gulch. No drainage problems have been identified in this area and no improvements to the existing storm drainage system are planned according to the *City and County of Denver Storm Drainage Master Plan* (2010).

I-225 System at Tamarac Parkway

Runoff from I-225, Tamarac Parkway, and adjacent areas passes into a system of inlets. These inlets connect to a system of storm sewers that vary in size from 18 inches to 30 inches in diameter. This system directs flows north and northeast to the ultimate outfall at Goldsmith Gulch. Offsite cross drainage from DTC directs some flows directly to Goldsmith Gulch. The Goldsmith Gulch channel lies adjacent to Tamarac Parkway and crosses under I-225 via two 12-foot by 6-foot reinforced concrete box culverts (RCBC). The inlet (south) sides of these RCBCs have a metal restrictor plate that restricts the peak flow to allow stormwater detention in the large landscape area south of the Tamarac Parkway eastbound on-ramp to I-225. No drainage problems have been identified in this area and no improvements to the existing storm drainage system are planned according to the *City and County of Denver Storm Drainage Master Plan* (2010).

I-225 System at South Yosemite Street

Runoff from I-225, Yosemite Street, and adjacent areas currently passes into a system of inlets. These inlets connect to a system of storm sewers that vary in size from 18 inches to 30 inches in diameter. This system directs the flows west and southwest to the ultimate outfall at Goldsmith Gulch. The extreme eastern part of the corridor falls within the Cherry Creek basin. A system of inlets and 18-inch storm sewer directs these flows toward Cherry Creek. No drainage problems have been identified in this area, and no improvements to the existing storm drainage system are planned according to the *City and County of Denver Storm Drainage Master Plan* (2010).

3.4 Traffic Operations

This section presents the existing I-225 traffic operation conditions, including travel speeds, travel times, traffic volumes, intersection geometry, LOS, and safety assessment analysis.

Travel Speeds and Travel Times

The posted speed limit for this section of I-225 is 65 mph until DTC Boulevard where the posted speed limit lowers to 55 mph until the junction with I-25. Actual southbound travel speeds tend to vary and are typically the lowest during peak commuter periods of travel, particularly the AM peak period. Congestion and associated low travel speeds are due to heavy traffic entering the system at the Parker Road interchange, where six lanes are provided, narrowing down to just two lanes at the DTC Boulevard bridge. This lane reduction along southbound I-225 causes a bottleneck at the DTC Boulevard bridge. This directly translates into extended queues and travel times along the corridor, particularly during the AM peak hour along southbound I-225.

Existing conditions along southbound I-225 during the AM peak period travel time from Parker Road to I-25 is approximately 8 to 15 minutes during congested periods, and the PM peak period travel time ranges from approximately 3 to 6 minutes, barring any incidents. I-225 average speeds are much greater during the PM peak hour than during the AM peak hour because the DTC Boulevard bridge is not the bottleneck during the PM peak period as it is during the morning commute. Northbound I-225 is also congested and backed up from Parker Road during the PM peak period, but this congestion may be alleviated, at least in part, once the widening of I-225 from Mississippi Avenue to Parker Road is completed (scheduled for completion in September 2014).

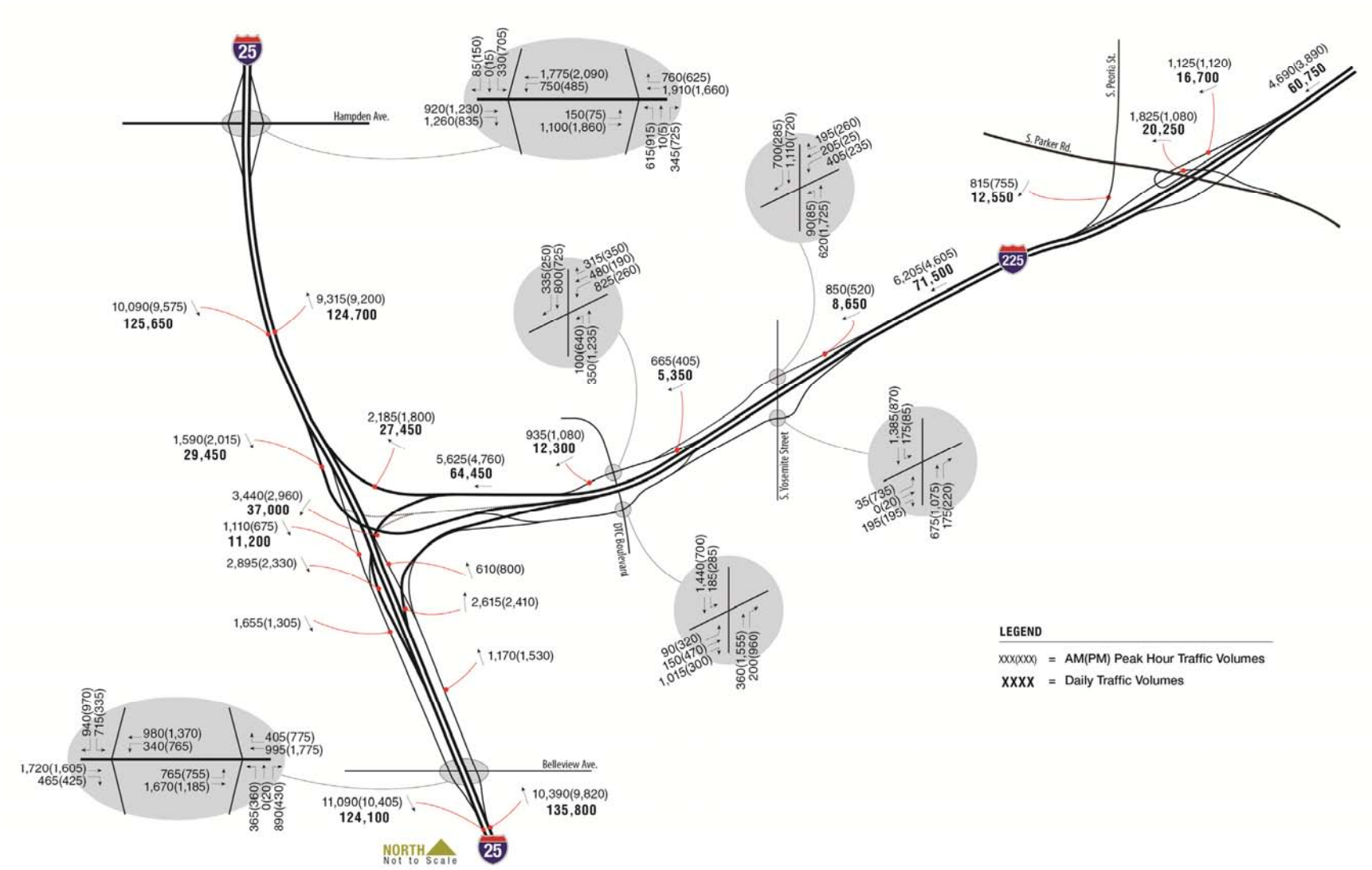
Traffic Volumes

An extensive amount of traffic count data has been collected along I-225 and at the interchange ramp intersections. **Figure 3.13** presents the data. I-25 and I-225 are the heaviest used roadway facilities in the immediate area serving approximately 250,000 and 140,000 vpd, respectively. The southbound I-225 traffic demand during the AM peak hour is approximately 6,200 vph just south of the Parker Road interchange. At the DTC Boulevard bridge, southbound I-225 demand is approximately 4,500 to 5,000 vph at peak times, although the amount that gets through is less. The inflow traffic at Parker Road Interchange exceeds the outflow traffic at DTC Boulevard bridge, thereby resulting in significant queues along the southbound I-225 mainline.

Figure 3.13 also shows turning movement traffic counts that were collected:

- I-225 at DTC Boulevard Interchange intersections
- I-225 at Yosemite Street Interchange intersections
- I-25 at Hampden Avenue Interchange intersections
- I-25 at Belleview Avenue Interchange intersections

Figure 3.13 Existing Traffic Volumes



The I-225 interchange cross-streets are connected as part of a split-diamond system in which one set of south-oriented ramps are provided and two sets of north-oriented ramps are provided (slip ramps were added between Yosemite Street and DTC Boulevard as part of the TREX project).

Several overarching traffic patterns are prevalent within and through the I-225/DTC Boulevard/Yosemite Interchange complex. Along the mainline I-225, the predominant traffic flow pattern is southbound during the AM peak period and northbound during the PM peak period. Much of this pattern is driven by predominantly residential uses out east along the I-225 corridor and employment opportunities along the I-25 corridor, including Downtown Denver, the DTC area, and the south I-25 corridor.

Traffic patterns through the DTC Boulevard interchange tend to be oriented to the south during the AM peak hour due to the employment located south of I-25 at DTC. This is evidenced by the heavy eastbound right-turn movement at the south ramp intersection and by the heavy westbound left-turn movement at the north ramp intersection of DTC Boulevard occurring during the AM peak hour. The reverse patterns are evident during the PM peak hour as evidenced from the relatively heavy northbound left-turn movement at the north ramp intersection and at the northbound right-turn movement at the south ramp intersection.

The large employment center in the DTC area also has an impact on traffic patterns passing through the Yosemite Street Interchange. The most notable movements are originating from the north along Yosemite and either passing straight through to the south or turning right onto the C-D/ ramp roadway to enter onto southbound I-225 or to travel to southbound DTC Boulevard. The reverse patterns can be seen during the PM peak hour in which the northbound through movement and the eastbound left-turn movement are relatively heavy.

Freeway and Intersection Levels of Service

This section provides an assessment of operations within the study area. Specifically, this entails AM and PM peak hour LOS estimates for the four interchange intersections and peak hour LOSs for the southbound mainline freeway.

Operating conditions were evaluated using a combination of traffic analysis tools to capitalize on the strengths of each package. The following paragraphs describe the modeling tools used and LOS measures.

VISSIM was used to evaluate the freeways and ramps along I-225 and I-25. VISSIM is a micro-simulation traffic flow model that specializes in the analysis of complex transportations systems and the interaction between system elements. It is especially useful for analyzing freeways due to its sophisticated driver behavior algorithms that accurately reflect lane changing and car following maneuvers. In addition, Highway Capacity Software (HCS) was used as a supplement in assessing the two-lane bottleneck operation in isolation.

Synchro/HCM was used to analyze the signalized intersections of the interchange terminals within the study area. Operation conditions were graded in accordance to the criteria established in the *Highway Capacity Manual* (Transportation Research Board 2010). This manual establishes six LOSs: Level A (“Free Flow”) to Level F (“Fully Saturated”). LOSs are measures of traffic flow that consider such factors as speed, delay, traffic interruptions, safety, driver comfort, and density.

- LOS A describes free-flow operations. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream and travel through a network without stopping.

- LOS B represents reasonably free-flow operations. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.
- LOS C provides for flow to be slightly restricted operations. The ability to maneuver within the traffic stream is noticeably restricted, and land changes require more car and vigilance on the part of the driver.
- LOS D is the level at which speeds begin to decline with increasing flows, with density increasing more quickly. Many vehicles stop and freedom to maneuver with the traffic stream is seriously limited.
- LOS E describes operations at capacity, progression is unfavorable. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream.
- LOS F describes breakdown, or unstable flow with excessive congestion and delay.

LOS thresholds and criteria vary depending on the type of facility being evaluated. For intersections, the LOS criteria are based on the amount of delay according to the type of traffic control device used at the intersection. For freeways, LOS criteria are based on traffic density, the number of vehicles within a defined roadway space. The density LOS thresholds for merging and diverging areas (typically these are located at interchange ramp junctions) are slightly different from those for basic freeway segments.

Table 3.13 summarizes the LOS thresholds for all facilities evaluated.

Table 3.13 LOS Definition

LOS	Intersections		Freeways	
	Control Delay per Vehicle (sec/veh)		Density (vpmpl or pcpmpl)[1]	
	Signalized Intersections	Unsignalized Intersections	Basic	Merge/Diverge
A	≤ 10	0-10	0-11	0-10
B	> 10-20	> 10-15	>11-18	>10-20
C	> 20-35	> 15-25	>18-26	>20-28
D	> 35-55	> 25-35	>26-35	>28-35
E	> 55-80	> 35-50	>35-45	>35
F	> 80	> 50	>45	Demand exceeds capacity

[1] Vehicles per Mile per Lane or Passenger Cars per Mile per Lane

Geometry

I-225 is a freeway facility with as many as six southbound through lanes near the Parker Road Interchange narrowing to two lanes over DTC Boulevard. Auxiliary lanes are provided at all on-ramps and off-ramps.

I-25 is also a freeway facility with four through lanes both northbound and southbound within the traffic analysis area. Auxiliary lanes are provided for merging and diverging operations at interchange ramps.

DTC Boulevard is an arterial facility with two through lanes (in each direction) north of the interchange and three through (each direction) lanes south of the interchange. The speed limit is 35 mph. Dual left-turn lanes are provided at the intersections.

Yosemite Street is a 35 mph arterial facility with two through lanes in each direction along its entire length.

Model Calibration

The project team developed two VISSIM simulation models, AM and PM peak hours, to reflect current geometry and traffic control conditions. The team then validated the models to reflect known peak hour conditions.

The validation process included recreating reasonable real-world operations, such as how vehicles move in a road, how they change lanes, and where vehicles are queuing. Before the process began, field visits were completed to observe traffic characteristics, such as queue lengths and merging behaviors. Existing traffic volumes and vehicular types (percentages of trucks) were also recorded and used for input into the models.

The VISSIM validation compared peak hour field data with the models' outputs, and an assessment was made of the visual representations. Review of the simulated model was completed to ensure that all traffic components were operating correctly. Modeling parameters (driver behavior, roadway characteristics, priority rules), in this step of validation, were then fine-tuned.

After visual inspection was completed, the executed models and results were recorded and compared against field observations. VISSIM outputs included travel times, delay, average traveling speeds, and vehicular volumes. Modifications were then completed until the models sufficiently replicated current traffic conditions. The existing conditions models were then finalized using the modeling calibration adjustments.

Summary of Existing Traffic Conditions Analysis

Intersections

The intersections in the study area were evaluated to determine how they operate today during the AM and PM commuter peak hours. The LOSs for the signalized interchange intersections were determined and are displayed in **Table 3.14**. **Figure 3.14** shows the lane configuration at each intersection in the study area and the overall results.

Table 3.14 Interchange Intersection LOS and Average Delay

Interchange / Intersection	AM Peak Hour		PM Peak Hour	
	Avg. Delay (s[1])	LOS	Avg. Delay (s[1])	LOS
I-225 / DTC Boulevard Interchange Intersections				
North Ramps	23.9	C	19.2	B
South Ramps	6.6	A	18.7	B
I-225 / Yosemite Street Interchange Intersections				
North Ramps	37.6	D	8.4	A
South Ramps	10.5	B	18.8	B
I-25 / Hampden Avenue Interchange Intersections				
West Ramps	18.8	B	30.4	C
East Ramps	19.8	B	14.1	B
I-25 /Belleview Avenue Interchange Intersections*				
West Ramps	--	E	--	D
East Ramps	--	D	--	E

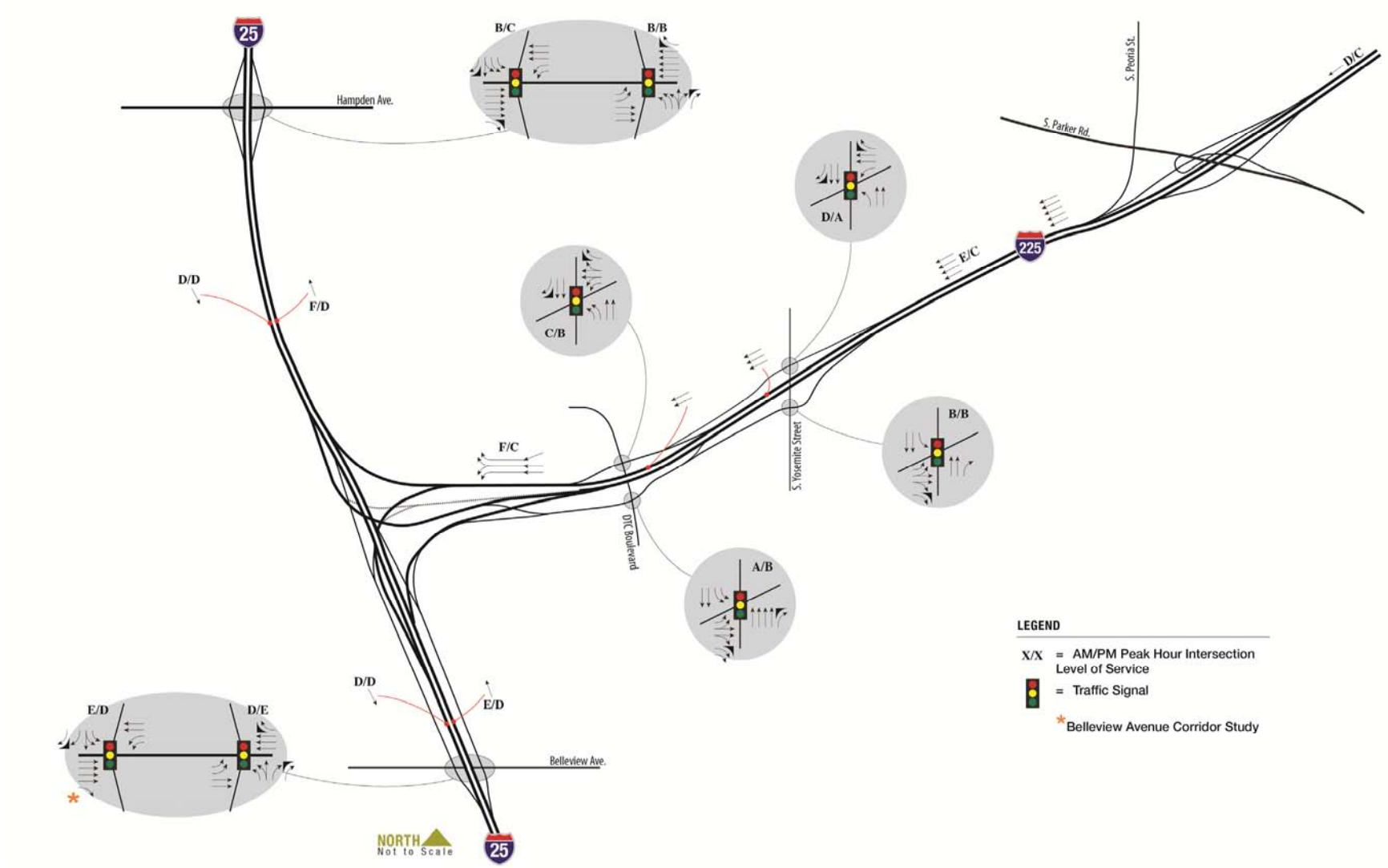
* *LOS at the I-25/Belleview Avenue interchange intersections is based on traffic analyses performed for the Belleview Corridor Study.*

[1] *Seconds*

For intersection analysis, LOS C is what is normally used for highway design, representing a roadway with traffic volumes ranging from 70 percent to 80 percent capacity. However, LOS D is considered acceptable for peak period conditions in urban and suburban areas. During AM and PM peak hours, most intersections operate at LOS D or better. The exception includes the intersections at the Belleview Avenue Interchange, which experience LOS E during the peak hours. These poor LOSs are due to the heavy movements turning to and from the ramps.

As in most areas, there are always alternative driving patterns during peak congestion times with drivers altering their routes in hopes of avoiding congestion and longer commutes. Occasionally during the AM peak hours, southbound mainline I-225 traffic will exit at Yosemite Street and travel the C-D/ramp roadway to the DTC Boulevard on-ramp as a “short-cut”. This driving pattern is the result of drivers trying to avoid the mainline bottleneck. This short-cut increases delay at those intersections when this pattern is prevalent.

Figure 3.14 Existing Conditions 2013 Lane Geometry and LOS



Freeways

Existing traffic conditions along I-225 and I-25 freeway were evaluated to understand how traffic is currently operating related to mainline flows, merges/diverges and weaving. **Table 3.15** displays the existing freeway traffic conditions along I-225 and I-25.

The I-225 mainline DTC Boulevard two-lane bottleneck operates at a LOS F during the AM peak hour from the VISSIM results. The PM peak hour is better operating at no worse than LOS D. The southbound weave (south of DTC Boulevard), while controlled in part by ramp metering of on-ramp traffic and the limiting capacity of the two through lanes along I-225, also functions at a LOS F during the AM peak hour. This tends to be related more to operations along I-25 and the merging of I-225 traffic and the associated spillback caused onto the weave section. The PM peak hour traffic flow along southbound I-225 is much better than that of the AM peak hour, with the bottleneck segment functioning at a LOS D, again based on the VISSIM modeling.

The two-lane freeway section between the two DTC Boulevard Interchange ramps was also evaluated using HCS to identify how often this specific stretch of I-225 operates at LOS F. In essence, the hourly demand for each hour of the day was considered in assessing this two-lane stretch of I-225. Currently, it was found that this short stretch of I-225 operates at LOS F approximately two to three hours a day. In actuality, the short two-lane stretch of I-225 can experience poor operations more frequently than two to three hours due to downstream traffic issues queuing back, but the segment itself appears to be the constraining factor about two to three hours per day, all occurring during the AM peak period from the HCS analysis.

Along northbound I-25, the I-225 merge is currently operating at LOS F during the AM peak hour. The LOS F is due to the heavy northbound through traffic. Southbound I-25 overall is a LOS D or better during both AM and PM peak hours, with the exception of the I-225 south merge onto southbound I-25. This merge operates at LOS E during the AM peak hour.

Table 3.15 Existing (2013) Freeway Operations (VISSIM) – Ideal Conditions**

Location	Type	AM Peak Hour		PM Peak Hour	
		LOS	Density*	LOS	Density*
Southbound I-225					
I-225, North of Parker Interchange	Freeway	D	27.3	C	24.9
Parker Road Off-Ramp	Diverge	C	25.1	C	20.7
Parker Road Flyover On-Ramp	Merge	B	18.8	B	12.1
Parker Road/Peoria Street On-Ramp	Merge	C	22.4	B	14.8
Between Parker & Yosemite Interchanges	Freeway	E	40.0	C	18.3
Yosemite Street Off-Ramp	Diverge	E	40.0	B	18.3
DTC Boulevard Street Off-Ramp	Diverge	F	57.3	C	22.0
Between DTC Boulevard Off-Ramp & On-Ramp	Freeway	F	53.8	D	30.1
Between DTC Boulevard On-Ramp at I-25	Weave	F	52.9	C	27.7
Northbound I-25					
I-25, South of Belleview	Freeway	D	27.9	D	26.1
Belleview Avenue Off-Ramp	Diverge	C	27.9	C	26.1
Between Belleview & I-225	Freeway	E	37.7	D	31.2
I-225/Tamarac Parkway/DTC Blvd Off-Ramp	Diverge	E	37.7	D	31.2
Belleview Avenue On-Ramp	Merge	F	76.9	F	55.8
I-225 On-Ramp	Merge	F	64.1	C	27.6
Between I-225 & Belleview Avenue	Freeway	F	72.9	D	32.5
Hampden Avenue Off-Ramp	Diverge	F	72.9	D	32.5
Hampden Avenue On-Ramp	Merge	F	87.2	F	47.4
I-25, North of Hampden	Freeway	E	37.5	E	36.3
Southbound I-25					
I-25, North of Hampden	Freeway	D	27.2	D	29.4
Hampden Avenue Off-Ramp	Diverge	D	27.2	D	29.4
Hampden Avenue On-Ramp	Merge	D	30.4	D	31.2
Between Hampden Avenue & I-225	Freeway	D	30.4	D	31.2
I-225 Off-Ramp	Diverge	D	30.4	D	31.2
Belleview Avenue Off-Ramp	Diverge	D	30.4	D	31.2
Between I-225 & Belleview	Freeway	D	28.2	C	27.4
I-225 On-Ramp	Merge	E	43.0	C	26.4
Between I-225 & Belleview	Freeway	D	31.5	D	29.5
Belleview Avenue On-Ramp	Merge	D	29.4	D	31.0
I-25, South of Belleview	Freeway	D	32.4	D	32.9

* *Density reported in pc/mi/ln*

** *Ideal conditions represent simulations of study area without any roadway incidents that can occur on I-225 and I-25.*

Safety Assessment Analysis

The project team completed a Safety Assessment Report for the I-225 PEL Study, which can be found in **Appendix A**. It presents a detailed analysis of the study area; an overview is provided here. The safety analysis covers a portion of southbound I-225 from milepost (MP) 0.00 to MP 4.66 (north of Parker Road) including the DTC Boulevard interchange and Yosemite Street intersection. In addition, given the direct interaction that I-225 has with I-25, a portion of I-25 from Belleview Avenue (MP 199.40) to Hampden Avenue (MP 201.59) also has been reviewed as part of this analysis. The safety assessment focused on understanding the magnitude and nature of any safety problems within the project limits and related crash causality to roadway geometrics, roadside features, traffic control devices, traffic operations, driver behavior, and vehicle type.

The study corridor contains six interchanges: the system interchange of I-25 / I-225, three along southbound I-225, and two along I-25, including I-25 / I-225 (MP 0.00 / MP 200.13), I-225 / DTC Boulevard (MP 0.79), I-225 / Yosemite Street (MP 1.33), I-225 / Parker Road (MP 3.94), I-25 / Belleview Avenue (MP 199.40), and I-25 / Hampden Avenue (MP 201.59).

As part of the examination of crash patterns for the entire study area, an assessment of the magnitude of safety problems on select highway sections has been refined through the use of Safety Performance Function (SPF) methodology. Development of the SPF lends itself well to the conceptual formulation of the Levels of Service of Safety (LOSS). The concept of LOSS uses qualitative measures that characterize safety of a roadway segment in reference to its expected performance and severity. If the LOSS predicted by the SPF represents a normal or expected number of crashes at a specific level of ADT, then the degree of deviation from the norm can be stratified to represent specific levels of safety.

- LOSS-I – Indicates low potential for crash reduction
- LOSS-II – Indicates better than expected safety performance
- LOSS-III – Indicates less than expected safety performance
- LOSS-IV – Indicates high potential for crash reduction

The conclusions and recommendations of the Safety Assessment Report are based on an investigation of three years of crash history. Along I-225 and both directions of I-25 as described, there were a total of 1,074 reported crashes; 420 crashes occurred along southbound I-225, and 654 crashes occurred along I-25, including crashes on the ramps. In general, the freeway segments within the study area fall within the LOSS I or II categories, meaning the corridor as a whole has a better than expected safety performance for like facilities. However, rear-end and sideswipe crash patterns emerged along southbound I-225. There are several locations of higher than expected crash concentration and severity located at the interchanges of DTC Boulevard, Yosemite Street, and Parker Road primarily related to congestion. Further, a moderate pattern of crashes is evident along the Cherry Creek Reservoir Dam.

At the I-225/DTC Boulevard and I-225/Yosemite Street interchange intersections, LOSS ranged from LOSS I to LOSS III. The LOSS for the northern DTC Boulevard intersection is a LOSS III, indicating less than expected safety performance. There were a total of 103 crashes at the four intersections: 30 crashes occurred at the southern DTC Boulevard intersection, 54 crashes occurred at the northern DTC Boulevard intersection, eight crashes occurred at the southern Yosemite Street intersection, and 11 crashes occurred at the northern Yosemite Street intersection. At the northern DTC Boulevard

intersection (highest concentration of intersection crashes), 22 of the 54 crashes were broadside crashes, indicating the need for improvements (**Appendix A**).

The following recommendations should help reduce the number of crashes throughout the study corridor:

- **Improvements to southbound I-225 to reduce congestion along I-225** – These improvements should help to decrease the number of rear-end type and sideswipe (same direction) type crashes on the freeway. Further investigation and identification of improvements is part of the I-225 PEL Study process.
- **Parker Road flyover to southbound I-225** – Consideration should be given to reviewing the existing reflector and delineation along this flyover ramp due to the high occurrence of run-off-the-road type crashes during dry conditions.
- **Improvements to signal coordination and reviewing/updating the existing red/yellow clearance intervals** – These improvements may help reduce the frequency of broadside and rear-end type of crashes. Additionally, consideration should be given to changing left-turn phasing to protected only left turn phasing at the northern DTC Boulevard intersection.

3.5 Transit Conditions

Many transit lines run through the study area, largely due to the Ulster & Tufts Bus Transfer Center just south of the intersection of Ulster Street and Tufts Avenue and the proximity to the LRT lines/stations. The information that follows briefly summarizes the routes in the study area.

Local Routes

Local bus lines make local stops throughout their designated routes.

- **Route #27 –** Provides east/west connections between the Wadsworth & Hampden park-n-Ride and the Ulster & Tufts Bus Transfer Center in the DTC.
- **Route #46 –** Provides north/south connections between the Cherry Creek neighborhood and the Ulster & Tufts Bus Transfer Center in the DTC.
- **Route #65 –** Provides north/south connections along Monaco Parkway between the Stapleton park-n-Ride and the east side of the Arapahoe at Village Center LRT Station (east of I-25) via the Ulster & Tufts Bus Transfer Center in the DTC. Unlike other routes serving the DTC, the #65 travels both directions along Ulster Street near the Ulster & Tufts Bus Transfer Center. However, a limited number of stops occur along the loop of Tufts Avenue, DTC Boulevard, and Union Avenue around the transfer center.
- **Route #73 –** Provides north/south connections along Quebec Street between the Stapleton park-n-Ride and the west side of the Arapahoe at Village Center LRT Station (west of I-25) via the Ulster & Tufts Bus Transfer Center in the DTC.
- **Route #105 –** Provides north/south connections primarily along Havana Street between the Stapleton park-n-Ride and the Ulster & Tufts Bus Transfer Center in the DTC.
- **Route #121 –** Provides north/south connections along Peoria Street between the Montbello park-n-Ride and the Ulster & Tufts Bus Transfer Center in the DTC via the Nine Mile Station

that includes LRT, bus service, and a park-n-Ride. Service between Nine Mile Station and the Ulster & Tufts Bus Transfer Center uses I-225 and is offered only on weekdays.

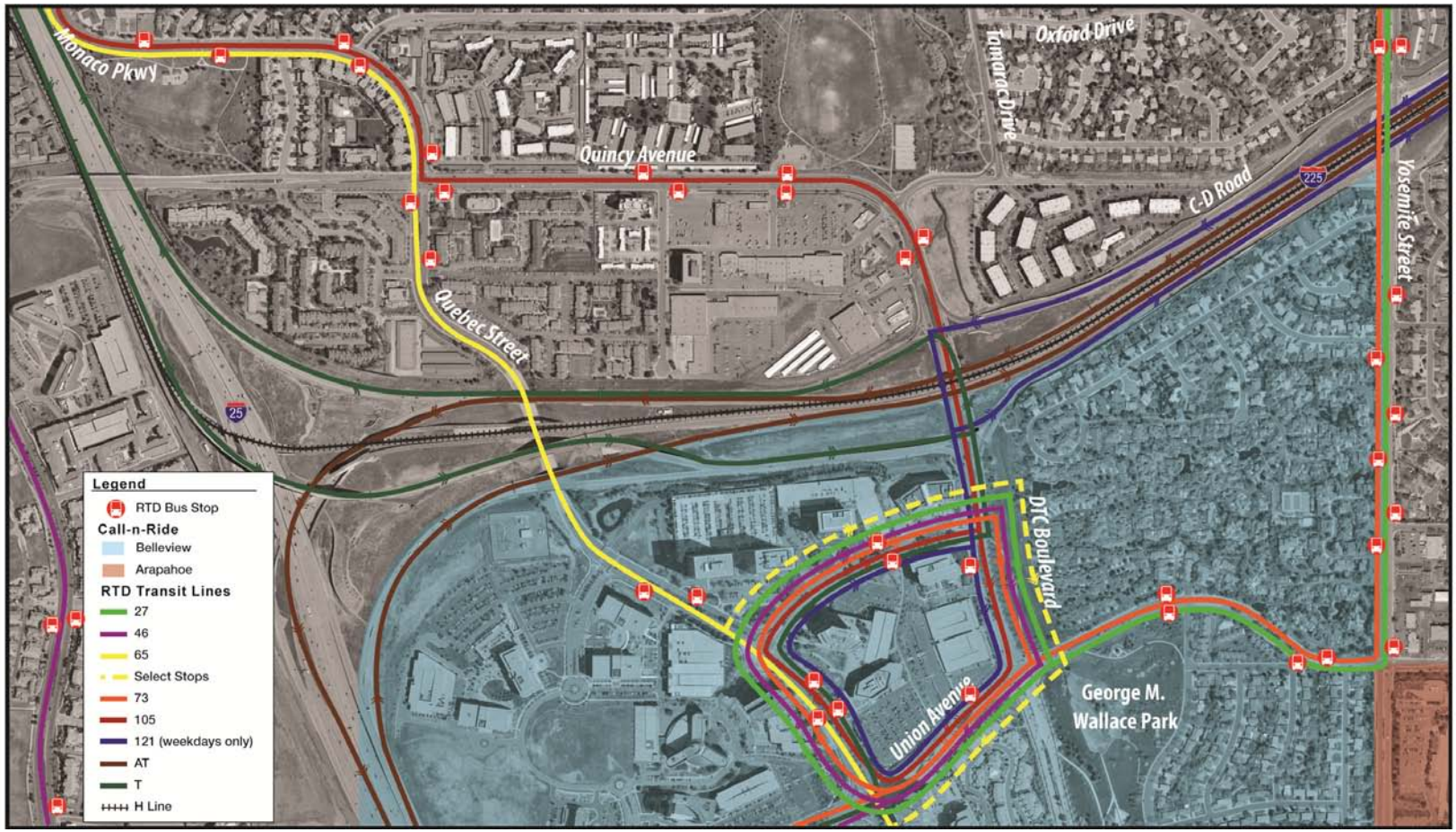
Regional and SkyRide Routes

Regional routes provide regional connectivity and do not make many local stops between their two termini. The **T Route** is the only regional route serving the study area, providing regional connectivity between the Table Mesa park-n-Ride in Boulder and the east side of the Arapahoe at Village Center LRT Station via the Ulster & Tufts Bus Transfer Center in the DTC. The route has local stops within the DTC and uses the I-25/I-225 Interchange to access the area. It operates only during weekdays on a limited schedule, bringing commuters southbound from Boulder in the morning, and returning from DTC in the afternoon.

SkyRide routes are regional routes that provide connectivity to DIA. The study area has no SkyRide route stops, but the **AT Route** uses I-225 to travel between DIA and the east side of the Arapahoe at Village Center LRT Station.

Figure 3.15 maps the existing transit line serving the study area.

Figure 3.15 Study Area Transit Services



LRT

No LRT line has a station within the study area, although there are six stations in and surrounding the study area (**Table 3.16**). However, the **H-Line** operates on tracks in the ROW of I-225, between the northbound and southbound lanes. This line provides connectivity between downtown Denver and the Nine Mile Station. Riders can access DTC by transferring at the Southmoor Station and using the E-Line or F-Line that runs along I-25.

Figure 3.15 displays the LRT Line H location within the study area. **Table 3.16** briefly describes each LRT station within the Traffic Analysis Study Area locations in proximity to bicycle and pedestrian facilities. Many stations are included in this discussion of LRT services due to connectivity to major transit routes. But they are not included in the figure due their distance from the study area.

Table 3.16 Local LRT Station Amenities and Descriptions

Station	Location	Parking Spaces	Bike Storage	Bus/LRT Connections	Description
Nine Mile	I-225 and Parker Road	1225	16 racks, 28 lockers	35, 79L, 83L, 121, 130, 131, 133, 135, AT, ATX LRT – H	The Nine Mile LRT Station is located at the intersection of I-225 and Parker Road. The City of Aurora has begun planning for a TOD project at this elevated station. Nine Mile Station currently is an end of line transit station providing more than 1,200 parking spaces and multiple bus line connections. It is accessible via Parker Road or by vehicle and bus on Peoria Street. The LRT trains are accessible via a pedestrian underpass of I-225.
Belleview	Belleview Avenue and South Quebec Street	59	12 racks, 12 lockers	46, 73, Belleview call-n-Ride LRT – E, F, H	The Belleview LRT Station is located at the intersections of East Belleview Avenue and South Quebec Street. The station is accessible by South Quebec Street and Belleview Avenue.
Dayton	I-225 and South Yosemite Street	250	16 racks, 8 lockers	LRT - H	Dayton LRT Station is located near the intersection of I-225 and Yosemite Street. The park-n-Ride lot has 250 vehicle spaces and is accessed via South Boston Street or South Dallas Street. The station is connected to the Village Greens North Trail and Cherry Creek Reservoir and Recreational Area via a pedestrian overpass. No bus connections are available at this station.
Southmoor	South Monaco and South Magnolia Way	788	16 racks, 22 lockers	35, 40, 65, 105 LRT – E, F, H	The Southmoor Station and parking are located at the intersection of South Monaco Parkway and Magnolia Way on the east side of I-25. The parking lot is equipped to handle more than 700 vehicles, multiple bus lines, and bicycle commuters. The station has a pedestrian underpass to access the LRT trains located on the west side of I-225.
Orchard	East Orchard and I-25	48	None	73, Orchard call-n-Ride LRT – E, F	The Orchard Station is located on the west side of I-25 and has a pedestrian overpass to access the corporate offices on the east side of I-25.
Arapahoe at Village Center (South of Study Area)	Caley Avenue and Yosemite Street	817	8 racks, 8 lockers	65, 66, 73, AT, ATX, T, Arapahoe call-n-Ride, Orchard call-n-Ride LRT – E, F	The Arapahoe Village Center LRT Station is located in a developed TOD area that includes restaurants, shopping, and an entertainment center. The station is also within walking distance of multiple corporate offices. Accessibility is available on both the east and west sides of I-25 either on Caley Avenue and South Yosemite Street or directly to the trains off South Fiddlers Green Circle.

3.6 Bicycle and Pedestrian Facilities and Operations

Bicycle Facilities

Existing

Few bicycle facilities exist in the study area. Shared lane markings ("sharrows") are painted within the wide right lane of Union Avenue/Temple Drive, and bike lanes exist along Tamarac Drive, north of Quincy Avenue. Multi-use paths are also present along George M. Wallace Park.

The area contains a few designated bike routes. Ulster Street and its name changes (Quebec Street, Eastmoor Drive, Princeton Avenue, and Monaco Parkway) are designated as bike routes, as is Yosemite Street. Other bike routes include Union Avenue, west of DTC Boulevard; Quincy Avenue, west of Eastmoor Drive; Oneida Street, north of Princeton Avenue; and Princeton Avenue, east of Eastmoor Drive. While these streets are designated bike routes, physical bike infrastructure is not present unless otherwise noted. **Figure 3.16** shows existing bicycle facilities in the study area.

Planned

The City and County of Denver's bike plan, *Denver Moves – Making Bicycle and Multi-Use Connections*, identifies a few bicycle improvements for the study area. It lists bike lanes along Ulster Street/Quebec Street/Eastmoor Drive from Princeton Avenue to the south (2011). It also identifies future bike lanes for Quincy Avenue from the western boundary of the study area to the northern segment of Tamarac Drive, and along Yosemite Street for its entirety within the study area. A "party parking bike lane" is listed for Princeton Avenue from Eastmoor Drive to the northern boundary of the study area, which involves on-street parking that is wide enough and often void of parked vehicles so that it typically operates like a de-facto bike lane. **Figure 3.16** also shows planned bicycle facilities in the study area.

Figure 3.16 Study Area Bicycle Services

Pedestrian Facilities

Most roads in the study area have pedestrian facilities on both sides of the road, but a few segments are missing a sidewalk, see **Figure 3.17**. A segment along the south side of Quincy Avenue from Happy Canyon Road to the end of Olive Street is missing a sidewalk, with the exception of the bridge crossing of I-25. Again, Quincy Avenue is missing sidewalks on the south side between the jog of northern Tamarac Drive and southern Tamarac Parkway, along the north side from the northern leg of Tamarac Drive to where Quincy Avenue ends, and along a short section of the I-225 C-D road sound wall.

Existing sidewalks in DTC are frequently detached, as are sidewalks along Quincy Avenue between Eastmoor Drive and Tamarac Parkway. However, most sidewalks in the remainder of the study area are attached. Many paths exist along and within the three parks that fall within this area. Sidewalks south of I-225 are typically newer and wider, while those north of the highway are older and narrower. **Figure 3.17** shows the current conditions at intersections in the study area.

Pedestrian facilities at intersections in the study area vary per intersection. This is primarily to suit the uniqueness of each intersection environment. Most intersections in the study area are well programmed for pedestrians, but some common amenities that improve use for pedestrians (including American with Disabilities Act [ADA] programming) are lacking in some instances. **Table 3.17** lists the current conditions at intersections in the study area, including existing amenities and deficiencies.

Figure 3.17 Study Area Pedestrian Services

Table 3.17 Pedestrian Treatments at Intersections

Location	Type	Amenities	Deficiencies
Union & Ulster	Four-way signalized intersection	• Crosswalks across each leg • Channelized right-turn lanes with a triangle refuge • Push-button activated signals at each corner	• None apparent
Union & DTC Boulevard	Four-way signalized intersection	• Crosswalks across each leg • Channelized right-turn lanes with a triangle refuge • Push-button activated signals at each corner	• None apparent
DTC Boulevard & Tufts	Three-way signalized intersection	• Crosswalks across the western and southern legs • Channelized right-turn lane with a triangle refuge • Push-button activated signals on the two legs with crosswalks	• No crosswalk across the northern leg
Ulster & Tufts	Four-way signalized intersection	• Crosswalks across each leg • Channelized right-turn lanes with triangle refuge • Push-button activated signals at each corner	• The eastern leg median intruding into most of the crosswalk without refuge amenities and curb ramps
Ulster & Technology Way	Four-way signalized intersection	• Crosswalks across each leg • Two channelized right-turn lanes to/from Technology Way with a triangle refuge at each • Push-button activated signals at each corner	• None apparent

Location	Type	Amenities	Deficiencies
DTC Boulevard & Northbound I-225 C-D Road/Off-Ramp	Four-way signalized intersection with the east and west legs being one-way eastbound	• Crosswalks across eastern, western, and southern legs • Two channelized right-turn lanes with triangle refuges • Push-button activated signal at eastern, western, and southern legs	• No pedestrian crossing for northern leg • No audible alert for visually-impaired pedestrians to know when it is safe to cross
Tamarac & Southbound I-225 C-D Road/On-Ramp	Four-way signalized intersection with the east and west legs being one-way westbound	• Crosswalks across eastern, western, and northern legs • Two channelized right-turn lanes with triangle refuges • Push-button activated signal at eastern, western, and northern legs • Median on the northern leg of Tamarac that provides protection for the middle of the crosswalk	• No pedestrian crossing for southern leg • No audible alert for visually-impaired pedestrians to know when it is safe to cross
Yosemite & Northbound I-225 C-D Road/On-Ramp	Four-way signalized intersection with the east and west legs being one-way eastbound	• Crosswalks across the eastern, western, and southern legs • Channelized right-turn lane with a triangle refuge on the western leg • Push-button activated signal at southern leg	• No crosswalk across northern leg • Western leg with no pedestrian signal • Eastern leg with a pedestrian signal without the push-button • No curb ramps for the median within the southern leg's crosswalk • The curb ramp at the southeast corner of the intersection that is programmed for crossing the southern leg not aligned with the crosswalk; requites mobility impaired pedestrians to travel into the lane of traffic or use the ramp for crossing the eastern leg and maneuver over to the southern leg's crosswalk

Location	Type	Amenities	Deficiencies
Yosemite & Southbound I-225 C-D Road/Off-Ramp	Four-way signalized intersection with the east and west legs being one-way westbound	• Crosswalks across the eastern, western, and northern legs • Two channelized right-turn lanes with a triangle refuge • Push-button activated signal at northern leg	• No crosswalk across southern leg • No pedestrian signal at eastern leg • No push-button activation for pedestrian signal at western leg • Impaired accessibility due to a signal pole on the refuge on the westbound to northbound turn lane • No curb ramp or sidewalk at northeast corner despite the existing crosswalk
Yosemite & Union	Four-way signalized intersection	• Crosswalks across each leg • Push-button activated signal at northern and southern legs • Pedestrian signals at eastern and western legs	• No push-button activation at eastern and western legs
Tamarac & Quincy	Four-way signalized intersection	• Crosswalks across eastern, northern, and southern legs • Push-button activated signals for northern and southern legs • Pedestrian signals at western and eastern legs	• No crosswalk across western leg • No push-button at western and eastern legs
Quincy & Eastmoor	Four way signalized intersection	• Crosswalks across each leg • Push-button activated signals exist at each crossing • Median as part of the crosswalk for the southern leg (grass) and eastern leg (sloped surface)	• Faded striping • A channelized right-turn lane for the westbound to northbound turn with no triangle median as a pedestrian refuge (paint-only) • Neither median well programmed for pedestrians nor Americans with Disabilities Act accessible

4.0 FUTURE TRANSPORTATION CONDITIONS

The project team used the DRCOG 2035 fiscally constrained regional travel demand model (including the 2035 land use forecasts described in **Chapter 2**) to develop the 2035 traffic forecasts. The project team used the most current version available at the time of this study, with slight land use changes incorporated from the *Belleview Avenue Corridor Study*. The changes reflect the current projections of build-out for the Belleview Station development situated just beyond the study area between Belleview Avenue, Union Boulevard, Monaco Parkway, and Quebec Street. The project team used the National Cooperative Highway Research Program (NCHRP) 255 Modeling Adjustment process to adjust the output from the model. The NCHRP 255 Modeling Adjustment process uses model growth and observed counts to arrive at a final volume. **Figure 4.1** documents the adjusted 2035 No-Action traffic forecasts.

As can be seen, the 2035 traffic volumes reflect the demands along the southern reaches of I-225 with the heavy employment in the DTC area, and the impacts from residential and nearby retail. Overall, 2035 traffic patterns would remain similar to the existing traffic patterns, but the mainline magnitude in traffic demand is expected to increase by 20 to 30 percent.

4.1 No-Action Alternative

The No-Action Alternative reflects a scenario should CDOT select to not build any further improvements than those already being constructed. The No-Action Alternative is also used as a baseline comparison for alternative development and screening. This alternative would leave southbound I-225 with two lanes passing over the DTC Boulevard bridge, but improvements upstream along I-225 are anticipated to be in place. These would include the widening of I-225 from Parker Road to Mississippi Avenue, which is currently under construction. Upon completion, I-225 will be a six-lane facility its entire length (except for the southbound segment crossing DTC Boulevard/Tamarac Parkway).

One other planned/funded improvement along the I-225 corridor includes the completion of the FastTracks LRT line. Specifically, the LRT that currently terminates at Nine Mile Station (near I-225 / Parker Road) will be extended north along I-225, pass through the Aurora City Center area, pass through the Fitzsimons/Anschutz Campus, and terminate at the East Rail Line near Peoria Street and Smith Road. The completion of this rail line would dramatically improve the level of transit service provided along I-225 and is reflected in the 2035 No-Action volumes developed from the DRCOG travel demand model.

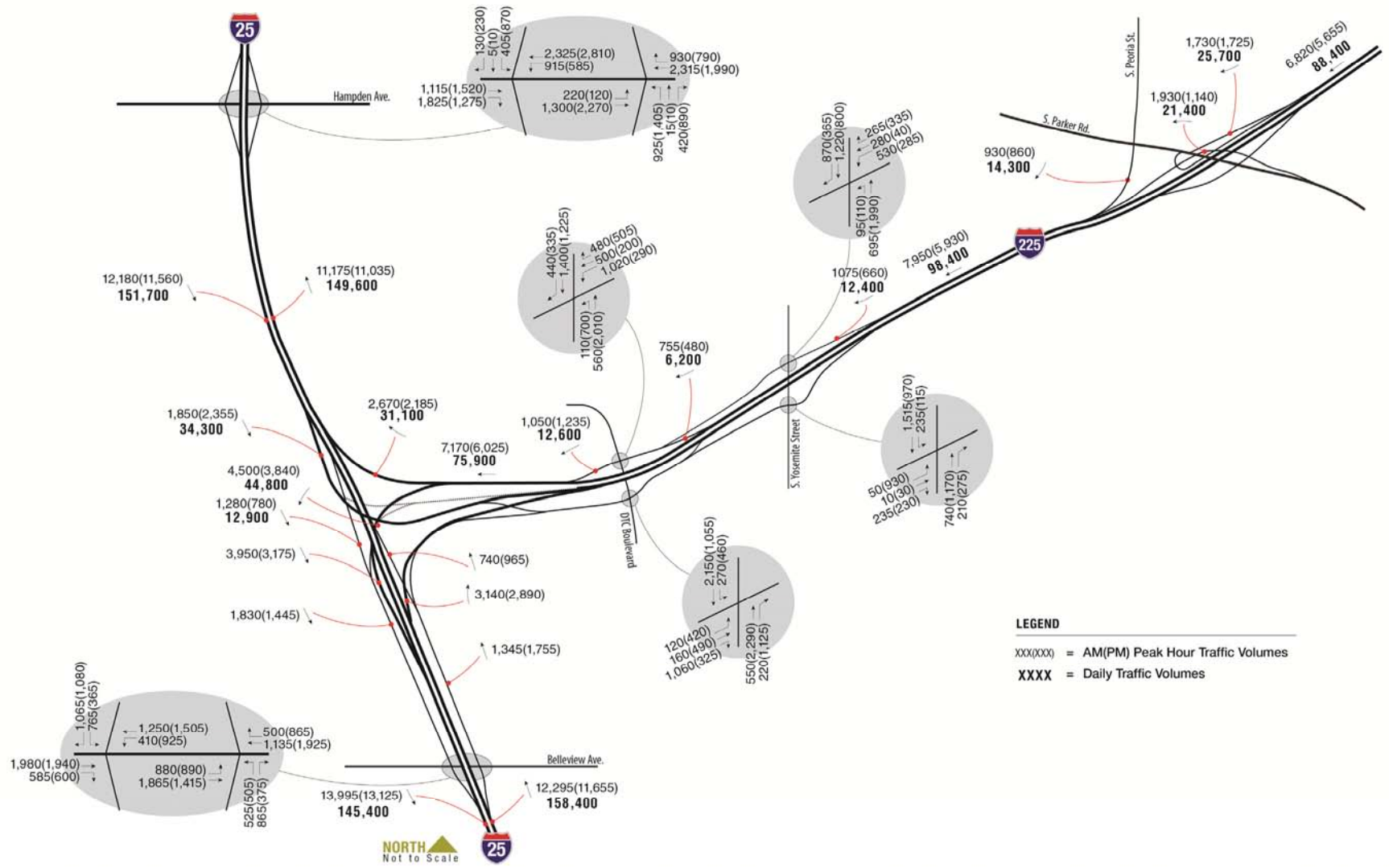
4.2 2035 No-Action Conditions

This section presents the 2035 No-Action I-225 traffic operation conditions, including travel speeds, travel times, and LOS.

Travel Speeds and Travel Times

2035 travel times will increase along I-225 during the peak hours compared to existing conditions. Simulation of future conditions using VISSIM software suggests that the AM peak period travel time from Parker Road to I-25 could increase by three to four times current conditions. The PM peak period would continue to operate better than the AM period, but it too is prone to experience significant increase in travel time compared to existing conditions. Currently, the PM peak hours are not problematic along southbound I-225 barring incidents, but this would change given the anticipated growth in demand out to the year 2035.

Figure 4.1 2035 No-Action Traffic Volumes



Corridor Traffic Forecasts and Capacity Thresholds

The 2035 No-Action traffic volume forecasts for I-25 and I-225 were developed and each are projected to serve approximately 300,000 and 190,000 vpd, respectively. **Figure 4.2** shows projected traffic demands. The southbound I-225 traffic demand during the AM peak hour would be approximately 8,000 vph just south of the Parker Road Interchange. Just as in existing conditions, the inflow traffic at the Parker Road Interchange would exceed the outflow traffic at the DTC Boulevard bridge and the bottleneck constraint would be worsened by the growth along I-225. Additionally, this analysis includes the widening of I-225 from Parker Road to Mississippi Avenue. This improvement would open up the existing pinch point north of Parker Road, thereby allowing greater concentrations of traffic into the bottleneck at the DTC Boulevard Interchange.

As mentioned in **Section 3.4**, there are some pronounced turning movement patterns within the study area interchanges. By 2035, these patterns will become even more pronounced.

Freeway and Intersection Operations

The project team evaluated operating conditions for the 2035 No-Action Alternative, displayed on **Figure 4.2**. The LOSs for the signalized interchange intersections were determined for the AM and PM peak hour, and **Table 4.1** displays the LOS and average delays. In general, there will be a decrease in LOS compared to existing conditions at the intersections because the 2035 No-Action Alternative does not assume any additional improvements at the interchange intersections.

The more notable drops in LOS include the I-225 / DTC Boulevard north ramps intersection, where LOS will decrease from LOS C to LOS E during the AM peak hour. This results from the increase of westbound left-turning vehicles (1,020 vph) with limiting capacity of one left-turn lane and a shared left-turn/through lane.

At the S. Yosemite Street north ramps intersection, the LOS will decline from LOS D to LOS E. Both the westbound left-turn and northbound left-turn movements will operate at LOS F due to limited capacity.

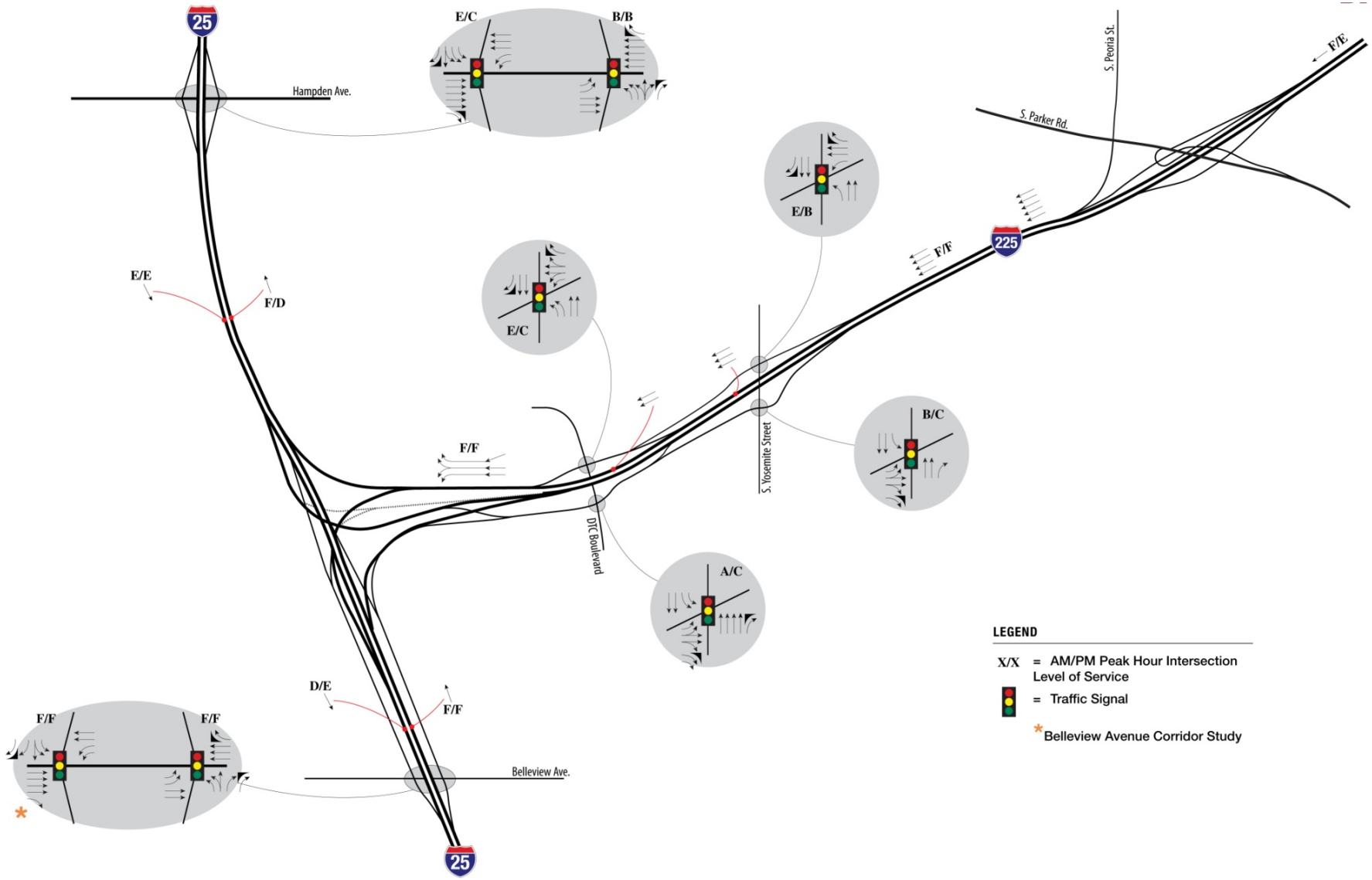
Table 4.1 Interchange Intersection LOS and Average Delay

Interchange / Intersection	AM Peak Hour		PM Peak Hour	
	Avg. Delay (s[1])	LOS	Avg. Delay (s[1])	LOS
I-225 / DTC Boulevard Interchange Intersections				
North Ramps	62.5	E	31.8	C
South Ramps	7.1	A	24.4	C
I-225 / Yosemite Street Interchange Intersections				
North Ramps	72.2	E	10.2	B
South Ramps	11.0	B	25.6	C
I-25 / Hampden Avenue Interchange Intersections				
West Ramps	62.5	E	29.0	C
East Ramps	18.4	B	16.6	B
I-25 / Belleview Avenue Interchange Intersections*				
West Ramps	--	F	--	F
East Ramps	--	F	--	F

* *LOS at the I-25/Belleview Avenue Interchange intersections is based on traffic analyses performed for the Belleview Corridor Study*

[1] *seconds*

Figure 4.2 No-Action 2035 Lane Geometry and LOS



The I-25/Hampden Avenue west ramps intersection experiences a drop in LOS from LOS B to LOS E due to the very large increase in eastbound right-turn movement traffic during the AM peak hour. Additionally, the O-25/Belleview Avenue interchange intersections decline from LOS D/E to LOS F for both intersection during both AM and PM peak hours without improvements. A separate study nearing completion will identify recommended improvements to remedy this condition.

Table 4.2 displays the projected freeway conditions along I-225 and I-25 from the VISSIM simulation runs. North of the I-225/DTC Boulevard Interchange bottleneck, I-225 will continue to operate at LOS F during the AM peak hour in the southbound direction, but PM peak hour operations will also operate at LOS F in 2035. The I-225 weave (between DTC Boulevard and I-25) is projected to function at a LOS F during both peak hours.

Much of southbound I-25 will function poorly during both AM and PM peak hours. The I-225 merge with I-25 will operate at LOS F during both peak hours due to the short merging lane distances along I-25. Along northbound and southbound I-25, some of the merge/diverge points (I-225, Hampden Avenue ramps and Belleview Avenue ramps) will experience little change in operations relative to existing conditions. This is caused by congestion south and north of these areas along I-25. The high traffic volumes constrain the flow to this point along I-25 creating a metering condition. This currently exists along I-25 during peak hours where traffic queues then releases after merge or diverge area providing a brief improvement in LOS until the driver reaches congestion again.

The project team also used HCS to evaluate the freeway section between the two DTC Boulevard Interchange ramps in isolation to determine how often this I-225 segment would cause LOS F throughout the day (as opposed to downstream constraints causing LOS F conditions). Given the 2035 projected hourly traffic demands and realizing that unmet demand in a particular hour would extend into the subsequent hours, this segment is projected to cause LOS F for 8 to 12 hours a day, including the AM and PM peak periods and many of the mid-day hours. Many mid-day hours currently see southbound traffic flows that are only 25 to 35 percent lower than those of the AM peak hour. The 20 to 30 percent traffic increase indicative of year 2035 traffic will push the mid-day hour traffic levels to today's AM peak hour demand level, which already overwhelms the freeway. As such, this condition could be predominant throughout the typical weekday by 2035.

Transit

Future conditions include the extension of the LRT service north along the I-225 corridor, currently under construction. When completed, this rail line will extend north through Aurora City Center, Fitzsimons, and connect with the East Rail Line that will serve DIA and Downtown Denver. An additional train route will be added to I-225 upon this line's completion in which direct lines will run from Lincoln Avenue in Douglas County to the East Rail Line and return. Service to/from Downtown Denver will use the I-225 line as far north as the Florida Avenue Station. The extension of the rail and the added service help to ensure a robust transit service along the I-225 corridor, thereby removing vehicular trips that would otherwise have an impact on the mainline.

With the extended rail line, bus service will also be enhanced to leverage this new asset. RTD regularly adjusts and updates its bus service in response to demand conditions as well. Many routes through the study area, such as routes 27, 46, 65, 73, 105, 121, and T, are candidates to be adjusted. In addition, there are ongoing discussions with respect to each station planned along the I-225 line to develop strong pedestrian connections. This will help encourage use of the robust transit system planned for this corridor.

Table 4.2 2035 No-Action Freeway Operations (VISSIM) – Ideal Conditions**

Location	Type	AM Peak Hour		PM Peak Hour	
		LOS	Density*	LOS	Density*
Southbound I-225					
I-225, North of Parker Interchange	Freeway	F	100.9	E	36.6
Parker Road Off-Ramp	Diverge	F	95.6	E	42.0
Parker Road Flyover On-Ramp	Merge	F	162.5	F	88.8
Parker Road/Peoria Street On-Ramp	Merge	F	140.0	F	80.2
Between Parker & Yosemite Interchanges	Freeway	F	126.9	F	100.7
Yosemite Street Off-Ramp	Diverge	F	126.9	F	100.7
DTC Boulevard Street Off-Ramp	Diverge	F	119.9	F	112.5
Between DTC Boulevard Off-Ramp & On-Ramp	Freeway	F	124.2	F	122.7
Between DTC Boulevard On -Ramp & I-25	Weave	F	111.2	F	104.6
Northbound I-25					
I-25, South of Belleview	Freeway	F	84.9	F	91.1
Belleview Avenue Off-Ramp	Diverge	F	84.9	F	91.1
Between Belleview & I-225	Freeway	F	71.1	F	85.6
I-225/Tamarac Parkway/DTC Blvd Off-Ramp	Diverge	F	71.1	F	85.6
Belleview Avenue On-Ramp	Merge	F	58.1	D	33.3
I-225 On-Ramp	Merge	F	48.4	C	27.0
Between I-225 & Belleview Avenue	Freeway	F	72.5	D	32.4
Hampden Avenue Off-Ramp	Diverge	F	72.5	D	32.4
Hampden Avenue On-Ramp	Merge	F	87.9	F	62.5
I-25, North of Hampden	Freeway	E	37.0	E	36.5
Southbound I-25					
I-25, North of Hampden	E	36.4	F	61.6	E
Hampden Avenue Off-Ramp	E	36.4	F	61.6	E
Hampden Avenue On-Ramp	E	40.3	E	36.3	E
Between Hampden Avenue & I-225	E	40.3	E	36.3	E
I-225 Off-Ramp	E	42.3	D	32.0	E
Belleview Avenue Off-Ramp	F	57.1	E	37.8	F
Between I-225 & Belleview	F	92.7	F	83.8	F
I-225 On-Ramp	F	62.1	F	62.0	F
Between I-225 & Belleview	D	33.0	E	35.8	D
Belleview Avenue On-Ramp	D	31.3	E	36.1	D
I-25, South of Belleview	D	33.7	D	34.5	D

* *Density reported in pc/mi/ln; ** Average Speed reported in mph*

** *Ideal conditions represent simulations of study area without any roadway incidents that can on I-225 and I-25.*

Bicycle and Pedestrian

The level of traffic along the adjacent roadways has an impact on bicycle and pedestrian activity. The forecasted increase in traffic volume along the interchange cross-streets will result in some reduction in bicycle and pedestrian comfort along the interchange complex cross-streets. However, Yosemite Street will continue to be in place to accommodate bicycle and pedestrian activity.

5.0 ENVIRONMENTAL OVERVIEW

Chapter 5 summarizes the existing environmental conditions of the study area. The environmental resources selected are based on the characteristics of the study area and on stakeholder input. The considered resources are generally consistent with NEPA, its implementing regulations, and FHWA and CDOT guidelines.

The following resources are considered red flag environmental resources with separate regulatory drivers, such as the ESA or CWA, or are typically resources of concern for the general public, such as traffic noise:

- Parks and recreation resources
- Traffic noise
- Historic resources
- Floodways, 100-year floodplains, and water quality
- Wetlands and waters of the US
- Wildlife/threatened and endangered species
- Hazardous materials

Chapter 5 presents the results of the analysis for each resource topic. Within each resource subsection, the resource is introduced, followed by the methodology and existing conditions. As a foundation for the environmental overview, each resource cites the *Southeast Corridor Final Environmental Impact Statement (EIS)* (CDOT & FHWA, 1999). This EIS contains the most recent documentation of evaluated environmental resources for the study area, despite the fact the information is more than 14 years old.

Appendix B contains a technical memorandum for each environmental resource. These memorandums provide more detailed information on each resource than is summarized in this report.

5.1 Parks and Recreation Resources

Parks and recreation resources are important community facilities that warrant consideration during federally funded projects. These resources include parks, trails, and open space areas that offer opportunities for recreation, including both passive and active activities.

Analysis Methodology

The project team used geographic information systems (GIS) to identify details and characteristics of existing parks and recreational resources in the study area and then field verified them in May 2013. The project team obtained additional inventory details about the resources, such as ownership, size, and amenities, by accessing individual municipalities' websites in May 2013. Research centered on using the most current version of information available online. The information has not been confirmed with the jurisdictions and may change as the project progresses through the planning phases. **Table 5.1** lists the findings for the Parks and Recreational Resources. **Figure 5.1** shows the study area in which parks, trails, and open space resources were evaluated. Identified properties were within the study area or within close proximity or adjacent to the study area.

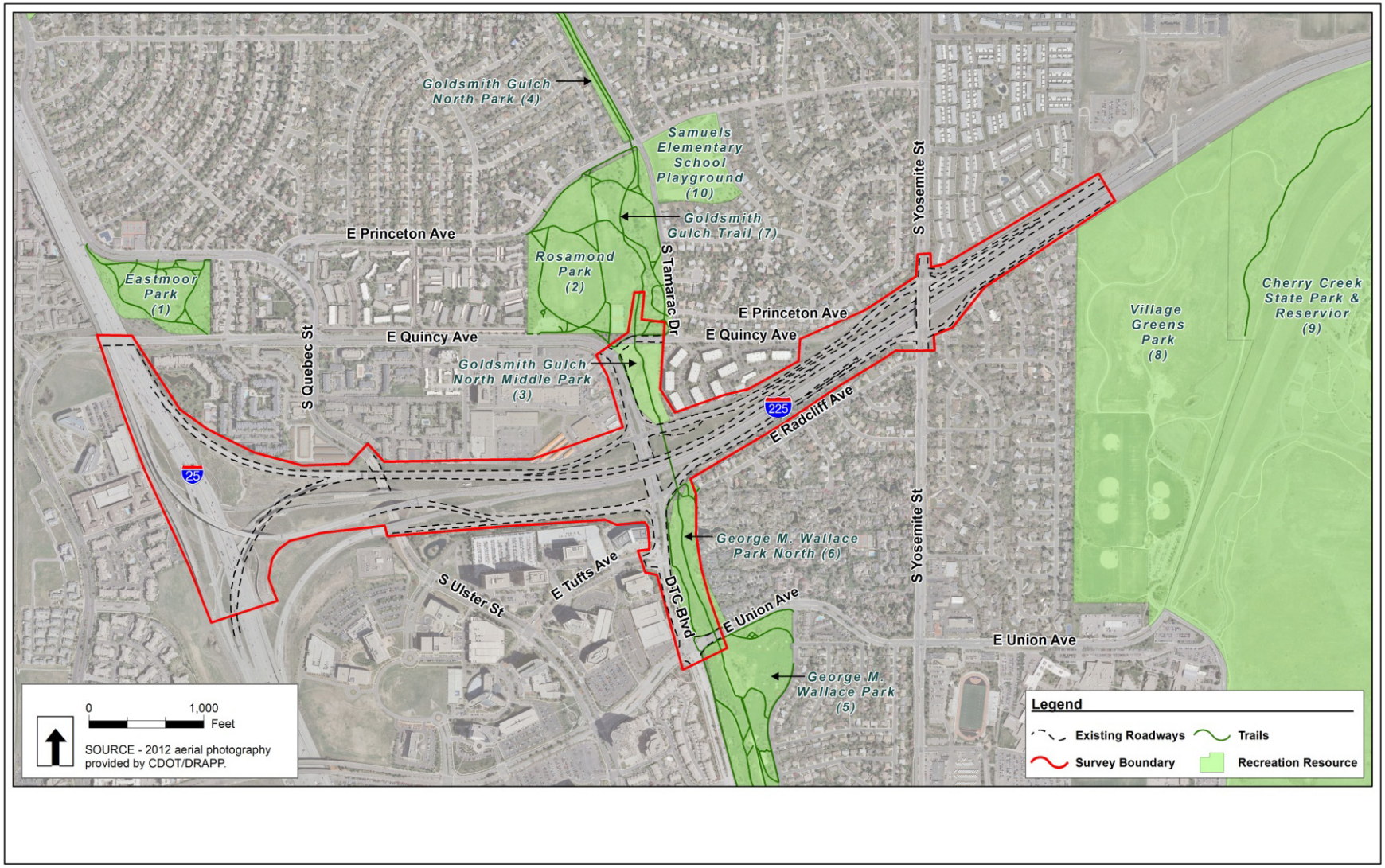
Findings for Parks and Recreational Resources

Table 5.1 Existing Park, Trail, and Open Space Resources

Map ID	Resource Name	Location	Description & Location	Classification	Managed by
1	Eastmoor Park[1]	Princeton Avenue and Oneida Street	12-acre park with playground and paved path.	Neighborhood Park	Denver Parks and Recreation
2	Rosamond Park[1]	8051 East Quincy Avenue	38-acre fully developed turf grass park with trails, recreation areas, and benches. Goldsmith Gulch runs through park.	Community Park	Denver Parks and Recreation
3	Goldsmith Gulch North Middle Park[1]	I-225 to Quincy Avenue	4.5 acres adjacent to Quincy Avenue. Goldsmith Gulch runs through park.	Open Space – Special Use	Denver Parks and Recreation
4	Goldsmith Gulch North Park[1]	Hampden Avenue to Mansfield Avenue	5.4 acres undeveloped with Goldsmith Gulch runs through park. Gravel trail adjacent to Tamarac Drive.	Open space	Denver Parks and Recreation
5	George M. Wallace Park [1, 4]	Belleview Avenue and DTC Boulevard	24.8 acres –flood control/drainage way with recreational and park purposes.	Community Park	Denver Parks and Recreation
6	George M. Wallace Park North [1]	DTC Boulevard and Temple Avenue	7.7 acres – Park that parallels DTC Boulevard with a paved trail.	Community Park	Denver Parks and Recreation
7	Goldsmith Gulch Trail[2]	Prentice Avenue to Quincy Avenue	Paved trail parallel to DTC Boulevard.	Minor Trail	Denver Parks and Recreation
8	Village Greens Park[3]	East Union Avenue and South Dayton Street	25.12-acre site that hosts Cherry Creek High School athletics and youth leagues. Contains multi-use amenities.	Regional Park	Greenwood Village
9	Cherry Creek State Park and Reservoir	I-225 and South Parker Road	5.2 square miles with reservoir, trails, picnic, and campgrounds.	Regional Park	Colorado Parks and Wildlife
10	Samuels Elementary School Playground	Mansfield Avenue and Tamarac Parkway	Elementary school playground and recreation areas	Neighborhood Park	Denver Public Schools

[1] *City and County of Denver, 2013a*
[2] *City and County of Denver, 2013b*
[3] *Greenwood Village, 2013*
[4] *UDFCD, 2013*

Figure 5.1 Existing Park, Trail and Open Space Resource



The project team reviewed Denver's Parks and Recreation District website for future planned or upgrades to existing parks, open spaces, and trails. The project team identified no proposals for future improved areas for the properties listed in **Table 5.1**.**Error! Reference source not found.** or within proximity to the study area.

