ACCESS JUSTIFICATION REPORT

I-35_I-240 INTERCHANGE
OKLAHOMA COUNTY

July 2015

Prepared by

OLSSON ASSOCIATES

ACCESS JUSTIFICATION REPORT

I-35_I-240 INTERCHANGE

Oklahoma City, Oklahoma County

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EXECUTIVE SUMMARY

Section 111 of Title 23, United States Code (23 USC 111) requires that proposed new or revised Interstate access to be approved by the Federal Highway Administration (FHWA) before such access modifications can be made. FHWA's interest is to maintain and provide the highest level of service in terms of safety and mobility. Adequate control of access is critical to providing safety and proper level of traffic operation on the Interstate Highway System, therefore; FHWA national policy has instituted rules and regulations guiding any new access points or proposed changes to existing access points on the Interstate Highway System to meet the eight (8) requirements published in their policy.

The access justification requested is the revision of the existing Interstate Highways 35 and 240 interchange in Oklahoma City, OK. This is an old interchange with outdated design, lack of proper acceleration and deceleration lanes, exit and entrance loop ramps with tight radii. During the past decade, this interchange has experienced substantial traffic growth due to the continuous developments in this area. The traffic growth and design deficiencies have all contributed to the problems that this interchange has been experiencing in recent years.

A team comprised of representatives from Oklahoma Department of Transportation (ODOT), FHWA, the City of Oklahoma City, Oklahoma City Metropolitan Planning Organization, and consulting engineers studied the interchange area. Data were supplied by ODOT and traffic forecasts were prepared using the regional travel demand model (City/MPO). Interchange alternatives were developed and evaluated with public input provided at public meetings and through comments received via mail services.

An Environmental Assessment (EA) for this interchange has been prepared. Alternatives have been screened out through the environmental process and the preferred alternative has been identified by the EA. The Interstate access analysis showed that a three (3) level partial cloverleaf system interchange configuration would best meet the purpose and need for an updated interchange at this location. All eight policy requirements for revised Interstate access are satisfied and are detailed in this report.

The exact project schedule has not been established. For the analysis in this report, the "Opening Day" for the proposed interchange is set for year 2020, and the design year is set for year 2040.

INTRODUCTION

This Interchange Access Justification Report (AJR) documents a request to FHWA for an access revision to I-35 and I-240 interchange in Oklahoma County. The AJR has been prepared in accordance with criteria outlined in the Federal Register of February 11, 1998, and addresses all the requirements.

I-35 traverses Oklahoma from north to south connecting the Kansas City (Missouri), Wichita (Kansas), Oklahoma City (Oklahoma), and Dallas/Fort Worth (Texas) metropolitan areas. Within Oklahoma County, I-35 serves not only the long-distance national traffic, but also the commuters from the greater Oklahoma City area and the regional freight movements. The existing urbanized full cloverleaf system interchange that connects the two high volume Interstate Highways 35 and 240 in Oklahoma City, Oklahoma County, is an old interchange with outdated design. The interchange is also known as the Crossroads Interchange, due to the adjacent Crossroads Mall located in the northeast quadrant. Heavy traffic volumes, inadequate interchange design (lack of proper acceleration and deceleration lanes, exit and entrance loop ramps with tight radii) have contributed to the problems that this interchange has been experiencing in recent years.

The Oklahoma Department of Transportation (ODOT) has been studying and evaluating this interchange since 1988. Operational and safety improvements, economic developments, environment impacts, highway project-management, public involvement, costs impacts on institutions that provide ancillary services to highways,...etc., have all been considered in developing alternative configuration alignments for this interchange and all are noted on the National Environmental Policy Act (NEPA) documents.

The preferred interchange configuration for this location is a three (3) level partial cloverleaf system interchange. All entrance and exit ramps are designed on the right side of the highway. The interchange maintains single exit with the exception of eastbound I-240 where two (2) exits are needed to provide for the northbound and southbound I-35 movements. The two (2) loop ramps in the NW and SE quadrants provide the westbound I-240 to southbound I-35 and the eastbound I-240 to northbound I-35 connections, respectively. The two (2) directional flyovers provide the northbound I-35 to westbound I-240 and the southbound I-35 to eastbound I-240 movements. The other four (4) basic interchange movements are through directional ramps.

The Interstate Highway 35 mainline consists of six (6) basic lanes and it is already constructed on its present alignment. The Interstate Highway 240 with six (6) basic lanes will be reconstructed on a partially new alignment which is shifted south where it crosses I-35 to provide more space on the heavily developed northeast quadrant of the interchange.

The proposed interchange configuration will provide the eight (8) primary basic movements according to the American Association of State Highway and Transportation Officials (AASHTO) Design Standards Interstate System, which is essential to a system interchange. All the entrance/exit ramps are properly designed to provide safe and acceptable merge and diverge. The proposed interchange design meets or exceeds the latest edition of AASHTO “A Policy on Geometric Design of Highways and Streets” guidelines and design criteria.

The intent of this report is to justify that the proposed improvements are truly needed for this location. The results of the traffic operational analyses on the existing facility are a good indication of the poor traffic operation of the interchange especially during the peak hours of operation. The existing accident rate throughout the interchange, which exceeds the current average accident rate for an urbanized full access control facility, is another indication of the problems that this interchange is experiencing. The new interchange configuration will provide acceptable safety and traffic operation.

The current total programmed estimated cost for the proposed improvements (Right-of-Way, Utilities, Design, Construction, and Traffic Control) is $132,049,475.00.

Requirement 1: EXISTING FACILITIES

"The need being addressed by the request cannot be adequately satisfied by existing interchanges to the Interstate, and/or local roads and streets in the corridor can neither provide the desired access, nor can they be reasonably improved (such as access control along surface streets, improving traffic control, modifying ramp terminals and intersections, adding turn bays or lengthening storage) to satisfactorily accommodate the design-year traffic demands (23 CFR 625.2(a))."

The Interstate Highway 35 (I-35) and Interstate Highway 240 (I-240) in Oklahoma County are connected via a full cloverleaf system interchange. The interchange was designed and constructed in 1960s. The area surrounding the interchange has developed throughout the years. This location is one of the crowded urbanized area in Oklahoma City. High traffic volumes, inadequate interchange design, lack of proper acceleration and deceleration lanes, and loop ramps with small radii have all contributed to the problems that this interchange is currently experiencing. The existing project location is shown on Exhibit (1).

ODOT has studied and evaluated this interchange since 1988. Extensive traffic operational analyses have determined that the travel demands for the project area and the interchange in the future would be over capacity unless additional lanes were added to the existing facility. Additional lanes were recently constructed on I-35. The basic number of through lanes is three each direction. The area around the interchange and along I-35 towards Oklahoma City is very dense and saturated. The Department is well aware that the likelihood of additional lane or lanes on I-35 is very low due to the lack of right-of-way and high cost. The Department has also been evaluating other routes east and west of I-35 between the City of Norman and Oklahoma City to reduce traffic congestion on I-35 in this area.

The 24-hour raw traffic for the project area mainlines, interchange ramps and intersections were counted by ODOT in 2013. This raw traffic data was processed by ODOT to develop the 2013 balanced traffic data (the annual average daily traffic (AADT), morning and evening (AM-PM) peak hour traffic volumes along mainlines, ramps, and intersections) for the existing and proposed interchange configurations. The balanced 2013 traffic volumes were forecasted to the future 2040 design year for the existing and proposed interchange configurations based on the travel parameters (trip generation, trip distribution, mode choice, and traffic assignment), land use and future developments. The travel parameters data was obtained from the regional Metropolitan Planning Organizations (MPOs) and the Association of Central Oklahoma Governments (ACOG) serving Oklahoma City that account for future land use plans in the surrounding suburbs within the Oklahoma City Area Regional Transportation Study (OCARTS). The forecasted 2040 design year traffic volumes were adjusted to develop capacity restraint assignments in order to approximate equilibrium solution by capturing the trip delay caused by flow congestion. The flow congestion of a route is determined by the route's operational flow volumes to capacity ratio (v/c) reflecting the route's performance, which is also described through notion of level of service in Highway Capacity Manual.

The existing 2013 AADT and the AM-PM peak hour traffic volumes, the forecasted capacity restrained 2040 AADT and the AM-PM peak hour traffic volumes, and their corresponding Annual Average Daily Truck Traffic (AADTT) and Truck Percentage of Design Hourly Volume (TDHV) for the existing interchange configuration for the mainlines and ramps are shown on Exhibits (2) through (4) respectively.

The latest version of the Highway Capacity Software (HCS 2010) was utilized for the freeway analysis. The HCS is approved by the FHWA as a guide for evaluating freeways (Capacity, Operation, and Planning). The capacity analysis provides the measures of the traffic volume that a given facility can accommodate. The intent of the analysis is to estimate the maximum amount of traffic that can be accommodated by a facility while maintaining desired operational qualities.

The quality of traffic operation or concept of level-of-service (LOS) is defined in the Highway Capacity Manual (HCM) as a qualitative measure which describes operational conditions in terms of such factors as vehicular speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, highway geometry, and safety. The qualitative traffic operation of a facility is measured by a set of six defined levels of service. These six levels of service are given letter designations from "A" to "F" with level of service "A" representing the best operating conditions (Free Flow, Open Space Movement) and "F" representing the worst operating conditions (Severe Congestion, Traffic Jam).

Basic Freeway Segment -- Highway Capacity Manual defines basic freeway segments as those freeway segments that are outside the influence of merging, diverging, or weaving maneuvers. A basic freeway segment can be characterized by three performance measures: density in passenger cars per mile per lane (pc/mi/ln), space mean speed in miles per hour (mi/h), and the ratio of demand flow rate to capacity (v/c). Because speed is constant through a broad range of flows and the v/c ratio is not directly discernible to road users (except at capacity), the service measure for basic freeway segment is density. Table (1) shows the LOS thresholds for basic freeway segments.

LOS	Density (pc/mi/ln)
A	≤ 11
B	> 11-18
C	> 18-26
D	> 26-35
E	> 35-45
F	> 45

Table (1)

The HCM operational analysis does not accurately calculate the density and speed once freeway segment demand exceeds capacity and does not depict any values for them.

Freeway Merge and Diverge Segments – Freeway merge and diverge segments occur primarily at on-ramp and off-ramp junctions with the freeway mainline. They can also occur at major merge or diverge points where mainline roadways join or separate. Merge/diverge segment LOS is defined in terms of density for all cases of stable operation (LOS A-E). LOS F exists when the freeway demand exceeds the capacity of the upstream (diverges) or downstream (merges) freeway segment, or where the off-ramp demand exceeds the off-ramp capacity. LOS for merge and diverge areas is based on density (pc/mile/lane) within the merge or diverge influence areas. The LOS thresholds for merge and diverge areas are shown in Table (2).

LOS	Density (pc/mi/ln)	Comments
A	≤ 10	Unrestricted operations
B	> 10-20	Merging and diverging maneuvers noticeable to drivers
C	> 20-28	Influence area speeds begin to decline
D	> 28-35	Influence area turbulence becomes intrusive
E	> 35	Turbulence felt by virtually all drivers
F	Demand exceeds capacity	Ramp and freeway queues form

Table (2)

Freeway Weaving Segment – Weaving is generally defined as the crossing of two or more traffic streams traveling in the same direction along a significant length of highway without the aid of traffic control devices (except for guide signs). Weaving segments are formed when merge segments are closely followed by diverge segments. "Closely" implies that there is not sufficient distance between the merge and diverge segments for them to operate independently. LOS in a weaving segment is related to the density (pc/mile/lane) in the segment. Table (3) provides LOS threshold criteria for weaving segments on freeway, collector-distributer (C-D) roadways, and multilane highways.

	Freeway Weaving	Weaving Segments on Multilane
LOS	Segments	Highways or C-D Roadways
	Density (pc/mi/ln)	
A	0-10	0-12
B	> 10-20	> 12-24
C	> 20-28	> 24-32
D	> 28-35	> 32-36
E	> 35	> 36
F	Demand exceeds capacity	

Table (3)

When a ramp junction or major merge/diverge area involves lane additions or lane drops at the junction, freeway capacity must be checked both immediately upstream and downstream of the ramp influence area. The capacity of the ramp roadway should always be checked against the demand flow rate on the ramp. Ramp-freeway junction capacity check (i.e., demand exceeds capacity: v/c is greater than 1.00) results in LOS F. Table (4) offers Capacity of Ramp Roadways (pc/h) based on ramp free flow speed.

Ramp FFS	Capacity of Ramp Roadway (pc)	
S_{fr} (mi/h)	Single-Lane Ramps	Two-Lane Ramps
> 50	2,200	4,400
> 40-50	2,100	4,200
> 30-40	2,000	4,000
> 20-30	1,900	3,800
> 20	1,800	3,600

Table (4)

The results of HCS freeway analysis on the existing interchange configuration utilizing the 2013 and capacity restrained 2040 traffic volumes are shown on exhibits (5) and (6) respectively. These results are based on the following input assumptions that were consistent with the existing conditions,

- Peak Hour Factor (PHF) 0.92
- Terrain Level
- I-35, I-240 Free Flow Speed (FFS) 69.6 mph
- Directional Ramps Free Flow Speed 45 mph
- Loop Ramps Free Flow Speed 25 mph

To simplify the comparison of the level-of-service analyses for 2013 and capacity restrained 2040 traffic volumes, the results are tabulated and provided in Table (5) through Table (7).

The 2013 operational analyses indicate that the overall level of traffic operation for the interchange during the peak hours of traffic is poor. The results show the interchange ramps and weaving sections along both I-35 and I-240 operate at poor levels of service. The analyses and observation show that the existing conditions do not provide a necessary safe access and required level of operation. The 2040 operational analyses on the existing conditions also indicate that the traffic operations will continue to be poor, if improvements are not considered for the existing interchange.

Exhibit (1)

EXISTING CONDITIONS

PREPARED FOR:

BY:

Exhibit (2)

2013 TRAFFIC DATA
EXISTING CONDITIONS

LEGEND

XXXX / XXX/XXX = AADT / AM/PM PEAK HOUR TRAFFIC VOLUME

PREPARED FOR: ODOT Oklahoma Department of Transportation

BY: OLSSON ASSOCIATES


MATCH LINE 1
MATCH LINE 2
MATCH LINE 3
S.E. 59TH ST.
HIGH AVE.
S.E. 82ND ST.
S.E. 66TH ST.
LT. SERV. RD.
RT. SERV. RD.
SHIELDS BLVD.
WALKER AVE.
SANTA FE AVE.
POLE ROAD
A.T.S.F. RAILROAD
EASTERN AVE.
N
Exhibit (3)
CAPACITY RESTRAINED
I-35 & I-240 INTERCHANGE
2040 TRAFFIC DATA
EXISTING CONDITIONS
LEGEND
XXXX = AADT
XXX/XXX = AM/PM PEAK HOUR TRAFFIC VOLUME
PREPARED FOR:
Oklahoma Department of Transportation
BY:
OLSSON ASSOCIATES

Exhibit (4)

TRUCKS TRAFFIC DATA
EXISTING CONDITIONS

LEGEND

XX% / XX% = AADTT% / AM/PM TDHV%

PREPARED FOR: ODOT Oklahoma Department of Transportation

BY: OLSSON ASSOCIATES

Exhibit (5)
2013 Level-of-Service
EXISTING CONDITIONS

PREPARED FOR: Oklahoma Department of Transportation BY: OLSSON ASSOCIATES

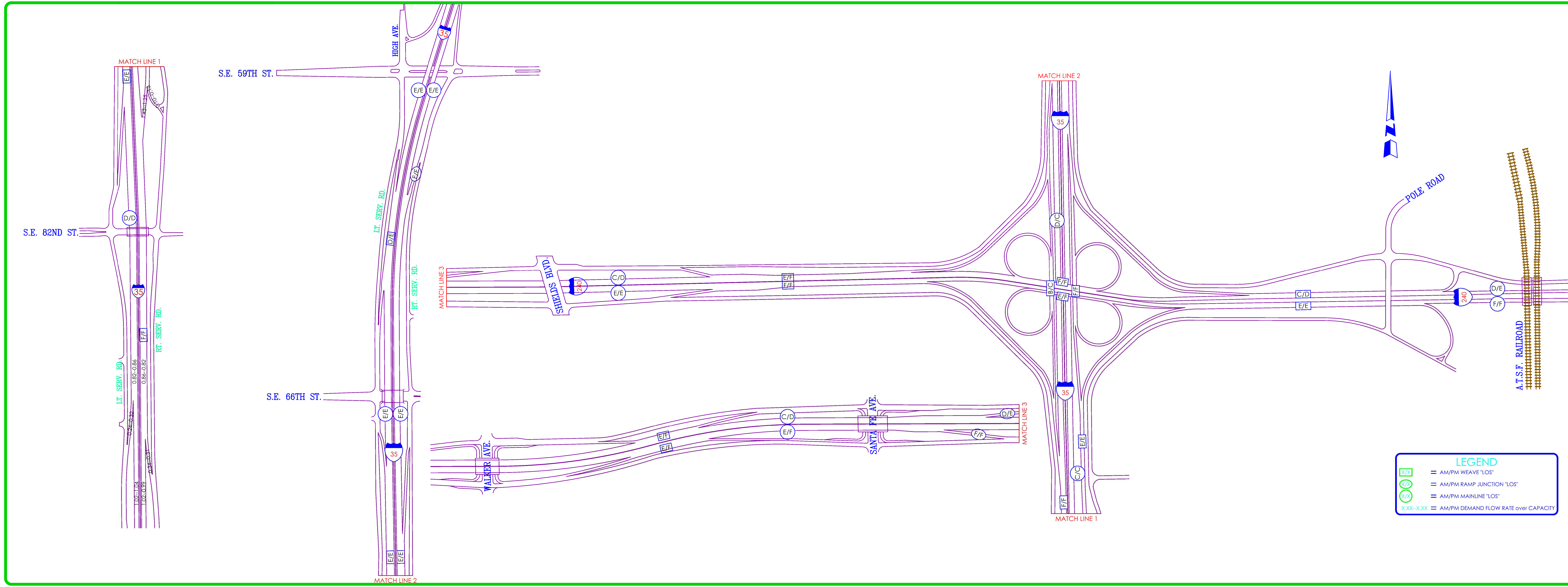


Exhibit (6)

CAPACITY RESTRAINED
I-35 & I-240 INTERCHANGE
2040 Level-of-Service
EXISTING CONDITIONS

PREPARED FOR: DOT Oklahoma Department of Transportation
BY: OLSSON® ASSOCIATES

BASIC FREEWAY ANALYSIS (EXISTING CONFIGURATION)
Level of Service Utilizing 2013 and Capacity Constrained 2040 Traffic Volumes

Freeway Dir. of Travel	Location	LOS 2013 AM/PM Peak Hour	LOS 2040 AM/PM Peak Hour
I-35 Northbound	South of SE 89th St.	v/c = 0.97-0.79	v/c = 1.02-0.99
I-35 Northbound	North of On Ramp from SE 89th St.	v/c = 0.79-0.65	v/c = 0.86-0.82
I-35 Northbound	North of Off Ramp to I-35 Northbound C-D Rd.	C/C	C/C
I-35 Northbound	South of SE 66th St., North of Off Ramp to SE 66th St.	E/D	E/E
I-35 Northbound	South of SE 59th St., North of Off Ramp to SE 59th St.	E/D	E/E
I-35 Southbound	South of SE 59th St., North of On Ramp from SE 59th St.	D/E	E/E
I-35 Southbound	South of SE 66th St., North of On Ramp from SE 66th St.	D/E	E/E
I-35 Southbound	South of Off Ramp to I-240 Westbound	C/D	D/C
I-35 Southbound	North of SE 82nd St., South of Off Ramp to SE 82nd St.	C/D	D/D
I-35 Southbound	South of SE 89th St.	v/c = 0.79-0.97	v/c = 1.02-1.04
I-240 Eastbound	West of Santa Ave.	C/D	E/F
I-240 Eastbound	East of Shields Blvd.	C/D	F/F
I-240 Eastbound	East of Pole Rd. Off Ramp	D/D	F/F
I-240 Eastbound	East of Off Ramp to Eastern Ave.	C/C	F/F
I-240 Westbound	East of On Ramp from Eastern Ave.	C/C	D/E
I-240 Westbound	East of Pole Rd. On Ramp	C/C	D/E
I-240 Westbound	East of Shields Blvd.	C/C	C/D
I-240 Westbound	West of Santa Fe Ave.	C/C	C/D

Note: v/c = Volume / Capacity

Table (5)

RAMP JUNCTION ANALYSIS (EXISTING CONFIGURATION)
Level of Service Utilizing 2013 and Capacity Constrained 2040 Traffic Volumes

Freeway Dir. of Travel	Location	LOS 2013 AM/PM Peak Hour	LOS 2040 AM/PM Peak Hour
I-35 Northbound	Off Ramp to SE 59th St.	E/D	E/E
I-240 Eastbound	Off Ramp to Shields Blvd.	D/D	F/F
I-240 Eastbound	Off Ramp to Eastern Ave.	E/E	E/E
I-240 Westbound	On Ramp from Eastern Ave.	C/D	D/E
I-240 Westbound	On Ramp from Shields Blvd.	C/D	D/E

Table (6)

FREEWAY WEAVING ANALYSIS (EXISTING CONFIGURATION)
Level of Service Utilizing 2013 and Capacity Constrained 2040 Traffic Volumes

Freeway Dir. of Travel	Weaving Segment Location	LOS 2013 AM/PM Peak Hour	LOS 2040 AM/PM Peak Hour
I-35 Northbound	On Ramp from SE 89th St. to Off Ramp to I-35 Northbound C-D Rd.	F/F	F/F
I-35 Northbound C-D Rd.	On Ramp from SE Service Rd. to I-240 Eastbound	E/E	E/E
I-35 Northbound	On Ramp Loop from I-240 eastbound to Off Ramp Loop to I-240 Westbound	F/F	F/F
I-35 Northbound	On Ramp from I-240 Westbound to Off Ramp to SE 66th St.	E/D	E/E
I-35 Southbound	On Ramp from SE 59th St. to Off Ramp to SE 66th St.	C/D	D/E
I-35 Southbound	On Ramp from SE 66th St. to Off Ramp to I-240 Westbound	D/E	E/E
I-35 Southbound C-D Rd.	On Ramp Loop from I-240 Westbound to Off Ramp Loop to I-240 Eastbound	B/B	B/C
I-35 Southbound	On Ramp from I-240 Eastbound to Off Ramp to SE 82nd St.	E/E	F/F
I-240 Eastbound	On Ramp from Walker Ave. to Off Ramp to Santa Fe Ave.	E/E	E/F
I-240 Eastbound	On Ramp from Shields Blvd. to I-35 Southbound	D/E	F/F

I-240 Eastbound	On Ramp Loop from I-35 Southbound C-D Rd. to Off ramp Loop to I-35 Northbound C-D Rd.	**D/D**	**E/F**
I-240 Eastbound	On Ramp from I-35 Northbound C-D Rd. to Off Ramp to Pole Rd.	**C/D**	**E/E**
I-240 Westbound	On Ramp from Pole Rd. to Off Ramp to I-35 Northbound	**B/C**	**C/D**
I-240 Westbound	On Ramp Loop from I-35 Northbound C-D Rd. to Off Ramp Loop to I-35 Southbound C-D Rd.	**C/D**	**F/F**
I-240 Westbound	On Ramp from I-35 Southbound to Off Ramp to Shields Blvd.	**C/D**	**E/F**
I-240 Westbound	On Ramp from Santa Fe Ave. to Off Ramp to Walker Ave.	**D/E**	**E/F**

Table (7)

Requirement 2: TRANSPORTATION SYSTEM MANAGEMENT (TSM)

"The need being addressed by the request cannot be adequately satisfied by reasonable transportation system management (such as ramp metering, mass transit and HOV facilities), geometric design, and alternative improvements to the Interstate without the proposed change(s) in access (23 CFR 625.2(a))."

Although ODOT has not applied High Occupancy Vehicle (HOV) lane strategies on Oklahoma's freeway system, provisions for HOV lanes, mass transit and ramp metering have all been included in all design phases of this project. All the necessary steps such as appropriate groups involvement, public participation, data collection, analysis techniques, public input on alternatives and preferred alternative selection have all been considered in the planning of HOV lanes during the NEPA process and screening categories. The ACOG Congestion Management System (CMS) Plan focuses on improving the existing and future transportation system performance in Oklahoma City by examining strategies for reducing Single Occupancy Vehicle (SOV) and promoting HOV use.

The final geometric cross-section through the I-35 and I-240 corridors will accommodate six (6) all-purpose lanes. The HOV lanes (for carpools and transit systems) can be accommodated by designating the left most lanes of both I-35 and I-240 corridors as HOV lanes for future travel demands beyond the target year 2040. The HOV lanes can be converted to light rail system in the future to provide additional passenger-carrying capacity. ODOT along with ACOG are currently conducting other TSM alternatives under the Transportation Improvement Program (TIP) that include,

- Incident Management
- Intelligent Transportation Systems (ITS)
- Local Government Projects such as,
  - Traffic signal coordination
  - Signal preemption
  - Full or integrated Advanced Transportation Management Systems (ATMS) to assist in monitoring the roadway
  - Road weather detection
  - Real-time video display, control and communications
  - Dynamic Message Signs (DMS) and Highway Advisory Radio (HAR)
  - Operations of signals, signs, and Closed Circuit Television cameras under emergency evacuation procedures.