Section 3.6 discusses in detail related bicycle facilities adjacent to existing park, trail and open space resources.

5.2 Traffic Noise

The *CDOT Noise Analysis and Abatement Guidelines* (CDOT, 2013) specify that a noise analysis study is required for all Type I projects if noise-sensitive receptors are present within the project study zone. A Type I project consists of a proposed Federal or Federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway that significantly changes either the horizontal or the vertical alignment or increases the number of lanes.

Analysis Methodology

The analytical methods for the evaluation followed the *CDOT Noise Analysis and Abatement Guidelines* (CDOT, 2013). The project team evaluated current traffic noise conditions through computer modeling of the PEL study area. Modeling is used because day-to-day variations in traffic or weather conditions that affect traffic noise levels cannot be captured or quantified by brief noise measurements alone. In addition, the modeling can evaluate many more locations than can reasonably be field measured.

The modeling calculated traffic noise levels at many representative receptor locations throughout the PEL study area). The modeling results represent predicted typical average traffic conditions during peak traffic noise periods for 2012. **Figure 5.2** also shows the locations of existing noise walls.

Noise levels from the model were compared to CDOT's NAC (**Table 5.2**) to determine noise impacts. Under CDOT guidelines, equaling or exceeding the NAC is viewed as a noise impact. The CDOT NAC for residences (Category B) and for parks and recreational areas (Category C) is an exterior equivalent sound level (L_{eq}) of 66 A-weighted decibels (dBA). The NAC for sensitive commercial properties (Category E) is a L_{eq} of 71 dBA.

A "substantial" noise increase from a proposed project can also cause a noise impact. A "substantial" noise increase occurs when the future noise level is expected to increase by 10 dBA or more over existing levels. Because this analysis and memorandum consider only current conditions, the substantial noise increase criterion is not relevant and will not be considered further.

Figure 5.2 Noise Abatement Categories, Modeled Receptors, and Existing Noise Walls

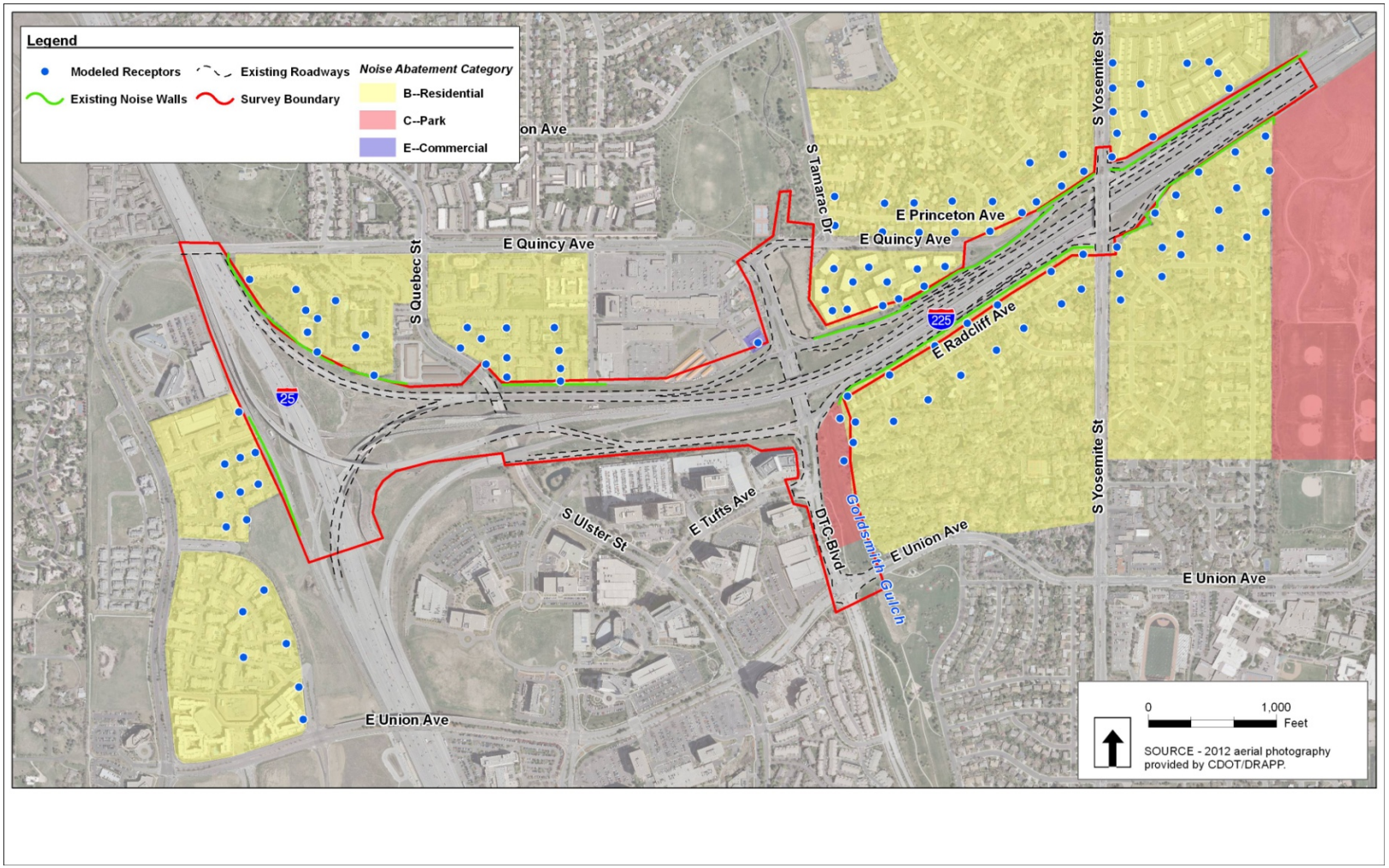


Table 5.2 CDOT Noise Abatement Criteria

NAC Category	CDOT NAC (L_{eq})	Description of NAC Category
A	56 dBA (Exterior)	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is to continue to serve its intended purpose
B	66 dBA (Exterior)	Residential
C	66 dBA (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, schools, Section 4(f) sites, trails, trail crossings, and television studios
D	51 dBA (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, schools and television studios
E	71 dBA (Exterior)	Hotels, motels, offices, restaurants, bars, and other developed lands, properties, or activities not included in A– D or F
F	Not Applicable	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, ship yards, utilities (water resources, water treatment, electrical), and warehousing
G	Not Applicable	Undeveloped lands that are not permitted for development

Source: CDOT, 2013

Conclusions and Recommendations

The project team used noise modeling to evaluate the current (2012) traffic noise conditions in the I-225 PEL study area. Approximately 475 residential units (**Table 5.3**) were calculated to have traffic noise levels at or above the Category B NAC although most of these were on upper floors. **Figure 5.3** shows the noise-impacted areas based on the model results.

Table 5.3 Summary of Calculated Noise Impacts

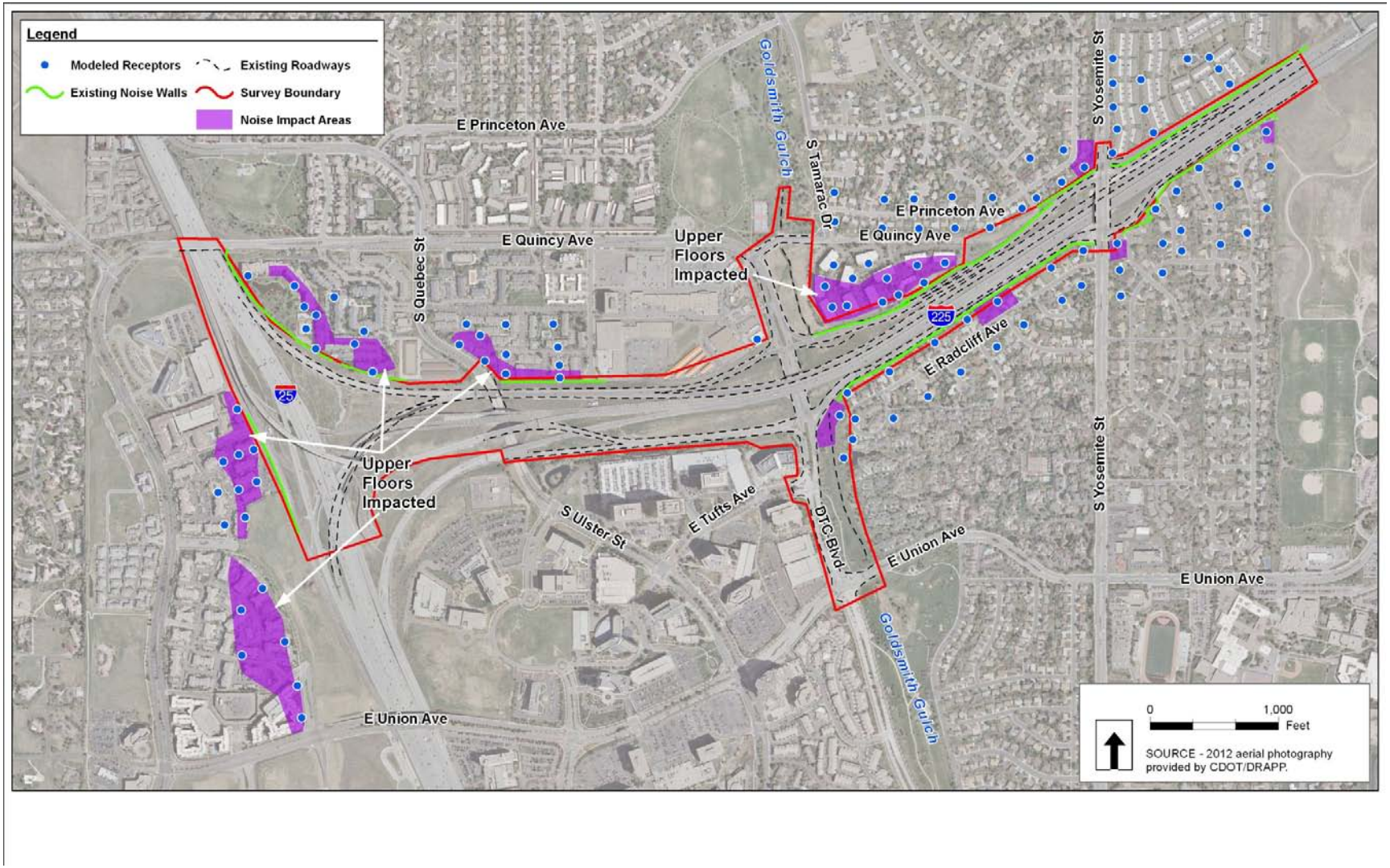
NAC Category	Existing (2012) Receptors Impacted
Category B	474
Category C	1
Category E	0

Previous projects in the I-25/I-225 corridor have constructed noise walls next to most of the current residential areas in the I-225 PEL study area**)**. From the modeling results, these walls appear to be effective in mitigating traffic noise for front-row ground-level receptors in the residential areas. Receptors for the upper floors (such as balconies) of multi-story apartment buildings did not appear to benefit from the noise walls; noise walls typically are not designed to benefit the upper floors. Therefore, traffic noise mitigation is already in place throughout the I-225 PEL study area and is likely to address any added traffic noise due to road improvements recommended through the I-225 PEL.

Previous projects installed the existing noise walls as mitigation actions. The alternatives and improvements examined through the I-225 PEL should seek to avoid these walls. An alternative or improvement that requires the removal of any of these walls will result in the I-225 project needing to replace the affected walls to maintain the mitigation actions of the earlier projects.

An evaluation of traffic noise for the selected alternative will be needed.

Figure 5.3 Noise-Impacted Areas from Noise Model Results



5.3 Cultural Resources

This section includes information on identified historic cultural resources along the study area. Historic cultural resources are places and remains from the past, including historic buildings, structures, sites, districts, and landscapes. Historic cultural resources are divided into two categories:

- **Historic resources –** Historic resources include buildings, bridges, railroads, roads, and other structures that are generally at least 50 years old (45 years old for transportation projects).
- **Archaeological resources –** Archaeological resources are often buried and include artifacts and features associated with prehistoric Native American culture but can also include historic artifacts, features, and ruins from the period after Euro-American settlement.

Analysis Methodology

The project team used the following methodology to gather information within this section:

- Searched the **COMPASS** database (Office of Archaeology and Historic Preservation online) to determine whether previously determined eligible or listed historic properties are located within the I-225 PEL study area
- Reviewed City and County of Denver Assessor's Office records to determine age-eligible properties
- Conducted a field assessment to identify properties with architectural significance and integrity that may be potential historic resources

Study Area

The project team checked each property in the study area against the COMPASS database and City and County of Denver Assessor's Office database to determine whether the property was a previously recorded historic resource or met the minimum age requirement of 45 years old. The results are outlined below.

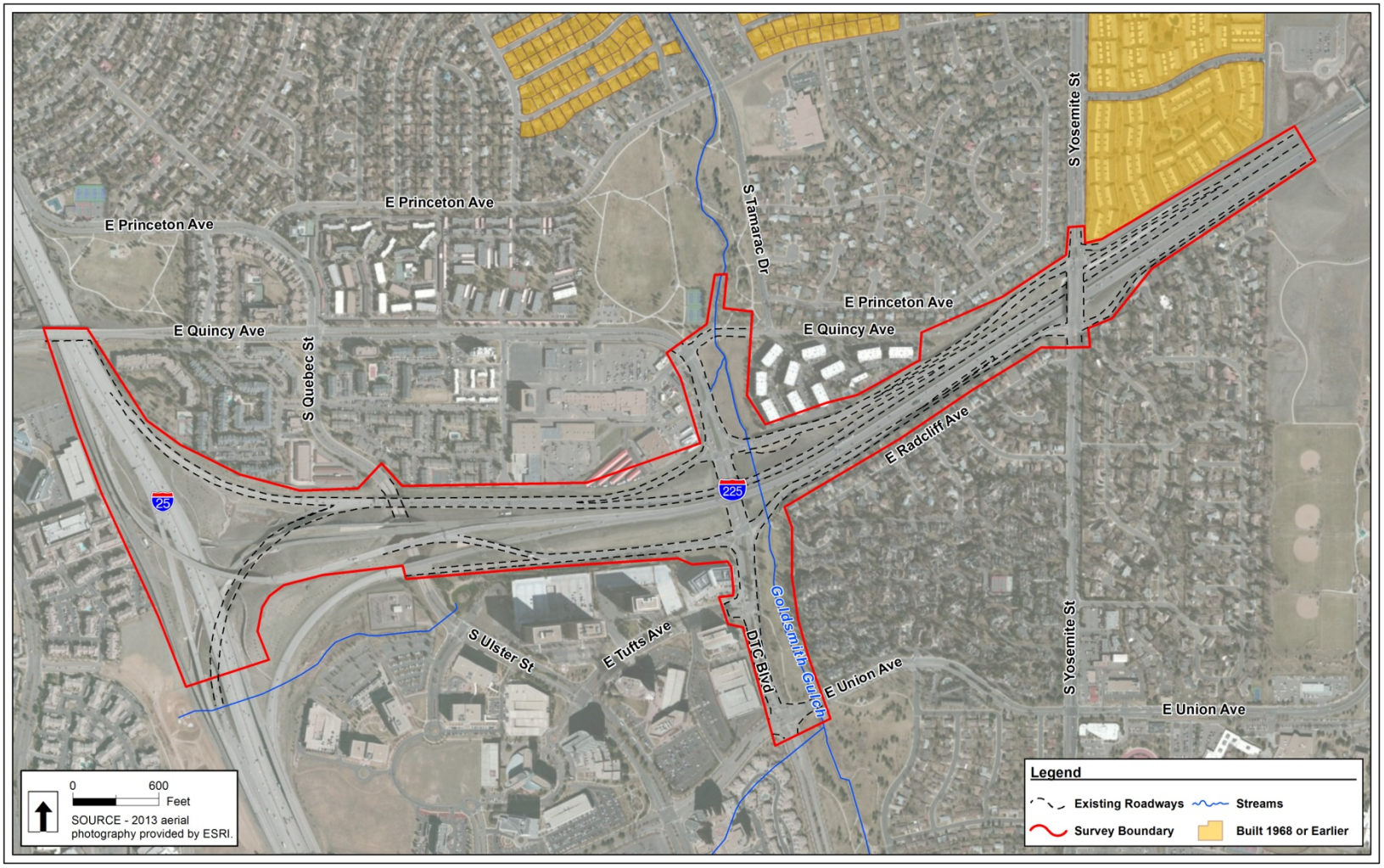
Previously Identified Cultural Resources

No previously recorded historic or archaeological sites occur today within the study area. One historic site did occur within the study area before it was removed in 2003 when the I-25/I-225 Interchange was built. The historic site included two vehicular bridges, F-17-FW and F-17-FX, located at the I-25/I-225 Interchange. These bridges were found to be eligible for the NRHP based on their uniquely engineered three-way grade separation and angled piers.

Age-Eligible Sites within the Study Area

Only one site within the study area was found to be at least 45 years old, which satisfies the age-eligibility requirement for historic cultural resources. This site is known as the Cherry Creek Townhouses, a residential condominium development, and is located at the northeast corner of Yosemite Street and Oxford Drive at the east end of the study area (**Figure 5.4**). An intensive survey of cultural resources will be conducted, including preparation of a Cultural Resources Inventory Report, to facilitate official evaluations of NRHP-eligibility and assess specific project impacts as required for National Historic Preservation Act Section 106 review.

Figure 5.4 Previously Recorded and Potentially Historic Sites



5.4 Floodways, 100-year Floodplains and Water Quality

This section summarizes major floodways, floodplains and water quality concerns within the study area.

Floodway/Floodplain Methodology

The project team identified floodplains by inspecting FEMA flood insurance rate maps (FIRM) for the study area. FEMA designated floodplains that are located within the study area are described below:

- Zone AE is part of the FEMA 100-year flood hazard area (1 percent chance flood) where a detailed study has occurred and base flood elevations have been determined. The 100-year flood is FEMA's base flood.
- Zone X is part of the FEMA 500-year flood area, 100-year flood area with average depths of less than 1 foot, or with drainage areas less than 1 square mile.

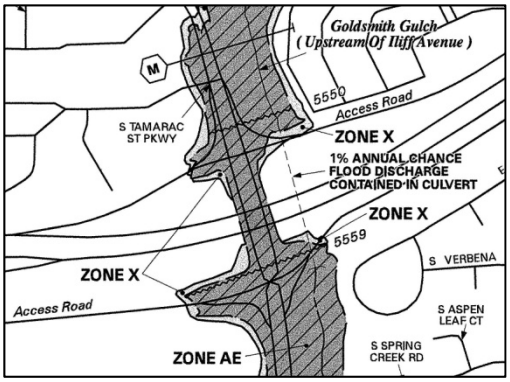


Figure 5.5 Local Floodplains at I-225/DTC Boulevard Intersection.

Source: FEMA FIRM, Map No. 0800460219G

Floodway/Floodplain Findings

FEMA has designated Zones AE and Zone X in the Goldsmith Gulch Floodplain. The gulch is a tributary of Cherry Creek and is mainly used for natural moderation of floods with limited wildlife usage.

Goldsmith Gulch is the only drainageway that has a FEMA designated floodplain in the study area (see **Figure 5.5**). While portions of Goldsmith Gulch flow through open channels, other sections are piped underground, such as under I-225 via 12-foot by 16-foot box culverts. According to FEMA, the full 100-year flood flow passes through these culverts. The FEMA map in **Figure 5.5** shows that DTC Boulevard is in the floodplain because the levee that funnels Goldsmith Gulch into the culverts was never certified. Thus, if worst conditions were to occur (assuming no levee exists), DTC Boulevard is in the floodway.

Floodway/Floodplain Recommendations

Drainageways that have a Zone AE designation, such as Goldsmith Gulch, are sensitive to changes. Relatively small changes that do not result in a net increase of fill may be incorporated in the floodplain without triggering the Conditional Letters of Map Revision (CLOMR)/Letters of Map Revision (LOMR) process; however, floodplain modeling may be required to assess the extent of the impact. If the impacts cause greater than 0.5 foot of rise in the flood elevation, the CLOMR/LOMR process could be required.

If any of the proposed I-225 work is to be done within the floodway areas of DTC Boulevard, coordination with the City and County of Denver floodplain administrator and/or FEMA will be necessary. If work in the floodway is minor and no fill is added, a no rise certificate must be submitted to the City and County of Denver floodplain administrator with calculations, cross sections, and volume calculations.

Water Quality Findings

Water quality concerns are attributed to surface waters found in the study area. Goldsmith Gulch is the only surface water resource within the study area. The Colorado Water Quality Control Division defines water use classifications for water resources such as Goldsmith Gulch.

Existing water quality features in the study area include a pond/wetland area in the I-25/I-225 Interchange and a pond at the southbound I-225 off-ramp to DTC Boulevard. The sizes of these features are unknown but should be determined once further details about impacts are determined. See **Figure 5.6** for water quality features.

Water Quality Recommendations

If any proposed work is to be done in a water quality feature in the study area, such as Goldsmith Gulch, coordination with the Colorado Water Quality Control Division will be necessary.

5.5 Wetlands and Waters of the US

Wetland resources are protected under Section 404 of the CWA (33 US Code [USC] 1344) and Executive Order 11990 Protection of Wetlands (Environmental Protection Agency (EPA), 1977). The following wetland analysis describes the inventory of wetlands and other open waters within the study area. This analysis builds on the results of previous environmental studies completed in the study area, including the *Southeast Corridor Final EIS* (CDOT & FHWA, 1999).

Analysis Methodology

FHU staff identified areas where potential wetlands would be before conducting a field survey. FHU staff used the US Geological Survey's (USGS) National Hydrological Dataset to initially identify areas of known surface water, including streams, ditches, ponds, and lakes that would be likely areas of wetlands or open water that would be considered Waters of the US. FHU staff also referenced the National Wetland Inventory, which is maintained by the USFWS, for more specific locations of known wetlands.

The FHU project team conducted a limited site reconnaissance of the project corridor in May 2013. Previously identified wetlands, as well as potential wetland areas that had not been mapped in previous studies, were examined. The project team reviewed wetland vegetation and hydrology at each potential site, collected data, and located wetland areas that had not been previously mapped.

Findings

Most wetlands identified within the corridor are small palustrine emergent wetlands with most occurring in a narrow fringe in isolated locations along Goldsmith Gulch and in a stormwater pond in CDOT's ROW at the I-25 and I-225 Interchange. Previous studies considered these wetlands low-quality wetlands. All of these wetlands are isolated by development or are modified fully to an urban landscaped space (Goldsmith Gulch Park) and provide minimal wildlife habitat.

Figure 5.7 shows all wetlands identified in this field review in relation to the survey boundary.

Figure 5.6 Floodplain and Water Quality Features

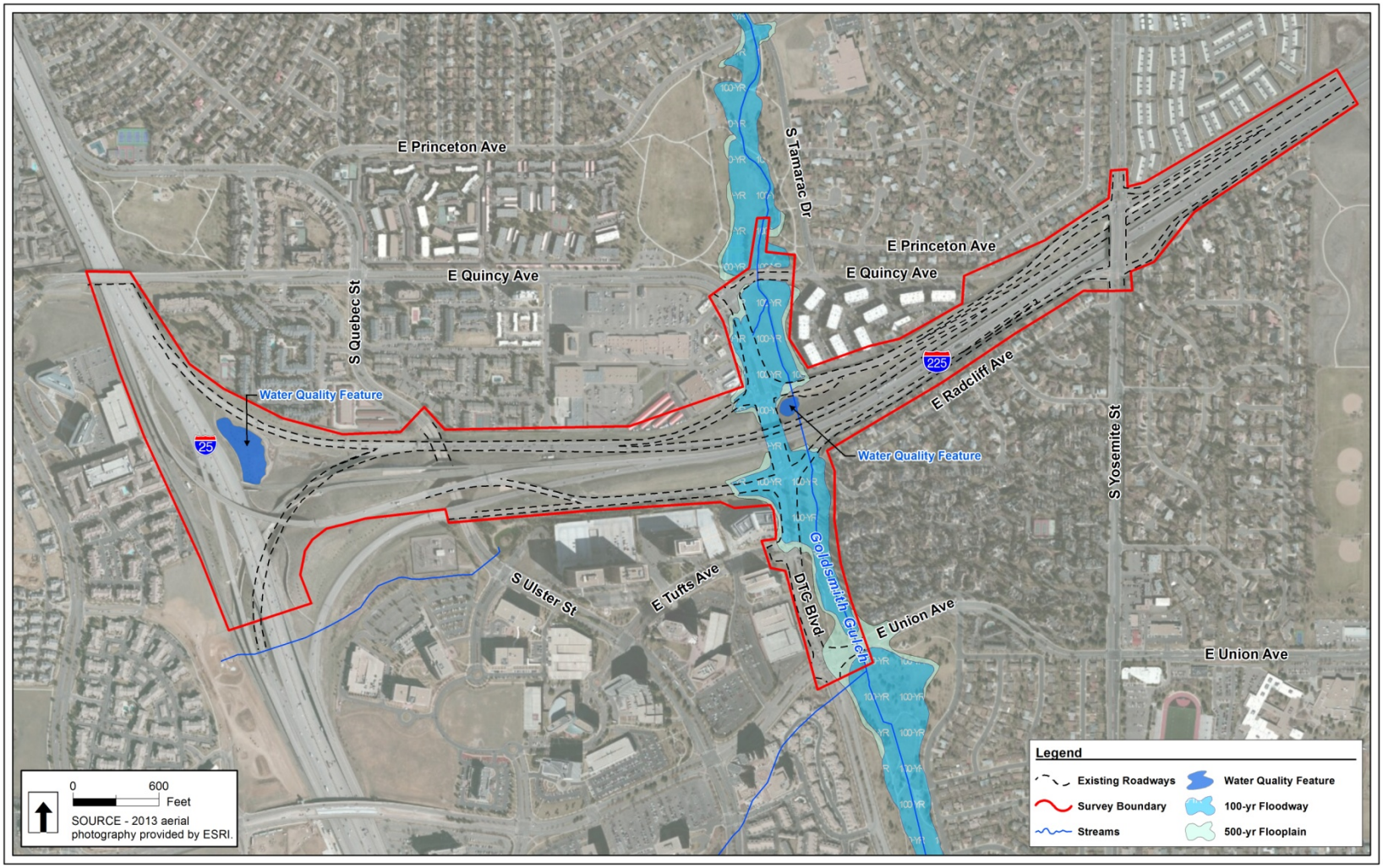


Figure 5.7 Surveyed Wetlands and Other Waters

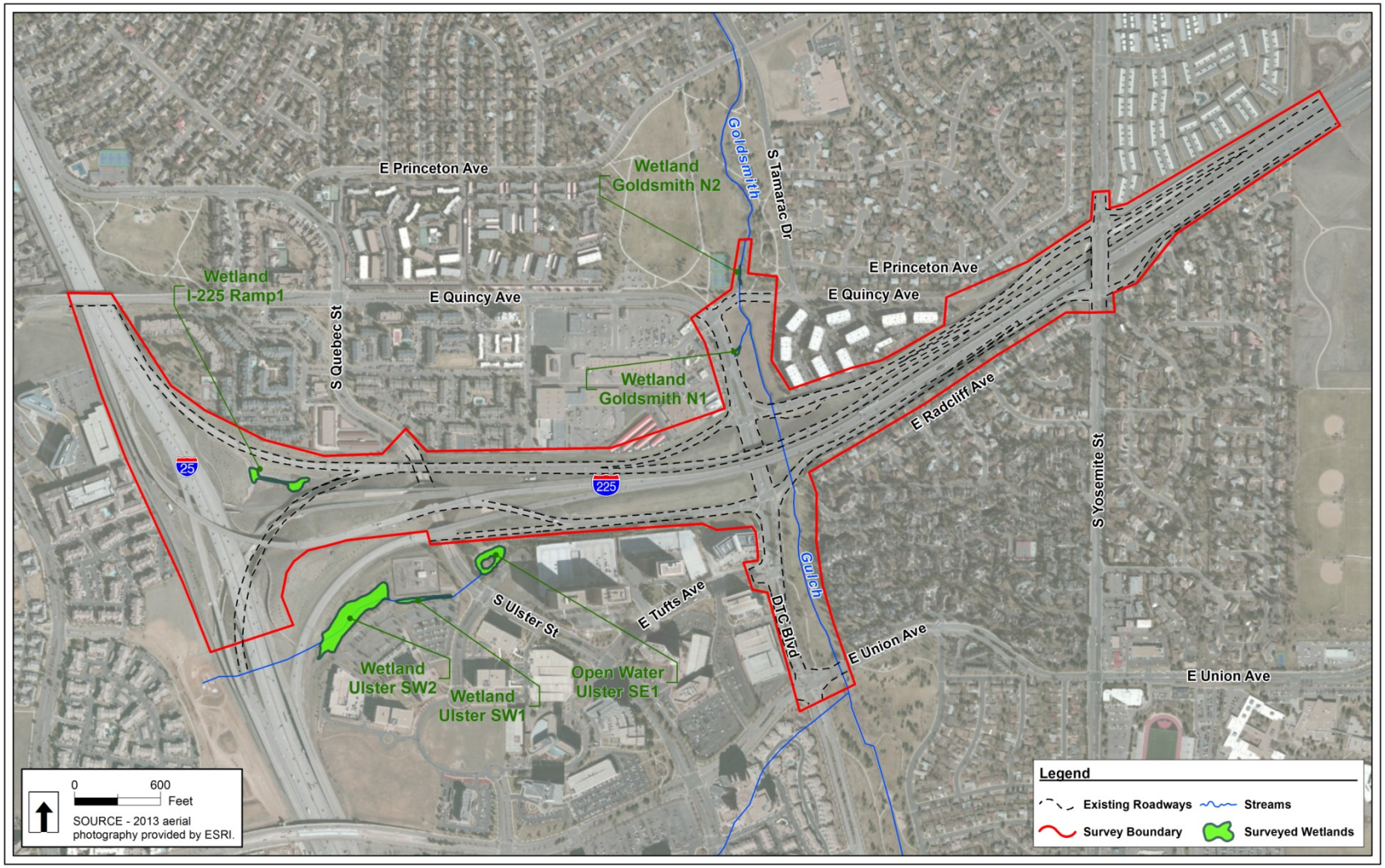


Table 5.4 identifies all wetlands and lists the previous survey ID, the new wetland ID, water source, and the area of each.

Table 5.4 Summary of Previously Surveyed Wetlands/Existing Wetlands

Previous Wetland ID	Updated Wetland ID	Water Source	Acres
I25I225NE1 – NE5	I-225 Ramp 1	Stormwater Drain, Surface Runoff	0.361
I25I225SE2	Ulster SE1	Stormwater Pond	0.449
I25I225SE3	Ulster SW1	Stormwater	0.173
I25I225SE3	Ulster SW2	Stormwater	1.680
TamNE2	Goldsmith N1	Goldsmith Gulch	0.027
TamNE2	Goldsmith N2	Goldsmith Gulch	0.013
TamSE1	Goldsmith OW	Goldsmith Gulch	N/A – Waters of the United States (WOUS) Channel

Palustrine Emergent Wetlands

Palustrine emergent wetlands found in the project corridor were located along stormwater ditches, edges of detention ponds, and adjacent to perennial and intermittent waterways. The typical vegetation includes a predominance of reed canary grass (*Phalaris arundinacea*) and common cattail (*Typha latifolia*), as well as smaller populations of Canada thistle (*Cirsium arvense*) and soft-stem bulrush (*Scirpus validus*).

The primary hydrology for these wetlands is surface runoff, groundwater flows, and adjacency to intermittent and perennial waterways. Hydrologic indicators observed include sediment deposits, areas of inundation, and drainage patterns in wetlands.

5.6 Wildlife/Threatened and Endangered Species

Wildlife is an important public resource that warrants consideration during federally funded projects and is documented during the NEPA process. Various federal laws protect wildlife, including the ESA, the MBTA, and the BGPA.

Analysis Methodology

The project team used GIS data to identify details and characteristics of wildlife resources in the study area. The project team then field verified this information on May 17, 2013. The project team obtained additional inventory details about the resources, such as protection status and presence of species, by accessing the Colorado Department of Parks and Wildlife Natural Diversity Information Source (NDIS), the Colorado Natural Heritage Program, and the USFWS Information Planning and Conservation System (IPaC) websites in May 2013. Research centered on using the most current version of information available online. The project team also used data from the *Southeast Corridor Final EIS* because the two study areas generally overlap (CDOT & FHWA, 1999).

Table 5.5 identifies the special status species found within the study area as identified by NDIS and IPaC. The project team then verified this list based on a field visit on May 17, 2013, whereby the team observed whether species or species habitat was present. Based on the field visit, the full species list for the City and County of Denver was then reduced to what species could be potentially present based on available habitat in the study area.

Table 5.5 Existing Wildlife Resources

Resource Name	Protection Type	Habitat	Habitat Present?	Observed in Field?
Cliff Swallows (*Petrochelidon pyrrhonota)*	MBTA	Streams and creeks with readily available access to insects and locations for building nests.	Yes, multiple locations where structures can be used to build nests.	Some. However, staff did not have access to all structures to check for nests.
Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)	Federally Threatened Species – ESA	Inhabits riparian areas near standing or running water in lowland areas dominated by forested wetlands, shrub dominated wetlands, and grass/forb dominated wetlands between 4,000 and 8,000 feet in elevation.	No, highly landscaped Goldsmith Gulch. *Note: A block clearance zone for this species exists for the study area.	No survey conducted.
Various nesting birds, including Canada Goose (*Branta canadensis*) at Stormwater Pond	MBTA	Canada Goose nesting at stormwater pond. Various other migratory birds nesting near Goldsmith Gulch.	Yes, multiple nests were observed at the stormwater pond near Ulster Street.	Yes, several nests identified.
Black-Tailed Prairie Dog (*Cynomys ludovicianus*)	State Species of Special Concern	Black-tailed prairie dogs form large colonies or "towns" in shortgrass or mixed prairie.	Yes, north of I-225 east of DTC Boulevard on either side of Goldsmith Gulch.	Yes, one prairie dog colony located.

Findings

Migratory Birds

During the field survey, the project team noted any nests that were within or readily visible from the ROW, including migratory birds, raptors, and eagles. Multiple Cliff Swallows (*Petrochelidon pyrrhonota*) were seen flying nearby and their nests were assumed in areas with structures over Goldsmith Gulch. Canada Goose nests were also identified on the island in the middle of the stormwater pond next to Ulster Street.

Thus, impacts on migratory birds (for example, song birds, herons, other migratory birds) may occur from design alternatives if construction occurs during the normal nesting season of these species.

Wildlife Corridors

Wildlife is identified as a road safety hazard, causing billions of dollars annually in repairs and medical costs due to animal-vehicle collisions (AVCs) nationwide. These AVCs also result in a loss to wildlife

populations and wildlife diversity. Typically, the total number of AVCs is under-reported and only focuses on large wildlife species. Existing land use in the study area is primarily residential, commercial, and a managed park. Where wildlife had free movement along the Goldsmith Gulch drainage in the past, their movements are now highly constricted or no longer present.

Currently, there are no parks or open space properties that include identified movement corridors for wildlife between protected tracts of land within or adjacent to the study area. The construction of wildlife-friendly structures over this drainage will provide avenues for wildlife to move through the study area while keeping the general public safe.

State Species of Special Concerns

One Black-tailed Prairie Dog (*Cynomys ludovicianus*) colony is located at Goldsmith Gulch North Middle Park, north of I-225 along DTC Boulevard (discussed in Section 5.1). Black-tailed Prairie Dogs inhabit short and mid-grass prairie and semi-desert shrublands. The extents of the Black-tailed Prairie Dog colony shall be determined and delineated during final design. The project will comply with the CDOT Black-tailed Prairie Dog Policy (CDOT, 2009).

The Black-tailed Prairie Dog colony has the potential for the presence of burrowing owls. Burrowing owls live on flat, treeless land with short vegetation, and nest underground in burrows dug by prairie dogs, badgers, and foxes. These raptors are classified as a state threatened species. A burrowing owl survey is recommended if the Black-tailed Prairie Dog colony will be impacted by the project.

5.7 Hazardous Materials

A hazardous materials assessment identifies and assesses the potential for encountering hazardous materials on properties adjacent to or within the study area. This hazardous materials assessment identifies sites within the study area that have known (current and historic) soil or groundwater contamination and those that are distinguished in this report as sites with recognized environmental conditions. Recognized environmental conditions, include sites with *"*the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property*"* (American Society for Testing and Materials (ASTM), 2005). Sites with the potential for soil and/or groundwater contamination that could not be confirmed without additional inspection or investigation are distinguished as sites with potential environmental conditions.

This hazardous materials assessment has been prepared with a level of detail appropriate for the development and screening of design alternatives. At the time this report was written, it is unknown if acquisition and/or easements are expected as part of any future projects. A future acquisition process will require additional assessments and field investigations. Specific materials management and institutional controls will be necessary during the construction period.

Analysis Methodology

This hazardous materials assessment included the following steps:

- Reviewed readily available local, state, and federal environmental agency databases as dictated by ASTM Standard E1527-05 (ASTM, 2005). The Technical Memorandum for

Hazardous Materials Assessment (Initial Site Assessment (ISA)) contains the Environmental Data Resources, Inc. (EDR) Database Report (EDR, 2013).

- Performed a limited site reconnaissance of the study area to identify site activities and potential contamination sources within and adjacent to the study area. Areas adjacent to the study area were observed from the existing ROW only.
- Reviewed the contaminated materials section of the *Southeast Corridor Final EIS* (CDOT & FHWA, 1999).
- Identified sites with known or potential hazardous materials concerns (such as sites with recognized environmental conditions and sites with potential environmental conditions).

Observations

The study area is located in the City and County of Denver along the Front Range of the Rocky Mountains in central Colorado. A site visit was conducted and the observations are included in the technical memorandum on Appendix B.

Agency Records Review

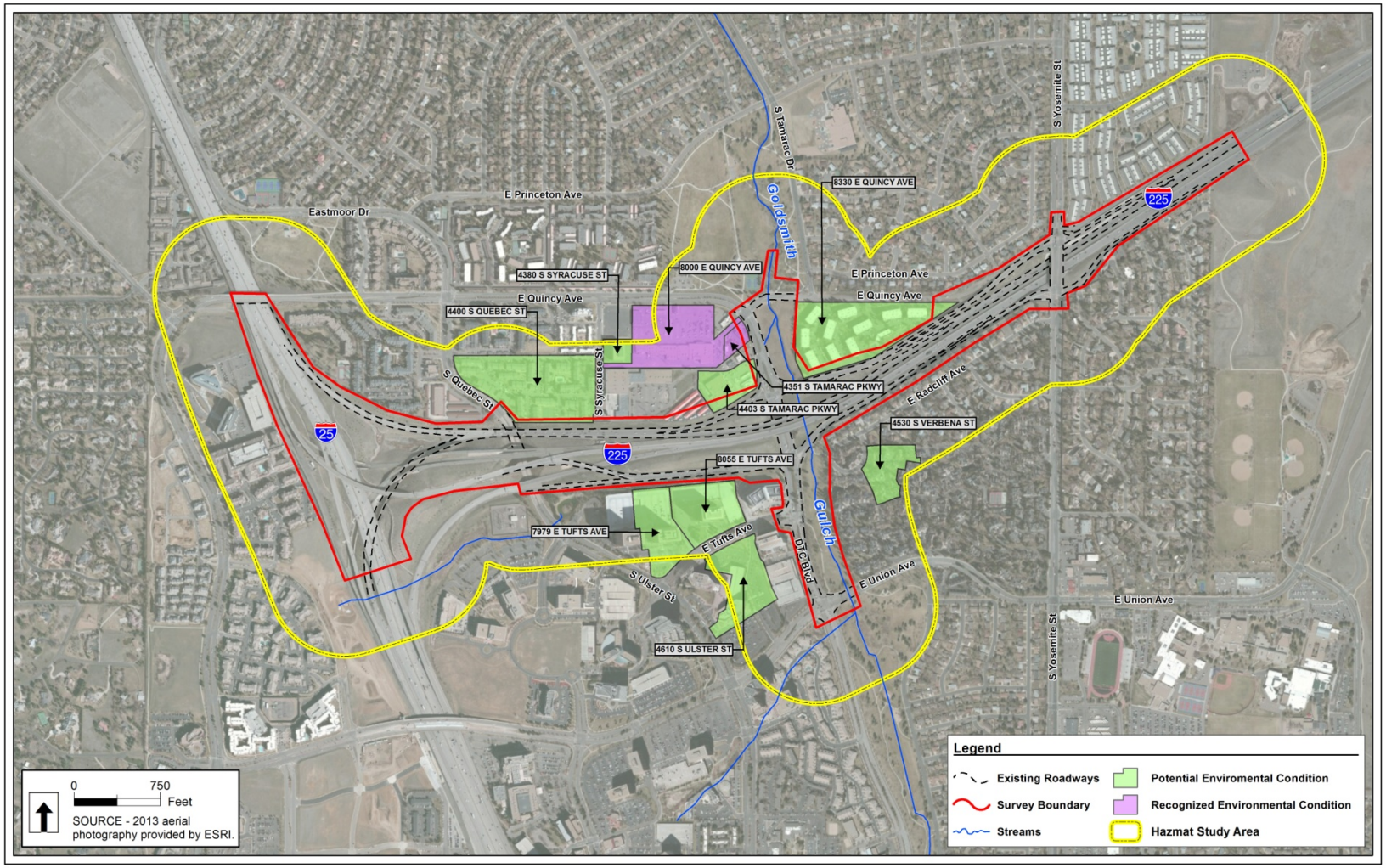
The project team conducted an environmental database search for sites extending up to 1 mile from the study area with potential hazardous materials concerns. **Table 5.6** and **Figure 5.8** include sites adjacent to and/or within 1/8 mile (660 feet) of the study area.

Table 5.6 Sites Adjacent to or within 1/8 Mile of Study Area

Site Address	Location/Gradient	Site Description
4351 South Tamarac Parkway	Adjacent/Down-gradient	Closed LUST; open 7-11 gasoline station with operating USTs. Site identified as a recognized environmental condition due to closed LUST. If ground-disturbing activities are expected to occur in the vicinity of this site, residual soil and/or groundwater contamination could be present.
8000 East Quincy Avenue	Adjacent/Down-gradient	Closed LUST; Dry Cleaners/Historical Dry Cleaners; open Coloradoland Tire & Service Auto Repair Shop; monitoring well located on the south side of building. Site with recognized environmental conditions due to closed LUST and historical dry cleaning operations.
4403 South Tamarac Parkway	Adjacent/Down-gradient	Dry Cleaners/Historical Dry Cleaners; open dry cleaning business – DTC Cleaners. Site identified as a potential environmental condition due to historic dry cleaning operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical dry cleaner facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
4400 South Quebec Street	Adjacent/Up-gradient	Historical Auto; currently the Brandy Chase Apartment Home Complex. Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the

Site Address	Location/Gradient	Site Description
		site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
8330 East Quincy Avenue	Adjacent/Up-gradient	Historical Auto; currently a public storage unit complex. Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities. Also, as a storage unit, the potential exists for methamphetamine lab activity.
4380 South Syracuse Street	Approximately 500 feet from project footprint/Up-gradient	Historical Auto; currently the Westgold Centre Office Building (brick, multi-story). Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
4530 South Verbena Street	Approximately 200 feet from project footprint/Down-gradient	Historical Cleaners; currently multi-unit residences/Large parcel with multiple patio homes. Site identified as a potential environmental condition due to historic dry cleaning operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical dry cleaner facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
7979 East Tufts Avenue	Adjacent/Up-gradient	underground storage tank (UST), aboveground storage tank (AST); currently the Allied Insurance Office Building (brick, multi-story, w/fenced in generator). No reported leaks or spills are associated with this facility.
8055 East Tufts Avenue	Adjacent/Up-gradient	Historical Auto; currently the Stanford Place Office Building (glass, multi-story). Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
4610 South Ulster Street	Approximately 325 feet from project footprint/Up-gradient	Historical Auto; currently an office building (multi-story) site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.

Figure 5.8 Potential or Recognized Hazardous Material Sites



Findings

The project team identified several sites with recognized or potential environmental conditions within 1/8 mile from the existing ROW within the study area. Hazardous materials are most likely to be encountered during ground-disturbing activities near sites with recognized environmental conditions. There are two LUST sites adjacent to the study area. Both LUST sites have been closed, and cleanup has been completed. The Colorado Department of Labor and Employment, Division of Oil and Public Safety defines a LUST site as closed/clean-up complete when "the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up." As a result, residual surficial and subsurface soil contamination and/or groundwater contamination may be present at closed sites and could be encountered on-site or down-gradient of these closed sites during subsurface construction activities.

The other sites within the project study area are associated with historical auto operations, historical dry cleaner operations, or current dry cleaner operations, and USTs/ASTs. These sites have been identified as sites with potential environmental conditions because it is unknown if any spills/releases have occurred at these sites in the past. However, because these sites have previously been redeveloped, these sites are considered low risk because it is likely that any historic contamination issues would have been cleaned up as part of the redevelopment efforts. Based on the unknown history of these sites, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities

Recommendations

A more-detailed hazardous materials initial site assessment would be needed as part of any future project development. The purpose of conducting a more detailed hazardous materials assessment is to gather additional information needed to plan for known and potential hazardous materials issues. During the planning and design process, this information can be used to identify avoidance options, when possible, and to assist with the development of specific materials management or mitigation measures. Properties to be acquired may also require individual site assessments as part of the ROW acquisition process. Specific CDOT requirements are included in the technical memorandum in Appendix B and would depend on the scope of work for any future project.

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Appendix A
Safety Assessment Report

I-225 PLANNING AND ENVIRONMENTAL LINKAGE (PEL) STUDY

SAFETY ASSESSMENT REPORT

STATE HIGHWAY (INTERSTATE) 225A (MP 0.00 TO MP 4.66)

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November 2013
FHU Reference No. 112200-01

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I. INTRODUCTION

The primary intent of this report is to provide information as it relates to safety for the I-225 Planning and Environmental Linkage (PEL) Study. The I-225 PEL study is focused on the southbound segment of I-225 between I-25 at Milepost (MP) 0.00 and Yosemite Street (MP 1.33). This portion of I-225 is a bottleneck during the AM peak period due to the reduction in through lanes at Yosemite Street and DTC Boulevard. Traffic backups along southbound I-225 as far north as the I-225 / Parker Road interchange (MP 3.94) are not uncommon during the peak period. Based on this, the safety analyses completed for this report cover a portion of southbound I-225 from MP 0.00 to MP 4.66 (north of Parker Road). In addition, given the direct interaction I-225 has with I-25, a portion of I-25 from Belleview Avenue (MP 199.40) to Hampden Avenue (MP 201.59) has also been reviewed as part of this analysis.

In conjunction with the PEL study, an opportunity exists for the detection of safety problems and the implementation of selected improvements at locations where it is justified by crash experience.

The scope of this report is as follows:

- Assess the magnitude and nature of the safety problem within the project limits.
- Relate crash causality to roadway geometrics, roadside features, traffic control devices, traffic operations, driver behavior and vehicle type.

This report is based on the analysis of three years of crash history (July 1, 2009 to June 30, 2012). With ADT's on both freeways to be higher than 50,000 a three year crash history was used.

II. SITE LOCATION AND CONDITONS

As mentioned, this study addresses a section of State Highway (Interstate) 225A (I-225) beginning at MP 0.00 (the interchange with I-25) and extending east/north to MP 4.66 (north of the Parker Road interchange). The focus of this study is on the southbound direction of I-225 only. In addition, a portion of I-25 from MP 198.85 to MP 202.14 has also been included in this study due to the direction interaction between the two facilities. According to the CDOT Online Transportation Information System (OTIS) database, I-225's annual average daily traffic (AADT) in 2011 was approximately 126,000 vehicles per day (vpd) near the I-25 interchange, 130,000 vpd near the Yosemite interchange and about 123,000 vpd near the Parker Road interchange. As a percentage of the total vehicular traffic volume, the average truck volume across the section ranges from approximately 4% to 6%.

The following observations related to the study corridor were made during a field review, a review of aerial photography and the CDOT OTIS video log for I-225. Of note, CDOT annually collects video data for every state highway, so the information reviewed in OTIS for this report is from 2012.

- A typical cross section includes a 6 to 10-foot outside shoulder, two to three 12-foot travel lanes and a 6 to 20-foot (near Parker Interchange) inside shoulder.
- The barrier separated median between northbound and southbound directions is approximately 30 to 55-feet wide throughout the study corridor. Light-rail runs along the median of I-225 within this segment.
- Guard rail and concrete barriers are generally located on the outside shoulder in the vicinity of interchanges as well as on over and under passes. There is a concrete barrier along the inside shoulder for the entire corridor.
- There are luminaires along the study corridor.
- There are six interchanges within the study corridor, the system interchange of I-25 / I-225, three on I-225 and two on I-25: I-25 / I-225 (MP 0.00 / MP 200.13), I-225 / DTC Boulevard (MP 0.79), I-225 / Yosemite Street (MP 1.33), I-225 / Parker Road (MP 3.94), I-25 / Belleview Avenue (MP 199.40) and I-25 / Hampden Avenue (MP 201.59).
- Auxiliary lanes for on and off-ramps in the southbound direction within the corridor are detailed as follows:
    - Three auxiliary lanes in the southbound direction are created by on-ramps from Parker Road that merge to one lane which then exits at the off-ramp to Yosemite Street.
    - An additional thru lane drops in the southbound direction at the exit to DTC Boulevard.
- The posted speed limit on I-225 is currently 65 miles per hour (mph).

III. CORRIDOR CRASH HISTORY AND PROBLEM ANALYSIS

Crash history for the three-year period, July 1, 2009 through June 30, 2012, was examined between MP 0.00 and MP 4.66 on I-225 (southbound direction only) as well as MP 198.85 and MP 202.14 on I-25 (both directions) to locate crash clusters and to identify crash causes.

Table 1 summarizes the number of crashes for I-225 over the three-year study period. The first number represents the number of crashes that occurred along southbound I-225 while the number in parentheses reflects crashes that occurred along I-25. In general, as can be seen in this table, the total number of crashes from year to year is typically consistent during the three-year study period.

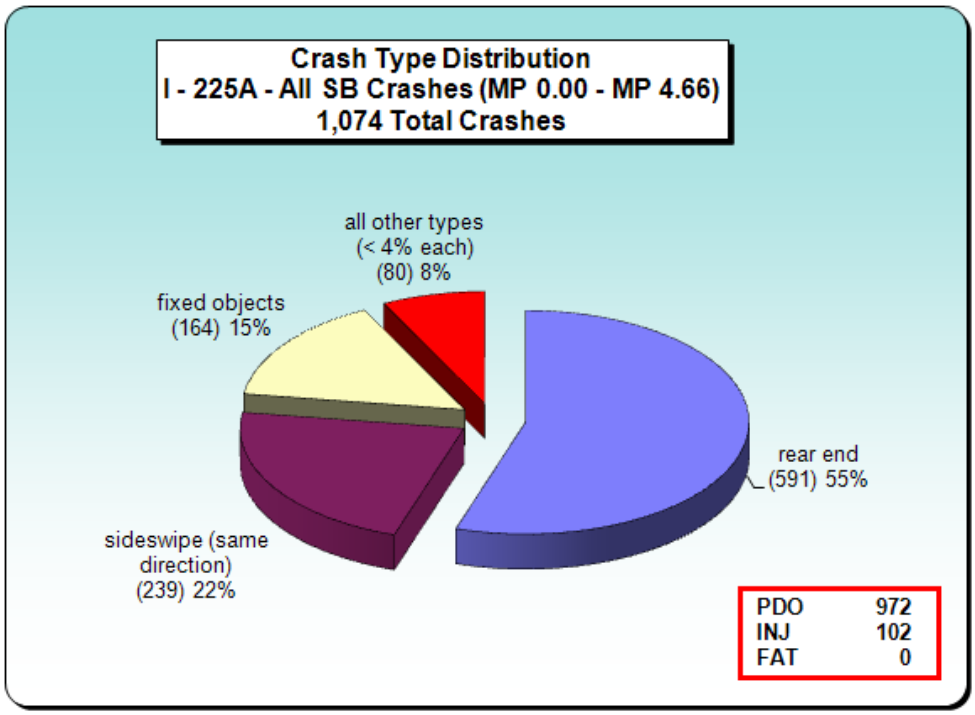
Table 1. I-225A (I-25A) Crash History: MP 0.00 – MP 4.66 (MP 198.85 – MP 202.14)

Period	Number of Crashes			
	Prop. Damage Only	Injury	Fatality	Total
07/01/2009 – 6/30/2010	121 (233)	14 (27)	0 (0)	135 (260)
07/01/2010 – 6/30/2011	115 (179)	10 (18)	0 (0)	125 (197)
07/01/2011 – 6/30/2012	147 (177)	13 (20)	0 (0)	160 (197)
Total (07/01/2009 – 6/30/2012)	**383 (589)**	**37 (65)**	**0 (0)**	**420 (654)**
Overall 3-Year Average per Year	**127.7 (196.3)**	**12.3 (21.7)**	**0 (0)**	**140.0 (218.0)**

A. Corridor Crash History

During the three-year study period (7/1/2009 – 6/30/2012), there were a total of 420 reported crashes on southbound I-225 within the project limits. I-25, in both directions (northbound and southbound), a total of 654 crashers were reported during the three-year study period. These totals include crashes on the ramps and ramp terminals along both highways. **Figure 1** provides a graphical representation of the crash types for the entire study area (southbound I-225 and both directions of I-25). The ramp crashes are discussed in more detail later in this report. Rear-end type crashes (55%) were the predominant crash type followed by sideswipe (same direction) crashes (22%) and fixed object type crashes (15%). A definition explaining each crash type as well as a diagram and the typical causes of the crash type can be found in the **Appendix**. The crash summary sheet listings are also presented in the **Appendix**.

Figure 1. Overall Crash Distribution



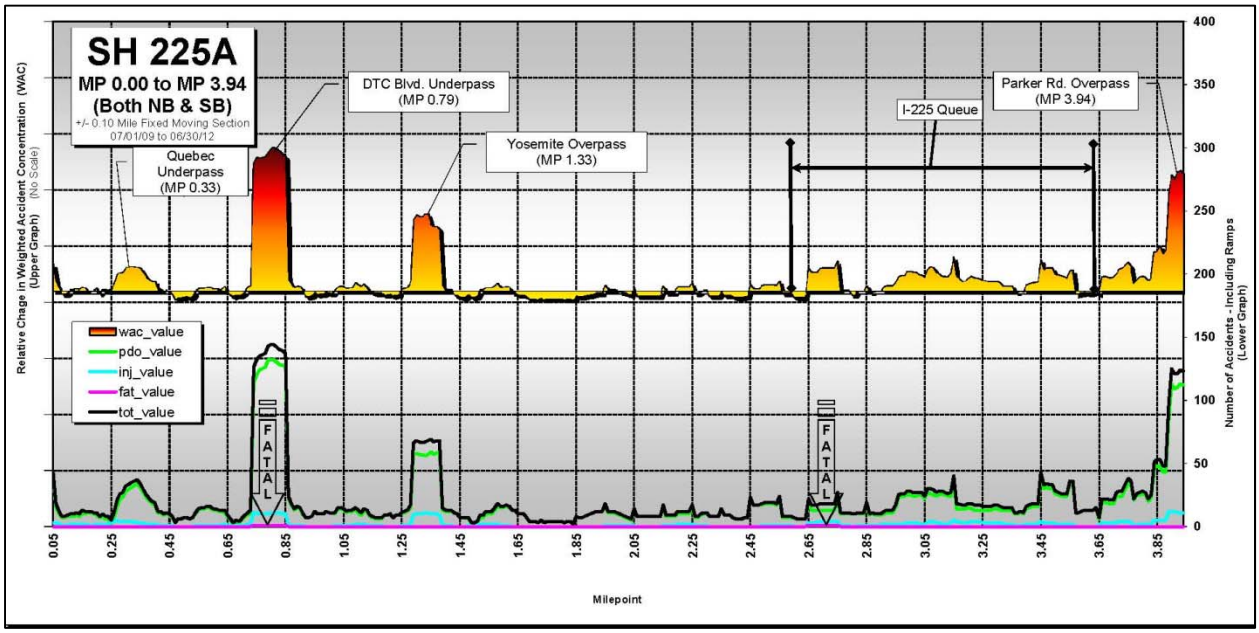
B. General Observations

The crash pattern seen above is not entirely unexpected since this is a corridor with heavy traffic during normal peak hours that results in vehicle congestion. Many of these crashes are likely due to the congestion occurring along the project corridor. A more detailed discussion of the predominant crash types is provided in the following interchange analysis sections.

C. Weighted Accident Concentration

A graphical rendering of the change in weighted crash concentration (WAC) along I-225 (shown on **Figure 2**) reveals the locations of crash concentration and their severity along the corridor. The complete crash listing and detailed crash summary sheets for this section of I-225 are provided in the **Appendix**.

Figure 2. Weighted Accident Concentration



As can be seen on this figure, there are several locations of crash concentrations throughout the I-225 study corridor. In general, the largest concentrations of crashes are related to the interchanges. The largest interchange related peaks on the graph are at DTC Boulevard, Yosemite Street and Parker Road. Of note, this chart includes both southbound and northbound crashes along I-225 as the methodology requires that both directions be included. The two fatal crashes shown on the chart occurred in the northbound direction and as such, have not been reviewed further in this report since the focus is on southbound I-225 only.

IV. SAFETY PERFORMANCE FUNCTION ANALYSIS

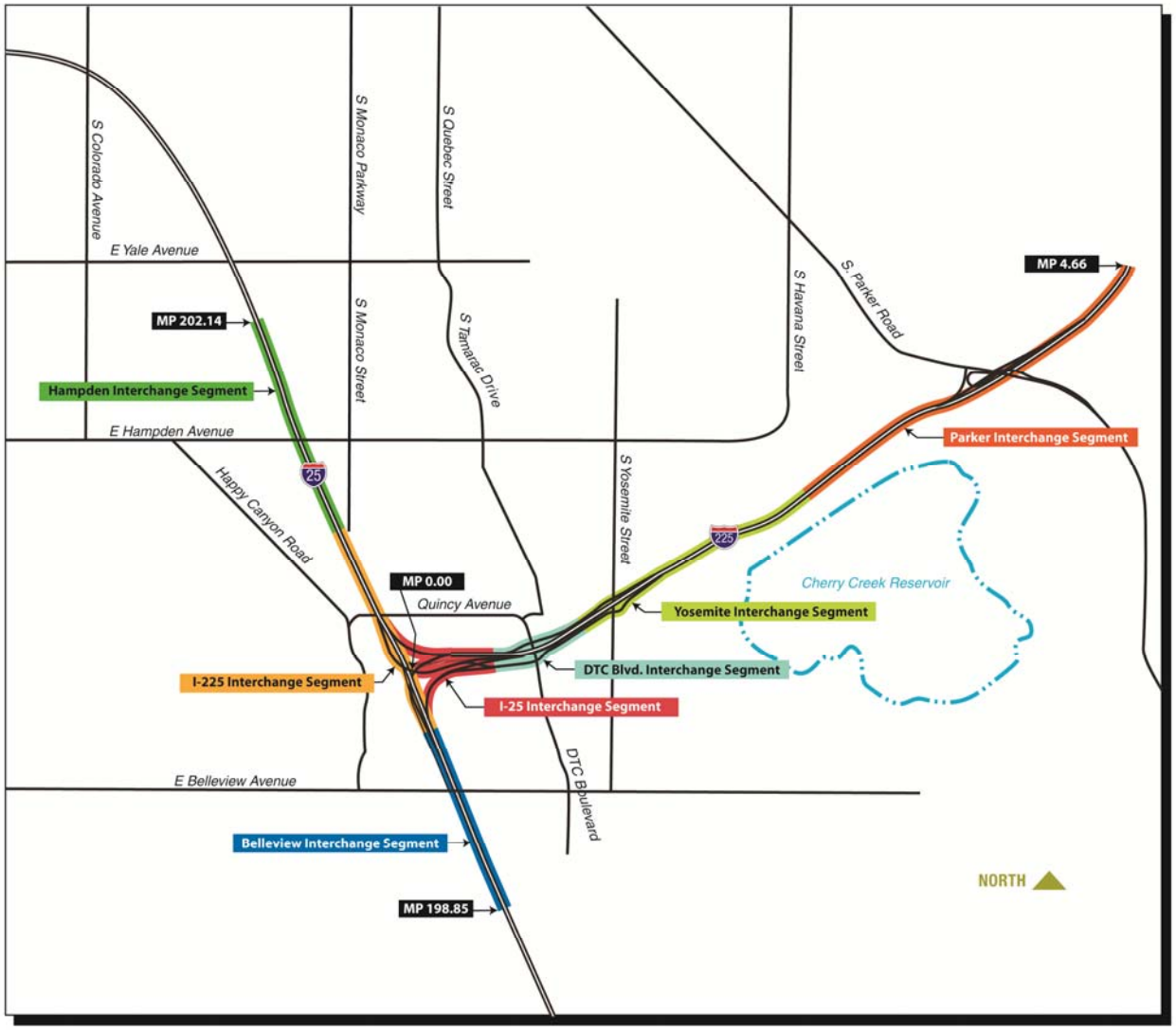
In addition to the examination and comparison of crash patterns for the entire study area as well as the WAC analysis, the assessment of the magnitude of safety problems on select highway sections has been refined through the use of Safety Performance Function (SPF) methodology. The SPF reflects the complex relationship between exposure (measured in ADT) and the crash count for a section of roadway measured in crashes per mile per year (CPMPY). The SPF models provide an estimate for the expected crash frequency for each interchange influence area, for a range of ADT, among similar facilities. SPF functions are limited to mainline crashes only and as such do not include crashes that occur on ramps.

Development of the SPF lends itself well to the conceptual formulation of the Levels of Service of Safety (LOSS). The concept of level of service uses qualitative measures that characterize safety of a roadway segment in reference to its expected performance and severity. If the level of safety predicted by the SPF will represent a normal or expected number of crashes at a specific level of ADT, then the degree of deviation from the norm can be stratified to represent specific levels of safety.

LOSS-I – Indicates low potential for crash reduction
LOSS-II – Indicates better than expected safety performance
LOSS-III – Indicates less than expected safety performance
LOSS-IV – Indicates high potential for crash reduction

The study sections on I-225 and I-25 have a mixture of classification ranging from an Urban 6-Lane Freeway to an Urban 8-Lane Freeway. The freeway has been broken down into seven analysis segments, each segment associated with one of the interchanges along the study corridor. The segmentation for the corridor is presented graphically on **Figure 3** on the next page.

Figure 3. Freeway Segmentation



As mentioned, there is a mixture of Urban 6-Lane and Urban 8-Lane Freeway segments throughout the study area. Data for three-years of crash history on I-225 and I-25 has been plotted for evaluation on the two SPF figures. Of note, these charts include both southbound and northbound crashes along I-225 as the SPF methodology requires that both directions be included in the analysis.

Figure 4. Urban 6-Lane Freeway SPF

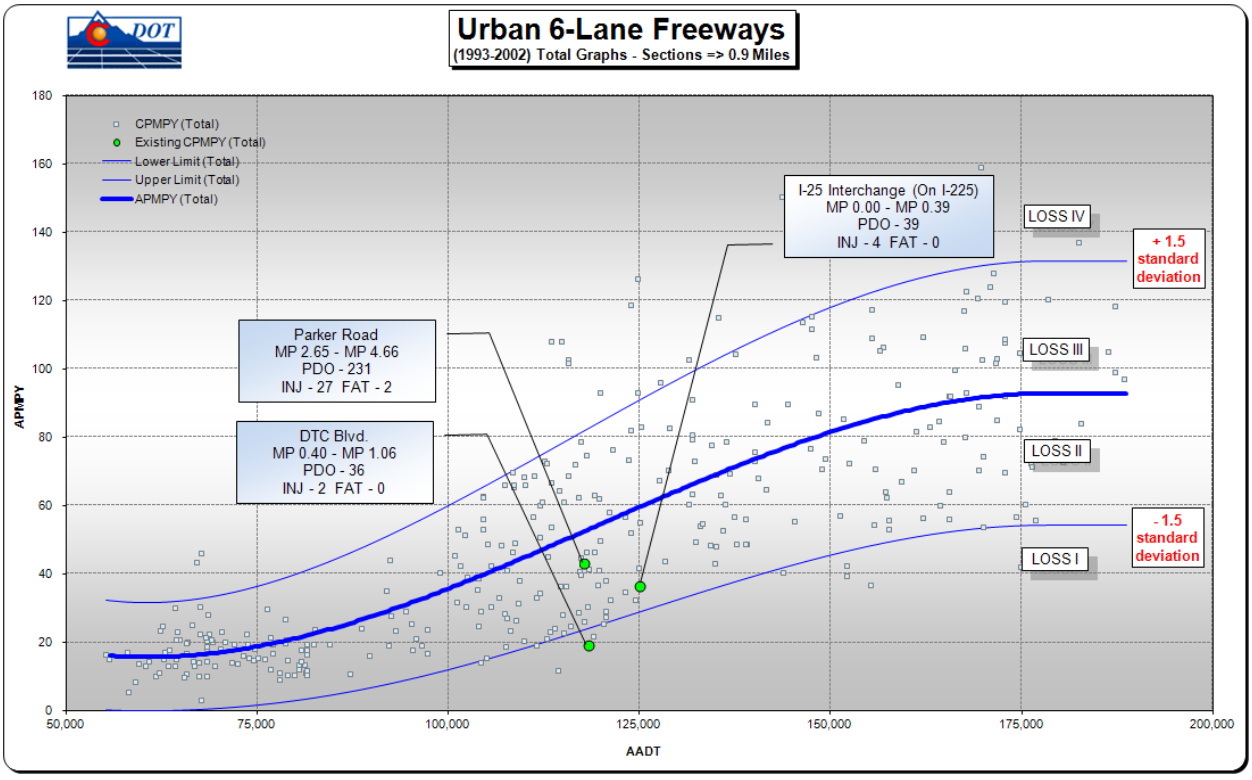


Figure 4 depicts the total crash SPF for the 6-Lane Freeway segments based on the given crash data. As can be seen, the SPF segments for the I-25 / I-225 and Parker Road interchanges are below the average expected crash rate for the given AADTs. This places these SPF segments in the LOSS II category, which indicates better than expected safety performance. In addition, the DTC Boulevard interchange SPF segment falls in the LOSS I category which indicates a low potential for crash reduction.

Figure 5. Urban 8-Lane Freeway SPF

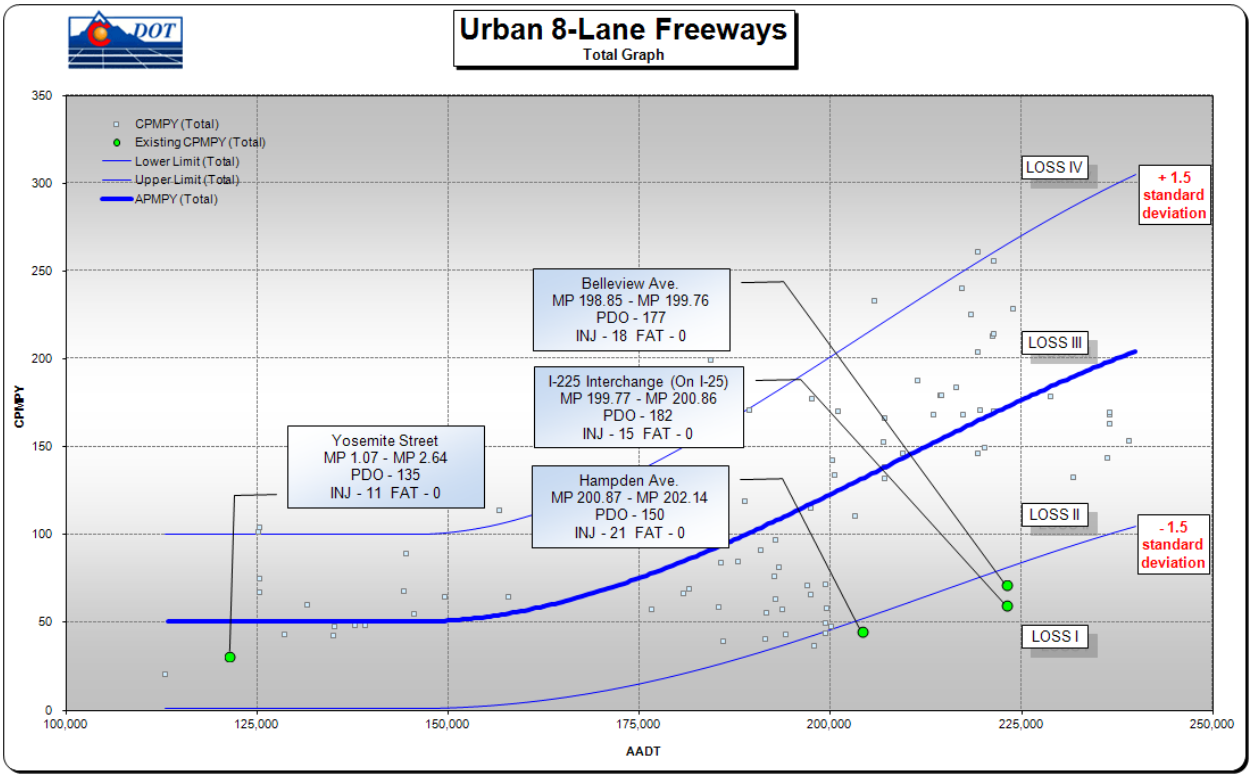


Figure 5 depicts the total crash SPF for the 8-Lane Freeway segments based on the given crash data. As can be seen, all of the SPF segments for the interchanges along I-25 are within the LOSS I category. This indicates a low potential for crash reduction on these segments. However, the Yosemite Street interchange segment falls just below the average expected crash frequency which places it in the LOSS II category. This means this segment has better than expected safety performance.

The detail of the crash occurrence on each of the SPF segments is discussed in more detail in the following sections. The mainline crashes, which correlate to the SPF analyses, are reviewed independently from the ramp crashes and the ramp terminal intersection crashes (if any) in the following sections.

V. I-225 INTERCHANGE ANALYSES

The following provides a summary of the analyses for the four interchange segments reviewed along I-225 from MP 0.00 to MP 4.66. These analyses include both mainline and ramp crashes as the proposed modifications to I-225 near DTC Boulevard could have an impact on the crash occurrence on both mainline I-225 and the ramps at the interchanges.

A. Segment 1 – I-25 Interchange (on I-225) (MP 0.00 to MP 0.39)

Mainline Crashes

During the three-year study period there were 16 reported mainline crashes between MP 0.00 and MP 0.39 on southbound I-225. **Figure 6** shows Segment 1 in relation to the other roadways in the vicinity.

Figure 6. I-25 (on I-225) Interchange Segment

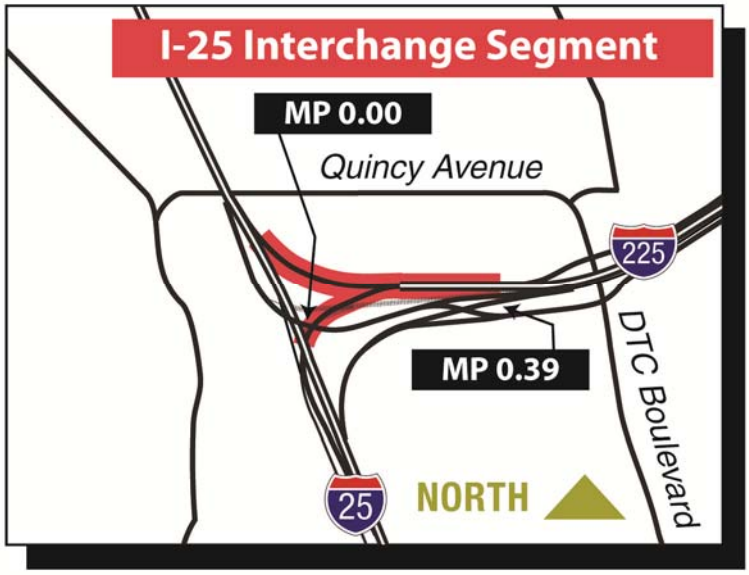
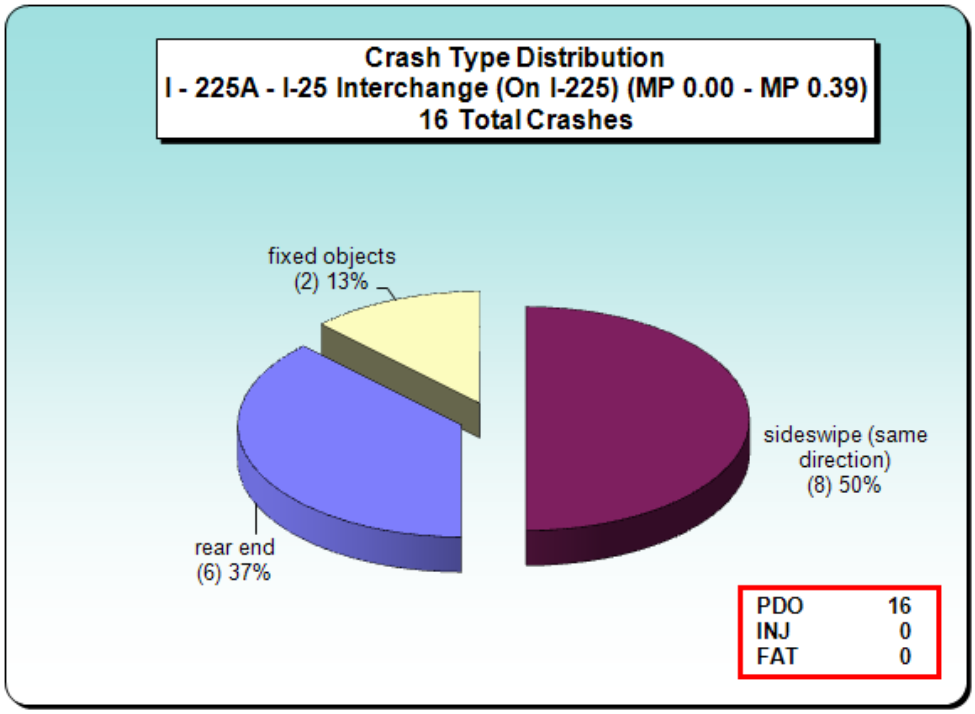


Figure 7 provides a graphical representation of the southbound crash types for this segment. Sideswipe (same direction) crashes were predominant (50%) followed by rear-end type crashes (37%).

Figure 7. I-25 (on I-225) Interchange Crash Distribution



The proportion of sideswipe (same direction) type crashes were higher than expected for this portion of the study corridor. Half of these crashes (4 of 8) occurred during the midday peak between Noon and 2PM when speeds on I-225 are higher and changing lanes is likely more difficult. The other crashes occurred during the morning peak (3 of 8) and afternoon peak (1 of 8). The majority of the vehicles involved in the sideswipe crashes (5 of 8) were changing lanes at the time of the collision in an effort to position themselves for the upcoming exit ramps to I-25.

Ramp Crashes

There were a total of 23 ramp crashes reported on the two southbound I-225 ramps to I-25 during the study period. These two ramps include Ramp C (southbound I-225 to northbound I-25) and Ramp I (southbound I-225 to southbound I-25).

The following provides a summary for each of the ramps.

Ramp C – Southbound I-225 to Northbound I-25

There were six crashes reported on the southbound I-225 ramp to northbound I-25 over the three-year study period. The predominant crash type on this ramp was fixed-object type crashes. The most frequent of the fixed-object type crashes was 2 concrete highway barrier crashes. All other crash types were single occurrences. Based on this, no correctable crash pattern could be identified based on a review of the crash history along this ramp.

Ramp I – Southbound I-225 to Southbound I-25

During the three-year study period there were a total of 17 crashes on this ramp between southbound I-225 and southbound I-25. The majority of these crashes (8) were rear-end type crashes, followed by sideswipe (same direction) crashes (4) and fixed object type crashes (3). Unlike the mainline crash pattern on this segment where most of the congestion related crashes (rear-end and sideswipe) occurred prior to 2PM, the majority of the congestion related crashes (7 of 12) on this ramp occurred between 4PM and 7PM. This is likely due to the traffic congestion on southbound I-25 during the PM peak hour which causes traffic to slow on this ramp. Based on this, no recommendation is made to address this existing pattern in relation to the PEL study.

B. Segment 2 – DTC Blvd. Interchange (MP 0.40 to MP 1.06)

Mainline Crashes

During the three-year study period there were 31 reported mainline crashes between MP 0.40 and MP 1.06 on southbound I-225. **Figure 8** shows Segment 2 in relation to the other roadways in the vicinity.

Figure 8. DTC Blvd. Interchange Segment

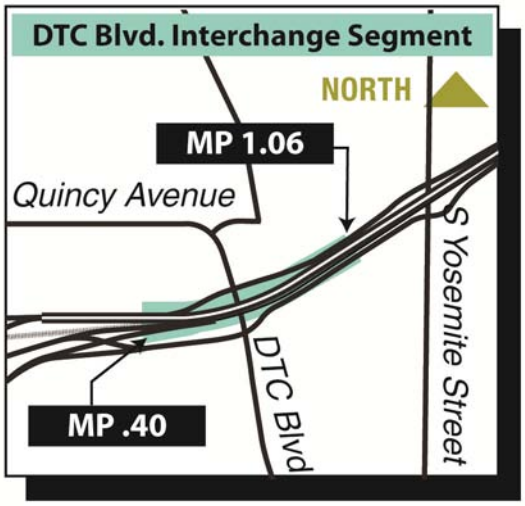
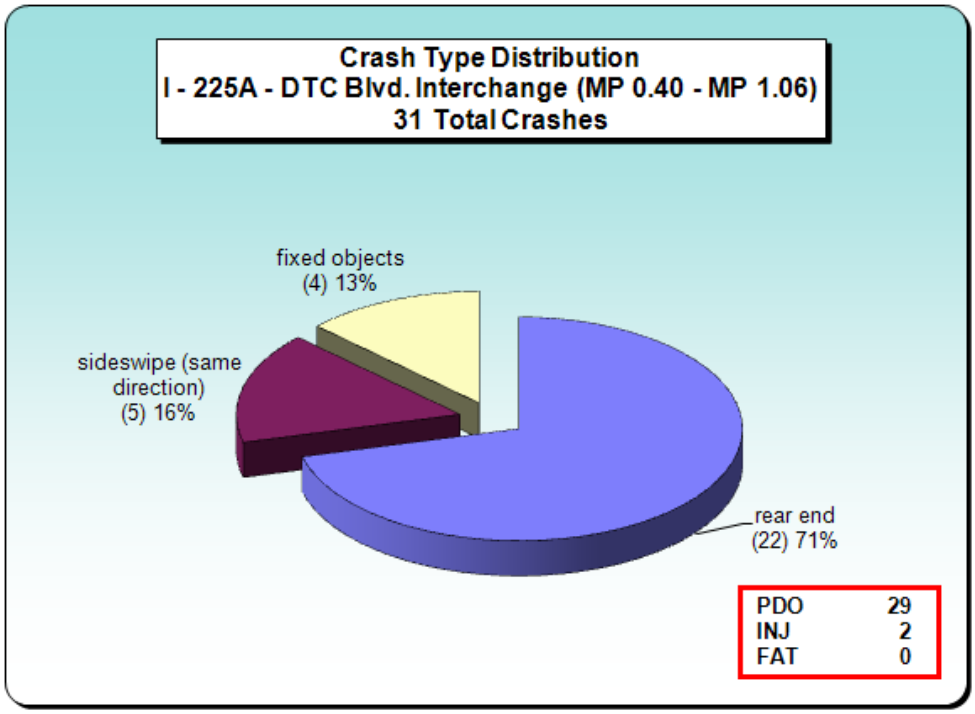


Figure 9 provides a graphical representation of the southbound mainline crash types for this segment. Rear-end crashes were predominant (71%) followed by sideswipe (same direction) type crashes (16%).

Figure 9. DTC Blvd. Interchange Crash Distribution



The proportion of rear-end type crashes were higher than expected for this portion of the study corridor. The majority of these crashes (13 of 22) occurred between 6AM and 10AM when traffic volumes on southbound I-225 are heaviest. Between 3PM and 7PM there were a total of 7 rear-end type crashes. Of the vehicles struck during the rear-end collisions, nearly all (20 of 22) were either stopped or slowing for traffic on mainline I-225. This pattern is not unexpected as this segment includes the existing lane drop and bottleneck currently in place on southbound I-225.

Ramp Crashes

There were a total of 19 ramp crashes reported on the two southbound I-225 ramps from/to DTC Boulevard. These two ramps include Ramp D (southbound I-225 off-ramp) and Ramp E (southbound I-225 on-ramp).

The following provides a summary for each of the ramps.

Ramp D – Southbound I-225 Off-Ramp

There were twelve crashes reported on the southbound I-225 off-ramp to DTC Boulevard over the three-year study period. The predominant crash type on this ramp (9 of 12) was rear-end type crashes. All other crash types had two or fewer occurrences. Of the rear-end type crashes, 8 of 9 occurred when one vehicle was either stopped or slowing for the traffic queue, likely for the traffic signal at the ramp terminal. The occurrences of these crashes were spread uniformly throughout the day with no clear peak. Based on this pattern, no recommendations are made to address the crashes on this ramp in relation to the PEL study.

Ramp E – Southbound I-225 On-Ramp

During the three-year study period there were a total of 7 crashes on this ramp to southbound I-225 from DTC Boulevard. The majority of these crashes (6) were rear-end type crashes, followed by sideswipe (same direction) crashes (1). All of these crashes occurred during the AM and PM peak periods. These crashes occurred when one vehicle (either stopped or slowing for traffic) was struck from behind by a second vehicle. This pattern is likely due to the queue created by the ramp meter on this ramp during the peak periods. Based on this, no recommendation is made to address this existing pattern.

C. Segment 3 – Yosemite Street Interchange (MP 1.07 to MP 2.64)

Mainline Crashes

During the three-year study period there were 85 reported mainline crashes between MP 1.07 and MP 2.64 on southbound I-225. **Figure 10** shows Segment 3 in relation to the other roadways in the vicinity.

Figure 10. Yosemite Street Interchange Segment

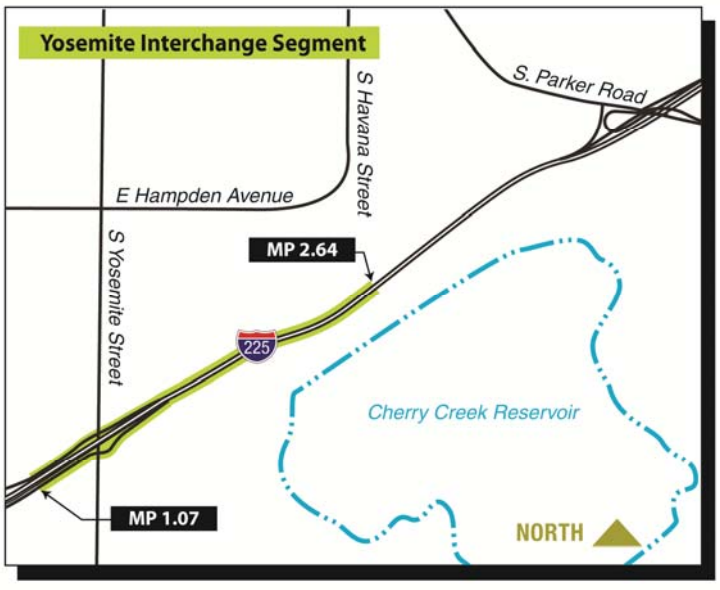
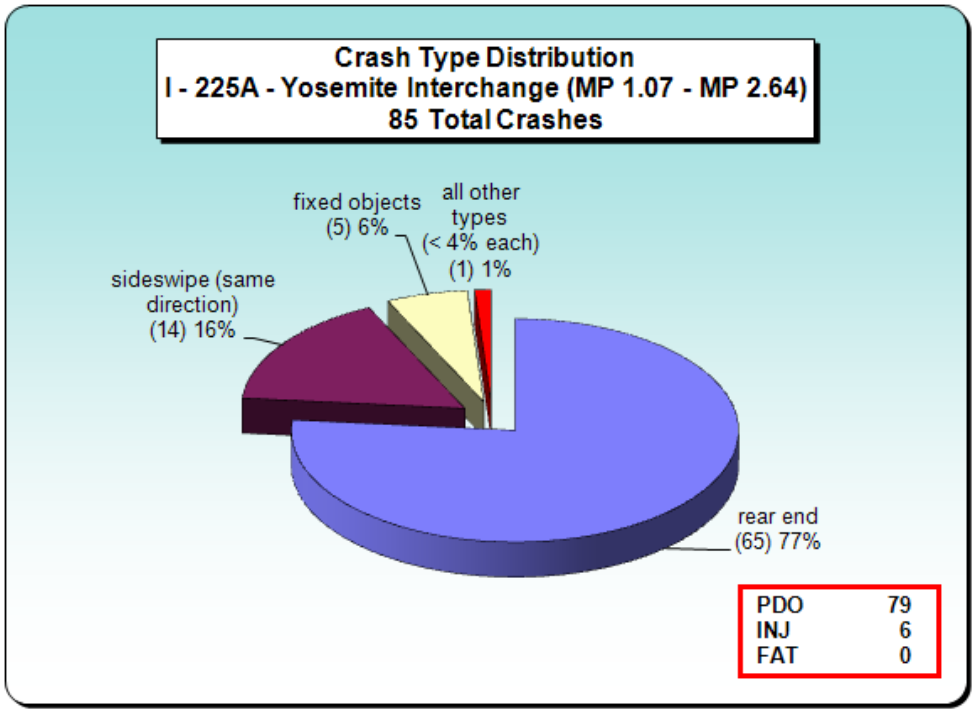


Figure 11 provides a graphical representation of the southbound mainline crash types for this segment. Rear-end crashes were predominant (77%) followed by sideswipe (same direction) type crashes (16%).

Figure 11. Yosemite Street Interchange Crash Distribution



The proportion of rear-end type crashes were higher than expected for this portion of the study corridor. The majority of these crashes (49 of 65) occurred between 6AM and 10AM when traffic volumes on southbound I-225 are heaviest. Between 3PM and 7PM there were a total of 10 rear-end type crashes. All other crashes occurred outside of the peak periods. Of the vehicles struck during the rear-end collisions, nearly all (55 of 65) were either stopped or slowing for traffic on mainline I-225. Once again, this pattern is not unexpected as this segment is immediately upstream of the existing bottleneck at DTC Boulevard. Traffic and congestion spills back from the bottleneck at DTC Boulevard onto the Yosemite Street interchange segment.

Ramp Crashes

There were a total of 6 ramp crashes reported on the southbound I-225 off-ramp to Yosemite Street and on the Yosemite Street on-ramp to the collector-distributor (CD) road. These two ramps include Ramp D (southbound I-225 off-ramp) and Ramp E/J (southbound I-225 CD road).

The following provides a summary for each of the ramps.

Ramp D – Southbound I-225 Off-Ramp

There were two crashes reported on the southbound I-225 off-ramp to Yosemite Street over the three-year study period. There was one rear-end and one sideswipe (same direction) type crash on this ramp. Based on the low occurrence of crashes, no recommendations are made to address the crashes on this ramp.

Ramp E/J – Southbound I-225 Collector-Distributor (CD)

During the three-year study period there were a total of four crashes on this CD road. Half of these crashes were rear-end type crashes, followed by sideswipe (same direction) and traffic signal pole crashes in which each had one occurrence. Once again, due to the low occurrence of crashes, no recommendation is made to address the existing crashes.

D. Segment 4 – Parker Road Interchange (MP 2.65 to MP 4.66)

Mainline Crashes

During the three-year study period there were 92 reported mainline crashes between MP 2.65 and MP 4.66 on southbound I-225. **Figure 12** shows Segment 4 in relation to the other roadways in the vicinity.

Figure 12. Parker Road Interchange Segment

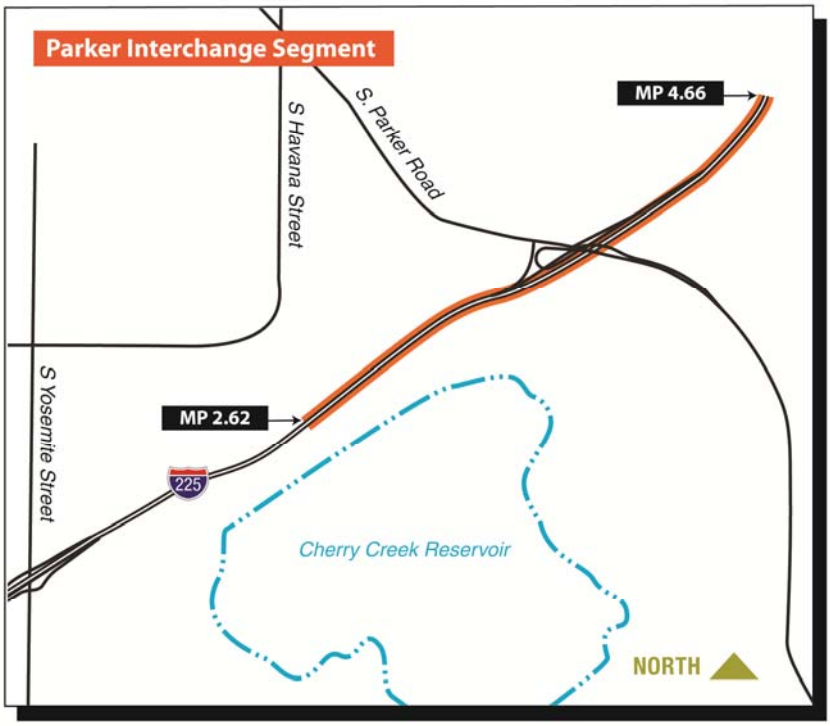
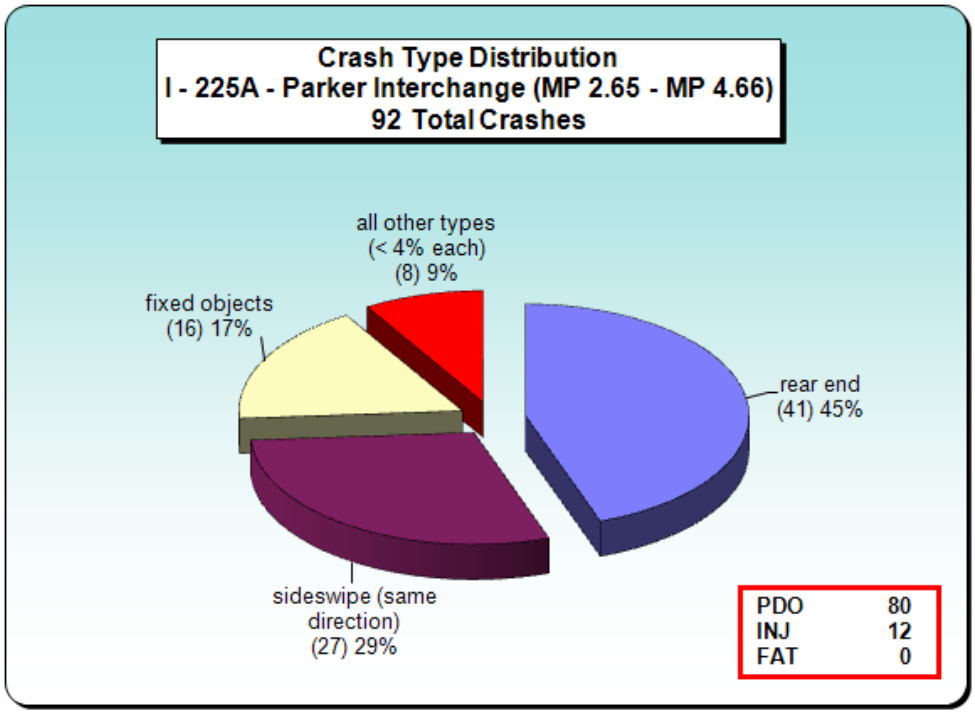


Figure 13 provides a graphical representation of the southbound mainline crash types for this segment. Rear-end crashes were predominant (45%) followed by sideswipe (same direction) type crashes (29%).

Figure 13. Parker Road Interchange Crash Distribution



The proportion of rear-end type and sideswipe (same direction) type crashes were higher than expected for this portion of the study corridor. Since both of these crash types are congestion related, they have been reviewed together. The majority of these crashes (37 of 68) occurred between 6AM and 10AM when traffic volumes on southbound I-225 are heaviest. Between 3PM and 7PM there were a total of 14 rear-end/sideswipe type crashes. Of the vehicles struck during the rear-end collisions, over 75 percent were either stopped or slowing for traffic on mainline I-225. As with the other segments included in this study, this pattern is common as this segment routinely experiences congested traffic conditions during peak periods.

Ramp Crashes

There were a total of 61 ramp crashes reported on the three southbound I-225 ramps from/to Parker Road. These three ramps include Ramp D (southbound I-225 off-ramp) and Ramp E (southbound I-225 on-ramp) and Ramp I (southbound I-225 flyover on-ramp from northbound Parker Road).

The following provides a summary for each of the ramps.

Ramp D – Southbound I-225 Off-Ramp

There were 37 crashes reported on the southbound I-225 off-ramp to Parker Road over the three-year study period. The predominant crash type on this ramp (32 of 37) was rear-end type crashes. All other crash types had two or fewer occurrences. Of the rear-end type crashes, 28 of 32 occurred when one vehicle was either stopped or slowing for traffic on the off-ramp. The occurrence of these crashes was spread uniformly throughout the day with no clear peak. This pattern was previously identified in a safety assessment completed by CDOT and will be addressed with the current I-225 widening project. A realignment of the southbound off-ramp and the existing YEILD traffic control being converted to STOP control is planned.

Ramp E – Southbound I-225 On-Ramp

During the three-year study period there were a total of six crashes on this ramp to southbound I-225 from Parker Road. Half of these crashes (3) were rear-end type crashes, followed by sideswipe (same direction) crashes (2). The remaining crash was an overturning crash. All of these crashes occurred during the AM and PM peak periods. These crashes occurred when one vehicle (either stopped or slowing for traffic) was struck from behind by a second vehicle, often changing lanes. This pattern is likely due to the turbulence created by the merge point onto southbound I-225. However, due to the low occurrence of crashes, no recommendation is made to address this existing pattern.

Ramp I – Southbound I-225 On-Ramp (flyover)

During the three-year study period there were a total of 18 crashes on this ramp to southbound I-225 from flyover ramp from northbound Parker Road. The majority of these crashes (7) were concrete barrier type crashes, followed by sideswipe (same direction) crashes (6). All other crash types had two or fewer occurrences.

Of the concrete barrier type crashes, 4 of 7 occurred at night with the majority occurring in dry conditions. Consideration should be given to reviewing the existing reflector and delineation along this flyover ramp.

Similarly, 4 of 6 of the sideswipe crashes also occurred at night in dry conditions. Most of these crashes occurred when one vehicle changed lanes and sideswiped the vehicle in the adjacent lane. Once again, consideration should be given to reviewing the existing reflector and delineation as well as lane striping on this flyover ramp.

VI. I-25 INTERCHANGE ANALYSES

The following provides a summary of the analyses for the three interchange segments reviewed along I-25 from MP 198.85 to MP 202.14. These analyses focus on mainline traffic only as the ramps at the interchanges along I-25 likely will not be impacted by changes made to the southbound I-225 cross section near DTC Boulevard.

A. Segment 1 – Belleview Avenue Interchange (MP 198.85 to MP 199.76)

Mainline Crashes

During the three-year study period there were 195 reported mainline crashes between MP 198.85 and MP 199.76 on I-25. **Figure 14** shows Segment 1 in relation to the other roadways in the vicinity.

Figure 14. Belleview Avenue Interchange Segment

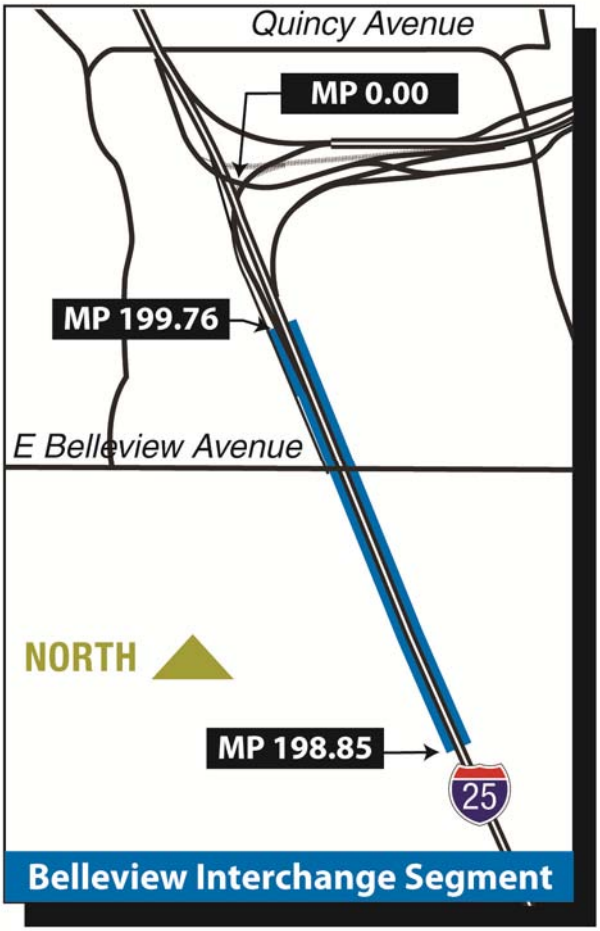
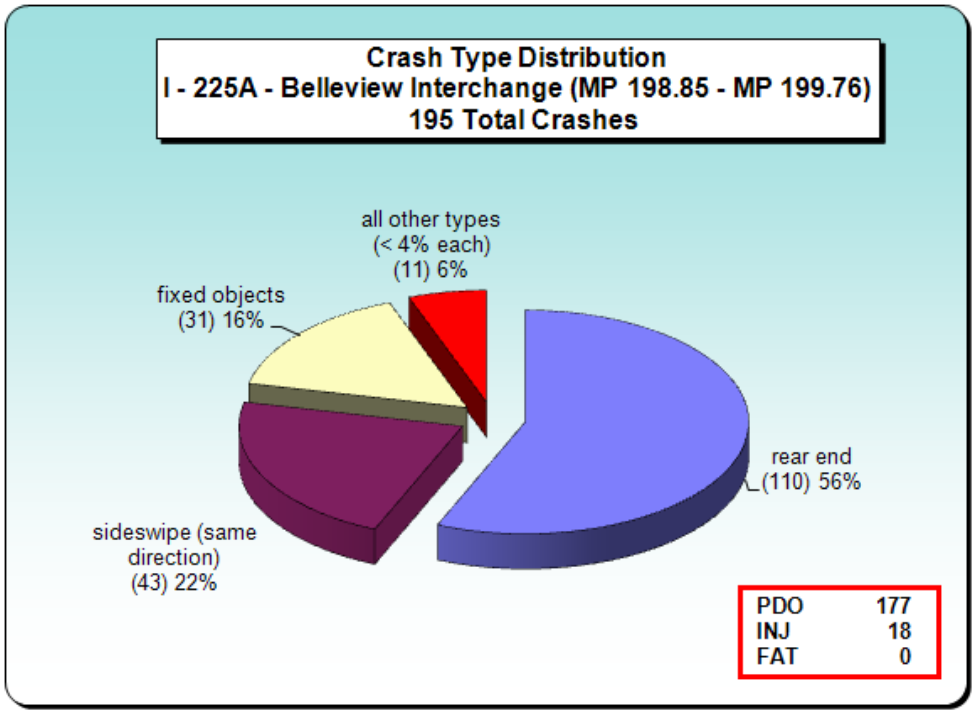


Figure 15 provides a graphical representation of the mainline crash types for both directions of this segment. Rear-end crashes were predominant (56%) followed by sideswipe (same direction) type crashes (22%).

Figure 15. Belleview Avenue Interchange Crash Distribution



The proportion of rear-end type and sideswipe (same direction) type crashes were higher than expected for this portion of the study corridor. Since both of these crash types are congestion related, they have been reviewed together. The majority of these crashes (73 of 153) occurred between 3PM and 7PM. Between 6AM and 10AM there were a total of 33 rear-end/sideswipe type crashes. The remainder of the crashes occurred throughout the day. Of the vehicles struck during the rear-end collisions, over 80 percent were either stopped or slowing for traffic on mainline I-25. As with the other segments included in this study, this pattern is common as this segment routinely experiences congested traffic conditions during peak periods.

B. Segment 2 – I-225 Interchange (on I-25) (MP 199.77 to MP 200.86)

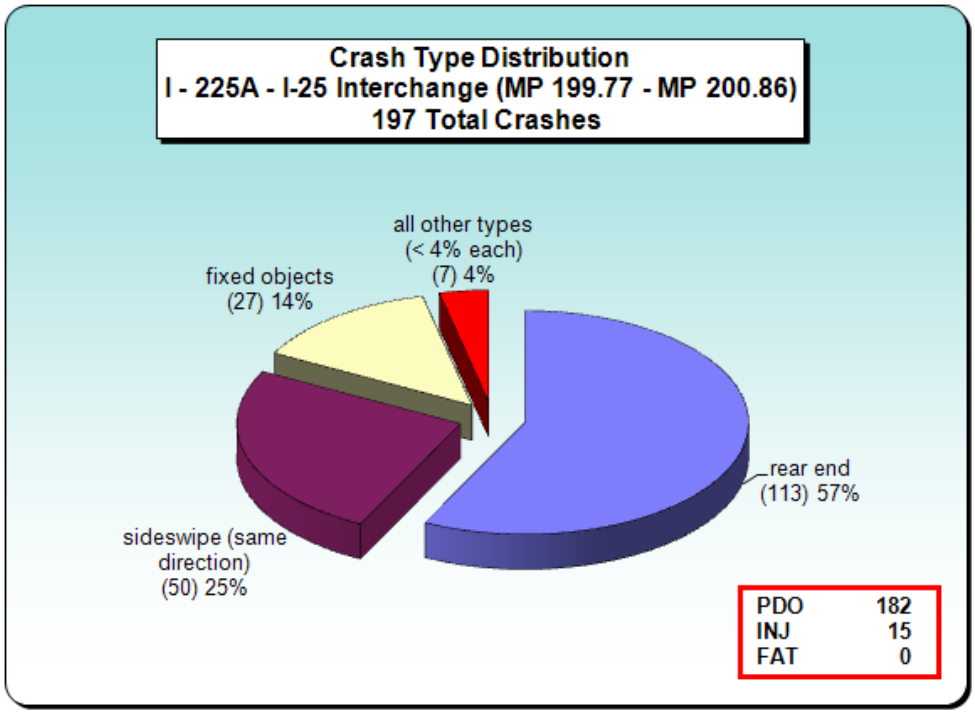
Mainline Crashes

During the three-year study period there were 197 reported mainline crashes between MP 199.77 and MP 200.86 on mainline I-25. **Figure 16** shows Segment 2 in relation to the other roadways in the vicinity.

Figure 16. I-225 Interchange (on I-25) Interchange Segment

Figure 17 provides a graphical representation of the mainline crash types for both directions of this segment. Rear-end crashes were predominant (57%) followed by sideswipe (same direction) type crashes (25%).

Figure 17. I-225 (on I-25) Interchange Crash Distribution



The proportion of rear-end type and sideswipe (same direction) type crashes were higher than expected for this portion of the study corridor. Since both of these crash types are congestion related, they have been reviewed together. The majority of these crashes (69 of 163) occurred between 3PM and 7PM. Between 6AM and 10AM there were a total of 46 rear-end/sideswipe type crashes. The remainder of the crashes occurred throughout the day. Of the vehicles struck during the rear-end collisions, over 70 percent were either stopped or slowing for traffic on mainline I-25. As with the other segments included in this study, this pattern is common as this segment routinely experiences congested traffic conditions during peak periods.

C. Segment 3 – Hampden Avenue Interchange (MP 200.87 to MP 202.14)

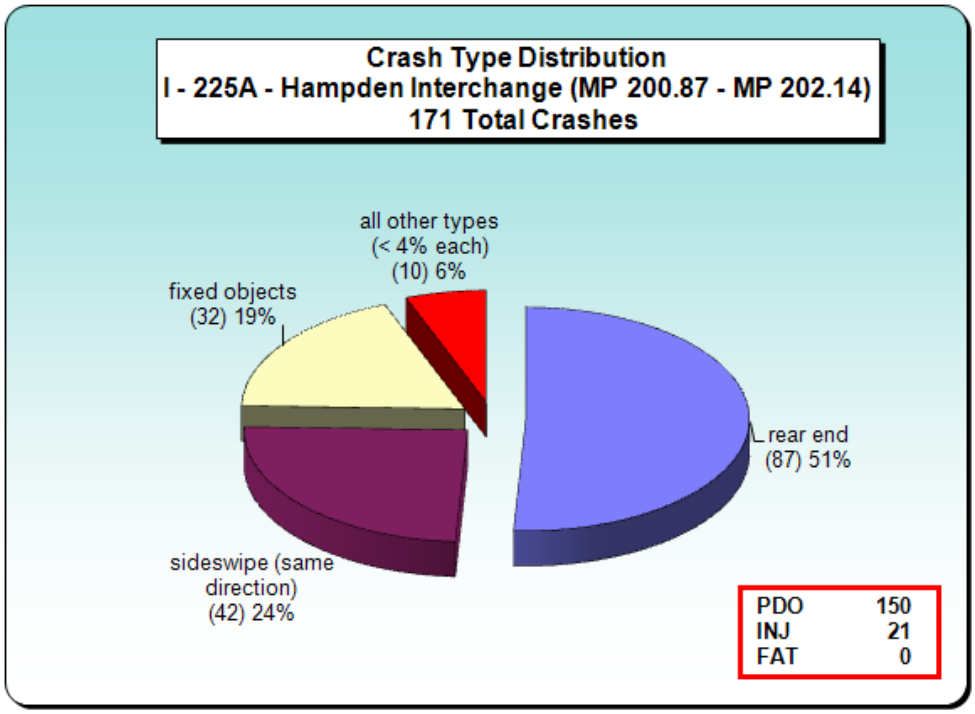
Mainline Crashes

During the three-year study period there were 171 reported mainline crashes between MP 200.87 and MP 202.14 on I-25. **Figure 18** shows Segment 3 in relation to the other roadways in the vicinity.

Figure 18. Hampden Avenue Interchange Segment

Figure 19 provides a graphical representation of the mainline crash types for both directions of this segment. Rear-end crashes were predominant (51%) followed by sideswipe (same direction) type crashes (24%).

Figure 19. Hampden Avenue Interchange Crash Distribution



The proportion of rear-end type and sideswipe (same direction) type crashes were higher than expected for this portion of the study corridor. Since both of these crash types are congestion related, they have been reviewed together. As with the other segments on I-25, the majority of these crashes (47 of 129) occurred between 3PM and 7PM. Between 6AM and 10AM there were a total of 37 rear-end/sideswipe type crashes. The remainder of the crashes occurred throughout the day. Of the vehicles struck during the rear-end collisions, over 80 percent were either stopped or slowing for traffic on mainline I-25. As with the other segments included in this study, this pattern is common as this segment routinely experiences congested traffic conditions during peak periods.

VII. CONCLUSION AND RECOMMENDATIONS

The primary intent of this report is to provide information as it relates to safety for the I-225 Planning and Environmental Linkage (PEL) Study. The I-225 PEL study is focused only on the southbound segment of I-225 between I-25 at Milepost (MP) 0.00 and Yosemite Street (MP 1.33). This portion of I-225 is a bottleneck during the AM peak period due to the reduction in through lanes at Yosemite Street and DTC Boulevard. Traffic backups along southbound I-225 as far north as the I-225 / Parker Road interchange are not uncommon during the peak period. Based on this, the safety analyses completed for this report cover a portion of southbound I-225 from MP 0.00 to MP 4.66 (just north of Parker Road). In addition, given the direct interaction I-225 has with I-25, a portion of I-25 from Belleview Avenue (MP 199.40) to Hampden Avenue (MP 201.59) has also been reviewed as part of this analysis.

The conclusions and recommendations of this study are based on the analysis of three years of crash history. Between southbound I-225 (MP 0.00 to MP 4.66) and both directions of I-25 (MP 198.85 to MP 202.14), there were a total of 1,074 reported crashes within the project limits; on southbound I-225 (420 crashes) and on both directions of I-25 (654 crashes). This total includes crashes on the ramps for the interchanges that fall within the study area. In general, the freeway segments within the study area fall within the LOSS I or II categories which means the corridor as a whole has a better than expected safety performance. However, along southbound I-225, there is a higher than expected occurrence of rear-end and sideswipe (same direction) crash types. There are several locations of higher than expected crash concentration and severity which are primarily related to these congestion related crashes. The following recommendations are made to help reduce the number of crashes throughout the study corridor:

A. General Recommendations

- As part of the I-225 PEL Study, the safety analysis recommends improvements to southbound I-225 to reduce congestion along I-225 which should help to decrease the number of rear-end type and sideswipe (same direction) type crashes on the freeway. Further study to identify the improvements is part of the I-225 PEL Study process.

B. Interchange Specific Recommendations

- Parker Road flyover to southbound I-225 – Consideration should be given to reviewing the existing reflector and delineation along this flyover ramp due to the high occurrence of run off the road type crashes during dry conditions.

APPENDIX

THREE-YEAR DETAILED SUMMARY OF TRAFFIC CRASHES

THREE-YEAR GENERAL SUMMARY OF TRAFFIC CRASHES

- I-25 Interchange (on I-225)
- DTC Boulevard Interchange
- Yosemite Street Interchange
- Parker Road Interchange
- Belleview Avenue Interchange
- I-225 Interchange (on I-25)
- Hampden Avenue Interchange

COMMON CRASH TYPES AND DIAGRAMS

STRAIGHT-LINE-DIAGRAM

THREE-YEAR CRASH LISTING

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
Detailed Accident Summary Report

Microsoft Visual FoxPro 9 SP2
04/16/2013

Job #: 20130416101307

Highway: 225A **Begin:** 0.00 **End:** 4.66 **From:** 07/01/2009 **To:** 06/30/2012

I-225 - Southbound

Severity

PDO:	401	
INJ:	40	57 :Injured
FAT:	0	0 :Killed
Total:	**441**	

Multi-Vehicle

One Vehicle:	62
Two Vehicles:	330
Three or More:	49
Unknown:	0
Total:	**441**

Location

On Road:	377	Off in Median:	0
Off Road Left:	35	Private Property:	0
Off Road Right:	28	Unknown:	0
Off Road at Tee:	1		
		Total:	**441**

Accident Type

Overturning:	8	Road Maintenance Equipment:	0	Fence:	3
Other Non Collision:	0	Domestic Animal:	0	Tree:	0
School Age Peds:	0	Wild Animal:	0	Large Rocks or Boulder:	0
Ped on Toy Motorized Vehicle:	0	Light/Utility Pole:	0	Railroad Crossing Equipment:	0
Other Pedestrians:	1	Traffic Signal Pole:	2	Barricade:	0
Head On:	0	Sign:	2	Wall/Building:	4
Rear End:	228	Guard Rail:	5	Crash Cushion/Traffic Barrel:	0
Broadside:	24	Cable Rail:	3	Mailbox:	0
Approach Turn:	24	Concrete Highway Barrier:	33	Other Fixed Object:	1
Overtaking Turn:	5	Bridge Structure:	3	Involving Other Object:	0
Sideswipe (Same):	86	Vehicle Debris/Cargo:	3	Unknown:	0
Sideswipe (Opposite):	0	Culvert/Headwall:	0	**Total:**	**441**
Parked Motor Vehicle:	3	Embankment:	0		
Railway Vehicle:	0	Curb:	3	Total Fixed Objects:	59
Bicycle:	0	Delineator Post:	0	Total Other Objects:	3

Lighting Conditions

Daylight:	332
Dawn or Dusk:	17
Dark - Lighted:	74
Dark - Unlighted:	16
Unknown:	2
Total:	**441**

Weather Conditions

None:	387	Dust:	0
Rain:	19	Wind:	0
Snow/Sleet/Hail:	32	Unknown:	1
Fog:	2		
		Total:	**441**

Road Description

At Intersection:	68
At Driveway Access:	0
Intersection Related:	9
Non Intersection:	230
Alley Related:	0
Roundabout:	0
Ramp:	134
Parking Lot:	0
Unknown:	0
Total:	**441**

Road Conditions

Dry:	363
Wet:	30
Muddy:	0
Snowy:	8
Icy:	23
Slushy:	8
Foreign Material:	1
Dry w/Icy Road Treatment:	2
Wet w/Icy Road Treatment:	2
Snowy w/Icy Road Treatment:	0
Icy w/Icy Road Treatment:	1
Slushy w/Icy Road Treatment:	2
Unknown:	1
Total:	**441**

Mainline/Ramps/Frontage Rds

Mainline:	225
Crossroad (Ramp A):	4
Frontage Rd:	0

Ramps

B:	1	H:	0
C:	20	I:	36
D:	51	J:	3
E:	14	K:	0
F:	10	T:	0
G:	0		

Intsx Frontage/Ramps

M:	0	N:	59
O:	18	P:	0

HOV Lanes:	0
Uknwn:	0
Total:	**441**

Accident Rates

PDO:	0.65 MVMT	Total:	0.72 MVMT
Injury:	0.07 MVMT		
Fatal:	0.00 100 MVMT		

ADT: 119,656 **Length:** 4.66 **Coris File:** tcoris2010.dbf

Highway: 225A **Begin:** 0.00 **End:** 4.66 **From:** 07/01/2009 **To:** 06/30/2012

I-225 - Southbound

Vehicle Types	Veh 1	Veh 2	Veh 3
Vehicle/Vehicle Combo (> 10k Lbs):	11	6	0
School Bus (All School Busses):	1	0	0
Non-School Bus (> 8) in Commerce:	0	1	1
Transit Bus:	1	0	0
Passenger Car/Van:	277	219	33
Passenger Car/Van w/Trailer:	1	0	0
Pickup Truck/Utility Van:	40	46	7
Pickup Truck/Utility Van w/Trailer:	2	2	0
SUV:	84	98	8
SUV w/Trailer:	0	0	0
Motor Home:	0	0	0
Motorcycle:	7	3	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	16	3	0
Light Rail:	0	0	0
Other:	1	1	0
Unknown:	0	0	0
Commercial Vehicle **Total:**	**441**	**379**	**49**

Direction	Veh 1	Veh 2	Veh 3
North:	19	18	2
Northeast:	0	0	0
East:	3	0	0
Southeast:	0	0	0
South:	279	232	30
Southwest:	75	66	11
West:	47	51	6
Northwest:	18	12	0
Unknown:	0	0	0
Total:	**441**	**379**	**49**

Contributing Factor	Veh 1	Veh 2	Veh 3
No Apparent Contributing Factor:	235	375	49
Asleep at the Wheel:	1	0	0
Driver Fatigue:	1	0	0
Illness/Medical:	2	0	0
Driver Inexperience:	39	0	0
Agressive Driving:	34	0	0
Driver Unfamilar with Area:	12	0	0
Driver Emotionally Upset:	0	0	0
Evading Law Enforcement Officier:	0	0	0
Physical Disability:	0	0	0
DUI, DWAI, DUID:	11	1	0
Distracted/Passenger:	2	0	0
Distracted/Cell Phone:	4	0	0
Distracted/Radio:	2	0	0
Distracted/Other:	58	0	0
Other Factor:	40	3	0
Unknown:	0	0	0
Total:	**441**	**379**	**49**

Vehicle Movement	Veh 1	Veh 2	Veh 3
Going Straight:	215	147	13
Slowing:	40	58	7
Stopped in Traffic:	1	140	23
Making Right Turn:	19	5	1
Making Left Turn:	25	12	3
Making U-Turn:	2	0	0
Passing:	4	3	1
Backing:	1	0	0
Enter/Leave Parked Pos:	2	0	0
Parked:	0	3	0
Changing Lanes:	79	4	0
Avoiding Object in Road:	4	5	1
Weaving:	6	0	0
Spun Out of Control:	39	1	0
Drove Wrong Way:	0	0	0
Other:	4	1	0
Unknown:	0	0	0
Total:	**441**	**379**	**49**

Driver Condition (Alcohol)	Veh 1	Veh 2	Veh 3
No Alcohol Suspected:	390	375	49
Alcohol Suspected:	13	1	0
Unknown Alcohol:	38	3	0
Alcohol Sub-Total:	**441**	**379**	**49**

Driver Condition (Drugs)	Veh 1	Veh 2	Veh 3
No Drugs Suspected:	400	376	48
Drugs Suspected:	0	0	1
Unknown Drugs:	41	3	0
Drugs Sub-Total:	**441**	**379**	**49**

ADT: 119,656 **Length:** 4.66 **Coris File:** tcoris2010.dbf

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
Detailed Accident Summary Report

Microsoft Visual FoxPro 9 SP2
04/16/2013

Job #: 20130416101756

Highway: 25A **Begin:** 198.85 **End:** 202.14 **From:** 07/01/2009 **To:** 06/30/2012

I-25 - Both Directions

Severity

PDO:	587	
INJ:	65	73 :Injured
FAT:	0	0 :Killed
Total:	**652**	

Multi-Vehicle

One Vehicle:	100
Two Vehicles:	443
Three or More:	109
Unknown:	0
Total:	**652**

Location

On Road:	549	Off in Median:	1
Off Road Left:	50	Private Property:	0
Off Road Right:	52	Unknown:	0
Off Road at Tee:	0		
		Total:	**652**

Accident Type

Overturning:	6	Road Maintenance Equipment:	1	Fence:	0
Other Non Collision:	5	Domestic Animal:	0	Tree:	1
School Age Peds:	0	Wild Animal:	1	Large Rocks or Boulder:	0
Ped on Toy Motorized Vehicle:	0	Light/Utility Pole:	0	Railroad Crossing Equipment:	0
Other Pedestrians:	0	Traffic Signal Pole:	0	Barricade:	1
Head On:	0	Sign:	0	Wall/Building:	1
Rear End:	363	Guard Rail:	9	Crash Cushion/Traffic Barrel:	9
Broadside:	1	Cable Rail:	0	Mailbox:	0
Approach Turn:	3	Concrete Highway Barrier:	79	Other Fixed Object:	0
Overtaking Turn:	0	Bridge Structure:	1	Involving Other Object:	3
Sideswipe (Same):	153	Vehicle Debris/Cargo:	12	Unknown:	0
Sideswipe (Opposite):	0	Culvert/Headwall:	1	**Total:**	**652**
Parked Motor Vehicle:	0	Embankment:	2		
Railway Vehicle:	0	Curb:	0	Total Fixed Objects:	104
Bicycle:	0	Delineator Post:	0	Total Other Objects:	15

Lighting Conditions

Daylight:	456
Dawn or Dusk:	32
Dark - Lighted:	138
Dark - Unlighted:	25
Unknown:	1
Total:	**652**

Weather Conditions

None:	521	Dust:	0
Rain:	26	Wind:	1
Snow/Sleet/Hail:	98	Unknown:	1
Fog:	5		
		Total:	**652**

Road Description

At Intersection:	7
At Driveway Access:	0
Intersection Related:	0
Non Intersection:	563
Alley Related:	0
Roundabout:	0
Ramp:	82
Parking Lot:	0
Unknown:	0
Total:	**652**

Road Conditions

Dry:	478
Wet:	48
Muddy:	0
Snowy:	29
Icy:	53
Slushy:	14
Foreign Material:	0
Dry w/Icy Road Treatment:	2
Wet w/Icy Road Treatment:	3
Snowy w/Icy Road Treatment:	12
Icy w/Icy Road Treatment:	4
Slushy w/Icy Road Treatment:	7
Unknown:	2
Total:	**652**

Mainline/Ramps/Frontage Rds

Mainline:	563
Crossroad (Ramp A):	0
Frontage Rd:	0

Ramps

B:	17	H:	0
C:	30	I:	0
D:	16	J:	0
E:	17	K:	0
F:	2	T:	0
G:	0		

Intsx Frontage/Ramps

M:	0	N:	6
O:	1	P:	0

HOV Lanes:	0
Uknwn:	0
Total:	**652**

Accident Rates

PDO:	0.74 MVMT	Total:	0.83 MVMT
Injury:	0.08 MVMT		
Fatal:	0.00 100 MVMT		

ADT: 218,519 **Length:** 3.29 **Coris File:** tcoris2010.dbf

Highway: 25A **Begin:** 198.85 **End:** 202.14 **From:** 07/01/2009 **To:** 06/30/2012

I-25 - Both Directions

Vehicle Types	Veh 1	Veh 2	Veh 3
Vehicle/Vehicle Combo (> 10k Lbs):	13	13	3
School Bus (All School Busses):	2	1	0
Non-School Bus (> 8) in Commerce:	0	2	0
Transit Bus:	0	2	0
Passenger Car/Van:	356	321	64
Passenger Car/Van w/Trailer:	1	0	0
Pickup Truck/Utility Van:	73	58	11
Pickup Truck/Utility Van w/Trailer:	4	0	2
SUV:	149	153	26
SUV w/Trailer:	1	0	0
Motor Home:	0	0	0
Motorcycle:	5	0	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	48	1	3
Light Rail:	0	0	0
Other:	0	1	0
Unknown:	0	0	0
Commercial Vehicle **Total:**	**652**	**552**	**109**

Direction	Veh 1	Veh 2	Veh 3
North:	406	351	75
Northeast:	1	1	0
East:	7	7	3
Southeast:	4	4	1
South:	218	176	30
Southwest:	1	1	0
West:	8	6	0
Northwest:	7	6	0
Unknown:	0	0	0
Total:	**652**	**552**	**109**

Contributing Factor	Veh 1	Veh 2	Veh 3
No Apparent Contributing Factor:	377	540	107
Asleep at the Wheel:	5	1	0
Driver Fatigue:	3	0	0
Illness/Medical:	7	1	0
Driver Inexperience:	50	0	2
Agressive Driving:	64	6	0
Driver Unfamilar with Area:	14	1	0
Driver Emotionally Upset:	0	0	0
Evading Law Enforcement Officier:	0	0	0
Physical Disability:	3	0	0
DUI, DWAI, DUID:	17	0	0
Distracted/Passenger:	6	0	0
Distracted/Cell Phone:	9	0	0
Distracted/Radio:	4	0	0
Distracted/Other:	42	0	0
Other Factor:	51	3	0
Unknown:	0	0	0
Total:	**652**	**552**	**109**

Vehicle Movement	Veh 1	Veh 2	Veh 3
Going Straight:	329	221	33
Slowing:	47	132	22
Stopped in Traffic:	2	167	51
Making Right Turn:	3	2	1
Making Left Turn:	3	1	0
Making U-Turn:	0	0	0
Passing:	6	0	0
Backing:	2	0	0
Enter/Leave Parked Pos:	0	1	0
Parked:	0	2	1
Changing Lanes:	114	9	0
Avoiding Object in Road:	8	8	0
Weaving:	8	0	0
Spun Out of Control:	118	4	0
Drove Wrong Way:	2	1	0
Other:	10	3	1
Unknown:	0	1	0
Total:	**652**	**552**	**109**

Driver Condition (Alcohol)	Veh 1	Veh 2	Veh 3
No Alcohol Suspected:	558	543	104
Alcohol Suspected:	19	0	0
Unknown Alcohol:	75	9	5
Alcohol Sub-Total:	**652**	**552**	**109**

Driver Condition (Drugs)	Veh 1	Veh 2	Veh 3
No Drugs Suspected:	569	543	104
Drugs Suspected:	3	0	0
Unknown Drugs:	80	9	5
Drugs Sub-Total:	**652**	**552**	**109**

ADT: 218,519 **Length:** 3.29 **Coris File:** tcoris2010.dbf

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
General Accident Summary Report

Job #: 20130416102804

Highway: 225A **Begin:** 0.00 **End:** 0.39 **From:** 07/01/2009 **To:** 06/30/2012

I-25 Interchange (on I-225)

Severity

PDO:	17	
INJ:	0	0 :Injured
FAT:	0	0 :Killed
Total:	**17**	

Number of Vehicles

One Vehicle:	3
Two Vehicles:	12
Three or More:	2
Unknown:	0
Total:	**17**

Location

On Road:	14
Off Road:	3
Unknown:	0
Total:	**17**

Accident Type

Overturning:	0	Sideswipe (Same):	8	Bicycles:	0
Other Non Collision:	0	Sideswipe (Opposite):	0	Domestic Animal:	0
Pedestrians:	0	Approach Turn:	0	Wild Animal:	0
Broadside:	0	Overtaking Turn:	0	Fixed Objects:	3
Head On:	0	Parked Motor Vehicle:	0	Other Objects:	0
Rear End:	6	Railway Vehicle:	0	Unknown:	0
				Total:	**17**

Lighting Conditions

Daylight:	13
Dawn or Dusk:	1
Dark - Lighted:	1
Dark - Unlighted:	2
Unknown:	0
Total:	**17**

Mainline/Ramps/Frontage Rds

Mainline:	16
Ramps:	1
Frontage Roads:	0
Intsx Frontage/Ramps:	0
HOV Lanes:	0
Unknown:	0
Total:	**17**

Weather Conditions

None:	14
Rain:	1
Snow/Sleet/Hail:	2
Fog:	0
Dust:	0
Wind:	0
Unknown:	0
Total:	**17**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Vehicle/Vehicle Combo (> 10k Lbs):	0	0	0
School Bus (All School Busses):	0	0	0
Non-School Bus (> 8) in Commerce:	0	0	0
Transit Bus:	0	0	0
Passenger Car/Van:	11	9	1
Passenger Car/Van w/Trailer:	0	0	0
Pickup Truck/Utility Van:	4	1	0
Pickup Truck/Utility Van w/Trailer:	0	0	0
SUV:	2	4	1
SUV w/Trailer:	0	0	0
Motor Home:	0	0	0
Motorcycle:	0	0	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	0	0	0
Light Rail:	0	0	0
Other:	0	0	0
Unknown:	0	0	0
Total:	**17**	**14**	**2**

Commercial Vehicle

Road Conditions

Dry:	12
Wet:	2
Muddy:	0
Snowy:	0
Icy:	1
Slushy:	1
Foreign Material:	0
With Road Treatment:	1
Unknown:	0
Total:	**17**

Accident Rates

PDO:	0.12 *	* MVMT
INJ:	0.00 *	** 100 MVMT
FAT:	0.00 **	**Total:** **0.12** *

ADT: 125,000 **Length:** 1.00 **Coris File:** tcoris2010.dbf

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
General Accident Summary Report

Job #: 20130416103008

Highway: 225A **Begin:** 0.40 **End:** 1.06 **From:** 07/01/2009 **To:** 06/30/2012

DTC Blvd.

Severity

PDO:	30	
INJ:	2	2:Injured
FAT:	0	0:Killed
Total:	**32**	

Number of Vehicles

One Vehicle:	4
Two Vehicles:	22
Three or More:	6
Unknown:	0
Total:	**32**

Location

On Road:	28
Off Road:	4
Unknown:	0
Total:	**32**

Accident Type

Overturning:	0	Sideswipe (Same):	5	Bicycles:	0
Other Non Collision:	0	Sideswipe (Opposite):	0	Domestic Animal:	0
Pedestrians:	0	Approach Turn:	0	Wild Animal:	0
Broadside:	0	Overtaking Turn:	0	Fixed Objects:	4
Head On:	0	Parked Motor Vehicle:	0	Other Objects:	0
Rear End:	23	Railway Vehicle:	0	Unknown:	0
				Total:	**32**

Lighting Conditions

Daylight:	24
Dawn or Dusk:	2
Dark - Lighted:	5
Dark - Unlighted:	1
Unknown:	0
Total:	**32**

Mainline/Ramps/Frontage Rds

Mainline:	31
Ramps:	1
Frontage Roads:	0
Intsx Frontage/Ramps:	0
HOV Lanes:	0
Unknown:	0
Total:	**32**

Weather Conditions

None:	27
Rain:	3
Snow/Sleet/Hail:	2
Fog:	0
Dust:	0
Wind:	0
Unknown:	0
Total:	**32**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Vehicle/Vehicle Combo (> 10k Lbs):	1	0	0
School Bus (All School Busses):	0	0	0
Non-School Bus (> 8) in Commerce:	0	0	1
Transit Bus:	0	0	0
Passenger Car/Van:	18	12	4
Passenger Car/Van w/Trailer:	0	0	0
Pickup Truck/Utility Van:	1	4	1
Pickup Truck/Utility Van w/Trailer:	0	0	0
SUV:	8	11	0
SUV w/Trailer:	0	0	0
Motor Home:	0	0	0
Motorcycle:	1	0	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	3	1	0
Light Rail:	0	0	0
Other:	0	0	0
Unknown:	0	0	0
Total:	**32**	**28**	**6**

Commercial Vehicle

Road Conditions

Dry:	25
Wet:	3
Muddy:	0
Snowy:	0
Icy:	3
Slushy:	0
Foreign Material:	1
With Road Treatment:	0
Unknown:	0
Total:	**32**

Accident Rates

PDO:	0.23 *	* MVMT
INJ:	0.02 *	** 100 MVMT
FAT:	0.00 **	**Total:** **0.25** *

ADT: 117,839 **Length:** 1.00 **Coris File:** tcoris2010.dbf

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
General Accident Summary Report

Job #: 20130416103132

Highway: 225A **Begin:** 1.07 **End:** 2.64 **From:** 07/01/2009 **To:** 06/30/2012

Yosemite Street

Severity

PDO:	79	
INJ:	6	8 :Injured
FAT:	0	0 :Killed
Total:	**85**	

Number of Vehicles

One Vehicle:	3
Two Vehicles:	61
Three or More:	21
Unknown:	0
Total:	**85**

Location

On Road:	80
Off Road:	5
Unknown:	0
Total:	**85**

Accident Type

Overturning:	0	Sideswipe (Same):	14	Bicycles:	0
Other Non Collision:	0	Sideswipe (Opposite):	0	Domestic Animal:	0
Pedestrians:	0	Approach Turn:	0	Wild Animal:	0
Broadside:	0	Overtaking Turn:	0	Fixed Objects:	5
Head On:	0	Parked Motor Vehicle:	0	Other Objects:	1
Rear End:	65	Railway Vehicle:	0	Unknown:	0
				Total:	**85**

Lighting Conditions

Daylight:	73
Dawn or Dusk:	1
Dark - Lighted:	9
Dark - Unlighted:	2
Unknown:	0
Total:	**85**

Mainline/Ramps/Frontage Rds

Mainline:	85
Ramps:	0
Frontage Roads:	0
Intsx Frontage/Ramps:	0
HOV Lanes:	0
Unknown:	0
Total:	**85**

Weather Conditions

None:	80
Rain:	4
Snow/Sleet/Hail:	1
Fog:	0
Dust:	0
Wind:	0
Unknown:	0
Total:	**85**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Vehicle/Vehicle Combo (> 10k Lbs):	2	2	0
School Bus (All School Busses):	0	0	0
Non-School Bus (> 8) in Commerce:	0	0	0
Transit Bus:	0	0	0
Passenger Car/Van:	56	41	14
Passenger Car/Van w/Trailer:	0	0	0
Pickup Truck/Utility Van:	7	14	6
Pickup Truck/Utility Van w/Trailer:	1	0	0
SUV:	13	23	1
SUV w/Trailer:	0	0	0
Motor Home:	0	0	0
Motorcycle:	2	1	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	4	1	0
Light Rail:	0	0	0
Other:	0	0	0
Unknown:	0	0	0
Total:	**85**	**82**	**21**

Commercial Vehicle

Road Conditions

Dry:	78
Wet:	4
Muddy:	0
Snowy:	1
Icy:	1
Slushy:	1
Foreign Material:	0
With Road Treatment:	0
Unknown:	0
Total:	**85**

Accident Rates

PDO:	0.38 *	* MVMT
INJ:	0.03 *	** 100 MVMT
FAT:	0.00 **	**Total:** **0.41** *

ADT: 121,208 **Length:** 1.57 **Coris File:** tcoris2010.dbf

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
General Accident Summary Report

Job #: 20130416103234

Highway: 225A **Begin:** 2.65 **End:** 4.66 **From:** 07/01/2009 **To:** 06/30/2012

Parker Road

Severity

PDO:	84	
INJ:	12	14 :Injured
FAT:	0	0 :Killed
Total:	**96**	

Number of Vehicles

One Vehicle:	19
Two Vehicles:	69
Three or More:	8
Unknown:	0
Total:	**96**

Location

On Road:	78
Off Road:	18
Unknown:	0
Total:	**96**

Accident Type

Overturning:	3	Sideswipe (Same):	28	Bicycles:	0
Other Non Collision:	0	Sideswipe (Opposite):	0	Domestic Animal:	0
Pedestrians:	1	Approach Turn:	1	Wild Animal:	0
Broadside:	0	Overtaking Turn:	1	Fixed Objects:	16
Head On:	0	Parked Motor Vehicle:	3	Other Objects:	1
Rear End:	42	Railway Vehicle:	0	Unknown:	0
				Total:	**96**

Lighting Conditions

Daylight:	72
Dawn or Dusk:	2
Dark - Lighted:	15
Dark - Unlighted:	7
Unknown:	0
Total:	**96**

Mainline/Ramps/Frontage Rds

Mainline:	93
Ramps:	3
Frontage Roads:	0
Intsx Frontage/Ramps:	0
HOV Lanes:	0
Unknown:	0
Total:	**96**

Weather Conditions

None:	84
Rain:	0
Snow/Sleet/Hail:	11
Fog:	1
Dust:	0
Wind:	0
Unknown:	0
Total:	**96**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Vehicle/Vehicle Combo (> 10k Lbs):	5	2	0
School Bus (All School Busses):	0	0	0
Non-School Bus (> 8) in Commerce:	0	1	0
Transit Bus:	1	0	0
Passenger Car/Van:	56	46	4
Passenger Car/Van w/Trailer:	0	0	0
Pickup Truck/Utility Van:	8	9	0
Pickup Truck/Utility Van w/Trailer:	0	0	0
SUV:	21	17	4
SUV w/Trailer:	0	0	0
Motor Home:	0	0	0
Motorcycle:	2	1	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	2	1	0
Light Rail:	0	0	0
Other:	1	0	0
Unknown:	0	0	0
Commercial Vehicle **Total:**	**96**	**77**	**8**

Road Conditions

Dry:	72
Wet:	4
Muddy:	0
Snowy:	3
Icy:	12
Slushy:	3
Foreign Material:	0
With Road Treatment:	2
Unknown:	0
Total:	**96**

Accident Rates

PDO:	0.32 *	* MVMT
INJ:	0.05 *	** 100 MVMT
FAT:	0.00 **	**Total:** **0.37** *

ADT: 117,783 **Length:** 2.00 **Coris File:** tcoris2010.dbf

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
General Accident Summary Report

Microsoft Visual FoxPro 9 SP2
04/16/2013

Job #: 20130416103619

Highway: 25A **Begin:** 198.85 **End:** 199.76 **From:** 07/01/2009 **To:** 06/30/2012

Belleview

Severity

PDO:	177	
INJ:	18	22 :Injured
FAT:	0	0 :Killed
Total:	**195**	

Number of Vehicles

One Vehicle:	30
Two Vehicles:	135
Three or More:	30
Unknown:	0
Total:	**195**

Location

On Road:	165
Off Road:	30
Unknown:	0
Total:	**195**

Accident Type

Overturning:	1	Sideswipe (Same):	43	Bicycles:	0
Other Non Collision:	4	Sideswipe (Opposite):	0	Domestic Animal:	0
Pedestrians:	0	Approach Turn:	0	Wild Animal:	0
Broadside:	0	Overtaking Turn:	0	Fixed Objects:	31
Head On:	0	Parked Motor Vehicle:	0	Other Objects:	6
Rear End:	110	Railway Vehicle:	0	Unknown:	0
				Total:	**195**

Lighting Conditions

Daylight:	127
Dawn or Dusk:	11
Dark - Lighted:	51
Dark - Unlighted:	5
Unknown:	1
Total:	**195**

Mainline/Ramps/Frontage Rds

Mainline:	195
Ramps:	0
Frontage Roads:	0
Intsx Frontage/Ramps:	0
HOV Lanes:	0
Unknown:	0
Total:	**195**

Weather Conditions

None:	158
Rain:	5
Snow/Sleet/Hail:	28
Fog:	2
Dust:	0
Wind:	1
Unknown:	1
Total:	**195**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Vehicle/Vehicle Combo (> 10k Lbs):	3	2	2
School Bus (All School Busses):	1	0	0
Non-School Bus (> 8) in Commerce:	0	2	0
Transit Bus:	0	0	0
Passenger Car/Van:	104	96	18
Passenger Car/Van w/Trailer:	1	0	0
Pickup Truck/Utility Van:	22	16	2
Pickup Truck/Utility Van w/Trailer:	3	0	1
SUV:	50	49	7
SUV w/Trailer:	0	0	0
Motor Home:	0	0	0
Motorcycle:	3	0	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	8	0	0
Light Rail:	0	0	0
Other:	0	0	0
Unknown:	0	0	0
Commercial Vehicle **Total:**	**195**	**165**	**30**

Road Conditions

Dry:	151
Wet:	8
Muddy:	0
Snowy:	11
Icy:	14
Slushy:	4
Foreign Material:	0
With Road Treatment:	6
Unknown:	1
Total:	**195**

Accident Rates

PDO:	0.73 *	* MVMT
INJ:	0.07 *	** 100 MVMT
FAT:	0.00 **	**Total:** **0.81** *

ADT: 220,575 **Length:** 1.00 **Coris File:** tcoris2010.dbf

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
General Accident Summary Report

Job #: 20130416103713

Highway: 25A **Begin:** 199.77 **End:** 200.86 **From:** 07/01/2009 **To:** 06/30/2012

I-225 (on I-25)

Severity

PDO:	182	
INJ:	15	15 :Injured
FAT:	0	0 :Killed
Total:	**197**	

Number of Vehicles

One Vehicle:	26
Two Vehicles:	135
Three or More:	36
Unknown:	0
Total:	**197**

Location

On Road:	169
Off Road:	28
Unknown:	0
Total:	**197**

Accident Type

Overturning:	2	Sideswipe (Same):	50	Bicycles:	0
Other Non Collision:	1	Sideswipe (Opposite):	0	Domestic Animal:	0
Pedestrians:	0	Approach Turn:	0	Wild Animal:	1
Broadside:	0	Overtaking Turn:	0	Fixed Objects:	27
Head On:	0	Parked Motor Vehicle:	0	Other Objects:	3
Rear End:	113	Railway Vehicle:	0	Unknown:	0
				Total:	**197**

Lighting Conditions

Daylight:	144
Dawn or Dusk:	12
Dark - Lighted:	33
Dark - Unlighted:	8
Unknown:	0
Total:	**197**

Mainline/Ramps/Frontage Rds

Mainline:	197
Ramps:	0
Frontage Roads:	0
Intsx Frontage/Ramps:	0
HOV Lanes:	0
Unknown:	0
Total:	**197**

Weather Conditions

None:	150
Rain:	10
Snow/Sleet/Hail:	36
Fog:	1
Dust:	0
Wind:	0
Unknown:	0
Total:	**197**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Vehicle/Vehicle Combo (> 10k Lbs):	5	7	1
School Bus (All School Busses):	0	0	0
Non-School Bus (> 8) in Commerce:	0	0	0
Transit Bus:	0	2	0
Passenger Car/Van:	112	99	21
Passenger Car/Van w/Trailer:	0	0	0
Pickup Truck/Utility Van:	21	21	4
Pickup Truck/Utility Van w/Trailer:	0	0	1
SUV:	38	41	6
SUV w/Trailer:	0	0	0
Motor Home:	0	0	0
Motorcycle:	1	0	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	20	0	3
Light Rail:	0	0	0
Other:	0	1	0
Unknown:	0	0	0
Total:	**197**	**171**	**36**

Commercial Vehicle

Road Conditions

Dry:	137
Wet:	20
Muddy:	0
Snowy:	9
Icy:	15
Slushy:	4
Foreign Material:	0
With Road Treatment:	12
Unknown:	0
Total:	**197**

Accident Rates

PDO:	0.67 *	* MVMT
INJ:	0.06 *	** 100 MVMT
FAT:	0.00 **	**Total:** **0.73** *

ADT: 222,369 **Length:** 1.11 **Coris File:** tcoris2010.dbf

DR2447 Format

Colorado Department of Transportation
Safety and Traffic Engineering
General Accident Summary Report

Job #: 20130416103835

Highway: 25A **Begin:** 200.87 **End:** 202.14 **From:** 07/01/2009 **To:** 06/30/2012

Hampden

Severity

PDO:	150	
INJ:	21	25 :Injured
FAT:	0	0 :Killed
Total:	**171**	

Number of Vehicles

One Vehicle:	32
Two Vehicles:	107
Three or More:	32
Unknown:	0
Total:	**171**

Location

On Road:	139
Off Road:	32
Unknown:	0
Total:	**171**

Accident Type

Overturning:	3	Sideswipe (Same):	42	Bicycles:	0
Other Non Collision:	0	Sideswipe (Opposite):	0	Domestic Animal:	0
Pedestrians:	0	Approach Turn:	0	Wild Animal:	0
Broadside:	0	Overtaking Turn:	0	Fixed Objects:	32
Head On:	0	Parked Motor Vehicle:	0	Other Objects:	6
Rear End:	87	Railway Vehicle:	0	Unknown:	0
				Total:	**171**

Lighting Conditions

Daylight:	115
Dawn or Dusk:	8
Dark - Lighted:	42
Dark - Unlighted:	6
Unknown:	0
Total:	**171**

Mainline/Ramps/Frontage Rds

Mainline:	171
Ramps:	0
Frontage Roads:	0
Intsx Frontage/Ramps:	0
HOV Lanes:	0
Unknown:	0
Total:	**171**

Weather Conditions

None:	131
Rain:	9
Snow/Sleet/Hail:	29
Fog:	2
Dust:	0
Wind:	0
Unknown:	0
Total:	**171**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Vehicle/Vehicle Combo (> 10k Lbs):	3	3	0
School Bus (All School Busses):	0	1	0
Non-School Bus (> 8) in Commerce:	0	0	0
Transit Bus:	0	0	0
Passenger Car/Van:	93	77	17
Passenger Car/Van w/Trailer:	0	0	0
Pickup Truck/Utility Van:	18	15	5
Pickup Truck/Utility Van w/Trailer:	1	0	0
SUV:	40	43	10
SUV w/Trailer:	1	0	0
Motor Home:	0	0	0
Motorcycle:	1	0	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	14	0	0
Light Rail:	0	0	0
Other:	0	0	0
Unknown:	0	0	0
Commercial Vehicle **Total:**	**171**	**139**	**32**

Road Conditions

Dry:	117
Wet:	13
Muddy:	0
Snowy:	8
Icy:	20
Slushy:	6
Foreign Material:	0
With Road Treatment:	6
Unknown:	1
Total:	**171**

Accident Rates

PDO:	0.51 *	* MVMT
INJ:	0.07 *	** 100 MVMT
FAT:	0.00 **	**Total:** **0.58** *

ADT: 213,570 **Length:** 1.25 **Coris File:** tcoris2010.dbf

APPROACH TURN ACCIDENTS

Definition:

Two vehicles traveling opposite direction are approaching each other and one vehicle unsafely turns in front of the oncoming vehicle resulting in a front to side collision.