Requirement 3: OPERATIONAL ANALYSIS

"The proposed access point does not have a significant adverse impact on the safety and operation of the Interstate facility based on an analysis of current and future traffic. The operational analysis for existing conditions shall, particularly in urbanized areas, include an analysis of sections of Interstate to and including at least the first adjacent existing or proposed interchange on each side. Crossroads and other roads and streets shall be included in the analysis to the extent necessary to assure their ability to collect and distribute traffic to and from the interchange with the new or revised access points."

The current configuration of I-35 and I-240 Interchange is a full cloverleaf system interchange which was designed and constructed in 1960s. The areas surrounding the interchange has developed throughout the years. This location is one of the crowded urbanized areas in Oklahoma City. High traffic volumes, outdated interchange design, improper ramp spacing, and loop ramps with less than adequate radii are contributing to the problems that this interchange is experiencing now.

The evaluation of the existing conditions for the interchange is documented in the EXISTING FACILITIES section (Page 4) of this report. The poor traffic operation of this interchange is clearly affecting the adjacent interchanges in this area. I-240 and Eastern Avenue interchange (1.0 mile east), the I-240 and Shields Boulevard interchange (0.66 mile west), I-35 and SE 66th Street interchange (0.5 north) and I-35 and SE 82nd Street interchange (0.5 mile south) do not operate properly during the peak hours of traffic operation.

The design deficiencies between the interchange's ramps and the SE 66th Street, SE 82nd Street and Shields Boulevard cause a flow breakdown in this area during the peak hours of traffic operation. The recurring traffic congestion, high collision rate, and the results of the traffic operational analysis demand improvements to this interchange.

The proposed interchange configuration for this location is a three (3) level partial cloverleaf system interchange. The highway design consistency that ensures successive elements are coordinated to produce harmonious and homogeneous driver performances and to create communicative aspects between the driver and the freeway and interchange complex is maintained throughout the proposed design. The interstate system design criteria such as basic lanes, lane balance, applications of auxiliary lanes, route continuity, appropriate interchange form, no weaving within interchange on freeway, right exits and entrances only, single exit on freeway per interchange (except one location-I-240 eastbound where two exits are needed to provide for the I-35 northbound and southbound movements), exit in advance of crossroad, simplified signing, implementation of decision sight distance, freeway and exit/entrance ramp speed relationships and ramp spacing are maintained and followed in the design of the proposed configuration.

The proposed interchange configuration will provide the eight (8) primary basic movements according to AASHTO "A Policy on Design Standards Interstate System" which is essential to a system interchange. All the entrance and exit ramps are properly designed to provide safe and acceptable merge and diverge lengths throughout the interchange area. The proposed interchange design meets or exceeds the latest edition of AASHTO "A Policy on Geometric Design of Highways and Streets" guidelines and design criteria.

In order to maintain an acceptable level of traffic operation on interstate highway and also enhance the safety of the highway users, the I-35 partial interchanges north of SE 82nd Street and south of SE 66th Street will be removed. The close proximity of the arterial streets to the interchange led to this design decision. The adjacent upstream-downstream ramps and the service roads around the interchange will compensate for the removed movements.

The existing I-240 westbound exit ramp and eastbound entrance ramp located east of Shields Boulevard cannot be maintained due to the close proximity of the I-240 conventional diamond interchange at Shields Boulevard located just west of the I-35 and I-240 system interchange, the complexity of the proposed design configuration, interstate highway design criteria, and proper ramp spacing were the supporting factors. This will create a partial interchange at Shields Boulevard. The HCS ramp junction analysis indicates that the I-240 westbound on ramp from Shields Blvd. currently operates at LOS C/D during the AM/PM peak hours respectively and will operate at LOS D/E during the design year. Similarly, the I-240 eastbound off ramp to Shields Blvd. operates at LOS D/D now and F/F by the design year.

I-240 and Shields Boulevard interchange is located approximately 3,475 feet west of I-35. The egress and ingress between I-240 and Shields Boulevard are provided by four slip ramps through one-way service roads north and south of I-240. Santa Fe Avenue is approximately 1,700 feet west of Shields Boulevard and the two turn arounds located east and west of Santa Fe Avenue connect the two service roads. Walker Avenue is located approximately 2,600 feet west of Santa Fe Avenue. The two eastbound entrance and exit ramps and westbound entrance and exit ramps between these two arterial streets provide access to and from I-240. Exhibit (7) shows the existing ramp configurations in this area.
It is worth mentioning that the westbound successive entrance ramps and eastbound exit ramps east and west of Santa Fe Avenue are not common practice.

As mentioned earlier, the two exit and entrance ramp movements east of Shields Boulevard cannot be provided with the new design configuration for the I-35 and I-240 interchange and creates a partial interchange. Exhibit (8) shows that lane balance on I-240 cannot be properly maintained with the new I-35 and I-240 design configuration due to the partial interchange at Shields Boulevard. I-35 northbound and southbound movements to I-240 westbound are merged together to form a two-lane entrance ramp to I-240 westbound. It is shown that a five-lane section is created at the gore area and further west the two outside lanes are dropped improperly due to the existing I-240 westbound entrance ramp from Shields Boulevard. The same is true for I-240 eastbound, in order to provide proper connection from I-240 eastbound to I-35 north and southbound, two lanes are added to I-240 eastbound right after the I-240 eastbound exit ramp to Shields Boulevard.

The basic number of lanes for a substantial length of Interstate Highway 240 is established here as three in each direction. According to the Interstate Design Guide, there should be balance in the number of traffic lanes on the freeway and ramps in order to provide efficient traffic operation through and beyond an interchange. It is the proper coordination of lane balance and basic number of lanes that allows an auxiliary lane between the entrance and exit terminals to be provided on urbanized interchanges that are closely spaced. In order to improve traffic operation on I-240 mainline west of I-35 and to provide lane continuity as well as lane balance that accommodates auxiliary lanes between interchanges, ODOT proposes to remove the I-240 westbound entrance and eastbound exit ramps west of Shields Boulevard and construct a westbound exit and an eastbound entrance ramps east of Santa Fe Avenue. This design will change the partial interchange at Santa Fe Avenue to a full interchange and provides proper lane balance and auxiliary lanes between the Santa Fe Avenue and the I-35 and I-240 interchanges.

Traffic operational analysis indicates the weaving sections on I-240 between the Santa Fe Avenue and Walker Avenue ramps will be congested during the peak hours of operations. Due to the close proximity of these two arterial streets, the existing weave lengths are very short. The HCS weaving analysis is included in this report and the level of service (LOS) analyses for the existing conditions and proposed design utilizing existing and future traffic volumes are tabulated below.

I-240 FREEWAY WEAVING ANALYSIS (SANTA FE AVE. TO WALKER AVE.)

LOCATION	EASTBOUND		WESTBOUND	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
2013 EXISTING	E	E	D	E
2040 EXISTING	E	F	E	F
2040 DESIGN	F	F	F	F

Table (8)

The proposed design configuration is shown on Exhibit (9). The forecasted 2040 capacity restrained AADT and AM/PM peak hour traffic volumes and the corresponding AADTT and TDHV for the proposed design configuration are shown on Exhibits (10) and (11) respectively. The same input assumptions that was consistent with the existing conditions used for the freeway analysis

Peak Hour Factor (PHF)	0.92
Terrain	Level
I-35, I-240 Free Flow Speed (FFS)	69.6 mph
Directional ramps Free Flow Speed	45 mph
Loop Ramps Free Flow Speed	25 mph

The results of the 2040 design year HCS traffic operational analysis on the proposed design configuration are shown on Exhibit (12). The results have also been tabulated and are shown in Table (9) through Table (11). As the analyses indicate, this proposed access point change does not have an adverse impact on the safety and operation of the interstate highways 35 and 240, except the I-240 weaving segment between Santa Fe and Walker Avenues. In fact, the proposed design will improve the traffic operation on the interstate highways and creates a more harmonious and smoother operation with the adjacent interchanges. The results of the 2040 capacity restrained LOS analyses for the eight (8) primary movements of the existing and the proposed interchange configurations are tabulated and shown on Table (12) for comparison purposes only.


S WALKER AVE.
S SANTA FE AVE.
S SHIELDS BLVD
240
240
35
35
Exhibit (7)
I-240 EXISTING RAMP CONFIGURATIONS
WEST OF I-35_I-240 INTERCHANG
PREPARED FOR:
DOT
BY:
OLSSON ASSOCIATES


S WALKER AVE.
S SANTA FE AVE.
240
N.W. SERV. RD.
S.W. SERV. RD.
SHIELDS BLVD.
The I-35 I-240 DESIGN CONFIGURATION
W/ EXISTING ON & OFF RAMPS WEST OF
SHIELDS BLVD.
Exhibit (8)
PREPARED FOR:
DOT
BY: OLSSON ASSOCIATES

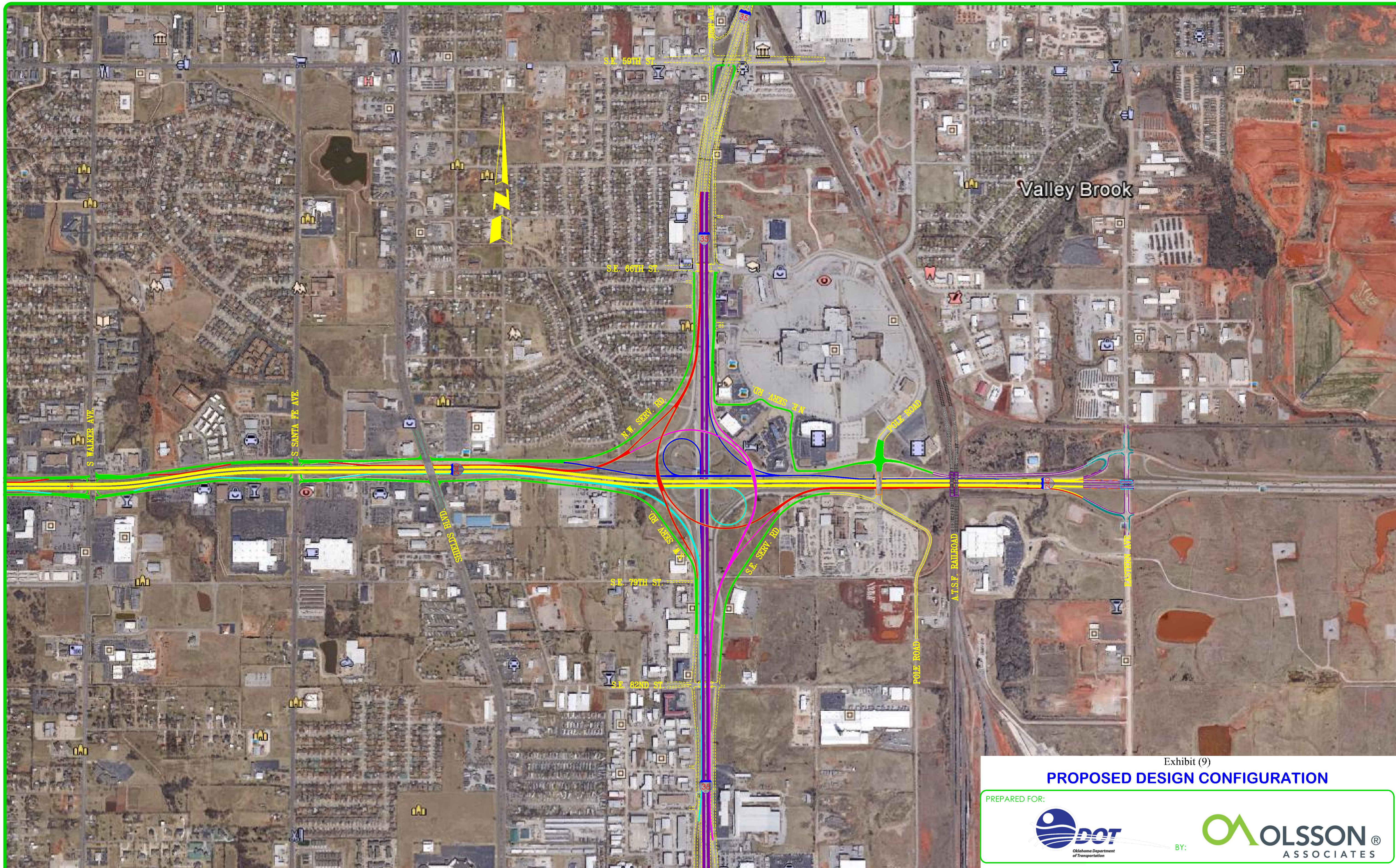


Exhibit (9)

PROPOSED DESIGN CONFIGURATION

PREPARED FOR: ODOT Oklahoma Department of Transportation BY: OLSSON ASSOCIATES

Exhibit (10)

2040 CAPACITY RESTRAINED TRAFFIC DATA
PROPOSED DESIGN

PREPARED FOR: Oklahoma Department of Transportation
BY: OLSSON ASSOCIATES

Exhibit (11)

TRUCKS TRAFFIC DATA
PROPOSED DESIGN

Exhibit (12)
2040 CAPACITY RESTRAINED LEVEL-OF-SERVICE PROPOSED DESIGN

BASIC FREEWAY ANALYSIS (PROPOSED DESIGN)
Level of Service Utilizing Capacity Restrained 2040 Traffic Volumes

Freeway Dir. of Travel	Location	LOS AM/PM Peak Hour
I-35 Northbound	South of SE 89th St.	**E/E**
I-35 Northbound	North of On Ramp from SE 89th St.	**D/D**
I-35 Northbound	South of SE 59th St.	**E/E**
I-35 Southbound	South of SE 59th St.	**E/E**
I-35 Southbound	South of Off Ramp to SE 66th St.	**D/D**
I-35 Southbound	North of SE 89th St.	**D/D**
I-35 Southbound	South of SE 89th St.	**E/E**
I-240 Eastbound	West of Shields Blvd.	**C/D**
I-240 Eastbound	East of Pole Rd.	**B/C**
I-240 Westbound	East of Pole Rd.	**C/C**
I-240 Westbound	East of Shields Blvd.	**C/C**

Table (9)

RAMP JUNCTION ANALYSIS (PROPOSED DESIGN)
Level of Service Utilizing Capacity Restrained 2040 Traffic Volumes

Freeway Dir. of Travel	Location	LOS AM/(PM) Peak Hour
I-35 Northbound	On Ramp from SE 89th St.	**Freeway-Upstream v/c = 1.02 / 1.01 Ramp v/c = 0.45 / 0.45 Freeway-Downstream v/c = 0.87 / 0.86**
I-35 Northbound	Off Ramp to I-240 Eastbound	**D/C**
I-35 Northbound	On Ramp from I-240 Eastbound	**E/E**
I-35 Northbound	On Ramp from I-240 Westbound	**D/D**

I-35 Northbound	Off Ramp to SE 59th St.	**C/C**
I-35 Southbound	Off Ramp to I-240 Westbound	**C/C**
I-35 Southbound	On Ramp from I-240 Westbound C-D Rd.	**D/D**
I-35 Southbound	On Ramp from I-240 Eastbound	**Freeway-Upstream v/c = 0.86 / 0.89 Ramp v/c = 0.42 / 0.44 Freeway-Downstream v/c = 0.83 / 0.87**
I-35 Southbound	Off Ramp to SE 89th St.	**E/E**
I-240 Eastbound	On Ramp from Santa Fe Ave.	**Freeway-Upstream v/c = 0.90 / 0.95 Ramp v/c = 0.23 / 0.30 Freeway-Downstream v/c = 0.73 / 0.78**
I-240 Eastbound	Off Ramp to I-35 Southbound	**A/B**
I-240 Eastbound	Off Ramp to I-35 Northbound	**C/C**
I-240 Eastbound	On Ramp from I-35 Northbound	**B/A**
I-240 Eastbound	Off Ramp to Eastern Ave.	**B/B**
I-240 Westbound	On Ramp from Eastern Ave.	**B/C**
I-240 Westbound	Off Ramp to I-240 Westbound C-D Rd.	**B/B**
I-240 Westbound	Off Ramp from I-240 Westbound C-D Rd. to I-35	**B/B**
I-240 Westbound	On Ramp from both I-35 Southbound & Northbound	**C/D**
I-240 Westbound	Off Ramp to Santa Fe Ave.	**C/C**

Note: v/c = Volume/Capacity

Table (10)

FREEWAY WEAVING ANALYSIS (PROPOSED DESIGN)
Level of Service Utilizing Capacity Restrained 2040 Traffic Volumes

Freeway Dir. of Travel	Weaving Segment Location	LOS AM/PM Peak Hour
I-35 Southbound	On Ramp from SE 59th St. to Off Ramp to SE 66th St.	**E/E**
I-240 Eastbound	On Ramp from Walker Ave. to Off Ramp to Santa Fe Ave.	**F/F**
I-240 Westbound	On Ramp from Santa Fe Ave. to Off Ramp to Walker Ave.	**F/F**

Table (11)

The 2040 Level of Service (LOS)-Eight Primary Movements, EXISTING & PROPOSED DESIGN

The Eight Primary Movements			EXISTING CONDITIONS	PROPOSED DESIGN
Diverging		Merging	LOS AM/PM Peak Hour Diverging---(Merging)	
I-35 Northbound	to	I-240 Eastbound	**E/E---(E/E)**	**D/C---(B/A)**
		I-240 Westbound	**F/F---(F/F)**	**D/C---(C/D)**
I-35 Southbound	to	I-240 Eastbound	**B/C---(E/F)**	**C/C---(B/A)**
		I-240 Westbound	**E/F---(E/F)**	**C/C---(C/D)**
I-240 Eastbound	to	I-35 Northbound	**E/F---(F/F)**	**C/C---(E/E)**
		I-35 Southbound	**F/F---(F/F)**	**A/B---(v/c < 1)**
I-240 Westbound	to	I-35 Northbound	**C/D---(E/E)**	**B/B---(D/D)**
		I-35 Southbound	**F/F---(B/C)**	**B/B---(D/D)**

Note: v/c = Volume/Capacity

Table (12)

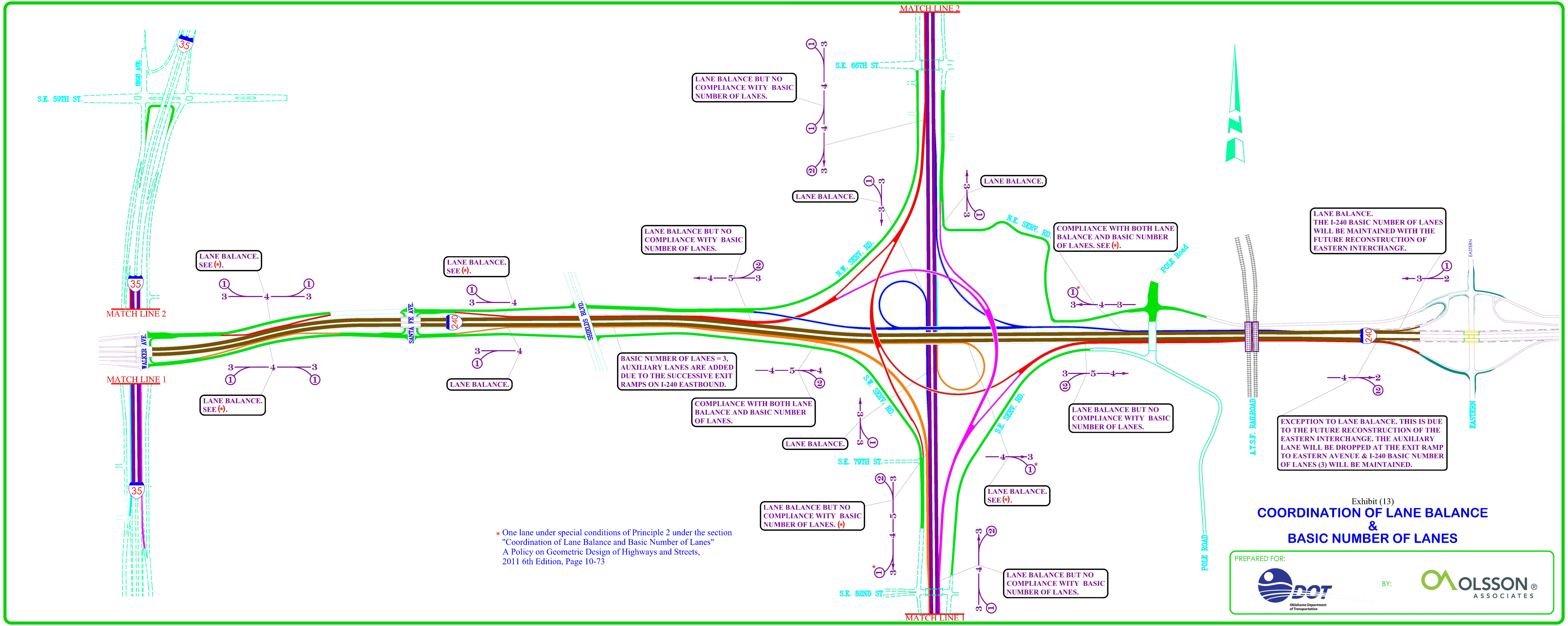


Exhibit (13)

COORDINATION OF LANE BALANCE & BASIC NUMBER OF LANES

Exhibit (14)
THE INTERCHANGE SIGNING LAYOUT

PREPARED FOR: ODOT Oklahoma Department of Transportation BY: OLSSON ASSOCIATES

Requirement 4: ACCESS CONNECTIONS AND DESIGN

"The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" may be considered on a case-by-case basis for applications requiring special access for managed lanes (e.g., transit, HOVs, HOT lanes) or park and ride lots. The proposed access will be designed to meet or exceed current standards (23 CFR 625.2(a), 625.4(a) (2), and 655.603(d))."

The Interstate Highways 35 and 240 are full access controlled facilities and the proposed system interchange will provide all primary traffic movements. All the operational and design criteria associated with interstate freeway and interchange design such as basic lanes, lane balance, applications of auxiliary lanes, route continuity, appropriate interchange form, no weaving within interchange on freeway have been maintained. Right exits and entrances only, single exit on freeway per interchange (with the exception of I-240 eastbound where two exits are needed to provide for I-35 northbound and southbound movements), exit in advance of crossroad, simplified signing, implementation of decision sight distance, freeway and exit/entrance ramp speed relationships, ramp spacing have all been considered and followed in the design of this facility.

All the geometric controls and criteria such as design speed, sight distance, curvature and superelevation, width of traffic lanes and shoulders, side slopes, medians, horizontal clearance to obstructions, vertical clearance, cross section and structural capacity for the proposed access design will meet or exceed current standards under the latest versions of AASHTO "A Policy on Design Standards Interstate System" and AASHTO "A Policy on Geometric Design of Highways and Streets".

Although no design exception is anticipated at this level, in any situation where the design is less than what is described by the standards, a design exception will be submitted to FHWA for review and approval.

Requirement 5: TRANSPORTATION LAND USE PLANS

"The proposal considers and is consistent with local and regional land use and transportation plans. Prior to receiving final approval, all requests for new or revised access must be included in an adopted metropolitan transportation plan, in the adopted Statewide or Metropolitan Transportation Improvement Program (STIP or TIP), and the Congestion Management Process within transportation management areas, as appropriate and as specified in 23 CFR part 450, and the transportation conformity requirements of 40 CFR parts 51 and 93."

The proposal for transportation improvements within the I-35 and I-240 corridors is consistent with local and regional land use and transportation plans. The ACOG regional travel demand model data was used in determining the forecasted future traffic for the design year 2040. The forecasted traffic for the proposed system incorporates the future land use and other development plans in the metropolitan and suburban Oklahoma City communities that would affect the project corridors. The proposed widening of I-35 and I-240 to six (6) lane access controlled facilities is consistent with the objectives identified in the Oklahoma City Area Regional Transportation Study (OCARTS) 2035 Long Range Plan.

The provisions of 23 Code of Federal Regulations (CFR) part 450 and transportation conformity requirements of 40 CFR parts 51 and 93 have been met.

Requirement 6: COMPREHENSIVE INTERSTATE NETWORK STUDY

"In corridors where the potential exists for future multiple interchange additions; a comprehensive corridor or network study must accompany all requests for new or revised access with recommendations that address all of the proposed and desired access changes within the context of a longer-range system or network plan (23 U.S.C. 109(d), 23 CFR 625.2(a), 655.603(d), and 771.111)."

The interchange study area is located in an urbanized area with a developed local arterial system. There are multiple existing interchanges on the I-35 and I-240 corridors adjacent to the interchange study. The I-240 interchanges at Eastern Avenue, Bryant Avenue, Sunny lane Road and Sooner Road are spaced one (1) mile apart and are located east of the subject interchange. The interchanges at Shields Boulevard, Santa Fe Avenue, and Walker Avenue west of the I-35 and I-240 interchange are less than a mile apart. There are multiple interchanges on I-35 north and south of the subject interchange that are less than a mile apart.

A comprehensive Interstate Network Study is not needed due to the fact that no interchange addition or new access with multiple interchanges will ever be required considering the spacing of the existing interchanges on the interstate system within the I-35 and I-240 corridors around the I-35 and I-240 interchange.

Requirement 7: COORDINATION WITH TRANSPORTATION SYSTEM IMPROVEMENTS

"When a new or revised access point is due to a new, expanded, or substantial change in current or planned future development or land use, requests must demonstrate appropriate coordination has occurred between the development and any proposed transportation system improvements (23 CFR 625.2(a) and 655.603(d)). The request must describe the commitments agreed upon to assure adequate collection and dispersion of the traffic resulting from the development with the adjoining local street network and Interstate access point (23 CFR 625.2(a) and 655.603(d))."