Event Sequence Diagrams [2]:

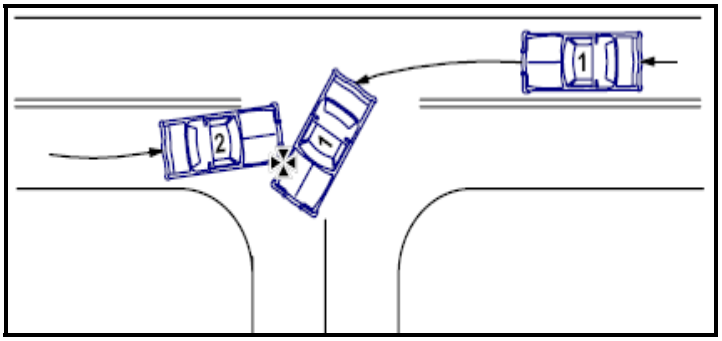


Figure FR-5: Front to Side

Probable Causes:

Approach turn accidents at signalized intersections are typically attributable to:

1) Restricted Sight Distance
2) Excessive speed
3) Poor traffic control visibility
4) Inadequate advance intersection warning signs
5) Inadequate traffic signal cycles
6) Inadequate road design and/or maintenance

BROADSIDE ACCIDENTS

Definition [1]:

Two vehicles approaching from non-opposing angular directions collide, typically resulting as one vehicle failed to either stop or yield right of way from a Stop or Yield sign, ran a red light, or was not cleared from the intersection upon the onset of the conflicting movement's green signal.

Event Sequence Diagrams [2]:

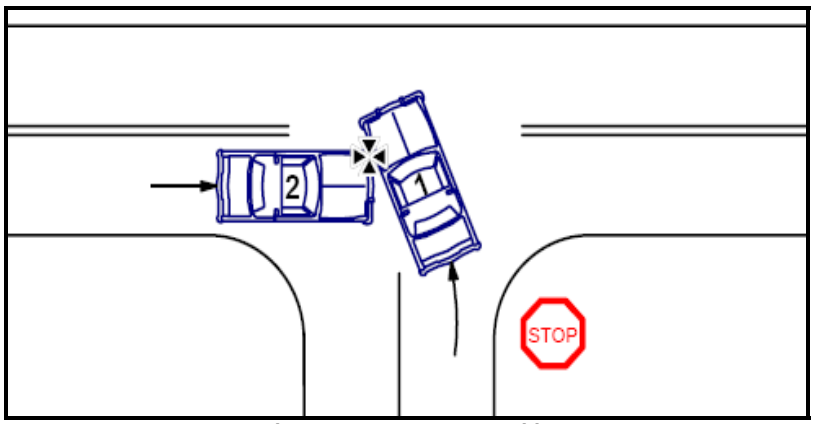


Figure FR-12A: Front to Side

Probable Causes:

Broadside accidents at signalized intersections are typically attributable to:

1) Restricted sight distance
2) Excessive Speed on approaches
3) Poor visibility of signals
4) Inadequate signal timing
5) Inadequate roadway lighting
6) Inadequate advance intersection warning signs
7) Large total intersection volume

HEAD-ON COLLISION ACCIDENTS

Definition [1]:

Two vehicles approaching opposite directions and intending to continue in opposite directions collide in a frontal or angular manner as a result of one or both vehicles crossing the painted or unpainted centerline or divided median of the roadway. This includes a collision resulting from one vehicle traveling the wrong way down a divided highway.

Event Sequence Diagrams [2]:

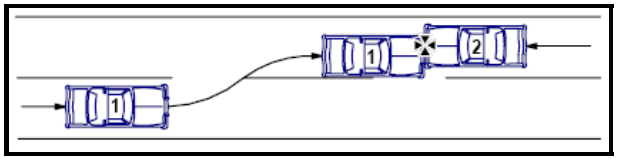


Figure FR-6A: Front to Front

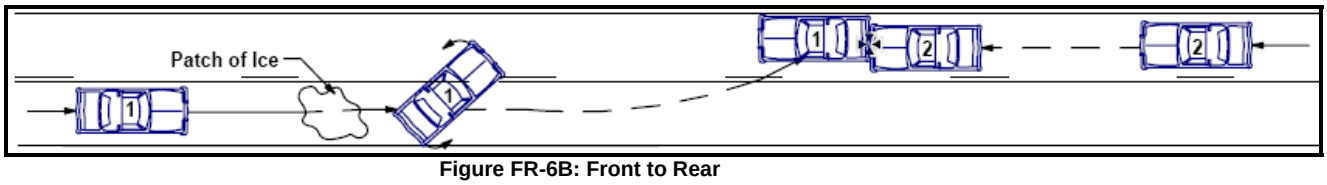


Figure FR-6B: Front to Rear

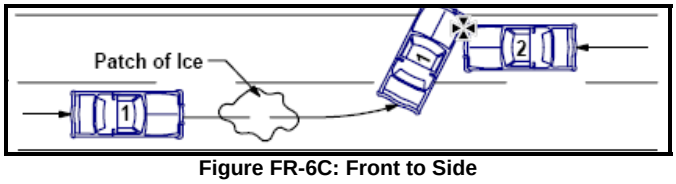


Figure FR-6C: Front to Side

Probable Causes:

Head-on collision accidents are typically attributable to:

1) Inadequate road design and/or maintenance
2) Inadequate shoulders
3) Excessive vehicle speed
4) Inadequate pavement markings
5) Inadequate channelization
6) Inadequate signing
7) Aggressive driving behaviors

OVERTAKING ACCIDENTS

Definition [3]:

Collisions occur when a vehicle tries to overtake another vehicle traveling in the same direction by overtaking when approaching or at a road junction on either side of the road, where the road narrows, when approaching a school crossing patrol, where traffic is queuing at junctions or in construction work zones. This forces another road user to swerve or slow down, at a level crossing, when a road user is indicating right.

Event Sequence Diagrams [2]:

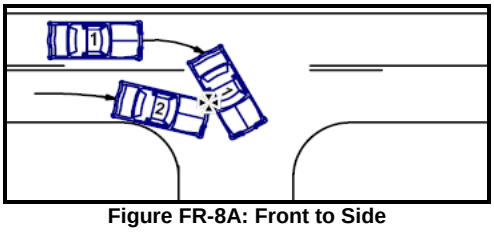


Figure FR-8A: Front to Side

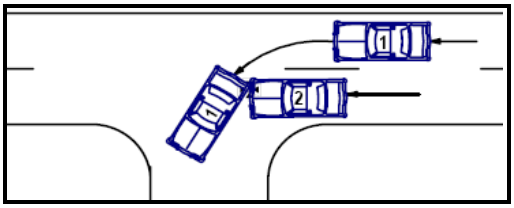


Figure FR-8B: Front to Side

Probable Causes:

Overtaking accidents at signalized intersections are typically attributable to:

1) Inadequate pavement markings
2) Inadequate signing
3) Inadequate road design and/or maintenance
4) Roadside features

OVERTURNING ACCIDENTS

Definition [1]:

A crash in which a vehicle overturns on or off the roadway without first having been involved in some other type single or multiple vehicle crash. This includes motorcycle crashes in which the operator loses control of and drops the bike, but had not initially struck another motor vehicle, fixed or non-fixed object, animal, bicyclist or pedestrian.

Event Sequence Diagrams [2]:

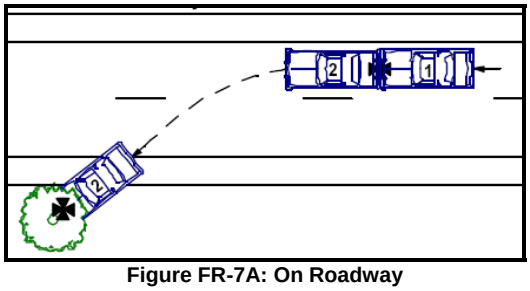


Figure FR-7A: On Roadway

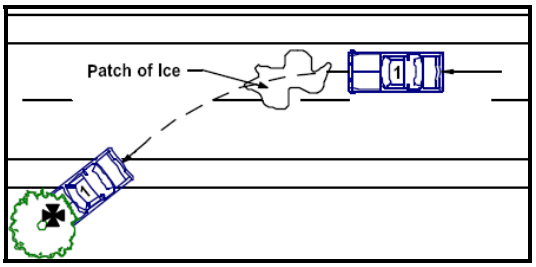


Figure FR-7A: Ran off left side

Probable Causes:

Overturning accidents are typically attributable to:

1) Roadside features
2) Inadequate shoulder / recovery zone
3) Pavement features

SIDESWIPE ACCIDENTS (OPPOSITE DIRECTION)

Definition [1]:

Two vehicles approaching opposite directions and intending to continue in opposite directions collide in a sideswiping manner as a result of one or both vehicles crossing the painted or unpainted centerline or divided median of the roadway. This also includes a collision resulting from one vehicle traveling the wrong way down a divided highway.

Event Sequence Diagrams [2]:

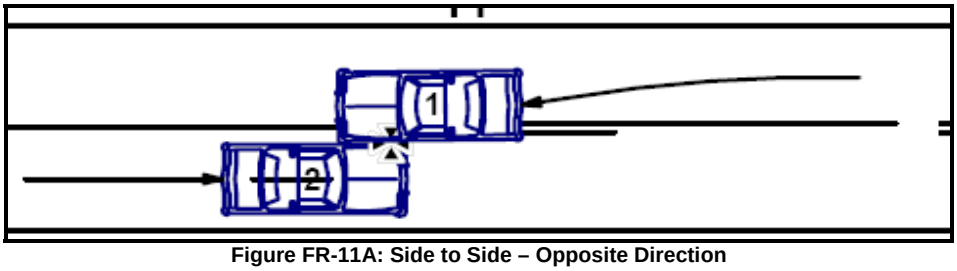


Figure FR-11A: Side to Side – Opposite Direction

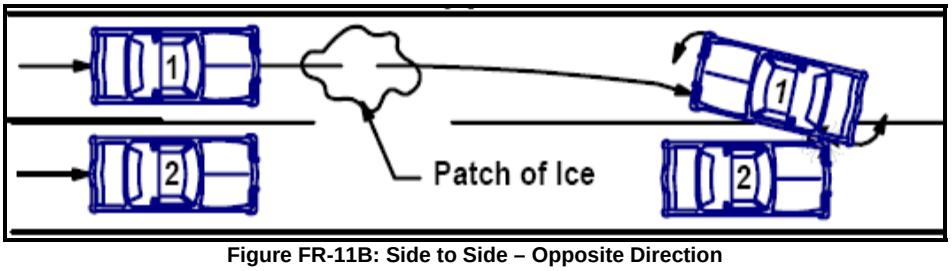


Figure FR-11B: Side to Side – Opposite Direction

Probable Causes:

Side swipe accidents are typically attributable to:

1) Inadequate road design and/or maintenance
2) Inadequate shoulders
3) Excessive vehicle speed
4) Inadequate pavement markings
5) Inadequate channelization
6) Inadequate signing

SIDESWIPE ACCIDENTS (SAME DIRECTION)

Definition [1]:

Two vehicles moving alongside each other and collide, with at least one of the vehicles being struck on the side. This type would include a collision resulting from one of the vehicles making an improper turn such as a left from the right lane or vice-versa or turning right from the appropriate outside lane and striking a vehicle passing on the right shoulder.

Event Sequence Diagrams [2]:

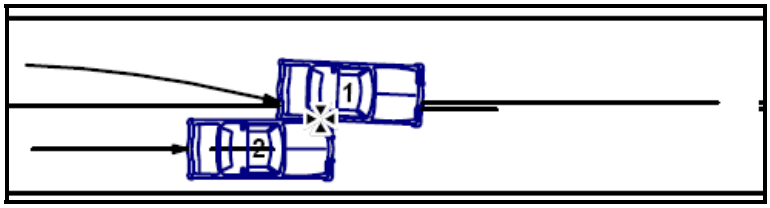


Figure FR-10A: Side to Side – Same Direction

Figure FR-10B: Side to Side – Same Direction

Probable Causes:

Side swipe accidents are typically attributable to:

1) Inadequate road design and/or maintenance
2) Inadequate shoulders
3) Excessive vehicle speed
4) Inadequate pavement markings
5) Inadequate channelization
6) Inadequate signing

REAR END ACCIDENTS

Definition [1]:

Two vehicles in a position of one behind the other and collide, regardless of what movement(s) either vehicle was in the process of making with the exception of one or both vehicles backing. This type includes a collision in which the leading vehicle spun out and became turned 180 degrees around such that the resulting same direction collision had it strike front end to front end with the following vehicle.

Event Sequence Diagrams [2]:

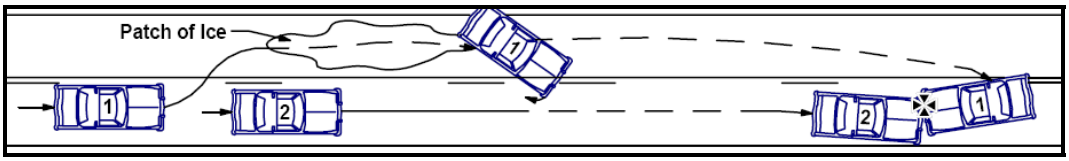


Figure FR-9A: Front to Front

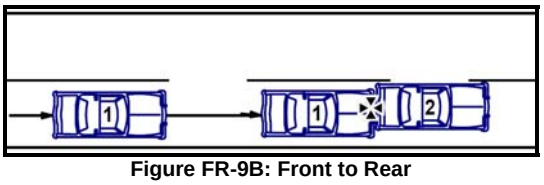


Figure FR-9B: Front to Rear

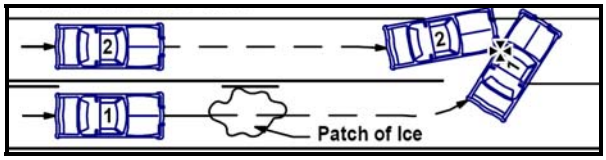


Figure FR-9C: Front to Side

Rear-End accidents at signalized intersections are typically attributable to:

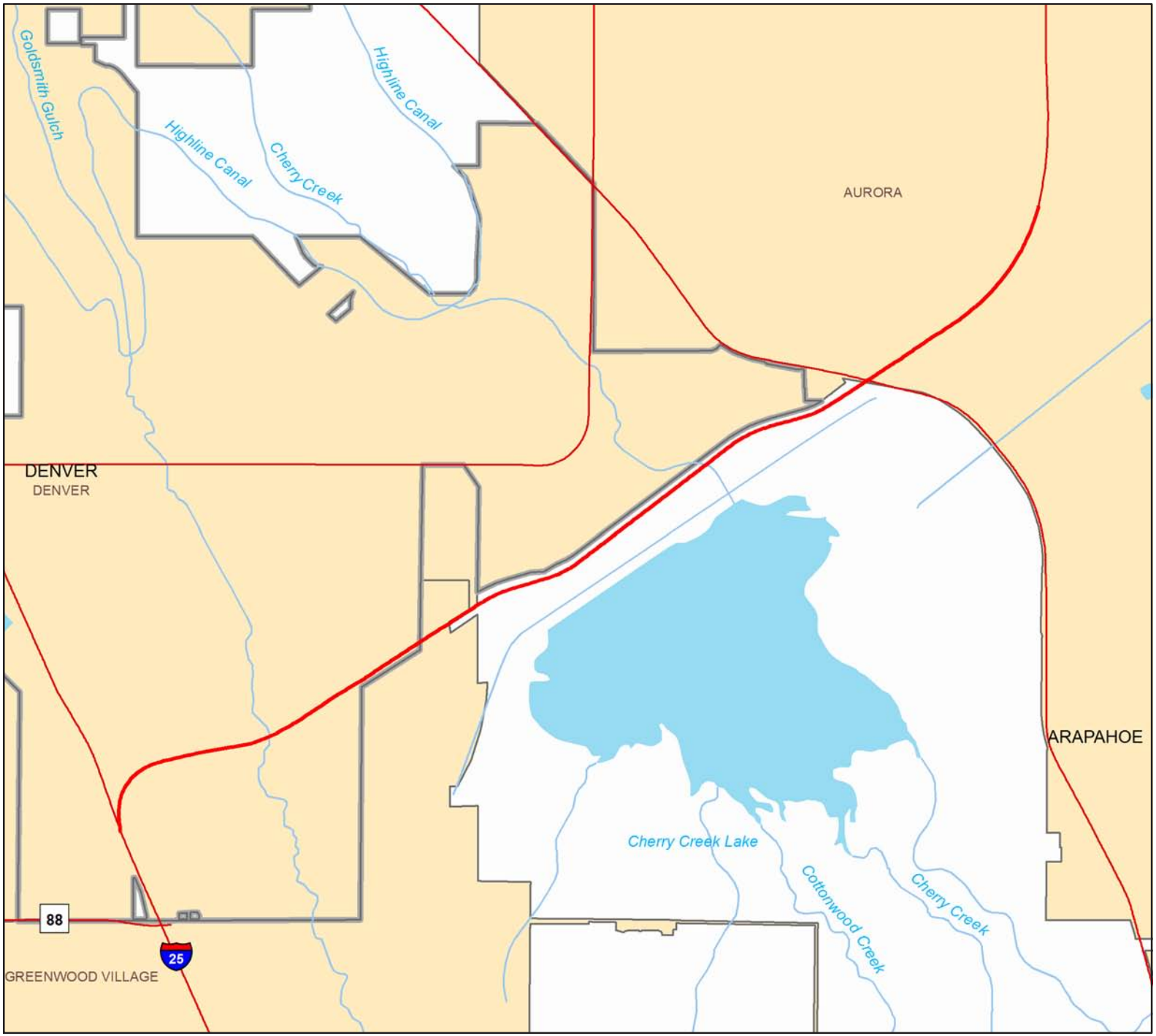
1) Slippery road surface
2) Large turning volume
3) Poor Visibility of signals
4) Inadequate signal timing
5) Unwarranted signal
6) Inadequate roadway lighting
7) Excessive speed on approaches
8) Crossing pedestrians
9) Uncontrolled access at intersection
10) Short turning radius
11) Inadequate directional signing

Rear-End accidents at un-signalized intersections are typically attributable to:

1) Drivers unaware of intersection
2) Slippery road surface
3) Large turning volume

4) Inadequate roadway lighting
5) Excessive speed on approaches
6) Lack of adequate gaps for turning vehicles
7) Absence of turning lanes
8) Crossing pedestrians
9) Uncontrolled access at intersection
10) Short turning radius
11) Inadequate directional signing

Route 225A From 0 To 5



Legend

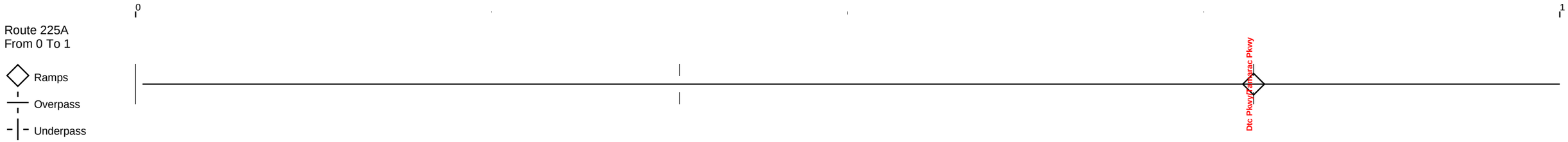
- Highways
- Streams - 24K
- Lakes
- Cities
- Counties

Created:
8/28/2013 2:01:44 PM

0.5 0 0.5 1 1.5 Miles

N

DOT
DEPARTMENT OF TRANSPORTATION



CLASSIFICATION

Access Control	FW F-W: Interstate System, Freeway Facils

GEOMETRICS

Is Divided (Yes=1,No = 0)	1		
Median Type	21 Depressed	55 HOV Reversible	
Median Width	99	38	
Operation	2 Two-Way		
Primary Inside Shoulder Type	3 Portland		
Primary Inside Shoulder Width	8	6	10
Primary Outside Shoulder	3 Portland		
Primary Outside Shoulder Width	8	10	12
Primary Surface Type	3 JPCP - Jointed Plain Concrete	2 AC - Asphalt Concrete (Bituminous)	
Secondary Inside Shoulder Width	12	6	10
Secondary Outside Shoulder Width	12		
Secondary Surface Type	2 AC - Asphalt Concrete (Bituminous)		

SAFETY

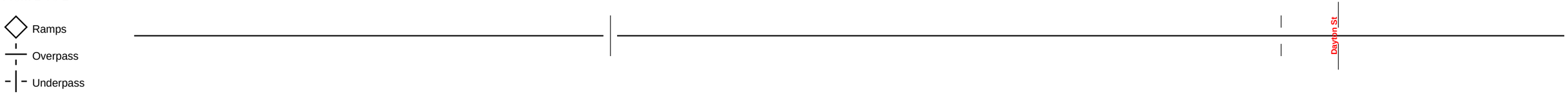
Speed Limit	55

TRAFFIC

AADT	127000	117000

It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

Route 225A
From 1 To 2



CLASSIFICATION

Access Control	FW F-W: Interstate System, Freeway Facils					

GEOMETRICS

Is Divided (Yes=1,No = 0)	1					
Median Type	55 HOV Reversible					
Median Width	33	39	43	55	53	
Operation	2 Two-Way					
Primary Inside Shoulder Type	3 Portland			2 Bituminous		
Primary Inside Shoulder Width	10	11	12	14	12	
Primary Outside Shoulder	3 Portland			2 Bituminous		
Primary Outside Shoulder Width	12	14	12	9	12	
Primary Surface Type	2 AC - Asphalt Concrete (Bituminous)					
Secondary Inside Shoulder Width	10	12		14	12	
Secondary Outside Shoulder Width	12	9	12	14	12	20
Secondary Surface Type	2 AC - Asphalt Concrete (Bituminous)					

SAFETY

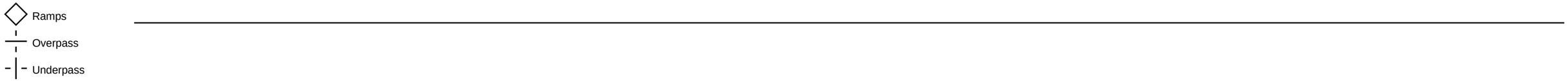
Speed Limit	55					

TRAFFIC

AADT	117000	131000				

It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

Route 225A
From 2 To 3



CLASSIFICATION

Access Control	FW F-W: Interstate System, Freeway Facils

GEOMETRICS

Is Divided (Yes=1,No = 0)	1
Median Type	55 HOV Reversible
Median Width	35
Operation	2 Two-Way
Primary Inside Shoulder Type	2 Bituminous
Primary Inside Shoulder Width	11
Primary Outside Shoulder	2 Bituminous
Primary Outside Shoulder Width	13
Primary Surface Type	2 AC - Asphalt Concrete (Bituminous)
Secondary Inside Shoulder Width	11
Secondary Outside Shoulder Width	13
Secondary Surface Type	2 AC - Asphalt Concrete (Bituminous)

SAFETY

Speed Limit	55

TRAFFIC

AADT	131000

It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

Route 225A
From 3 To 4

CLASSIFICATION

Access Control	FW F-W: Interstate System, Freeway Facils			

GEOMETRICS

Is Divided (Yes=1,No = 0)	1			
Median Type	55 HOV Reversible			
Median Width	35	33		
Operation	2 Two-Way			
Primary Inside Shoulder Type	2 Bituminous			
Primary Inside Shoulder Width	11	22	14	12
Primary Outside Shoulder	2 Bituminous			
Primary Outside Shoulder Width	17	11	10	
Primary Surface Type	2 AC - Asphalt Concrete (Bituminous)		3 JPCP - Jointed Plain Concrete	
Secondary Inside Shoulder Width	11	20	13	10
Secondary Outside Shoulder Width	13	10	12	13
Secondary Surface Type	2 AC - Asphalt Concrete (Bituminous)		3 JPCP - Jointed Plain Concrete	

SAFETY

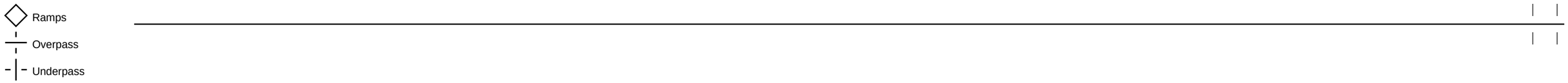
Speed Limit	55			

TRAFFIC

AADT	131000			107000

It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

Route 225A
From 4 To 5



CLASSIFICATION

Access Control	FW F-W: Interstate System, Freeway Facils

GEOMETRICS

Is Divided (Yes=1,No = 0)	1			
Median Type	55 HOV Reversible	21 Depressed		
Median Width	33	51	45	
Operation	2 Two-Way			
Primary Inside Shoulder Type	2 Bituminous			
Primary Inside Shoulder Width	12	2	4	5
Primary Outside Shoulder	2 Bituminous			
Primary Outside Shoulder Width	10	13	12	
Primary Surface Type	2 AC - Asphalt Concrete (Bituminous)			
Secondary Inside Shoulder Width	12	2	4	8
Secondary Outside Shoulder Width	21	13	8	6
Secondary Surface Type	2 AC - Asphalt Concrete (Bituminous)			

SAFETY

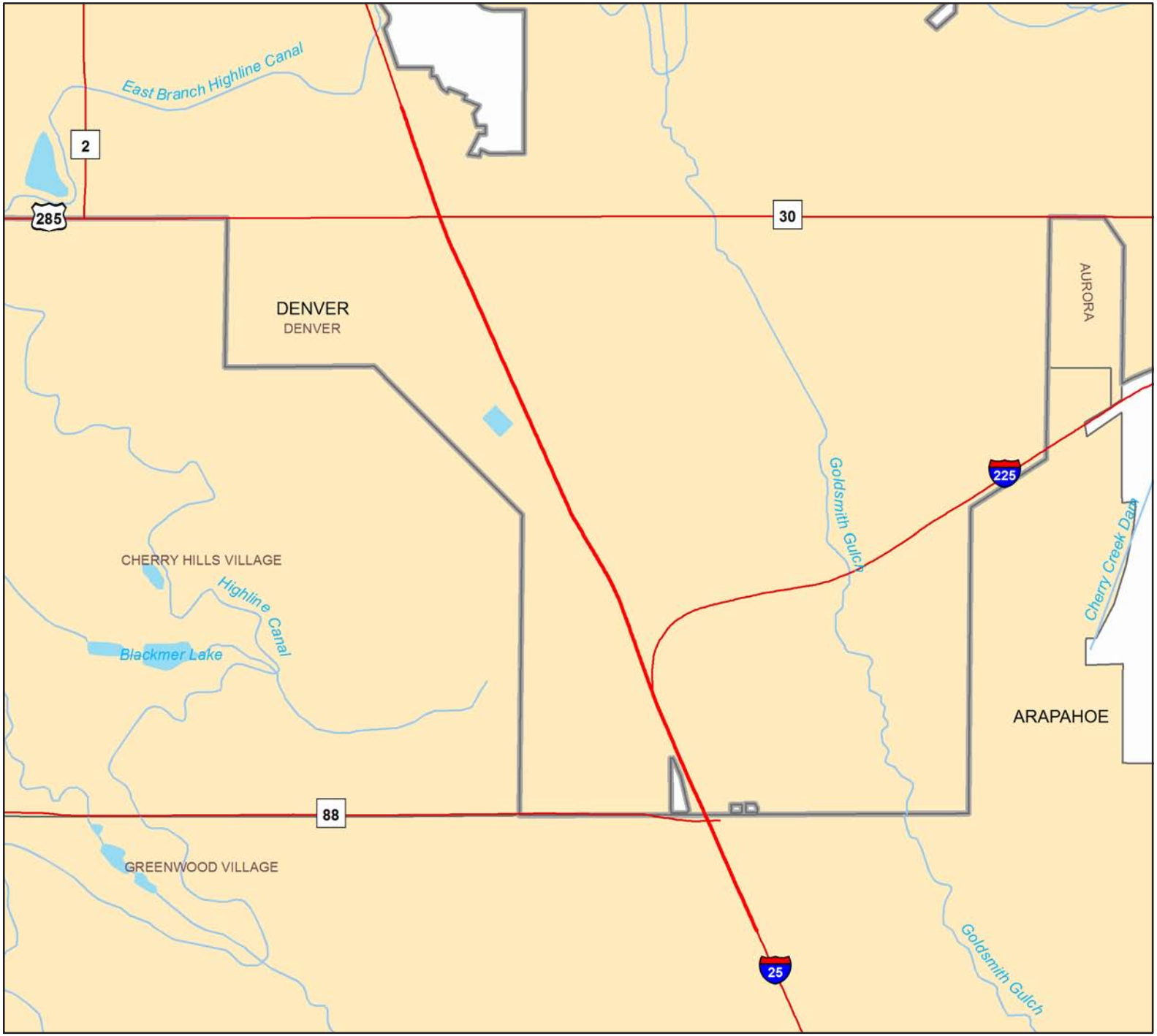
Speed Limit	55

TRAFFIC

AADT	107000

It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

Route 025A From 199 To 202



Legend

- Highways
- Streams - 24K
- Lakes
- Cities
- Counties

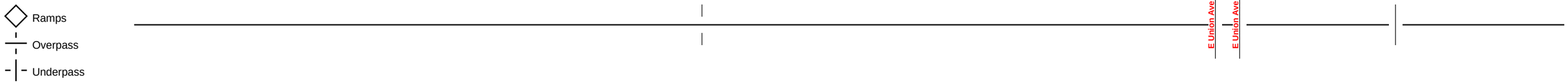
Created:
8/28/2013 1:58:26 PM

0.4 0 0.4 0.8 1.2 Miles

N

DOT
DEPARTMENT OF TRANSPORTATION

Route 025A
From 199 To 200



CLASSIFICATION

Access Control	FW F-W: Interstate System, Freeway Facils

GEOMETRICS

Is Divided (Yes=1,No = 0)	1	
Median Type	14 Level	
Median Width	5	
Operation	2 Two-Way	
Primary Inside Shoulder Type	3 Portland	
Primary Inside Shoulder Width	9	
Primary Outside Shoulder	3 Portland	
Primary Outside Shoulder Width	10	
Primary Surface Type	2 AC - Asphalt Concrete (Bituminous)	3 JPCP - Jointed Plain Concrete
Secondary Inside Shoulder Width	9	
Secondary Outside Shoulder Width	10	
Secondary Surface Type	2 AC - Asphalt Concrete (Bituminous)	3 JPCP - Jointed Plain Concrete

SAFETY

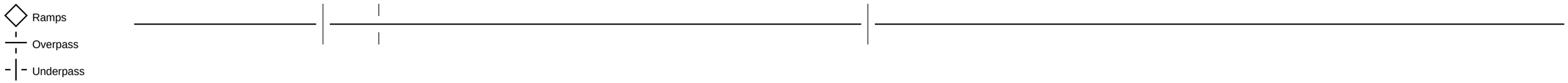
Speed Limit	65	55

TRAFFIC

AADT	238000	226000

It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

Route 025A
From 200 To 201



CLASSIFICATION

Access Control	FW F-W: Interstate System, Freeway Facils

GEOMETRICS

Is Divided (Yes=1,No = 0)	1		
Median Type	14 Level		
Median Width	5		
Operation	2 Two-Way		
Primary Inside Shoulder Type	3 Portland		
Primary Inside Shoulder Width	9		
Primary Outside Shoulder	3 Portland		
Primary Outside Shoulder Width	8	30	9
Primary Surface Type	3 JPCP - Jointed Plain Concrete		
Secondary Inside Shoulder Width	9		
Secondary Outside Shoulder Width	10	8	10
Secondary Surface Type	3 JPCP - Jointed Plain Concrete		

SAFETY

Speed Limit	55

TRAFFIC

AADT	226000	225000

It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

CLASSIFICATION

Access Control	FW F-W: Interstate System, Freeway Facils	

GEOMETRICS

Is Divided (Yes=1,No = 0)	1		
Median Type	14 Level		
Median Width	5		
Operation	2 Two-Way		
Primary Inside Shoulder Type	3 Portland		
Primary Inside Shoulder Width	9		
Primary Outside Shoulder	3 Portland		
Primary Outside Shoulder Width	9		
Primary Surface Type	3 JPCP - Jointed Plain Concrete	2 AC - Asphalt Concrete (Bituminous)	
Secondary Inside Shoulder Width	9		
Secondary Outside Shoulder Width	10	9	20
Secondary Surface Type	3 JPCP - Jointed Plain Concrete	2 AC - Asphalt Concrete (Bituminous)	

SAFETY

Speed Limit	55	

TRAFFIC

AADT	225000	206000

It may appear that information is missing from the straight line diagram. If so, reduce the number of miles/page and re-submit the request.

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
1	025A	198.85	4/13/2010	1307	PDO	10021140	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
2	025A	198.87	10/10/2009	0728	PDO	09055258	ON	NON-INTERSECTION	2	ICY	DARK-UNLIGHTED
3	025A	198.87	11/9/2011	1042	PDO	11063341	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
4	025A	198.91	2/4/2011	1749	PDO	11008257	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
5	025A	198.91	5/20/2011	1628	PDO	11027123	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
6	025A	198.92	8/29/2009	0429	PDO	09046534	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
7	025A	198.94	10/16/2009	1640	PDO	09057242	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
8	025A	198.95	4/16/2010	1834	PDO	10023286	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
9	025A	198.95	5/31/2012	1659	PDO	12030161	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
10	025A	198.96	4/16/2010	1822	PDO	10021143	ON	NON-INTERSECTION	2	UNKNOWN	DAYLIGHT
11	025A	198.96	3/10/2011	1510	PDO	11013699	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
12	025A	198.96	12/20/2011	1331	PDO	11071655	ON	NON-INTERSECTION	2	DRY	UNKNOWN
13	025A	198.96	1/8/2010	1722	PDO	10000208	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
14	025A	198.96	2/16/2011	0902	PDO	11011273	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
15	025A	198.97	4/24/2012	2340	PDO	12021210	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
16	025A	198.97	6/19/2012	1737	PDO	12032731	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
17	025A	198.98	10/16/2009	1621	PDO	09060646	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
18	025A	198.98	10/16/2009	1621	PDO	09060648	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
19	025A	198.98	6/27/2010	1050	PDO	10034699	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
20	025A	198.98	6/7/2011	0827	PDO	11032538	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
21	025A	199	9/2/2009	1709	PDO	09051228	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
22	025A	199	12/14/2011	2125	PDO	11071657	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
23	025A	199	6/22/2012	1340	PDO	12033753	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
24	025A	199.01	3/1/2010	0754	PDO	10012517	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
25	025A	199.01	12/5/2010	2234	PDO	10074793	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
26	025A	199.01	3/24/2010	0016	PDO	10014547	ON	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DARK-LIGHTED
27	025A	199.02	6/11/2010	1730	INJ	10031918	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
28	025A	199.03	8/26/2011	1824	PDO	11047002	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
29	025A	199.04	1/20/2011	1538	PDO	11003704	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
30	025A	199.05	3/31/2011	1643	PDO	11020737	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
31	025A	199.05	5/3/2011	1719	PDO	11025000	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
32	025A	199.05	8/21/2011	1253	PDO	11045461	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
33	025A	199.05	9/30/2011	1634	PDO	11054966	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
34	025A	199.05	10/5/2011	2302	PDO	11055863	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
35	025A	199.05	1/5/2011	1126	INJ	11001080	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
36	025A	199.05	4/10/2012	1720	INJ	12017007	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
37	025A	199.06	1/13/2012	1845	PDO	12001723	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
38	025A	199.06	1/26/2012	1748	PDO	12004890	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
39	025A	199.1	7/23/2010	1545	PDO	10039947	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
40	025A	199.1	11/15/2011	1709	PDO	11066648	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
41	025A	199.1	5/1/2012	1319	INJ	12024811	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
42	025A	199.12	2/2/2010	1740	PDO	10005044	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
43	025A	199.12	9/12/2010	1149	PDO	10057560	OFF LEFT	NON-INTERSECTION	2	DRY	DAYLIGHT
44	025A	199.12	1/31/2011	2251	PDO	11005039	OFF LEFT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
45	025A	199.12	10/14/2011	1050	PDO	11059089	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
46	025A	199.12	10/28/2011	1825	PDO	11061453	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
47	025A	199.12	1/13/2010	1750	PDO	10001105	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
48	025A	199.12	7/1/2010	0835	PDO	10034701	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
49	025A	199.12	4/5/2011	1606	PDO	11017705	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
50	025A	199.12	5/18/2011	1307	PDO	11027115	ON	NON-INTERSECTION	2	WET	DAYLIGHT
51	025A	199.13	10/27/2011	1317	PDO	11060167	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
52	025A	199.19	8/7/2010	1637	INJ	10047487	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
53	025A	199.2	4/12/2012	0726	PDO	12018909	ON	RAMP	2	DRY	DAYLIGHT
54	025A	199.2	5/27/2012	1315	INJ	12030160	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
55	025A	199.21	6/27/2011	1607	PDO	11035977	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
56	025A	199.21	1/10/2011	0937	PDO	11001091	OFF LEFT	NON-INTERSECTION	1	SNOWY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
1	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	065
2	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	030
3	NONE	CONCRETE HIGHWAY BARRIER	N	SUV	OTHER FACTOR	065
4	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN W/TRAILER	NONE APPARENT	015
5	NONE	REAR END	S	SUV	NONE APPARENT	030
6	NONE	SIDESWIPE (SAME DIRECTION)	N	VEH COMBO (10,001 LBS AND OVER)	DRIVER FATIGUE	065
7	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	020
8	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	025
9	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
10	UNKNOWN	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	030
11	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	ILLNESS/MEDICAL	065
12	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	ASLEEP AT THE WHEEL	075
13	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	030
14	NONE	REAR END	S	SUV	NONE APPARENT	040
15	NONE	REAR END	N	SUV	DUI, DWAI, DUID	045
16	NONE	REAR END	S	SUV	NONE APPARENT	015
17	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	030
18	NONE	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	010
19	NONE	OTHER NON-COLLISION	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	065
20	NONE	REAR END	S	SUV	DRIVER INEXPERIENCE	010
21	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	055
22	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	000
23	NONE	VEHICLE DEBRIS OR CARGO	S	HIT & RUN - UNKNOWN	OTHER FACTOR	065
24	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	025
25	NONE	REAR END	N	PASSENGER CAR/VAN	DUI, DWAI, DUID	080
26	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	040
27	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	030
28	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/PASSENGER	050
29	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	020
30	NONE	VEHICLE DEBRIS OR CARGO	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	065
31	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	010
32	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	065
33	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
34	NONE	REAR END	N	SUV	NONE APPARENT	030
35	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	050
36	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	055
37	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	25
38	NONE	REAR END	N	SUV	DISTRACTED/RADIO	15
39	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	015
40	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
41	NONE	SIDESWIPE (SAME DIRECTION)	N	MOTORCYCLE	DISTRACTED/OTHER	070
42	NONE	REAR END	N	SUV	NONE APPARENT	030
43	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	060
44	NONE	CONCRETE HIGHWAY BARRIER	N	SUV	NONE APPARENT	045
45	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	UK
46	NONE	REAR END	N	SUV	NONE APPARENT	050
47	NONE	REAR END	S	SUV	NONE APPARENT	065
48	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	035
49	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	045
50	RAIN	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	065
51	NONE	REAR END	N	SUV	NONE APPARENT	065
52	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	065
53	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	040
54	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	065
55	NONE	CONCRETE HIGHWAY BARRIER	N	SUV	DISTRACTED/OTHER	050
56	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	DRIVER INEXPERIENCE	045

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
57	025A	199.23	12/27/2010	1743	PDO	10074795	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
58	025A	199.23	4/9/2010	1544	PDO	10021034	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
59	025A	199.23	7/16/2010	1734	PDO	10038688	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
60	025A	199.24	2/23/2011	1739	PDO	11011306	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
61	025A	199.24	6/8/2011	1803	PDO	11029673	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
62	025A	199.25	6/26/2012	1753	PDO	12032741	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
63	025A	199.25	11/1/2011	1811	PDO	11061454	ON	NON-INTERSECTION	2	DRY	DARK-UNLIGHTED
64	025A	199.25	5/9/2012	1754	PDO	12024812	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
65	025A	199.27	5/17/2012	1752	PDO	12024825	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
66	025A	199.27	6/26/2012	1643	PDO	12033757	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
67	025A	199.29	10/1/2011	1900	PDO	11055855	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
68	025A	199.29	10/5/2011	2254	PDO	11055864	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
69	025A	199.29	8/26/2009	1454	PDO	09046998	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
70	025A	199.3	12/2/2009	0540	PDO	09069868	OFF LEFT	NON-INTERSECTION	1	ICY	DARK-UNLIGHTED
71	025A	199.3	6/10/2010	1401	PDO	10031913	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
72	025A	199.31	4/19/2010	1826	INJ	10027204	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
73	025A	199.31	8/17/2010	1335	PDO	10047206	ON	NON-INTERSECTION	1	DRY	DAYLIGHT
74	025A	199.31	10/29/2010	1836	PDO	10065006	ON	RAMP	2	DRY	DAYLIGHT
75	025A	199.33	9/1/2011	0655	PDO	11048721	ON	RAMP	2	DRY	DAYLIGHT
76	025A	199.34	10/10/2009	0534	PDO	09055262	ON	NON-INTERSECTION	2	ICY	DARK-LIGHTED
77	025A	199.34	10/10/2009	0613	PDO	09055263	OFF RIGHT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
78	025A	199.34	5/8/2011	1922	INJ	11030419	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
79	025A	199.34	10/10/2009	0756	PDO	09055254	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
80	025A	199.34	10/10/2009	0748	PDO	09055257	OFF RIGHT	NON-INTERSECTION	1	ICY	DAYLIGHT
81	025A	199.35	11/16/2009	0755	PDO	09063677	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
82	025A	199.35	1/16/2012	1401	PDO	12001726	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
83	025A	199.36	5/16/2012	1633	PDO	12024080	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
84	025A	199.37	8/19/2009	0807	INJ	09044096	ON	NON-INTERSECTION	5	DRY	DAYLIGHT
85	025A	199.37	10/10/2009	0541	PDO	09055250	ON	NON-INTERSECTION	2	ICY	DARK-LIGHTED
86	025A	199.37	11/15/2009	1205	PDO	09063676	ON	NON-INTERSECTION	2	SLUSHY W/VIS ICY ROAD TREATMENT	DAYLIGHT
87	025A	199.37	12/7/2009	0720	PDO	09069875	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
88	025A	199.38	7/10/2009	1554	PDO	09036611	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
89	025A	199.38	7/30/2009	1820	PDO	09044087	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
90	025A	199.38	11/1/2010	0922	PDO	10061890	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
91	025A	199.38	10/20/2011	1235	PDO	11059097	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
92	025A	199.38	10/27/2011	1604	PDO	11060155	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
93	025A	199.38	12/6/2011	1357	INJ	11066673	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
94	025A	199.38	8/20/2011	0909	PDO	11047553	ON	RAMP	2	DRY	DAYLIGHT
95	025A	199.38	1/29/2012	0522	PDO	12004892	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
96	025A	199.38	6/6/2011	1324	PDO	11032537	ON	RAMP	2	DRY	DAYLIGHT
97	025A	199.39	10/15/2009	1243	PDO	09057237	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
98	025A	199.4	1/22/2012	0106	PDO	12002669	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
99	025A	199.4	6/12/2012	1820	PDO	12033755	ON	INTERSECTION RELATED	3	DRY	DAYLIGHT
100	025A	199.4	10/22/2009	1737	PDO	09057445	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
101	025A	199.4	12/22/2009	1815	PDO	09070817	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
102	025A	199.4	4/7/2010	0541	PDO	10017873	OFF LEFT	NON-INTERSECTION	1	SLUSHY	DARK-LIGHTED
103	025A	199.4	6/18/2010	0138	PDO	10033252	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
104	025A	199.4	12/17/2010	1815	PDO	10071161	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
105	025A	199.4	12/31/2010	1645	PDO	10071717	OFF LEFT	NON-INTERSECTION	2	SNOWY	DARK-LIGHTED
106	025A	199.4	1/3/2011	1906	PDO	11001074	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
107	025A	199.4	1/7/2011	2224	PDO	11001088	OFF LEFT	NON-INTERSECTION	1	DRY	DARK-LIGHTED
108	025A	199.4	8/4/2011	1855	PDO	11040618	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
109	025A	199.4	6/7/2012	1737	INJ	12049820	ON	NON-INTERSECTION	5	DRY	DAYLIGHT
110	025A	199.4	11/24/2009	0738	PDO	09066260	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
111	025A	199.4	3/11/2010	0900	PDO	10014671	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
112	025A	199.4	3/20/2010	1131	PDO	10015364	ON	NON-INTERSECTION	2	WET	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
57	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
58	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	065
59	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	065
60	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
61	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	030
62	WIND	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	040
63	NONE	REAR END	S	SUV	NONE APPARENT	055
64	NONE	REAR END	S	PASSENGER CAR/VAN W/TRAILER	NONE APPARENT	030
65	NONE	REAR END	N	SUV	OTHER FACTOR	015
66	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER FATIGUE	040
67	NONE	REAR END	N	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	060
68	NONE	REAR END	N	SUV	DISTRACTED/OTHER	040
69	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	050
70	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	NONE APPARENT	050
71	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	015
72	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	065
73	NONE	INVOLVING OTHER OBJECT	N	PASSENGER CAR/VAN	NONE APPARENT	050
74	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	AGRESSIVE DRIVING	040
75	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/CELL PHONE	015
76	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	040
77	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	030
78	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	ILLNESS/MEDICAL	060
79	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	055
80	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	020
81	NONE	REAR END	N	SUV	DISTRACTED/OTHER	025
82	NONE	VEHICLE DEBRIS OR CARGO	S	PICKUP TRUCK/UTILITY VAN W/TRAILER	NONE APPARENT	60
83	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	DRIVER UNFAMILIAR W/AREA	UK
84	NONE	REAR END	N	SUV	NONE APPARENT	045
85	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	SUV	OTHER FACTOR	040
86	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	055
87	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	SUV	OTHER FACTOR	050
88	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	020
89	NONE	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	000
90	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	015
91	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	030
92	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	045
93	NONE	REAR END	N	SUV	NONE APPARENT	065
94	NONE	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	065
95	NONE	VEHICLE DEBRIS OR CARGO	S	PASSENGER CAR/VAN	NONE APPARENT	65
96	NONE	REAR END	W	PASSENGER CAR/VAN	DISTRACTED/OTHER	020
97	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	065
98	NONE	APPROACH TURN	E	PASSENGER CAR/VAN	NONE APPARENT	20
99	NONE	REAR END	E	SUV	NONE APPARENT	010
100	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
101	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	065
102	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	050
103	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	099
104	NONE	REAR END	N	SUV	ASLEEP AT THE WHEEL	020
105	SNOW/SLEET/HAIL	GUARD RAIL	N	PASSENGER CAR/VAN	NONE APPARENT	050
106	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	005
107	NONE	CONCRETE HIGHWAY BARRIER	N	PICKUP TRUCK/UTILITY VAN	DISTRACTED/CELL PHONE	065
108	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
109	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	UK
110	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	025
111	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	DISTRACTED/OTHER	065
112	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	UK

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
113	025A	199.4	5/11/2010	1257	PDO	10024674	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
114	025A	199.4	12/23/2010	2140	PDO	10071403	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
115	025A	199.4	12/18/2011	0135	INJ	11075187	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
116	025A	199.4	1/11/2012	0613	PDO	12001393	ON	AT INTERSECTION	2	SNOWY	DARK-LIGHTED
117	025A	199.4	2/3/2012	1010	PDO	12004898	ON	NON-INTERSECTION	2	SNOWY	DAYLIGHT
118	025A	199.4	2/8/2012	1600	PDO	12007642	OFF RIGHT	AT INTERSECTION	1	WET	DAYLIGHT
119	025A	199.4	6/13/2012	0625	PDO	12035052	OFF RIGHT	AT INTERSECTION	1	DRY	DAWN OR DUSK
120	025A	199.4	6/22/2012	1351	PDO	12032739	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
121	025A	199.4	9/18/2009	1200	PDO	09051234	ON	AT INTERSECTION	2	DRY	DAYLIGHT
122	025A	199.4	3/11/2010	1700	PDO	10012526	ON	RAMP	2	DRY	DAYLIGHT
123	025A	199.4	12/14/2011	1858	PDO	11068621	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
124	025A	199.4	1/10/2012	1743	PDO	12001061	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
125	025A	199.4	1/27/2012	1558	PDO	12004891	ON	AT INTERSECTION	3	DRY	DAYLIGHT
126	025A	199.4	5/31/2012	1253	PDO	12030159	ON	AT INTERSECTION	2	DRY	DAYLIGHT
127	025A	199.41	9/3/2009	1724	PDO	09046798	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
128	025A	199.41	12/11/2009	1705	PDO	09075901	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
129	025A	199.41	2/19/2010	0513	PDO	10008498	ON	NON-INTERSECTION	2	SLUSHY	DARK-LIGHTED
130	025A	199.41	3/11/2010	1715	PDO	10012118	ON	RAMP	3	DRY	DAWN OR DUSK
131	025A	199.41	8/20/2010	2215	PDO	10043898	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
132	025A	199.41	4/6/2012	1033	PDO	12035297	ON	RAMP	2	DRY	DAYLIGHT
133	025A	199.41	7/13/2009	1342	PDO	09036949	ON	RAMP	2	WET	DAYLIGHT
134	025A	199.41	10/28/2009	1524	PDO	09075101	OFF RIGHT	NON-INTERSECTION	1	SNOWY W/VIS ICY ROAD TREATMENT	DAYLIGHT
135	025A	199.42	12/21/2011	2330	PDO	11071841	ON	NON-INTERSECTION	2	SNOWY	DARK-LIGHTED
136	025A	199.42	6/14/2012	0200	PDO	12036826	OFF RIGHT	RAMP	1	DRY	DARK-LIGHTED
137	025A	199.42	10/29/2009	1708	PDO	09075116	ON	NON-INTERSECTION	3	SNOWY	DAWN OR DUSK
138	025A	199.42	4/7/2010	0355	PDO	10017510	OFF RIGHT	NON-INTERSECTION	2	SLUSHY	DARK-UNLIGHTED
139	025A	199.42	5/2/2010	1703	PDO	10022653	OFF RIGHT	RAMP	1	DRY	DAYLIGHT
140	025A	199.42	12/15/2011	1656	PDO	11073660	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
141	025A	199.43	11/17/2011	1452	PDO	11063829	ON	RAMP	2	DRY	DAYLIGHT
142	025A	199.44	9/24/2010	1610	PDO	10053699	OFF LEFT	RAMP	1	DRY	DAYLIGHT
143	025A	199.44	11/23/2011	2020	PDO	11068923	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
144	025A	199.45	6/14/2011	1810	INJ	11031250	ON	RAMP	2	DRY	DAYLIGHT
145	025A	199.45	4/25/2012	0640	PDO	12022057	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
146	025A	199.46	2/7/2010	2042	PDO	10005999	ON	NON-INTERSECTION	3	SNOWY	DARK-LIGHTED
147	025A	199.46	10/26/2011	1827	INJ	11060713	OFF LEFT	RAMP	3	WET W/VIS ICY ROAD TREATMENT	DARK-LIGHTED
148	025A	199.48	4/1/2011	1756	PDO	11017445	ON	RAMP	2	DRY	DAYLIGHT
149	025A	199.49	12/6/2009	1345	PDO	09075832	ON	NON-INTERSECTION	2	SNOWY	DAYLIGHT
150	025A	199.49	12/25/2009	1756	PDO	09070108	ON	RAMP	2	DRY	DARK-LIGHTED
151	025A	199.49	2/21/2010	1620	INJ	10008356	OFF RIGHT	RAMP	1	ICY	DAYLIGHT
152	025A	199.49	3/5/2010	1815	PDO	10010417	ON	RAMP	2	DRY	DAYLIGHT
153	025A	199.49	12/8/2011	1330	PDO	11072504	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
154	025A	199.5	6/10/2011	1325	INJ	11031104	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
155	025A	199.5	12/15/2009	0855	INJ	09068358	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
156	025A	199.5	1/7/2010	0830	PDO	10000073	ON	NON-INTERSECTION	3	ICY	DAYLIGHT
157	025A	199.5	2/5/2010	0805	PDO	10004676	ON	RAMP	2	DRY	DARK-UNLIGHTED
158	025A	199.5	12/1/2010	0740	INJ	10070009	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
159	025A	199.51	12/5/2011	0553	PDO	11069198	OFF LEFT	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DAWN OR DUSK
160	025A	199.51	6/25/2010	1743	PDO	10032573	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
161	025A	199.52	10/8/2009	0942	PDO	09053614	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
162	025A	199.53	2/6/2011	1309	PDO	11006498	OFF LEFT	NON-INTERSECTION	1	SLUSHY	DAYLIGHT
163	025A	199.56	9/29/2009	1723	PDO	09052509	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
164	025A	199.56	8/21/2010	1700	PDO	10047217	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
165	025A	199.59	8/26/2011	1301	PDO	11044840	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
166	025A	199.59	6/30/2012	0113	PDO	12040113	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
167	025A	199.6	6/20/2011	0507	PDO	11031847	OFF LEFT	NON-INTERSECTION	1	WET	DARK-UNLIGHTED
168	025A	199.61	4/1/2010	1721	PDO	10016764	ON	NON-INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
113	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	060
114	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	UK
115	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DUI, DWAI, DUID	000
116	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	UK
117	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	OTHER FACTOR	45
118	NONE	EMBANKMENT	S	PASSENGER CAR/VAN	ILLNESS/MEDICAL	025
119	NONE	TRAFFIC SIGNAL POLE	S	HIT & RUN - UNKNOWN	OTHER FACTOR	030
120	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	010
121	NONE	REAR END	W	SUV	NONE APPARENT	005
122	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	025
123	NONE	REAR END	W	SUV	OTHER FACTOR	040
124	NONE	APPROACH TURN	W	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	20
125	NONE	BROADSIDE	W	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	35
126	NONE	APPROACH TURN	W	PASSENGER CAR/VAN	NONE APPARENT	020
127	NONE	REAR END	N	SUV	NONE APPARENT	015
128	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	000
129	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	065
130	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	040
131	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	DUI, DWAI, DUID	065
132	NONE	REAR END	NW	PASSENGER CAR/VAN	NONE APPARENT	010
133	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	030
134	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	065
135	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	065
136	NONE	GUARD RAIL	N	PASSENGER CAR/VAN	DUI, DWAI, DUID	UK
137	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	035
138	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	OTHER FACTOR	050
139	NONE	BRIDGE STRUCTURE	S	PASSENGER CAR/VAN	DUI, DWAI, DUID	065
140	RAIN	REAR END	S	SUV	NONE APPARENT	065
141	NONE	REAR END	N	SUV	NONE APPARENT	025
142	NONE	GUARD RAIL	N	SUV	NONE APPARENT	030
143	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	055
144	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	020
145	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	070
146	SNOW/SLEET/HAIL	OTHER NON-COLLISION	N	SUV	NONE APPARENT	040
147	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	OTHER FACTOR	025
148	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	000
149	FOG	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	UK
150	NONE	REAR END	N	SUV	AGRESSIVE DRIVING	015
151	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	OTHER FACTOR	025
152	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	030
153	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	055
154	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	UK
155	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	000
156	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
157	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
158	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	055
159	NONE	CONCRETE HIGHWAY BARRIER	E	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	040
160	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
161	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	VEH COMBO (10,001 LBS AND OVER)	OTHER FACTOR	015
162	NONE	CONCRETE HIGHWAY BARRIER	S	SUV	NONE APPARENT	UK
163	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
164	NONE	OTHER NON-COLLISION	S	PASSENGER CAR/VAN	NONE APPARENT	060
165	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	045
166	NONE	OVERTURNING	S	MOTORCYCLE	AGRESSIVE DRIVING	065
167	RAIN	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	065
168	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
169	025A	199.62	7/30/2010	1330	INJ	10044480	ON	RAMP	2	DRY	DAYLIGHT
170	025A	199.63	8/10/2009	1525	PDO	09041980	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
171	025A	199.63	10/23/2009	1643	PDO	09075054	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
172	025A	199.63	11/17/2009	1615	PDO	09075620	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
173	025A	199.63	1/7/2010	0910	PDO	10005497	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
174	025A	199.63	6/6/2010	0804	PDO	10028443	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
175	025A	199.63	12/17/2010	1844	PDO	10071159	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
176	025A	199.63	1/7/2011	2140	PDO	11001946	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
177	025A	199.63	1/26/2011	0755	PDO	11007029	ON	NON-INTERSECTION	2	DRY W/VIS ICY ROAD TREATMENT	DAYLIGHT
178	025A	199.63	10/2/2011	1445	PDO	11054157	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
179	025A	199.63	2/3/2012	0130	PDO	12006059	ON	NON-INTERSECTION	2	SNOWY	DARK-LIGHTED
180	025A	199.63	3/5/2012	0758	PDO	12011361	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
181	025A	199.63	4/11/2012	1223	PDO	12019730	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
182	025A	199.64	10/10/2009	0846	INJ	09053412	OFF LEFT	NON-INTERSECTION	3	ICY	DAYLIGHT
183	025A	199.64	10/23/2009	1643	PDO	09075052	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
184	025A	199.65	2/19/2010	0231	PDO	10007916	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DARK-LIGHTED
185	025A	199.65	5/20/2010	1721	PDO	10026545	ON	RAMP	3	DRY	DAYLIGHT
186	025A	199.65	4/5/2012	1811	PDO	12016914	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
187	025A	199.65	2/7/2010	1838	PDO	10005980	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DARK-LIGHTED
188	025A	199.65	10/5/2011	0750	PDO	11054264	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
189	025A	199.65	2/16/2012	1830	PDO	12009733	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
190	025A	199.66	11/3/2009	0735	PDO	09060080	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
191	025A	199.67	11/11/2010	1732	PDO	10065996	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
192	025A	199.68	10/26/2010	2233	PDO	10063918	ON	RAMP	2	DRY	DARK-UNLIGHTED
193	025A	199.69	6/24/2010	1657	PDO	10032543	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
194	025A	199.69	2/4/2012	1348	PDO	12006172	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
195	025A	199.7	10/7/2009	1647	PDO	09053497	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
196	025A	199.7	1/25/2010	0825	PDO	10003440	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
197	025A	199.7	5/18/2010	1629	PDO	10026382	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
198	025A	199.7	11/14/2011	2130	INJ	11063353	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
199	025A	199.7	2/3/2012	0809	PDO	12004897	ON	NON-INTERSECTION	2	SNOWY	DAYLIGHT
200	025A	199.7	9/28/2011	0748	PDO	11052749	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
201	025A	199.71	1/20/2011	0740	PDO	11002789	ON	NON-INTERSECTION	3	ICY	DAYLIGHT
202	025A	199.75	11/18/2009	1007	PDO	09062908	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
203	025A	199.75	9/1/2011	1653	PDO	11046194	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
204	025A	199.75	1/3/2012	0736	PDO	12000884	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
205	025A	199.75	1/19/2012	0548	PDO	12002856	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
206	025A	199.76	8/9/2009	1640	PDO	09041094	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
207	025A	199.76	9/1/2009	1525	PDO	09046760	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
208	025A	199.76	11/5/2009	0730	PDO	09059589	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
209	025A	199.76	11/13/2009	1620	PDO	09061646	ON	NON-INTERSECTION	3	WET	DAWN OR DUSK
210	025A	199.76	4/15/2010	0800	PDO	10018744	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
211	025A	199.76	5/6/2010	1756	PDO	10023143	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
212	025A	199.76	8/27/2010	0740	PDO	10044917	OFF LEFT	NON-INTERSECTION	2	DRY	DAYLIGHT
213	025A	199.76	2/10/2011	1630	PDO	11006016	ON	NON-INTERSECTION	2	WET	DAWN OR DUSK
214	025A	199.76	4/20/2011	0730	PDO	11020425	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
215	025A	199.76	8/5/2011	1816	PDO	11042671	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
216	025A	199.76	12/1/2011	0549	PDO	11074314	ON	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DARK-LIGHTED
217	025A	199.76	12/14/2011	0725	PDO	11073591	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
218	025A	199.76	2/10/2012	1916	PDO	12006247	ON	NON-INTERSECTION	5	DRY	DARK-LIGHTED
219	025A	199.76	3/13/2012	0723	PDO	12013516	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
220	025A	199.76	5/23/2012	2048	PDO	12039318	OFF LEFT	NON-INTERSECTION	1	WET	DARK-LIGHTED
221	025A	199.76	10/5/2009	0635	PDO	09071571	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
222	025A	199.76	3/26/2010	1719	PDO	10016018	ON	NON-INTERSECTION	2	WET	DAYLIGHT
223	025A	199.76	6/29/2010	0800	PDO	10033729	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
224	025A	199.76	9/2/2010	1721	INJ	10046467	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
169	NONE	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	NONE APPARENT	000
170	NONE	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	000
171	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	010
172	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	OTHER FACTOR	050
173	SNOW/SLEET/HAIL	REAR END	N	SCHOOL BUS (ALL SCHOOL BUSSES)	NONE APPARENT	010
174	NONE	OTHER NON-COLLISION	N	HIT & RUN - UNKNOWN	NONE APPARENT	000
175	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	055
176	NONE	BARRICADE	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	080
177	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	045
178	NONE	CRASH CUSHION/TRAFFIC BARREL	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	050
179	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	SUV	OTHER FACTOR	35
180	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	DRIVER UNFAMILIAR W/AREA	60
181	NONE	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	DRIVER UNFAMILIAR W/AREA	050
182	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	030
183	NONE	REAR END	N	SUV	AGRESSIVE DRIVING	010
184	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	065
185	NONE	REAR END	N	VEH COMBO (10,001 LBS AND OVER)	OTHER FACTOR	010
186	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	020
187	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	NONE APPARENT	045
188	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	OTHER FACTOR	060
189	NONE	REAR END	SE	SUV	NONE APPARENT	45
190	NONE	REAR END	N	SUV	DISTRACTED/OTHER	UK
191	NONE	REAR END	N	SUV	NONE APPARENT	060
192	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	055
193	NONE	REAR END	N	SUV	OTHER FACTOR	030
194	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
195	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	010
196	NONE	REAR END	N	SUV	NONE APPARENT	UK
197	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	060
198	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	050
199	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	35
200	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	060
201	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	000
202	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	050
203	NONE	REAR END	N	SUV	NONE APPARENT	UK
204	NONE	REAR END	N	SUV	OTHER FACTOR	45
205	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
206	NONE	REAR END	N	MOTORCYCLE	DRIVER INEXPERIENCE	055
207	NONE	REAR END	N	SUV	NONE APPARENT	UK
208	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	005
209	RAIN	REAR END	N	SUV	NONE APPARENT	030
210	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	UK
211	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	030
212	NONE	CONCRETE HIGHWAY BARRIER	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	065
213	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
214	NONE	REAR END	N	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	025
215	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	035
216	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	040
217	NONE	REAR END	N	PASSENGER CAR/VAN	ASLEEP AT THE WHEEL	055
218	NONE	REAR END	N	SUV	AGRESSIVE DRIVING	60
219	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	65
220	RAIN	CONCRETE HIGHWAY BARRIER	N	SUV	AGRESSIVE DRIVING	055
221	FOG	INVOLVING OTHER OBJECT	S	SUV	AGRESSIVE DRIVING	000
222	SNOW/SLEET/HAIL	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010
223	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN W/TRAILER	DRIVER INEXPERIENCE	015
224	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	ILLNESS/MEDICAL	UK