The revision and improvements to this interchange were not generated by any specific development but were developed as part of the long-range planning process as improvements to the overall transportation system. Transportation System Improvements that would apply to this corridor include transit improvements, Intelligent Transportation System (ITS) improvements, and travel demand management (TDM) alternatives. The local transit authority, the Central Oklahoma Transportation and Parking Authority (COTPA), which is a part of the City of Oklahoma City local government.

COPTA and Cleveland Area Rapid Transit (CART) have programs to encourage carpool and transit usage in these corridors as well as region wide. Some of the routes within the study area are;

- Route 013 S WESTERN/I-240 CROSSTOWN, Transit Center, SW Medical Center, Shartel Towers, Oklahoma City Community College, and Variety Care. Days Served: Monday – Saturday. Frequency: 30 min. (Week), 45 min. (Sat)
- Route 014 SE BRYANT or SUNNYLANE, Transit Center, Plaza Mayor, Valley Brook, Metro Tech/Bryant Campus, and Sunnylane. Days Served: Monday – Saturday. Frequency: 45 min.
- Route 024 NORMAN, Norman, University of Oklahoma, Downtown Oklahoma City, State Capital, and OU Medical Center. Days Served: Monday – Friday. Frequency: N /A.

COPTA and ODOT are members of the ACOG Board of Directors and provide direction to implement TSM on an annual basis. ITS improvements in this corridor include fiber optic lines, overhead changeable message signs and video cameras. This allows for efficient traffic operation management, incident management and implementation of TMS alternatives. As mentioned previously, provisions are made for future HOV lanes within these corridors. The inside lane in each direction can be designated as HOV lane.

Requirement 8: STATUS OF PLANNING AND NEPA

"The proposal can be expected to be included as an alternative in the required environmental evaluation, review and processing. The proposal should include supporting information and current status of the environmental processing (23 CFR 771.111)."

A National Environmental Policy Act (NEPA) document has been produced on these corridors which address all environmental concerns such as noise abatement, wetlands, endangered species, neighborhood impacts, commercial business impacts, etc. The NEPA document also includes a copy of the preliminary operational analysis related to traffic operations and traffic safety at the time it was issued.

Six (6) design alternatives suitable for a system interchange were considered for this location. The evaluation process based on total cost, level-of-service, accessibility, constructability and right-of-way requirements would reduce them to three (3). Design alternatives 4, 5 and 6 were ranked the highest. These three (3) design alternatives were further refined and elements from each were combined to form design alternative 5A.

A public meeting was held in March of 2003 to present the No-Build, Six (6) initial design alternatives and the design alternative 5A. Based on public inputs from another public meeting held on August of 2003 and alternative evaluation the design alternatives were reduced to two and subsequently the preferred (proposed) design alternative was selected.

As part of the proposed interchange design, the exit ramp from eastbound Interstate 240 to Pole Road and entrance ramp from Pole Road to westbound Interstate 240 are eliminated due to the geometric and safety constraints. During the final public meeting held on June of 2005 and meetings with property owners, concerns were raised over the reduced access to Crossroads Mall. The Department agreed to conduct additional design and traffic studies in order to better address the public concerns.

Closing Interstate 240 access to and from Pole Road would require traffic to utilize the existing diamond interchange at Eastern Avenue, half a mile east of Pole Road. To improve the traffic circulation at Eastern Avenue Interchange, signalization of ramp terminals with Eastern Avenue were analyzed and considered. To enhance the traffic circulation of Crossroads Mall access with Interstate 35, an additional turnaround lane on the south side of the existing SE 59th Street bridge was evaluated and considered.

An EA/FONSI (environmental assessment/finding of no significant impact) for this project was issued by FHWA on September 1, 2005.

A reevaluation and reconfiguration of the induced I-240 and Shields Blvd. partial interchange was necessary in order to provide proper lane balance on I-240. The decision was to remove the I-240 westbound entrance and eastbound exit ramps west of Shields Blvd. and construct a westbound exit ramp and an eastbound entrance ramp east of Santa Fe Avenue. This design will change the existing partial interchange at Santa Fe Avenue to a full interchange and provides proper lane balance and auxiliary lanes between Santa Fe Avenue and I-35 and I-240 interchanges.

The final public hearing was held on June 11, 2015 to inform the public about the changes in design and access. The Department is currently reevaluating the EA/FONSI and it will be submitted to FHWA for approval upon completion. The solicitation responses and written comments from the public meeting are presented in Appendix D.

SAFETY ANALYSIS

A traffic collision analysis was performed to review the existing crash pattern along I-35 and I-240 within the interchange area (i.e. I-35 from SE 89th Street to SE 66th Street and I-240 from Shields Boulevard to Eastern Avenue). During the 5 year period between 2008 and 2012 a total of 2,206 collisions occurred along the two highway corridors; 65.4 percent of the collisions were property damage, 34.3 percent injury, and 0.3 percent fatal crashes. In addition to seven fatalities, the collision report identifies 1,084 injured people within this period.

The collision report also indicates the crash pattern as 22.1 percent of collisions occurring on Fridays with 39.6 percent occurrence during the mid-morning to afternoon hours. In addition, 88.6 percent of the collisions were on dry roadway and 55.1 percent during clear weather conditions.

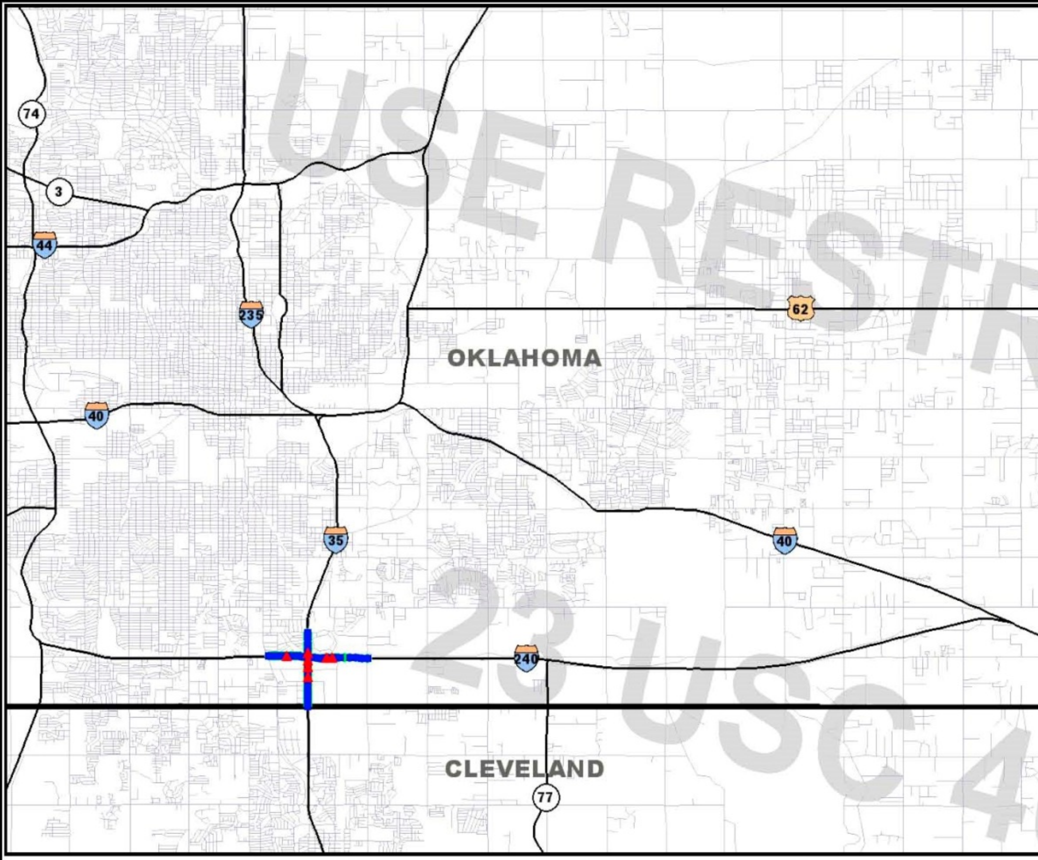
It was identified in the analysis that rear-end, side-swipe, and off-road (fixed object) accidents were the most common type of accidents reported along these corridors, accounting for 64.3, 9.3, and 3.6 percent of the total accidents, respectively.

- Rear-end collisions are common along freeways experiencing high level of congestion. Rear-end collisions also occur along a high speed roadway when traffic is forced to stop for an at-grade intersection, such as at freeway ramp terminals. The report indicates that 21 percent of collisions as drivers following too close and 8.6 percent as vehicles with unsafe speed.
- Off-road crashes on a freeway can often be caused by driver inattention, excessive speeds, or poor weather conditions. The report shows that 7.9 percent of collisions as driver's inattention and 10 percent as wet roadway conditions.
- Side-swipe collisions are typically associated with freeway lane changing maneuvers, such as merging and diverging. These crashes usually occur along the interchange ramps or at the ramp terminals. The collision report identifies 4.8 percent of collisions as improper lane change.

The safety benefits of reducing congestion within this interchange are expected to become more pronounced over time as this area continues to experience high traffic due to various commercial and industrial developments.

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Collision Analysis



Legend

- Fatality
- Injury
- Property Damage

N
W E
S

Remarks:

I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Date Range: 01-01-2008 thru 12-31-2012

Collision Severity

	2008				2009				2010				2011				2012*			
	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot
Collisions	1	175	299	475	2	128	254	384	1	171	292	464	2	143	303	448	1	139	295	435
Persons	1	268		269	2	184		186	1	250		251	2	195		197	1	187		188

* DENOTES A YEAR FOR WHICH DATA MAY BE INCOMPLETE.

	Study Total			
	Fatal	Injury	Property Damage	Total
Collisions	7	756	1443	2206
Persons	7	1084		1091

TOTALS REFLECT HIGHWAY COLLISIONS ONLY.

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Oklahoma Department of Transportation

TABULATION OF COLLISIONS
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Collisions By Type Of Collision

Type Of Collision	2008				2009				2010				2011				2012*			
	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot
Rear-End (front-to-rear)		119	210	329		77	160	237	1	97	205	303		88	195	283	1	90	176	267
Head-On (front-to-front)		1	2	3		4	9	13		3	7	10		5	6	11		6	9	15
Right Angle		3	9	12		2	8	10		2	1	3			5	5		3	5	8
Angle Turning		3	14	17		3	13	16		2	15	17		3	11	14		2	10	12
Other Angle		3	5	8	1	3	4	8		7	12	19		4	12	16		2	16	18
Sideswipe Same Direction		2	9	11		3	11	14		4	6	10		2	17	19		3	20	23
Sideswipe Opposite Direction											1	1			1	1			1	1
Fixed Object		20	23	43		11	24	35		15	21	36		12	35	47		12	32	44
Pedestrian														1		1				
Pedal Cycle														1		1				
Animal																				
Overturn/Rollover	1	9	5	15	1	10	4	15		12	2	14	2	14	3	19		10	2	12
Vehicle-Train																				
Other Single Vehicle Crash			1	1			1	1		1		1						1	1	2
Other		15	21	36		15	20	35		28	22	50		13	18	31		10	23	33
Total	1	175	299	475	2	128	254	384	1	171	292	464	2	143	303	448	1	139	295	435
Percent		7.9	13.6	21.5	0.1	5.8	11.5	17.4		7.8	13.2	21.0	0.1	6.5	13.7	20.3		6.3	13.4	19.7

Collisions By Type Of Collision

Type Of Collision	Total				
	Fat	Inj	PD	Tot	Pct
Rear-End (front-to-rear)	2	471	946	1419	64.3
Head-On (front-to-front)		19	33	52	2.4
Right Angle		10	28	38	1.7
Angle Turning		13	63	76	3.4
Other Angle	1	19	49	69	3.1
Sideswipe Same Direction		14	63	77	3.5
Sideswipe Opposite Direction			3	3	0.1
Fixed Object		70	135	205	9.3
Pedestrian		1		1	
Pedal Cycle		1		1	
Animal					
Overturn/Rollover	4	55	16	75	3.4
Vehicle-Train					
Other Single Vehicle Crash		2	3	5	0.2
Other		81	104	185	8.4
Total	7	756	1443	2206	100
Percent	0.3	34.3	65.4	100	

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TABULATION OF COLLISIONS
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Units By Unit Type

Unit Type	2008				2009				2010				2011				2012*			
	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot
Train																				
Pedestrian														2		2				
Animal																				
Pedal Cycle														1		1				
Parked Vehicle		4		4			1	1			2	2		5		5		1	1	2
CMV		5	25	30		7	14	21		8	23	31		9	24	33	1	9	28	38
Other Single Vehicle	1	28	26	55	1	20	29	50		26	22	48	2	27	38	67		22	34	56
Other Multi-Vehicle		342	548	890	2	231	462	695	2	332	551	885		253	542	795	1	257	525	783
Total	1	379	599	979	3	258	506	767	2	366	598	966	2	297	604	903	2	289	588	879
Percent		8.4	13.3	21.8	0.1	5.7	11.3	17.1		8.1	13.3	21.5		6.6	13.4	20.1		6.4	13.1	19.6

Units By Unit Type

Unit Type	Total				
	Fat	Inj	PD	Tot	Pct
Train					
Pedestrian		2		2	
Animal					
Pedal Cycle		1		1	
Parked Vehicle		10	4	14	0.3
CMV	1	38	114	153	3.4
Other Single Vehicle	4	123	149	276	6.1
Other Multi-Vehicle	5	1415	2628	4048	90.1
Total	10	1589	2895	4494	100
Percent	0.2	35.4	64.4	100	

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TABULATION OF COLLISIONS
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Vehicles By Vehicle Type

Vehicle Type	2008				2009				2010				2011				2012*			
	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot	Fat	Inj	PD	Tot
Passenger Vehicle-2 Door		48	52	100	1	28	54	83		30	48	78		23	52	75		21	42	63
Passenger Vehicle-4 Door		145	220	365	1	95	195	291	1	127	222	350		111	228	339		121	248	369
Passenger Vehicle-Convertible		3	3	6		2	2	4			8	8			3	3		1		1
Pickup Truck		73	142	215		43	110	153		82	151	233		64	130	194		58	124	182
Single-Unit Truck (2 axles)		1	3	4		3	4	7		7	9	16		1	7	8		5	9	14
Single-Unit Truck (3 or more axles)		1	3	4			2	2			2	2		3	1	4		1		1
School Bus																				
Truck/Trailer			1	1						1		1		2	5	7			3	3
Truck-Tractor (bobtail)			3	3			1	1			1	1		1	2	3			1	1
Truck-Tractor/Semi-Trailer		4	15	19		5	10	15		4	16	20		3	14	17		5	16	21
Truck-Tractor/Double			1	1											1	1	1			1
Truck-Tractor/Triple																				
Bus/Large Van (9-15 seats)		1	2	3		1		1											1	1
Bus (16+ seats)							1	1												
Motorcycle	1	16	1	18		4		4		12	1	13	2	10	1	13		10		10
Motor Scooter/Moped										1		1		1		1		1		1
Motor Home											1	1								
Farm Machinery			1	1																
ATV																				
Sport Utility Vehicle (SUV)		61	101	162	1	58	90	149	1	79	103	183		53	119	172	1	53	122	176
Passenger Van		18	32	50		15	19	34		15	21	36		19	25	44		10	16	26
Truck More Than 10,000 lbs.			1	1			1	1			1	1			2	2			1	1
Van (10,000 lbs. or less)		3	2	5		2	3	5		3	6	9			8	8		2	5	7
Other		5	16	21		2	14	16		5	8	13		3	6	9		1		1
Total	1	379	599	979	3	258	506	767	2	366	598	966	2	294	604	900	2	289	588	879
Percent		8.4	13.3	21.8	0.1	5.7	11.3	17.1		8.1	13.3	21.5		6.5	13.4	20.0		6.4	13.1	19.6

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TABULATION OF COLLISIONS
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Vehicles By Vehicle Type

Vehicle Type	Total				
	Fat	Inj	PD	Tot	Pct
Passenger Vehicle-2 Door	1	150	248	399	8.9
Passenger Vehicle-4 Door	2	599	1113	1714	38.2
Passenger Vehicle-Convertible		6	16	22	0.5
Pickup Truck		320	657	977	21.8
Single-Unit Truck (2 axles)		17	32	49	1.1
Single-Unit Truck (3 or more axles)		5	8	13	0.3
School Bus					
Truck/Trailer		3	9	12	0.3
Truck-Tractor (bobtail)		1	8	9	0.2
Truck-Tractor/Semi-Trailer		21	71	92	2.0
Truck-Tractor/Double	1		2	3	0.1
Truck-Tractor/Triple					
Bus/Large Van (9-15 seats)		2	3	5	0.1
Bus (16+ seats)			1	1	
Motorcycle	3	52	3	58	1.3
Motor Scooter/Moped		3		3	0.1
Motor Home			1	1	
Farm Machinery			1	1	
ATV					
Sport Utility Vehicle (SUV)	3	304	535	842	18.7
Passenger Van		77	113	190	4.2
Truck More Than 10,000 lbs.			6	6	0.1
Van (10,000 lbs. or less)		10	24	34	0.8
Other		16	44	60	1.3
Total	10	1586	2895	4491	100
Percent	0.2	35.3	64.5	100	

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Oklahoma Department of Transportation

TABULATION OF COLLISIONS
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Day And Time Of Occurrence Of Collisions

Day	Hour Of The Day																									
	AM												PM													
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	Tot	Pcnt
Sunday	9	7	1	1	2	3	4	4	3	7	7	11	8	17	7	19	7	9	4	7	3	3	6	4	153	6.9
Monday	1	1	1	1	1	16	18	14	20	6	6	15	31	15	36	45	38	17	5	8	4	6	4	1	311	14.1
Tuesday	2	1	1	1	3	8	16	19	14	8	13	19	15	21	42	46	39	25	6	1	3	4	2	4	313	14.2
Wednesday	1	2	1	1	2	12	21	15	13	7	9	11	17	27	35	41	43	34	6	6	8	3	3	3	321	14.6
Thursday	2	3	2	1	5	13	27	30	15	11	11	22	20	26	42	36	46	49	6	6	6	6	4	1	390	17.7
Friday	2	4	2		3	11	19	22	11	14	24	42	36	46	66	63	41	42	15	7	6	6	3	3	488	22.1
Saturday	3	9	2	1	3	1	3	3	6	9	20	28	22	21	23	14	16	10	11	8	4	3	7	3	230	10.4
	Early Morning - Sunrise						Morning Peak			Mid Morning/Afternoon						PM Peak			Evening - Late Night						Tot	100
Total	146						297			873						680			210						2206	
Percent	6.6						13.5			39.6						30.8			9.5						100	

Roadway/Lighting

Roadway Conditions	Lighting Conditions					Total	Percent
	Daylight	Darkness	Twilight	Lighted	Unknown		
Dry	1594	43	42	276		1955	88.6
Wet (Water)	170	6	7	38		221	10.0
Ice, Snow, or Slush	14		1	6		21	1.0
Mud, Dirt, Gravel, or Sand			1			1	
Other	7			1		8	0.4
Total	1785	49	51	321		2206	100
Percent	80.9	2.2	2.3	14.6		100	

Weather Conditions

Weather Conditions	Total	Percent
Clear	1215	55.1
Clouds Present	799	36.2
Raining/Fog	165	7.5
Snowing/Sleet/Hail	21	1.0
Other	6	0.3
Total	2206	100

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Oklahoma Department of Transportation

TABULATION OF COLLISIONS
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
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Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Drivers By Driver Conditions

Unsafe/Unlawful	Apparently Normal			Alcohol Involved: Ability Impaired			Alcohol Involved: Odor Detected			Sleep Suspected			Drug Use Indicated			Unknown Condition			Collision Severity				
	Fat	Inj	P-D	Fat	Inj	P-D	Fat	Inj	P-D	Fat	Inj	P-D	Fat	Inj	P-D	Fat	Inj	P-D	Fat	Inj	P-D	Total	Pcnt
Failed to Yield		19	64		1												3	10		23	74	97	2.2
Failed to Stop		5	8			1											2	5		7	14	21	0.5
Failed to Signal																							
Improper Turn		1	18														2	2		3	20	23	0.5
Improper Start		2	2																	2	2	4	0.1
Improper Stop		2	4																	2	4	6	0.1
Improper Backing		1	2															2		1	4	5	0.1
Improper Parking			2																		2	2	
Improper Passing		1	2															1		1	3	4	0.1
Improper Lane Change		45	136	1		1						2					7	24	1	52	163	216	4.8
Left of Center			3														1	2		1	5	6	0.1
Following Too Close		284	596		1	1								2			11	30		298	627	925	20.7
Unsafe Speed	2	166	192	1	7	2		1	1		1			1			5	8	3	181	203	387	8.6
DWI					25	18	1		2					3	2				1	28	22	51	1.1
Inattention		127	209		1	2					7	1					3	5		138	217	355	7.9
Negligent Driving		1	18													1		5	1	1	23	25	0.6
Defective Vehicle		8	20															2		8	22	30	0.7
Wrong Way																							
No Improper Action	3	797	1391		9	7								1	2		7	19	3	814	1419	2236	49.9
Other		8	54			1										1	8	12	1	16	67	84	1.9
Total	5	1467	2721	2	44	33	1	1	3		8	3		7	4	2	49	127	10	1576	2891	4477	100
Percent	0.1	32.8	60.8		1.0	0.7			0.1		0.2	0.1		0.2	0.1		1.1	2.8	0.2	35.2	64.6	100	

Collisions By Special Feature

Special Feature	Total: Fat	Total: Inj	Total: PD	Total: Tot
Bridge	1	4	13	18
Work Zone		8	8	16
Cross Median	1	1	1	3
Train Collision				

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OLSSON ASSOCIATES

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: I-240, MM 121.31, NB EXIT																		
55	70	15	19	00.59	NB EXIT	COLL-DIST RD	NO	N	N	2			REAR-END	INATT	DARK	DRY	PDO	09-12-2008
55	70	15	19	00.59	NB EXIT	COLL-DIST RD	NO	N	-	1			F-O UTIL-POLE	UNSAF-SPD	DYLGT	ICE	PDO	01-26-2009
55	70	15	19	00.59	NB EXIT	COLL-DIST RD	NO	N	N	4			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-22-2010
55	70	15	19	00.59	NB EXIT	COLL-DIST RD	NO	N	N	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	02-12-2011
55	70	15	19	00.59	NB EXIT	M/L COL GORE	NO	N	-	1		1	ROLLOVER	UNSAF-SPD	DARK	DRY	FAT	04-18-2011
55	70	15	19	00.59	NB EXIT	M/L COL GORE	NO	N	-	1	1		ROLLOVER	D-W-I	DARK	DRY	N-I INJ	10-09-2012
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.38																		
55	70	15	19	00.66			NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	03-03-2008
55	70	15	19	00.66			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	05-06-2008
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.39																		
55	70	15	19	00.67		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-04-2009
55	70	15	19	00.67		M/L RAMP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-06-2009
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.40																		
55	70	15	19	00.68			NO	S	S	4			HEAD-ON	UNSAF-SPD	DYLGT	DRY	PDO	05-16-2008
55	70	15	19	00.68			NO	N	N	3	2		OTHER	FOL-CLOSE	DYLGT	WET	N-I INJ	08-19-2008
55	70	15	19	00.68			NO	S	S	2			REAR-END	INATT	DUSK	DRY	PDO	01-26-2011
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.41																		
55	70	15	19	00.69			NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	10-04-2012
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.44																		
55	70	15	19	00.72			NO	S	S	2			ANGLE-OTHER	UNSAF-SPD	DARK	DRY	PDO	09-05-2009
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: I-240, MM 121.46, I-240 SB ENT																		
55	70	15	19	00.74	I-240 SB ENT	COLL-DIST RD	NO	S	S	2			REAR-END	UNSAF-SPD	DARK	DRY	PDO	03-06-2008
55	70	15	19	00.74	I-240 SB ENT	COLL-DIST RD	NO	S	S	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	03-28-2008
55	70	15	19	00.74	I-240 SB ENT	M/L COL MERG	NO	S	S	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	05-05-2008
55	70	15	19	00.74	I-240 SB ENT	M/L COL MERG WKZONE	NO	S	S	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	09-25-2008
55	70	15	19	00.74	I-240 SB ENT	M/L COL MERG	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-09-2008
55	70	15	19	00.74	I-240 SB ENT	M/L COL MERG	NO	S	S	3			OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	01-02-2009
55	70	15	19	00.74	I-240 SB ENT	M/L COL MERG	NO	S	S	2			REAR-END	F-YIELD	DYLGT	OTHER	PDO	05-01-2009
55	70	15	19	00.74	I-240 SB ENT	COLL-DIST RD	NO	S	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DARK	DRY	P INJ	08-29-2009
55	70	15	19	00.74	I-240 SB ENT	COLL-DIST RD	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-30-2009
55	70	15	19	00.74	I-240 SB ENT	M/L COL MERG	NO	S	-	1	2		ROLLOVER	UNSAF-SPD	DARK	DRY	I INJ	12-06-2009
55	70	15	19	00.74	I-240 SB ENT	M/L COL MERG	NO	S	S	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	09-06-2010
55	70	15	19	00.74	I-240 SB ENT	COLL-DIST RD	NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	02-23-2011
55	70	15	19	00.74	I-240 SB ENT	COLL-DIST RD	NO	E	-	1			F-O BARR-CONCRETE	D-W-I	DARK	DRY	PDO	03-10-2011
55	70	15	19	00.74	I-240 SB ENT	M/L RAMP MRG	NO	W	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	WET	PDO	07-12-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.74	I-240 SB ENT	COLL-DIST RD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-30-2011
55	70	15	19	00.74	I-240 SB ENT	M/L COL MERG	NO	S	S	2			ANGLE-OTHER	F-YIELD	DARK	DRY	PDO	11-02-2011
55	70	15	19	00.74	I-240 SB ENT	COLL-DIST RD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-06-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.48										
55	70	15	19	00.76			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	01-16-2008
55	70	15	19	00.76			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	01-16-2008
55	70	15	19	00.76			NO	S	S	3	2		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	04-04-2008
55	70	15	19	00.76			NO	S	S	2	1		REAR-END	D-W-I	DARK	DRY	P INJ	11-28-2008
55	70	15	19	00.76			NO	N	N	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	04-24-2009
55	70	15	19	00.76			NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	04-09-2010
55	70	15	19	00.76			NO	S	S	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	06-27-2010
55	70	15	19	00.76			NO	N	N	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	10-06-2010
55	70	15	19	00.76			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	11-17-2010
55	70	15	19	00.76			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-26-2011
55	70	15	19	00.76			NO	N	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	06-22-2011
55	70	15	19	00.76		WKZONE	NO	N	N	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	10-26-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.51										
55	70	15	19	00.82		M/L RAMP GOR	NO	S	-	1			F-O DITCH	D-W-I	DARK	DRY	PDO	11-13-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.52										
55	70	15	19	00.83		RAMP	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-08-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	DRY	PDO	01-13-2008
55	70	15	19	00.83		RAMP	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-17-2008
55	70	15	19	00.83		RAMP	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	01-21-2008
55	70	15	19	00.83		RAMP	NO	S	-	2	1		OTHER	NO-IMP-ACT	DARK	DRY	P INJ	01-26-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	OTHER	DYLGT	DRY	PDO	02-12-2008
55	70	15	19	00.83		RAMP	NO	S	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	P INJ	02-23-2008
55	70	15	19	00.83		RAMP	NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	03-04-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	2		REAR-END	INATT	DYLGT	DRY	N-I INJ	03-19-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	03-27-2008
55	70	15	19	00.83		RAMP	NO	E	-	1	1		F-O DROP-OFF	UNSAF-SPD	DYLGT	DRY	N-I INJ	04-02-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	-	1			F-O RET-WALL	UNSAF-SPD	DYLGT	DRY	PDO	04-06-2008
55	70	15	19	00.83		RAMP	NO	S	S	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	04-11-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-14-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-15-2008
55	70	15	19	00.83		RAMP	NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	05-16-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	05-19-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	E	E	2	2		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	06-11-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-06-2008
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-09-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-16-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	07-17-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	INATT	DYLGT	DRY	PDO	07-28-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	08-07-2008
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	4			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	08-29-2008
55	70	15	19	00.83		M/L RAMP GOR	NO	S	S	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	09-01-2008
55	70	15	19	00.83		RAMP	NO	E	E	3	2		REAR-END	INATT	DYLGT	DRY	P INJ	09-08-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	09-14-2008
55	70	15	19	00.83		RAMP	NO	S	-	1			ROLLOVER	UNSAF-SPD	DARK	DRY	PDO	09-23-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	-	1			F-O BARR-CONCRETE	D-W-I	DARK	DRY	PDO	09-27-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-01-2008
55	70	15	19	00.83		RAMP	NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	10-22-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-14-2008
55	70	15	19	00.83		RAMP	NO	E	E	3	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	11-24-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DARK	DRY	P INJ	11-30-2008
55	70	15	19	00.83		RAMP	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-01-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-05-2008
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-10-2008
55	70	15	19	00.83		RAMP	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-29-2008
55	70	15	19	00.83		RAMP	NO	S	S	2	1		REAR-END	FOL-CLOSE	DARK	DRY	N-I INJ	01-04-2009
55	70	15	19	00.83		RAMP	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	01-13-2009
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	INATT	DAWN	DRY	PDO	01-20-2009
55	70	15	19	00.83		M/L RAMP MRG	NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	01-21-2009
55	70	15	19	00.83		M/L RAMP GOR	NO	W	-	1	1		ROLLOVER	SLEEPY	DYLGT	DRY	I INJ	01-22-2009
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	I INJ	01-23-2009
55	70	15	19	00.83		M/L RAMP MRG	NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-24-2009
55	70	15	19	00.83		RAMP	NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	02-04-2009
55	70	15	19	00.83		RAMP	NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	02-21-2009
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	03-09-2009
55	70	15	19	00.83		RAMP	NO	N	-	1			OTH-SINGLE-VEH	OTHER	DYLGT	DRY	PDO	03-14-2009
55	70	15	19	00.83		RAMP	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-15-2009
55	70	15	19	00.83		RAMP	NO	S	S	3	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	03-17-2009
55	70	15	19	00.83		M/L RAMP MRG WKZONE	NO	S	S	2			REAR-END	INATT	DYLGT	DRY	PDO	03-18-2009

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			RIGHT-ANGLE	FOL-CLOSE	DYLGT	DRY	PDO	03-20-2009
55	70	15	19	00.83		RAMP	NO	S	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	N-I INJ	03-25-2009
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-30-2009
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	5		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	06-05-2009
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	1		REAR-END	DEF-VEH	DYLGT	WET	P INJ	07-30-2009
55	70	15	19	00.83		RAMP	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-13-2009
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	09-18-2009
55	70	15	19	00.83		RAMP	NO	E	-	1			F-O GROUND	UNSAF-SPD	DYLGT	WET	PDO	11-15-2009
55	70	15	19	00.83		RAMP	NO	E	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	N-I INJ	12-13-2009
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2	1		ANGLE-OTHER	INATT	DYLGT	DRY	P INJ	02-12-2010
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	2		1	REAR-END	IMP-LN-CHG	DYLGT	DRY	FAT	03-05-2010
55	70	15	19	00.83		RAMP	NO	E	-	1			ROLLOVER	D-W-I	DARK	DRY	PDO	04-03-2010
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	WET	N-I INJ	04-16-2010
55	70	15	19	00.83		RAMP	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-30-2010
55	70	15	19	00.83		RAMP	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-10-2010
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-20-2010
55	70	15	19	00.83		RAMP	NO	E	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	N-I INJ	07-28-2010
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	2	2		REAR-END	IMP-LN-CHG	DARK	DRY	P INJ	12-01-2010
55	70	15	19	00.83		RAMP	NO	S	-	1	2		ROLLOVER	UNSAF-SPD	DARK	DRY	N-I INJ	12-18-2010
55	70	15	19	00.83		M/L RAMP MRG	NO	S	S	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	02-26-2011
55	70	15	19	00.83		M/L RAMP MRG	NO	S	-	1			F-O RET-WALL	UNSAF-SPD	DYLGT	WET	PDO	04-24-2011
55	70	15	19	00.83		M/L RAMP GOR	NO	W	-	1			F-O UTIL-POLE	UNSAF-SPD	DARK	WET	PDO	05-20-2011
55	70	15	19	00.83		RAMP	NO	E	-	1	1		F-O TREE	NO-IMP-ACT	DARK	DRY	P INJ	06-13-2011
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	3			OTHER	INATT	DYLGT	DRY	PDO	07-22-2011
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	07-25-2011
55	70	15	19	00.83		M/L RAMP GOR	NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	07-26-2011
55	70	15	19	00.83		M/L RAMP GOR	NO	E	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	WET	N-I INJ	08-07-2011
55	70	15	19	00.83		M/L RAMP MRG	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-09-2011
55	70	15	19	00.83		RAMP	NO	S	-	1			ROLLOVER	INATT	DYLGT	DRY	PDO	10-30-2011
55	70	15	19	00.83		M/L RAMP GOR	NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	12-14-2011
55	70	15	19	00.83		M/L RAMP GOR	NO	E	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	WET	PDO	12-14-2011
55	70	15	19	00.83		M/L RAMP MRG	NO	S	-	1	2		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	N-I INJ	05-20-2012
55	70	15	19	00.83		RAMP	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-25-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.53										
55	70	15	19	00.84		RAMP	NO	N	N	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	01-09-2008
55	70	15	19	00.84		RAMP	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	04-19-2008
55	70	15	19	00.84		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	01-15-2009

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.84		RAMP	NO	E	-	1			F-O UTIL-POLE	UNSAF-SPD	DARK	WET	PDO	10-04-2009
55	70	15	19	00.84		M/L RAMP GOR	NO	N	-	1			F-O TRAFF-SIGN	IMP-TURN	DARK	DRY	PDO	10-27-2009
55	70	15	19	00.84		RAMP	NO	N	-	1			ROLLOVER	UNSAF-SPD	DYLGT	WET	PDO	11-15-2009
55	70	15	19	00.84		RAMP	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-24-2009
55	70	15	19	00.84		M/L RAMP MRG	NO	W	-	1			F-O GUARDRL-FACE	NO-IMP-ACT	DARK	DRY	PDO	04-21-2011
55	70	15	19	00.84		M/L RAMP MRG	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	05-19-2011
55	70	15	19	00.84		M/L RAMP MRG	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-18-2011
55	70	15	19	00.84		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	10-29-2011
55	70	15	19	00.84		M/L RAMP GOR	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-25-2012
55	70	15	19	00.84		M/L RAMP MRG	NO	N	N	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	03-01-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 121.55										
55	70	15	19	00.86			NO	N	N	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-05-2008
55	70	15	19	00.86			NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	02-12-2010
55	70	15	19	00.86			NO	S	S	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	06-30-2010
55	70	15	19	00.86			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-24-2010
55	70	15	19	00.86			NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-13-2010
55	70	15	19	00.86			NO	N	-	1	1		F-O BARR-CONCRETE	OTHER	DAWN	ICE	N-I INJ	01-20-2011
55	70	15	19	00.86			NO	N	N	2	1		REAR-END	OTHER	DYLGT	DRY	P INJ	03-25-2011
55	70	15	19	00.86			NO	S	-	2	2		OTHER	NO-IMP-ACT	DYLGT	DRY	N-I INJ	06-02-2011
55	70	15	19	00.86			NO	S	S	3	1		ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	N-I INJ	11-11-2011
55	70	15	19	00.86		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-27-2012
55	70	15	19	00.86			NO	S	S	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	03-26-2012
55	70	15	19	00.86			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-20-2012
55	70	15	19	00.86			NO	N	N	2	2		REAR-END	UNSAF-SPD	DARK	DRY	P INJ	08-16-2012
55	70	15	19	00.86			NO	S	S	2			REAR-END	IMP-LN-CHG	DUSK	DRY	PDO	09-10-2012
55	70	15	19	00.86			NO	S	S	2			SIDESWIPE-SAME	F-YIELD	DYLGT	DRY	PDO	09-14-2012
55	70	15	19	00.86			NO	N	N	3	1		HEAD-ON	IMP-LN-CHG	DYLGT	DRY	I INJ	10-03-2012
55	70	15	19	00.86			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-12-2012
55	70	15	19	00.86			NO	N	N	2	1		HEAD-ON	FOL-CLOSE	DYLGT	DRY	I INJ	10-22-2012
55	70	15	19	00.86			NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	11-20-2012
55	70	15	19	00.86			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	11-27-2012
55	70	15	19	00.86			NO	E	E	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	12-12-2012
55	70	15	19	00.86			NO	S	S	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-13-2012
55	70	15	19	00.86			NO	W	-	1			F-O CULVERT	UNSAF-SPD	DARK	WET	PDO	12-14-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 121.56										
55	70	15	19	00.87			NO	E	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	P INJ	03-19-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 121.57										

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
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Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	3	1		REAR-END	INATT	DYLGT	DRY	P INJ	05-30-2008
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-22-2009
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-27-2009
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-06-2009
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	09-14-2009
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-26-2009
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-24-2009
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	3			OTHER	F-STOP	DYLGT	DRY	PDO	04-27-2010
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	01-27-2011
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	02-18-2011
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	UNSAF-SPD	DARK	DRY	PDO	03-25-2011
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	06-27-2011
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	3	1		REAR-END	INATT	DYLGT	DRY	P INJ	08-29-2011
55	70	15	19	00.88		COLL-DIST RD	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	11-03-2011
55	70	15	19	00.88		COLL-DIST RD	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	10-31-2012
55	70	15	19	00.88			NO	S	-	1			F-O BARR-CONCRETE	NO-IMP-ACT	DARK	DRY	PDO	12-20-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 121.58										
55	70	15	19	00.89		RAMP/COL MRG	NO	S	S	2			REAR-END	D-W-I	DARK	DRY	PDO	04-27-2008
55	70	15	19	00.89		COLL-DIST RD	NO	S	S	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	12-10-2009
55	70	15	19	00.89		COLL-DIST RD	NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-27-2010
55	70	15	19	00.89		COLL-DIST RD	NO	W	W	2	2		REAR-END	FOL-CLOSE	DAWN	DRY	P INJ	03-24-2011
55	70	15	19	00.89		COLL-DIST RD	NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-05-2011
55	70	15	19	00.89		COLL-DIST RD	NO	S	S	2			REAR-END	INATT	DARK	DRY	PDO	08-18-2011
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 121.60										
55	70	15	19	00.91			NO	S	S	2	1		ANGLE-OTHER	UNSAF-SPD	DYLGT	SNOW	N-I INJ	01-27-2009
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 121.61										
55	70	15	19	00.92		M/L LOOP MRG	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-18-2008
55	70	15	19	00.92		M/L LOOP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-05-2008
55	70	15	19	00.92		M/L LOOP MRG	NO	E	E	2			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	09-24-2008
55	70	15	19	00.92		M/L LOOP MRG	NO	E	E	2	1		REAR-END	F-YIELD	DYLGT	DRY	P INJ	03-26-2010
55	70	15	19	00.92		M/L LOOP MRG	NO	E	E	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	07-14-2010
55	70	15	19	00.92		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-26-2010
55	70	15	19	00.92		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	09-28-2010
55	70	15	19	00.92		M/L LOOP MRG	NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	11-24-2010
55	70	15	19	00.92		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-10-2010
55	70	15	19	00.92		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-18-2010
55	70	15	19	00.92		M/L LOOP MRG	NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	01-07-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Created: 06/07/2013 by Ken Hess

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Cnty	City	CS #	Int. #	Mile Post	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.92	M/L LOOP MRG	NO	E	E	2			SIDESWIPE-OPP	UNSAF-SPD	DYLGT	WET	PDO	04-29-2012
55	70	15	19	00.92	M/L LOOP MRG	NO	E	E	2	1		REAR-END	IMP-LN-CHG	DYLGT	WET	N-I INJ	05-11-2012
55	70	15	19	00.92		NO	S	S	3			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	05-21-2012
55	70	15	19	00.92	M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-25-2012

(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.62

Cnty	City	CS #	Int. #	Mile Post	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.93		NO	S	-	1			F-O RET-WALL	DEF-VEH	DYLGT	DRY	PDO	07-13-2009
55	70	15	19	00.93		NO	S	S	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-09-2010
55	70	15	19	00.93		NO	S	S	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	09-03-2010
55	70	15	19	00.93		NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	03-24-2012
55	70	15	19	00.93		NO	N	N	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	03-27-2012
55	70	15	19	00.93		NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	10-03-2012
55	70	15	19	00.93		NO	W	W	2	1		REAR-END	UNSAF-SPD	DYLGT	WET	P INJ	10-13-2012

(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.63

Cnty	City	CS #	Int. #	Mile Post	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-28-2008
55	70	15	19	00.94	M/L LOOP GOR	NO	E	-	1		1	ROLLOVER	UNSAF-SPD	DYLGT	DRY	FAT	03-01-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	03-05-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	03-10-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2	2		REAR-END	OTHER	DYLGT	DRY	P INJ	03-11-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	03-24-2008
55	70	15	19	00.94	LOOP	NO	S	S	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	04-05-2008
55	70	15	19	00.94	LOOP	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-18-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DARK	DRY	PDO	04-26-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	05-07-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-19-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-03-2008
55	70	15	19	00.94	M/L LOOP MRG INCIDENT	NO	N	N	2	5		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	06-04-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-04-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2	2		HEAD-ON	F-YIELD	DYLGT	DRY	P INJ	06-04-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-04-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-06-2008
55	70	15	19	00.94	M/L LOOP GOR	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	06-13-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	W	W	2			REAR-END	INATT	DYLGT	DRY	PDO	06-17-2008
55	70	15	19	00.94	LOOP	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-23-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2			ANGLE-OTHER	F-YIELD	DYLGT	DRY	PDO	07-15-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	07-16-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	W	W	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	07-22-2008
55	70	15	19	00.94	M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	07-25-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-15-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	08-21-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	08-21-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-04-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-04-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-07-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-09-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-09-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	09-11-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DARK	DRY	PDO	09-20-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-22-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-28-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	WET	P INJ	10-14-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	10-21-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-27-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	10-30-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	11-04-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	11-20-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	12-10-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	12-12-2008
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DARK	DRY	PDO	01-08-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DARK	DRY	PDO	01-08-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3			OTHER	UNSAF-SPD	DYLGT	WET	PDO	01-29-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	01-30-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	01-30-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	02-10-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-11-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	02-12-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	02-16-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	02-21-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	02-26-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	03-03-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	S	S	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	03-05-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-05-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	OTHER	DYLGT	DRY	PDO	03-07-2009
55	70	15	19	00.94		LOOP	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-08-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	03-10-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-19-2009

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		M/L LOOP MRG	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	03-30-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-04-2009
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-09-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-15-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-16-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-STOP	DYLGT	DRY	PDO	04-17-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	04-17-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-18-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-20-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-22-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	04-25-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	04-27-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-28-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		OTHER	INATT	DYLGT	DRY	P INJ	05-01-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-01-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	05-02-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	05-03-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-04-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	05-12-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	05-15-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	05-18-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	05-23-2009
55	70	15	19	00.94		M/L LOOP MRG	YES	N	N	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	05-27-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		ANGLE-OTHER	F-YIELD	DYLGT	DRY	P INJ	06-04-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-04-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-05-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	IMP-BACK	DYLGT	DRY	PDO	06-09-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	06-12-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-17-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-25-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	INATT	DYLGT	DRY	PDO	06-26-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-29-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-02-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	07-05-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-09-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-09-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-19-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-20-2009

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-24-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	07-25-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	07-27-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	07-27-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-30-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-31-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-04-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-07-2009
55	70	15	19	00.94		M/L LOOP GOR	NO	E	-	1	2		F-O CURB	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-09-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-12-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-14-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			ANGLE-TURNING	FOL-CLOSE	DYLGT	DRY	PDO	08-23-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DAWN	DRY	N-I INJ	08-24-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-27-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3			OTHER	INATT	DYLGT	DRY	PDO	08-28-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	08-30-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-02-2009
55	70	15	19	00.94		LOOP	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-02-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-09-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	WET	PDO	09-17-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-18-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-24-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-25-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-29-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	10-02-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			OTHER	F-YIELD	DYLGT	DRY	PDO	10-02-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	10-13-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	INATT	DUSK	MUD	N-I INJ	10-17-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	IMP-BACK	DYLGT	DRY	PDO	10-17-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	10-20-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	10-23-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	10-24-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	10-30-2009
55	70	15	19	00.94		M/L LOOP GOR	NO	E	-	1			ROLLOVER	INATT	DYLGT	DRY	PDO	11-14-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-19-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	IMP-START	DYLGT	DRY	PDO	11-19-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-24-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	11-28-2009

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-03-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	12-04-2009
55	70	15	19	00.94		M/L LOOP GOR	NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	12-07-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	FOL-CLOSE	DUSK	DRY	P INJ	12-10-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-17-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			HEAD-ON	INATT	DYLGT	DRY	PDO	12-18-2009
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	12-31-2009
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	01-15-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-17-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-20-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-25-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DARK	DRY	PDO	01-25-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3			OTHER	INATT	DYLGT	DRY	PDO	02-17-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	02-18-2010
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	02-20-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	02-20-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-22-2010
55	70	15	19	00.94		LOOP	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	02-23-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-23-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	02-23-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	03-06-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	03-08-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	03-16-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-25-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	03-28-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	03-30-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-04-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-06-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-08-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	WET	P INJ	04-16-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-19-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	04-20-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	IMP-START	DYLGT	DRY	P INJ	04-27-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-03-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	05-04-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	05-08-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	05-10-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	05-11-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	05-13-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-09-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-10-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	06-12-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	IMP-START	DYLGT	DRY	PDO	06-20-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	06-21-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	06-21-2010
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	06-21-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-24-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	06-24-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-28-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	06-28-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-29-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	W	-	1			ROLLOVER	DEF-VEH	DARK	DRY	PDO	07-11-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-22-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-23-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	3		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-23-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	07-26-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	07-26-2010
55	70	15	19	00.94		M/L LOOP GOR	NO	N	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	P INJ	07-26-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-06-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	08-10-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-12-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-12-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-16-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-18-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-27-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	08-29-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-31-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-03-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-03-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-14-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-18-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-29-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-01-2010
55	70	15	19	00.94		M/L LOOP GOR WKZONE	NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	10-01-2010
55	70	15	19	00.94		M/L LOOP GOR	NO	W	-	1	1		F-O GROUND	NO-IMP-ACT	DYLGT	DRY	N-I INJ	10-01-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-09-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	E	N	2	1		RIGHT-ANGLE	FOL-CLOSE	DYLGT	DRY	P INJ	10-14-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	10-22-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	10-22-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	WET	P INJ	10-22-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	10-23-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-24-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	10-27-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	10-27-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	INATT	DYLGT	DRY	PDO	11-05-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-09-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-13-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-16-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-16-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	11-17-2010
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	11-17-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-24-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-02-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-02-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DARK	DRY	P INJ	12-03-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	12-04-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	E	E	2			SIDESWIPE-SAME	F-YIELD	DYLGT	DRY	PDO	12-06-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-11-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-17-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-17-2010
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-22-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-23-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-23-2010
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	01-07-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	01-16-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DARK	DRY	PDO	01-27-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-31-2011
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	WET	PDO	02-11-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-12-2011
55	70	15	19	00.94		LOOP	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-12-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	02-15-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-21-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-28-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		LOOP	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	03-03-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-03-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-03-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	03-05-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	03-10-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	03-26-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-29-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-01-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	04-09-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-16-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-19-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DAWN	DRY	PDO	04-20-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-03-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-11-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	05-13-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-19-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-20-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-21-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	05-25-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	05-27-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-02-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-04-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-09-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	IMP-PASS	DYLGT	DRY	PDO	06-13-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	06-28-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-30-2011
55	70	15	19	00.94		LOOP	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	07-08-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-14-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	07-22-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-22-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-23-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3	2		OTHER	INATT	DYLGT	DRY	N-I INJ	07-26-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	07-27-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	08-07-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-08-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	08-09-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-10-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		ANGLE-OTHER	IMP-PASS	DARK	DRY	N-I INJ	08-22-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	3		REAR-END	FOL-CLOSE	DAWN	DRY	N-I INJ	08-26-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-30-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	09-06-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	09-09-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-13-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-18-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	E	2			REAR-END	INATT	DYLGT	DRY	PDO	09-18-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-30-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	10-13-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3			REAR-END	F-YIELD	DARK	DRY	PDO	10-14-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	10-17-2011
55	70	15	19	00.94		M/L LOOP MRG	NO			2			REAR-END	OTHER	DYLGT	DRY	PDO	10-19-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	F-YIELD	DYLGT	DRY	N-I INJ	10-20-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	10-21-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-25-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-28-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-01-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	11-04-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-05-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	11-07-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-17-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			ANGLE-OTHER	IMP-LN-CHG	DARK	DRY	PDO	11-19-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	11-21-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DARK	WET	PDO	11-21-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N		2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-05-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	INATT	DARK	DRY	P INJ	12-12-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	12-13-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	12-16-2011
55	70	15	19	00.94		M/L LOOP GOR	NO	W	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	WET	PDO	12-19-2011
55	70	15	19	00.94		LOOP	NO	E	-	1			ROLLOVER	UNSAF-SPD	DAWN	WET	PDO	12-26-2011
55	70	15	19	00.94		M/L LOOP GOR	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-28-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	DRY	PDO	12-30-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	12-30-2011
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	01-11-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DARK	DRY	PDO	01-19-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-08-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DARK	WET	PDO	02-13-2012

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
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Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-14-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-14-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	02-17-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	03-01-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	03-03-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3			REAR-END	INATT	DYLGT	DRY	PDO	03-09-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	W	-	1			F-O TRAFF-SIGN	FOL-CLOSE	DYLGT	WET	PDO	03-19-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DARK	WET	PDO	04-03-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-06-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	04-14-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-20-2012
55	70	15	19	00.94			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-21-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-23-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-25-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	05-04-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-06-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-08-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DARK	WET	PDO	05-11-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3	1		OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	05-13-2012
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	05-14-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	3			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	05-15-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2	2		ANGLE-OTHER	F-YIELD	DYLGT	WET	P INJ	05-20-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-13-2012
55	70	15	19	00.94			NO	N	N	2			SIDESWIPE-SAME	FOL-CLOSE	DYLGT	DRY	PDO	06-18-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	-	2			SIDESWIPE-SAME	INATT	DYLGT	WET	PDO	06-20-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-30-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-04-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	OTHER	DYLGT	DRY	PDO	07-05-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			HEAD-ON	F-YIELD	DYLGT	DRY	PDO	07-10-2012
55	70	15	19	00.94		M/L LOOP GOR	NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	07-11-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-12-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-15-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-24-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-30-2012
55	70	15	19	00.94			NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-30-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-30-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	2		REAR-END	FOL-CLOSE	DARK	DRY	N-I INJ	08-01-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-22-2012

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			HEAD-ON	INATT	DUSK	DRY	PDO	09-28-2012
55	70	15	19	00.94		M/L LOOP GOR	NO	E	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	WET	PDO	09-29-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	WET	PDO	09-29-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	09-30-2012
55	70	15	19	00.94			NO	N	N	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	10-04-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-05-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	10-09-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-17-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-27-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	10-29-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	10-29-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			ANGLE-OTHER	INATT	DYLGT	DRY	PDO	11-02-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	10		REAR-END	INATT	DYLGT	DRY	P INJ	11-02-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	11-17-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	11-19-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-02-2012
55	70	15	19	00.94			NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	12-14-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	DEF-VEH	DARK	DRY	PDO	12-18-2012
55	70	15	19	00.94		M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-26-2012

(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: I-240, MM 121.64, NB C/D RD.