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
225	025A	199.76	2/9/2011	0610	PDO	11006197	ON	NON-INTERSECTION	2	ICY	DAWN OR DUSK
226	025A	199.76	8/16/2011	0755	PDO	11044131	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
227	025A	199.76	5/1/2012	1814	PDO	12030911	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
228	025A	199.77	2/26/2010	1700	PDO	10013460	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
229	025A	199.78	8/9/2011	1544	PDO	11042420	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
230	025A	199.78	10/6/2011	0950	PDO	11054352	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
231	025A	199.78	12/2/2009	0559	PDO	09065853	OFF RIGHT	NON-INTERSECTION	3	ICY	DAWN OR DUSK
232	025A	199.8	12/7/2009	0820	PDO	09065794	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
233	025A	199.8	2/1/2010	0845	INJ	10004553	ON	RAMP	2	DRY	DAYLIGHT
234	025A	199.8	8/24/2011	0635	PDO	11044610	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
235	025A	199.8	12/3/2011	0717	PDO	11069156	ON	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DAYLIGHT
236	025A	199.8	2/4/2012	0852	PDO	12006140	OFF LEFT	NON-INTERSECTION	1	SLUSHY W/VIS ICY ROAD TREATMENT	DAYLIGHT
237	025A	199.82	1/9/2011	0832	PDO	11001971	OFF LEFT	NON-INTERSECTION	1	ICY	DAYLIGHT
238	025A	199.83	8/12/2009	1145	PDO	09042044	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
239	025A	199.84	4/23/2011	2235	PDO	11026473	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
240	025A	199.84	10/5/2011	0851	PDO	11054269	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
241	025A	199.85	7/25/2011	1816	PDO	11040188	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
242	025A	199.85	12/31/2010	1411	PDO	10071706	ON	NON-INTERSECTION	3	ICY W/VIS ICY ROAD TREATMENT	DAYLIGHT
243	025A	199.85	6/6/2012	1457	PDO	12035774	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
244	025A	199.86	8/5/2011	0935	PDO	11042955	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
245	025A	199.87	8/9/2009	1427	PDO	09041907	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
246	025A	199.87	9/25/2009	1130	PDO	09052451	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
247	025A	199.87	8/31/2011	1215	PDO	11049938	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
248	025A	199.87	5/11/2010	2325	PDO	10024867	OFF LEFT	NON-INTERSECTION	1	SLUSHY	DARK-UNLIGHTED
249	025A	199.88	10/28/2009	0135	PDO	09058580	OFF RIGHT	NON-INTERSECTION	1	WET	DARK-UNLIGHTED
250	025A	199.88	2/18/2010	1917	PDO	10008160	ON	NON-INTERSECTION	3	ICY	DARK-LIGHTED
251	025A	199.88	5/28/2010	1624	PDO	10028216	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
252	025A	199.88	8/31/2010	0805	PDO	10046341	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
253	025A	199.88	12/6/2010	2111	PDO	10070910	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
254	025A	199.88	4/14/2011	2316	PDO	11020221	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
255	025A	199.88	5/5/2011	0658	PDO	11022900	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
256	025A	199.88	8/15/2011	1809	PDO	11043611	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
257	025A	199.88	10/5/2011	1401	PDO	11054303	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
258	025A	199.88	2/7/2010	1934	INJ	10005669	OFF RIGHT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
259	025A	199.89	11/8/2009	0431	PDO	09059448	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
260	025A	199.9	9/15/2009	0740	PDO	09049044	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
261	025A	199.9	4/22/2010	0730	PDO	10020364	ON	NON-INTERSECTION	2	WET	DAYLIGHT
262	025A	199.9	12/27/2010	1722	PDO	10071491	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
263	025A	199.9	2/6/2011	0628	PDO	11006481	ON	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DARK-LIGHTED
264	025A	199.9	10/4/2010	0810	PDO	10052815	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
265	025A	199.94	2/23/2012	0835	PDO	12010119	ON	RAMP	2	SLUSHY W/VIS ICY ROAD TREATMENT	DAYLIGHT
266	025A	199.98	1/29/2010	1909	PDO	10004624	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
267	025A	199.98	6/22/2010	1700	PDO	10035740	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
268	025A	199.99	11/10/2010	0718	INJ	10066512	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
269	025A	200	12/31/2009	1527	PDO	09071346	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
270	025A	200	9/28/2010	0720	PDO	10050889	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
271	025A	200	10/19/2010	1750	PDO	10063523	ON	NON-INTERSECTION	3	DRY	DAWN OR DUSK
272	025A	200	5/26/2011	1745	PDO	11026722	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
273	025A	200	1/24/2011	0700	PDO	11002380	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
274	025A	200	4/22/2011	1630	PDO	11020547	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
275	025A	200.01	10/10/2009	0823	INJ	09053411	OFF RIGHT	NON-INTERSECTION	1	ICY	DAYLIGHT
276	025A	200.01	8/9/2011	1545	INJ	11042419	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
277	025A	200.03	6/10/2010	1705	PDO	10030521	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
278	025A	200.03	2/4/2011	0654	PDO	11006729	ON	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DAWN OR DUSK
279	025A	200.04	6/10/2010	1632	PDO	10030520	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
280	025A	200.04	2/17/2011	0830	PDO	11007852	ON	NON-INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
225	NONE	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	030
226	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	045
227	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/PASSENGER	025
228	NONE	REAR END	N	SUV	NONE APPARENT	UK
229	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	OTHER FACTOR	040
230	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	035
231	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	NONE APPARENT	UK
232	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
233	NONE	REAR END	N	SUV	AGRESSIVE DRIVING	UK
234	NONE	REAR END	S	PASSENGER CAR/VAN	OTHER FACTOR	055
235	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	SUV	DRIVER INEXPERIENCE	035
236	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	OTHER FACTOR	45
237	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	OTHER FACTOR	040
238	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	065
239	RAIN	REAR END	N	SUV	NONE APPARENT	060
240	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	030
241	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	060
242	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	060
243	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	065
244	NONE	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	040
245	NONE	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	NONE APPARENT	055
246	NONE	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	NONE APPARENT	000
247	NONE	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	NONE APPARENT	055
248	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	060
249	SNOW/SLEET/HAIL	CRASH CUSHION/TRAFFIC BARREL	N	SUV	DUI, DWAI, DUID	055
250	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	045
251	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	035
252	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	UK
253	NONE	SIDESWIPE (SAME DIRECTION)	N	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	065
254	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	065
255	NONE	GUARD RAIL	N	PASSENGER CAR/VAN	NONE APPARENT	055
256	NONE	REAR END	N	SUV	NONE APPARENT	020
257	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	035
258	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	DRIVER INEXPERIENCE	065
259	NONE	WILD ANIMAL	S	PASSENGER CAR/VAN	NONE APPARENT	065
260	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	000
261	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
262	NONE	REAR END	N	SUV	ASLEEP AT THE WHEEL	050
263	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	NONE APPARENT	UK
264	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	045
265	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	SUV	DISTRACTED/OTHER	35
266	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	010
267	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	020
268	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	045
269	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	040
270	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	030
271	NONE	REAR END	N	SUV	NONE APPARENT	060
272	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	040
273	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
274	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	025
275	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	035
276	NONE	REAR END	N	SUV	NONE APPARENT	UK
277	NONE	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	OTHER FACTOR	045
278	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	050
279	NONE	REAR END	N	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	035
280	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	040

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
281	025A	200.04	6/9/2011	1052	PDO	11031051	ON	NON-INTERSECTION	1	DRY	DAYLIGHT
282	025A	200.04	6/17/2011	1542	PDO	11031351	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
283	025A	200.04	7/29/2011	1716	PDO	11040369	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
284	025A	200.04	3/22/2012	1333	PDO	12030764	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
285	025A	200.04	3/24/2010	1000	PDO	10015472	OFF RIGHT	NON-INTERSECTION	1	SNOWY W/VIS ICY ROAD TREATMENT	DAYLIGHT
286	025A	200.05	10/10/2009	0454	PDO	09054253	OFF LEFT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
287	025A	200.07	2/18/2010	1613	PDO	10006861	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
288	025A	200.07	11/5/2010	1733	PDO	10068193	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
289	025A	200.07	12/5/2011	0713	INJ	11069214	ON	RAMP	2	SLUSHY W/VIS ICY ROAD TREATMENT	DAYLIGHT
290	025A	200.09	4/12/2010	0735	PDO	10018623	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
291	025A	200.09	5/27/2010	1601	PDO	10028188	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
292	025A	200.09	4/25/2011	2149	PDO	11022569	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
293	025A	200.09	4/11/2012	1850	PDO	12019751	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
294	025A	200.09	7/5/2010	2248	PDO	10035218	OFF LEFT	NON-INTERSECTION	1	WET	DARK-LIGHTED
295	025A	200.1	10/29/2010	1731	PDO	10064066	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
296	025A	200.11	5/25/2010	1800	PDO	10027647	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
297	025A	200.11	5/21/2012	1624	PDO	12042252	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
298	025A	200.12	8/31/2010	0038	PDO	10053603	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
299	025A	200.13	4/1/2010	1742	PDO	10016216	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
300	025A	200.13	5/28/2010	1449	PDO	10028222	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
301	025A	200.13	6/9/2010	1841	PDO	10030493	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
302	025A	200.13	7/30/2010	1935	PDO	10040645	ON	NON-INTERSECTION	2	WET	DAYLIGHT
303	025A	200.13	8/27/2010	0800	PDO	10044921	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
304	025A	200.13	3/16/2011	1751	PDO	11017007	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
305	025A	200.13	5/20/2011	1839	PDO	11024570	ON	RAMP	2	DRY	DAYLIGHT
306	025A	200.13	6/30/2011	2123	PDO	11035357	OFF RIGHT	NON-INTERSECTION	1	WET	DARK-LIGHTED
307	025A	200.13	10/27/2011	1552	PDO	11067533	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
308	025A	200.13	1/18/2012	0712	PDO	12003897	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
309	025A	200.13	1/25/2012	0729	PDO	12003965	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
310	025A	200.13	4/20/2012	1631	PDO	12030805	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
311	025A	200.13	8/10/2009	1747	PDO	09042190	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
312	025A	200.13	8/28/2009	0708	PDO	09058579	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
313	025A	200.13	10/29/2009	1409	PDO	09075114	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
314	025A	200.13	12/8/2009	1230	PDO	09075855	ON	NON-INTERSECTION	2	ICY W/VIS ICY ROAD TREATMENT	DAYLIGHT
315	025A	200.13	2/7/2010	1948	PDO	10005917	OFF LEFT	NON-INTERSECTION	2	ICY	DARK-LIGHTED
316	025A	200.13	10/4/2010	1111	PDO	10052813	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
317	025A	200.13	4/22/2011	1549	PDO	11020544	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
318	025A	200.13	1/5/2012	0853	PDO	12003148	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
319	025A	200.13	1/11/2012	0935	PDO	12003831	ON	NON-INTERSECTION	2	SLUSHY W/VIS ICY ROAD TREATMENT	DAYLIGHT
320	025A	200.14	3/20/2010	1741	PDO	10013828	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
321	025A	200.15	9/18/2009	1650	PDO	09048889	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
322	025A	200.15	4/2/2011	0005	PDO	11017436	ON	NON-INTERSECTION	2	DRY	DARK-UNLIGHTED
323	025A	200.15	4/25/2011	1301	PDO	11022548	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
324	025A	200.15	3/16/2010	1121	PDO	10013588	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
325	025A	200.19	6/5/2012	1830	PDO	12035772	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
326	025A	200.19	3/7/2010	1852	PDO	10015335	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
327	025A	200.22	6/24/2012	2050	PDO	12033476	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
328	025A	200.26	10/14/2009	2148	INJ	09055661	OFF RIGHT	NON-INTERSECTION	1	DRY	DARK-LIGHTED
329	025A	200.29	1/9/2011	0725	PDO	11002424	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
330	025A	200.3	1/9/2011	1555	PDO	11002392	ON	NON-INTERSECTION	2	SNOWY	DAWN OR DUSK
331	025A	200.3	2/8/2012	1542	PDO	12008721	OFF RIGHT	NON-INTERSECTION	1	WET	DAYLIGHT
332	025A	200.3	3/17/2010	1325	INJ	10015947	OFF RIGHT	RAMP	1	DRY	DAYLIGHT
333	025A	200.31	2/29/2012	1649	INJ	12010478	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
334	025A	200.33	5/21/2010	1626	PDO	10027560	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
335	025A	200.33	6/11/2011	2231	PDO	11030287	ON	NON-INTERSECTION	4	DRY	DARK-UNLIGHTED
336	025A	200.35	9/3/2009	1858	PDO	09049769	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
281	NONE	OVERTURNING	N	SUV	NONE APPARENT	065
282	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	040
283	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	035
284	NONE	REAR END	N	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	UK
285	NONE	CONCRETE HIGHWAY BARRIER	S	SUV	NONE APPARENT	048
286	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	OTHER FACTOR	UK
287	SNOW/SLEET/HAIL	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
288	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	045
289	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	045
290	NONE	REAR END	N	SUV	NONE APPARENT	040
291	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
292	RAIN	REAR END	N	HIT & RUN - UNKNOWN	DISTRACTED/OTHER	050
293	NONE	REAR END	N	SUV	NONE APPARENT	UK
294	RAIN	CONCRETE HIGHWAY BARRIER	S	SUV	DRIVER INEXPERIENCE	055
295	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	050
296	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	010
297	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
298	NONE	INVOLVING OTHER OBJECT	N	PASSENGER CAR/VAN	DUI, DWAI, DUID	070
299	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	055
300	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	010
301	NONE	REAR END	N	SUV	AGRESSIVE DRIVING	020
302	RAIN	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	045
303	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/RADIO	050
304	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	065
305	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	010
306	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	060
307	NONE	VEHICLE DEBRIS OR CARGO	N	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	035
308	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	45
309	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	35
310	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	030
311	NONE	REAR END	S	SUV	NONE APPARENT	UK
312	NONE	REAR END	S	PASSENGER CAR/VAN	ASLEEP AT THE WHEEL	UK
313	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	000
314	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	065
315	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	NONE APPARENT	UK
316	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	AGRESSIVE DRIVING	000
317	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	PHYSICAL DISABILITY	065
318	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	35
319	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	SUV	DRIVER INEXPERIENCE	55
320	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	045
321	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	020
322	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	000
323	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	060
324	NONE	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	000
325	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
326	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	000
327	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	055
328	NONE	CULVERT/HEADWALL	N	PASSENGER CAR/VAN	DISTRACTED/PASSENGER	070
329	SNOW/SLEET/HAIL	REAR END	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	025
330	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
331	NONE	OVERTURNING	NW	SUV	DRIVER INEXPERIENCE	55
332	NONE	CRASH CUSHION/TRAFFIC BARREL	S	PASSENGER CAR/VAN	NONE APPARENT	UK
333	NONE	REAR END	N	SUV	DISTRACTED/OTHER	40
334	NONE	REAR END	N	SUV	DISTRACTED/CELL PHONE	040
335	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
336	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	000

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
337	025A	200.35	2/14/2010	1133	PDO	10005869	ON	NON-INTERSECTION	2	WET	DAYLIGHT
338	025A	200.35	2/14/2010	1153	PDO	10006200	OFF RIGHT	NON-INTERSECTION	2	WET	DAYLIGHT
339	025A	200.35	3/14/2010	0535	INJ	10013528	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
340	025A	200.35	5/26/2010	1604	PDO	10028154	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
341	025A	200.35	7/6/2010	1830	PDO	10048769	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
342	025A	200.35	11/4/2010	1701	PDO	10068135	ON	NON-INTERSECTION	3	DRY	DAWN OR DUSK
343	025A	200.35	8/8/2011	1610	PDO	11042156	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
344	025A	200.35	1/12/2012	0639	INJ	12001445	ON	NON-INTERSECTION	3	DRY	DAWN OR DUSK
345	025A	200.35	6/25/2012	0747	PDO	12035414	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
346	025A	200.36	10/7/2009	1629	PDO	09074674	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
347	025A	200.37	8/5/2009	2038	INJ	09041019	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
348	025A	200.38	6/9/2011	1537	PDO	11031066	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
349	025A	200.38	8/11/2011	1610	PDO	11043669	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
350	025A	200.39	7/27/2010	1711	PDO	10053844	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
351	025A	200.39	9/16/2010	0745	PDO	10048338	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
352	025A	200.39	5/3/2012	1610	PDO	12031047	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
353	025A	200.4	12/24/2009	0920	PDO	09070502	OFF RIGHT	NON-INTERSECTION	2	ICY	DAYLIGHT
354	025A	200.41	7/9/2009	0715	PDO	09035771	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
355	025A	200.41	7/31/2009	1200	PDO	09038843	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
356	025A	200.45	12/1/2010	1835	PDO	10070045	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
357	025A	200.46	10/8/2011	1252	PDO	11055535	ON	NON-INTERSECTION	2	WET	DAYLIGHT
358	025A	200.46	2/14/2010	1335	PDO	10006801	ON	NON-INTERSECTION	2	SLUSHY	DAYLIGHT
359	025A	200.48	9/13/2011	0807	PDO	11049994	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
360	025A	200.49	2/14/2010	1109	PDO	10006824	ON	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DAYLIGHT
361	025A	200.49	2/14/2010	1109	PDO	10006817	ON	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DAYLIGHT
362	025A	200.49	1/6/2011	1747	PDO	11002444	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
363	025A	200.49	9/16/2011	0730	PDO	11050608	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
364	025A	200.5	1/2/2010	1353	PDO	10003816	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
365	025A	200.5	5/23/2012	1659	PDO	12039310	ON	NON-INTERSECTION	3	WET	DAYLIGHT
366	025A	200.5	12/31/2009	2225	PDO	09071513	ON	RAMP	2	DRY	DARK-UNLIGHTED
367	025A	200.5	3/20/2010	1017	PDO	10013807	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
368	025A	200.51	7/30/2009	1715	PDO	09038822	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
369	025A	200.51	8/12/2009	0955	PDO	09042033	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
370	025A	200.51	12/24/2009	1240	PDO	09076207	ON	NON-INTERSECTION	3	SLUSHY	DAYLIGHT
371	025A	200.51	12/24/2009	1225	PDO	09071246	ON	NON-INTERSECTION	2	WET W/VIS ICY ROAD TREATMENT	DAYLIGHT
372	025A	200.51	2/1/2010	2237	PDO	10007944	OFF RIGHT	NON-INTERSECTION	1	DRY	DARK-LIGHTED
373	025A	200.51	3/23/2010	2140	PDO	10015458	OFF LEFT	NON-INTERSECTION	1	SNOWY	DARK-LIGHTED
374	025A	200.51	4/26/2010	1720	PDO	10022024	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
375	025A	200.51	8/4/2010	1639	PDO	10040821	ON	NON-INTERSECTION	2	WET	DAYLIGHT
376	025A	200.51	8/28/2010	1754	PDO	10060759	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
377	025A	200.51	2/25/2011	0730	PDO	11010878	ON	NON-INTERSECTION	2	WET	DAYLIGHT
378	025A	200.51	4/20/2011	1810	PDO	11020466	ON	NON-INTERSECTION	2	WET	DAYLIGHT
379	025A	200.51	4/27/2011	1755	PDO	11022650	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
380	025A	200.51	6/7/2011	1324	PDO	11029063	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
381	025A	200.51	8/16/2011	0725	PDO	11044129	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
382	025A	200.51	11/10/2011	1720	PDO	11075721	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
383	025A	200.51	1/11/2012	0620	PDO	12021493	ON	NON-INTERSECTION	5	SNOWY	DAYLIGHT
384	025A	200.51	1/18/2012	1729	PDO	12007799	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
385	025A	200.51	6/7/2012	0733	PDO	12029692	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
386	025A	200.51	10/5/2009	0650	PDO	09053145	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
387	025A	200.51	10/28/2009	0546	PDO	09058646	ON	NON-INTERSECTION	2	SNOWY	DARK-UNLIGHTED
388	025A	200.51	2/14/2010	1131	PDO	10006799	ON	NON-INTERSECTION	3	SLUSHY	DAYLIGHT
389	025A	200.51	8/20/2010	0800	PDO	10043575	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
390	025A	200.51	10/8/2010	0900	PDO	10054333	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
391	025A	200.51	2/1/2011	0811	PDO	11006376	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
392	025A	200.51	5/16/2011	0925	PDO	11024406	ON	NON-INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
337	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	040
338	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	060
339	NONE	OTHER NON-COLLISION	N	PASSENGER CAR/VAN	DRIVER FATIGUE	055
340	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	045
341	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
342	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	055
343	NONE	REAR END	N	SUV	OTHER FACTOR	050
344	NONE	REAR END	N	SUV	NONE APPARENT	50
345	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	045
346	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	035
347	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	065
348	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	045
349	NONE	REAR END	S	SUV	AGRESSIVE DRIVING	010
350	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	020
351	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	040
352	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
353	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	035
354	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	004
355	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
356	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	030
357	RAIN	SIDESWIPE (SAME DIRECTION)	N	SUV	DRIVER INEXPERIENCE	000
358	SNOW/SLEET/HAIL	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	045
359	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	030
360	SNOW/SLEET/HAIL	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	UK
361	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	NONE APPARENT	UK
362	NONE	REAR END	N	HIT & RUN - UNKNOWN	OTHER FACTOR	UK
363	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	010
364	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	020
365	RAIN	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	045
366	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	000
367	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	060
368	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	045
369	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	035
370	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	040
371	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	OTHER FACTOR	053
372	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	UK
373	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	SUV	NONE APPARENT	036
374	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	055
375	RAIN	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	NONE APPARENT	000
376	NONE	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	UK
377	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	030
378	RAIN	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	035
379	NONE	REAR END	N	SUV	NONE APPARENT	UK
380	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	UK
381	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	UK
382	NONE	REAR END	N	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	040
383	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	UK
384	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	35
385	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	060
386	NONE	REAR END	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	004
387	SNOW/SLEET/HAIL	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
388	SNOW/SLEET/HAIL	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	045
389	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	050
390	NONE	VEHICLE DEBRIS OR CARGO	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	065
391	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	OTHER FACTOR	040
392	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	065

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
393	025A	200.51	2/24/2012	1721	PDO	12010273	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
394	025A	200.51	5/19/2012	0810	PDO	12025666	OFF LEFT	NON-INTERSECTION	2	WET	DAYLIGHT
395	025A	200.52	2/23/2012	0500	PDO	12011162	ON	NON-INTERSECTION	2	SNOWY	DARK-UNLIGHTED
396	025A	200.53	8/4/2011	2050	PDO	11042907	ON	NON-INTERSECTION	2	DRY	DARK-UNLIGHTED
397	025A	200.53	12/13/2011	1748	PDO	11073575	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
398	025A	200.53	10/17/2010	0450	PDO	10063390	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
399	025A	200.53	2/14/2010	1100	PDO	10008140	ON	NON-INTERSECTION	4	SNOWY	DAYLIGHT
400	025A	200.55	2/7/2010	0913	PDO	10004729	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DAYLIGHT
401	025A	200.55	3/21/2011	1711	PDO	11017034	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
402	025A	200.57	8/6/2009	1821	PDO	09041056	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
403	025A	200.58	5/9/2012	1800	INJ	12031154	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
404	025A	200.59	1/15/2010	1615	PDO	10001562	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
405	025A	200.59	5/31/2011	1819	PDO	11028245	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
406	025A	200.59	2/3/2012	1304	PDO	12015930	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DAYLIGHT
407	025A	200.6	2/10/2010	0745	PDO	10005879	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
408	025A	200.6	8/25/2009	0740	PDO	09045442	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
409	025A	200.6	11/3/2009	2350	INJ	09060093	OFF LEFT	NON-INTERSECTION	1	DRY	DARK-UNLIGHTED
410	025A	200.6	12/6/2009	0654	PDO	09065989	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DAYLIGHT
411	025A	200.6	8/1/2010	1720	PDO	10044554	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
412	025A	200.6	4/16/2012	1530	PDO	12021662	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
413	025A	200.61	3/3/2010	0735	PDO	10010874	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
414	025A	200.61	4/25/2011	2147	INJ	11022570	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
415	025A	200.61	7/13/2009	1240	INJ	09036956	OFF LEFT	NON-INTERSECTION	3	DRY	DAYLIGHT
416	025A	200.61	3/24/2010	1025	INJ	10015473	ON	NON-INTERSECTION	3	SLUSHY W/VIS ICY ROAD TREATMENT	DAYLIGHT
417	025A	200.61	8/17/2010	0108	PDO	10043735	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
418	025A	200.62	2/10/2011	2007	PDO	11005936	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
419	025A	200.63	10/12/2009	1550	PDO	09074910	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
420	025A	200.65	11/1/2010	1840	INJ	10067761	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
421	025A	200.66	2/10/2011	0900	PDO	11006000	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
422	025A	200.66	10/30/2009	0935	PDO	09058725	ON	NON-INTERSECTION	2	WET	DAYLIGHT
423	025A	200.66	10/30/2009	0935	PDO	09058727	ON	NON-INTERSECTION	2	WET	DAYLIGHT
424	025A	200.68	9/9/2010	1115	PDO	10048805	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
425	025A	200.7	5/31/2011	1705	PDO	11028235	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
426	025A	200.73	5/26/2010	1510	PDO	10028149	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
427	025A	200.75	3/23/2012	1607	PDO	12014493	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
428	025A	200.76	4/25/2011	2150	PDO	11022566	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
429	025A	200.79	12/21/2011	2015	PDO	11071791	ON	NON-INTERSECTION	2	ICY	DARK-LIGHTED
430	025A	200.84	2/9/2012	0925	PDO	12006208	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
431	025A	200.9	12/6/2009	1959	PDO	09066029	OFF RIGHT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
432	025A	200.9	7/22/2010	1338	PDO	10037833	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
433	025A	201.09	7/2/2009	1530	PDO	09035465	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
434	025A	201.09	8/13/2009	1753	PDO	09042094	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
435	025A	201.09	10/1/2009	1715	PDO	09052597	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
436	025A	201.09	12/6/2009	0554	PDO	09065986	OFF LEFT	NON-INTERSECTION	1	SNOWY	DARK-LIGHTED
437	025A	201.09	2/18/2010	1910	PDO	10006853	ON	NON-INTERSECTION	2	SNOWY W/VIS ICY ROAD TREATMENT	DARK-LIGHTED
438	025A	201.09	3/12/2010	1715	PDO	10012150	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
439	025A	201.09	5/11/2010	0723	PDO	10024664	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
440	025A	201.09	11/18/2010	1754	PDO	10066358	ON	NON-INTERSECTION	3	DRY	DAWN OR DUSK
441	025A	201.09	12/28/2010	2020	PDO	10071545	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
442	025A	201.09	7/31/2011	1829	INJ	11040483	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
443	025A	201.09	10/28/2011	1649	PDO	11061798	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
444	025A	201.09	12/22/2011	1949	INJ	11071905	ON	NON-INTERSECTION	1	ICY	DARK-LIGHTED
445	025A	201.09	3/9/2012	2145	PDO	12018504	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
446	025A	201.09	6/30/2010	0650	PDO	10035148	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
447	025A	201.09	7/14/2010	1030	PDO	10036347	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
448	025A	201.19	1/7/2010	0625	PDO	10000079	ON	NON-INTERSECTION	2	ICY	DARK-LIGHTED

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
393	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	30
394	RAIN	CONCRETE HIGHWAY BARRIER	S	SUV	AGRESSIVE DRIVING	065
395	SNOW/SLEET/HAIL	REAR END	N	SUV	NONE APPARENT	UK
396	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
397	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	035
398	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	065
399	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	SE	HIT & RUN - UNKNOWN	NONE APPARENT	UK
400	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	055
401	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
402	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	000
403	NONE	REAR END	N	MOTORCYCLE	DISTRACTED/RADIO	045
404	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	030
405	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	020
406	FOG	CONCRETE HIGHWAY BARRIER	N	SUV	NONE APPARENT	40
407	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
408	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	000
409	NONE	CONCRETE HIGHWAY BARRIER	S	SUV	DUI, DWAI, DUID	065
410	SNOW/SLEET/HAIL	TREE	S	SUV	NONE APPARENT	065
411	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	050
412	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	060
413	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
414	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	065
415	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	UK
416	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	050
417	NONE	REAR END	S	PASSENGER CAR/VAN	DUI, DWAI, DUID	070
418	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
419	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	OTHER FACTOR	060
420	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	OTHER FACTOR	040
421	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	055
422	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	UK
423	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	UK
424	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	065
425	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
426	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	055
427	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	15
428	RAIN	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	050
429	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	020
430	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/RADIO	40
431	SNOW/SLEET/HAIL	WALL/BUILDING	S	SUV	NONE APPARENT	045
432	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	060
433	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	020
434	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	060
435	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
436	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	045
437	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	OTHER FACTOR	055
438	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
439	NONE	REAR END	N	SUV	OTHER FACTOR	045
440	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	050
441	NONE	VEHICLE DEBRIS OR CARGO	N	PASSENGER CAR/VAN	NONE APPARENT	065
442	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	060
443	NONE	REAR END	N	SUV	DRIVER INEXPERIENCE	030
444	NONE	OVERTURNING	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	050
445	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	050
446	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	000
447	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	OTHER FACTOR	070
448	RAIN	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	040

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
449	025A	201.19	4/14/2010	0820	PDO	10018707	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
450	025A	201.21	7/29/2010	1826	PDO	10039098	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
451	025A	201.25	9/14/2010	0850	INJ	10048440	ON	NON-INTERSECTION	1	DRY	DAYLIGHT
452	025A	201.25	4/11/2011	0955	PDO	11020070	ON	NON-INTERSECTION	1	DRY	DAYLIGHT
453	025A	201.29	3/30/2010	0750	PDO	10016074	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
454	025A	201.29	5/10/2011	2350	PDO	11024108	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
455	025A	201.3	3/20/2010	1048	INJ	10013809	ON	NON-INTERSECTION	3	SNOWY	DAYLIGHT
456	025A	201.3	3/16/2010	1415	PDO	10013853	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
457	025A	201.34	1/8/2010	0900	PDO	10000045	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
458	025A	201.34	2/18/2010	2256	PDO	10006854	ON	NON-INTERSECTION	2	ICY	DARK-LIGHTED
459	025A	201.34	9/16/2011	0739	PDO	11050611	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
460	025A	201.34	9/16/2011	0900	PDO	11050171	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
461	025A	201.34	2/1/2010	1437	PDO	10004764	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
462	025A	201.34	6/30/2011	2056	PDO	11035354	OFF RIGHT	NON-INTERSECTION	1	WET	DARK-LIGHTED
463	025A	201.34	4/5/2012	1544	PDO	12016906	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
464	025A	201.35	10/29/2009	2246	PDO	09058574	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DARK-LIGHTED
465	025A	201.35	11/20/2009	1913	INJ	09063007	OFF RIGHT	NON-INTERSECTION	1	DRY	DARK-LIGHTED
466	025A	201.35	3/26/2010	1715	PDO	10016028	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
467	025A	201.35	6/9/2010	1319	INJ	10030476	OFF RIGHT	NON-INTERSECTION	2	DRY	DAYLIGHT
468	025A	201.35	7/23/2010	1953	INJ	10039188	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
469	025A	201.35	9/7/2010	1800	PDO	10053592	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
470	025A	201.36	8/17/2009	1816	INJ	09043353	OFF LEFT	RAMP	1	DRY	DAYLIGHT
471	025A	201.36	12/21/2009	1827	PDO	09076150	OFF LEFT	RAMP	2	DRY	DARK-LIGHTED
472	025A	201.39	2/1/2011	0925	PDO	11005743	OFF RIGHT	NON-INTERSECTION	1	ICY	DAYLIGHT
473	025A	201.39	2/4/2011	0641	INJ	11006732	OFF LEFT	NON-INTERSECTION	2	ICY W/VIS ICY ROAD TREATMENT	DAYLIGHT
474	025A	201.39	11/15/2009	2142	PDO	09062813	ON	NON-INTERSECTION	2	ICY	DARK-LIGHTED
475	025A	201.4	12/6/2009	2226	PDO	09066034	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DARK-LIGHTED
476	025A	201.42	4/12/2011	1631	PDO	11022453	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
477	025A	201.44	11/15/2009	0820	PDO	09062791	OFF RIGHT	NON-INTERSECTION	2	SLUSHY	DAYLIGHT
478	025A	201.44	7/9/2010	1554	PDO	10040599	ON	RAMP	3	DRY	DAYLIGHT
479	025A	201.44	11/9/2010	1702	PDO	10066482	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
480	025A	201.45	10/14/2010	1735	PDO	10063255	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
481	025A	201.45	6/24/2012	1820	INJ	12035826	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
482	025A	201.46	5/29/2011	1502	PDO	11028325	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
483	025A	201.47	12/6/2011	1337	PDO	11069288	ON	RAMP	2	DRY	DAYLIGHT
484	025A	201.48	11/25/2011	1625	PDO	11066101	ON	RAMP	2	DRY	DAYLIGHT
485	025A	201.49	10/7/2009	1630	PDO	09074675	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
486	025A	201.49	11/3/2009	0430	INJ	09065838	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
487	025A	201.49	12/2/2009	0740	PDO	09065857	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
488	025A	201.49	6/8/2010	1738	PDO	10031316	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
489	025A	201.49	8/8/2010	0153	PDO	10052654	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
490	025A	201.49	2/9/2011	0531	PDO	11006195	OFF LEFT	NON-INTERSECTION	3	ICY	DARK-LIGHTED
491	025A	201.5	12/18/2009	1658	INJ	09070006	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
492	025A	201.5	2/18/2010	2252	PDO	10008168	ON	NON-INTERSECTION	2	ICY	DARK-LIGHTED
493	025A	201.5	4/6/2010	0650	PDO	10016255	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
494	025A	201.5	7/19/2010	1445	PDO	10040613	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
495	025A	201.5	4/13/2011	0905	PDO	11020149	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
496	025A	201.5	12/22/2011	1119	PDO	11071866	ON	NON-INTERSECTION	2	SLUSHY	DAYLIGHT
497	025A	201.5	4/6/2012	2145	PDO	12019195	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
498	025A	201.51	2/10/2012	1758	PDO	12007996	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
499	025A	201.53	12/6/2009	0000	PDO	09066011	ON	NON-INTERSECTION	3	SNOWY	DAYLIGHT
500	025A	201.53	2/25/2010	1720	PDO	10010431	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
501	025A	201.53	5/4/2010	1840	PDO	10023397	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
502	025A	201.53	5/20/2010	1855	PDO	10026470	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
503	025A	201.53	4/8/2011	0730	PDO	11019985	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
504	025A	201.53	1/2/2012	1526	INJ	12000870	ON	NON-INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
449	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
450	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
451	NONE	OVERTURNING	N	MOTORCYCLE	NONE APPARENT	045
452	NONE	OVERTURNING	N	SUV	OTHER FACTOR	065
453	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	000
454	RAIN	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	070
455	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	060
456	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	055
457	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	000
458	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	040
459	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	035
460	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	065
461	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	UK
462	RAIN	GUARD RAIL	S	PASSENGER CAR/VAN	NONE APPARENT	060
463	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
464	SNOW/SLEET/HAIL	GUARD RAIL	N	SUV	NONE APPARENT	050
465	NONE	GUARD RAIL	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	030
466	NONE	REAR END	N	SUV	PHYSICAL DISABILITY	050
467	NONE	CRASH CUSHION/TRAFFIC BARREL	N	PASSENGER CAR/VAN	NONE APPARENT	UK
468	NONE	CRASH CUSHION/TRAFFIC BARREL	N	PASSENGER CAR/VAN	DUI, DWAI, DUID	UK
469	NONE	REAR END	N	SUV	NONE APPARENT	UK
470	NONE	CRASH CUSHION/TRAFFIC BARREL	N	PASSENGER CAR/VAN	NONE APPARENT	040
471	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	PHYSICAL DISABILITY	060
472	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	SUV	NONE APPARENT	UK
473	SNOW/SLEET/HAIL	CRASH CUSHION/TRAFFIC BARREL	N	SUV	AGRESSIVE DRIVING	UK
474	NONE	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	050
475	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	045
476	NONE	VEHICLE DEBRIS OR CARGO	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
477	SNOW/SLEET/HAIL	GUARD RAIL	N	SUV	AGRESSIVE DRIVING	030
478	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	035
479	RAIN	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
480	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	040
481	NONE	CONCRETE HIGHWAY BARRIER	N	SUV	AGRESSIVE DRIVING	077
482	NONE	VEHICLE DEBRIS OR CARGO	N	SUV W/TRAILER	NONE APPARENT	UK
483	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	035
484	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	050
485	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
486	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	UK
487	SNOW/SLEET/HAIL	REAR END	N	SUV	NONE APPARENT	UK
488	NONE	REAR END	N	PASSENGER CAR/VAN	DUI, DWAI, DUID	UK
489	RAIN	SIDESWIPE (SAME DIRECTION)	N	SUV	DISTRACTED/OTHER	065
490	NONE	CONCRETE HIGHWAY BARRIER	S	PICKUP TRUCK/UTILITY VAN W/TRAILER	NONE APPARENT	UK
491	NONE	REAR END	N	SUV	DISTRACTED/OTHER	002
492	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	045
493	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
494	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	UK
495	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/CELL PHONE	040
496	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	040
497	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	030
498	NONE	REAR END	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	40
499	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	055
500	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	UK
501	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	035
502	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	020
503	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	065
504	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	60

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
505	025A	201.53	3/24/2010	0555	PDO	10015946	OFF LEFT	NON-INTERSECTION	1	ICY	DAWN OR DUSK
506	025A	201.55	4/17/2011	0649	PDO	11020320	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
507	025A	201.55	1/12/2012	1840	PDO	12001486	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
508	025A	201.55	5/21/2010	2113	PDO	10035037	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
509	025A	201.55	1/31/2011	0943	PDO	11010369	ON	RAMP	2	ICY	DAYLIGHT
510	025A	201.55	3/8/2011	1545	PDO	11033068	ON	RAMP	2	DRY	DAYLIGHT
511	025A	201.55	4/8/2011	0727	PDO	11019929	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
512	025A	201.55	5/30/2012	1333	PDO	12029366	ON	RAMP	2	DRY	DAYLIGHT
513	025A	201.56	2/14/2010	1315	PDO	10006800	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
514	025A	201.56	9/22/2010	1115	INJ	10053374	ON	RAMP	2	DRY	DAYLIGHT
515	025A	201.56	2/11/2011	1205	PDO	11005887	ON	RAMP	2	DRY W/VIS ICY ROAD TREATMENT	DAYLIGHT
516	025A	201.56	4/20/2011	0939	PDO	11020427	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
517	025A	201.56	11/23/2011	1729	PDO	11068919	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
518	025A	201.56	8/14/2010	0003	PDO	10043545	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
519	025A	201.57	4/30/2012	0648	PDO	12022548	ON	RAMP	4	DRY	DAYLIGHT
520	025A	201.57	8/21/2009	1733	PDO	09043533	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
521	025A	201.57	10/5/2009	0633	PDO	09053084	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
522	025A	201.57	9/20/2010	1406	PDO	10053859	OFF LEFT	RAMP	1	DRY	DAYLIGHT
523	025A	201.57	2/9/2011	1140	PDO	11006132	ON	RAMP	2	WET	DAYLIGHT
524	025A	201.57	5/12/2011	1412	PDO	11024180	ON	RAMP	2	WET	DAYLIGHT
525	025A	201.57	6/14/2011	0830	PDO	11031218	ON	RAMP	2	DRY	DAYLIGHT
526	025A	201.57	7/4/2009	0205	PDO	09035540	OFF LEFT	NON-INTERSECTION	1	WET	DARK-UNLIGHTED
527	025A	201.57	12/8/2009	1205	PDO	09067278	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
528	025A	201.57	12/21/2009	1425	PDO	09070645	ON	RAMP	2	DRY	DAYLIGHT
529	025A	201.57	4/14/2010	0645	PDO	10020280	ON	RAMP	2	DRY	DAYLIGHT
530	025A	201.57	6/14/2011	1050	PDO	11031222	OFF DIVIDED HIGHWAY	NON-INTERSECTION	3	DRY	DAYLIGHT
531	025A	201.57	9/6/2011	2130	PDO	11049216	ON	NON-INTERSECTION	2	WET	DARK-UNLIGHTED
532	025A	201.58	11/4/2010	0704	PDO	10068091	ON	RAMP	4	DRY	DAYLIGHT
533	025A	201.58	12/7/2010	0708	PDO	10070914	ON	RAMP	2	DRY	DAYLIGHT
534	025A	201.58	11/21/2011	0741	PDO	11067601	ON	RAMP	2	DRY	DAYLIGHT
535	025A	201.58	6/26/2012	0747	PDO	12035155	ON	RAMP	3	DRY	DAYLIGHT
536	025A	201.58	8/22/2009	0215	PDO	09043550	ON	RAMP	1	DRY	DARK-UNLIGHTED
537	025A	201.58	11/15/2009	0858	PDO	09061613	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
538	025A	201.58	1/6/2010	2140	PDO	10000086	ON	NON-INTERSECTION	3	ICY	DARK-UNLIGHTED
539	025A	201.58	5/14/2010	2150	PDO	10025012	ON	RAMP	2	WET	DARK-UNLIGHTED
540	025A	201.58	10/21/2010	1835	PDO	10063636	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
541	025A	201.58	4/25/2011	2150	PDO	11022573	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
542	025A	201.58	6/25/2011	1020	PDO	11049019	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
543	025A	201.58	8/9/2011	1257	PDO	11042789	ON	RAMP	2	DRY	DAYLIGHT
544	025A	201.58	9/9/2011	1530	INJ	11065901	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
545	025A	201.58	9/14/2011	2349	INJ	11049923	ON	NON-INTERSECTION	1	WET	DARK-UNLIGHTED
546	025A	201.58	10/24/2011	1540	PDO	11059075	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
547	025A	201.58	2/8/2012	0855	PDO	12006185	ON	RAMP	3	WET	DAYLIGHT
548	025A	201.58	8/9/2009	0606	INJ	09046558	OFF RIGHT	RAMP	1	DRY	DAYLIGHT
549	025A	201.58	8/14/2009	1145	PDO	09042124	ON	RAMP	2	DRY	DAYLIGHT
550	025A	201.58	8/21/2009	0731	INJ	09045408	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
551	025A	201.58	12/8/2009	1600	PDO	09067300	ON	RAMP	2	ICY	DAYLIGHT
552	025A	201.58	4/14/2010	1447	PDO	10018721	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
553	025A	201.58	1/9/2011	1224	PDO	11026449	ON	NON-INTERSECTION	2	WET W/VIS ICY ROAD TREATMENT	DAYLIGHT
554	025A	201.58	2/21/2011	1500	PDO	11010746	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
555	025A	201.58	3/13/2010	1028	PDO	10012155	ON	RAMP	2	DRY	DAYLIGHT
556	025A	201.59	8/7/2009	1605	PDO	09041191	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
557	025A	201.59	8/16/2009	1448	PDO	09043317	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
558	025A	201.59	11/15/2009	0820	PDO	09061615	ON	NON-INTERSECTION	2	SNOWY	DAYLIGHT
559	025A	201.59	3/9/2010	0859	PDO	10012025	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
560	025A	201.59	4/16/2010	1720	PDO	10019139	ON	NON-INTERSECTION	4	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
505	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	UK
506	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	055
507	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	UK
508	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
509	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	045
510	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	000
511	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	UK
512	NONE	REAR END	SE	PICKUP TRUCK/UTILITY VAN	DISTRACTED/CELL PHONE	020
513	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	050
514	NONE	REAR END	N	SUV	NONE APPARENT	035
515	NONE	REAR END	N	SUV	DISTRACTED/PASSENGER	010
516	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	030
517	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	065
518	NONE	SIDESWIPE (SAME DIRECTION)	W	PICKUP TRUCK/UTILITY VAN	DUI, DWAI, DUID	065
519	NONE	REAR END	E	PASSENGER CAR/VAN	NONE APPARENT	UK
520	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	005
521	FOG	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	000
522	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	040
523	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	030
524	RAIN	REAR END	N	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	UK
525	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	005
526	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	DISTRACTED/CELL PHONE	UK
527	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	AGRESSIVE DRIVING	UK
528	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
529	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	UK
530	NONE	VEHICLE DEBRIS OR CARGO	S	PASSENGER CAR/VAN	NONE APPARENT	040
531	RAIN	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
532	NONE	REAR END	E	SUV	DRIVER INEXPERIENCE	040
533	NONE	REAR END	E	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	015
534	NONE	REAR END	E	PASSENGER CAR/VAN	NONE APPARENT	025
535	NONE	REAR END	E	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	030
536	NONE	CRASH CUSHION/TRAFFIC BARREL	N	PICKUP TRUCK/UTILITY VAN	DUI, DWAI, DUID	UK
537	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	035
538	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
539	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	025
540	NONE	REAR END	N	SUV	OTHER FACTOR	UK
541	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	045
542	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	030
543	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
544	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	NONE APPARENT	065
545	RAIN	CRASH CUSHION/TRAFFIC BARREL	N	PASSENGER CAR/VAN	NONE APPARENT	UK
546	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	ILLNESS/MEDICAL	UK
547	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	35
548	NONE	EMBANKMENT	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	035
549	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	UK
550	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	035
551	NONE	REAR END	S	SUV	NONE APPARENT	015
552	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	UK
553	SNOW/SLEET/HAIL	ROAD MAINTENANCE EQUIPMENT	S	PASSENGER CAR/VAN	NONE APPARENT	045
554	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	020
555	NONE	REAR END	SE	SUV	NONE APPARENT	025
556	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	010
557	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	060
558	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	UK
559	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	000
560	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	050

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
561	025A	201.59	5/19/2010	0800	PDO	10026406	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
562	025A	201.59	7/29/2010	1819	PDO	10048871	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
563	025A	201.59	9/1/2010	1807	PDO	10046419	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
564	025A	201.59	9/15/2010	1714	PDO	10048356	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
565	025A	201.59	9/29/2010	1418	INJ	10054078	ON	NON-INTERSECTION	1	DRY	DAYLIGHT
566	025A	201.59	10/4/2010	1640	INJ	10054087	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
567	025A	201.59	11/8/2010	0804	PDO	10068299	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
568	025A	201.59	12/27/2010	1537	PDO	10071486	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
569	025A	201.59	1/10/2011	1210	PDO	11002008	OFF RIGHT	NON-INTERSECTION	1	SLUSHY	DAYLIGHT
570	025A	201.59	1/27/2011	0708	PDO	11006969	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
571	025A	201.59	2/1/2011	1220	PDO	11005758	ON	NON-INTERSECTION	2	ICY W/VIS ICY ROAD TREATMENT	DAYLIGHT
572	025A	201.59	2/8/2011	2027	PDO	11006187	ON	NON-INTERSECTION	2	ICY	DARK-LIGHTED
573	025A	201.59	2/9/2011	0729	PDO	11006098	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
574	025A	201.59	2/9/2011	0533	PDO	11006207	ON	NON-INTERSECTION	3	ICY	DAWN OR DUSK
575	025A	201.59	8/8/2011	1758	PDO	11042389	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
576	025A	201.59	8/15/2011	1703	PDO	11043156	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
577	025A	201.59	12/15/2011	1722	PDO	11073661	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
578	025A	201.59	12/16/2011	2252	PDO	11075180	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
579	025A	201.59	2/7/2012	0934	PDO	12007926	ON	NON-INTERSECTION	2	SLUSHY	DAYLIGHT
580	025A	201.59	2/9/2012	0910	PDO	12006212	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
581	025A	201.59	2/21/2011	1324	PDO	11010745	ON	RAMP	2	DRY	DAYLIGHT
582	025A	201.59	1/17/2010	1150	PDO	10004531	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
583	025A	201.59	3/4/2010	1922	PDO	10010546	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
584	025A	201.59	3/20/2010	0245	PDO	10013791	OFF LEFT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
585	025A	201.59	4/21/2010	0735	PDO	10024025	ON	NON-INTERSECTION	2	UNKNOWN	DAYLIGHT
586	025A	201.59	8/14/2010	1324	PDO	10043905	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
587	025A	201.59	12/1/2010	0755	PDO	10070008	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
588	025A	201.59	12/31/2010	1629	PDO	10071718	OFF LEFT	NON-INTERSECTION	1	SNOWY W/VIS ICY ROAD TREATMENT	DAYLIGHT
589	025A	201.59	3/23/2011	1608	PDO	11017069	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
590	025A	201.59	6/14/2011	1606	PDO	11031241	ON	RAMP	2	DRY	DAYLIGHT
591	025A	201.59	8/9/2011	1740	PDO	11042426	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
592	025A	201.59	8/29/2011	0840	PDO	11046696	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
593	025A	201.59	10/5/2011	0640	PDO	11054261	OFF LEFT	NON-INTERSECTION	2	DRY	DAWN OR DUSK
594	025A	201.59	11/1/2011	2240	PDO	11072434	OFF LEFT	NON-INTERSECTION	1	SLUSHY	DARK-LIGHTED
595	025A	201.59	11/17/2011	0755	PDO	11068827	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
596	025A	201.59	5/2/2012	2104	PDO	12030977	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
597	025A	201.59	5/2/2012	2135	PDO	12030976	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
598	025A	201.6	7/4/2009	0101	PDO	09035539	OFF RIGHT	NON-INTERSECTION	1	WET	DARK-LIGHTED
599	025A	201.6	9/25/2009	1323	INJ	09050994	ON	RAMP	2	DRY	DAYLIGHT
600	025A	201.6	10/8/2009	0720	PDO	09053439	ON	NON-INTERSECTION	2	WET	DAYLIGHT
601	025A	201.6	4/7/2010	0840	PDO	10019781	ON	NON-INTERSECTION	4	WET	DAYLIGHT
602	025A	201.6	12/26/2010	1410	PDO	10071452	OFF LEFT	RAMP	1	DRY	DAYLIGHT
603	025A	201.6	1/23/2010	1049	PDO	10001311	ON	RAMP	2	DRY	DAYLIGHT
604	025A	201.6	3/12/2010	2006	PDO	10012149	ON	RAMP	2	DRY	DARK-LIGHTED
605	025A	201.6	3/16/2010	1400	PDO	10013594	ON	RAMP	2	DRY	DAYLIGHT
606	025A	201.6	8/26/2010	1548	PDO	10044903	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
607	025A	201.6	11/17/2010	1620	PDO	10066289	ON	RAMP	2	DRY	DAYLIGHT
608	025A	201.6	8/7/2010	1830	PDO	10040992	ON	RAMP	2	DRY	DAYLIGHT
609	025A	201.61	7/9/2010	1600	PDO	10044587	ON	RAMP	2	DRY	DAYLIGHT
610	025A	201.61	8/20/2010	1623	PDO	10046265	ON	RAMP	2	DRY	DAYLIGHT
611	025A	201.61	2/6/2011	1050	PDO	11031718	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DAYLIGHT
612	025A	201.61	7/27/2010	0945	PDO	10039027	ON	RAMP	2	DRY	DAYLIGHT
613	025A	201.61	9/2/2010	0750	PDO	10048745	ON	RAMP	2	DRY	DAYLIGHT
614	025A	201.62	2/25/2012	0917	PDO	12010317	ON	RAMP	2	DRY	DAYLIGHT
615	025A	201.62	10/17/2011	1853	PDO	11057943	ON	RAMP	2	DRY	DARK-LIGHTED
616	025A	201.62	6/30/2011	2141	PDO	11035362	ON	RAMP	3	WET	DARK-LIGHTED

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
561	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	015
562	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	UK
563	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	010
564	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/CELL PHONE	UK
565	NONE	VEHICLE DEBRIS OR CARGO	N	SUV	NONE APPARENT	060
566	NONE	CONCRETE HIGHWAY BARRIER	N	SUV	NONE APPARENT	050
567	NONE	REAR END	N	HIT & RUN - UNKNOWN	NONE APPARENT	UK
568	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	015
569	NONE	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	040
570	NONE	REAR END	N	SUV	NONE APPARENT	UK
571	NONE	REAR END	N	SUV	NONE APPARENT	005
572	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	N	SUV	AGRESSIVE DRIVING	UK
573	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	045
574	NONE	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	050
575	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	025
576	NONE	REAR END	N	SUV	OTHER FACTOR	UK
577	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	030
578	NONE	REAR END	N	PASSENGER CAR/VAN	DUI, DWAI, DUID	035
579	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	UK
580	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	40
581	NONE	REAR END	NE	PASSENGER CAR/VAN	NONE APPARENT	010
582	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	OTHER FACTOR	000
583	NONE	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	030
584	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	DUI, DWAI, DUID	UK
585	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	000
586	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	065
587	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	025
588	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	DRIVER INEXPERIENCE	040
589	NONE	VEHICLE DEBRIS OR CARGO	S	HIT & RUN - UNKNOWN	NONE APPARENT	065
590	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	010
591	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	000
592	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	UK
593	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	OTHER FACTOR	070
594	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	045
595	NONE	REAR END	S	HIT & RUN - UNKNOWN	NONE APPARENT	010
596	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
597	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	040
598	RAIN	CONCRETE HIGHWAY BARRIER	N	SUV	DRIVER INEXPERIENCE	055
599	NONE	REAR END	N	SUV	DISTRACTED/OTHER	020
600	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
601	NONE	REAR END	N	SUV	NONE APPARENT	UK
602	NONE	CONCRETE HIGHWAY BARRIER	N	SUV	ILLNESS/MEDICAL	UK
603	NONE	REAR END	NW	PASSENGER CAR/VAN	NONE APPARENT	020
604	NONE	REAR END	NW	PASSENGER CAR/VAN	AGRESSIVE DRIVING	025
605	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
606	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	025
607	NONE	REAR END	S	SUV	NONE APPARENT	005
608	NONE	REAR END	SW	SUV	NONE APPARENT	UK
609	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025
610	NONE	REAR END	N	HIT & RUN - UNKNOWN	DISTRACTED/OTHER	010
611	FOG	CONCRETE HIGHWAY BARRIER	N	SUV	NONE APPARENT	055
612	NONE	REAR END	NW	SUV	NONE APPARENT	005
613	NONE	SIDESWIPE (SAME DIRECTION)	NW	HIT & RUN - UNKNOWN	NONE APPARENT	030
614	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	10
615	NONE	REAR END	NW	PASSENGER CAR/VAN	NONE APPARENT	UK
616	RAIN	REAR END	S	SUV	DUI, DWAI, DUID	030

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
617	025A	201.62	5/2/2012	1955	PDO	12030975	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
618	025A	201.62	6/24/2012	0235	PDO	12035824	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
619	025A	201.63	3/25/2010	0200	PDO	10015809	OFF LEFT	RAMP	1	ICY	DARK-UNLIGHTED
620	025A	201.63	5/16/2011	1807	PDO	11024431	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
621	025A	201.63	1/13/2012	1020	PDO	12007790	ON	RAMP	2	DRY	DAYLIGHT
622	025A	201.65	2/1/2011	1200	PDO	11005759	OFF RIGHT	NON-INTERSECTION	1	ICY	DAYLIGHT
623	025A	201.65	4/15/2011	0730	PDO	11020230	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
624	025A	201.65	7/14/2011	0757	PDO	11035641	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
625	025A	201.67	8/4/2010	1140	INJ	10040804	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
626	025A	201.68	3/23/2012	1641	PDO	12014495	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
627	025A	201.68	6/5/2012	1745	PDO	12035770	ON	RAMP	2	DRY	DAYLIGHT
628	025A	201.68	1/23/2012	1640	PDO	12011040	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
629	025A	201.69	9/25/2009	0337	PDO	09050881	OFF RIGHT	NON-INTERSECTION	1	WET	DARK-LIGHTED
630	025A	201.69	11/15/2009	0035	PDO	09061623	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DARK-UNLIGHTED
631	025A	201.7	2/15/2012	1810	PDO	12009619	ON	RAMP	4	DRY	DARK-LIGHTED
632	025A	201.73	10/28/2009	0545	PDO	09075082	ON	NON-INTERSECTION	2	SLUSHY W/VIS ICY ROAD TREATMENT	DARK-UNLIGHTED
633	025A	201.74	4/22/2012	1026	PDO	12021826	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
634	025A	201.74	4/6/2010	1624	PDO	10023317	ON	RAMP	2	DRY	DAYLIGHT
635	025A	201.78	10/28/2009	1000	PDO	09058667	ON	NON-INTERSECTION	2	WET	DAYLIGHT
636	025A	201.78	12/6/2010	1552	PDO	10070891	ON	RAMP	2	DRY	DAYLIGHT
637	025A	201.78	9/29/2011	1559	PDO	11052873	ON	RAMP	2	DRY	DAYLIGHT
638	025A	201.78	1/6/2012	1745	PDO	12003200	ON	RAMP	2	DRY	DARK-LIGHTED
639	025A	201.78	2/10/2012	1846	PDO	12008000	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
640	025A	201.79	12/10/2009	1030	PDO	09067379	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
641	025A	201.84	2/26/2010	1624	PDO	10012047	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
642	025A	201.84	7/19/2011	0650	INJ	11038296	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
643	025A	201.84	1/9/2012	0643	PDO	12002747	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
644	025A	201.84	4/19/2010	2100	PDO	10020324	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
645	025A	201.84	5/28/2010	1030	INJ	10027655	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
646	025A	201.84	11/23/2011	1743	PDO	11074304	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
647	025A	201.89	12/8/2009	0930	PDO	09067264	ON	NON-INTERSECTION	3	ICY	DAYLIGHT
648	025A	201.89	12/18/2009	1729	PDO	09076143	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
649	025A	201.95	5/3/2010	2140	INJ	10023364	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
650	025A	201.98	7/29/2009	0720	PDO	09038736	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
651	025A	201.99	5/13/2010	1834	PDO	10024945	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
652	025A	202.07	6/1/2012	1620	PDO	12029487	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
653	025A	202.09	2/3/2012	1230	PDO	12006088	OFF LEFT	NON-INTERSECTION	1	SLUSHY	DAYLIGHT
654	025A	202.09	11/27/2011	1246	PDO	11075470	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
655	225A	0	4/18/2011	0635	PDO	11020344	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
656	225A	0	2/14/2010	0232	PDO	10005834	OFF LEFT	RAMP	1	SNOWY	DARK-LIGHTED
657	225A	0	3/20/2010	0831	PDO	10013876	ON	RAMP	2	SLUSHY W/VIS ICY ROAD TREATMENT	DAYLIGHT
658	225A	0	4/13/2010	1310	PDO	10018674	ON	RAMP	2	DRY	DAYLIGHT
659	225A	0	4/27/2010	0757	PDO	10022033	ON	RAMP	2	DRY	DAYLIGHT
660	225A	0	8/26/2010	1834	PDO	10044913	ON	RAMP	2	DRY	DAYLIGHT
661	225A	0	8/31/2010	0930	PDO	10046348	ON	RAMP	2	DRY	DAYLIGHT
662	225A	0	12/31/2010	1015	PDO	10071683	OFF RIGHT	RAMP	1	SLUSHY W/VIS ICY ROAD TREATMENT	DAYLIGHT
663	225A	0	1/27/2011	1745	PDO	11010362	ON	RAMP	2	DRY	DARK-LIGHTED
664	225A	0	6/10/2011	1712	PDO	11031124	ON	RAMP	2	DRY	DAYLIGHT
665	225A	0	7/19/2011	0850	PDO	11038302	ON	RAMP	2	DRY	DAYLIGHT
666	225A	0	11/15/2011	1756	PDO	11063175	ON	RAMP	3	DRY	DAWN OR DUSK
667	225A	0	1/10/2012	0800	PDO	12002764	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
668	225A	0	3/28/2012	1215	PDO	12020244	ON	RAMP	2	DRY	DAYLIGHT
669	225A	0	5/11/2012	1902	PDO	12031151	ON	RAMP	2	DRY	DAWN OR DUSK
670	225A	0	5/22/2012	0621	PDO	12039245	OFF LEFT	RAMP	1	DRY	DAYLIGHT
671	225A	0.01	9/18/2010	1922	PDO	10053534	OFF LEFT	RAMP	1	DRY	DARK-LIGHTED
672	225A	0.01	1/8/2011	0742	PDO	11001959	ON	NON-INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
617	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	050
618	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	OTHER FACTOR	UK
619	NONE	GUARD RAIL	N	SUV	DRIVER UNFAMILIAR W/AREA	030
620	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	005
621	NONE	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	45
622	NONE	CONCRETE HIGHWAY BARRIER	N	SUV	NONE APPARENT	050
623	NONE	SIDESWIPE (SAME DIRECTION)	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	000
624	NONE	REAR END	S	SUV	DRIVER UNFAMILIAR W/AREA	UK
625	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	030
626	NONE	REAR END	N	PASSENGER CAR/VAN	AGRESSIVE DRIVING	25
627	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
628	NONE	REAR END	S	PASSENGER CAR/VAN	ILLNESS/MEDICAL	65
629	RAIN	CONCRETE HIGHWAY BARRIER	N	SUV	NONE APPARENT	050
630	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	NONE APPARENT	055
631	NONE	REAR END	N	SUV	DISTRACTED/CELL PHONE	25
632	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	OTHER FACTOR	UK
633	NONE	SIDESWIPE (SAME DIRECTION)	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	065
634	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	UK
635	SNOW/SLEET/HAIL	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
636	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	UK
637	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/PASSENGER	005
638	NONE	REAR END	N	SCHOOL BUS (ALL SCHOOL BUSSES)	OTHER FACTOR	10
639	NONE	REAR END	N	SUV	DISTRACTED/OTHER	35
640	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	OTHER FACTOR	004
641	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK
642	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	065
643	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	DISTRACTED/PASSENGER	80
644	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	060
645	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	UK
646	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010
647	SNOW/SLEET/HAIL	REAR END	S	SUV	AGRESSIVE DRIVING	035
648	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/CELL PHONE	UK
649	NONE	REAR END	S	HIT & RUN - UNKNOWN	NONE APPARENT	UK
650	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	040
651	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	030
652	NONE	REAR END	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	055
653	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	40
654	NONE	REAR END	S	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	075
655	NONE	SIDESWIPE (SAME DIRECTION)	NW	SUV	NONE APPARENT	055
656	SNOW/SLEET/HAIL	OVERTURNING	S	PICKUP TRUCK/UTILITY VAN	DUI, DWAI, DUID	UK
657	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	045
658	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	000
659	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010
660	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
661	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
662	SNOW/SLEET/HAIL	BRIDGE STRUCTURE	S	PASSENGER CAR/VAN	NONE APPARENT	020
663	NONE	REAR END	S	PASSENGER CAR/VAN	OTHER FACTOR	015
664	NONE	REAR END	S	HIT & RUN - UNKNOWN	NONE APPARENT	UK
665	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	030
666	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010
667	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	45
668	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	UK
669	RAIN	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	000
670	NONE	GUARD RAIL	S	SUV	DRIVER INEXPERIENCE	065
671	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	060
672	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
673	225A	0.02	1/7/2011	1814	PDO	11002438	ON	RAMP	2	DRY	DARK-LIGHTED
674	225A	0.02	1/10/2011	1417	PDO	11002018	OFF LEFT	NON-INTERSECTION	1	SLUSHY	DAYLIGHT
675	225A	0.05	1/11/2012	1334	PDO	12001424	OFF RIGHT	RAMP	2	ICY W/VIS ICY ROAD TREATMENT	DAYLIGHT
676	225A	0.1	4/23/2010	0650	PDO	10021948	OFF LEFT	RAMP	1	WET	DAYLIGHT
677	225A	0.13	8/23/2011	1634	PDO	11044598	ON	RAMP	2	DRY	DAYLIGHT
678	225A	0.15	6/21/2012	1340	PDO	12031999	OFF LEFT	RAMP	1	DRY	DAYLIGHT
679	225A	0.2	12/6/2010	1730	PDO	10316515	ON	NON-INTERSECTION	2	DRY	DARK-UNLIGHTED
680	225A	0.24	7/10/2011	0617	INJ	11049055	OFF RIGHT	RAMP	1	DRY	DAYLIGHT
681	225A	0.29	4/3/2010	1212	PDO	10016232	ON	RAMP	2	DRY	DAYLIGHT
682	225A	0.29	9/30/2011	1901	PDO	11062518	ON	RAMP	3	DRY	DAWN OR DUSK
683	225A	0.3	11/29/2009	1553	PDO	09070852	OFF LEFT	RAMP	2	DRY	DAYLIGHT
684	225A	0.3	12/9/2009	1300	INJ	09067337	OFF LEFT	RAMP	1	DRY	DAYLIGHT
685	225A	0.3	1/6/2010	1203	PDO	10001754	ON	NON-INTERSECTION	2	WET	DAYLIGHT
686	225A	0.3	8/13/2010	1330	PDO	10043527	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
687	225A	0.3	1/25/2011	0850	PDO	11007000	ON	NON-INTERSECTION	2	DRY W/VIS ICY ROAD TREATMENT	DAYLIGHT
688	225A	0.3	7/1/2009	0533	PDO	09035391	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
689	225A	0.3	12/6/2009	0802	PDO	09065993	OFF LEFT	RAMP	1	SNOWY	DAYLIGHT
690	225A	0.31	4/19/2011	0005	PDO	11020379	OFF LEFT	NON-INTERSECTION	1	WET	DARK-LIGHTED
691	225A	0.31	5/13/2011	1418	PDO	11024229	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
692	225A	0.32	10/22/2011	1300	PDO	11058829	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
693	225A	0.33	1/13/2011	0950	PDO	11002317	OFF RIGHT	NON-INTERSECTION	1	ICY	DAYLIGHT
694	225A	0.33	8/12/2011	1625	PDO	11043439	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
695	225A	0.33	3/15/2012	1150	PDO	12015986	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
696	225A	0.35	10/4/2010	0545	PDO	10069982	ON	NON-INTERSECTION	4	DRY	DARK-UNLIGHTED
697	225A	0.37	6/8/2011	0805	PDO	11029094	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
698	225A	0.39	8/10/2010	1729	PDO	10041208	ON	RAMP	2	DRY	DAYLIGHT
699	225A	0.4	5/21/2010	1835	PDO	10026512	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
700	225A	0.4	11/12/2010	1817	PDO	10066052	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
701	225A	0.5	6/15/2012	1732	PDO	12029913	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
702	225A	0.56	11/12/2009	1742	PDO	09061489	ON	RAMP	3	DRY	DARK-UNLIGHTED
703	225A	0.58	3/4/2010	2251	PDO	10010456	ON	NON-INTERSECTION	2	DRY	DARK-UNLIGHTED
704	225A	0.59	9/1/2009	1530	INJ	09046759	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
705	225A	0.59	12/6/2011	0828	PDO	11069264	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
706	225A	0.59	11/29/2011	1838	PDO	11069063	ON	RAMP	2	DRY	DARK-LIGHTED
707	225A	0.59	5/31/2012	0753	PDO	12029406	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
708	225A	0.6	9/14/2010	0857	PDO	10048441	ON	RAMP	2	DRY	DAYLIGHT
709	225A	0.6	1/8/2010	1505	PDO	10003894	ON	RAMP	2	DRY	DAYLIGHT
710	225A	0.61	9/3/2010	1653	PDO	10046912	ON	RAMP	2	DRY	DAYLIGHT
711	225A	0.61	5/4/2012	0950	PDO	12031028	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
712	225A	0.63	9/17/2011	1453	PDO	11050639	ON	NON-INTERSECTION	2	WET	DAYLIGHT
713	225A	0.65	10/12/2011	1720	PDO	11056660	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
714	225A	0.69	4/23/2010	1419	INJ	10020383	OFF LEFT	NON-INTERSECTION	1	WET	DAYLIGHT
715	225A	0.75	10/10/2009	0400	PDO	09054671	OFF LEFT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
716	225A	0.75	11/18/2011	1829	PDO	11068843	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
717	225A	0.75	4/1/2010	1713	PDO	10016763	ON	RAMP	2	DRY	DAYLIGHT
718	225A	0.77	1/31/2012	0658	PDO	12008514	ON	RAMP	2	DRY	DAYLIGHT
719	225A	0.77	2/16/2012	1731	PDO	12009705	ON	RAMP	2	DRY	DARK-LIGHTED
720	225A	0.79	1/26/2012	1648	PDO	12004031	ON	RAMP	2	DRY	DAYLIGHT
721	225A	0.79	5/31/2012	0915	PDO	12029413	ON	RAMP	2	DRY	DAYLIGHT
722	225A	0.79	7/26/2009	1117	PDO	09037533	ON	AT INTERSECTION	2	DRY	DAYLIGHT
723	225A	0.79	8/27/2009	1756	PDO	09045571	ON	AT INTERSECTION	2	DRY	DAYLIGHT
724	225A	0.79	10/11/2009	0350	PDO	09054673	OFF LEFT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
725	225A	0.79	11/22/2009	1615	PDO	09063058	ON	AT INTERSECTION	2	DRY	DAYLIGHT
726	225A	0.79	11/25/2009	1222	PDO	09064567	ON	AT INTERSECTION	2	DRY	DAYLIGHT
727	225A	0.79	12/21/2009	1254	PDO	09070592	ON	AT INTERSECTION	2	DRY	DAYLIGHT
728	225A	0.79	2/7/2010	1015	PDO	10004737	ON	AT INTERSECTION	2	WET	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
673	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	030
674	NONE	CONCRETE HIGHWAY BARRIER	SW	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	045
675	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	SW	SUV	OTHER FACTOR	055
676	RAIN	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	UK
677	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	030
678	NONE	WALL/BUILDING	NW	PASSENGER CAR/VAN	AGRESSIVE DRIVING	060
679	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	050
680	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	UK
681	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	UK
682	NONE	SIDESWIPE (SAME DIRECTION)	W	SUV	NONE APPARENT	000
683	NONE	OVERTURNING	S	HIT & RUN - UNKNOWN	OTHER FACTOR	000
684	NONE	FENCE	S	PICKUP TRUCK/UTILITY VAN	ILLNESS/MEDICAL	UK
685	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
686	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	OTHER FACTOR	060
687	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	025
688	NONE	SIDESWIPE (SAME DIRECTION)	W	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	060
689	SNOW/SLEET/HAIL	SIGN	W	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	050
690	RAIN	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	050
691	NONE	REAR END	S	SUV	NONE APPARENT	065
692	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	055
693	SNOW/SLEET/HAIL	WALL/BUILDING	S	PASSENGER CAR/VAN	NONE APPARENT	035
694	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
695	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	45
696	NONE	REAR END	S	PASSENGER CAR/VAN	OTHER FACTOR	050
697	NONE	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	035
698	NONE	SIDESWIPE (SAME DIRECTION)	S	PICKUP TRUCK/UTILITY VAN W/TRAILER	NONE APPARENT	010
699	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	050
700	NONE	REAR END	S	SUV	NONE APPARENT	UK
701	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	055
702	NONE	OTHER NON-COLLISION	SE	HIT & RUN - UNKNOWN	NONE APPARENT	UK
703	NONE	SIDESWIPE (SAME DIRECTION)	W	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	000
704	NONE	REAR END	S	MOTORCYCLE	AGRESSIVE DRIVING	UK
705	NONE	REAR END	S	SUV	NONE APPARENT	045
706	NONE	REAR END	W	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	020
707	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	040
708	NONE	REAR END	SW	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	015
709	NONE	REAR END	W	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	030
710	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	025
711	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	025
712	RAIN	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	030
713	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	030
714	RAIN	GUARD RAIL	S	PASSENGER CAR/VAN	DISTRACTED/RADIO	050
715	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	DRIVER INEXPERIENCE	055
716	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	055
717	NONE	SIDESWIPE (SAME DIRECTION)	W	PASSENGER CAR/VAN	NONE APPARENT	005
718	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	35
719	NONE	REAR END	S	SUV	NONE APPARENT	05
720	NONE	REAR END	NW	SUV	NONE APPARENT	UK
721	NONE	REAR END	NW	PASSENGER CAR/VAN	NONE APPARENT	025
722	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	002
723	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	002
724	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	055
725	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	030
726	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	025
727	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010
728	SNOW/SLEET/HAIL	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	015