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.95	NB C/D RD.	WKZONE	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-27-2008

(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: I-240, MM 121.65, I-240 UP

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.96	I-240 UP	X-ST BTM TRM	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-28-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	02-08-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	WET	N-I INJ	02-11-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	02-11-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-05-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-16-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	1		ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	P INJ	05-21-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-06-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	06-13-2008
55	70	15	19	00.96	I-240 UP	X-ST BTM TRM	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-16-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	1		ANGLE-OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	07-16-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	3	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	07-29-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	09-22-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-01-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	3	1		OTHER	FOL-CLOSE	DAWN	DRY	P INJ	10-03-2008
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	3	1		OTHER	INATT	DYLGT	DRY	N-I INJ	11-06-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	11-28-2008
55	70	15	19	00.96	I-240 UP	X-ST BTM TRM	YES	E	E	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	01-21-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	02-03-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	02-25-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	3	1		OTHER	FOL-CLOSE	DARK	DRY	I INJ	03-06-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	03-13-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	03-16-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	03-25-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	2		REAR-END	DEF-VEH	DYLGT	SNOW	P INJ	03-28-2009
55	70	15	19	00.96	I-240 UP	X-ST BTM TRM	NO	N	N	2	1		HEAD-ON	OTHER	DYLGT	DRY	N-I INJ	04-04-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	04-24-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-01-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-30-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	P INJ	08-18-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	-	1	1		ROLLOVER	D-W-I	DARK	DRY	P INJ	09-10-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	3	2		HEAD-ON	UNSAF-SPD	DYLGT	WET	P INJ	09-19-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-23-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-10-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	INATT	DARK	DRY	PDO	11-11-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	3	3		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	12-03-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-03-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-10-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	12-21-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	12-22-2009
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	01-18-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	01-18-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	01-21-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			SIDESWIPE-SAME	OTHER	DYLGT	DRY	PDO	03-10-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-11-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	-	1	1		F-O BARR-CONCRETE	NO-IMP-ACT	DARK	DRY	N-I INJ	03-12-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	3		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	03-18-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	SNOW	PDO	03-20-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			HEAD-ON	UNSAF-SPD	DYLGT	SNOW	PDO	03-20-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	3	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	03-25-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	1		SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	N-I INJ	04-02-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	5			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	04-09-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	05-07-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	05-18-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	-	1	1		ROLLOVER	NO-IMP-ACT	DARK	DRY	N-I INJ	05-27-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-01-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	3	1		OTHER	UNSAF-SPD	DYLGT	DRY	N-I INJ	06-17-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	06-18-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	06-22-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-28-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-12-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	DRY	N-I INJ	07-30-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-04-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	08-17-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	N-I INJ	08-19-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-20-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	08-21-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	3	2		OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	08-24-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	3	3		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-26-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	DEF-VEH	DYLGT	DRY	PDO	09-01-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-02-2010
55	70	15	19	00.96	I-240 UP	BRIDGE	NO	N	N	3	1		ANGLE-OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	09-07-2010
55	70	15	19	00.96	I-240 UP	BRIDGE	NO	N	N	2			HEAD-ON	DEF-VEH	DYLGT	DRY	PDO	09-24-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	WET	PDO	10-22-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			ANGLE-OTHER	NEG-DRVING	DYLGT	WET	PDO	10-22-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	FOL-CLOSE	DARK	WET	PDO	10-22-2010
55	70	15	19	00.96	I-240 UP	X-ST BTM TRM	NO	E	E	2	1		REAR-END	FOL-CLOSE	DARK	DRY	I INJ	10-26-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	11-16-2010
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	01-24-2011
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	01-24-2011
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	02-25-2011
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	05-02-2011
55	70	15	19	00.96	I-240 UP	BRIDGE	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	05-25-2011
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			OTHER	OTHER	DYLGT	DRY	PDO	09-28-2011
55	70	15	19	00.96	I-240 UP	BRIDGE	NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DARK	DRY	PDO	10-20-2011
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	11-10-2011
55	70	15	19	00.96	I-240 UP	M/L LOOP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-27-2011
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	03-27-2012

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	3	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	04-03-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	3	1		REAR-END	IMP-LN-CHG	DARK	DRY	P INJ	04-09-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	04-10-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	3	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	04-13-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-01-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	05-01-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	05-07-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			HEAD-ON	UNSAF-SPD	DYLGT	WET	PDO	05-11-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-15-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	07-11-2012
55	70	15	19	00.96	I-240 UP	M/L LOOP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-07-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	W	W	2			REAR-END	IMP-LN-CHG	DAWN	DRY	PDO	11-12-2012
55	70	15	19	00.96	I-240 UP	BR ON X-ROAD	NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	12-10-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35		AT: I-240,		MM 121.66,		SB C/D RD.							
55	70	15	19	00.97	SB C/D RD.		NO	N	N	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	12-07-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.67									
55	70	15	19	00.98		INCIDENT	NO	N	N	2			REAR-END	NO-IMP-ACT	DARK	DRY	PDO	04-19-2008
55	70	15	19	00.98			NO	S	S	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	06-05-2008
55	70	15	19	00.98			NO	N	-	1			OTH-SINGLE-VEH	NO-IMP-ACT	DYLGT	OTHER	PDO	12-01-2008
55	70	15	19	00.98			NO	N	-	1	1		F-O RET-WALL	SLEEPY	DARK	DRY	I INJ	01-30-2009
55	70	15	19	00.98			NO	N	-	1			F-O BARR-CONCRETE	NO-IMP-ACT	DYLGT	WET	PDO	02-01-2010
55	70	15	19	00.98			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-05-2010
55	70	15	19	00.98			NO	S	S	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	11-03-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.68									
55	70	15	19	00.99			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	08-19-2008
55	70	15	19	00.99			NO	N	-	1	1		F-O CULVERT	UNSAF-SPD	DYLGT	DRY	P INJ	03-24-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.69									
55	70	15	19	01.00			NO	S	S	2			REAR-END	NO-IMP-ACT	DYLGT	DRY	PDO	09-05-2012
55	70	15	19	01.00			NO	S	S	3	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-30-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.70									
55	70	15	19	01.01		LOOP	NO	N	-	1			ROLLOVER	UNSAF-SPD	DYLGT	DRY	PDO	01-21-2008
55	70	15	19	01.01		M/L LOOP MRG	NO	W	-	1	1		F-O RET-WALL	FOL-CLOSE	DYLGT	DRY	P INJ	04-28-2008
55	70	15	19	01.01		LOOP	NO	S	N	2			OTHER	L-CENTER	DYLGT	DRY	PDO	04-30-2008
55	70	15	19	01.01		M/L LOOP MRG	NO	W	W	2	2		ANGLE-OTHER	D-W-I	DARK	DRY	N-I INJ	05-03-2008
55	70	15	19	01.01		M/L LOOP GOR	NO	N	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	07-02-2008
55	70	15	19	01.01		M/L LOOP GOR	NO	N	N	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	06-15-2009
55	70	15	19	01.01		M/L LOOP MRG	NO	W	W	2			OTHER	OTHER	DARK	WET	PDO	02-04-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	01.01		M/L LOOP MRG	NO	W	W	2			REAR-END	INATT	DARK	DRY	PDO	04-28-2010
55	70	15	19	01.01		M/L LOOP GOR	NO	N	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	10-09-2010
55	70	15	19	01.01		M/L LOOP MRG	NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	03-07-2011
55	70	15	19	01.01		M/L LOOP MRG	NO	W	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	PDO	12-03-2011
55	70	15	19	01.01		M/L LOOP MRG	NO	W	-	1			F-O TRAFF-SIGN	INATT	DYLGT	DRY	PDO	12-16-2011
55	70	15	19	01.01		M/L LOOP GOR	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-24-2012
55	70	15	19	01.01		M/L LOOP GOR	NO	N	N	3			OTHER	UNSAF-SPD	DYLGT	DRY	PDO	01-31-2012
55	70	15	19	01.01		M/L LOOP MRG	NO	W	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	PDO	03-08-2012
55	70	15	19	01.01		M/L LOOP MRG	NO	W	W	2	1		HEAD-ON	UNSAF-SPD	DYLGT	WET	P INJ	03-19-2012
55	70	15	19	01.01		M/L LOOP MRG	NO	W	W	2			OTHER	NO-IMP-ACT	DARK	WET	PDO	04-03-2012
55	70	15	19	01.01		M/L LOOP MRG	NO	W	-	1	1		F-O BARR-CONCRETE	FOL-CLOSE	DYLGT	WET	N-I INJ	04-07-2012
55	70	15	19	01.01		M/L LOOP MRG	NO	W	W	2			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	04-28-2012
55	70	15	19	01.01		M/L LOOP MRG	NO	W	-	1			F-O GUARDRL-FACE	FOL-CLOSE	DYLGT	WET	PDO	05-11-2012
55	70	15	19	01.01		M/L LOOP MRG	NO	W	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	P INJ	09-29-2012
55	70	15	19	01.01		M/L LOOP MRG	NO	W	-	1	2		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	N-I INJ	09-29-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.71										
55	70	15	19	01.02		M/L LOOP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-22-2008
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	05-13-2008
55	70	15	19	01.02		M/L LOOP MRG	NO	N	W	2			RIGHT-ANGLE	FOL-CLOSE	DARK	DRY	PDO	06-01-2008
55	70	15	19	01.02		M/L LOOP GOR	NO	W	-	1			F-O POLE-OTHER	UNSAF-SPD	DYLGT	DRY	PDO	06-08-2008
55	70	15	19	01.02		LOOP	NO	N	-	1	1		F-O UTIL-POLE	UNSAF-SPD	DYLGT	DRY	P INJ	08-25-2008
55	70	15	19	01.02		LOOP	NO	S	-	1	2		ROLLOVER	UNSAF-SPD	DARK	DRY	P INJ	03-01-2009
55	70	15	19	01.02		LOOP	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-23-2009
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	06-04-2009
55	70	15	19	01.02		M/L LOOP MRG	NO	S	S	2			SIDESWIPE-SAME	OTHER	DYLGT	DRY	PDO	06-16-2009
55	70	15	19	01.02		M/L LOOP GOR	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	N-I INJ	07-09-2009
55	70	15	19	01.02		LOOP	NO	W	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	DRY	PDO	07-20-2009
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			ANGLE-TURNING	IMP-TURN	DARK	DRY	PDO	08-24-2009
55	70	15	19	01.02		M/L LOOP GOR	NO	W	-	1			F-O POLE-OTHER	UNSAF-SPD	DYLGT	WET	PDO	10-04-2009
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	N-I INJ	10-31-2009
55	70	15	19	01.02		X-RD LOOP MR	NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	04-15-2010
55	70	15	19	01.02		M/L LOOP GOR	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	I INJ	04-25-2010
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	05-03-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	05-15-2010
55	70	15	19	01.02		M/L LOOP MRG	NO	N	S	2			REAR-END	INATT	DYLGT	DRY	PDO	07-22-2010
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2	2		OTHER	IMP-LN-CHG	DUSK	DRY	P INJ	08-01-2010
55	70	15	19	01.02		M/L LOOP GOR	NO	W	-	1			F-O CURB	IMP-TURN	DYLGT	DRY	PDO	08-14-2010
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	3	1		ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	P INJ	08-17-2010
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	08-29-2010
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	10-11-2010
55	70	15	19	01.02		M/L LOOP GOR	NO	W	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	WET	PDO	03-08-2011
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	03-20-2011
55	70	15	19	01.02		M/L LOOP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-14-2011
55	70	15	19	01.02		M/L LOOP MRG	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	N-I INJ	06-28-2011
55	70	15	19	01.02		LOOP	NO	E	-	1	1		F-O DITCH	UNSAF-SPD	DARK	DRY	P INJ	11-03-2011
55	70	15	19	01.02		LOOP	NO	W	-	1			F-O UTIL-POLE	UNSAF-SPD	DAWN	WET	PDO	01-22-2012
55	70	15	19	01.02		M/L LOOP GOR	NO	W	W	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	01-25-2012
55	70	15	19	01.02		M/L LOOP GOR	NO	W	-	1	1		F-O OTHER	UNSAF-SPD	DYLGT	WET	P INJ	09-27-2012
55	70	15	19	01.02		M/L LOOP MRG	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-18-2012
55	70	15	19	01.02		M/L LOOP MRG	NO	S	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	N-I INJ	11-29-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.74										
55	70	15	19	01.05			NO	S	-	1			F-O RET-WALL	NO-IMP-ACT	DYLGT	DRY	PDO	01-16-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.75										
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	01-18-2008
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-30-2008
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	IMP-PARK	DUSK	DRY	PDO	03-08-2008
55	70	15	19	01.06		COLL-DIST RD	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-15-2008
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-29-2008
55	70	15	19	01.06		COLL-DIST RD	NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-19-2008
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-22-2009
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	03-25-2009
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-29-2009
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-08-2009
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-11-2009
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	10-07-2009
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-20-2009
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-05-2010
55	70	15	19	01.06		COLL-DIST RD	NO	N	-	1			F-O UTIL-POLE	D-W-I	DYLGT	DRY	PDO	04-09-2010
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-10-2010
55	70	15	19	01.06			NO	S	-	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	04-28-2011
55	70	15	19	01.06			NO	N	N	5	5		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	05-05-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	01.06			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-20-2011
55	70	15	19	01.06			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-17-2011
55	70	15	19	01.06			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-22-2011
55	70	15	19	01.06			NO	S	S	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-07-2011
55	70	15	19	01.06			NO	S	S	2			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	08-17-2011
55	70	15	19	01.06			NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	09-15-2011
55	70	15	19	01.06			NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	01-23-2012
55	70	15	19	01.06			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-13-2012
55	70	15	19	01.06			NO	N	-	1			F-O BARR-CONCRETE	NO-IMP-ACT	DARK	DRY	PDO	03-16-2012
55	70	15	19	01.06			NO	S	S	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	03-27-2012
55	70	15	19	01.06		COLL-DIST RD	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	04-03-2012
55	70	15	19	01.06			NO	S	S	2	4		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-07-2012
55	70	15	19	01.06			NO	N	N	2			SIDESWIPE-SAME	INATT	DYLGT	DRY	PDO	07-14-2012
55	70	15	19	01.06			NO	S	S	2	2		REAR-END	D-W-I	DYLGT	DRY	I INJ	09-01-2012
55	70	15	19	01.06			NO	S	-	1			F-O UTIL-POLE	IMP-TURN	DYLGT	DRY	PDO	09-16-2012
55	70	15	19	01.06			NO	S	S	2	2		REAR-END	SLEEPY	DYLGT	DRY	P INJ	10-03-2012
55	70	15	19	01.06			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-01-2012
55	70	15	19	01.06			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	11-16-2012
55	70	15	19	01.06			NO	N	N	3			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	11-22-2012
55	70	15	19	01.06			NO	N	-	1			ROLLOVER	UNSAF-SPD	DYLGT	DRY	PDO	11-22-2012
55	70	15	19	01.06			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-06-2012
55	70	15	19	01.06			NO	S	S	3			OTHER	FOL-CLOSE	DARK	DRY	PDO	12-07-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 121.76										
55	70	15	19	01.07		COLL-DIST RD	NO	S	-	1	2		F-O EMBANKMENT	UNSAF-SPD	DARK	DRY	P INJ	07-31-2008
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 121.77										
55	70	15	19	01.08			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	02-11-2009
55	70	15	19	01.08		INCIDENT	NO	S	N	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	02-24-2009
55	70	15	19	01.08			NO	S	S	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	01-14-2011
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 121.78										
55	70	15	19	01.09			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	01-30-2008
55	70	15	19	01.09			NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	ICE	PDO	01-30-2010
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 121.80										
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-18-2008
55	70	15	19	01.11		M/L RAMP MRG	NO	W	W	2			REAR-END	INATT	DYLGT	DRY	PDO	01-26-2008
55	70	15	19	01.11		M/L RAMP GOR	NO	W	W	2	1		REAR-END	IMP-BACK	DYLGT	DRY	P INJ	03-07-2008
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1	1		F-O DITCH	UNSAF-SPD	DYLGT	DRY	I INJ	03-16-2008
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-04-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
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Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	05-01-2008
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1	1		F-O GROUND	UNSAF-SPD	DYLGT	DRY	N-I INJ	05-05-2008
55	70	15	19	01.11		RAMP	NO	W	-	1	1		F-O DITCH	NO-IMP-ACT	DYLGT	DRY	I INJ	05-21-2008
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	05-22-2008
55	70	15	19	01.11		RAMP	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-10-2008
55	70	15	19	01.11		M/L RAMP GOR	NO	N	-	1			F-O UTIL-POLE	UNSAF-SPD	DARK	DRY	PDO	07-11-2008
55	70	15	19	01.11		RAMP	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-31-2008
55	70	15	19	01.11		RAMP	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-09-2008
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1	1		F-O GROUND	D-W-I	DARK	DRY	I INJ	08-22-2008
55	70	15	19	01.11		M/L RAMP GOR	NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	08-30-2008
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-20-2008
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-03-2008
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	10-09-2008
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	11-19-2008
55	70	15	19	01.11		RAMP	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DARK	WET	P INJ	12-08-2008
55	70	15	19	01.11		RAMP	NO	W	W	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-29-2008
55	70	15	19	01.11		M/L RAMP MRG	NO	N	-	1			F-O UTIL-POLE	F-YIELD	DYLGT	DRY	PDO	01-30-2009
55	70	15	19	01.11		M/L RAMP GOR	NO	N	-	1	2		ROLLOVER	UNSAF-SPD	DYLGT	DRY	I INJ	02-05-2009
55	70	15	19	01.11		RAMP	NO	N	-	1			ROLLOVER	INATT	DARK	DRY	PDO	02-08-2009
55	70	15	19	01.11		RAMP	NO	N	-	1			ROLLOVER	UNSAF-SPD	DYLGT	DRY	PDO	04-16-2009
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	UNSAF-SPD	DARK	WET	PDO	04-18-2009
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	04-27-2009
55	70	15	19	01.11		RAMP	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	P INJ	06-03-2009
55	70	15	19	01.11		RAMP	NO	N	-	1			F-O EMBANKMENT	UNSAF-SPD	DARK	DRY	PDO	06-24-2009
55	70	15	19	01.11		RAMP	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	10-06-2009
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1			F-O UTIL-POLE	UNSAF-SPD	DYLGT	WET	PDO	11-29-2009
55	70	15	19	01.11		RAMP	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-22-2009
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	N-I INJ	01-24-2010
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	02-12-2010
55	70	15	19	01.11		M/L RAMP GOR	NO	N	-	1	1		ROLLOVER	NO-IMP-ACT	DYLGT	DRY	N-I INJ	04-11-2010
55	70	15	19	01.11		M/L RAMP GOR	NO	N	-	1	1		F-O DITCH	D-W-I	DARK	DRY	P INJ	04-25-2010
55	70	15	19	01.11		RAMP	NO	N	-	1	1		F-O DITCH	UNSAF-SPD	DARK	DRY	P INJ	05-02-2010
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			SIDESWIPE-OPP	OTHER	DYLGT	DRY	PDO	06-08-2010
55	70	15	19	01.11		RAMP	NO	W	-	1			F-O CURB	UNSAF-SPD	DARK	DRY	PDO	07-09-2010
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-19-2010
55	70	15	19	01.11		RAMP	NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	07-20-2010
55	70	15	19	01.11		M/L RAMP MRG	NO	W	W	2			REAR-END	INATT	DYLGT	DRY	PDO	07-26-2010
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1	2		ROLLOVER	UNSAF-SPD	DARK	DRY	N-I INJ	08-10-2010

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	01.11		M/L RAMP GOR	NO	W	W	2			REAR-END	UNSAF-SPD	DARK	WET	PDO	10-22-2010
55	70	15	19	01.11		RAMP	NO	N	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DARK	DRY	PDO	11-06-2010
55	70	15	19	01.11		RAMP	NO	S	-	1	1		F-O UTIL-POLE	OTHER	DYLGT	DRY	P INJ	01-07-2011
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1			F-O UTIL-POLE	UNSAF-SPD	DARK	DRY	PDO	02-27-2011
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1	1		ROLLOVER	D-W-I	DARK	DRY	P INJ	03-13-2011
55	70	15	19	01.11		M/L RAMP GOR	NO	E	W	3	1		HEAD-ON	UNSAF-SPD	DYLGT	WET	P INJ	04-24-2011
55	70	15	19	01.11		RAMP	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	N-I INJ	05-05-2011
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	05-05-2011
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-09-2011
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1	1		F-O CULVERT	UNSAF-SPD	DYLGT	DRY	N-I INJ	05-21-2011
55	70	15	19	01.11		M/L RAMP MRG	NO	N	W	2			RIGHT-ANGLE	INATT	DYLGT	DRY	PDO	06-01-2011
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	DRY	PDO	07-15-2011
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1		1	ROLLOVER	UNSAF-SPD	DARK	DRY	FAT	07-23-2011
55	70	15	19	01.11		M/L RAMP GOR	NO	N	-	1	2		ROLLOVER	UNSAF-SPD	DARK	DRY	N-I INJ	08-13-2011
55	70	15	19	01.11		RAMP	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-13-2011
55	70	15	19	01.11		M/L RAMP GOR	NO	N	-	1			F-O DITCH	UNSAF-SPD	DARK	DRY	PDO	08-14-2011
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	10-10-2011
55	70	15	19	01.11		RAMP	NO	N	-	1			ROLLOVER	UNSAF-SPD	DARK	DRY	PDO	11-24-2011
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2	2		REAR-END	F-YIELD	DYLGT	WET	N-I INJ	12-14-2011
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2	1		REAR-END	INATT	DARK	WET	N-I INJ	02-10-2012
55	70	15	19	01.11		M/L RAMP GOR	NO	W	-	1	1		OTH-SINGLE-VEH	UNSAF-SPD	DYLGT	DRY	P INJ	02-22-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-23-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-23-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	W	-	1	1		ROLLOVER	NO-IMP-ACT	DYLGT	DRY	N-I INJ	05-03-2012
55	70	15	19	01.11		M/L RAMP GOR	NO	N	-	1	1		ROLLOVER	UNSAF-SPD	DARK	DRY	P INJ	05-10-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-02-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-09-2012
55	70	15	19	01.11		RAMP	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-24-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-15-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-25-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-26-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-25-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	W	W	2			REAR-END	INATT	DYLGT	DRY	PDO	11-15-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	12-04-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	12-14-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	12-19-2012
55	70	15	19	01.11		M/L RAMP MRG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DARK	DRY	I INJ	12-20-2012

(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.81

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			ROLLOVER	UNSAF-SPD	DARK	DRY	PDO	01-07-2008
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			REAR-END	NO-IMP-ACT	DYLGT	DRY	PDO	02-04-2008
55	70	15	19	01.12		M/L RAMP GOR	NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-27-2008
55	70	15	19	01.12		RAMP	NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	N-I INJ	06-16-2008
55	70	15	19	01.12		RAMP	NO	W	-	1	1		F-O UTIL-POLE	UNSAF-SPD	DYLGT	DRY	P INJ	07-07-2008
55	70	15	19	01.12		M/L RAMP GOR IMPACT ATNU8	NO	S	-	1	1		F-O IMPACT-ATTEN	D-W-I	DARK	DRY	N-I INJ	07-25-2008
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			F-O EMBANKMENT	UNSAF-SPD	DYLGT	DRY	PDO	07-27-2008
55	70	15	19	01.12		RAMP	NO	W	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	DRY	PDO	08-17-2008
55	70	15	19	01.12		RAMP	NO	S	S	2			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	10-05-2008
55	70	15	19	01.12		RAMP	NO	W	-	1	1		F-O CURB	UNSAF-SPD	DUSK	DRY	N-I INJ	10-09-2008
55	70	15	19	01.12		M/L RAMP MRG	NO	N	W	2			RIGHT-ANGLE	FOL-CLOSE	DYLGT	DRY	PDO	10-22-2008
55	70	15	19	01.12		M/L RAMP MRG	NO	S	S	2	1		REAR-END	INATT	DARK	DRY	P INJ	10-30-2008
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			F-O BARR-CONCRETE	NEG-DRVING	DARK	DRY	PDO	12-21-2008
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			REAR-END	F-YIELD	DARK	DRY	PDO	12-22-2008
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	03-18-2009
55	70	15	19	01.12		RAMP	NO	S	-	1			F-O UTIL-POLE	DEF-VEH	DYLGT	WET	PDO	04-29-2009
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			F-O TRAFF-SIGN	DEF-VEH	DYLGT	OTHER	PDO	07-06-2009
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	07-08-2009
55	70	15	19	01.12		RAMP	NO	W	S	2	1		HEAD-ON	OTHER	DYLGT	DRY	N-I INJ	07-15-2009
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1	1		F-O RET-WALL	UNSAF-SPD	DYLGT	WET	N-I INJ	07-27-2009
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			REAR-END	OTHER	DYLGT	DRY	PDO	09-28-2009
55	70	15	19	01.12		RAMP	NO	W	-	1	1		F-O CURB	UNSAF-SPD	DARK	DRY	P INJ	03-05-2010
55	70	15	19	01.12		RAMP	NO	S	-	1			F-O UTIL-POLE	D-W-I	DYLGT	DRY	PDO	03-07-2010
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1	1		ROLLOVER	D-W-I	DARK	DRY	P INJ	03-22-2010
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	07-19-2010
55	70	15	19	01.12		M/L RAMP MRG	NO	S	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	I INJ	08-05-2010
55	70	15	19	01.12		M/L RAMP GOR	NO	S	S	2	1		REAR-END	UNSAF-SPD	DYLGT	SNOW	N-I INJ	02-02-2011
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	03-15-2011
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	05-29-2011
55	70	15	19	01.12		RAMP	NO	W	-	1	1		F-O CURB	UNSAF-SPD	DYLGT	DRY	N-I INJ	07-08-2011
55	70	15	19	01.12		M/L RAMP GOR	NO	S	S	2	1		REAR-END	IMP-LN-CHG	DYLGT	WET	P INJ	08-07-2011
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			ANGLE-OTHER	UNSAF-SPD	DARK	DRY	PDO	10-07-2011
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	3			REAR-END	UNSAF-SPD	DARK	WET	PDO	11-21-2011
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	DRY	P INJ	01-11-2012

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	N-I INJ	02-03-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			SIDESWIPE-SAME	NEG-DRVING	DYLGT	DRY	PDO	02-22-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-31-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			ROLLOVER	UNSAF-SPD	DYLGT	WET	PDO	04-13-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	2	3		HEAD-ON	DEF-VEH	DYLGT	DRY	N-I INJ	05-01-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			F-O GUARDRL-FACE	UNSAF-SPD	DYLGT	DRY	PDO	05-20-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			F-O UTIL-POLE	D-W-I	DARK	DRY	PDO	07-04-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			F-O UTIL-POLE	UNSAF-SPD	DYLGT	WET	PDO	07-09-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	WET	PDO	08-18-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	3	1		ANGLE-OTHER	F-YIELD	DYLGT	DRY	P INJ	08-27-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	W	3			ANGLE-OTHER	UNSAF-SPD	DYLGT	WET	PDO	10-12-2012
55	70	15	19	01.12		M/L RAMP GOR	NO	W	-	1			F-O UTIL-POLE	INATT	DARK	DRY	PDO	11-24-2012
55	70	15	19	01.12		M/L RAMP MRG	NO	W	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DARK	WET	PDO	12-27-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 121.85										
55	70	15	19	01.16			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	01-17-2008
55	70	15	19	01.16			NO	S	-	1	1		F-O UTIL-POLE	UNSAF-SPD	DYLGT	WET	P INJ	03-18-2008
55	70	15	19	01.16			NO	N	N	3	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	08-25-2008
55	70	15	19	01.16			NO	S	-	1			F-O GUARDRL-FACE	D-W-I	DARK	DRY	PDO	11-08-2009
55	70	15	19	01.16			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-07-2011
55	70	15	19	01.16			NO	S	S	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	09-20-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35		AT: I-240,		MM 121.87,		I-240 NB ENT							
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	W	W	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	02-13-2008
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-08-2008
55	70	15	19	01.18	I-240 NB ENT	COLL-DIST RD	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	09-16-2008
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-29-2008
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	04-10-2009
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-21-2009
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-21-2009
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	-	1			F-O CURB	NO-IMP-ACT	DYLGT	WET	PDO	03-08-2010
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	2			REAR-END	INATT	DYLGT	WET	PDO	05-14-2010
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	05-26-2010
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	4	1		OTHER	FOL-CLOSE	DYLGT	DRY	I INJ	06-21-2010
55	70	15	19	01.18	I-240 NB ENT	RAMP	NO	E	-	1			F-O UTIL-POLE	UNSAF-SPD	DARK	WET	PDO	03-29-2011
55	70	15	19	01.18	I-240 NB ENT	M/L RAMP MRG	NO	W	-	1			F-O CURB	UNSAF-SPD	DARK	DRY	PDO	07-06-2011
55	70	15	19	01.18	I-240 NB ENT	COLL-DIST RD	NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-25-2011
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	10-31-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15	19	01.18	I-240 NB ENT	M/L RAMP MRG	NO	W	-	1	1		F-O DITCH	SLEEPY	DARK	DRY	I INJ	12-29-2011
55	70	15	19	01.18	I-240 NB ENT	M/L COL MERG	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-02-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35		AT: MM 121.88											
55	70	15	19	01.19			NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	02-19-2008
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35		AT: I-240,			MM 121.89,		SB EXIT						
55	70	15	19	01.20	SB EXIT	M/L COL GORE	NO	S	S	2			REAR-END	OTHER	DUSK	DRY	PDO	01-17-2008
55	70	15	19	01.20	SB EXIT	M/L COL GORE	NO	S	S	2	1		REAR-END	IMP-LN-CHG	DAWN	DRY	N-I INJ	11-01-2010
55	70	15	19	01.20	SB EXIT	COLL-DIST RD	NO	S	S	2			REAR-END	NO-IMP-ACT	DARK	DRY	PDO	12-21-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: I-35,			MM 4.38,		*20*						
55	70	71	19	04.38	*20*		NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-07-2008
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 4.40											
55	70	71	19	04.40			NO	W	W	2			REAR-END	UNSAF-SPD	DAWN	WET	PDO	10-22-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 4.44											
55	70	71	19	04.44			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	12-08-2008
55	70	71	19	04.44			NO	W	-	1			F-O UTIL-POLE	INATT	DYLGT	DRY	PDO	11-01-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 4.45											
55	70	71	19	04.45			NO	W	-	1	1		ROLLOVER	D-W-I	DARK	DRY	P INJ	01-13-2008
55	70	71	19	04.45			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	03-20-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-28-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-02-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-03-2008
55	70	71	19	04.45			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	06-09-2008
55	70	71	19	04.45			NO	E	E	3	1		REAR-END	INATT	DYLGT	DRY	P INJ	06-13-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-16-2008
55	70	71	19	04.45			NO	E	E	2			SIDESWIPE-SAME	D-W-I	DYLGT	DRY	PDO	07-20-2008
55	70	71	19	04.45			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-01-2008
55	70	71	19	04.45			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	08-25-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	09-12-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	OTHER	DYLGT	DRY	PDO	09-14-2008
55	70	71	19	04.45			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	09-18-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-19-2008
55	70	71	19	04.45			NO	W	-	1			F-O UTIL-POLE	UNSAF-SPD	DYLGT	WET	PDO	10-10-2008
55	70	71	19	04.45			NO	E	E	2	2		REAR-END	OTHER	DARK	DRY	P INJ	10-24-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-20-2008
55	70	71	19	04.45			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-21-2008
55	70	71	19	04.45			NO	E	E	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	12-26-2008
55	70	71	19	04.45			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-02-2009
55	70	71	19	04.45			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	02-06-2009

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71	19	04.45			NO	E	E	2			REAR-END	UNSAF-SPD	DARK	DRY	PDO	02-07-2009
55	70	71	19	04.45			NO	E	E	2			HEAD-ON	IMP-LN-CHG	DYLGT	DRY	PDO	02-19-2009
55	70	71	19	04.45			NO	E	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	DRY	N-I INJ	04-03-2009
55	70	71	19	04.45			NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	04-24-2009
55	70	71	19	04.45			NO	N	-	1			F-O UTIL-POLE	IMP-BACK	DYLGT	DRY	PDO	08-17-2009
55	70	71	19	04.45			NO	W	W	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	11-04-2009
55	70	71	19	04.45			NO	E	E	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	12-18-2009
55	70	71	19	04.45			NO	W	W	2			OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	12-23-2009
55	70	71	19	04.45			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	WET	PDO	01-19-2010
55	70	71	19	04.45			NO	E	E	3	1		OTHER	INATT	DYLGT	DRY	N-I INJ	02-12-2010
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-18-2010
55	70	71	19	04.45			NO	W	W	2			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	04-21-2010
55	70	71	19	04.45		WKZONE	NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	09-17-2010
55	70	71	19	04.45			NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DARK	DRY	PDO	12-06-2010
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-04-2011
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-31-2011
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-16-2011
55	70	71	19	04.45			NO	E	E	2	2		REAR-END	INATT	DYLGT	DRY	N-I INJ	07-01-2011
55	70	71	19	04.45			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-12-2011
55	70	71	19	04.45			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-23-2011
55	70	71	19	04.45			NO	E	E	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	10-21-2011
55	70	71	19	04.45			NO	E	E	3	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	11-09-2011
55	70	71	19	04.45			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	11-14-2011
55	70	71	19	04.45			NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	01-12-2012
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-02-2012
55	70	71	19	04.45			NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DARK	WET	N-I INJ	02-02-2012
55	70	71	19	04.45			NO	E	E	3	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	02-26-2012
55	70	71	19	04.45			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	03-07-2012
55	70	71	19	04.45			NO	W	W	2			OTHER	INATT	DYLGT	DRY	PDO	04-10-2012
55	70	71	19	04.45			NO	W	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	PDO	04-29-2012
55	70	71	19	04.45			NO	E	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DARK	WET	PDO	05-29-2012
55	70	71	19	04.45			NO	N	N	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	05-30-2012
55	70	71	19	04.45			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-25-2012
55	70	71	19	04.45			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-11-2012
55	70	71	19	04.45			NO	W	W	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-13-2012
55	70	71	19	04.45			NO	W	W	4	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-09-2012

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Oklahoma Department of Transportation

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-17-2012
55	70	71	19	04.45			NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	08-23-2012
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-30-2012
55	70	71	19	04.45			NO	W	W	2			SIDESWIPE-SAME	UNSAF-SPD	DYLGT	WET	PDO	09-07-2012
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-08-2012
55	70	71	19	04.45			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	09-21-2012
55	70	71	19	04.45			NO	W	-	1			F-O BARR-CONCRETE	NO-IMP-ACT	DYLGT	WET	PDO	09-27-2012
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-28-2012
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-23-2012
55	70	71	19	04.45			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-08-2012
55	70	71	19	04.45			NO	E	E	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	12-03-2012
55	70	71	19	04.45			NO	E	E	3	1		REAR-END	FOL-CLOSE	DARK	DRY	I INJ	12-11-2012
55	70	71	19	04.45			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	12-11-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.49										
55	70	71	19	04.49			NO	W	-	1			ROLLOVER	UNSAF-SPD	DARK	DRY	PDO	12-06-2008
55	70	71	19	04.49			NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	08-22-2009
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.50										
55	70	71	19	04.50			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-09-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.50										
55	70	71	19	04.51			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	02-25-2012
55	70	71	19	04.51			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-25-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.52										
55	70	71	19	04.53			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	08-21-2009
55	70	71	19	04.53			NO	W	W	2	1		REAR-END	INATT	DARK	DRY	P INJ	02-14-2010
55	70	71	19	04.53			NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	05-22-2012
55	70	71	19	04.53			NO	W	-	1			F-O POLE-OTHER	UNSAF-SPD	DYLGT	DRY	PDO	05-26-2012
55	70	71	19	04.53			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-17-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.53										
55	70	71	19	04.54			NO	E	-	1			F-O GUARDRL-END	D-W-I	DARK	DRY	PDO	03-16-2008
55	70	71	19	04.54			NO	W	W	2			OTHER	IMP-LN-CHG	DYLGT	WET	PDO	03-18-2008
55	70	71	19	04.54			NO	W	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DARK	WET	PDO	05-02-2009
55	70	71	19	04.54			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-07-2012
55	70	71	19	04.54			NO	W	W	2			ANGLE-OTHER	UNSAF-SPD	DYLGT	WET	PDO	03-08-2012
55	70	71	19	04.54			NO	W	W	2			HEAD-ON	UNSAF-SPD	DYLGT	WET	PDO	03-11-2012
55	70	71	19	04.54			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-16-2012

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71	19	04.54			NO	E	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DARK	DRY	I INJ	11-29-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240		AT: I-35,		MM 4.54,			I-35 OP						
55	70	71	19	04.55	I-35 OP	BRIDGE	NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	05-09-2011
55	70	71	19	04.55	I-35 OP	BRIDGE	NO	E	E	4			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-31-2011
55	70	71	19	04.55	I-35 OP	BRIDGE	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-11-2011
55	70	71	19	04.55	I-35 OP	BRIDGE WKZONE	NO	W	-	1	1		ROLLOVER	NO-IMP-ACT	DARK	DRY	P INJ	09-08-2011
55	70	71	19	04.55	I-35 OP	BRIDGE	NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	10-19-2011
55	70	71	19	04.55	I-35 OP	BRIDGE	NO	W	W	2	1		REAR-END	UNSAF-SPD	DARK	DRY	N-I INJ	11-15-2011
55	70	71	19	04.55	I-35 OP	BRIDGE	NO	W	W	2			REAR-END	DEF-VEH	DYLGT	WET	PDO	12-11-2011
55	70	71	19	04.55	I-35 OP	BRIDGE	NO	E	E	2			REAR-END	IMP-LN-CHG	DUSK	DRY	PDO	12-15-2011
55	70	71	19	04.55	I-35 OP	BRIDGE	NO	W	W	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	N-I INJ	12-17-2011
55	70	71	19	04.55	I-35 OP	M/L RAMP MRG	YES	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-10-2012
55	70	71	19	04.55	I-35 OP	M/L LOOP MRG	NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	09-13-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240				AT: MM 4.55									
55	70	71	19	04.56			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	02-29-2008
55	70	71	19	04.56			NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-16-2009
55	70	71	19	04.56			NO	W	W	2	1		HEAD-ON	UNSAF-SPD	DYLGT	WET	P INJ	03-08-2012
55	70	71	19	04.56			NO	W	W	2	1		SIDESWIPE-SAME	UNSAF-SPD	DYLGT	WET	P INJ	03-08-2012
55	70	71	19	04.56			NO	W	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	P INJ	03-11-2012
55	70	71	19	04.56		M/L RAMP MRG	NO	N	N	2	1		REAR-END	F-YIELD	DYLGT	DRY	N-I INJ	06-19-2012
55	70	71	19	04.56			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	07-30-2012
55	70	71	19	04.56			NO	E	E	2			ANGLE-OTHER	UNSAF-SPD	DYLGT	WET	PDO	09-29-2012
55	70	71	19	04.56			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	I INJ	10-12-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240				AT: MM 4.56									
55	70	71	19	04.57			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-04-2008
55	70	71	19	04.57			NO	E	E	4	2		REAR-END	IMP-LN-CHG	DYLGT	DRY	N-I INJ	08-04-2008
55	70	71	19	04.57			NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-14-2008
55	70	71	19	04.57			NO	W	W	4			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	01-17-2009
55	70	71	19	04.57			NO	W	W	2			REAR-END	IMP-STOP	DYLGT	DRY	PDO	07-12-2012
55	70	71	19	04.57			NO	W	W	2			REAR-END	FOL-CLOSE	DAWN	WET	PDO	09-27-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240				AT: MM 4.60									
55	70	71	19	04.61			NO	W	W	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	02-22-2008
55	70	71	19	04.61			NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	05-23-2008
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240				AT: MM 4.64									
55	70	71	19	04.65			NO	W	W	2			REAR-END	INATT	DYLGT	DRY	PDO	03-31-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71	19	04.65			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-23-2008
55	70	71	19	04.65			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-17-2008
55	70	71	19	04.65			NO	W	W	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	07-25-2008
55	70	71	19	04.65			NO	E	-	1	1		F-O FENCE	D-W-I	DARK	DRY	N-I INJ	10-22-2008
55	70	71	19	04.65			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-18-2009
55	70	71	19	04.65			NO	E	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	PDO	02-24-2011
55	70	71	19	04.65			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	03-04-2011
55	70	71	19	04.65			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-09-2011
55	70	71	19	04.65			NO	E	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DAWN	WET	PDO	08-17-2011
55	70	71	19	04.65			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-06-2011
55	70	71	19	04.65			NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	09-23-2011
55	70	71	19	04.65			NO	W	W	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	N-I INJ	11-01-2011
55	70	71	19	04.65			NO	W	W	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	01-11-2012
55	70	71	19	04.65			NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DARK	DRY	PDO	02-27-2012
55	70	71	19	04.65			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	03-20-2012
55	70	71	19	04.65			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-11-2012
55	70	71	19	04.65			NO	W	W	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	04-17-2012
55	70	71	19	04.65			NO	W	-	1	1		F-O DITCH	NO-IMP-ACT	DYLGT	DRY	P INJ	06-01-2012
55	70	71	19	04.65			NO	W	-	1	1		F-O GROUND	NO-IMP-ACT	DYLGT	DRY	N-I INJ	07-06-2012
55	70	71	19	04.65			NO	W	W	5	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	07-17-2012
55	70	71	19	04.65			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	10-04-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 120.72,					00.11 before 89 ST. S. NB ENT					
55	70	15		00.00		DRIVEWAY	NO	S	S	2	1		ANGLE-TURNING	IMP-LN-CHG	DYLGT	DRY	P INJ	08-26-2009
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 120.73,					00.10 before 89 ST. S. NB ENT					
55	70	15		00.01		FR BTN RMP/L DRIVEWAY	NO	S	S	2			ANGLE-TURNING	IMP-TURN	DARK	DRY	PDO	01-04-2008
55	70	15		00.01		FR BTN RMP/L	NO	-	-	2			ANGLE-TURNING	IMP-TURN	DYLGT	WET	PDO	03-18-2008
55	70	15		00.01		FR BTN RMP/L DRIVEWAY	NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	03-21-2008
55	70	15		00.01		FR BTN RMP/L DRIVEWAY	NO	-	-	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	07-16-2008
55	70	15		00.01			NO	N	N	2	1		REAR-END	D-W-I	DARK	DRY	N-I INJ	08-29-2009
55	70	15		00.01		FR BTN RMP/L	NO	S	S	2			ANGLE-OTHER	IMP-LN-CHG	DARK	DRY	PDO	09-04-2009
55	70	15		00.01			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-02-2009
55	70	15		00.01		FR BTN RMP/L	NO	S	S	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	11-30-2009

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		00.01		FR BTN RMP/L DRIVEWAY	NO	S	S	2			ANGLE-TURNING	IMP-TURN	DARK	WET	PDO	12-02-2009
55	70	15		00.01		FR BTN RMP/L DRIVEWAY	NO	-	-	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	06-07-2010
55	70	15		00.01			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	03-16-2011
55	70	15		00.01		FR BTN RMP/L	NO	S	S	2			HEAD-ON	DEF-VEH	DYLGT	DRY	PDO	04-05-2011
55	70	15		00.01			NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-03-2011
55	70	15		00.01			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-24-2012
55	70	15		00.01			NO	N	N	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	06-28-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 120.74,					00.09 before 89 ST. S. NB ENT					
55	70	15		00.02		FR RD J LEFT	NO	S	S	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	05-22-2008
55	70	15		00.02			NO	N	N	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	02-27-2009
55	70	15		00.02			NO	S	S	2	1		REAR-END	IMP-LN-CHG	DARK	DRY	N-I INJ	03-24-2010
55	70	15		00.02			NO	N	-	1			F-O BARR-CONCRETE	OTHER	DARK	DRY	PDO	08-10-2010
55	70	15		00.02		FR RD J LEFT	NO	S	-	1			F-O FENCE	INATT	DARK	DRY	PDO	12-26-2011
55	70	15		00.02		FR RD J LEFT	NO	S	S	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	06-27-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 120.76,					00.07 before 89 ST. S. NB ENT					
55	70	15		00.04			NO	N	N	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	10-09-2009
55	70	15		00.04			NO	N	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DARK	ICE	PDO	12-08-2009
55	70	15		00.04			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-29-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 120.77,					00.06 before 89 ST. S. NB ENT					
55	70	15		00.05			NO	N	N	2			OTHER	NEG-DRVING	DARK	DRY	PDO	07-18-2008
55	70	15		00.05			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-09-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 120.78,					00.05 before 89 ST. S. NB ENT					
55	70	15		00.06			NO	S	-	2	1		REAR-END	D-W-I	DARK	DRY	N-I INJ	10-29-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 120.80,					00.03 before 89 ST. S. NB ENT					
55	70	15		00.08			NO	S	-	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	03-28-2011
55	70	15		00.08			NO	N	N	2			OTHER	IMP-LN-CHG	DARK	DRY	PDO	12-20-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 120.82,					00.01 before 89 ST. S. NB ENT					
55	70	15		00.10			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-05-2008
55	70	15		00.10			NO	N	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	WET	P INJ	02-11-2009
55	70	15		00.10			NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-03-2009
55	70	15		00.10			NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	08-06-2009
55	70	15		00.10			NO	S	S	3			ANGLE-OTHER	DEF-VEH	DARK	DRY	PDO	10-06-2009
55	70	15		00.10			NO	S	-	1			F-O GUARDRL-END	D-W-I	DARK	WET	PDO	02-21-2010
55	70	15		00.10			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-04-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		00.10			NO	S	S	3			REAR-END	NO-IMP-ACT	DYLGT	DRY	PDO	06-08-2010
55	70	15		00.10			NO	N	N	2	1		REAR-END	FOL-CLOSE	DARK	DRY	N-I INJ	10-03-2010
55	70	15		00.10			NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-18-2010
55	70	15		00.10			NO	N	-	1			F-O FENCE	D-W-I	DARK	DRY	PDO	11-13-2010
55	70	15		00.10			NO	S	S	3	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	11-30-2010
55	70	15		00.10			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	07-06-2011
55	70	15		00.10			NO	N	N	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	10-20-2011
55	70	15		00.10			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-08-2011
55	70	15		00.10			NO	N	N	2			ANGLE-OTHER	UNSAF-SPD	DARK	ICE	PDO	02-14-2012
55	70	15		00.10			NO	N	N	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-01-2012
55	70	15		00.10			NO	N	N	3			OTHER	FOL-CLOSE	DARK	DRY	PDO	12-20-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35					AT: MM 120.84,			00.01 after 89 ST. S. NB ENT					
55	70	15		00.12			NO	N	N	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	08-20-2012
55	70	15		00.12			NO	W	W	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	11-11-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35					AT: MM 120.85,			00.02 before 89 ST.SB EX 120					
55	70	15		00.13			NO	N	N	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	03-10-2009
55	70	15		00.13		WKZONE	NO	S	S	3	1		REAR-END	UNSAF-SPD	DARK	DRY	N-I INJ	02-28-2011
55	70	15		00.13			NO	S	-	1			F-O OTHER	DEF-VEH	DYLGT	DRY	PDO	09-17-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35					AT: MM 120.87,			89 ST.SB EX 120					
55	70	15		00.15	89 ST.SB EX 120	M/L RAMP GOR	NO	S	-	1			F-O TRAFF-SIGN	OTHER	DARK	DRY	PDO	07-26-2008
55	70	15		00.15	89 ST.SB EX 120	M/L RAMP GOR	NO	S	-	1			F-O UTIL-POLE	OTH-ANIMAL	DYLGT	DRY	PDO	04-14-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35					AT: MM 120.90,			00.03 after 89 ST.SB EX 120					
55	70	15		00.18			NO	N	N	2	1		REAR-END	OTHER	DYLGT	DRY	P INJ	05-14-2008
55	70	15		00.18			NO	S	S	2	1		REAR-END	D-W-I	DARK	DRY	N-I INJ	04-29-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35					AT: MM 120.92,			00.05 after 89 ST.SB EX 120					
55	70	15		00.20			NO	N	N	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	08-27-2008
55	70	15		00.20			NO	N	-	4	1		RIGHT-ANGLE	D-W-I	DYLGT	DRY	P INJ	12-15-2008
55	70	15		00.20			NO	N	N	2			SIDESWIPE-SAME	OTHER	DYLGT	DRY	PDO	01-15-2009
55	70	15		00.20			NO	N	N	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	11-29-2010
55	70	15		00.20			NO	N	N	3			OTHER	UNSAF-SPD	DYLGT	DRY	PDO	11-30-2010
55	70	15		00.20			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-23-2012
55	70	15		00.20			NO	N	N	2	2		HEAD-ON	D-W-I	DYLGT	DRY	N-I INJ	11-13-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35					AT: MM 120.93,			00.06 after 89 ST.SB EX 120					
55	70	15		00.21			NO	S	S	2			REAR-END	INATT	DYLGT	DRY	PDO	06-29-2012
55	70	15		00.21			NO	N	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DARK	WET	PDO	08-25-2012
55	70	15		00.21			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-22-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35					AT: MM 120.94,			00.06 before MM 121					
55	70	15		00.22			NO	N	N	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	11-29-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35					AT: MM 120.97,			00.03 before MM 121					