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
729	225A	0.79	2/19/2010	1757	PDO	10006866	ON	AT INTERSECTION	2	WET	DARK-LIGHTED
730	225A	0.79	3/20/2010	1857	PDO	10013895	ON	AT INTERSECTION	2	DRY	DAYLIGHT
731	225A	0.79	3/26/2010	1411	PDO	10017314	ON	AT INTERSECTION	2	DRY	DAYLIGHT
732	225A	0.79	4/13/2010	0830	PDO	10018664	ON	AT INTERSECTION	2	DRY	DAYLIGHT
733	225A	0.79	6/8/2010	0908	PDO	10030443	ON	AT INTERSECTION	2	DRY	DAYLIGHT
734	225A	0.79	8/23/2010	0633	PDO	10043856	ON	AT INTERSECTION	2	DRY	DAYLIGHT
735	225A	0.79	8/27/2010	1927	PDO	10044960	ON	AT INTERSECTION	2	DRY	DAWN OR DUSK
736	225A	0.79	8/31/2010	0705	PDO	10053674	ON	AT INTERSECTION	2	DRY	DAYLIGHT
737	225A	0.79	9/3/2010	1429	INJ	10046892	ON	AT INTERSECTION	2	DRY	DAYLIGHT
738	225A	0.79	9/23/2010	1605	PDO	10053345	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
739	225A	0.79	9/26/2010	1838	PDO	10050836	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
740	225A	0.79	11/9/2010	0910	PDO	10066449	ON	AT INTERSECTION	3	DRY	UNKNOWN
741	225A	0.79	11/29/2010	1730	PDO	10068714	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
742	225A	0.79	12/23/2010	1805	PDO	10071402	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
743	225A	0.79	4/21/2011	1115	PDO	11020491	ON	AT INTERSECTION	2	DRY	DAYLIGHT
744	225A	0.79	5/5/2011	0835	PDO	11022898	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
745	225A	0.79	5/11/2011	1220	PDO	11024126	ON	AT INTERSECTION	2	WET	DAYLIGHT
746	225A	0.79	7/7/2011	0939	PDO	11034555	ON	AT INTERSECTION	2	DRY	DAYLIGHT
747	225A	0.79	7/14/2011	2145	INJ	11036928	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
748	225A	0.79	7/19/2011	0901	PDO	11038304	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
749	225A	0.79	7/21/2011	1625	PDO	11045006	OFF RIGHT	AT INTERSECTION	1	DRY	DAYLIGHT
750	225A	0.79	8/26/2011	2016	PDO	11062479	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
751	225A	0.79	9/25/2011	1541	PDO	11051903	ON	AT INTERSECTION	2	DRY	DAYLIGHT
752	225A	0.79	11/15/2011	0907	PDO	11063165	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
753	225A	0.79	11/15/2011	1906	PDO	11072464	ON	AT INTERSECTION	2	DRY	DAWN OR DUSK
754	225A	0.79	12/15/2011	1204	PDO	11073640	ON	AT INTERSECTION	2	DRY	DAYLIGHT
755	225A	0.79	12/20/2011	1922	PDO	11071747	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
756	225A	0.79	2/6/2012	0758	PDO	12007866	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
757	225A	0.79	2/6/2012	0758	PDO	12009453	ON	AT INTERSECTION	2	ICY	DAYLIGHT
758	225A	0.79	3/7/2012	1117	PDO	12018486	ON	AT INTERSECTION	2	DRY	DAYLIGHT
759	225A	0.79	4/12/2012	0700	PDO	12020287	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
760	225A	0.79	5/19/2012	1716	PDO	12025699	ON	AT INTERSECTION	2	DRY	DAYLIGHT
761	225A	0.79	6/25/2012	0905	PDO	12037118	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
762	225A	0.79	1/21/2010	1631	PDO	10001379	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
763	225A	0.79	4/16/2010	1806	PDO	10019118	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
764	225A	0.79	9/24/2010	1427	PDO	10053299	ON	AT INTERSECTION	2	DRY	DAYLIGHT
765	225A	0.79	10/15/2010	1220	PDO	10063276	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
766	225A	0.79	11/4/2010	1925	PDO	10068138	ON	INTERSECTION RELATED	2	DRY	DARK-LIGHTED
767	225A	0.79	11/13/2010	1213	PDO	10066080	ON	AT INTERSECTION	2	DRY	DAYLIGHT
768	225A	0.79	11/21/2010	0623	PDO	10068406	ON	AT INTERSECTION	3	DRY	DAYLIGHT
769	225A	0.79	9/29/2011	1300	INJ	11052864	ON	RAMP	2	DRY	DAYLIGHT
770	225A	0.79	10/10/2011	0830	PDO	11055606	ON	AT INTERSECTION	3	DRY	DAYLIGHT
771	225A	0.79	4/12/2012	1242	PDO	12020299	ON	AT INTERSECTION	2	DRY	DAYLIGHT
772	225A	0.79	4/27/2012	0535	PDO	12021988	ON	AT INTERSECTION	2	DRY	DAWN OR DUSK
773	225A	0.79	5/7/2012	1223	PDO	12040091	ON	AT INTERSECTION	2	WET	DAYLIGHT
774	225A	0.79	6/21/2012	2305	PDO	12035407	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
775	225A	0.8	9/17/2011	0920	PDO	11058972	ON	RAMP	2	DRY	DAYLIGHT
776	225A	0.8	11/13/2011	2215	PDO	11063113	ON	RAMP	2	DRY	DARK-LIGHTED
777	225A	0.8	12/2/2009	0900	PDO	09066064	ON	RAMP	2	SNOWY	DAYLIGHT
778	225A	0.8	3/19/2010	1735	PDO	10013764	ON	RAMP	2	DRY W/VIS ICY ROAD TREATMENT	DAWN OR DUSK
779	225A	0.8	1/13/2011	1645	PDO	11002718	ON	RAMP	2	WET	DAWN OR DUSK
780	225A	0.81	8/10/2010	1111	PDO	10041066	ON	RAMP	2	DRY	DAYLIGHT
781	225A	0.82	4/25/2010	1615	PDO	10076259	ON	RAMP	2	UNKNOWN	UNKNOWN
782	225A	0.83	3/13/2012	0802	PDO	12013520	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
783	225A	0.85	2/16/2010	0920	PDO	10006829	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
784	225A	0.85	6/7/2011	1020	INJ	11029054	OFF RIGHT	RAMP	1	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
729	SNOW/SLEET/HAIL	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	010
730	NONE	BROADSIDE	S	PASSENGER CAR/VAN	NONE APPARENT	030
731	NONE	BROADSIDE	S	PASSENGER CAR/VAN	OTHER FACTOR	030
732	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	020
733	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	030
734	NONE	REAR END	S	HIT & RUN - UNKNOWN	NONE APPARENT	UK
735	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	015
736	NONE	APPROACH TURN	S	SUV	NONE APPARENT	020
737	NONE	BROADSIDE	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	025
738	NONE	REAR END	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	015
739	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	055
740	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	030
741	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010
742	NONE	APPROACH TURN	S	SUV	NONE APPARENT	015
743	NONE	BROADSIDE	S	SUV	DRIVER INEXPERIENCE	025
744	NONE	OVERTAKING TURN	S	SUV	DRIVER UNFAMILIAR W/AREA	015
745	RAIN	OVERTAKING TURN	S	PASSENGER CAR/VAN	NONE APPARENT	025
746	NONE	BROADSIDE	S	PASSENGER CAR/VAN	NONE APPARENT	030
747	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	UK
748	NONE	REAR END	S	HIT & RUN - UNKNOWN	NONE APPARENT	UK
749	NONE	TRAFFIC SIGNAL POLE	S	PICKUP TRUCK/UTILITY VAN	DISTRACTED/CELL PHONE	005
750	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	AGRESSIVE DRIVING	025
751	NONE	OVERTAKING TURN	S	PASSENGER CAR/VAN	NONE APPARENT	010
752	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	UK
753	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	015
754	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	030
755	NONE	BROADSIDE	S	SUV	DRIVER UNFAMILIAR W/AREA	035
756	NONE	REAR END	S	SUV	NONE APPARENT	20
757	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	02
758	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	005
759	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	040
760	NONE	BROADSIDE	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	035
761	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	025
762	NONE	REAR END	W	SUV	NONE APPARENT	020
763	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	010
764	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	015
765	NONE	REAR END	W	PASSENGER CAR/VAN	DISTRACTED/OTHER	020
766	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	UK
767	NONE	SIDESWIPE (SAME DIRECTION)	W	PASSENGER CAR/VAN	NONE APPARENT	UK
768	NONE	BROADSIDE	W	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	035
769	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	015
770	NONE	BROADSIDE	W	PASSENGER CAR/VAN	DISTRACTED/OTHER	045
771	NONE	OVERTAKING TURN	W	SUV	NONE APPARENT	010
772	NONE	BROADSIDE	W	PASSENGER CAR/VAN	NONE APPARENT	065
773	RAIN	BROADSIDE	W	PASSENGER CAR/VAN	NONE APPARENT	010
774	NONE	REAR END	W	HIT & RUN - UNKNOWN	NONE APPARENT	020
775	NONE	REAR END	NW	SUV	NONE APPARENT	010
776	NONE	REAR END	NW	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	035
777	SNOW/SLEET/HAIL	REAR END	S	SUV	OTHER FACTOR	020
778	SNOW/SLEET/HAIL	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	010
779	NONE	SIDESWIPE (SAME DIRECTION)	SW	SUV	OTHER FACTOR	005
780	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	055
781	UNKNOWN	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	UK
782	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
783	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	UK
784	NONE	OVERTURNING	W	SUV	OTHER FACTOR	075

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
785	225A	0.87	5/11/2010	1650	PDO	10026246	ON	NON-INTERSECTION	3	WET	DAYLIGHT
786	225A	0.89	2/26/2010	1215	PDO	10007830	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
787	225A	0.94	3/9/2010	0640	PDO	10010841	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
788	225A	0.94	5/26/2010	0830	PDO	10027650	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
789	225A	0.96	8/25/2009	0915	PDO	09045774	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
790	225A	1	11/8/2009	1902	PDO	09059402	ON	NON-INTERSECTION	4	DRY	DARK-LIGHTED
791	225A	1	10/4/2010	0840	PDO	10052808	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
792	225A	1	7/5/2011	0720	PDO	11506003	ON	RAMP	2	DRY	DAYLIGHT
793	225A	1.04	6/8/2011	1100	PDO	11029096	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
794	225A	1.04	3/5/2012	1600	PDO	12011405	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
795	225A	1.05	8/25/2009	0845	PDO	09045449	ON	NON-INTERSECTION	2	FOREIGN MATERIAL	DAYLIGHT
796	225A	1.07	6/18/2010	1521	INJ	10033609	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
797	225A	1.08	4/15/2011	0830	PDO	11020234	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
798	225A	1.08	8/10/2011	0650	PDO	11042481	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
799	225A	1.08	9/7/2011	1150	PDO	11058108	ON	NON-INTERSECTION	2	WET	DAYLIGHT
800	225A	1.13	2/16/2011	1100	PDO	11007803	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
801	225A	1.16	1/4/2012	0658	PDO	12000904	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
802	225A	1.23	4/29/2010	0705	PDO	10022189	ON	NON-INTERSECTION	2	WET	DAYLIGHT
803	225A	1.25	4/4/2012	0815	PDO	12016099	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
804	225A	1.27	2/9/2011	1335	PDO	11006139	ON	RAMP	2	WET	DAYLIGHT
805	225A	1.3	8/31/2010	0741	PDO	10046336	ON	RAMP	2	DRY	DAYLIGHT
806	225A	1.32	11/10/2009	0730	PDO	09061582	ON	RAMP	2	DRY	DAYLIGHT
807	225A	1.32	3/5/2012	0749	INJ	12011360	OFF LEFT	RAMP	1	DRY	DAYLIGHT
808	225A	1.33	7/10/2009	0755	PDO	09035811	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
809	225A	1.33	7/17/2009	1423	PDO	09037150	ON	AT INTERSECTION	2	DRY	DAYLIGHT
810	225A	1.33	8/10/2009	0656	PDO	09041938	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
811	225A	1.33	9/9/2009	0930	PDO	09047661	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
812	225A	1.33	4/27/2010	0630	PDO	10021484	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
813	225A	1.33	6/18/2010	0650	PDO	10036237	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
814	225A	1.33	6/25/2010	2022	PDO	10035139	ON	INTERSECTION RELATED	2	DRY	DAWN OR DUSK
815	225A	1.33	7/28/2010	0740	INJ	10039044	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
816	225A	1.33	8/27/2010	2113	INJ	10044965	ON	AT INTERSECTION	2	DRY	DARK-UNLIGHTED
817	225A	1.33	11/18/2010	1301	PDO	10066341	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
818	225A	1.33	12/3/2010	1837	PDO	10070154	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
819	225A	1.33	12/14/2010	0815	PDO	10070992	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
820	225A	1.33	12/16/2010	1240	PDO	10071101	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
821	225A	1.33	7/18/2011	0723	PDO	11038283	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
822	225A	1.33	10/14/2011	0845	PDO	11057295	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
823	225A	1.33	2/24/2012	1338	PDO	12010234	ON	AT INTERSECTION	2	DRY	DAYLIGHT
824	225A	1.33	3/28/2012	0742	PDO	12015260	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
825	225A	1.33	5/21/2012	0629	PDO	12039206	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
826	225A	1.33	5/25/2012	0704	PDO	12025743	ON	AT INTERSECTION	2	DRY	DAYLIGHT
827	225A	1.33	1/27/2011	0826	PDO	11006965	ON	AT INTERSECTION	2	DRY	DAYLIGHT
828	225A	1.33	3/23/2011	0915	PDO	11017050	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
829	225A	1.33	6/6/2011	0643	INJ	11030980	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
830	225A	1.33	1/9/2012	1612	PDO	12009265	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
831	225A	1.33	2/14/2012	1546	PDO	12011077	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
832	225A	1.33	11/5/2009	0754	PDO	09059492	ON	AT INTERSECTION	2	DRY	DAYLIGHT
833	225A	1.33	11/20/2009	1803	INJ	09063000	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
834	225A	1.33	1/9/2011	1135	PDO	11001986	ON	AT INTERSECTION	2	SNOWY	DAYLIGHT
835	225A	1.33	7/7/2011	0849	PDO	11034553	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
836	225A	1.33	9/14/2011	0746	PDO	11050032	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
837	225A	1.33	9/17/2011	1552	PDO	11050252	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
838	225A	1.38	4/4/2012	0956	PDO	12016110	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
839	225A	1.42	5/27/2011	0825	PDO	11026743	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
840	225A	1.42	6/15/2011	0625	PDO	11031258	ON	NON-INTERSECTION	3	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
785	RAIN	SIDESWIPE (SAME DIRECTION)	SW	SUV	AGRESSIVE DRIVING	025
786	NONE	REAR END	S	SUV	NONE APPARENT	004
787	NONE	REAR END	S	SUV	NONE APPARENT	UK
788	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
789	NONE	REAR END	S	VEH COMBO (10,001 LBS AND OVER)	DISTRACTED/OTHER	010
790	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	040
791	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	030
792	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
793	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DISTRACTED/CELL PHONE	030
794	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	30
795	NONE	REAR END	S	PASSENGER CAR/VAN	OTHER FACTOR	005
796	NONE	REAR END	W	HIT & RUN - UNKNOWN	NONE APPARENT	UK
797	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	050
798	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	030
799	NONE	VEHICLE DEBRIS OR CARGO	W	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	070
800	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	045
801	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	40
802	RAIN	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	040
803	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	30
804	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	OTHER FACTOR	045
805	NONE	REAR END	S	SUV	NONE APPARENT	005
806	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
807	NONE	TRAFFIC SIGNAL POLE	SW	PASSENGER CAR/VAN	NONE APPARENT	25
808	NONE	REAR END	S	PASSENGER CAR/VAN	OTHER FACTOR	040
809	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	015
810	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
811	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	DRIVER INEXPERIENCE	045
812	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
813	NONE	REAR END	S	SUV	NONE APPARENT	UK
814	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK
815	NONE	REAR END	S	SUV	DISTRACTED/OTHER	030
816	NONE	APPROACH TURN	S	SUV	NONE APPARENT	UK
817	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	AGRESSIVE DRIVING	065
818	NONE	BROADSIDE	S	PASSENGER CAR/VAN	NONE APPARENT	UK
819	NONE	REAR END	S	SUV	OTHER FACTOR	015
820	NONE	SIDESWIPE (SAME DIRECTION)	S	HIT & RUN - UNKNOWN	NONE APPARENT	055
821	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	OTHER FACTOR	030
822	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	UK
823	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	45
824	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	35
825	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	045
826	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	000
827	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	010
828	NONE	REAR END	SW	SUV	AGRESSIVE DRIVING	045
829	NONE	REAR END	SW	MOTORCYCLE	NONE APPARENT	030
830	NONE	REAR END	SW	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	30
831	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	40
832	NONE	REAR END	W	SUV	NONE APPARENT	010
833	NONE	BROADSIDE	W	PASSENGER CAR/VAN	NONE APPARENT	020
834	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	W	HIT & RUN - UNKNOWN	NONE APPARENT	UK
835	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	035
836	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	055
837	RAIN	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	030
838	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	20
839	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	NONE APPARENT	040
840	NONE	REAR END	SW	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	055

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
841	225A	1.43	7/1/2009	0800	PDO	09035397	ON	RAMP	2	DRY	DAYLIGHT
842	225A	1.43	4/29/2010	0705	PDO	10022185	ON	NON-INTERSECTION	3	WET	DAYLIGHT
843	225A	1.43	6/18/2010	1120	PDO	10031434	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
844	225A	1.43	5/31/2012	0801	PDO	12029408	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
845	225A	1.53	7/27/2009	0635	PDO	09038654	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
846	225A	1.53	11/5/2010	0745	PDO	10068149	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
847	225A	1.53	7/18/2009	1139	INJ	09039747	OFF RIGHT	NON-INTERSECTION	2	DRY	DAYLIGHT
848	225A	1.56	4/13/2010	0728	PDO	10018653	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
849	225A	1.57	9/22/2010	0913	PDO	10050804	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
850	225A	1.57	1/30/2011	0030	PDO	11010367	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
851	225A	1.57	3/5/2012	0757	PDO	12011364	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
852	225A	1.57	5/21/2012	0756	INJ	12039208	ON	RAMP	2	DRY	DAYLIGHT
853	225A	1.59	2/22/2012	1645	PDO	12010078	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
854	225A	1.59	6/21/2012	0718	PDO	12045992	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
855	225A	1.62	2/22/2012	1624	PDO	12009027	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
856	225A	1.63	1/26/2010	0715	PDO	10003452	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
857	225A	1.63	8/21/2011	2010	PDO	11502073	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
858	225A	1.64	11/14/2009	0236	PDO	09063672	ON	NON-INTERSECTION	2	SNOWY	DARK-UNLIGHTED
859	225A	1.68	1/26/2010	0917	PDO	10003657	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
860	225A	1.9	10/13/2009	0800	PDO	09327690	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
861	225A	1.9	3/9/2010	0725	PDO	10322289	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
862	225A	1.9	7/8/2009	0900	PDO	09308685	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
863	225A	1.9	11/23/2009	1545	PDO	09320608	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
864	225A	1.93	12/24/2009	1227	PDO	09071963	ON	NON-INTERSECTION	3	SLUSHY	DAYLIGHT
865	225A	1.95	3/22/2012	0700	PDO	12505554	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
866	225A	2	3/5/2012	1934	PDO	12504880	OFF RIGHT	NON-INTERSECTION	1	DRY	DARK-LIGHTED
867	225A	2	4/10/2012	0315	PDO	12507238	ON	NON-INTERSECTION	2	DRY	DARK-UNLIGHTED
868	225A	2	9/23/2010	2250	INJ	10313166	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
869	225A	2.1	4/12/2012	0830	PDO	12506786	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
870	225A	2.1	5/27/2010	0720	PDO	10305335	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
871	225A	2.2	2/24/2010	0740	PDO	10323510	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
872	225A	2.2	5/17/2012	0620	PDO	12508983	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
873	225A	2.2	6/27/2012	0850	PDO	12512079	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
874	225A	2.25	9/11/2009	0730	PDO	09328753	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
875	225A	2.33	3/30/2012	0955	PDO	12021579	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
876	225A	2.34	10/18/2011	0645	PDO	11504848	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
877	225A	2.4	5/10/2011	0805	PDO	11308718	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
878	225A	2.4	9/23/2011	0647	PDO	11502575	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
879	225A	2.4	8/30/2010	2240	PDO	10308565	OFF LEFT	NON-INTERSECTION	1	DRY	DARK-LIGHTED
880	225A	2.4	12/15/2010	1715	PDO	10317203	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
881	225A	2.48	9/8/2010	1605	PDO	10311209	OFF RIGHT	NON-INTERSECTION	2	DRY	DAYLIGHT
882	225A	2.5	1/4/2011	0745	PDO	11300072	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
883	225A	2.5	1/21/2011	1730	PDO	11301597	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
884	225A	2.5	6/17/2011	0645	PDO	11313090	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
885	225A	2.5	11/9/2011	1825	PDO	11507823	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
886	225A	2.5	12/2/2011	1534	PDO	11511256	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
887	225A	2.5	4/12/2012	0640	PDO	12506789	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
888	225A	2.5	5/22/2012	1744	PDO	12509713	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
889	225A	2.5	5/27/2012	0600	PDO	12509714	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
890	225A	2.5	7/31/2009	0655	PDO	09315935	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
891	225A	2.5	4/6/2010	0924	PDO	10302823	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
892	225A	2.5	7/15/2010	0742	PDO	10310726	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
893	225A	2.54	8/28/2009	0700	INJ	09311118	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
894	225A	2.6	3/14/2011	0830	PDO	11315516	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
895	225A	2.6	7/29/2011	0850	PDO	11314391	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
896	225A	2.6	3/5/2012	1615	PDO	12504931	ON	NON-INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
841	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	004
842	RAIN	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	040
843	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	000
844	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	025
845	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
846	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	030
847	NONE	CONCRETE HIGHWAY BARRIER	SW	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	060
848	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	000
849	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/CELL PHONE	055
850	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	000
851	NONE	REAR END	S	SUV	NONE APPARENT	35
852	NONE	SIDESWIPE (SAME DIRECTION)	S	SCHOOL BUS (ALL SCHOOL BUSSES)	NONE APPARENT	030
853	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	20
854	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	025
855	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	015
856	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
857	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	065
858	SNOW/SLEET/HAIL	REAR END	SW	PASSENGER CAR/VAN	DUI, DWAI, DUID	075
859	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	040
860	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	005
861	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	040
862	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	055
863	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	040
864	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	035
865	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	040
866	NONE	WALL/BUILDING	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	080
867	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	090
868	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	AGRESSIVE DRIVING	065
869	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	010
870	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	050
871	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	ILLNESS/MEDICAL	040
872	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	060
873	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	030
874	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	020
875	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	055
876	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	025
877	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN W/TRAILER	DISTRACTED/OTHER	020
878	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	020
879	NONE	CONCRETE HIGHWAY BARRIER	SW	HIT & RUN - UNKNOWN	NONE APPARENT	065
880	RAIN	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	NONE APPARENT	030
881	NONE	GUARD RAIL	SW	PASSENGER CAR/VAN	NONE APPARENT	065
882	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	015
883	NONE	REAR END	S	SUV	DUI, DWAI, DUID	040
884	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	020
885	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	015
886	NONE	REAR END	S	SUV	DISTRACTED/OTHER	005
887	NONE	REAR END	S	SUV	NONE APPARENT	035
888	NONE	REAR END	S	SUV	ASLEEP AT THE WHEEL	065
889	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	DUI, DWAI, DUID	065
890	NONE	REAR END	SW	SUV	NONE APPARENT	060
891	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	015
892	NONE	REAR END	SW	SUV	DISTRACTED/OTHER	025
893	NONE	REAR END	SW	MOTORCYCLE	DRIVER INEXPERIENCE	065
894	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	020
895	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	035
896	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	065

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
897	225A	2.6	8/5/2009	0855	PDO	09310582	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
898	225A	2.7	11/15/2011	0725	PDO	11509266	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
899	225A	2.7	1/4/2012	0740	PDO	12500423	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
900	225A	2.7	6/8/2012	0955	PDO	12510354	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
901	225A	2.8	9/11/2009	0845	PDO	09321325	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
902	225A	2.8	10/26/2010	0808	PDO	10065026	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
903	225A	2.8	3/1/2011	0808	PDO	11303949	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
904	225A	2.8	8/23/2011	1645	PDO	11507449	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
905	225A	2.9	8/15/2010	0405	PDO	10324588	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
906	225A	2.9	11/18/2011	1745	PDO	11508573	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
907	225A	2.92	10/13/2010	0655	PDO	10326656	ON	NON-INTERSECTION	2	DRY	DAWN OR DUSK
908	225A	3	10/26/2009	1106	PDO	09325902	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
909	225A	3	5/2/2011	0830	PDO	11314517	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
910	225A	3	12/13/2011	0655	PDO	11513166	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
911	225A	3	3/29/2012	0930	PDO	12506020	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
912	225A	3	5/21/2012	0945	PDO	12509251	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
913	225A	3.03	11/18/2009	0820	PDO	09326014	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
914	225A	3.09	3/26/2012	1300	PDO	12506095	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
915	225A	3.1	3/1/2010	1845	PDO	10327217	ON	NON-INTERSECTION	3	DRY	DARK-LIGHTED
916	225A	3.1	2/8/2011	1545	PDO	11302956	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
917	225A	3.1	3/10/2011	1500	PDO	11304499	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
918	225A	3.1	4/25/2011	1000	PDO	11306799	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
919	225A	3.1	7/10/2011	2145	PDO	11315932	ON	NON-INTERSECTION	1	DRY	DARK-UNLIGHTED
920	225A	3.1	11/3/2011	1445	PDO	11505348	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
921	225A	3.1	3/8/2012	0740	PDO	12504720	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
922	225A	3.1	9/19/2009	1530	INJ	09311318	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
923	225A	3.1	12/6/2009	0930	PDO	09319505	ON	NON-INTERSECTION	2	SNOWY	DAYLIGHT
924	225A	3.1	4/5/2010	0910	PDO	10302606	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
925	225A	3.1	5/21/2010	1000	PDO	10305069	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
926	225A	3.11	5/5/2010	0654	INJ	10309210	ON	NON-INTERSECTION	4	DRY	DAYLIGHT
927	225A	3.15	5/5/2010	0655	PDO	10309215	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
928	225A	3.16	4/25/2011	2200	PDO	11306838	OFF RIGHT	NON-INTERSECTION	1	SLUSHY	DARK-LIGHTED
929	225A	3.19	8/25/2011	1425	INJ	11501279	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
930	225A	3.2	10/14/2009	0840	PDO	09324564	ON	NON-INTERSECTION	2	WET W/VIS ICY ROAD TREATMENT	DAYLIGHT
931	225A	3.2	3/21/2011	1730	PDO	11304987	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
932	225A	3.2	5/10/2011	0650	PDO	11308717	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
933	225A	3.2	8/8/2011	1030	PDO	11500382	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
934	225A	3.2	10/17/2011	0845	PDO	11504345	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
935	225A	3.2	1/11/2010	0730	PDO	10300097	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
936	225A	3.2	12/21/2010	1810	INJ	10318033	OFF RIGHT	NON-INTERSECTION	1	DRY	DARK-UNLIGHTED
937	225A	3.2	8/15/2011	1300	PDO	11500774	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
938	225A	3.26	1/31/2012	1815	INJ	12501902	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
939	225A	3.3	10/14/2009	0755	PDO	09326005	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
940	225A	3.3	10/29/2009	1248	PDO	09328102	ON	NON-INTERSECTION	2	SNOWY	DAYLIGHT
941	225A	3.3	1/10/2011	1300	PDO	11301327	OFF RIGHT	NON-INTERSECTION	1	SLUSHY	DAYLIGHT
942	225A	3.3	8/16/2011	0700	PDO	11500772	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
943	225A	3.3	8/11/2009	0855	PDO	09310402	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
944	225A	3.3	5/6/2010	0850	PDO	10303905	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
945	225A	3.3	6/4/2010	0750	PDO	10305369	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
946	225A	3.4	9/15/2011	0800	PDO	11501745	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
947	225A	3.4	10/5/2011	0825	PDO	11503156	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
948	225A	3.4	11/2/2011	1055	INJ	11505426	ON	NON-INTERSECTION	2	SLUSHY	DAYLIGHT
949	225A	3.4	11/18/2009	1635	PDO	09318086	ON	NON-INTERSECTION	2	WET	DARK-UNLIGHTED
950	225A	3.4	8/2/2010	1720	PDO	10307345	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
951	225A	3.42	10/18/2011	0650	PDO	11504947	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
952	225A	3.44	10/27/2009	2227	PDO	09323799	OFF LEFT	NON-INTERSECTION	1	WET	DARK-LIGHTED

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
897	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	045
898	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	010
899	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	20
900	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	020
901	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	030
902	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	025
903	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	015
904	NONE	REAR END	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	015
905	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	055
906	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	025
907	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	015
908	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	060
909	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	DISTRACTED/OTHER	055
910	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	000
911	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	005
912	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	040
913	NONE	REAR END	S	SUV	DISTRACTED/RADIO	065
914	NONE	VEHICLE DEBRIS OR CARGO	S	PICKUP TRUCK/UTILITY VAN	OTHER FACTOR	060
915	NONE	REAR END	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	065
916	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	045
917	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	060
918	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	060
919	NONE	OVERTURNING	S	SUV	OTHER FACTOR	000
920	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	065
921	NONE	REAR END	S	SUV	DISTRACTED/OTHER	05
922	NONE	REAR END	SW	PASSENGER CAR/VAN	AGRESSIVE DRIVING	070
923	SNOW/SLEET/HAIL	REAR END	SW	PASSENGER CAR/VAN	OTHER FACTOR	050
924	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	NONE APPARENT	065
925	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	AGRESSIVE DRIVING	075
926	NONE	REAR END	SW	SUV	DISTRACTED/OTHER	065
927	NONE	REAR END	SW	HIT & RUN - UNKNOWN	DISTRACTED/OTHER	040
928	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	050
929	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	065
930	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	DISTRACTED/OTHER	005
931	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	DISTRACTED/OTHER	060
932	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	030
933	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	065
934	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	020
935	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	015
936	NONE	CONCRETE HIGHWAY BARRIER	SW	PASSENGER CAR/VAN	DUI, DWAI, DUID	080
937	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	NONE APPARENT	065
938	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	65
939	FOG	REAR END	S	SUV	DISTRACTED/OTHER	015
940	SNOW/SLEET/HAIL	PARKED MOTOR VEHICLE	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	003
941	NONE	FENCE	S	SUV	DISTRACTED/OTHER	065
942	NONE	SIDESWIPE (SAME DIRECTION)	S	MOTORCYCLE	NONE APPARENT	015
943	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	025
944	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	020
945	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/PASSENGER	010
946	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	005
947	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	005
948	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	040
949	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	045
950	NONE	SIDESWIPE (SAME DIRECTION)	SW	VEH COMBO (10,001 LBS AND OVER)	DRIVER INEXPERIENCE	055
951	NONE	OVERTURNING	S	MOTORCYCLE	DISTRACTED/OTHER	025
952	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	020

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
953	225A	3.44	3/24/2010	0443	PDO	10018050	OFF LEFT	RAMP	2	ICY	DARK-LIGHTED
954	225A	3.45	10/19/2009	1645	PDO	09318324	ON	RAMP	2	DRY	DAYLIGHT
955	225A	3.46	5/4/2011	0830	PDO	11307355	ON	RAMP	3	DRY	DAYLIGHT
956	225A	3.5	7/26/2009	1645	INJ	09329427	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
957	225A	3.5	9/29/2010	0810	PDO	10313050	ON	RAMP	2	DRY	DAYLIGHT
958	225A	3.5	6/8/2011	0655	PDO	11310136	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
959	225A	3.5	9/30/2011	1050	PDO	11502878	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
960	225A	3.5	8/22/2009	1050	PDO	09310704	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
961	225A	3.5	1/13/2010	0809	PDO	10300158	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
962	225A	3.5	7/23/2010	0755	PDO	10310814	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
963	225A	3.52	9/21/2011	0720	PDO	11502435	ON	RAMP	2	DRY	DAYLIGHT
964	225A	3.6	7/24/2009	0843	PDO	09313761	ON	RAMP	2	DRY	DAYLIGHT
965	225A	3.63	7/30/2010	1850	PDO	10307192	OFF LEFT	RAMP	1	WET	DAYLIGHT
966	225A	3.65	11/4/2011	1510	PDO	11508552	ON	RAMP	2	WET	DAYLIGHT
967	225A	3.68	10/25/2011	0657	PDO	11509306	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
968	225A	3.7	7/13/2011	0545	INJ	11313810	OFF RIGHT	NON-INTERSECTION	1	DRY	DAYLIGHT
969	225A	3.7	11/4/2011	2034	PDO	11505466	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
970	225A	3.7	1/21/2012	1715	INJ	12501360	ON	RAMP	1	DRY	DARK-UNLIGHTED
971	225A	3.7	10/31/2009	1823	PDO	09060991	ON	RAMP	2	DRY	DARK-LIGHTED
972	225A	3.74	2/3/2012	1505	PDO	12502079	ON	RAMP	2	SLUSHY	DAYLIGHT
973	225A	3.75	11/15/2009	1800	PDO	09327613	ON	NON-INTERSECTION	2	ICY	DARK-UNLIGHTED
974	225A	3.8	2/10/2010	1645	PDO	10322279	OFF RIGHT	RAMP	1	DRY	DAYLIGHT
975	225A	3.8	1/7/2011	2055	PDO	11301297	ON	NON-INTERSECTION	2	WET	DARK-LIGHTED
976	225A	3.9	12/23/2009	1500	INJ	09327447	OFF RIGHT	NON-INTERSECTION	1	ICY	DAYLIGHT
977	225A	3.9	1/7/2010	1000	INJ	10323496	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
978	225A	3.9	1/7/2010	0959	PDO	10323497	OFF LEFT	NON-INTERSECTION	1	ICY	DAYLIGHT
979	225A	3.9	3/20/2010	1052	PDO	10014381	OFF LEFT	NON-INTERSECTION	1	ICY	DAYLIGHT
980	225A	3.9	7/7/2011	2145	PDO	11314081	OFF RIGHT	RAMP	1	WET	DARK-LIGHTED
981	225A	3.9	11/2/2011	1145	PDO	11505337	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
982	225A	3.9	3/8/2012	2330	PDO	12505043	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
983	225A	3.9	12/6/2009	1030	PDO	09319498	OFF LEFT	RAMP	1	SLUSHY	DAYLIGHT
984	225A	3.91	2/7/2010	1751	PDO	10011029	ON	RAMP	2	ICY	DARK-LIGHTED
985	225A	3.93	1/6/2010	1335	PDO	10009065	ON	RAMP	2	DRY	DAYLIGHT
986	225A	3.94	6/10/2011	2113	PDO	11031493	ON	NON-INTERSECTION	1	DRY	DARK-LIGHTED
987	225A	3.94	11/4/2011	2153	PDO	11510012	ON	RAMP	2	DRY	DARK-LIGHTED
988	225A	3.94	2/7/2010	1751	INJ	10011111	ON	RAMP	2	ICY	DARK-LIGHTED
989	225A	3.94	3/20/2010	0910	PDO	10016287	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
990	225A	3.94	4/20/2010	0724	PDO	10022488	ON	RAMP	2	DRY	DAYLIGHT
991	225A	3.94	6/3/2010	2216	PDO	10030261	ON	RAMP	2	DRY	DARK-LIGHTED
992	225A	3.94	6/22/2010	0511	PDO	10033082	OFF RIGHT	RAMP	1	DRY	DAYLIGHT
993	225A	3.94	7/17/2010	1626	PDO	10038614	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
994	225A	3.94	8/20/2010	0856	PDO	10052119	ON	RAMP	2	DRY	DAYLIGHT
995	225A	3.94	11/29/2010	0640	PDO	10069183	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
996	225A	3.94	5/30/2011	2350	INJ	11309728	OFF LEFT	RAMP	1	DRY	DARK-LIGHTED
997	225A	3.94	5/31/2011	0915	PDO	11505595	ON	RAMP	2	DRY	DAYLIGHT
998	225A	3.94	11/16/2011	1445	PDO	11508506	ON	RAMP	2	DRY	DAYLIGHT
999	225A	3.94	12/7/2011	1101	PDO	11511378	ON	RAMP	2	DRY	DAYLIGHT
1000	225A	3.94	9/13/2010	1958	PDO	10051334	OFF RIGHT	RAMP	1	DRY	DARK-LIGHTED
1001	225A	3.94	12/31/2010	2140	PDO	10318290	OFF LEFT	NON-INTERSECTION	1	ICY	DARK-LIGHTED
1002	225A	3.94	2/25/2011	2100	PDO	11011619	ON	RAMP	2	DRY	DARK-LIGHTED
1003	225A	3.94	2/27/2011	1714	PDO	11011620	ON	RAMP	2	DRY	DAYLIGHT
1004	225A	3.94	6/5/2011	1432	PDO	11505671	ON	RAMP	2	DRY	DAYLIGHT
1005	225A	3.94	7/4/2011	1615	PDO	11506000	ON	RAMP	2	DRY	DAYLIGHT
1006	225A	3.94	7/27/2011	1430	PDO	11506220	ON	RAMP	2	DRY	DAYLIGHT
1007	225A	3.94	8/23/2011	0700	PDO	11047742	OFF LEFT	RAMP	1	DRY	DAYLIGHT
1008	225A	3.94	9/25/2011	0958	PDO	11506791	ON	RAMP	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
953	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	055
954	NONE	SIDESWIPE (SAME DIRECTION)	SW	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	065
955	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	025
956	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	065
957	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	025
958	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	050
959	NONE	REAR END	S	HIT & RUN - UNKNOWN	NONE APPARENT	065
960	NONE	SIDESWIPE (SAME DIRECTION)	SW	SUV	DISTRACTED/OTHER	065
961	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	025
962	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	005
963	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	045
964	NONE	SIDESWIPE (SAME DIRECTION)	SW	SUV	DISTRACTED/OTHER	050
965	RAIN	CONCRETE HIGHWAY BARRIER	SW	PASSENGER CAR/VAN	NONE APPARENT	045
966	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	040
967	NONE	OVERTAKING TURN	S	TRANSIT BUS	NONE APPARENT	035
968	NONE	FENCE	S	SUV	DRIVER INEXPERIENCE	065
969	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	OTHER FACTOR	060
970	NONE	OVERTURNING	S	MOTORCYCLE	DRIVER INEXPERIENCE	40
971	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	NONE APPARENT	000
972	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	30
973	NONE	PARKED MOTOR VEHICLE	S	PASSENGER CAR/VAN	NONE APPARENT	002
974	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	055
975	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	055
976	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	030
977	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	040
978	NONE	CONCRETE HIGHWAY BARRIER	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	040
979	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	055
980	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	045
981	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	NONE APPARENT	070
982	NONE	REAR END	S	SUV	DUI, DWAI, DUID	060
983	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	SW	SUV	OTHER FACTOR	055
984	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	SW	SUV	NONE APPARENT	UK
985	SNOW/SLEET/HAIL	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	020
986	NONE	SIDESWIPE (SAME DIRECTION)	NW	PASSENGER CAR/VAN	AGRESSIVE DRIVING	055
987	NONE	SIDESWIPE (SAME DIRECTION)	NW	PASSENGER CAR/VAN	NONE APPARENT	045
988	SNOW/SLEET/HAIL	REAR END	S	SUV	NONE APPARENT	UK
989	NONE	REAR END	S	SUV	AGRESSIVE DRIVING	035
990	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	015
991	NONE	REAR END	S	SUV	NONE APPARENT	010
992	NONE	BRIDGE STRUCTURE	S	PASSENGER CAR/VAN	NONE APPARENT	040
993	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DISTRACTED/CELL PHONE	UK
994	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	005
995	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	030
996	NONE	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	DUI, DWAI, DUID	055
997	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	005
998	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	030
999	NONE	REAR END	S	SUV	OTHER FACTOR	005
1000	NONE	CONCRETE HIGHWAY BARRIER	SW	PASSENGER CAR/VAN	AGRESSIVE DRIVING	UK
1001	NONE	CONCRETE HIGHWAY BARRIER	SW	SUV	NONE APPARENT	065
1002	NONE	SIDESWIPE (SAME DIRECTION)	SW	PASSENGER CAR/VAN	NONE APPARENT	045
1003	NONE	REAR END	SW	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	020
1004	NONE	REAR END	SW	SUV	OTHER FACTOR	015
1005	NONE	REAR END	SW	PASSENGER CAR/VAN	OTHER FACTOR	UK
1006	NONE	REAR END	SW	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	005
1007	NONE	WALL/BUILDING	SW	VEH COMBO (10,001 LBS AND OVER)	OTHER FACTOR	030
1008	NONE	REAR END	SW	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	005

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
1009	225A	3.94	10/26/2011	1930	INJ	11507155	ON	RAMP	2	DRY	DARK-LIGHTED
1010	225A	3.94	11/14/2011	1809	PDO	11510669	ON	RAMP	2	DRY	DARK-LIGHTED
1011	225A	3.94	1/4/2012	0907	INJ	12002174	OFF RIGHT	RAMP	1	DRY	DAYLIGHT
1012	225A	3.94	1/30/2012	0755	PDO	12003633	ON	RAMP	2	DRY	DAYLIGHT
1013	225A	3.94	2/5/2012	1626	PDO	12005084	ON	RAMP	2	WET	DAYLIGHT
1014	225A	3.94	5/12/2012	1200	PDO	12025105	ON	INTERSECTION RELATED	3	DRY	DAYLIGHT
1015	225A	3.94	11/13/2009	1455	PDO	09065519	OFF LEFT	RAMP	1	DRY	DAYLIGHT
1016	225A	3.94	6/23/2010	1607	PDO	10034542	ON	RAMP	2	DRY	DAYLIGHT
1017	225A	3.94	1/3/2011	0600	PDO	11001585	ON	RAMP	2	DRY	DAWN OR DUSK
1018	225A	3.95	1/9/2010	1339	PDO	10015706	ON	RAMP	2	DRY	DAYLIGHT
1019	225A	3.95	3/5/2010	0937	PDO	10014138	ON	RAMP	2	DRY	DAYLIGHT
1020	225A	3.95	5/1/2010	1620	PDO	10023656	ON	RAMP	2	DRY	DAYLIGHT
1021	225A	3.95	8/21/2010	1155	PDO	10050360	ON	RAMP	2	DRY	DAYLIGHT
1022	225A	3.95	10/2/2010	1449	PDO	10054632	ON	RAMP	2	DRY	DAYLIGHT
1023	225A	3.95	12/28/2010	1238	PDO	10075083	ON	RAMP	2	DRY	DAYLIGHT
1024	225A	3.95	2/28/2011	2350	PDO	11305313	OFF RIGHT	RAMP	1	DRY	DARK-UNLIGHTED
1025	225A	3.95	7/10/2011	1330	PDO	11506291	ON	RAMP	2	DRY	DAYLIGHT
1026	225A	3.95	9/20/2011	0925	PDO	11506730	ON	RAMP	2	DRY	DAYLIGHT
1027	225A	3.95	11/8/2011	1759	PDO	11510110	ON	RAMP	2	DRY	DAYLIGHT
1028	225A	3.95	8/31/2010	0950	PDO	10052152	ON	RAMP	2	DRY	DAYLIGHT
1029	225A	3.95	9/15/2010	2018	PDO	10051361	ON	RAMP	2	DRY	DARK-LIGHTED
1030	225A	3.95	7/27/2011	0740	PDO	11506219	ON	RAMP	2	DRY	DAYLIGHT
1031	225A	3.95	7/28/2011	1103	PDO	11506226	ON	RAMP	2	DRY	DAYLIGHT
1032	225A	3.95	11/4/2011	0828	PDO	11507755	ON	RAMP	2	DRY	DAYLIGHT
1033	225A	3.95	7/18/2010	1725	PDO	10042748	ON	RAMP	2	DRY	DAYLIGHT
1034	225A	3.95	5/24/2012	0044	PDO	12026642	OFF LEFT	RAMP	1	WET	DARK-LIGHTED
1035	225A	3.95	6/25/2012	1558	PDO	12036487	ON	RAMP	3	DRY	DAYLIGHT
1036	225A	3.97	2/7/2010	1848	PDO	10011110	OFF RIGHT	NON-INTERSECTION	1	SNOWY	DARK-LIGHTED
1037	225A	3.97	11/1/2009	1921	PDO	09061038	ON	RAMP	2	DRY	DARK-LIGHTED
1038	225A	3.98	10/14/2009	0740	PDO	09324565	ON	NON-INTERSECTION	2	WET W/VIS ICY ROAD TREATMENT	DAYLIGHT
1039	225A	3.98	9/9/2010	2247	PDO	10051582	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
1040	225A	3.99	2/14/2012	1743	PDO	12007536	ON	RAMP	2	DRY	DARK-LIGHTED
1041	225A	4	12/25/2011	1343	PDO	11073901	OFF LEFT	RAMP	1	SLUSHY	DAYLIGHT
1042	225A	4	9/23/2009	1015	INJ	09051666	ON	RAMP	2	WET	DAYLIGHT
1043	225A	4	11/11/2009	1843	PDO	09062759	ON	NON-INTERSECTION	2	DRY	DARK-UNLIGHTED
1044	225A	4.01	10/6/2011	1520	INJ	11506928	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
1045	225A	4.02	7/20/2011	2317	PDO	11506148	OFF LEFT	RAMP	1	WET	DARK-LIGHTED
1046	225A	4.02	2/8/2012	2000	PDO	12007471	OFF RIGHT	RAMP	1	DRY	DARK-LIGHTED
1047	225A	4.02	6/13/2011	2054	INJ	11505773	ON	RAMP	1	WET	DAWN OR DUSK
1048	225A	4.03	9/30/2009	1000	PDO	09053744	ON	RAMP	2	DRY	DAYLIGHT
1049	225A	4.03	5/6/2010	1217	PDO	10025107	ON	RAMP	2	DRY	DAYLIGHT
1050	225A	4.03	4/2/2011	2340	PDO	11018694	ON	RAMP	2	DRY	DARK-LIGHTED
1051	225A	4.03	6/17/2011	0101	PDO	11032668	OFF LEFT	RAMP	1	DRY	DARK-LIGHTED
1052	225A	4.03	9/14/2011	2102	PDO	11051748	OFF AT TEE	RAMP	1	WET	DARK-LIGHTED
1053	225A	4.03	1/23/2012	1210	PDO	12003409	ON	RAMP	2	DRY	DAYLIGHT
1054	225A	4.03	5/4/2012	1412	PDO	12022847	ON	RAMP	2	DRY	DAYLIGHT
1055	225A	4.03	3/10/2011	1335	PDO	11016232	ON	RAMP	2	DRY	DAYLIGHT
1056	225A	4.03	5/23/2011	1059	PDO	11036467	ON	RAMP	3	DRY	DAYLIGHT
1057	225A	4.03	3/30/2012	0730	PDO	12016190	ON	RAMP	2	DRY	DAYLIGHT
1058	225A	4.05	1/3/2010	0400	PDO	10013932	OFF RIGHT	NON-INTERSECTION	1	DRY	DARK-UNLIGHTED
1059	225A	4.05	3/20/2010	1216	PDO	10016292	ON	RAMP	2	ICY	DAYLIGHT
1060	225A	4.07	10/26/2010	1130	PDO	10060562	ON	RAMP	2	DRY	DAYLIGHT
1061	225A	4.1	6/4/2010	0830	PDO	10311774	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
1062	225A	4.1	12/23/2011	0114	PDO	11075095	OFF RIGHT	RAMP	1	ICY	DARK-LIGHTED
1063	225A	4.13	10/24/2010	1417	PDO	10060547	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
1064	225A	4.14	2/22/2010	0815	PDO	10011253	OFF LEFT	NON-INTERSECTION	1	ICY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
1009	NONE	REAR END	SW	SUV	DRIVER INEXPERIENCE	020
1010	NONE	REAR END	SW	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	010
1011	NONE	GUARD RAIL	SW	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	45
1012	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	05
1013	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	20
1014	NONE	REAR END	SW	PASSENGER CAR/VAN	OTHER FACTOR	015
1015	NONE	CONCRETE HIGHWAY BARRIER	W	PASSENGER CAR/VAN	DISTRACTED/OTHER	045
1016	NONE	SIDESWIPE (SAME DIRECTION)	W	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	045
1017	NONE	SIDESWIPE (SAME DIRECTION)	W	PICKUP TRUCK/UTILITY VAN	DISTRACTED/OTHER	045
1018	NONE	REAR END	S	SUV	OTHER FACTOR	015
1019	NONE	REAR END	S	SUV	NONE APPARENT	005
1020	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	055
1021	NONE	REAR END	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	002
1022	NONE	REAR END	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	020
1023	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	005
1024	NONE	BRIDGE STRUCTURE	S	PASSENGER CAR/VAN	NONE APPARENT	055
1025	NONE	REAR END	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	005
1026	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010
1027	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	005
1028	NONE	REAR END	SW	PASSENGER CAR/VAN	OTHER FACTOR	015
1029	NONE	REAR END	SW	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	005
1030	NONE	REAR END	SW	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	015
1031	NONE	REAR END	SW	PASSENGER CAR/VAN	NONE APPARENT	UK
1032	NONE	REAR END	SW	PASSENGER CAR/VAN	OTHER FACTOR	005
1033	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	015
1034	RAIN	CURB	W	PASSENGER CAR/VAN	NONE APPARENT	035
1035	NONE	REAR END	W	PICKUP TRUCK/UTILITY VAN	DUI, DWAI, DUID	035
1036	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	SUV	NONE APPARENT	045
1037	NONE	SIDESWIPE (SAME DIRECTION)	W	PASSENGER CAR/VAN	DUI, DWAI, DUID	055
1038	NONE	REAR END	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	020
1039	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	055
1040	NONE	REAR END	NW	SUV	AGRESSIVE DRIVING	015
1041	NONE	CURB	NW	PASSENGER CAR/VAN	OTHER FACTOR	UK
1042	RAIN	REAR END	S	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	040
1043	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	UK
1044	NONE	REAR END	NW	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	040
1045	RAIN	CURB	NW	PASSENGER CAR/VAN	OTHER FACTOR	UK
1046	NONE	CONCRETE HIGHWAY BARRIER	SW	PASSENGER CAR/VAN	OTHER FACTOR	055
1047	RAIN	OVERTURNING	W	MOTORCYCLE	OTHER FACTOR	UK
1048	NONE	REAR END	NW	SUV	OTHER FACTOR	015
1049	NONE	REAR END	NW	PASSENGER CAR/VAN	NONE APPARENT	010
1050	NONE	REAR END	NW	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	035
1051	NONE	OTHER FIXED OBJECT	NW	PASSENGER CAR/VAN	AGRESSIVE DRIVING	060
1052	RAIN	SIGN	NW	PASSENGER CAR/VAN W/TRAILER	NONE APPARENT	030
1053	NONE	REAR END	NW	PASSENGER CAR/VAN	NONE APPARENT	15
1054	NONE	REAR END	SW	SUV	OTHER FACTOR	010
1055	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	015
1056	NONE	REAR END	W	PASSENGER CAR/VAN	OTHER FACTOR	010
1057	NONE	REAR END	W	PASSENGER CAR/VAN	OTHER FACTOR	015
1058	NONE	OVERTURNING	S	PASSENGER CAR/VAN	DUI, DWAI, DUID	060
1059	NONE	REAR END	S	SUV	NONE APPARENT	020
1060	NONE	VEHICLE DEBRIS OR CARGO	S	VEH COMBO (10,001 LBS AND OVER)	NONE APPARENT	055
1061	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	045
1062	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	S	PASSENGER CAR/VAN	NONE APPARENT	020
1063	NONE	CABLE RAIL	S	SUV	DRIVER INEXPERIENCE	055
1064	NONE	CABLE RAIL	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	055

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
1065	225A	4.2	10/16/2010	1439	PDO	10060502	ON	RAMP	2	DRY	DAYLIGHT
1066	225A	4.22	8/2/2010	0329	PDO	10042811	OFF LEFT	RAMP	1	DRY	DARK-UNLIGHTED
1067	225A	4.22	2/24/2012	0905	PDO	12010667	ON	NON-INTERSECTION	2	ICY	DAYLIGHT
1068	225A	4.33	12/8/2010	0820	PDO	10071773	OFF LEFT	NON-INTERSECTION	1	DRY	DAYLIGHT
1069	225A	4.34	12/12/2009	1619	PDO	09075325	ON	NON-INTERSECTION	3	DRY	DAWN OR DUSK
1070	225A	4.34	1/25/2012	2027	PDO	12003572	ON	NON-INTERSECTION	2	DRY	DARK-LIGHTED
1071	225A	4.34	10/20/2010	1736	INJ	10059707	ON	NON-INTERSECTION	3	DRY	DAYLIGHT
1072	225A	4.39	12/6/2010	0125	PDO	10071760	OFF RIGHT	NON-INTERSECTION	2	DRY	DARK-UNLIGHTED
1073	225A	4.44	11/16/2009	1115	PDO	09064186	ON	NON-INTERSECTION	2	DRY	DAYLIGHT
1074	225A	4.51	12/10/2011	0722	PDO	11511623	ON	NON-INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1
1065	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	000
1066	NONE	GUARD RAIL	S	PASSENGER CAR/VAN	DUI, DWAI, DUID	UK
1067	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	040
1068	NONE	CABLE RAIL	S	PASSENGER CAR/VAN	NONE APPARENT	050
1069	NONE	REAR END	S	PASSENGER CAR/VAN	OTHER FACTOR	015
1070	NONE	REAR END	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	UK
1071	NONE	PEDESTRIAN (ALL OTHER)	W	OTHER - SEE REPORT	NONE APPARENT	UK
1072	NONE	PARKED MOTOR VEHICLE	S	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	045
1073	NONE	SIDESWIPE (SAME DIRECTION)	S	VEH COMBO (10,001 LBS AND OVER)	OTHER FACTOR	045
1074	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	OTHER FACTOR	068

I-225 PLANNING AND ENVIRONMENTAL LINKAGE (PEL) STUDY

SAFETY ASSESSMENT REPORT

STATE HIGHWAY (INTERSTATE) 225A

DTC BOULEVARD & YOSEMITE STREET RAMP TERMINAL ADDENDUM

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May 2014
FHU Reference No. 112200-01

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I. INTRODUCTION

This report in an addendum to the I-225 PEL Study Safety Assessment Report prepared in November 2013. This report analyzes the crash history of the I-225/DTC Boulevard/Tamarac Street and I-225/Yosemite Street ramp terminals.

In conjunction with the PEL study, an opportunity exists for the detection of safety problems and the implementation of selected improvements at locations where it is justified by crash experience.

The scope of this report is as follows:

- Assess the magnitude and nature of the safety problem within the project limits.
- Relate crash causality to roadway geometrics, roadside features, traffic control devices, traffic operations, driver behavior and vehicle type.

This report is based on the analysis of three years of crash history (July 1, 2009 to June 30, 2012), which is the same timeframe used for the original August 2013 Safety Assessment.

II. INTERSECTION CRASH ANALYSIS

The magnitude of safety problems at intersections can be assessed through the use of Safety Performance Functions (SPF). The SPF reflects the complex relationship between exposure (measured in ADT) and the crash count for an intersection measured in crashes per year. The SPF models provide an estimate of the normal or expected crash frequency and severity for a range of ADT among similar facilities. This allows for an assessment of the magnitude of the safety problem from a frequency standpoint.

All of the dataset preparation was performed using the Colorado Department of Transportation (CDOT) crash databases. Crash history for each facility was prepared using the most recent three years of available crash data. Average Daily Traffic (ADT) for each intersection approach (major street and minor street) over the three years was entered into the same dataset.

Development of the SPF lends itself well to the conceptual formulation of the Levels of Service of Safety (LOSS). The concept of level of service uses qualitative measures that characterize safety of an intersection in reference to its expected performance. If the level of safety predicted by the SPF represents a normal or expected number of crashes at a specific level of ADT, then the degree of deviation from the norm can be stratified to represent specific levels of safety.

LOSS-I – Indicates low potential for crash reduction
LOSS-II – Indicates better than expected safety performance
LOSS-III – Indicates less than expected safety performance
LOSS-IV – Indicates high potential for crash reduction

Gradual change in the degree of deviation of the LOSS boundary line from the fitted model mean reflects the observed increase of variability in crashes as ADT increases. LOSS reflects how the intersection is performing in regard to its expected crash frequency at a specific level of ADT (major street and minor street). It only provides a crash frequency comparison with the expected norm. It does not, however, provide any information related to the nature of the safety problem itself. If a safety problem is present, LOSS will only describe its magnitude from a frequency standpoint. The nature of the problem is determined through diagnostic analysis using direct diagnostics and pattern recognition techniques and is discussed later in this report.

A. Northbound I-225 & DTC Boulevard/Tamarac Street Ramp Terminal (MP 0.79)

The intersection of the northbound I-225 ramps and DTC Boulevard is a four-way, divided, signalized intersection. Currently there are two through lanes, a through/right lane, and a channelized right-turn lane on the northbound approach. There are two left-turn lanes and two through lanes on the southbound approach. There is a left-turn lane, a left/through lane, a through/right lane, and two channelized right-turn lanes with acceleration lanes on the eastbound approach. The posted speed limit on DTC Boulevard is 35 mph. **Figure 1** shows an aerial of the intersection. The following observations were made in the field:

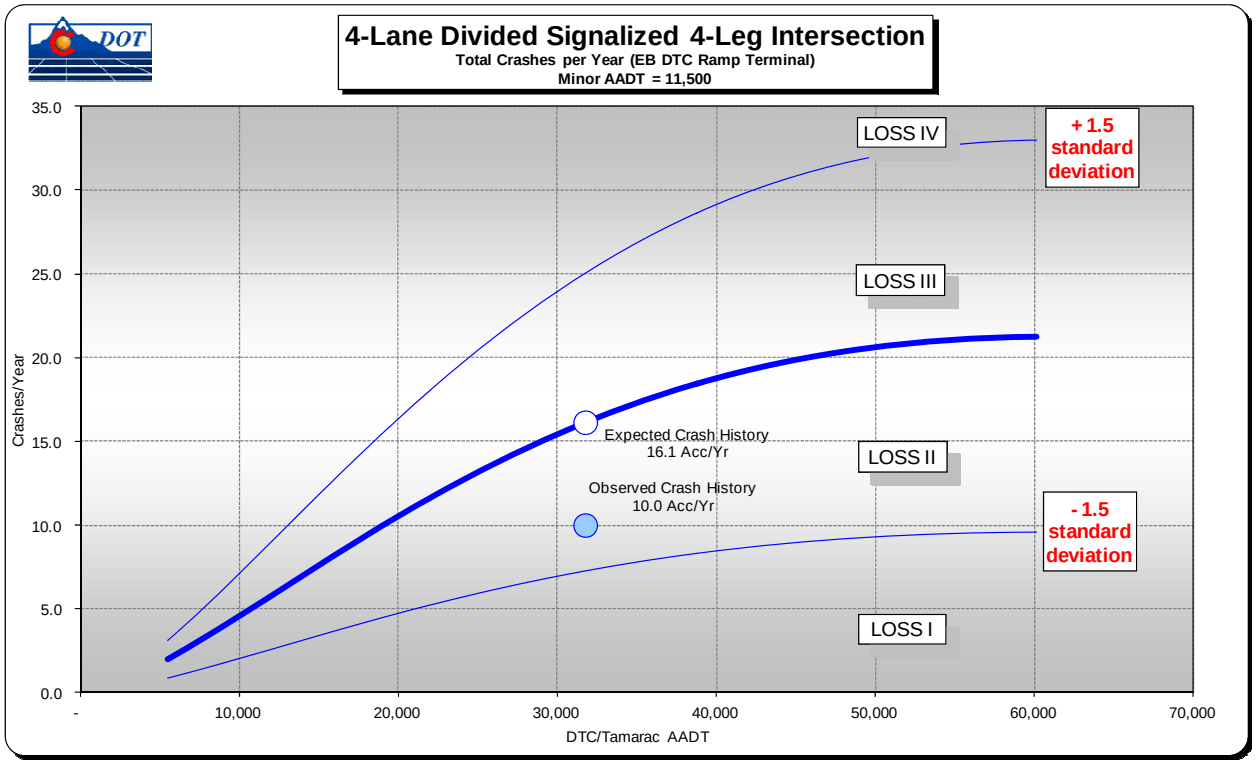
- Through lanes are approximately 12-feet wide, and the turn lanes are approximately 11-feet wide.
- The mast arm mounted signal heads have 12-inch lenses with backplates.
- The pole mounted signal heads have 12-inch lenses without backplates.
- All signal heads have LED bulbs.
- The southbound left-turns are protected / permissive.
- There is a raised median on DTC Boulevard.
- There are luminaires on all corners at this intersection.
- The street signs are large and easy to read.
- There are painted crosswalks across all legs of the intersection.
- There are pedestrian heads and push-button actuators for all crosswalks at this intersection.
- The lane striping is in fair condition but is worn in spots.

Figure 1. Northbound I-225/DTC Boulevard Ramp Terminal

Safety Performance Function Analysis

For the intersection of the northbound I-225 ramps and DTC Boulevard/Tamarac Street, **Figure 2** shows that the frequency of total crashes over the three-year study period was slightly below average for a 4-lane divided signalized 4-leg intersections which indicates a slightly better than expected safety performance (LOSS II).

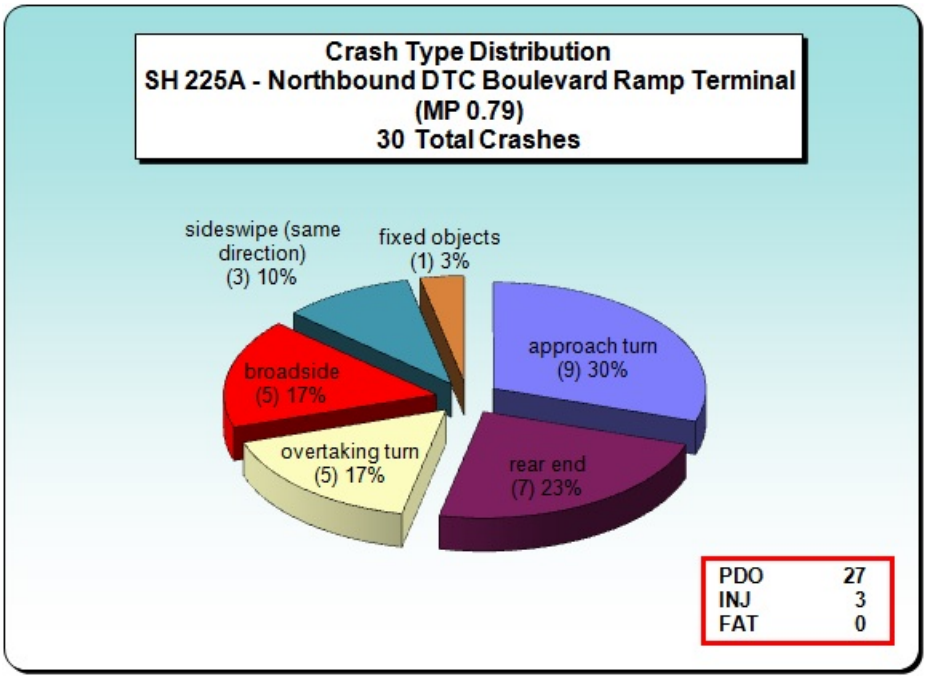
Figure 2. Northbound I-225/DTC Boulevard Ramp Terminal SPF



Crash History

During the three-year study period (7/1/2009 – 6/30/2012), there were 30 reported crashes at the intersection of the northbound I-225 ramps and DTC Boulevard. **Figure 3** provides a graphical representation of crash types for this location. Approach turn crashes were predominant (30%) followed by rear-end type crashes (23%), overtaking turn type crashes (17%), and broadside type crashes (17%).

Figure 3. Northbound I-225/DTC Boulevard Ramp Terminal Crash Distribution



Observations / Recommendations

The frequency of approach turn crashes was higher than expected for this type of intersection. A review of the crash history indicated that eight of the nine approach turn type crashes were the fault of a southbound left-turning vehicle turning in front of a northbound through vehicle. The frequency of overtaking turn type crashes was also higher than expected at this intersection.

Based upon the identified crash patterns at this intersection, the following mitigation measures should be considered:

- Consideration should be given to changing the southbound left-turn phasing to protected only. This may help to reduce the frequency of approach turn type crashes at this intersection.

- Further improving signal coordination and reviewing/updating the existing red/yellow clearance intervals may also help reduce the frequency of rear-end type crashes.

B. Southbound I-225 & DTC Boulevard/Tamarac Street Ramp Terminal (MP 0.79)

The intersection of the southbound I-225 ramps and DTC Boulevard is a four-way, divided, signalized intersection. Currently there are two left-turn lanes and two through lanes on the northbound approach. There are two through lanes and a channelized right-turn lane on the southbound approach. There is a left-turn lane, a left/through lane, a through/right lane, and a channelized right-turn lane on the westbound approach. The posted speed limit on DTC Boulevard is 35 mph. **Figure 4** shows an aerial of the intersection. The following observations were made in the field:

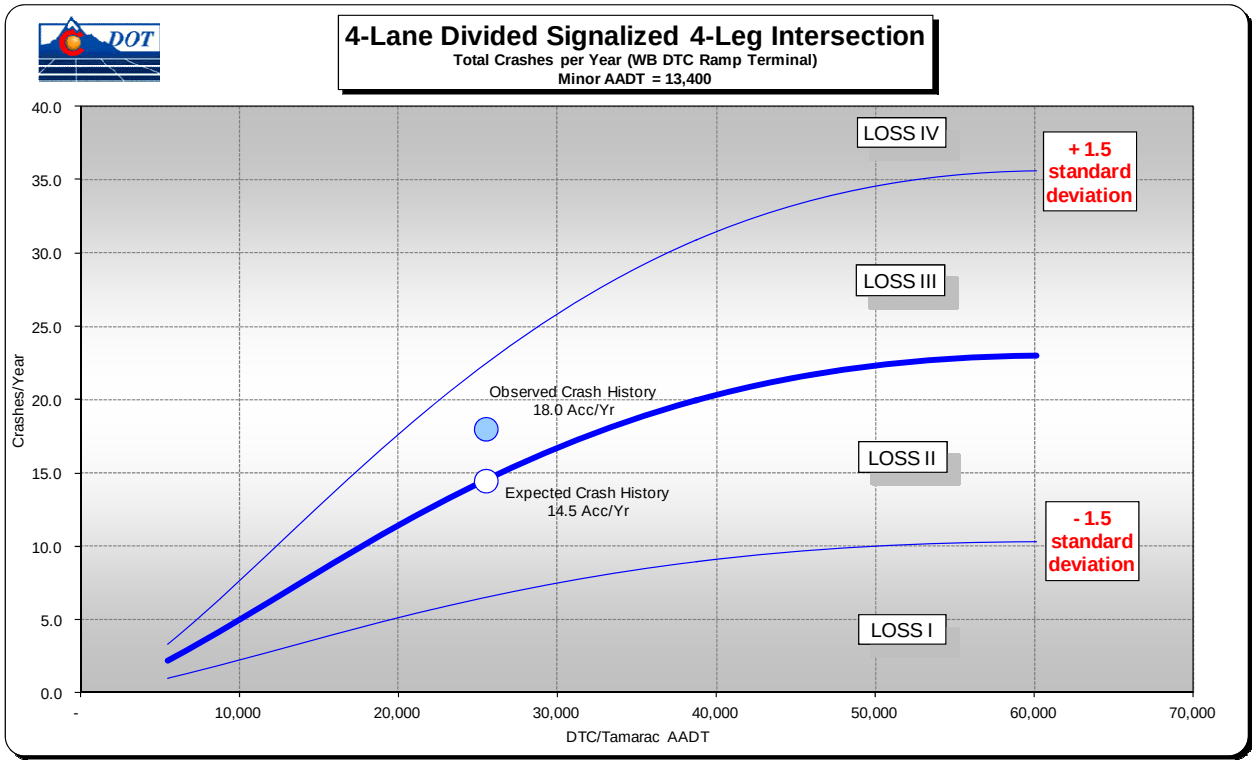
- Through lanes are approximately 12-feet wide, and the turn lanes are approximately 11-feet wide.
- The mast arm mounted signal heads have 12-inch lenses with backplates.
- The pole mounted signal heads have 12-inch lenses without backplates.
- All signal heads have LED bulbs.
- The northbound left-turns are protected / permissive.
- There is a raised median on Tamarac Street.
- There are luminaires on all corners at this intersection.
- The street signs are large and easy to read.
- There are painted crosswalks across all legs of the intersection.
- There are pedestrian heads and push-button actuators for all crosswalks at this intersection.
- The lane striping is in fair condition but is worn in spots.

Figure 4. Southbound I-225/DTC Boulevard Ramp Terminal

Safety Performance Function Analysis

For the intersection of the eastbound I-225 ramps and DTC Boulevard/Tamarac Street, **Figure 5** shows that the frequency of total crashes over the three-year study period was slightly above average for a 4-lane divided signalized 4-leg intersections which indicates a slightly less than expected safety performance (LOSS III).

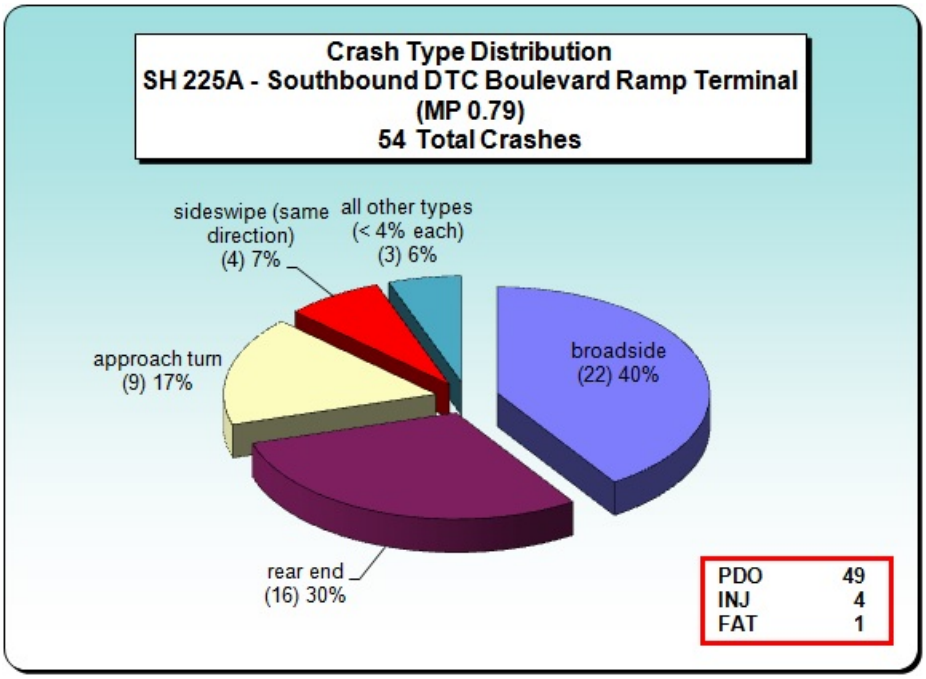
Figure 5. Southbound I-225/DTC Boulevard Ramp Terminal SPF



Crash History

During the three-year study period (7/1/2009 – 6/30/2012), there were 54 reported crashes at the intersection of the southbound I-225 ramps and DTC Boulevard. **Figure 6** provides a graphical representation of crash types for this location. Broadside crashes were predominant (40%) followed by rear-end type crashes (30%) and approach turn type crashes (17%)

Figure 6. Southbound I-225/DTC Boulevard Ramp Terminal Crash Distribution



Observations / Recommendations

The fatality at this intersection was a northbound motorcycle that had an overturning type crash. The crash occurred during the daytime with no inclement weather.

The frequency of broadside type crashes was higher than expected for this type of intersection. A review of the crash history indicated that over half of these crashes (14 of 22) were caused by the northbound or southbound through vehicle hitting a westbound vehicle.

Based upon the identified crash patterns at this intersection, the following mitigation measures should be considered:

- Improving signal coordination and reviewing/updating the existing red/yellow clearance intervals may help reduce the frequency of broadside and rear-end type crashes.