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		00.25			NO	S	S	2			SIDESWIPE-SAME	INATT	DYLGT	DRY	PDO	12-18-2009
55	70	15		00.25			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	11-10-2010
55	70	15		00.25			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-05-2011
55	70	15		00.25			NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-22-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 120.99,				00.01 before MM 121						
55	70	15		00.27			NO	N	-	2			REAR-END	OTHER	DYLGT	DRY	PDO	11-30-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.00,				MM 121						
55	70	15		00.28	MM 121		NO	N	-	1			F-O BARR-CONCRETE	NO-IMP-ACT	DYLGT	WET	PDO	06-16-2008
55	70	15		00.28	MM 121		NO	N	N	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	10-27-2008
55	70	15		00.28	MM 121		NO	S	S	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	02-14-2011
55	70	15		00.28	MM 121		NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-05-2011
55	70	15		00.28	MM 121		NO	S	S	2			SIDESWIPE-SAME	D-W-I	DYLGT	DRY	PDO	06-11-2011
55	70	15		00.28	MM 121		NO	S	S	2	3		ANGLE-OTHER	D-W-I	DARK	DRY	I INJ	06-19-2011
55	70	15		00.28	MM 121		NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-23-2011
55	70	15		00.28	MM 121		NO	S	S	2	1		REAR-END	IMP-LN-CHG	DARK	DRY	I INJ	08-18-2011
55	70	15		00.28	MM 121		NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	08-19-2011
55	70	15		00.28	MM 121		NO	N	N	2	2		REAR-END	IMP-LN-CHG	DYLGT	DRY	N-I INJ	08-22-2011
55	70	15		00.28	MM 121		NO	N	N	2			OTHER	UNSAF-SPD	DYLGT	DRY	PDO	08-22-2011
55	70	15		00.28	MM 121		NO	S	-	1	1		F-O FENCE-POLE	SLEEPY	DARK	DRY	P INJ	08-24-2011
55	70	15		00.28	MM 121		NO	N	N	3	2		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	09-22-2011
55	70	15		00.28	MM 121		NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	10-21-2011
55	70	15		00.28	MM 121		NO	N	N	2			REAR-END	INATT	DARK	DRY	PDO	11-05-2011
55	70	15		00.28	MM 121		NO			2	1		HEAD-ON	L-CENTER	DYLGT	DRY	P INJ	11-13-2011
55	70	15		00.28	MM 121		NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	12-09-2011
55	70	15		00.28	MM 121		NO	S	-	1			F-O TRAFF-SIGN	NO-IMP-ACT	DARK	DRY	PDO	12-28-2011
55	70	15		00.28	MM 121		NO	N	N	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-28-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.01,				00.01 after MM 121						
55	70	15		00.29		WKZONE	NO	N	N	2	3		REAR-END	INATT	DARK	DRY	N-I INJ	07-15-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.02,				00.02 after MM 121						
55	70	15		00.30			NO	S	-	1			F-O BARR-CONCRETE	NO-IMP-ACT	DYLGT	DRY	PDO	02-19-2010
55	70	15		00.30			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-05-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.07,				00.07 after MM 121						
55	70	15		00.35			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-15-2010
55	70	15		00.35			NO	N	N	2	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	12-22-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35			AT: MM 121.10,				00.10 after MM 121						
55	70	15		00.38			NO	N	N	2			REAR-END	UNSAF-SPD	DARK	DRY	PDO	01-08-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		00.38			NO	N	N	2			REAR-END	OTHER	DYLGT	DRY	PDO	02-28-2008
55	70	15		00.38			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-03-2009
55	70	15		00.38			NO	N	N	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	05-04-2010
55	70	15		00.38			NO	S	S	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	08-28-2010
55	70	15		00.38			NO	N	-	1			F-O TRAFF-SIGN	DEF-VEH	DYLGT	DRY	PDO	09-17-2010
55	70	15		00.38			NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-27-2010
55	70	15		00.38			NO	N	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	10-06-2010
55	70	15		00.38			NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-28-2010
55	70	15		00.38			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	02-20-2011
55	70	15		00.38		WKZONE	NO	S	S	2	1		REAR-END	UNSAF-SPD	DARK	DRY	I INJ	02-28-2011
55	70	15		00.38			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-10-2011
55	70	15		00.38			NO	N	N	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	05-16-2011
55	70	15		00.38			NO	S	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	05-20-2011
55	70	15		00.38			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-02-2011
55	70	15		00.38			NO	S	S	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	08-19-2011
55	70	15		00.38			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-23-2011
55	70	15		00.38			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-29-2011
55	70	15		00.38			NO	N	-	1	1		ROLLOVER	FOL-CLOSE	DYLGT	DRY	N-I INJ	10-05-2011
55	70	15		00.38			NO	S	S	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	10-21-2011
55	70	15		00.38			NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	11-09-2011
55	70	15		00.38			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-16-2012
55	70	15		00.38			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-05-2012
55	70	15		00.38			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-24-2012
55	70	15		00.38			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-17-2012
55	70	15		00.38			NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	08-29-2012
55	70	15		00.38			NO	N	N	2			HEAD-ON	INATT	DYLGT	DRY	PDO	08-29-2012
55	70	15		00.38			NO	N	N	2	1		REAR-END	IMP-LN-CHG	DARK	DRY	P INJ	12-10-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35				AT: MM 121.12,				00.08 before 82 ST. S. OP					
55	70	15		00.40			NO	N	N	2			HEAD-ON	UNSAF-SPD	DARK	WET	PDO	06-03-2009
55	70	15		00.40			NO	N	N	3	1		OTHER	FOL-CLOSE	DYLGT	SNOW	P INJ	01-20-2011
55	70	15		00.40			NO	N	N	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-14-2011
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35				AT: MM 121.14,				00.06 before 82 ST. S. OP					
55	70	15		00.42			NO	N	N	2	3		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-28-2008
55	70	15		00.42			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-03-2009
55	70	15		00.42			NO	N	N	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	10-10-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35				AT: MM 121.16,				00.04 before 82 ST. S. OP					
55	70	15		00.44			NO	N	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	N-I INJ	05-16-2008
55	70	15		00.44			NO	N	N	3	7		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	06-23-2009
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35				AT: MM 121.17,				00.03 before 82 ST. S. OP					

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		00.45			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-03-2011
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.18, 00.02 before 82 ST. S. OP																		
55	70	15		00.46			NO	S	S	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	WET	PDO	09-11-2008
55	70	15		00.46			NO	N	N	2	1		SIDESWIPE-SAME	IMP-LN-CHG	DAWN	DRY	P INJ	04-08-2009
55	70	15		00.46			NO	N	N	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	10-28-2010
55	70	15		00.46			NO	E	E	2			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	06-22-2012
55	70	15		00.46			NO	N	N	2			HEAD-ON	IMP-LN-CHG	DARK	DRY	PDO	10-11-2012
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.19, 00.01 before 82 ST. S. OP																		
55	70	15		00.47			NO	S	S	2			OTHER	UNSAF-SPD	DARK	WET	PDO	03-18-2008
55	70	15		00.47			NO	S	S	2			REAR-END	UNSAF-SPD	DUSK	DRY	PDO	11-12-2008
55	70	15		00.47			NO	N	N	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	12-19-2008
55	70	15		00.47			NO	N	-	1			F-O BARR-CONCRETE	DEF-VEH	DYLGT	DRY	PDO	02-02-2009
55	70	15		00.47		INCIDENT	NO	S	N	2			HEAD-ON	DEF-VEH	DARK	DRY	PDO	02-06-2009
55	70	15		00.47			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-26-2009
55	70	15		00.47			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-04-2009
55	70	15		00.47			NO	S	S	2			ANGLE-OTHER	IMP-LN-CHG	DARK	WET	PDO	02-03-2010
55	70	15		00.47			NO	N	N	3	1		OTHER	UNSAF-SPD	DYLGT	DRY	N-I INJ	05-11-2010
55	70	15		00.47			NO	S	S	2			REAR-END	OTHER	DARK	DRY	PDO	05-13-2010
55	70	15		00.47			NO	S	S	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	06-18-2010
55	70	15		00.47			NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	03-08-2011
55	70	15		00.47			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-19-2012
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.20, 82 ST. S. OP																		
55	70	15		00.48	82 ST. S. OP	TERM LOC LFT	YES	S	S	2			REAR-END	INATT	DYLGT	DRY	PDO	06-18-2008
55	70	15		00.48	82 ST. S. OP	TERM LOC LFT	YES	S	-	1			F-O OTHER	IMP-TURN	DARK	DRY	PDO	06-20-2010
(55) OKLAHOMA (70) OKLA. CITY HWY: I-35 AT: MM 121.21, 00.01 after 82 ST. S. OP																		
55	70	15		00.49			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	08-25-2008
55	70	15		00.49		FR BTN RMP/L DRIVEWAY	NO	-	-	2			ANGLE-TURNING	F-YIELD	DYLGT	WET	PDO	10-22-2008
55	70	15		00.49			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-01-2008
55	70	15		00.49			NO	S	S	2	1		OTHER		DYLGT	DRY	I INJ	01-12-2009
55	70	15		00.49			NO	N	N	2	1		REAR-END	D-W-I	DARK	DRY	N-I INJ	03-06-2009
55	70	15		00.49			NO	N	N	4			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-22-2009
55	70	15		00.49			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-24-2009
55	70	15		00.49			NO	N	-	1	1		F-O BARR-CONCRETE	NO-IMP-ACT	DYLGT	DRY	N-I INJ	09-23-2009
55	70	15		00.49			NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	05-04-2010

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		00.49			NO	N	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	DRY	P INJ	09-15-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.22,				00.02 after 82 ST. S. OP					
55	70	15		00.50			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	05-16-2008
55	70	15		00.50			NO	N	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	ICE	N-I INJ	12-09-2008
55	70	15		00.50			NO	S	S	2	3		ANGLE-OTHER	DEF-VEH	DYLGT	DRY	N-I INJ	06-12-2010
55	70	15		00.50		FR RD J LEFT	NO	S	S	2			ANGLE-OTHER	F-YIELD	DYLGT	DRY	PDO	08-16-2010
55	70	15		00.50			NO	S	S	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	08-18-2010
55	70	15		00.50			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-11-2011
55	70	15		00.50		FR RD J LEFT	NO	S	S	2			HEAD-ON	F-YIELD	DARK	DRY	PDO	09-08-2011
55	70	15		00.50			NO	N	S	2	1		SIDESWIPE-SAME	INATT	DYLGT	DRY	P INJ	01-19-2012
55	70	15		00.50			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-13-2012
55	70	15		00.50			NO	N	N	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	11-25-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.23,				00.03 after 82 ST. S. OP					
55	70	15		00.51			NO	N	N	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-19-2008
55	70	15		00.51			NO	N	-	1	1		ROLLOVER	UNSAF-SPD	DARK	WET	N-I INJ	09-13-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.24,				00.04 after 82 ST. S. OP					
55	70	15		00.52			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-16-2008
55	70	15		00.52			NO	N	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DARK	ICE	N-I INJ	03-20-2010
55	70	15		00.52			NO	N	-	2			OTHER	UNSAF-SPD	DARK	ICE	PDO	03-20-2010
55	70	15		00.52			NO	S	S	3	2		HEAD-ON	UNSAF-SPD	DYLGT	WET	N-I INJ	04-24-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.26,				00.02 before 82 ST. S.SB EXT					
55	70	15		00.54			NO	N	N	3	2		OTHER	IMP-LN-CHG	DAWN	DRY	P INJ	07-10-2008
55	70	15		00.54			NO	N	N	2	5		OTHER	UNSAF-SPD	DARK	DRY	N-I INJ	02-08-2009
55	70	15		00.54			NO	N	N	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-07-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.28,				82 ST. S.SB EXT					
55	70	15		00.56	82 ST. S.SB EXT	M/L RAMP GOR	NO	S	-	1			F-O IMPACT-ATTEN	L-CENTER	DARK	DRY	PDO	10-15-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.29,				00.01 after 82 ST. S.SB EXT					
55	70	15		00.57			NO	N	N	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	02-14-2008
55	70	15		00.57			NO	N	N	2			REAR-END	IMP-PASS	DYLGT	DRY	PDO	04-18-2009
55	70	15		00.57			NO	S	-	1			F-O RET-WALL	NO-IMP-ACT	DYLGT	DRY	PDO	07-28-2009
55	70	15		00.57			NO	N	N	2	1		REAR-END	INATT	DYLGT	WET	P INJ	02-01-2010
55	70	15		00.57			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-08-2010
55	70	15		00.57			NO	S	S	3	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	01-24-2011
55	70	15		00.57			NO	N	N	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	12-19-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35				AT: MM 121.30,				00.01 before NB EXIT					

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Oklahoma Department of Transportation

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
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Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		00.58			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-16-2008
55	70	15		00.58			NO	N	N	3			REAR-END	OTHER	DARK	DRY	PDO	01-19-2009
55	70	15		00.58			NO	S	-	1	1		F-O TRAFF-SIGN	DEF-VEH	DAWN	WET	P INJ	06-03-2009
55	70	15		00.58			NO	E	E	2			HEAD-ON	IMP-LN-CHG	DYLGT	DRY	PDO	07-07-2009
55	70	15		00.58			NO	S	S	3			OTHER	NEG-DRVING	DYLGT	DRY	PDO	11-07-2009
55	70	15		00.58			NO	N	N	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	11-17-2009
55	70	15		00.58			NO	S	S	3			OTHER	FOL-CLOSE	DARK	DRY	PDO	12-03-2009
55	70	15		00.58			NO	S	-	1	1		ROLLOVER	DEF-VEH	DYLGT	WET	N-I INJ	05-12-2010
55	70	15		00.58			NO	S	-	1			F-O BARR-CONCRETE	FOL-CLOSE	DYLGT	DRY	PDO	06-02-2010
55	70	15		00.58			NO	N	N	2			REAR-END	OTHER	DYLGT	DRY	PDO	11-10-2010
55	70	15		00.58			NO	N	N	2	2		REAR-END	IMP-START	DYLGT	DRY	P INJ	11-26-2010
55	70	15		00.58			NO	N	N	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	N-I INJ	12-15-2010
55	70	15		00.58			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-18-2010
55	70	15		00.58			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-13-2011
55	70	15		00.58			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-24-2011
55	70	15		00.58			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-19-2011
55	70	15		00.58			NO	N	N	2			SIDESWIPE-SAME	INATT	DYLGT	DRY	PDO	09-08-2011
55	70	15		00.58			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-29-2011
55	70	15		00.58			NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	01-01-2012
55	70	15		00.58			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-09-2012
55	70	15		00.58			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-27-2012
55	70	15		00.58			NO	S	S	3			REAR-END	INATT	DYLGT	DRY	PDO	04-12-2012
55	70	15		00.58			NO	N	N	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	06-25-2012
55	70	15		00.58			NO	N	-	1			F-O OTHER	OTHER	DYLGT	DRY	PDO	07-17-2012
55	70	15		00.58			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-26-2012
55	70	15		00.58			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-16-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35		AT: MM 121.90,						00.01 after SB EXIT					
55	70	15		01.21			NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-08-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35		AT: MM 121.94,						00.05 after SB EXIT					
55	70	15		01.25			NO	S	S	2			REAR-END	INATT	DYLGT	DRY	PDO	10-13-2009
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35		AT: MM 121.95,						00.05 before MM 122					
55	70	15		01.26			NO	S	S	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	08-20-2008
55	70	15		01.26			NO	S	-	1	1		F-O UTIL-POLE	UNSAF-SPD	DARK	DRY	N-I INJ	10-29-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-35		AT: MM 121.97,						00.03 before MM 122					
55	70	15		01.28			NO	S	S	4			HEAD-ON	UNSAF-SPD	DYLGT	ICE	PDO	01-26-2009
55	70	15		01.28			NO	N	N	4	1		ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	P INJ	09-08-2009
55	70	15		01.28			NO	N	N	2	1		ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	N-I INJ	07-16-2010

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OLSSON ASSOCIATES

Oklahoma Department of Transportation

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		01.28			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	11-19-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 122.07,					00.02 after 66 ST. S SB ENT					
55	70	15		01.38			NO	S	S	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-05-2008
55	70	15		01.38			NO	N	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	04-13-2009
55	70	15		01.38			NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	05-11-2009
55	70	15		01.38			NO	N	N	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	11-24-2009
55	70	15		01.38			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	WET	PDO	02-04-2010
55	70	15		01.38			NO	N	N	3	1		SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	P INJ	07-17-2010
55	70	15		01.38			NO	S	S	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	06-18-2011
55	70	15		01.38			NO	S	S	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	07-25-2011
55	70	15		01.38			NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	07-29-2011
55	70	15		01.38			NO	S	S	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-12-2011
55	70	15		01.38			NO	N	N	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	11-26-2011
55	70	15		01.38		INCIDENT	NO	N	N	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	02-04-2012
55	70	15		01.38			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-19-2012
55	70	15		01.38			NO	S	S	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	04-26-2012
55	70	15		01.38			NO	N	N	3			ANGLE-OTHER	FOL-CLOSE	DYLGT	DRY	PDO	06-12-2012
55	70	15		01.38			NO	S	S	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	07-16-2012
55	70	15		01.38			NO	S	S	3			OTHER	INATT	DARK	DRY	PDO	11-15-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 122.08,					00.03 after 66 ST. S SB ENT					
55	70	15		01.39			NO	N	N	2	1		REAR-END	INATT	DARK	DRY	P INJ	05-17-2012
55	70	15		01.39			NO	N	N	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	10-29-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 122.11,					00.06 after 66 ST. S SB ENT					
55	70	15		01.42			NO	S	S	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	03-05-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 122.15,					00.02 before 66 ST. S UP					
55	70	15		01.46		STR W/INTCHG	NO	S	S	2	1		ANGLE-TURNING	UNSAF-SPD	DYLGT	DRY	N-I INJ	09-27-2008
55	70	15		01.46			NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-23-2009
55	70	15		01.46			NO	S	S	2	2		HEAD-ON	UNSAF-SPD	DYLGT	ICE	P INJ	01-28-2010
55	70	15		01.46			NO	N	N	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	03-22-2010
55	70	15		01.46			NO	S	S	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-31-2011
55	70	15		01.46		FR RD J RITE	NO	N	N	2			ANGLE-TURNING	FOL-CLOSE	DYLGT	DRY	PDO	09-28-2011
55	70	15		01.46			NO	S	S	3			OTHER	INATT	DYLGT	DRY	PDO	08-10-2012
55	70	15		01.46			NO	S	-	1			F-O BARR-OTHER	INATT	DYLGT	DRY	PDO	10-31-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-35			AT: MM 122.16,					00.01 before 66 ST. S UP					
55	70	15		01.47			NO	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	07-10-2008
55	70	15		01.47			NO	N	N	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	03-13-2009
55	70	15		01.47			NO	S	S	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-03-2009
55	70	15		01.47			NO	S	S	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	01-18-2010

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OLSSON ASSOCIATES

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	15		01.47			NO	S	S	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	03-22-2010
55	70	15		01.47			NO	S	-	1			F-O TRAFF-SIGN	NO-IMP-ACT	DYLGT	SNOW	PDO	02-02-2011
55	70	15		01.47			NO	S	S	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	03-02-2011
55	70	15		01.47			NO	S	S	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	07-11-2012
55	70	15		01.47		FR BTN RMP/L	NO	S	-	1			OTH-SINGLE-VEH	NO-IMP-ACT	DYLGT	DRY	PDO	07-25-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-35			AT: MM 122.17,			66 ST. S UP							
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	N	2			REAR-END	OTHER	DARK	DRY	PDO	02-13-2008
55	70	15		01.48	66 ST. S UP	TERM LOC LFT	YES	S	W	2	2		RIGHT-ANGLE	F-YIELD	DYLGT	DRY	P INJ	05-04-2008
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	W	W	2			ANGLE-TURNING	OTHER	DYLGT	DRY	PDO	07-02-2008
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	E	N	2	1		RIGHT-ANGLE	UNSAF-SPD	DYLGT	DRY	N-I INJ	10-28-2008
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	N	2			OTHER	L-CENTER	DYLGT	DRY	PDO	10-30-2008
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	E	2			RIGHT-ANGLE	NEG-DRVING	DYLGT	DRY	PDO	12-08-2008
55	70	15		01.48	66 ST. S UP	BR ON X-ROAD	NO	E	E	3	2		ANGLE-TURNING	UNSAF-SPD	DYLGT	ICE	N-I INJ	12-09-2008
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	W	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	04-24-2009
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	N	2			REAR-END	DEF-VEH	DYLGT	DRY	PDO	07-14-2009
55	70	15		01.48	66 ST. S UP	TERM LOC LFT	YES	S	E	2			RIGHT-ANGLE	F-STOP	DARK	DRY	PDO	08-07-2009
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	E	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	08-08-2009
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	-	-	2			REAR-END	D-W-I	DARK	DRY	PDO	05-01-2010
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	E	W	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	07-27-2010
55	70	15		01.48	66 ST. S UP	TERM LOC LFT	YES	S	W	2	7		RIGHT-ANGLE	F-STOP	DYLGT	WET	P INJ	11-15-2010
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	N	2			ANGLE-TURNING	L-CENTER	DARK	DRY	PDO	12-20-2010
55	70	15		01.48	66 ST. S UP	TERM LOC LFT	YES	N	N	2			REAR-END	INATT	DARK	DRY	PDO	02-06-2011
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	E	W	2			HEAD-ON	F-YIELD	DARK	DRY	PDO	05-24-2011
55	70	15		01.48	66 ST. S UP	BRIDGE	NO	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	06-07-2011
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	N	2	2		REAR-END	DEF-VEH	DYLGT	DRY	N-I INJ	07-07-2011
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	S	-	1	1		PEDESTRIAN	IMP-TURN	DARK	DRY	P INJ	07-14-2011
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	W	-	1	1		PEDAL-CYCLE	NO-IMP-ACT	DYLGT	DRY	I INJ	10-13-2011
55	70	15		01.48	66 ST. S UP	TERM LOC LFT	YES	S	W	2	1		RIGHT-ANGLE	F-YIELD	DARK	DRY	P INJ	02-29-2012
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	N	2			SIDESWIPE-SAME	NEG-DRVING	DYLGT	DRY	PDO	08-08-2012
55	70	15		01.48	66 ST. S UP	TERM LOC RIT	YES	N	N	2			ANGLE-OTHER	OTHER	DYLGT	DRY	PDO	09-25-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240			AT: MM 3.88,			SHIELDS UP							
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	N	N	2			REAR-END	INATT	DYLGT	DRY	PDO	01-04-2008
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	E	2			RIGHT-ANGLE	INATT	DUSK	DRY	PDO	01-07-2008
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	S	2			ANGLE-TURNING	F-STOP	DARK	WET	PDO	02-16-2008
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	N	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	04-19-2008
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	E	2			ANGLE-TURNING	F-STOP	DARK	DRY	PDO	05-27-2008
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2			ANGLE-TURNING	OTHER	DYLGT	DRY	PDO	06-17-2008
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2	4		REAR-END	F-STOP	DARK	DRY	I INJ	07-08-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	S	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	07-15-2008
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	N	2			RIGHT-ANGLE	OTHER	DARK	DRY	PDO	07-22-2008
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-27-2008
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	E	2			ANGLE-TURNING	F-STOP	DYLGT	DRY	PDO	08-02-2008
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	N	2	1		REAR-END	F-STOP	DYLGT	DRY	N-I INJ	09-02-2008
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			ANGLE-TURNING	IMP-TURN	DARK	DRY	PDO	10-09-2008
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			HEAD-ON	IMP-LN-CHG	DUSK	DRY	PDO	12-21-2008
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			ANGLE-TURNING	NEG-DRVING	DYLGT	DRY	PDO	01-19-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	E	E	2			ANGLE-TURNING	FOL-CLOSE	DYLGT	DRY	PDO	02-23-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	N	2			ANGLE-TURNING	FOL-CLOSE	DYLGT	DRY	PDO	02-25-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	S	2			OTHER	OTHER	DYLGT	WET	PDO	05-04-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2			REAR-END	F-STOP	DARK	DRY	PDO	05-10-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	N	2			RIGHT-ANGLE	F-STOP	DYLGT	DRY	PDO	06-05-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	-	-	2	1		OTHER	F-YIELD	DYLGT	DRY	I INJ	07-03-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-11-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2	2		REAR-END	D-W-I	DYLGT	DRY	P INJ	07-11-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			REAR-END	INATT	DUSK	DRY	PDO	08-16-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-19-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	-	-	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	08-27-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	08-29-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	3			OTHER	FOL-CLOSE	DARK	DRY	PDO	09-24-2009
55	70	71		03.88	SHIELDS UP	X-ST BTM TRM	NO	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-30-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	S	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	10-01-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2	2		ANGLE-TURNING	F-YIELD	DARK	DRY	N-I INJ	10-17-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	N	W	2	1		RIGHT-ANGLE	F-STOP	DYLGT	DRY	N-I INJ	10-24-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2			REAR-END	IMP-BACK	DARK	DRY	PDO	10-26-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	W	2			ANGLE-TURNING	F-STOP	DYLGT	DRY	PDO	11-06-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	WET	PDO	12-28-2009
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	S	2			ANGLE-TURNING	FOL-CLOSE	DARK	SLUSH	PDO	12-29-2009
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-17-2010
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	-	1	1		F-O GUARDRL-END	D-W-I	DARK	DRY	N-I INJ	03-02-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	N	3			REAR-END	F-STOP	DUSK	WET	PDO	03-19-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	E	2	1		ANGLE-TURNING	F-YIELD	DARK	DRY	N-I INJ	04-30-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	-	-	2			ANGLE-TURNING	IMP-LN-CHG	DYLGT	DRY	PDO	05-18-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-24-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	N	2			ANGLE-TURNING	INATT	DYLGT	DRY	PDO	08-09-2010
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	S	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	09-13-2010
55	70	71		03.88	SHIELDS UP	BRIDGE	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-06-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	10-15-2010
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2	1		ANGLE-OTHER	OTHER	DYLGT	DRY	P INJ	11-03-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	N	2			ANGLE-TURNING	INATT	DYLGT	DRY	PDO	11-13-2010
55	70	71		03.88	SHIELDS UP	BRIDGE	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-23-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2	2		REAR-END	D-W-I	DARK	DRY	N-I INJ	11-26-2010
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	W	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	11-27-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2			ANGLE-OTHER	IMP-LN-CHG	DARK	DRY	PDO	11-30-2010
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	S	2			ANGLE-TURNING	IMP-TURN	DARK	DRY	PDO	12-19-2010
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES			2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	02-18-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			ANGLE-TURNING	F-YIELD	DYLGT	WET	PDO	02-24-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	N	2			ANGLE-TURNING	F-YIELD	DYLGT	WET	PDO	04-27-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	N	2			ANGLE-TURNING	OTHER	DYLGT	DRY	PDO	05-25-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	06-03-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	N	3	4		REAR-END	INATT	DYLGT	DRY	P INJ	06-08-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	-	1			F-O BR-RAIL	OTHER	DUSK	DRY	PDO	06-22-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	S	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	07-07-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	N	S	2			ANGLE-TURNING	OTHER	DYLGT	DRY	PDO	07-08-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	E	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	07-11-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	W	S	2			OTHER	F-YIELD	DYLGT	DRY	PDO	07-27-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-05-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2			REAR-END	INATT	DYLGT	DRY	PDO	08-05-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	3			REAR-END	INATT	DYLGT	DRY	PDO	08-05-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2			SIDESWIPE-SAME	OTHER	DYLGT	DRY	PDO	08-17-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	W	N	2	1		HEAD-ON	OTHER	DYLGT	DRY	P INJ	08-31-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES			2			REAR-END	INATT	DYLGT	DRY	PDO	09-02-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	3			REAR-END	INATT	DYLGT	DRY	PDO	09-09-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	-	1			F-O CURB	OTHER	DARK	DRY	PDO	09-25-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	N	E	2			RIGHT-ANGLE	INATT	DYLGT	DRY	PDO	11-10-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES			2	1		HEAD-ON	F-STOP	DYLGT	DRY	P INJ	11-15-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	N	2			OTHER	IMP-LN-CHG	DYLGT	OTHER	PDO	11-15-2011
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	E	2			RIGHT-ANGLE	F-YIELD	DYLGT	WET	PDO	11-22-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	N	N	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	12-27-2011
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	W	2	3		RIGHT-ANGLE	F-STOP	DYLGT	DRY	N-I INJ	01-01-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	E	2			RIGHT-ANGLE	D-W-I	DARK	DRY	PDO	01-14-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2			REAR-END	INATT	DYLGT	DRY	PDO	01-21-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	S	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	02-20-2012
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			ANGLE-TURNING	NEG-DRVING	DYLGT	DRY	PDO	02-25-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	NO	E	E	3	2		REAR-END	INATT	DYLGT	DRY	P INJ	03-23-2012