C. Northbound I-225 & Yosemite Street Ramp Terminal (MP 1.33)

The intersection of the northbound I-225 ramps and Yosemite Street is a four-way, divided, signalized intersection. Currently there are two through lanes and a right-turn lane on the northbound approach. There is a left-turn lane and two through lanes on the southbound approach. There are two left-turn lanes, a through/right lane, and a channelized right-turn lane with acceleration lanes on the eastbound approach. The posted speed limit on Yosemite Street is 35 mph. **Figure 7** shows an aerial of the intersection. The following observations were made in the field:

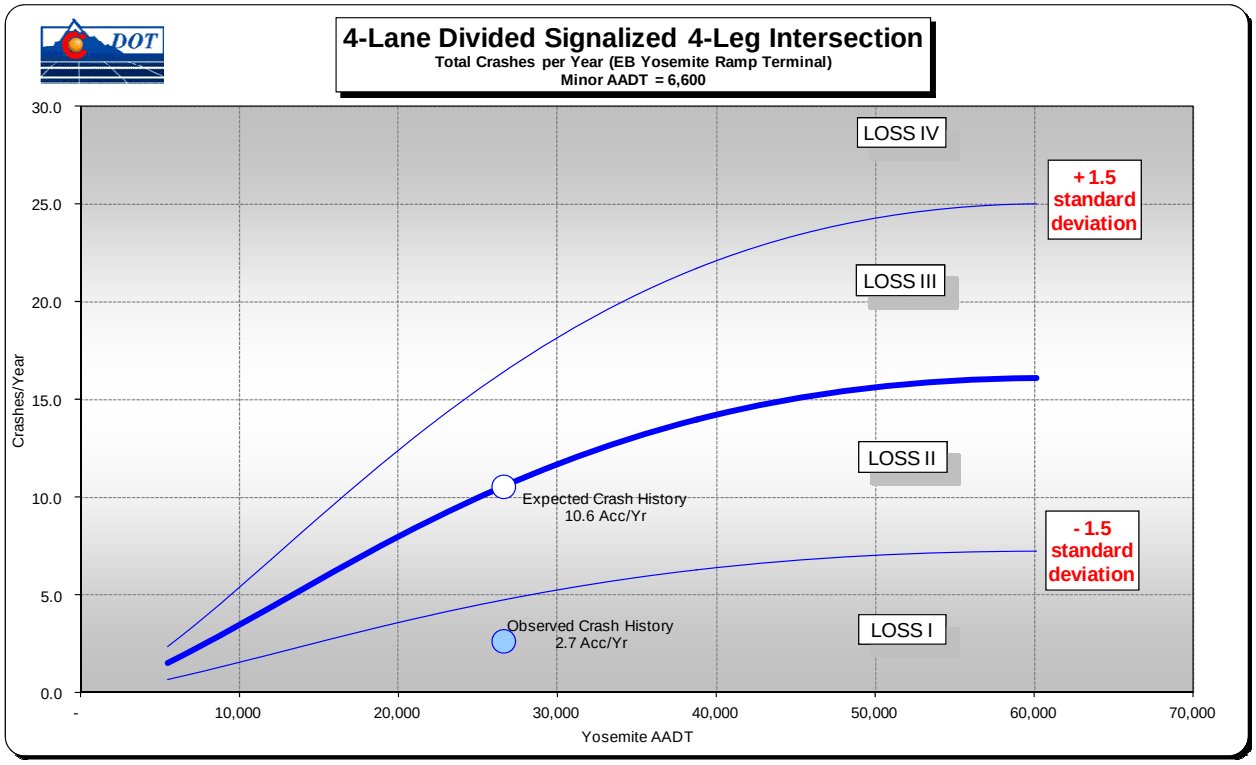
- Lanes are approximately 12-feet wide.
- The span-wire mounted signal heads have 12-inch red lenses and 8-inch yellow and green lenses. Some of the span-wire mounted signal heads have backplates
- The pole mounted signal heads have 8-inch lenses without backplates.
- All signal heads have LED bulbs.
- The southbound left-turns are protected / permissive.
- There is a raised median on Yosemite Street south of the intersection.
- There are luminaires on all corners at this intersection.
- The street signs are large and easy to read.
- There are painted crosswalks across all legs except the north leg of the intersection.
- There are pedestrian heads and push-button actuators for the south and east leg crosswalks at this intersection. There are no heads or actuators for the west leg of the intersection.
- The lane striping is in fair condition but is worn in spots.

Figure 7. Northbound I-225/Yosemite Street Ramp Terminal

Safety Performance Function Analysis

For the intersection of the northbound I-225 ramps and Yosemite Street, **Figure 8** shows that the frequency of total crashes over the three-year study period was below average for a 4-lane divided signalized 4-leg intersections which indicates a better than expected safety performance (LOSS I).

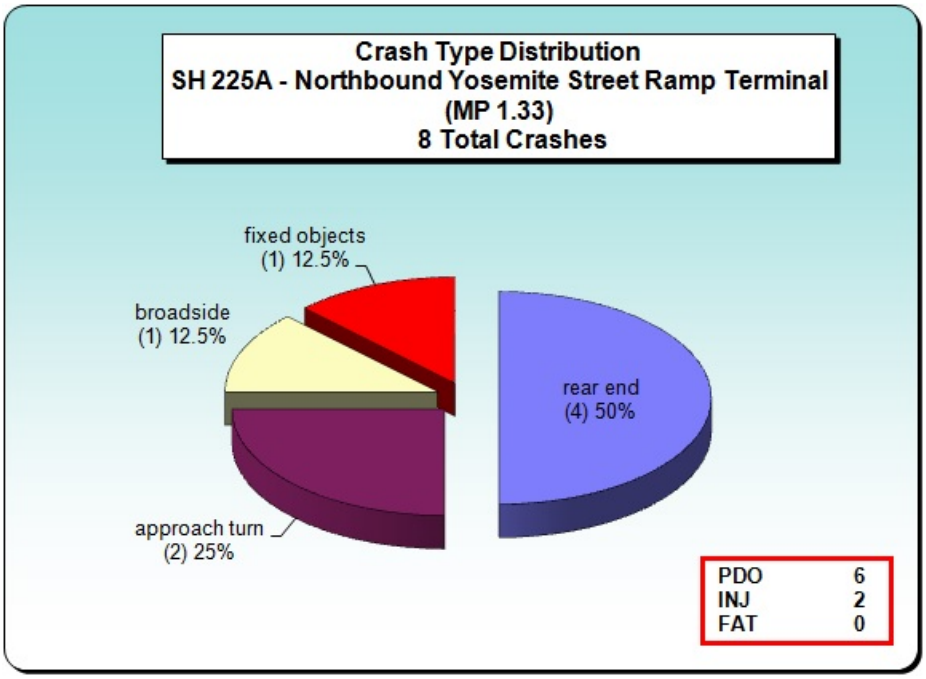
Figure 8. Northbound I-225/Yosemite Street Ramp Terminal SPF



Crash History

During the three-year study period (7/1/2009 – 6/30/2012), there were 8 reported crashes at the intersection of the northbound I-225 ramps and Yosemite Street. **Figure 9** provides a graphical representation of crash types for this location. Rear-end type crashes were predominant (50%) followed by approach turn type crashes (25%).

Figure 9. Northbound I-225/Yosemite Street Ramp Terminal Crash Distribution



Observations / Recommendations

There were no significant crash types at this intersection, however it should be noted that three of the four rear-end type crashes occurred in the northbound direction. Based upon the identified crash patterns at this intersection, the following mitigation measures should be considered:

- Improving signal coordination and reviewing/updating the existing red/yellow clearance intervals may help reduce the frequency of rear-end type crashes.

D. Southbound I-225 & Yosemite Ramp Terminal (MP 1.33)

The intersection of the westbound I-225 ramps and Yosemite Street is a four-way, divided, signalized intersection. Currently there is a left-turn lane and two through lanes on the northbound approach. There are two through lanes and a channelized right-turn lane on the southbound approach. There is a left-turn lane, two through lanes, and a channelized right-turn lane on the westbound approach. The posted speed limit on Yosemite Street is 35 mph. **Figure 7** shows an aerial of the intersection. The following observations were made in the field:

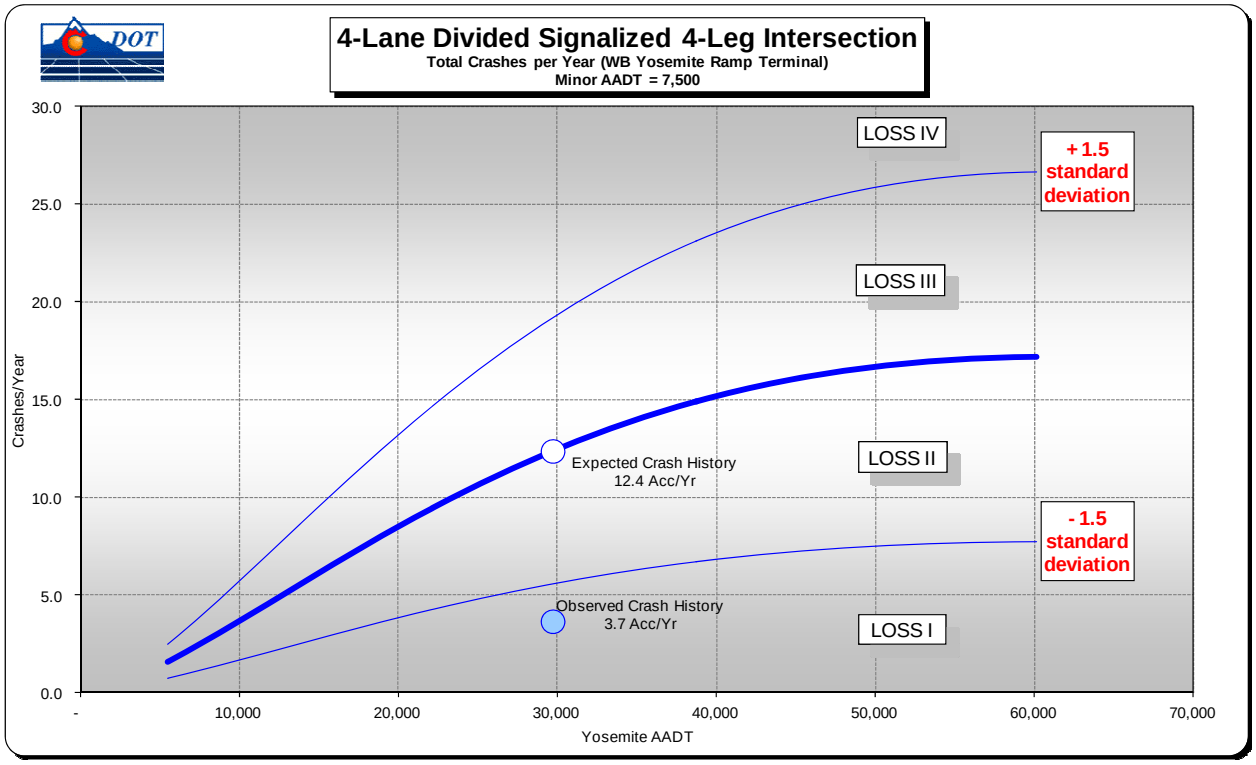
- Lanes are approximately 12-feet wide.
- The span-wire mounted signal heads have 12-inch red lenses and 8-inch yellow and green lenses. Some of the span-wire mounted signal heads have backplates
- The pole mounted signal heads have 8-inch lenses without backplates.
- All signal heads have LED bulbs.
- The northbound left-turns are protected / permissive.
- There is a raised median on Yosemite Street north of the intersection.
- There are luminaires on all except the southeast corner of the intersection.
- The street signs are large and easy to read.
- There are painted crosswalks across all legs except the south leg of the intersection.
- There are pedestrian heads and push-button actuators for the north and west leg crosswalks at this intersection. There are no heads or actuators for the east leg of the intersection.
- The lane striping is in fair condition but is worn in spots.

Figure 10. Southbound I-225/Yosemite Street Ramp Terminal

Safety Performance Function Analysis

For the intersection of the southbound I-225 ramps and Yosemite Street, **Figure 11** shows that the frequency of total crashes over the three-year study period was below average for a 4-lane divided signalized 4-leg intersections which indicates a better than expected safety performance (LOSS I).

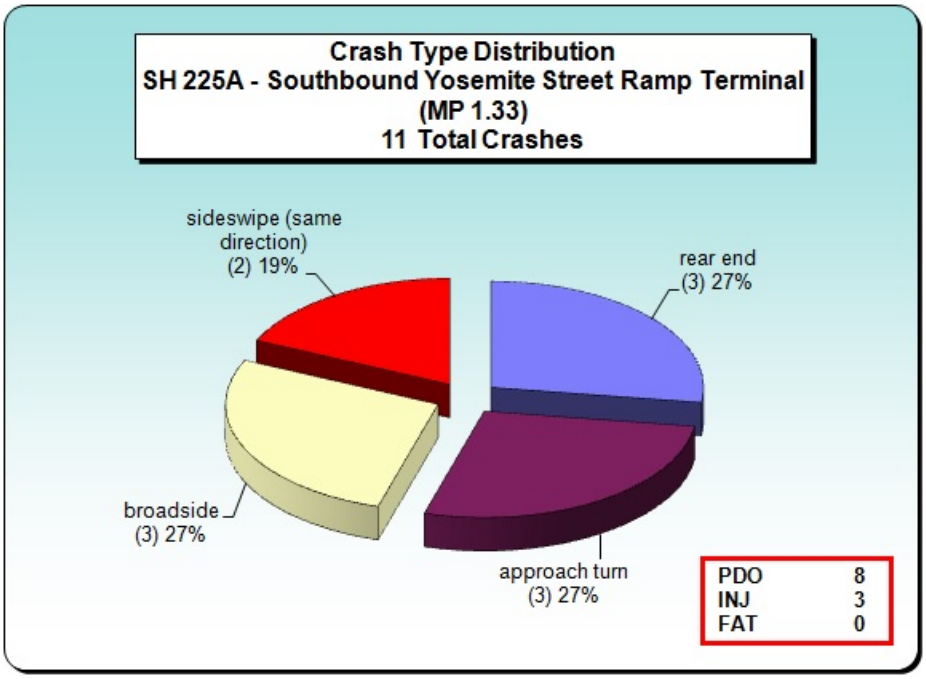
Figure 11. Southbound I-225/Yosemite Street Ramp Terminal SPF



Crash History

During the three-year study period (7/1/2009 – 6/30/2012), there were 11 reported crashes at the intersection of the southbound I-225 ramps and Yosemite Street. **Figure 12** provides a graphical representation of crash types for this location. Rear-end, approach turn, and broadside type crashes were predominant with three crashes each.

Figure 12. Southbound I-225/Yosemite Street Ramp Terminal Crash Distribution



Observations / Recommendations

The frequency of broadside type crashes was higher than expected for this type of intersection. There were only three broadside type crashes and no apparent patterns.

The frequency of sideswipe (same direction) type crashes was also higher than expected for this type of intersection, however there were only two crashes of this type.

Based upon the identified crash patterns at this intersection, the following mitigation measures should be considered:

- Improving signal coordination and reviewing/updating the existing red/yellow clearance intervals may help reduce the frequency of broadside and rear-end type crashes.

VII. CONCLUSION AND RECOMMENDATIONS

This report is an addendum to the I-25 PEL Study Safety Assessment Report. The primary intent of this report is to provide information as it relates to safety for the I-225 Planning and Environmental Linkage (PEL) Study. The safety analyses completed in this report includes the ramp terminals for the I-225/DTC Boulevard/Tamarac Street and I-225/Yosemite Street interchanges.

The conclusions and recommendations of this study are based on the analysis of three years of crash history. With the exception of the southbound ramp terminal at the DTC Boulevard interchange, the intersections all had accident rates slightly below average for the intersection type and volume of traffic. The southbound DTC Boulevard ramp terminal had a slightly above average crash frequency.

A. Intersection Specific Recommendations

Northbound DTC Boulevard/Tamarac Street

- Consideration should be given to changing the southbound left-turn phasing to protected only. This may help to reduce the frequency of approach turn type crashes at this intersection.

- Further improving signal coordination and reviewing/updating the existing red/yellow clearance intervals may also help reduce the frequency of rear-end type crashes.

Southbound DTC Boulevard/Tamarac Street

- Improving signal coordination and reviewing/updating the existing red/yellow clearance intervals may help reduce the frequency of broadside and rear-end type crashes.

Northbound Yosemite Street

- Improving signal coordination and reviewing/updating the existing red/yellow clearance intervals may help reduce the frequency of rear-end type crashes.

Southbound Yosemite Street

- Improving signal coordination and reviewing/updating the existing red/yellow clearance intervals may help reduce the frequency of broadside and rear-end type crashes.

APPENDIX

THREE-YEAR GENERAL SUMMARY OF TRAFFIC CRASHES

- Northbound DTC Boulevard Ramp Terminal & Southbound DTC Boulevard Ramp Terminal
- Northbound Yosemite Street Ramp Terminal & Southbound Yosemite Street Ramp Terminal

THREE-YEAR CRASH LISTING

Colorado Department of Transportation
DiExSys™ Roadway Safety Systems
General Accident Summary Report

07/28/2014

Job #: 20140728144115

Location: 225A **Begin:** 0.74 **End:** 0.84 **From:**07/01/2009 **To:**06/30/2012

DTC/Tamarac Ramp Terminals

Severity

PDO:	61	
INJ:	22	29 :Injured
FAT:	1	1 :Killed
Total:	**84**	

Number of Vehicles

One Vehicle:	2
Two Vehicles:	76
Three or More:	6
Unknown:	0
Total:	**84**

Location

On Road:	83
Off Road:	1
Unknown:	0
Total:	**84**

Mainline/Ramps/Frontage Rds

Mainline:	0
Ramps:	84
Frontage/Ramp Intsx:	0
Frontage Roads:	0
HOV Lanes:	0
Unknown:	0
Total:	**84**

Lighting Conditions

Daylight:	64
Dawn or Dusk:	4
Dark - Lighted:	15
Dark - Unlighted:	0
Unknown:	1
Total:	**84**

Accident Rates

PDO:	1.34 *	* Per MVMT
INJ:	0.48 *	** Per 100 MVMT
FAT:	2.20 **	**Total:** **1.85** *

Accident Type

Overturning:	1
Other Non Collision:	0
Pedestrians:	1
Broadside:	27
Head On:	0
Rear End:	22
Sideswipe Same:	7
Sideswipe Opposite:	0
Approach Turn:	19
Overtaking Turn:	6
Parked Motor Vehicle:	0
Railway Vehicle:	0
Bicycles:	0
Domestic Animal:	0
Wild Animal:	0
Fixed Objects:	1
Other Objects:	0
Unknown:	0
Total:	**84**

Weather Conditions

None:	77
Rain:	4
Snow/Sleet/Hail:	2
Fog:	1
Dust:	0
Wind:	0
Unknown:	0
Total:	**84**

Road Conditions

Dry:	77
Wet:	6
Muddy:	0
Snowy:	0
Icy:	1
Slushy:	0
Foreign Material:	0
With Road Treatment:	0
Unknown:	0
Total:	**84**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Passenger Car/Van:	58	51	5
Passenger Car/Van w/Trailer:	0	0	0
Pickup Truck/Utility Van:	6	10	0
Pickup Truck/Utility Van w/Trailer:	0	1	0
Truck 10k lbs or Less:	0	0	0
Trucks > 10k lbs/Busses > 15 People:	0	0	0
School Bus < 15 People:	0	0	0
Non School Bus < 15 People:	0	1	0
Motorhome:	0	0	0
Motorcycle:	1	1	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	3	0	0
Other:	0	1	0
Unknown:	0	0	0
Total:	**84**	**82**	**6**

ADT: 112,256 **Length:** 0.37

Colorado Department of Transportation
DiExSys™ Roadway Safety Systems
General Accident Summary Report

07/28/2014

Job #: 20140728143926

Location: 225A **Begin:** 1.29 **End:** 1.39 **From:** 07/01/2009 **To:** 06/30/2012

Yosemite Ramp Terminals

Severity

PDO:	12	
INJ:	7	11 :Injured
FAT:	0	0 :Killed
Total:	**19**	

Number of Vehicles

One Vehicle:	1
Two Vehicles:	18
Three or More:	0
Unknown:	0
Total:	**19**

Location

On Road:	18
Off Road:	1
Unknown:	0
Total:	**19**

Mainline/Ramps/Frontage Rds

Mainline:	0
Ramps:	19
Frontage/Ramp Intsx:	0
Frontage Roads:	0
HOV Lanes:	0
Unknown:	0
Total:	**19**

Lighting Conditions

Daylight:	14
Dawn or Dusk:	1
Dark - Lighted:	3
Dark - Unlighted:	1
Unknown:	0
Total:	**19**

Accident Rates

PDO:	0.89 *	* Per MVMT
INJ:	0.52 *	** Per 100 MVMT
FAT:	0.00 **	**Total:** **1.40** *

Accident Type

Overturning:	0
Other Non Collision:	0
Pedestrians:	0
Broadside:	4
Head On:	0
Rear End:	7
Sideswipe Same:	2
Sideswipe Opposite:	0
Approach Turn:	5
Overtaking Turn:	0
Parked Motor Vehicle:	0
Railway Vehicle:	0
Bicycles:	0
Domestic Animal:	0
Wild Animal:	0
Fixed Objects:	1
Other Objects:	0
Unknown:	0
Total:	**19**

Weather Conditions

None:	17
Rain:	0
Snow/Sleet/Hail:	2
Fog:	0
Dust:	0
Wind:	0
Unknown:	0
Total:	**19**

Road Conditions

Dry:	17
Wet:	0
Muddy:	0
Snowy:	1
Icy:	1
Slushy:	0
Foreign Material:	0
With Road Treatment:	0
Unknown:	0
Total:	**19**

Vehicle Types

	Vehicle 1	Vehicle 2	Vehicle 3
Passenger Car/Van:	13	13	0
Passenger Car/Van w/Trailer:	0	0	0
Pickup Truck/Utility Van:	2	0	0
Pickup Truck/Utility Van w/Trailer:	0	0	0
Truck 10k lbs or Less:	0	0	0
Trucks > 10k lbs/Busses > 15 People:	0	0	0
School Bus < 15 People:	0	0	0
Non School Bus < 15 People:	0	0	0
Motorhome:	0	0	0
Motorcycle:	0	0	0
Bicycle:	0	0	0
Motorized Bicycle:	0	0	0
Farm Equipment:	0	0	0
Hit and Run - Unknown:	1	0	0
Other:	0	0	0
Unknown:	0	0	0
Total:	**19**	**18**	**0**

ADT: 121,000 **Length:** 0.10

User: Henderson on LAP14

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
1	225A	0.79	7/20/2009	0615	PDO	09035030	ON	AT INTERSECTION	2	DRY	DAYLIGHT
2	225A	0.79	7/23/2009	1936	INJ	09037433	ON	AT INTERSECTION	2	DRY	DAYLIGHT
3	225A	0.79	7/26/2009	1117	PDO	09037533	ON	AT INTERSECTION	2	DRY	DAYLIGHT
4	225A	0.79	7/27/2009	0553	PDO	09037552	ON	AT INTERSECTION	2	DRY	DAYLIGHT
5	225A	0.79	8/1/2009	2309	PDO	09040008	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
6	225A	0.79	8/27/2009	1756	PDO	09045571	ON	AT INTERSECTION	2	DRY	DAYLIGHT
7	225A	0.79	11/22/2009	1615	PDO	09063058	ON	AT INTERSECTION	2	DRY	DAYLIGHT
8	225A	0.79	11/25/2009	1222	PDO	09064567	ON	AT INTERSECTION	2	DRY	DAYLIGHT
9	225A	0.79	12/21/2009	1254	PDO	09070592	ON	AT INTERSECTION	2	DRY	DAYLIGHT
10	225A	0.79	1/8/2010	1754	PDO	10001717	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
11	225A	0.79	1/11/2010	1611	PDO	10003941	ON	AT INTERSECTION	2	DRY	DAYLIGHT
12	225A	0.79	1/15/2010	1505	PDO	10001553	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
13	225A	0.79	1/20/2010	1825	PDO	10000931	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
14	225A	0.79	1/21/2010	1631	PDO	10001379	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
15	225A	0.79	3/19/2010	1110	PDO	10013715	ON	AT INTERSECTION	2	WET	DAYLIGHT
16	225A	0.79	3/20/2010	1857	PDO	10013895	ON	AT INTERSECTION	2	DRY	DAYLIGHT
17	225A	0.79	3/26/2010	1411	PDO	10017314	ON	AT INTERSECTION	2	DRY	DAYLIGHT
18	225A	0.79	4/13/2010	0830	PDO	10018664	ON	AT INTERSECTION	2	DRY	DAYLIGHT
19	225A	0.79	4/13/2010	1040	PDO	10018672	ON	AT INTERSECTION	2	DRY	DAYLIGHT
20	225A	0.79	4/16/2010	1806	PDO	10019118	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
21	225A	0.79	6/8/2010	0908	PDO	10030443	ON	AT INTERSECTION	2	DRY	DAYLIGHT
22	225A	0.79	6/19/2010	1307	PDO	10032367	ON	AT INTERSECTION	2	DRY	DAYLIGHT
23	225A	0.79	6/24/2010	1653	PDO	10032544	ON	AT INTERSECTION	4	DRY	DAYLIGHT
24	225A	0.79	8/18/2010	1507	PDO	10043784	ON	AT INTERSECTION	2	DRY	DAYLIGHT
25	225A	0.79	8/23/2010	0633	PDO	10043856	ON	AT INTERSECTION	2	DRY	DAYLIGHT
26	225A	0.79	9/3/2010	1429	INJ	10046892	ON	AT INTERSECTION	2	DRY	DAYLIGHT
27	225A	0.79	9/23/2010	1605	PDO	10053345	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
28	225A	0.79	9/24/2010	1427	PDO	10053299	ON	AT INTERSECTION	2	DRY	DAYLIGHT
29	225A	0.79	10/15/2010	1220	PDO	10063276	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
30	225A	0.79	10/20/2010	1059	FAT	10076365	ON	AT INTERSECTION	1	DRY	DAYLIGHT
31	225A	0.79	11/4/2010	1925	PDO	10068138	ON	INTERSECTION RELATED	2	DRY	DARK-LIGHTED
32	225A	0.79	11/9/2010	0910	PDO	10066449	ON	AT INTERSECTION	3	DRY	UNKNOWN
33	225A	0.79	11/13/2010	1213	PDO	10066080	ON	AT INTERSECTION	2	DRY	DAYLIGHT
34	225A	0.79	11/21/2010	0623	PDO	10068406	ON	AT INTERSECTION	3	DRY	DAYLIGHT
35	225A	0.79	11/24/2010	1300	PDO	10069996	ON	AT INTERSECTION	2	DRY	DAYLIGHT
36	225A	0.79	11/29/2010	1730	PDO	10068714	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
37	225A	0.79	2/11/2011	1532	PDO	11005893	ON	AT INTERSECTION	2	DRY	DAYLIGHT
38	225A	0.79	4/21/2011	1115	PDO	11020491	ON	AT INTERSECTION	2	DRY	DAYLIGHT
39	225A	0.79	5/21/2011	1423	PDO	11024580	ON	AT INTERSECTION	2	DRY	DAYLIGHT
40	225A	0.79	7/7/2011	0939	PDO	11034555	ON	AT INTERSECTION	2	DRY	DAYLIGHT
41	225A	0.79	7/14/2011	2145	INJ	11036928	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
42	225A	0.79	8/25/2011	0800	PDO	11044688	ON	AT INTERSECTION	2	DRY	DAYLIGHT
43	225A	0.79	8/26/2011	2016	PDO	11062479	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
44	225A	0.79	9/12/2011	1432	INJ	11058964	ON	AT INTERSECTION	4	DRY	DAYLIGHT
45	225A	0.79	10/10/2011	0830	PDO	11055606	ON	AT INTERSECTION	3	DRY	DAYLIGHT
46	225A	0.79	1/9/2012	0725	PDO	12009197	ON	AT INTERSECTION	2	DRY	DAYLIGHT
47	225A	0.79	2/14/2012	0544	PDO	12016795	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
48	225A	0.79	4/6/2012	1619	PDO	12016944	ON	AT INTERSECTION	2	DRY	DAYLIGHT
49	225A	0.79	4/12/2012	1242	PDO	12020299	ON	AT INTERSECTION	2	DRY	DAYLIGHT
50	225A	0.79	4/27/2012	0535	PDO	12021988	ON	AT INTERSECTION	2	DRY	DAWN OR DUSK
51	225A	0.79	5/7/2012	1223	PDO	12040091	ON	AT INTERSECTION	2	WET	DAYLIGHT
52	225A	0.79	5/19/2012	1716	PDO	12025699	ON	AT INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1	Vehicle Movement 1
1	NONE	BROADSIDE	E	PASSENGER CAR/VAN	NONE APPARENT	020	MAKING LEFT TURN
2	NONE	PEDESTRIAN (ALL OTHER)	N	PASSENGER CAR/VAN	OTHER FACTOR	010	MAKING LEFT TURN
3	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	002	SLOWING
4	NONE	BROADSIDE	N	PASSENGER CAR/VAN	NONE APPARENT	030	GOING STRAIGHT
5	NONE	BROADSIDE	E	PASSENGER CAR/VAN	NONE APPARENT	035	GOING STRAIGHT
6	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	002	GOING STRAIGHT
7	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DISTRACTED/OTHER	030	GOING STRAIGHT
8	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	NONE APPARENT	025	CHANGING LANES
9	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010	MAKING RIGHT TURN
10	NONE	APPROACH TURN	N	SUV	NONE APPARENT	015	MAKING LEFT TURN
11	NONE	APPROACH TURN	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	UK	MAKING LEFT TURN
12	NONE	REAR END	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	025	GOING STRAIGHT
13	NONE	APPROACH TURN	N	SUV	NONE APPARENT	UK	MAKING LEFT TURN
14	NONE	REAR END	W	SUV	NONE APPARENT	020	SLOWING
15	FOG	BROADSIDE	N	PASSENGER CAR/VAN	NONE APPARENT	025	GOING STRAIGHT
16	NONE	BROADSIDE	S	PASSENGER CAR/VAN	NONE APPARENT	030	GOING STRAIGHT
17	NONE	BROADSIDE	S	PASSENGER CAR/VAN	OTHER FACTOR	030	GOING STRAIGHT
18	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	DRIVER INEXPERIENCE	020	MAKING RIGHT TURN
19	NONE	BROADSIDE	N	SUV	NONE APPARENT	035	GOING STRAIGHT
20	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	010	GOING STRAIGHT
21	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	030	GOING STRAIGHT
22	NONE	APPROACH TURN	N	SUV	DISTRACTED/PASSENGER	010	MAKING LEFT TURN
23	NONE	BROADSIDE	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	020	GOING STRAIGHT
24	NONE	BROADSIDE	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	035	GOING STRAIGHT
25	NONE	REAR END	S	HIT & RUN - UNKNOWN	NONE APPARENT	UK	GOING STRAIGHT
26	NONE	BROADSIDE	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	025	GOING STRAIGHT
27	NONE	REAR END	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	015	MAKING RIGHT TURN
28	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	015	MAKING LEFT TURN
29	NONE	REAR END	W	PASSENGER CAR/VAN	DISTRACTED/OTHER	020	MAKING RIGHT TURN
30	NONE	OVERTURNING	N	MOTORCYCLE	OTHER FACTOR	UK	SLOWING
31	NONE	REAR END	W	PASSENGER CAR/VAN	NONE APPARENT	UK	GOING STRAIGHT
32	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	030	GOING STRAIGHT
33	NONE	SIDESWIPE (SAME DIRECTION)	W	PASSENGER CAR/VAN	NONE APPARENT	UK	MAKING LEFT TURN
34	NONE	BROADSIDE	W	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	035	GOING STRAIGHT
35	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	010	GOING STRAIGHT
36	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	010	GOING STRAIGHT
37	RAIN	BROADSIDE	E	PASSENGER CAR/VAN	NONE APPARENT	045	GOING STRAIGHT
38	NONE	BROADSIDE	S	SUV	DRIVER INEXPERIENCE	025	GOING STRAIGHT
39	NONE	BROADSIDE	E	PASSENGER CAR/VAN	AGRESSIVE DRIVING	UK	GOING STRAIGHT
40	NONE	BROADSIDE	S	PASSENGER CAR/VAN	NONE APPARENT	030	GOING STRAIGHT
41	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	UK	MAKING LEFT TURN
42	NONE	REAR END	N	SUV	DISTRACTED/OTHER	002	MAKING LEFT TURN
43	NONE	SIDESWIPE (SAME DIRECTION)	S	SUV	AGRESSIVE DRIVING	025	CHANGING LANES
44	NONE	BROADSIDE	N	SUV	AGRESSIVE DRIVING	035	GOING STRAIGHT
45	NONE	BROADSIDE	W	PASSENGER CAR/VAN	DISTRACTED/OTHER	045	GOING STRAIGHT
46	NONE	BROADSIDE	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	35	GOING STRAIGHT
47	NONE	APPROACH TURN	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	020	MAKING LEFT TURN
48	NONE	APPROACH TURN	N	PASSENGER CAR/VAN	NONE APPARENT	005	MAKING LEFT TURN
49	NONE	OVERTAKING TURN	W	SUV	NONE APPARENT	010	MAKING LEFT TURN
50	NONE	BROADSIDE	W	PASSENGER CAR/VAN	NONE APPARENT	065	GOING STRAIGHT
51	RAIN	BROADSIDE	W	PASSENGER CAR/VAN	NONE APPARENT	010	MAKING LEFT TURN
52	NONE	BROADSIDE	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	035	GOING STRAIGHT

#	Hwy	MP	Date	Time	Severity	Serial #	Location	Road Description	Vehicles	Condition	Lighting
53	225A	0.79	6/9/2012	1332	PDO	12029814	ON	AT INTERSECTION	2	DRY	DAYLIGHT
54	225A	0.79	6/21/2012	2305	PDO	12035407	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
55	225A	1.33	11/5/2009	0754	PDO	09059492	ON	AT INTERSECTION	2	DRY	DAYLIGHT
56	225A	1.33	11/20/2009	1803	INJ	09063000	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
57	225A	1.33	6/25/2010	2022	PDO	10035139	ON	INTERSECTION RELATED	2	DRY	DAWN OR DUSK
58	225A	1.33	12/3/2010	1837	PDO	10070154	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
59	225A	1.33	1/9/2011	1135	PDO	11001986	ON	AT INTERSECTION	2	SNOWY	DAYLIGHT
60	225A	1.33	1/27/2011	0826	PDO	11006965	ON	AT INTERSECTION	2	DRY	DAYLIGHT
61	225A	1.33	7/18/2011	0723	PDO	11038283	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
62	225A	1.33	9/17/2011	1227	INJ	11050641	ON	AT INTERSECTION	2	DRY	DAYLIGHT
63	225A	1.33	2/14/2012	1805	INJ	12008816	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
64	225A	1.33	2/24/2012	1338	PDO	12010234	ON	AT INTERSECTION	2	DRY	DAYLIGHT
65	225A	1.33	5/25/2012	0704	PDO	12025743	ON	AT INTERSECTION	2	DRY	DAYLIGHT
66	225A	0.79	7/8/2009	1618	PDO	09035742	ON	AT INTERSECTION	2	DRY	DAYLIGHT
67	225A	0.79	8/27/2009	2322	PDO	09045579	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
68	225A	0.79	10/19/2009	1338	PDO	09057286	ON	AT INTERSECTION	2	DRY	DAYLIGHT
69	225A	0.79	12/13/2009	1348	PDO	09067741	ON	AT INTERSECTION	3	DRY	DAYLIGHT
70	225A	0.79	2/7/2010	1015	PDO	10004737	ON	AT INTERSECTION	2	WET	DAYLIGHT
71	225A	0.79	2/15/2010	1120	PDO	10006820	ON	AT INTERSECTION	2	DRY	DAYLIGHT
72	225A	0.79	2/19/2010	1757	PDO	10006866	ON	AT INTERSECTION	2	WET	DARK-LIGHTED
73	225A	0.79	2/24/2010	0825	PDO	10007898	ON	AT INTERSECTION	2	DRY	DAYLIGHT
74	225A	0.79	8/27/2010	1927	PDO	10044960	ON	AT INTERSECTION	2	DRY	DAWN OR DUSK
75	225A	0.79	8/31/2010	0705	PDO	10053674	ON	AT INTERSECTION	2	DRY	DAYLIGHT
76	225A	0.79	10/15/2010	0645	PDO	10063263	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
77	225A	0.79	11/28/2010	0730	PDO	10068599	ON	AT INTERSECTION	2	DRY	DAYLIGHT
78	225A	0.79	12/23/2010	1805	PDO	10071402	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
79	225A	0.79	1/7/2011	1500	INJ	11002452	ON	RAMP	2	DRY	DAYLIGHT
80	225A	0.79	5/5/2011	0835	PDO	11022898	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
81	225A	0.79	5/11/2011	1220	PDO	11024126	ON	AT INTERSECTION	2	WET	DAYLIGHT
82	225A	0.79	6/3/2011	1130	PDO	11028124	ON	AT INTERSECTION	2	DRY	DAYLIGHT
83	225A	0.79	6/25/2011	0843	INJ	11033352	ON	AT INTERSECTION	2	DRY	DAYLIGHT
84	225A	0.79	7/4/2011	1344	PDO	11035750	ON	INTERSECTION RELATED	2	DRY	DAYLIGHT
85	225A	0.79	7/11/2011	1941	INJ	11044503	ON	AT INTERSECTION	2	WET	DAWN OR DUSK
86	225A	0.79	7/21/2011	1625	PDO	11045006	FF RIGHT	AT INTERSECTION	1	DRY	DAYLIGHT
87	225A	0.79	7/25/2011	1528	PDO	11040174	ON	AT INTERSECTION	2	DRY	DAYLIGHT
88	225A	0.79	9/25/2011	1541	PDO	11051903	ON	AT INTERSECTION	2	DRY	DAYLIGHT
89	225A	0.79	11/15/2011	1906	PDO	11072464	ON	AT INTERSECTION	2	DRY	DAWN OR DUSK
90	225A	0.79	12/15/2011	1204	PDO	11073640	ON	AT INTERSECTION	2	DRY	DAYLIGHT
91	225A	0.79	12/20/2011	1922	PDO	11071747	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
92	225A	0.79	2/6/2012	0758	PDO	12009453	ON	AT INTERSECTION	2	ICY	DAYLIGHT
93	225A	0.79	2/14/2012	1556	PDO	12009504	ON	AT INTERSECTION	2	DRY	DAYLIGHT
94	225A	0.79	3/7/2012	1117	PDO	12018486	ON	AT INTERSECTION	2	DRY	DAYLIGHT
95	225A	0.79	6/17/2012	2340	PDO	12029962	ON	AT INTERSECTION	2	DRY	DARK-LIGHTED
96	225A	1.33	7/17/2009	1423	PDO	09037150	ON	AT INTERSECTION	2	DRY	DAYLIGHT
97	225A	1.33	10/11/2009	1130	PDO	09053544	ON	AT INTERSECTION	2	DRY	DAYLIGHT
98	225A	1.33	10/15/2009	1724	PDO	09060674	ON	AT INTERSECTION	2	DRY	DAYLIGHT
99	225A	1.33	7/19/2010	1120	PDO	10038879	ON	AT INTERSECTION	2	DRY	DAYLIGHT
100	225A	1.33	8/6/2010	1742	PDO	10040898	ON	AT INTERSECTION	2	DRY	DAYLIGHT
101	225A	1.33	8/27/2010	2113	INJ	10044965	ON	AT INTERSECTION	2	DRY	DARK-UNLIGHTED
102	225A	1.33	1/31/2011	0818	PDO	11005028	FF RIGHT	AT INTERSECTION	1	ICY	DAYLIGHT
103	225A	1.33	4/16/2012	1206	INJ	12020660	ON	AT INTERSECTION	2	DRY	DAYLIGHT

#	Weather	Crash Type	Direction 1	Vehicle 1	Factor 1	Speed 1	Vehicle Movement 1
53	NONE	BROADSIDE	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	025	GOING STRAIGHT
54	NONE	REAR END	W	HIT & RUN - UNKNOWN	NONE APPARENT	020	GOING STRAIGHT
55	NONE	REAR END	W	SUV	NONE APPARENT	010	GOING STRAIGHT
56	NONE	BROADSIDE	W	PASSENGER CAR/VAN	NONE APPARENT	020	GOING STRAIGHT
57	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	UK	GOING STRAIGHT
58	NONE	BROADSIDE	S	PASSENGER CAR/VAN	NONE APPARENT	UK	GOING STRAIGHT
59	SNOW/SLEET/HAIL	SIDESWIPE (SAME DIRECTION)	W	HIT & RUN - UNKNOWN	NONE APPARENT	UK	GOING STRAIGHT
60	NONE	REAR END	SW	PASSENGER CAR/VAN	DISTRACTED/OTHER	010	MAKING RIGHT TURN
61	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	OTHER FACTOR	030	GOING STRAIGHT
62	NONE	APPROACH TURN	N	PASSENGER CAR/VAN	OTHER FACTOR	010	MAKING LEFT TURN
63	NONE	BROADSIDE	N	PASSENGER CAR/VAN	DRIVER FATIGUE	UK	GOING STRAIGHT
64	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	AGRESSIVE DRIVING	45	MAKING LEFT TURN
65	NONE	SIDESWIPE (SAME DIRECTION)	S	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	000	CHANGING LANES
66	NONE	REAR END	N	PICKUP TRUCK/UTILITY VAN	AGRESSIVE DRIVING	005	SLOWING
67	NONE	SIDESWIPE (SAME DIRECTION)	N	SUV	NONE APPARENT	015	MAKING LEFT TURN
68	NONE	BROADSIDE	N	PASSENGER CAR/VAN	DISTRACTED/OTHER	030	GOING STRAIGHT
69	NONE	APPROACH TURN	N	PASSENGER CAR/VAN	NONE APPARENT	035	GOING STRAIGHT
70	SNOW/SLEET/HAIL	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	015	MAKING LEFT TURN
71	NONE	SIDESWIPE (SAME DIRECTION)	E	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	020	MAKING LEFT TURN
72	SNOW/SLEET/HAIL	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	010	MAKING LEFT TURN
73	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	004	MAKING RIGHT TURN
74	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	015	MAKING LEFT TURN
75	NONE	APPROACH TURN	S	SUV	NONE APPARENT	020	MAKING LEFT TURN
76	NONE	REAR END	E	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	020	MAKING RIGHT TURN
77	NONE	SIDESWIPE (SAME DIRECTION)	N	HIT & RUN - UNKNOWN	NONE APPARENT	000	CHANGING LANES
78	NONE	APPROACH TURN	S	SUV	NONE APPARENT	015	MAKING LEFT TURN
79	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	025	GOING STRAIGHT
80	NONE	OVERTAKING TURN	S	SUV	DRIVER UNFAMILIAR W/AREA	015	MAKING U-TURN
81	RAIN	OVERTAKING TURN	S	PASSENGER CAR/VAN	NONE APPARENT	025	MAKING LEFT TURN
82	NONE	BROADSIDE	N	PASSENGER CAR/VAN	DRIVER INEXPERIENCE	025	GOING STRAIGHT
83	NONE	BROADSIDE	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	030	GOING STRAIGHT
84	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	020	GOING STRAIGHT
85	RAIN	BROADSIDE	N	PASSENGER CAR/VAN	DRIVER UNFAMILIAR W/AREA	UK	GOING STRAIGHT
86	NONE	TRAFFIC SIGNAL POLE	S	PICKUP TRUCK/UTILITY VAN	DISTRACTED/CELL PHONE	005	GOING STRAIGHT
87	NONE	OVERTAKING TURN	E	PASSENGER CAR/VAN	NONE APPARENT	UK	MAKING LEFT TURN
88	NONE	OVERTAKING TURN	S	PASSENGER CAR/VAN	NONE APPARENT	010	MAKING LEFT TURN
89	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	015	MAKING LEFT TURN
90	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	030	MAKING LEFT TURN
91	NONE	BROADSIDE	S	SUV	DRIVER UNFAMILIAR W/AREA	035	GOING STRAIGHT
92	NONE	REAR END	S	PASSENGER CAR/VAN	NONE APPARENT	02	SLOWING
93	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	15	MAKING RIGHT TURN
94	NONE	APPROACH TURN	S	PASSENGER CAR/VAN	NONE APPARENT	005	MAKING LEFT TURN
95	NONE	OVERTAKING TURN	E	PICKUP TRUCK/UTILITY VAN	DRIVER UNFAMILIAR W/AREA	005	GOING STRAIGHT
96	NONE	REAR END	S	PICKUP TRUCK/UTILITY VAN	NONE APPARENT	015	GOING STRAIGHT
97	NONE	BROADSIDE	N	PASSENGER CAR/VAN	NONE APPARENT	035	GOING STRAIGHT
98	NONE	REAR END	N	SUV	NONE APPARENT	UK	SLOWING
99	NONE	APPROACH TURN	N	PASSENGER CAR/VAN	NONE APPARENT	UK	GOING STRAIGHT
100	NONE	REAR END	N	PASSENGER CAR/VAN	NONE APPARENT	UK	GOING STRAIGHT
101	NONE	APPROACH TURN	S	SUV	NONE APPARENT	UK	MAKING LEFT TURN
102	SNOW/SLEET/HAIL	CONCRETE HIGHWAY BARRIER	N	PASSENGER CAR/VAN	NONE APPARENT	040	GOING STRAIGHT
103	NONE	REAR END	N	PASSENGER CAR/VAN	OTHER FACTOR	030	SLOWING

Appendix B
Environmental Resources Technical Memoranda

FELSBURG HOLT & ULLEVIG

connecting and enhancing communities

November 13, 2013

MEMORANDUM

TO: Rich Horstmann, PE, CDOT Project Manager

FROM: Amy Ochello, Environmental Scientist, Felsburg Holt & Ullevig (FHU)

SUBJECT:
Current Conditions Analysis for Parks and Recreation Resources
for the I-225 PEL Study
FHU Reference No: 112200-01

PROJECT DESCRIPTION

The Colorado Department of Transportation (CDOT) is conducting a Planning and Environmental Linkages (PEL) study for southbound Interstate 225 (I-225) between Yosemite Street and Interstate 25 (I-25) in the City and County of Denver, Colorado. The I-225 PEL (Yosemite to I-25) is being conducted to assess existing conditions, identify anticipated problem areas, and to develop and evaluate transportation improvements to reduce congestion, improve mobility, and enhance the safety of the I-225 within the study area. CDOT, in cooperation with the Federal Highway Administration (FHWA), is preparing this PEL study in accordance with FHWA and CDOT PEL guidance for improving and streamlining the environmental process for transportation projects by conducting planning activities prior to the start of the National Environmental Policy Act (NEPA) process.

INTRODUCTION TO RESOURCE

Parks and recreational resources are important community facilities that warrant consideration during federally funded projects. These resources include parks, trails, and open space areas which offer opportunities for recreation, including both passive and active activities. For purposes of this project, park and recreational resources can be categorized into one of the following categories:

- **Regional Park and Recreational Facility –** Regional parks typically involve jurisdiction partnerships that contribute to the development and maintenance of the regional park. These areas serve residents throughout the Front Range and are regionally recognized.
- **Community Park –** These facilities are typically smaller in size than regional facilities and serve as an attraction for residents and communities within a closer area, about 3 miles, of the facility. Community parks are typically managed and maintained by one entity.

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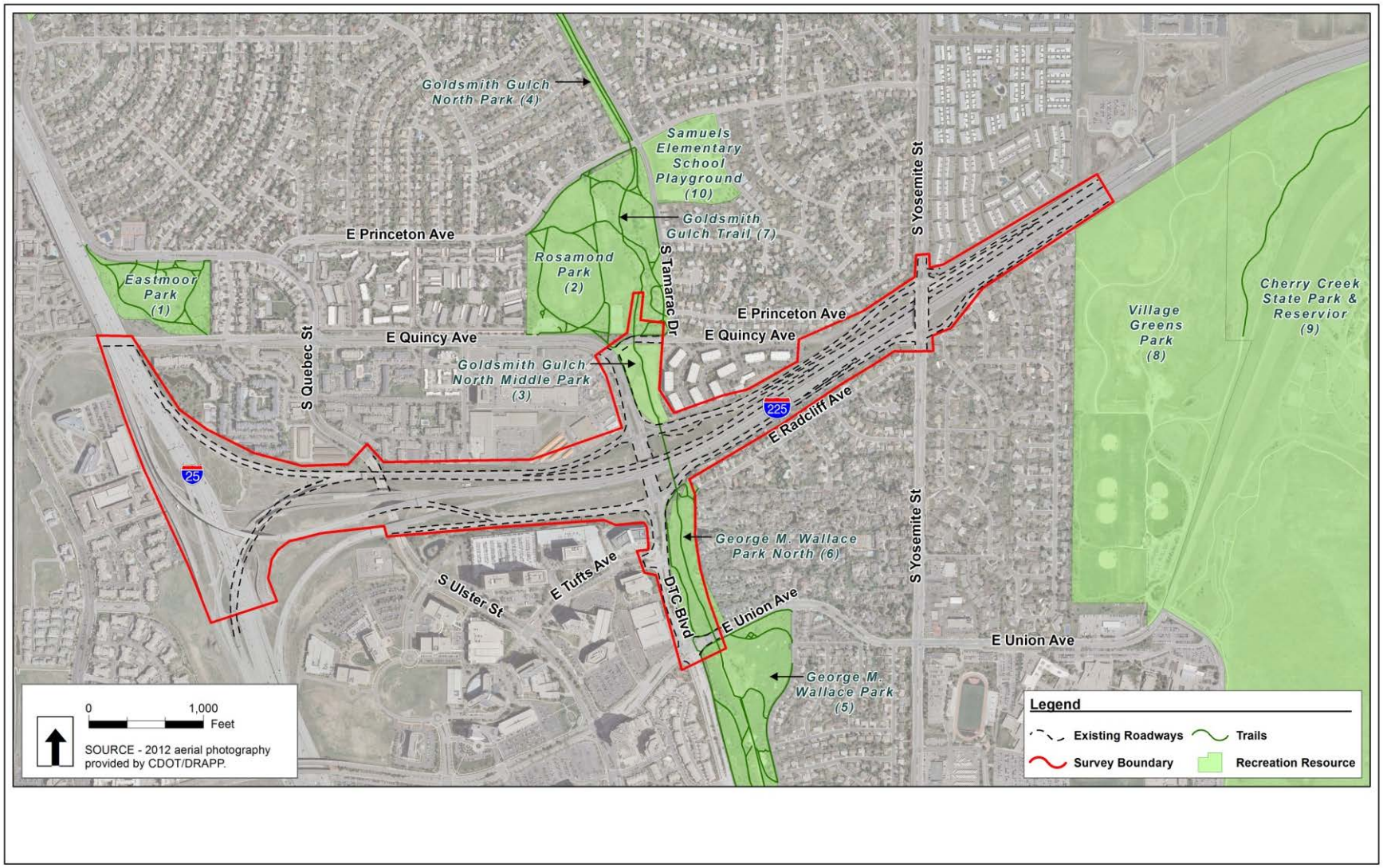
- **Neighborhood Park –** Neighborhood parks typically serve residents and community members within a 0.5 mile radius of the park. These parks are typically accessed by non-motorized means and are managed by one jurisdiction.
- **Open Space –** Open space areas include land and water parcels that remain in a predominantly natural or undeveloped state. Open space areas include possible activities such as growth management to habitat protection and/or passive recreation.
- **Trails –** Municipalities typically manage numerous miles of trails, including paved and non-paved trails. Trails often extend beyond one jurisdictional boundary into an adjacent boundary making them regional trails. It is typical for trails to follow existing linear features such as a ditch, river, or railroad.

ANALYSIS METHODOLOGY

- The study area in which parks, trails and open space resources were evaluated is shown in **Figure 1**. Properties were identified that were within the close proximity or adjacent to the study area. Details and characteristics of existing parks and recreational resources in the study area were identified through GIS and then field verified in May 2013. Additional inventory details about the resources, such as ownership, size and amenities were obtained from accessing individual municipalities' websites in May 2013. Research was centered on utilizing the most current version of information available online. The information has not been confirmed with the jurisdictions and may change as the project progresses through the planning phases.

Figure 1 Existing Parks and Open Spaces



FINDINGS

Table 1 lists existing park, trail and open space resources in the study area.

Table 1. Existing Park, Trail, and Open Space Resources

Map ID	Resource Name	Location	Description & Location	Classification	Managed by
1	Eastmoor Park[1]	Princeton Avenue and Oneida Street	12-acre park with playground and paved path	Neighborhood Park	Denver Parks and Recreation
2	Rosamond Park[1]	8051 East Quincy Avenue	38-acre fully developed turf grass park. Park features trails, softball fields, soccer fields, football fields, tennis courts, playground, basketball court, and benches. Goldsmith Gulch runs through the park.	Community Park	Denver Parks and Recreation
3	Goldsmith Gulch North Middle Park[1]	I-225 to Quincy Avenue	4.5 acres adjacent to Quincy Avenue. Goldsmith Gulch runs through property. Prairie dogs present.	Open Space – Special Use	Denver Parks and Recreation
4	Goldsmith Gulch North Park[1]	Hampden Avenue to Mansfield Avenue	5.4 acres undeveloped with Goldsmith Gulch running through property. Gravel trail adjacent to Tamarac Dr.	Open space	Denver Parks and Recreation
5	George M. Wallace Park [1, 4]	Belleview Avenue and DTC Boulevard	24.8 - Jointly funded UDFCD, Denver, and Goldsmith Metro District since 1990 as a flood control/drainage way with recreational and park purposes.	Community Park	Denver Parks and Recreation
6	George M. Wallace Park North [1]	DTC Boulevard and Temple Avenue	7.7 acres – Park that parallels DTC Boulevard with a paved trail	Community Park	Denver Parks and Recreation
7	Goldsmith Gulch Trail[2]	Prentice Avenue to Quincy Avenue	Paved trail parallel to DTC Boulevard	Minor Trail	Denver Parks and Recreation
8	Village Greens	East Union	25.12 acre site that	Regional Park	Greenwood

Map ID	Resource Name	Location	Description & Location	Classification	Managed by
	Park[3]	Avenue and South Dayton Street	hosts Cherry Creek High School athletics and youth leagues. Contains multi-use fields, softball, baseball fields and picnic amenities.		Village
9	Cherry Creek State Park and Reservoir	I-225 and South Parker Road	5.2 square miles with reservoir, trails, campgrounds, and picnic facilities.	Regional Park	Colorado Parks and Wildlife
10	Samuels Elementary School Playground	Mansfield Avenue and Tamarac Drive	Elementary school playground with ballfields, playground equipment etc.	Neighborhood Park	Denver Public Schools

[1] City and County of Denver, 2013a; [2] City and County of Denver, 2013b; [3]Greenwood Village, 2013; [4]UDFCD, 2013

Denver's Park and Recreation District website was reviewed for future planned or upgrades to existing parks, open spaces, and trails. No proposals for future improved areas were identified within for the properties listed in **Table 1** or within proximity to the study area.

LIST OF REFERENCED MATERIALS

City and County of Denver. 2013a. Website accessed May 17, 2013:
http://www.denvernature.net/Documents/DenverParks.html

City and County of Denver. 2013b. Website accessed May 20, 2013:
http://www.denvergov.org/Portals/747/documents/parks/trails/regional_trails_web.pdf

Greenwood Village. 2013. Website accessed May 20, 2013:
http://www.greenwoodvillage.com/index.aspx?NID=351

Urban Drainage and Flood Control District (UDFCD). 2013. Website access May 17, 2013:
http://www.udfcd.org/downloads/pdf/fhn/fhn90_1.pdf

FELSBURG HOLT & ULLEVIG

connecting and enhancing communities

November 13, 2013

MEMORANDUM

To: Rich Horstmann, PE, CDOT Project Manager

From: Dale Tischmak, Environmental Scientist, Felsburg, Holt & Ullevig (FHU)

Subject: Current Conditions Analysis for Traffic Noise for the I-225 PEL Study
FHU Reference No: 112200-01

PROJECT DESCRIPTION

Colorado Department of Transportation (CDOT) is conducting a Planning and Environmental Linkages (PEL) study for southbound Interstate 225 (I-225) between Yosemite Street and Interstate 25 (I-25) in the City and County of Denver, Colorado (**Figure 1**, located at the end of this technical memorandum). The I-225 PEL (Yosemite to I-25) is being conducted to assess existing conditions, identify anticipated problem areas, and develop and evaluate transportation improvements to reduce congestion, improve mobility, and enhance the safety of the I-225 within the study area. CDOT, in cooperation with the Federal Highway Administration (FHWA), is preparing this PEL study in accordance with FHWA and CDOT PEL guidance for improving and streamlining the environmental process for transportation projects by conducting planning activities prior to the start of the National Environmental Policy Act (NEPA) process.

The primary purpose of this memorandum is to evaluate and document current (2012) traffic noise conditions within the I-225 PEL study area. This information will be used to evaluate potential I-225 improvements in terms of possible noise impacts to nearby developed properties (i.e., receptors).

INTRODUCTION TO RESOURCE

The CDOT Noise Analysis and Abatement Guidelines (CDOT, 2013) specify that a noise analysis study is required for all Type I projects if noise-sensitive receptors are present within the project study zone. A Type I project consists of a proposed Federal or Federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of lanes.

Under the I-225 PEL, a number of highway improvements are being considered, including the addition of a through lane on southbound I-225. Such improvements would be a Type I project through the criterion of "addition of through-travel lane(s) by new construction or restriping an existing highway" (CDOT, 2013). There are noise-sensitive receptors near the potential improvements in the study area (**Figure 2**, located at the end of this technical memorandum). Therefore, a traffic noise analysis would be required under NEPA

for the I-225 improvements in the study area. Current conditions for traffic noise must be examined as part of a CDOT noise analysis, so current conditions were examined for the PEL.

The I-225 PEL study area was included in the Southeast Corridor Final Environmental Impact Statement (EIS) (CDOT & FHWA, 1999). The EIS considered multimodal improvements to both the I-25 and I-225 corridors. The noise analysis for the EIS identified numerous noise impacts along I-225 in the PEL study area. The EIS noise analysis evaluated abatement actions for those impacts and recommended construction of several noise walls in the PEL study area. The noise abatement actions recommended in the EIS were constructed and are the existing noise walls shown in **Figure 2**, located at the end of this technical memorandum. With one exception—the wall south of I-225 and east of Yosemite Street was constructed prior to the EIS as a private action by the local homeowners. The noise walls were estimated in the EIS to provide 8-10 dBA of noise reduction to the adjacent properties. These noise walls were intended to benefit ground-level residences, not upper-floor balconies, etc., and are important factors in the current traffic noise environment for the PEL study area.

ANALYSIS METHODOLOGY

The analytical methods for the evaluation followed the CDOT Noise Analysis and Abatement Guidelines (CDOT, 2013). Current traffic noise conditions were evaluated through computer modeling of the PEL study area. Modeling is used because day-to-day variations in traffic or weather conditions that affect traffic noise levels cannot be captured or quantified by brief noise measurements alone. In addition, the modeling can evaluate many more locations than can reasonably be field measured.

The modeling was used to calculate traffic noise levels at numerous representative locations throughout the PEL study area (**Figure 2**, located at the end of this technical memorandum). The modeling results represent predicted typical average traffic conditions during peak traffic noise periods for 2012.

Noise levels from the model were compared to CDOT's Noise Abatement Criteria (NAC) (**Table 1**) to determine noise impacts. Under CDOT guidelines, equaling or exceeding the NAC is viewed as a noise impact. The CDOT NAC for residences (Category B) and for parks and recreational areas (Category C) is an exterior equivalent sound level (L_{eq}) of 66 dBA. The NAC for sensitive commercial properties (Category E) is an L_{eq} of 71 dBA.

A noise impact can also be caused by a "substantial" noise increase from a proposed project. A "substantial" noise increase is when the future noise level is expected to increase by 10 dBA or more over existing levels. Because this analysis and memorandum are considering only current conditions, the substantial noise increase criterion is not relevant and will not be considered further.

The traffic noise modeling software used was FHWA's Traffic Noise Model (TNM) Version 2.5. The ultimate purpose of the model was to examine whether traffic noise levels would be high enough to impact neighboring properties.

A noise model was developed in TNM for current conditions that reflected the existing road layout, receptor locations and traffic volumes. Because of the nature of the PEL study area, a simple "flat" noise model would not provide an accurate representation of traffic noise conditions. The terrain in the PEL study area is hilly and complex, so elevation differences are important influences on the traffic noise environment. The actual terrain for the PEL study area (from 2-foot ground surface contour data) was used to develop the noise model. The residential areas in the PEL study area that adjoin I-225 or I-25 already

have noise walls in place (**Figure 2**, located at the end of this technical memorandum) and were included to calculate accurately current traffic noise levels. The heights of these walls are variable due to the hilly terrain and detailed height data were not available for the PEL, so simplified, representative walls heights (from field reconnaissance) were used in the noise model. The noise model included the major existing roads that could be important local traffic noise contributors with existing (2012) traffic volumes and road layouts. For both I-225 and I-25 traffic, the peak traffic volumes were congested, so the modeled traffic conditions were 1,800 vehicles/lane/hour traveling at 65 miles per hour (mph) and 55 mph along some portions (CDOT, 2013). The percentage of medium and heavy trucks in I-225/I-25 traffic was obtained from CDOT traffic count data from the area. For the ramps and other roads, the traffic volumes calculated for the PEL traffic analysis were used. Therefore, the current conditions noise model was relatively complex.

Table 1. CDOT Noise Abatement Criteria (NAC)

NAC Category	CDOT NAC (L_{eq})	Description of NAC Category
A	56 dBA (Exterior)	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is to continue to serve its intended purpose.
B	66 dBA (Exterior)	Residential
C	66 dBA (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, schools, Section 4(f) sites, trails, trail crossings, and television studios
D	51 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, schools and television studios
E	71 dBA (Exterior)	Hotels, motels, offices, restaurants, bars and other developed lands, properties or activities not included in A-D or F.
F	Not Applicable	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, ship yards, utilities (water resources, water treatment, electrical), and warehousing
G	Not Applicable	Undeveloped lands that are not permitted for development

Source: CDOT, 2013

Approximately 190 model receptor points were examined (**Figure 2**, located at the end of this technical memorandum). Many of the buildings are three- or four-story structures; the upper floors of residential buildings were modeled if there were exterior areas of frequent human use present (i.e., balconies).

FINDINGS

The noise model for current conditions was used to evaluate traffic noise levels within the I-225 PEL study area. The noise-impacted areas are illustrated in **Figure 3**, located at the end of this technical memorandum. Overall, the calculated noise level range at the model points was 52-76 dBA.

Several residential areas were calculated to have current traffic noise levels at or above the Category B NAC during the peak hour (**Figure 3**, located at the end of this technical memorandum). It was estimated that approximately 475 residential units were impacted by traffic noise (**Table 2**). These areas include a number of multi-story multi-family buildings. The impacted receptors are usually the upper floors/balconies of these buildings, for reasons described below.

One Category C property (Wallace Park) and no Category E properties (commercial areas) were found to be impacted (**Table 2**).

The residential areas adjoining I-225 already have a noise abatement feature in place (i.e., walls). The existing noise walls along I-225 appeared to be effective in abating traffic noise for ground-level front-row receptors, particularly in the single-family and/or single-story residential areas. Few of these receptors were found to be impacted (**Figure 3**, located at the end of this technical memorandum); those that were tended to be at the ends of the walls or at a location where the noise wall was noticeably shorter than adjacent walls.

Table 2. Summary of Calculated Noise Impacts

Land Use Category	Existing (2012) Receptors Impacted
Category B	474
Category C	1
Category E	0

Current (2012) traffic noise conditions in the I-225 PEL study area were evaluated through noise modeling. Approximately 475 residential units (**Table 1**) were calculated to have traffic noise levels at or above the Category B NAC (**Figure 3**, located at the end of this technical memorandum), although most of these were on upper floors.

Previous projects in the I-25/I-225 corridors have constructed noise walls next to most of the current residential areas in the I-225 PEL study area (**Figure 2**, located at the end of this technical memorandum). From the modeling results, these walls appeared to be effective in mitigating traffic noise for front-row ground-level receptors in the residential areas. Receptors for the upper floors (i.e., balconies) of multi-story apartment buildings did not appear to benefit from the noise walls; noise walls typically are not designed to benefit the upper floors. Therefore, traffic noise mitigation is already in-place throughout the I-225 PEL study area that is likely to address any added traffic noise due a road improvement(s) recommended through the I-225 PEL.

The existing noise walls were installed as mitigation actions by previous projects. The alternatives and improvements examined through the I-225 PEL should seek to avoid these walls. An alternative or improvement that requires the removal of any of these walls will result in the I-225 project needing to replace the affected walls to maintain the mitigation actions of the earlier projects.

An evaluation of traffic noise for the selected alternative will be needed.

REFERENCES

CDOT & FHWA. 1999. Southeast Corridor Final EIS, December 13.

CDOT. 2013. Noise Analysis and Abatement Guidelines, February.

Figure 1. Study Area Map

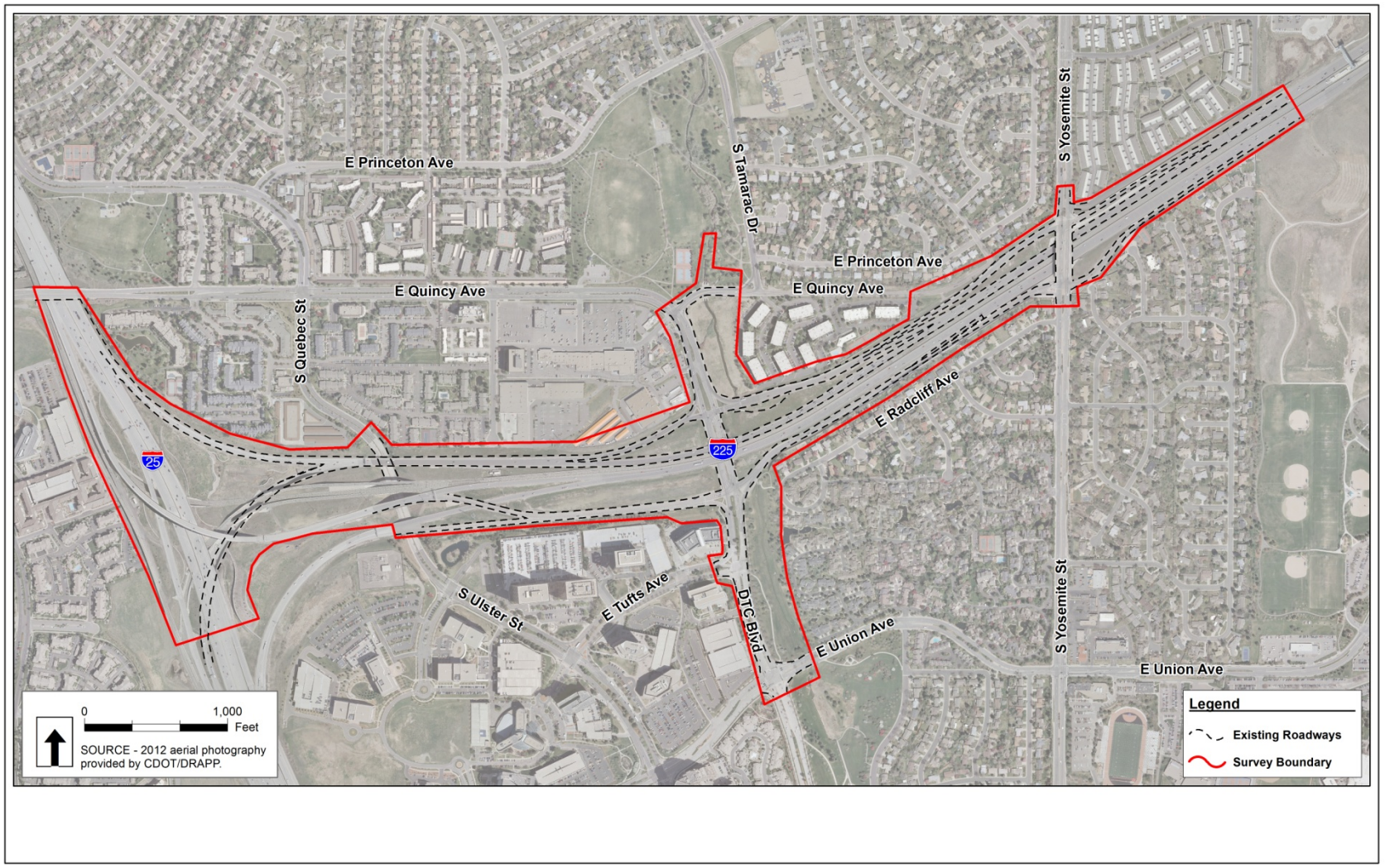


Figure 2. Land Uses, Modeled Receptors and Existing Noise Walls

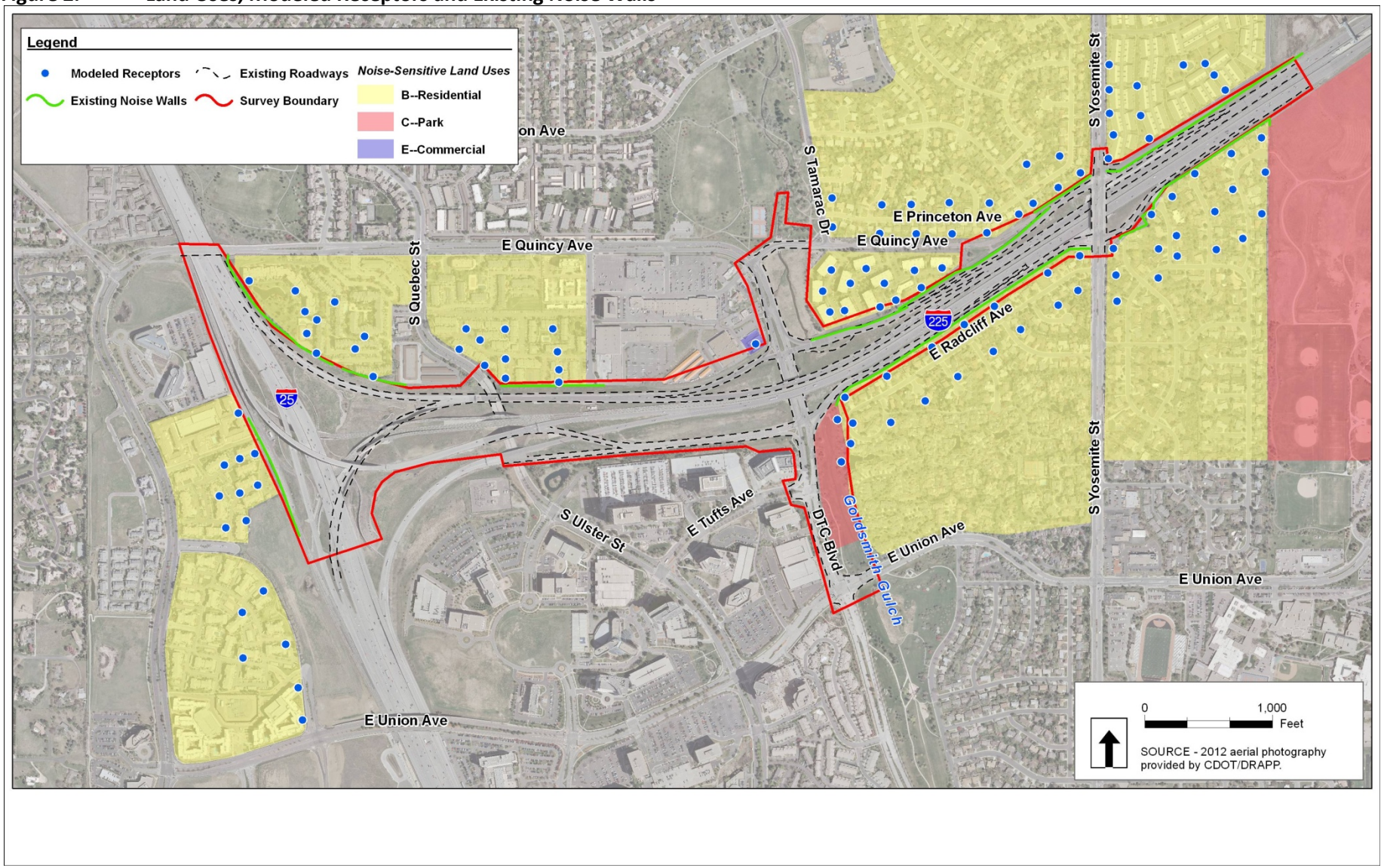
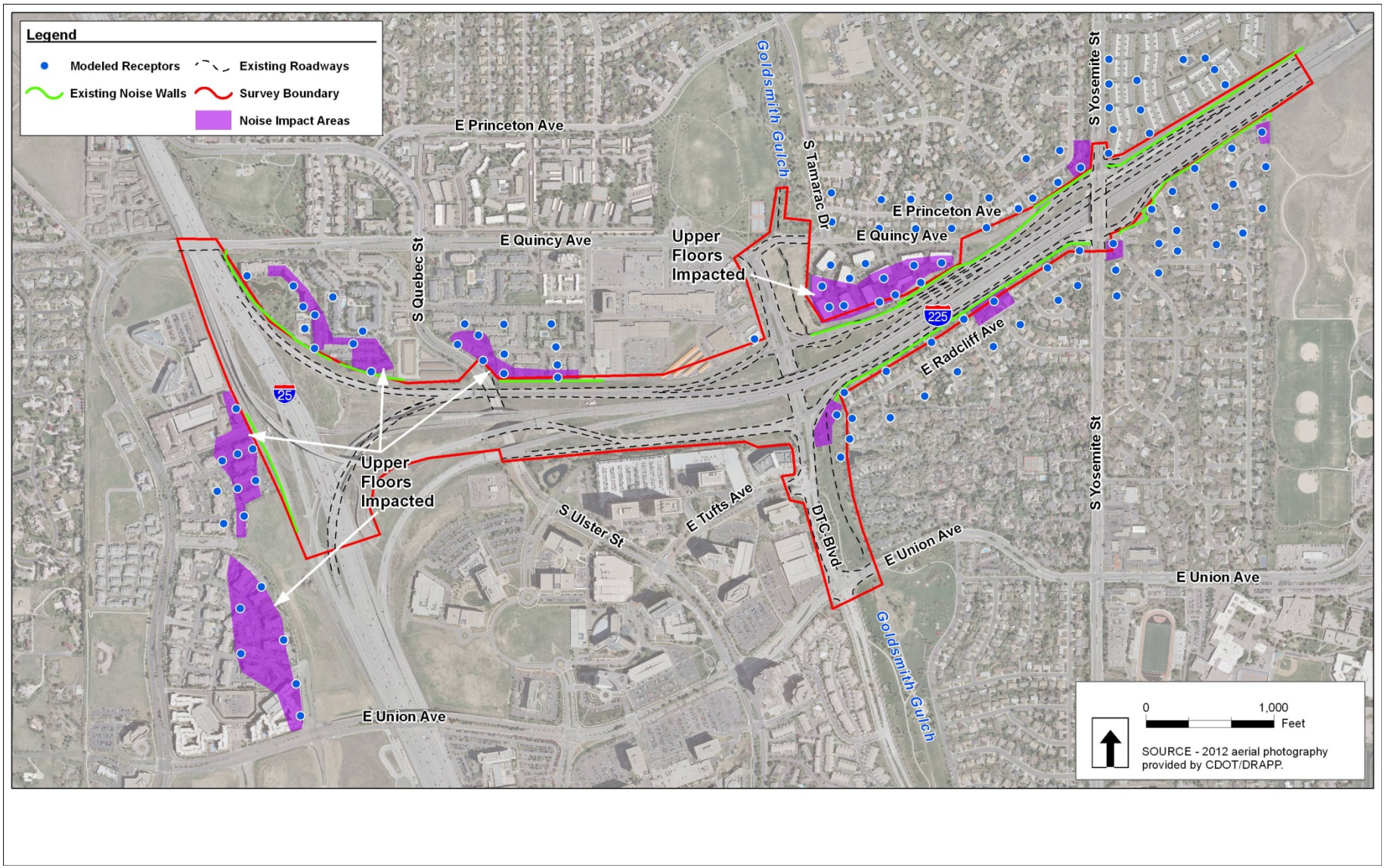


Figure 3 Noise-Impacted Areas from Noise Model Results



FELSBURG HOLT & ULLEVIG

connecting and enhancing communities

November 13, 2013

MEMORANDUM

TO:	Rich Horstmann, PE, CDOT Project Manager
FROM:	Jake Lloyd, Environmental Scientist, Felsburg, Holt & Ullevig (FHU)
SUBJECT:	Historic Cultural Resources Analysis for the I-225 PEL Study FHU Reference No: 112200-01

PROJECT DESCRIPTION

The following information constitutes our assessment of historic cultural resources associated with the Planning and Environmental Linkages (PEL) study for southbound I-225 between Yosemite Street and I-25. FHU is facilitating the PEL on behalf of the Colorado Department of Transportation (CDOT) to assess existing conditions, identify anticipated problem areas, and to develop and evaluate transportation improvements within the I-225 study area. **Figure 1** illustrates the general vicinity of the I-225 PEL study area located in southeastern City and County of Denver.

INTRODUCTION TO RESOURCES

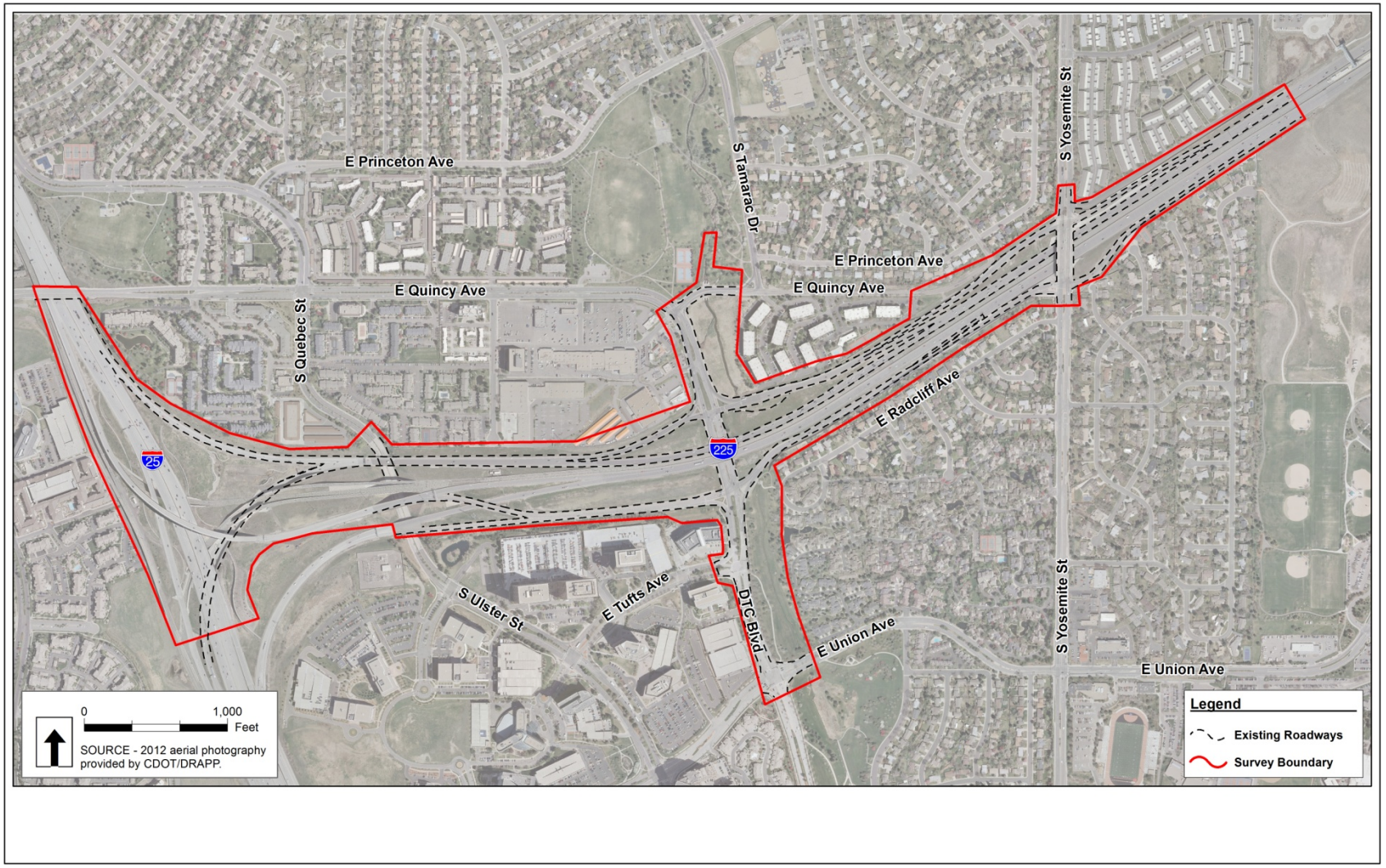
Historic cultural resources are places and remains from the past including historic buildings, structures, sites, districts, and landscapes. Historic cultural resources are divided into two categories; historic resources and archaeological resources. Historic resources include buildings, bridges, railroads, roads, and other structures that are generally at least 50 years old (45 years old for transportation projects). Archaeological resources are often buried and include artifacts and features associated with prehistoric Native American culture, but can also include historic artifacts, features, and ruins from the period after Euro-American settlement.

Historic cultural resources are afforded consideration by Section 106 of the National Historic Preservation Act of 1966, as amended, as well as Section 4(f) of the Department of Transportation Act of 1966. Significant historic resources are those resources that are eligible for inclusion or listed on the National Register of Historic Places (NRHP). Sites qualifying for the NRHP must retain sufficient integrity (of location, design, setting, materials, workmanship, feeling, and association) and meet one or more of the following eligibility criteria as specified in 36 CFR 60.4:

A. Be associated with events that have made a significant contribution to the broad patterns of our history

B. Be associated with the lives of persons significant in our past

Figure 1 Study Area Map



C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

D. Have yielded, or may be likely to yield, information important in prehistory or history

ANALYSIS METHODOLOGY

The following methodology was used to gather information within this memorandum:

- Searched the COMPASS database (Office of Archaeology and Historic Preservation online) to determine whether previously determined eligible or listed historic properties are located within the I-225 PEL study area
- Reviewed City and County of Denver Assessor's Office records to determine age-eligible properties
- A field assessment to identify properties with architectural significance and integrity that may be potential historic resources
- Used Google Earth street view for initial site assessment

FINDINGS

Area of Potential Effect (APE)

An APE is defined by the proposed I-225 PEL study area and includes all adjacent properties. Each property was checked against the COMPASS database and City and County of Denver Assessor's Office database to determine whether the property was a previously recorded historic resource or met the minimum age requirement of 45 years old. The results are outlined below.

Previously Identified Historic Sites within the APE

No previously recorded historic sites occur today within the APE.

One historic site did occur within the APE before it was removed in 2003 when the I-25/I-225 Interchange was built. The historic site included two vehicular bridges; F-17-FW and F-17-FX, located at the I-25/I-225 Interchange. These bridges were found to be eligible for the NRHP based on their uniquely engineered three-way grade separation and angled piers (**Table 1**).

Table 1 Previously Occurring Historic Sites within the APE

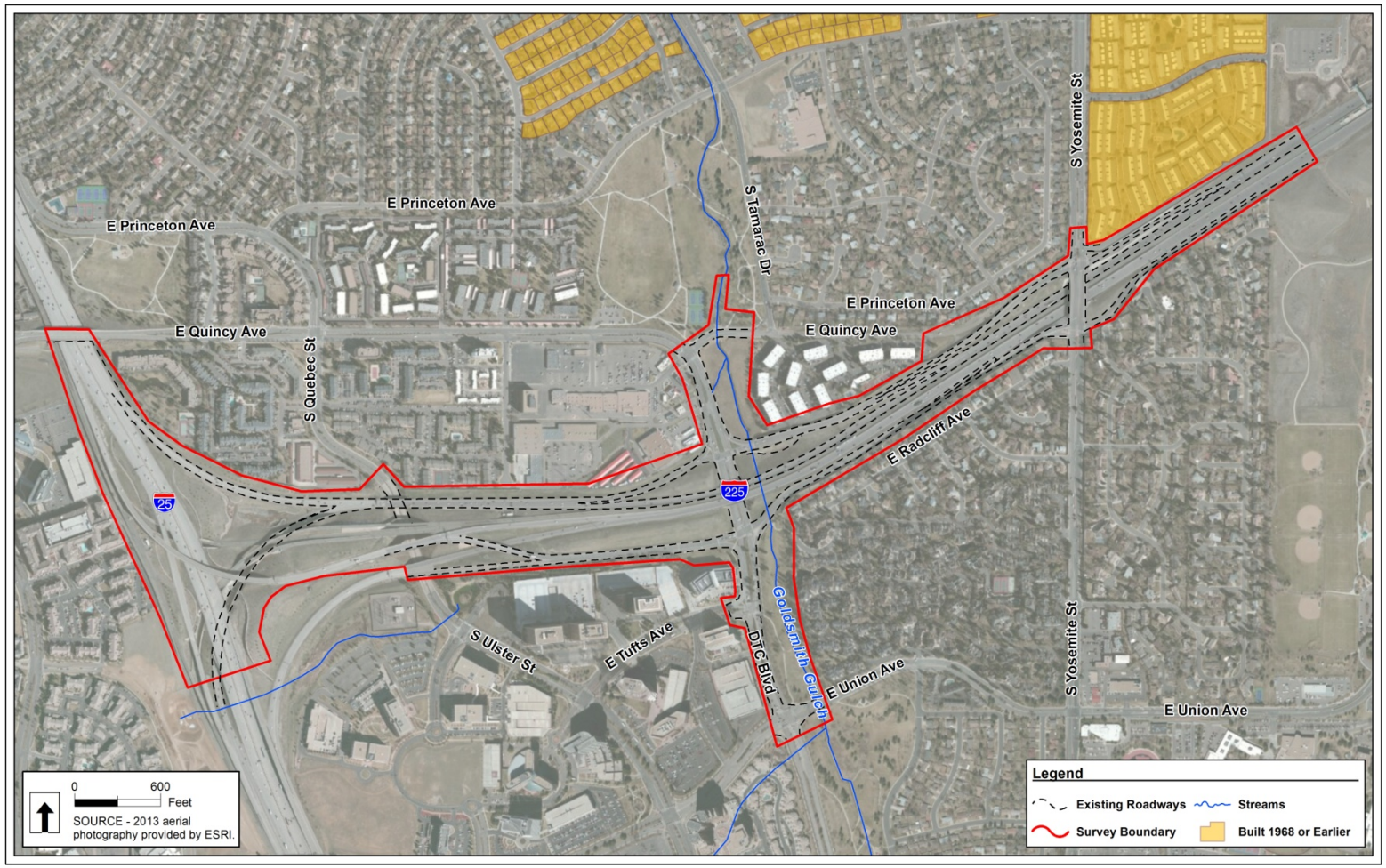
Site #	Name	Address	Description	Status
5DV.2130	Bridges: F-17-FW F-17-FX	I-25/I-225 Interchange	Built 1972-1973. Concrete box girder with three-way grade separation and angled piers.	Removed (2003)

Age-Eligible Sites within the APE

Only one site within the APE was found to be at least 45 years old which satisfies the age-eligibility requirement for historic cultural resources. This site is known as the Cherry Creek Townhouses, a residential condominium development, and is located at the northeast corner of Yosemite Street and Oxford Drive at the east end of the study area (**Figure 2**).

The City and County of Denver Assessor's Office showed that the property was developed in 1966, though a field visit revealed that the condominium development does not have the potential for being a historic cultural resource. An initial review of this site suggests that the buildings associated with the Cherry Creek Townhouse development would not be classified as eligible for the NRHP under any of the four eligibility criterion outlined above. These simple residential buildings do not represent any distinctive architectural characteristics, nor do they appear to be associated with events or people of significance in the history of the area or development of the Denver Tech Center.

Figure 2 Previously Recorded and Potentially Historic Sites



FELSBURG HOLT & ULLEVIG

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November 13, 2013

MEMORANDUM

TO: Rich Horstmann, PE, CDOT Project Manager

FROM: Kate Baird, PE, Environmental Scientist, Felsburg, Holt & Ullevig (FHU)

SUBJECT: Current Conditions Analysis for Floodplains and Water Quality for the I-225 PEL Study
FHU Reference No: 112200-01

PROJECT DESCRIPTION

Colorado Department of Transportation (CDOT) is conducting a Planning and Environmental Linkages (PEL) study for southbound Interstate 225 (I-225) between Yosemite Street and Interstate 25 (I-25) in the City and County of Denver, Colorado (**Figure 1**). The I-225 PEL (Yosemite to I-25) is being conducted to assess existing conditions, identify anticipated problem areas, and develop and evaluate transportation improvements to reduce congestion, improve mobility, and enhance the safety of the I-225 within the study area. CDOT, in cooperation with the Federal Highway Administration (FHWA), is preparing this PEL study in accordance with FHWA and CDOT PEL guidance for improving and streamlining the environmental process for transportation projects by conducting planning activities prior to the start of the National Environmental Policy Act (NEPA) process.

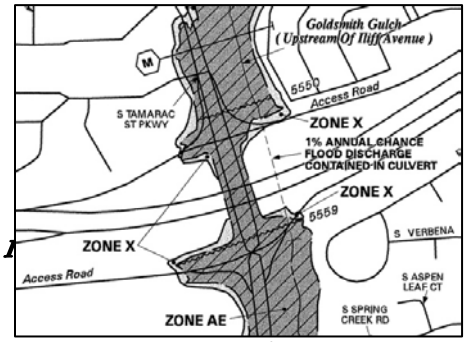
INTRODUCTION TO RESOURCE

This section provides a summary of major floodplains in the study area and a summary of local water quality.

FLOODPLAINS

Floodplains were identified by inspecting the Federal Emergency Management Agency (FEMA) flood insurance rate maps (FIRM) for the study area. FEMA designated floodplains that are located within the study area are described below:

- Zone AE is part of the FEMA 100-year flood hazard area (1% chance flood) where base flood elevations have been determined. The 100-year flood is FEMA's base flood.
- Zone X is part of the FEMA 500-year flood area,



Local floodplains at I-225/DTC Boulevard Intersection. Source: FEMA FIRM, Map No. 0800460219G

6300 South Syracuse Way, Suite 600 Centennial, CO 80111 tel 303.721.1440 fax 303.721.0832
www.fhueng.com info@fhueng.com

100-year flood area with average depths of less than one foot, or with drainage areas less than one square mile.

Goldsmith Gulch is the only drainageway that has a FEMA designated floodplain in the study area (see **Figure 1**, located at the end of this memorandum). Portions of Goldsmith Gulch flow through open channels while other portions are piped underground, such as under I-225. The gulch is a tributary of Cherry Creek and is mainly used for natural moderation of floods and has limited wildlife usage. FEMA has designated Zones AE and Zone X in the Goldsmith Gulch Floodplain.

Goldsmith Gulch near DTC Boulevard and E. Quincy Avenue. Photo looking south towards I-225.

Drainageways that have a Zone AE designation, such as Goldsmith Gulch, are sensitive to changes. Relatively small changes that do not result in a net increase of fill may be incorporated in the floodplain without triggering the Conditional Letters of Map Revision (CLOMR)/Letters of Map Revision (LOMR) process; however, floodplain modeling may be required to assess the extent of the impact. If the impacts cause greater than 0.5 foot of rise in the flood elevation, the CLOMR/LOMR process could be required.

If any of the proposed I-225 work is to be done within the floodway areas of DTC Boulevard, coordination with the City of Denver floodplain administrator and/or FEMA will be necessary. If work in the floodway is minor and no fill is added, a no rise certificate must be submitted to the City of Denver floodplain administrator with calculations, cross sections, and volume calculations.

WATER QUALITY

Water quality concerns are attributed to surface waters found in the study area. Goldsmith Gulch is the only surface water resource within the study area. The Colorado Water Quality Control Division defines water use classifications for water resources such as Goldsmith Gulch. All tributaries to Cherry Creek, including all lakes and reservoirs, from the source of east and west Cherry Creek to the confluence of the South Platte River (including Goldsmith Gulch) are classified as the following: Aquatic Life 2; Recreation 2; and Agriculture (Colorado Department of Health and Environment [CDPHE], 2013).

Groundwater resources mainly include four non-tributary aquifers: the Denver Basin, Arapahoe, Laramie Fox-Hills, and Dawson Aquifers cover the entire Denver metropolitan area. A shallow alluvial aquifer is also a tributary to the South Platte River west of the study area.

Nearby, the Cherry Creek watershed is one of the fastest growing areas in Colorado. The Colorado Water Quality Control Commission developed “Regulation 72” to protect water quality as the watershed matures. Regulation 72 sets forth stormwater related construction requirements for development projects, including construction best management practices (BMPs) and post-construction water quality features depending on the size of the project. Regulation 72 requirements are similar to CDOT’s Municipal Separate Storm Sewer System permit requirements but are typically more stringent.

Existing water quality features in the study area include a pond/wetland area in the I-25/I-225 Interchange and a pond at the southbound I-225 off-ramp to DTC Boulevard. The sizes of these features are unknown but should be determined once further details about impacts are determined.

If any proposed work is to be done in a water quality feature in the study area, such as Goldsmith Gulch, coordination with the Colorado Water Quality Control Division will be necessary.

RESOURCES

Cherry Creek Water Quality Basin Authority. Website accessed May 14, 2013. www.cherrycreekbasin.org

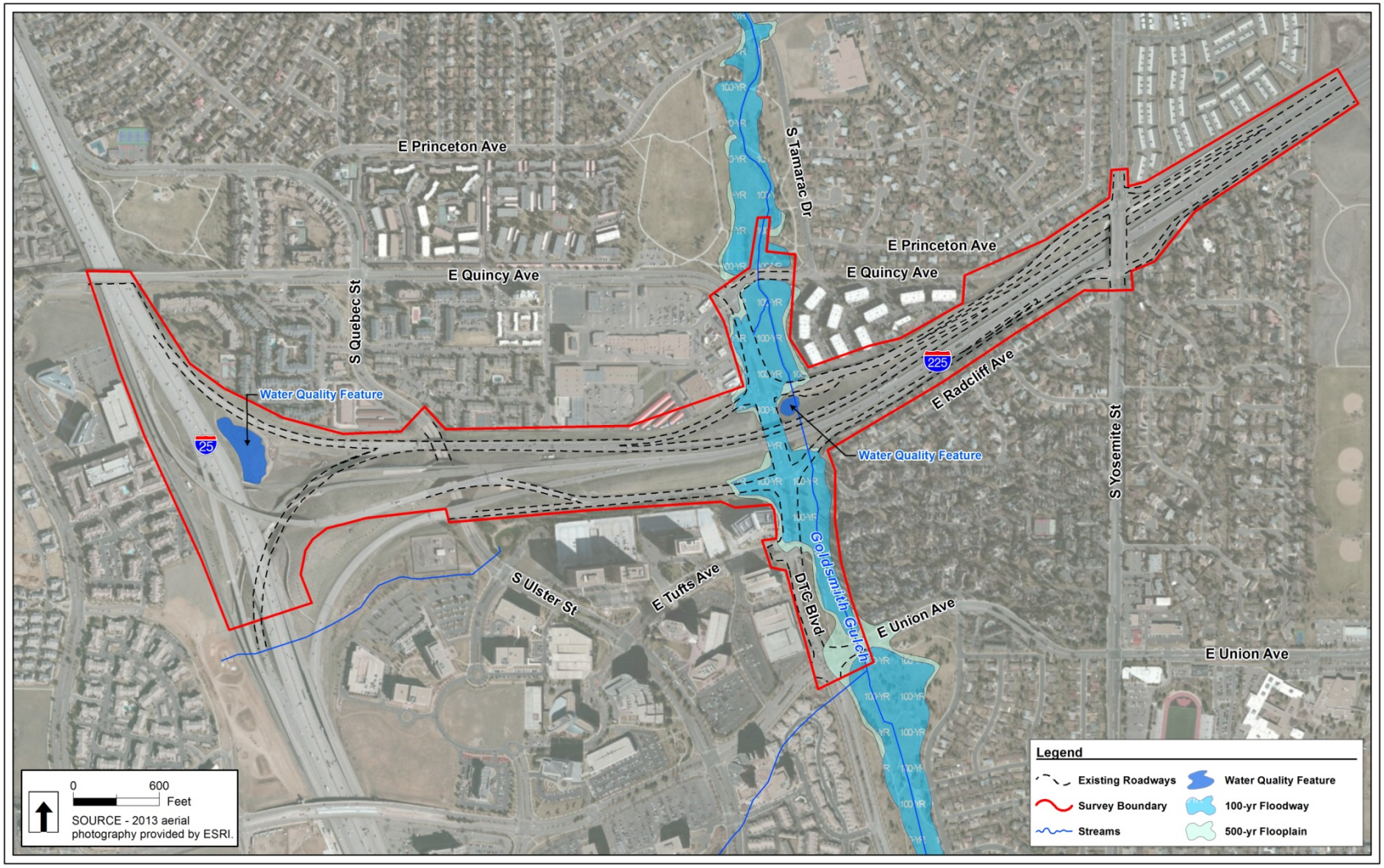
CDPHE, 2012. Cherry Creek Reservoir Control Regulation #72. Effective November 30, 2012.

CDPHE. 2013. Regulation 38 – Classifications and Numeric Standards for South Platte River Basin. Effective March 1, 2013.

FEMA FIRM, Community Panel , Map revised No. 0800460219G, Map revised November 17., 2005.

Flood Insurance Study of City and County of Denver, Colorado, FEMA, November 17, 2005.

Figure 1. Floodplains and Water Quality Features



FELSBURG HOLT & ULLEVIG

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November 13, 2013

MEMORANDUM

TO: Rich Hortsmann, PE, CDOT Project Manager

FROM: Keith Hidalgo, Environmental Scientist, GISP, Felsburg Holt & Ullevig (FHU)

SUBJECT: Current Conditions Analysis for Biological Resources and Wetlands for the I-225 PEL Study
FHU Reference No: 112200-01

PROJECT DESCRIPTION

The Colorado Department of Transportation (CDOT) is conducting a Planning and Environmental Linkages (PEL) study for southbound Interstate 225 (I-225) between Yosemite Street and Interstate 25 (I-25) in the City and County of Denver, Colorado. The I-225 PEL (Yosemite to I-25) is being conducted to assess existing conditions, identify anticipated problem areas, and to develop and evaluate transportation improvements to reduce congestion, improve mobility, and enhance the safety of the I-225 within the study area. CDOT, in cooperation with the Federal Highway Administration (FHWA), is preparing this PEL study in accordance with FHWA and CDOT PEL guidance for improving and streamlining the environmental process for transportation projects by conducting planning activities prior to the start of the National Environmental Policy Act (NEPA) process. Refer to **Figure 1** for a study and survey area map.

INTRODUCTION TO RESOURCE

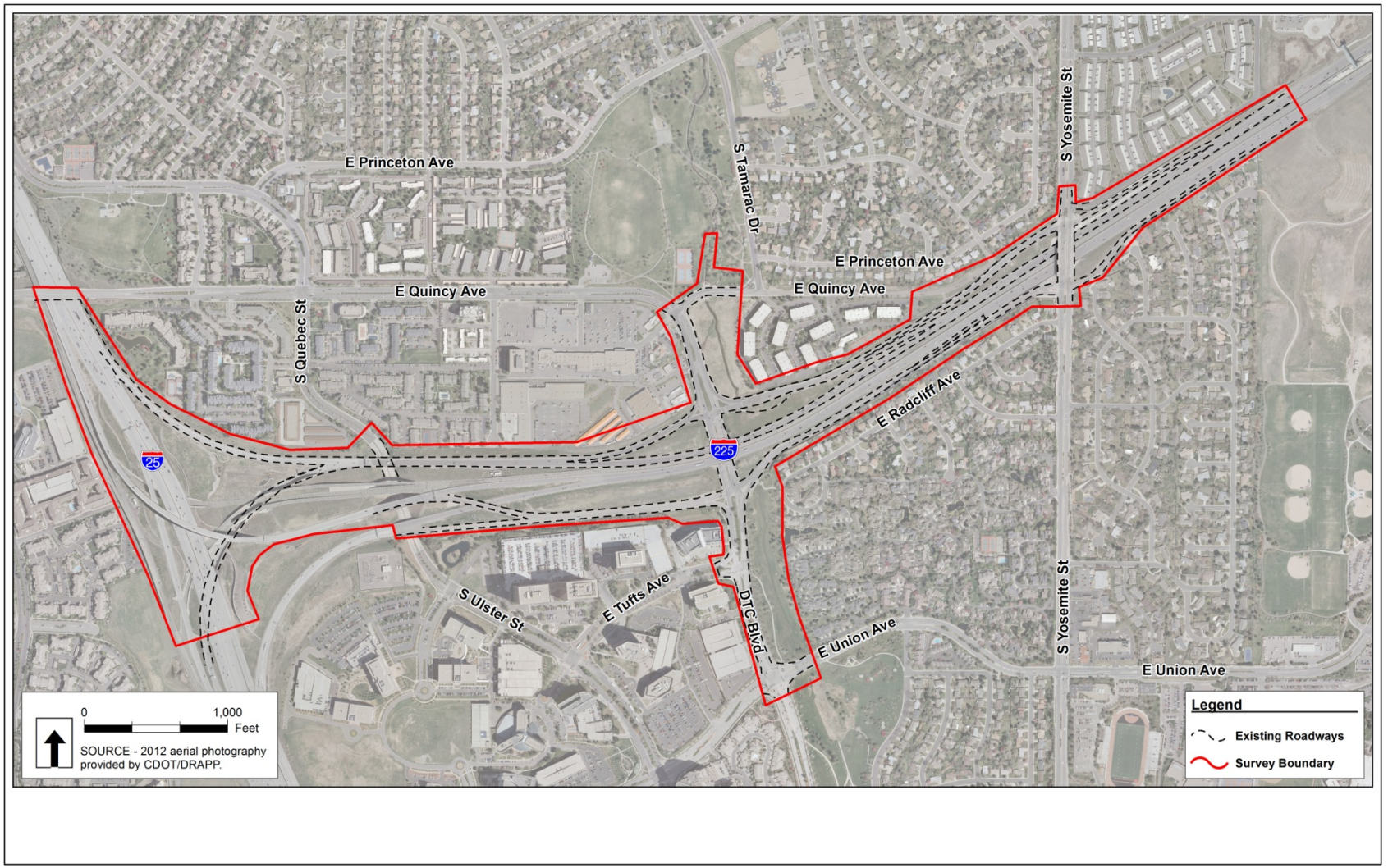
Wetlands and other Waters of the US

Wetland resources are protected under Section 404 of the Clean Water Act (CWA) (33 US Code [USC] 1344) and Executive Order 11990 Protection of Wetlands (US Environmental Protection Agency [USEPA], 1977). The CWA requires coordination with the US Army Corps of Engineers (USACE) and resource agencies such as the USEPA and the US Fish and Wildlife Service (USFWS) when impacts occur to wetlands that are considered waters of the US. The US Department of Transportation (USDOT) Order 5660.1. A Preservation of the Nation's Wetlands (USDOT 1978), provides guidance on wetland mitigation assessment. CDOT has incorporated this and other FHWA environmental guidance into its Environmental Stewardship Guide (CDOT 2005d), which emphasizes efforts to avoid and minimize wetland impacts and impacts to other Waters of the US (WUS).

Wildlife/Special Status Species

Wildlife is an important public resource that warrants consideration during federally funded projects and is documented during the NEPA process. Various federal laws have been established to protect wildlife, including: the Endangered Species Act (ESA); the Migratory Bird Treaty Act (MBTA); the Bald and Golden Eagle Protection Act (BGPA); and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Figure 1. Study Area Map



Resource Review

Wetlands and Waters of the US

The following wetland analysis describes the inventory of wetlands and other open waters within the I-225 PEL study area. This analysis builds on the results of prior environmental studies completed in the study area, including the Southeast Corridor Final Environmental Impact Statement (EIS) (CDOT & FHWA 1999). FHU staff identified areas where potential wetlands would be prior to conducting a field survey. FHU staff used the U.S. Geological Survey's (USGS) National Hydrological Dataset (NHD) to initially identify areas of known surface water, including streams, ditches, ponds, and lakes which would be likely areas of wetlands or open water which would be considered WUS. FHU staff also referenced the National Wetland Inventory (NWI), which is maintained by the USFWS for more specific locations of known wetlands.

Wildlife/Special Status Species

Details and characteristics of wildlife resources in the study area were identified using existing geographic information system (GIS) data and field verified (May 17, 2013) Additional inventory details about the resources, such as protection status and presence of species were obtained from accessing the Colorado Department of Parks & Wildlife (CPW) Natural Diversity Information Source (NDIS), the Colorado Natural Heritage Program (CNHP), and the USFWS Information Planning and Conservation System (IPaC) websites in May 2013. Research was centered on utilizing the most current version of information available online. Data from the Southeast Corridor Final EIS were utilized because the two study areas generally overlap (CDOT, & FHWA 1999).

ANALYSIS METHODOLOGY

A limited site reconnaissance of the project corridor was conducted in May 2013. Previously identified wetlands as well as potential wetland areas that had not been mapped in prior studies were examined. Wetland vegetation and hydrology was reviewed at each potential site, data collected and wetland areas that had not been previously mapped were located. Refer to **Attachment A** for photographs taken at the time of the field visit.

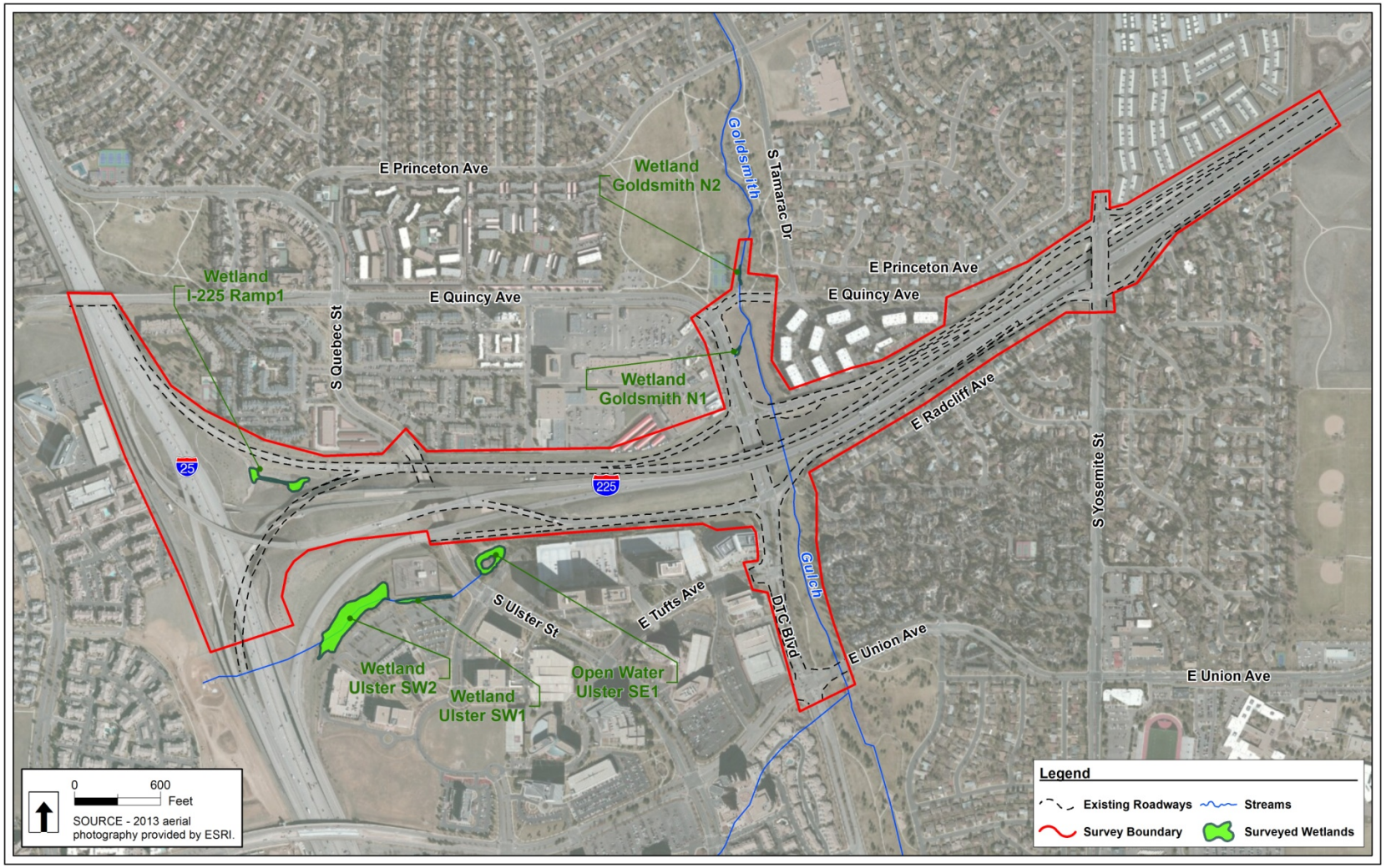
All field determinations were performed in accordance with the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Environmental Laboratory 2010). Field surveys and reviews of vegetation followed the 2012 Great Plains Wetland Indicator List (Lichvar 2012) and wetland community types were classified according to Cowardin et al. (1979).

FINDINGS

The majority of wetlands identified within the corridor are small palustrine emergent wetlands with most occurring in a narrow fringe in isolated locations along Goldsmith Gulch and in a stormwater pond in CDOT's ROW on the northeast quadrant of the I-25 and I-225 interchange. These wetlands were considered low quality wetlands in prior studies. All of these wetlands are isolated by development or are modified fully to an urban landscaped space (Goldsmith Gulch Park) and provide minimal wildlife habitat.

All wetlands identified in this field review are shown on **Figure 2** in relation to the study area.

Figure 2. Surveyed Wetlands and Other Waters



All wetlands are listed in **Table 1**, which lists the previous survey ID, the new wetland ID, water source, and the area of each.

Table 1. Summary of Surveyed Wetlands

Previous Wetland ID	Updated Wetland ID	Water Source	Acres
I25I225NE1 – NE5	I-225 Ramp 1	Stormwater Drain, Surface Runoff	0.361
I25I225SE2	Ulster SE1	Stormwater Pond	0.449
I25I225SE3	Ulster SW1	Stormwater	0.173
I25I225SE3	Ulster SW2	Stormwater	1.680
TamNE2	Goldsmith N1	Goldsmith Gulch	0.027
TamNE2	Goldsmith N2	Goldsmith Gulch	0.013
TamSE1	Goldsmith OW[1]	Goldsmith Gulch	N/A – WOUS Channel

1 – Goldsmith OW represents Goldsmith Gulch, this is labeled as a stream in **Figure 2**

Wetland hydrology for the surveyed wetlands in the study area was based on field observations and was found to be a combination of a modified stream corridor, stormwater runoff, landscaping irrigation, and stormwater ponds. Wetland types found in the study area include palustrine emergent systems with persistent vegetation. This field review confirmed earlier studies (Southeast Corridor Final EIS 1999) that found the following wetland types and vegetation/hydrological conditions.

Palustrine Emergent Wetlands

Palustrine emergent wetlands found in the study area were located along stormwater ditches, edges of stormwater ponds and adjacent to perennial and intermittent waterways. The typical vegetation includes a predominance of reed canarygrass (*Phalaris arundinacea*) and common cattail (*Typha latifolia*), as well as smaller populations of Canada thistle (*Cirsium arvense*), and soft-stem bulrush (Scirpus validus).

The primary hydrology for these wetlands is surface runoff, ground water flows, and adjacency to intermittent and perennial waterways. Hydrologic indicators observed include sediment deposits, areas of inundation and drainage patterns in wetlands.

Existing Wildlife/Special Status Species

Table 2 identifies the special status species found within the study area as identified by NDIS and IPaC. This list was then field verified based on a field visit on May 17, 2013, whereby FHU personnel observed whether species or species habitat was present. Based on the field visit, the full species list for the City and County of Denver was then reduced to what species could be potentially present based on available habitat in the study area.

Table 2. Existing Wildlife Resources

Resource Name	Protection Type	Habitat	Habitat Present?	Observed in Field?
Cliff Swallows (*Petrochelidon pyrrhonota)*	MBTA	Streams and creeks with readily available access to insects and locations for building nests.	Yes, multiple locations where structures can be used to build nests.	Some. However, staff did not have access to all structures to check for nests.
Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)	Federally Threatened Species - ESA	Inhabits riparian areas near standing or running water in lowland areas that are dominated by forested wetlands, shrub dominated wetlands, and grass/forb dominated wetlands between 4,000 and 8,000 ft in elevation.	No, highly landscaped Goldsmith Gulch. *Note: A block clearance zone for this species exists for the study area.	No Survey Conducted.
Various nesting birds, including Canada Goose (*Branta* canadensis) at Stormwater Pond	MBTA	Canada Goose nesting at stormwater pond. Various other migratory birds nesting near Goldsmith Gulch.	Yes, multiple nests were observed at the stormwater pond near Ulster Street.	Yes, several nests identified.
Black-Tailed Prairie Dog (*Cynomys ludovicianus*)	State Species of Special Concern	Black-tailed prairie dogs form large colonies or "towns" in shortgrass or mixed prairie.	Yes, north of I-225 east of DTC Boulevard on either side of Goldsmith Gulch	Yes, one prairie dog colony located.

The wildlife resources that were identified during the review can be categorized into one of the following categories:

- Threatened & Endangered Species – State and federal listed threatened & endangered species that are listed or are candidates for listing on the ESA. Habitat and range maps were collected from the above resources.
- Protected Species – Species or their habitat readily visible in the field at the time of the survey. They included species that are protected by the MBTA.
- Wildlife Corridors – Identified corridors for wildlife to move through the landscape freely. Wildlife Corridors and wildlife crossings are identified, as part of SAFETEA-LU, as a source for safety risks to the general public. Identifying and planning for best management practices for wildlife crossings is also identified in SAFETEA-LU.

Generally, the study area is in a flat to rolling plains region of Colorado which consists of a high density built-up environment. Goldsmith Gulch is the only drainage through the study area. During the field surveys, resources were identified that are within or adjacent to the road right-of-way (ROW) within the study area.

Migratory Birds

During the field survey, any nests that were within or readily visible from the ROW, including migratory birds, raptors, and eagles, were noted. Multiple Cliff Swallows (*Petrochelidon pyrrhonota*) were seen flying nearby and their nests were assumed in areas with structures over Goldsmith Gulch. Canada Goose nests were also identified on the island in the middle of the stormwater pond next to Ulster Street.

Thus, impacts to migratory birds (e.g., song birds, herons, other migratory birds) may occur from design alternatives if construction occurs during the normal nesting season of these species. The normal nesting season is between February 15th and July 15th.

Wildlife Corridors

Wildlife is identified as a road safety hazard, causing billions of dollars annually in repairs and medical costs due to animal-vehicle collisions (AVCs) nationwide. These AVCs also result in a loss to wildlife populations and wildlife diversity. Typically the total number of AVCs is under-reported and only focus on large wildlife species. Existing land use in the study area is primarily residential, commercial, and a managed park. Where wildlife had free movement along the Goldsmith Gulch drainage in the past, their movements are now highly constricted or no longer present.

Currently, there are no parks or open space properties which include identified movement corridors for wildlife between protected tracts of land within or adjacent to the study area. The construction of wildlife-friendly structures over this drainage will provide avenues for wildlife to move through the study area while keeping the general public safe.

State Species of Special Concerns

One Black-tailed Prairie Dog (*Cynomys ludovicianus*) colony is located at Goldsmith Gulch North Middle Park, north of I-225 along DTC Boulevard (found on **Figure 2**, around Wetland N1). Black-tailed Prairie Dogs inhabit short and mid-grass prairie and semi-desert shrublands. The extents of the Black-tailed

Prairie Dog colony shall be determined and delineated during final design. The project will comply with the CDOT Black-tailed Prairie Dog Policy (CDOT, 2009).

REFERENCES

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ATTACHMENT A – SITE PHOTOGRAPHS

	Photograph looking north towards the I-225/DTC Boulevard Interchange. This is a picture of the highly channelized Goldsmith Gulch showing the concrete bottom and banks. No wetlands were found in this area and this is a highly managed park with no wildlife habitat.
	Photograph looking south at the culverts under Ulster Street for Goldsmith Gulch. This entire area is managed as a park and the channel and banks are concrete, no wetlands present.
	Photograph taken south of Ulster Street of the only natural area with wetlands on Goldsmith Gulch. However, this area is south of the study area.

	Photograph of the stormwater pond east of Ulster Street and south of I-225. Very little to no wetland vegetation surrounds this pond, possibly due to management or wildlife removing it.
	Photograph of Canada Goose nest on the island in the middle of the stormwater pond.
	Photograph west of Ulster Street and south of I-225 where there is an electrical substation and a cattail wetland. However, this is south of the study area.

	Photograph looking south from E. Quincy Avenue towards I-225 and the DTC Boulevard interchange. The only area with prairie dogs, east of DTC Boulevard and a narrow storm drain channel in the background with sandbar willows. No wetlands were present on either side of the main Goldsmith Gulch channel here.
	Photograph looking north from E. Quincy Avenue into the nearby park where Goldsmith Gulch crosses E. Quincy Avenue. Fringe wetlands are present in the channel and along the west bank. However, most of the channel is lined with riprap and devoid of wetland vegetation due to park management activities.

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November 15, 2013

MEMORANDUM

TO:	Rich Horstmann, PE, CDOT Project Manager
FROM:	Laura Haas, Felsburg Holt & Ullevig (FHU); Amy Sobol, FHU
SUBJECT:	Hazardous Materials Assessment Analysis for the I-225 PEL Study
	FHU Reference No:112200-01

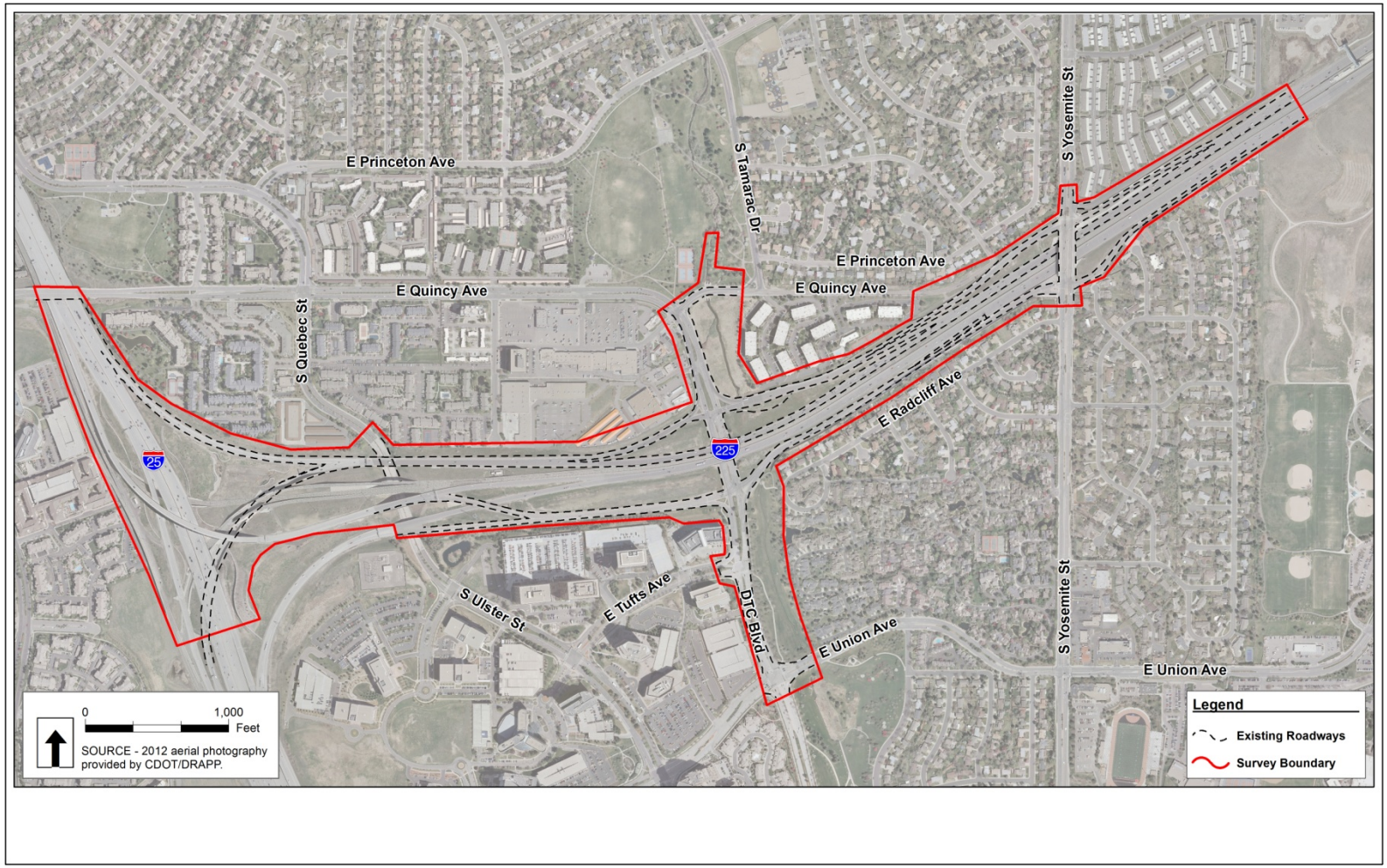
Introduction

FHU, acting on behalf of Colorado Department of Transportation (CDOT), conducted a hazardous materials assessment for the Planning and Environmental Linkages (PEL) study for southbound Interstate 225 (I-225) between Yosemite Street and Interstate 25 (I-25) in the City and County of Denver, Colorado. The I-225 PEL (Yosemite to I-25) Study is being conducted to assess existing conditions, identify anticipated problem areas, and to develop and evaluate transportation improvements to reduce congestion, improve mobility, and enhance the safety of the I-225 within the study area. CDOT, in cooperation with the Federal Highway Administration (FHWA), is preparing this PEL study in accordance with FHWA and CDOT PEL guidance for improving and streamlining the environmental process for transportation projects by conducting planning activities prior to the start of the National Environmental Policy Act (NEPA) process.

The purpose of the hazardous materials assessment is to identify and assess the potential for encountering hazardous materials on properties adjacent to or within the study area (**Figure 1**). For this hazardous materials assessment, sites within the study area were identified as having known (current and historic) soil or groundwater contamination and are distinguished in this report as sites with recognized environmental conditions. Recognized environmental conditions, include sites *with "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property"* (ASTM 2005). Sites with the potential for soil and/or groundwater contamination that could not be confirmed without additional inspection or investigation are distinguished as sites with potential environmental conditions.

This hazardous materials assessment has been prepared with a level of detail appropriate for the development and screening of design alternatives for the I-225 PEL Yosemite to I-25 Study. At the time of writing this report, it is unknown if acquisition and/or easements are expected as part of any future projects. If full acquisition is required, it is anticipated that additional assessment and/or field investigations could be needed to assist in the right-of-way acquisition process and the development of specific materials management or institutional controls that may be required during construction.

Figure 1. Study Area Map



Methodology

This hazardous materials assessment included the following steps:

- Reviewed readily available local, state, and federal environmental agency databases as dictated by the American Society for Testing and Materials (ASTM) Standard E1527-05 (ASTM 2005). The Environmental Data Resources, Inc. (EDR) Database Report is included in **Appendix A** (EDR 2013)
- Performed a limited site reconnaissance of the study area to identify site activities and potential contamination sources within and adjacent to the study area. Areas adjacent to the study area were observed from the existing right-of-way only
- Review of the contaminated materials section of the Southeast Corridor Environmental Impact Statement (EIS)
- Identified sites with known or potential hazardous materials concerns (i.e., sites with recognized environmental conditions and sites with potential environmental conditions)

Site Reconnaissance

A limited site reconnaissance was conducted on May 9, 2013 by Jessica Myklebust and Amy Sobol, environmental scientists with FHU. The purpose of the site reconnaissance was to assess the study area for obvious evidence of potential contamination sources such as current hazardous substances storage or use; unusually stained soils, concrete slabs, or pavements; sumps, dumps, drums, tanks, and electrical transformers; stressed vegetation; and discarded hazardous substances containers. The limited site reconnaissance did not include the investigation of areas not visible from public right-of-way.

Site Setting

The study area is located in the City and County of Denver along the Front Range of the Rocky Mountains in central Colorado. The local climate is semi-arid with low relative humidity, low precipitation, and high evaporation.

Within the Front Range urban corridor, the primary water-bearing shallow aquifers are present within unconsolidated deposits (20 to 100 feet in thickness) of Quaternary age (2 to 1.8 million years ago) and floodplain alluvium of the lower South Platte River basin and its tributaries (USGS 2003; Colorado Geological Survey 2003).

Surficial groundwater flow direction varies, but generally moves downstream and toward drainages. Based on the surface topography in the study area (gradual sloping to the north/east) groundwater likely flows to the north/east toward Goldsmith Gulch. Confirmation of the direction of groundwater flow beneath the study area was beyond the scope of this hazardous materials assessment.

Site Reconnaissance Observations

Table 1 includes a summary of the site reconnaissance observations. Photographs from the site reconnaissance are included in **Appendix B**.

Table 1 General Site Reconnaissance Observations

Hazardous Materials Observations	Description
Underground Storage Tanks/Aboveground Storage Tanks	Evidence of underground storage tanks (USTs) were observed at the 7-11 gasoline station (4351 S. Tamarac Pkwy) (**Figure 1**). No aboveground storage tanks (ASTs) were observed during the site reconnaissance. USTs and ASTs were previously associated with the former Stanford Place II site (7979 E Tufts Ave) (**Figure 1**).
Monitoring Wells	A groundwater monitoring well was observed at Coloradoland Tire & Service (8000 E. Quincy Ave) (**Figure 1**) during the site reconnaissance. The well is located on the south side of the auto service building structure.
Stockpile/Surface Trash/Debris	General garbage debris was visible within the study area and on surrounding properties during the site reconnaissance.
Protected/Fenced Areas	Many of the residential/commercial properties located in the study area contain fenced-in areas that were not visible from the public right-of-way during the site reconnaissance. Storage sheds were also observed, but the contents of the sheds are unknown.
Chemical Handling/Storage	Automotive service station (Coloradoland Tire & Service at 8000 E.Quincy Ave.) with vehicle maintenance bays. Unknown material handling and disposal practices. Potential materials include: fuel, motor oils, hydraulic fluids, degreasers, paints, and solvents. Former leaking underground storage tank (LUST) site. A 55-gallon drum was observed at the restaurant adjacent to 8000 E. Quincy Ave. The contents are unknown. Two open dry cleaning operations (4403 S. Tamarac Pkwy and 4680 S. Yosemite St.) with unknown cleaner and solvent handling and disposal practices. No reported contamination of soil and groundwater associated with this site.
Potential for Methamphetamine Lab Activity	Storage Units. Although not reported, the potential exists for methamphetamine lab activity.

Review of Previous Studies

As part of this hazardous materials assessment, the Southeast Corridor EIS was reviewed (CDOT & FHWA 1999). According to the contaminated materials section of the Southeast Corridor EIS, sites along the I-225 corridor include LUST sites. No specific addresses were identified in the EIS.

Agency Records Review

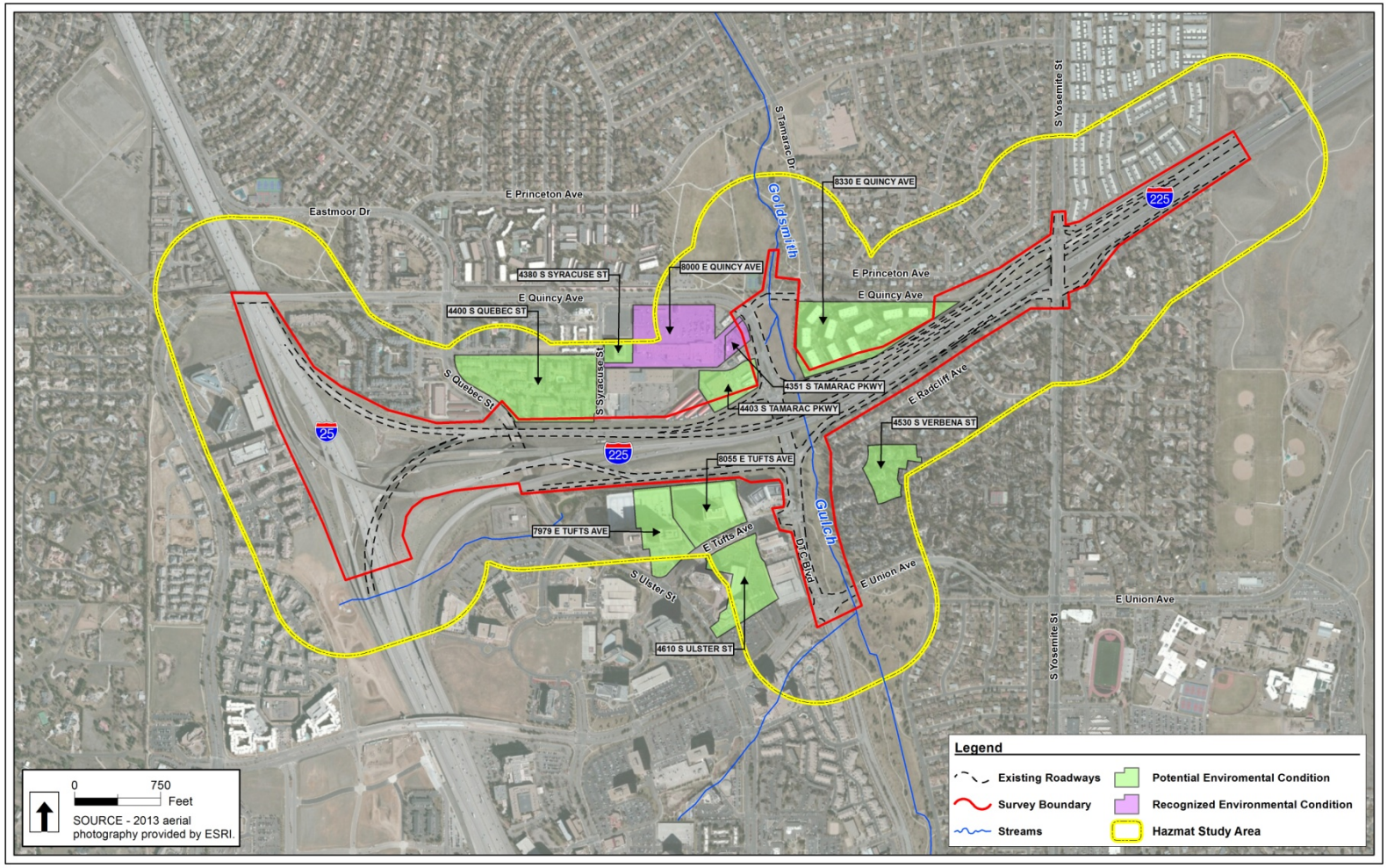
An environmental database search was conducted for sites extending up to one mile from the study area with potential hazardous materials concerns. **Table 2 and Figure 2** include sites adjacent to and/or within 1/8 mile (660 feet) of the study area.

Table 2 Sites Adjacent to or within 1/8 Mile of the Project Study Area

Site Address	Location/Gradient	Site Description
4351 S. Tamarac Pkwy.	Adjacent/Down-gradient	Closed LUST (Closed); Open 7-11 Gasoline Station with operating USTs. Site identified as a recognized environmental condition due to closed LUST. If ground-disturbing activities are expected to occur in the vicinity of this site, residual soil and/or groundwater contamination could be present.
8000 E. Quincy Ave.	Adjacent/Down-gradient	Closed LUST; Dry Cleaners/Historical Dry Cleaners; Open Coloradoland Tire & Service Auto Repair Shop; Monitoring well located on the south side of building. Site with recognized environmental conditions due to closed LUST and historical dry cleaning operations.
4403 S. Tamarac Pkwy	Adjacent/Down-gradient	Dry Cleaners/Historical Dry Cleaners; Open dry cleaning business - DTC Cleaners. Site identified as a potential environmental condition due to historic dry cleaning operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical dry cleaner facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
4400 S. Quebec St.	Adjacent/Up-gradient	Historical Auto; Currently the Brandy Chase Apartment Home Complex. Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
8330 E. Quincy St.	Adjacent/Up-gradient	Historical Auto; Currently a public storage unit complex. Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities. Also, as a storage unit, the potential exists for methamphetamine lab activity.
4380 S. Syracuse St.	Approximately 500 feet from project footprint/Up-gradient	Historical Auto; Currently the Westgold Centre Office Building (brick, multi-story). Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto

Site Address	Location/Gradient	Site Description
		facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
4530 S. Verbena St.	Approximately 200 feet from project footprint/Down-gradient	Historical Cleaners; Currently multi-unit residences/Large parcel w/ multiple patio homes. Site identified as a potential environmental condition due to historic dry cleaning operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical dry cleaner facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
7979 E. Tufts Ave.	Adjacent/Up-gradient	UST, AST; Currently the Allied Insurance Office Building (brick, multi-story, w/fenced in generator). No reported leaks or spills associated with this facility.
8055 E. Tufts Ave.	Adjacent/Up-gradient	Historical Auto; Currently the Stanford Place Office Building (glass, multi-story). Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.
4610 S. Ulster St.	Approximately 325 feet from project footprint/Up-gradient	Historical Auto; Currently an office Building (multi-story) Site identified as a potential environmental condition due to historic auto operations. It is unknown if any spills/releases have occurred at this site in the past. Based on the history of this site as a historical auto facility, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities.

Figure 2. Sites Adjacent to and/or within 1/8 mile of the Project Footprint



Findings

Several sites with recognized or potential environmental conditions were identified within 1/8 mile from the existing right-of-way within the study area. Hazardous materials are most likely to be encountered during ground-disturbing activities near sites with recognized environmental conditions. There are two LUST sites adjacent to the study area. Both of the LUST sites have been closed and clean-up has been completed. The Colorado Department of Labor and Employment, Division of Oil and Public Safety (OPS) defines a LUST site as closed/clean-up complete when "the owner and/or operator has not necessarily removed all contamination, but instead actions taken have met the criteria that the State uses for determining adequate clean up." As a result, residual surficial and subsurface soil contamination and/or groundwater contamination may be present at closed sites and could be encountered on-site or down-gradient of these closed sites during subsurface construction activities.

The other sites within the project study area are associated with historical auto operations, historical dry cleaner operations, or current dry cleaner operations, and USTs/ASTs. These sites have been identified as site with potential environmental conditions because it is unknown if any spills/releases have occurred at these sites in the past. However, because these sites have previously been redeveloped, these sites are considered low risk because it is likely that any historic contamination issues would have been cleaned-up as part of the redevelopment efforts. Based on the unknown history of these sites, any work within the vicinity of the site should be closely monitored for signs of soil and/or groundwater contamination during construction activities

Recommendations

A more-detailed hazardous materials initial site assessment would be needed as part of any future project development. The purpose of conducting a more detailed hazardous materials assessment is to gather additional information needed to plan for known and potential hazardous materials issues. During the planning and design process, this information can be used to identify avoidance options, when possible, and to assist with the development of specific materials management or mitigation measures. Properties to be acquired may also require individual site assessments as part of the right-of-way acquisition process. Specific CDOT requirements are included below and would depend on scope of work for any future project.

<u>Groundwater Wells</u>
If any groundwater wells will be affected by the project, they must be abandoned and plugged according to Section 202.02 of the CDOT Standard Specifications for Road and Bridge Construction (CDOT 2011a). A revised Section 202/Removal of Structures and Obstructions of the CDOT Standard Specifications for Road and Bridge Construction should be included with the project plans.

If present, all other permanent wells must be protected during construction with flagging and the installation of orange construction fencing. Although not expected, if any wells are impacted during construction, the well must be abandoned and plugged according to Section 202.02 of the CDOT Standard Specifications for Road and Bridge Construction (CDOT 2011a).

Groundwater Management

If dewatering of groundwater is required for the project for activities such as excavation for caissons associated with bridge piers, a Construction Dewatering Permit will be required.

Asbestos

Asbestos-containing material (ACM) is a toxic substance that may exist on highway structures and other structures (e.g., buildings) associated with the parcels to be acquired, particularly if they were constructed prior to 1980. Asbestos presents a worker health and safety concern due to the potential negative health impacts associated with the inhalation of asbestos fibers.

It is recommended that a State Certified Asbestos Inspector inspect for the presence of asbestos during utility work on potential ACM. If asbestos is found, all further work (soil-related) shall proceed in accordance with Section 250.07 specification (ACM Management) of the CDOT Standard Specifications for Road and Bridge Construction (CDOT 2011a).

Projects with significant utility excavations (i.e., greater than three feet below ground surface) are required to follow CDOT's Asbestos-Contaminated Soil Management Standard Operating Procedure (CDOT 2011b).

Lead-Based Paint

Lead is a hazardous substance that potentially exists on steel highway structures and other structures (e.g. buildings) associated with the parcels to be acquired, particularly if they were constructed prior to 1980. Due to the potential negative health impacts associated with lead exposure, the presence of lead-based paint presents a worker health and safety concern. Project personnel can be exposed to the toxic effects of lead through inhalation or ingestion of lead paint chips, dust, or debris during construction or materials management activities. Lead-based paint may need to be removed prior to demolition if the lead is leachable at concentrations greater than regulatory levels. Where lead-based painted surfaces would be removed via torching, additional health and safety monitoring requirements are applicable.

If LBP is present on any highway structures or other structures associated with parcels to be acquired, the requirements of subsection 250.04 (Heavy Metal Based Paint Management) shall be followed in addition to the requirements of subsection 250.03 (General) of the CDOT Standard Specifications for Road and Bridge Construction (CDOT 2011a).

Removal of Structures

Any electrical equipment with no label or unknown concentration is assumed to be "PCB - contaminated equipment" per EPA regulation and should be managed accordingly. In general, legal and financial responsibility for PCB-containing equipment lies with the equipment owner; however, if another party causes the equipment to fail, financial and legal responsibility may be transferred to the responsible party. Therefore, if during final design it is determined that any of the pole-mounted electrical transformers will be removed, coordination with the equipment owners will be required.

If any of the pole-mounted electrical transformers will be removed as part of the project, the location of the affected transformers should be identified on the Utility Plans. In addition, a note will be included on the Utility Plans indicating that prior to removal of any transformers coordination with the appropriate utility owners is required. The note should include the name and phone number of the utility owners.

Materials Management
Preparation of a Materials Handling Plan as required by Section 250.03 of the CDOT Standard Specifications for Road and Bridge Construction was recommended for parcels where residual contamination could be present from sites with known soil and groundwater contamination.

References

CDOT & FHWA. 1999. Southeast Corridor Final EIS.

CDOT. 2011a. CDOT Standard Specifications for Road and Bridge Construction.

CDOT. 2011b. Asbestos-Contaminated Soil Management Standard Operating Procedure. August 2011.

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American Society for Testing and Materials. 2005. ASTM Designation E 1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Colorado Geological Survey. 2003. Colorado Geological Survey Groundwater Atlas of Colorado. Colorado Geological Survey Special Publication 53. Prepared by Ralf Topper, K.L. Spray, W. H. Bellis, J.L. Hamilton, and P.E. Barkmann.

US Environmental Protection Agency (EPA). 2005. Standards and Practices for All Appropriate Inquiries, Final Rule. Federal Register 70 (November 1): 66070 – 66113.

US Geological Survey (USGS). 2003. Groundwater Quality Assessment of Shallow Aquifers in the Front Range Urban Corridor, Colorado, 1954-1998. Water Investigations Report 02-4247. Prepared by Jennifer L. Flynn.

APPENDIX A EDR RADIUS MAP REPORT
(SEE ATTACHED CD)

APPENDIX B
PHOTO LOG

		4351 S. Tamarac Pkwy. Closed LUST (Closed); Open 7-11
		4403 S. Tamarac Pkwy Dry Cleaners/Historical Dry Cleaners; Open dry cleaning business - DTC Cleaners.
		4400 S. Quebec St. Historical Auto; Currently the Brandy Chase Apartment Home Complex.

		8330 E. Quincy St. Historical Auto; Currently the Summit Ridge Apartment Home Complex.
		4380 S. Syracuse St. Historical Auto; Currently the Westgold Centre Office Building (brick, multi-story).
		4530 S. Verbena St. Historical Cleaners; Currently multi-unit residences/Large parcel w/ multiple patio homes.

		8000 E. Quincy Ave. Closed LUST; Dry Cleaners/Historical Dry Cleaners; Open Coloradoland Tire & Service Auto Repair Shop; Monitoring well located on the south side of building.
		7979 E. Tufts Ave. UST, Aboveground storage tank (AST); Currently the Allied Insurance Office Building (brick, mulit-story, w/fenced in generator)
		8055 E. Tufts Ave. Historical Auto; Currently the Stanford Place Office Building (glass, multi-story)

		4610 S. Ulster St. Historical Auto; Currently an office Building (multi-story)