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	S	S	2			ANGLE-TURNING	OTHER	DYLGT	DRY	PDO	03-24-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES			2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	WET	PDO	04-06-2012
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			ANGLE-TURNING	IMP-LN-CHG	DYLGT	DRY	PDO	04-23-2012
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-14-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	S	2	1		ANGLE-TURNING	F-YIELD	DYLGT	DRY	N-I INJ	06-27-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	N	E	2			RIGHT-ANGLE	F-STOP	DYLGT	WET	PDO	07-19-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	E	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	07-27-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	S	S	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-28-2012
55	70	71		03.88	SHIELDS UP	TERM LOC RIT	YES	E	E	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	09-19-2012
55	70	71		03.88	SHIELDS UP	TERM LOC LFT	YES	W	W	2			REAR-END	INATT	DYLGT	DRY	PDO	09-21-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.89,				00.01 after SHIELDS UP						
55	70	71		03.89			NO	E	E	3	1		REAR-END	UNSAF-SPD	DYLGT	WET	P INJ	01-16-2008
55	70	71		03.89			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	02-04-2008
55	70	71		03.89			NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	02-26-2008
55	70	71		03.89			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-04-2008
55	70	71		03.89			NO	E	E	3	3		REAR-END	INATT	DYLGT	DRY	N-I INJ	04-05-2008
55	70	71		03.89			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	04-18-2008
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-28-2008
55	70	71		03.89			NO	E	E	2			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	08-15-2008
55	70	71		03.89			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-21-2008
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-09-2008
55	70	71		03.89			NO	E	E	3			REAR-END	FOL-CLOSE	DARK	DRY	PDO	10-22-2008
55	70	71		03.89			NO	E	E	4	1		OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	11-21-2008
55	70	71		03.89			NO	E	E	3	3		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	12-29-2008
55	70	71		03.89			NO	E	-	1	1		F-O UTIL-POLE	UNSAF-SPD	DARK	ICE	P INJ	01-26-2009
55	70	71		03.89			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	02-02-2009
55	70	71		03.89			NO	E	E	3			ANGLE-OTHER	UNSAF-SPD	DYLGT	DRY	PDO	02-26-2009
55	70	71		03.89			NO	E	E	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	03-06-2009
55	70	71		03.89			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	03-31-2009
55	70	71		03.89			NO	E	E	3	2		OTHER	UNSAF-SPD	DYLGT	WET	P INJ	09-17-2009
55	70	71		03.89			NO	E	E	4	2		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	11-24-2009
55	70	71		03.89			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-22-2010
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	02-02-2010
55	70	71		03.89			NO	E	E	3	1		OTHER	FOL-CLOSE	DARK	DRY	P INJ	02-10-2010
55	70	71		03.89			NO	E	E	3	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	02-12-2010
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-13-2010
55	70	71		03.89			NO	E	E	2	3		REAR-END	FOL-CLOSE	DUSK	DRY	N-I INJ	02-18-2010
55	70	71		03.89			NO	E	E	2	3		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	02-20-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.89			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	04-16-2010
55	70	71		03.89			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	04-21-2010
55	70	71		03.89		FR BTN RMP/L	NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	05-06-2010
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-11-2010
55	70	71		03.89			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	06-18-2010
55	70	71		03.89			NO	E	E	2	1		HEAD-ON	UNSAF-SPD	DYLGT	DRY	P INJ	06-30-2010
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-17-2010
55	70	71		03.89			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-28-2010
55	70	71		03.89			NO	E	E	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	07-30-2010
55	70	71		03.89			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	08-11-2010
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-18-2010
55	70	71		03.89		INCIDENT	NO	E	E	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	08-30-2010
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-03-2010
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-07-2010
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-14-2011
55	70	71		03.89			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-18-2011
55	70	71		03.89		FR BTN RMP/L DRIVEWAY	NO	S	W	2	1		ANGLE-TURNING	F-YIELD	DYLGT	WET	P INJ	04-25-2011
55	70	71		03.89			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	01-27-2012
55	70	71		03.89		FR BTN RMP/L DRIVEWAY	NO	E	-	1			F-O CURB	UNSAF-SPD	DARK	WET	PDO	04-29-2012
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	06-01-2012
55	70	71		03.89			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-25-2012
55	70	71		03.89		FR BTN RMP/L DRIVEWAY	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	09-13-2012
55	70	71		03.89		FR BTN RMP/R	NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	10-29-2012
55	70	71		03.89			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-14-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.90,				00.02 after SHIELDS UP						
55	70	71		03.90		FR RD J LEFT	NO	W	W	2			SIDESWIPE-SAME	F-YIELD	DYLGT	DRY	PDO	01-25-2008
55	70	71		03.90			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-29-2008
55	70	71		03.90			NO	E	E	3	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	08-02-2008
55	70	71		03.90			NO	E	E	2			REAR-END	INATT	DYLGT	WET	PDO	08-18-2008
55	70	71		03.90		FR RD J LEFT	NO	W	W	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	10-15-2009
55	70	71		03.90			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-08-2010
55	70	71		03.90			NO	E	E	4	1		OTHER	INATT	DYLGT	DRY	N-I INJ	02-07-2011
55	70	71		03.90			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-13-2011
55	70	71		03.90			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-22-2012
55	70	71		03.90			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	06-29-2012

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
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Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.90			NO	E	E	3			OTHER	FOL-CLOSE	DARK	DRY	PDO	11-30-2012
55	70	71		03.90			NO	W	W	2			OTHER	FOL-CLOSE	DARK	DRY	PDO	12-21-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.91,					00.03 after SHIELDS UP					
55	70	71		03.91			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	01-16-2009
55	70	71		03.91			NO	E	E	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	04-08-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.92,					00.04 after SHIELDS UP					
55	70	71		03.92			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	01-30-2008
55	70	71		03.92			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-30-2008
55	70	71		03.92			NO	E	E	4	1		OTHER	OTHER	DYLGT	DRY	P INJ	02-12-2010
55	70	71		03.92			NO	E	E	2			REAR-END	DEF-VEH	DYLGT	DRY	PDO	11-01-2012
55	70	71		03.92			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-07-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.94,					00.06 after SHIELDS UP					
55	70	71		03.94			NO	E	E	3	3		OTHER	SLEEPY	DYLGT	DRY	I INJ	09-05-2008
55	70	71		03.94			NO	E	E	3	8		OTHER	UNSAF-SPD	DYLGT	DRY	N-I INJ	05-14-2010
55	70	71		03.94			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-29-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.95,					00.05 before MM 4					
55	70	71		03.95			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	02-04-2008
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.96,					00.04 before MM 4					
55	70	71		03.96			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-13-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.97,					00.03 before MM 4					
55	70	71		03.97			NO	E	E	5	4		REAR-END	INATT	DYLGT	DRY	I INJ	10-31-2008
55	70	71		03.97			NO	E	E	3	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	10-17-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 3.98,					00.02 before MM 4					
55	70	71		03.98			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-12-2008
55	70	71		03.98			NO	E	E	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	01-30-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	03-18-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-21-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-21-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-08-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-14-2008
55	70	71		03.98			NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DAWN	DRY	PDO	04-24-2008
55	70	71		03.98			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	04-24-2008
55	70	71		03.98			NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DARK	WET	N-I INJ	04-24-2008
55	70	71		03.98			NO	E	E	2	2		REAR-END	INATT	DYLGT	DRY	N-I INJ	04-24-2008
55	70	71		03.98			NO	E	E	5	3		REAR-END	IMP-LN-CHG	DYLGT	DRY	I INJ	04-30-2008
55	70	71		03.98			NO	E	E	2	4		REAR-END	INATT	DYLGT	DRY	P INJ	05-03-2008
55	70	71		03.98			NO	E	E	3			REAR-END	INATT	DYLGT	WET	PDO	05-07-2008
55	70	71		03.98			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	05-20-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.98			NO	E	E	2	1		REAR-END	INATT	DAWN	DRY	P INJ	05-29-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-05-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-13-2008
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-17-2008
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	06-23-2008
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	06-26-2008
55	70	71		03.98			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	06-30-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-25-2008
55	70	71		03.98			NO	E	-	1			F-O UTIL-POLE	FOL-CLOSE	DYLGT	DRY	PDO	08-12-2008
55	70	71		03.98			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	08-13-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-14-2008
55	70	71		03.98			NO	E	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DARK	DRY	PDO	08-17-2008
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	08-18-2008
55	70	71		03.98			NO	E	E	3			SIDESWIPE-SAME	INATT	DYLGT	DRY	PDO	08-22-2008
55	70	71		03.98			NO	E	-	1	2		ROLLOVER	INATT	DYLGT	DRY	I INJ	08-30-2008
55	70	71		03.98			NO	E	E	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	09-25-2008
55	70	71		03.98			NO	E	E	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-26-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-30-2008
55	70	71		03.98			NO	E	-	1			F-O UTIL-POLE	DEF-VEH	DYLGT	DRY	PDO	10-11-2008
55	70	71		03.98			NO	E	E	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	10-15-2008
55	70	71		03.98			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	10-20-2008
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	10-24-2008
55	70	71		03.98			NO	E	E	3			OTHER	INATT	DARK	DRY	PDO	11-03-2008
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-26-2008
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-26-2008
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DARK	WET	PDO	12-18-2008
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DARK	DRY	N-I INJ	01-21-2009
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	02-13-2009
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-07-2009
55	70	71		03.98			NO	E	E	2			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	03-13-2009
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-21-2009
55	70	71		03.98			NO	E	E	4			OTHER	UNSAF-SPD	DYLGT	DRY	PDO	06-23-2009
55	70	71		03.98			NO	W	W	3			OTHER	IMP-STOP	DYLGT	DRY	PDO	06-29-2009
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-03-2009
55	70	71		03.98			NO	E	E	2			OTHER	NO-IMP-ACT	DYLGT	WET	PDO	09-12-2009
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DARK	DRY	PDO	01-05-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	02-02-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-04-2010
55	70	71		03.98		WKZONE	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	03-11-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-18-2010
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-02-2010
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	04-09-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-02-2010
55	70	71		03.98			NO	E	E	2	1		REAR-END	OTHER	DYLGT	DRY	N-I INJ	06-17-2010
55	70	71		03.98			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-18-2010
55	70	71		03.98			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	06-21-2010
55	70	71		03.98			NO	E	E	3	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	06-22-2010
55	70	71		03.98			NO	E	E	3	1		OTHER	INATT	DYLGT	DRY	N-I INJ	06-23-2010
55	70	71		03.98			NO	E	E	3			OTHER	UNSAF-SPD	DYLGT	DRY	PDO	06-30-2010
55	70	71		03.98			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	06-30-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-01-2010
55	70	71		03.98			NO	E	E	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	07-12-2010
55	70	71		03.98			NO	E	E	2	1		REAR-END	UNSAF-SPD	DARK	DRY	I INJ	07-30-2010
55	70	71		03.98			NO	E	E	4	2		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	08-05-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-06-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-06-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-16-2010
55	70	71		03.98			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	08-19-2010
55	70	71		03.98			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-25-2010
55	70	71		03.98			NO	E	E	2	1		SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	P INJ	08-26-2010
55	70	71		03.98			NO	E	E	3	3		REAR-END	D-W-I	DYLGT	DRY	P INJ	09-10-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-11-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-28-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-28-2010
55	70	71		03.98			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	09-30-2010
55	70	71		03.98			NO	E	E	4			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	10-06-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-07-2010
55	70	71		03.98			NO	E	E	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	10-20-2010
55	70	71		03.98			NO	E	E	2			REAR-END	F-YIELD	DYLGT	DRY	PDO	10-21-2010
55	70	71		03.98			NO	E	E	4			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-05-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-05-2010
55	70	71		03.98			NO	E	-	1	1		OTH-SINGLE-VEH	FOL-CLOSE	DYLGT	DRY	N-I INJ	11-13-2010
55	70	71		03.98			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	11-13-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-17-2010
55	70	71		03.98			NO	E	E	3	2		OTHER	INATT	DARK	DRY	I INJ	11-24-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.98			NO	E	E	2	2		REAR-END	INATT	DYLGT	DRY	N-I INJ	12-22-2010
55	70	71		03.98			NO	W	W	2			OTHER	D-W-I	DARK	DRY	PDO	12-23-2010
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-06-2011
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	01-14-2011
55	70	71		03.98			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	01-21-2011
55	70	71		03.98			NO	E	E	4			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	02-11-2011
55	70	71		03.98			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	03-01-2011
55	70	71		03.98			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	04-07-2011
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-13-2011
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	05-11-2011
55	70	71		03.98			NO	W	-	1			F-O BARR-CONCRETE	NEG-DRVING	DYLGT	DRY	PDO	06-05-2011
55	70	71		03.98			NO	E	E	4			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-07-2011
55	70	71		03.98			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	06-30-2011
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	07-05-2011
55	70	71		03.98			NO	E	-	1			F-O UTIL-POLE	FOL-CLOSE	DYLGT	DRY	PDO	07-08-2011
55	70	71		03.98			NO	E	E	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	07-20-2011
55	70	71		03.98			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	07-21-2011
55	70	71		03.98			NO	E	E	2	1		REAR-END	NO-IMP-ACT	DYLGT	DRY	N-I INJ	08-04-2011
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-08-2011
55	70	71		03.98			NO	E	E	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-19-2011
55	70	71		03.98			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-27-2011
55	70	71		03.98			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	08-30-2011
55	70	71		03.98			NO	E	E	3	2		REAR-END	INATT	DYLGT	DRY	N-I INJ	09-02-2011
55	70	71		03.98			NO	E	E	2	4		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-02-2011
55	70	71		03.98			NO	W	W	3			SIDESWIPE-OPP	DEF-VEH	DYLGT	DRY	PDO	09-14-2011
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	09-14-2011
55	70	71		03.98		WKZONE	NO	W	W	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-02-2011
55	70	71		03.98			NO	E	E	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	10-16-2011
55	70	71		03.98			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	11-05-2011
55	70	71		03.98			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-15-2011
55	70	71		03.98		WKZONE	NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-15-2011
55	70	71		03.98			NO	E	E	4	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	12-30-2011
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-04-2012
55	70	71		03.98			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-11-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-27-2012
55	70	71		03.98			NO	E	E	3	2		REAR-END	UNSAF-SPD	DYLGT	DRY	I INJ	04-02-2012
55	70	71		03.98			NO	E	E	3	2		OTHER	FOL-CLOSE	DYLGT	WET	N-I INJ	04-03-2012

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Collision Analysis and Safety Branch
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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		03.98			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-05-2012
55	70	71		03.98			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	04-13-2012
55	70	71		03.98			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	04-20-2012
55	70	71		03.98			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	06-13-2012
55	70	71		03.98			NO	N	E	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	07-19-2012
55	70	71		03.98			NO	W	W	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-19-2012
55	70	71		03.98			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	07-25-2012
55	70	71		03.98			NO	E	E	3	1		REAR-END	INATT	DYLGT	DRY	P INJ	07-26-2012
55	70	71		03.98			NO	E	E	5			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-02-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-20-2012
55	70	71		03.98			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-27-2012
55	70	71		03.98			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	08-27-2012
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-27-2012
55	70	71		03.98			NO	E	E	4			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-28-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	09-13-2012
55	70	71		03.98			NO	E	E	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-18-2012
55	70	71		03.98			NO	E	E	3	1		REAR-END	INATT	DARK	WET	N-I INJ	09-27-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-09-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-23-2012
55	70	71		03.98			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	10-26-2012
55	70	71		03.98			NO	E	E	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-02-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-02-2012
55	70	71		03.98			NO	W	-	1			F-O FENCE	UNSAF-SPD	DARK	WET	PDO	11-11-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-12-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-13-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-27-2012
55	70	71		03.98			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-13-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-15-2012
55	70	71		03.98			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-19-2012
55	70	71		03.98			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-19-2012
55	70	71		03.98			NO	E	E	2			ANGLE-OTHER	IMP-LN-CHG	DARK	DRY	PDO	12-27-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240		AT: MM 4.00,				MM 4							
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-14-2009
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-14-2009
55	70	71		04.00	MM 4		NO	E	E	3	1		OTHER	FOL-CLOSE	DYLGT	WET	I INJ	09-16-2011
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-20-2011
55	70	71		04.00	MM 4		NO	E	E	4			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	10-03-2011
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-06-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.00	MM 4		NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-10-2011
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	11-16-2011
55	70	71		04.00	MM 4		NO	E	E	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	11-16-2011
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-02-2011
55	70	71		04.00	MM 4		NO	E	E	2			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	12-08-2011
55	70	71		04.00	MM 4		NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-11-2011
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	12-15-2011
55	70	71		04.00	MM 4		NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	12-16-2011
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	12-21-2011
55	70	71		04.00	MM 4		NO	W	W	2			ANGLE-OTHER	INATT	DYLGT	DRY	PDO	01-04-2012
55	70	71		04.00	MM 4		NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	01-11-2012
55	70	71		04.00	MM 4		NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-04-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.01,					00.01 after MM 4					
55	70	71		04.01			NO	W	-	1			F-O CULVERT	OTH-ANIMAL	DARK	DRY	PDO	07-22-2008
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.02,					00.02 after MM 4					
55	70	71		04.02			NO	E	E	3	2		REAR-END	INATT	DYLGT	DRY	N-I INJ	04-01-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.05,					00.02 before BYERS/REF					
55	70	71		04.05			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-04-2008
55	70	71		04.05			NO	E	E	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	07-17-2008
55	70	71		04.05			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	07-24-2008
55	70	71		04.05			NO	E	E	3	3		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	12-20-2008
55	70	71		04.05			NO	W	W	3	6		REAR-END	UNSAF-SPD	DARK	DRY	P INJ	12-05-2009
55	70	71		04.05			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	03-03-2010
55	70	71		04.05			NO	E	E	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	03-12-2010
55	70	71		04.05			NO	E	E	5	4		REAR-END	INATT	DYLGT	DRY	I INJ	05-04-2010
55	70	71		04.05			NO	E	E	4			REAR-END	INATT	DYLGT	DRY	PDO	05-04-2010
55	70	71		04.05			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	09-03-2011
55	70	71		04.05			NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	02-02-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.06,					00.01 before BYERS/REF					
55	70	71		04.06			NO	S	E	2	1		ANGLE-TURNING	IMP-TURN	DYLGT	DRY	N-I INJ	05-23-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.07,					BYERS/REF					
55	70	71		04.07	BYERS/REF		NO	S	E	2	1		ANGLE-TURNING	IMP-TURN	DYLGT	DRY	P INJ	06-04-2010
55	70	71		04.07	BYERS/REF	RAMP	NO	-	E	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	08-16-2010
55	70	71		04.07	BYERS/REF		NO	E	E	2			ANGLE-TURNING	OTHER	DYLGT	DRY	PDO	10-27-2010
55	70	71		04.07	BYERS/REF		NO	E	E	2			ANGLE-TURNING	IMP-TURN	DYLGT	DRY	PDO	06-09-2011
55	70	71		04.07	BYERS/REF		NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-28-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.08,					00.01 after BYERS/REF					
55	70	71		04.08			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-10-2008

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.08			NO	E	E	3			REAR-END	FOL-CLOSE	DARK	DRY	PDO	01-15-2008
55	70	71		04.08			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	02-01-2008
55	70	71		04.08			NO	W	-	1			F-O UTIL-POLE	UNSAF-SPD	DYLGT	DRY	PDO	02-14-2008
55	70	71		04.08			NO	E	E	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	03-07-2008
55	70	71		04.08			NO	E	E	5	3		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	03-12-2008
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-21-2008
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-01-2008
55	70	71		04.08			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-02-2008
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-04-2008
55	70	71		04.08			NO	E	E	2			SIDESWIPE-SAME	F-YIELD	DYLGT	DRY	PDO	04-10-2008
55	70	71		04.08			NO	E	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	P INJ	04-10-2008
55	70	71		04.08			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-14-2008
55	70	71		04.08			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	04-24-2008
55	70	71		04.08			NO	E	E	4			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-17-2008
55	70	71		04.08			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	05-23-2008
55	70	71		04.08			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	06-09-2008
55	70	71		04.08			NO	E	E	3	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	07-03-2008
55	70	71		04.08			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-01-2008
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-01-2008
55	70	71		04.08			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-15-2008
55	70	71		04.08			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-22-2008
55	70	71		04.08			NO	E	E	3	2		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-22-2008
55	70	71		04.08			NO	E	E	4			OTHER	UNSAF-SPD	DYLGT	DRY	PDO	09-18-2008
55	70	71		04.08			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-26-2008
55	70	71		04.08			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	09-27-2008
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-01-2008
55	70	71		04.08			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	10-03-2008
55	70	71		04.08			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-07-2008
55	70	71		04.08			NO	E	E	4	4		SIDESWIPE-SAME	FOL-CLOSE	DYLGT	DRY	I INJ	10-08-2008
55	70	71		04.08			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-16-2008
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-18-2008
55	70	71		04.08			NO	E	E	2	1		SIDESWIPE-SAME	UNSAF-SPD	DARK	DRY	P INJ	10-22-2008
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	10-22-2008
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DARK	DRY	PDO	10-23-2008
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-23-2008
55	70	71		04.08			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-23-2008
55	70	71		04.08			NO	E	E	4	4		REAR-END	UNSAF-SPD	DYLGT	DRY	I INJ	10-28-2008
55	70	71		04.08			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-15-2008

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.08			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-15-2008
55	70	71		04.08			NO	E	E	2	3		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	11-15-2008
55	70	71		04.08			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-23-2008
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	12-04-2008
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DARK	DRY	PDO	12-05-2008
55	70	71		04.08			NO	E	E	2	1		REAR-END	INATT	DARK	DRY	P INJ	01-09-2009
55	70	71		04.08			NO	E	E	2			REAR-END	UNSAF-SPD	DARK	DRY	PDO	01-16-2009
55	70	71		04.08			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	02-16-2009
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	02-19-2009
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-03-2009
55	70	71		04.08			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	07-16-2009
55	70	71		04.08			NO	W	W	2			REAR-END	INATT	DARK	DRY	PDO	12-05-2009
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-23-2009
55	70	71		04.08			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-17-2010
55	70	71		04.08			NO	E	E	3			HEAD-ON	FOL-CLOSE	DYLGT	DRY	PDO	02-05-2010
55	70	71		04.08			NO	E	E	2			OTHER	NO-IMP-ACT	DYLGT	WET	PDO	02-26-2010
55	70	71		04.08			NO	E	E	3	3		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-03-2010
55	70	71		04.08			NO	E	E	2	4		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	06-08-2010
55	70	71		04.08			NO	E	E	4	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	06-09-2010
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-11-2010
55	70	71		04.08			NO	E	E	2	3		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-30-2010
55	70	71		04.08			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	07-01-2010
55	70	71		04.08			NO	E	E	2	2		REAR-END	INATT	DYLGT	DRY	P INJ	07-19-2010
55	70	71		04.08			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	07-20-2010
55	70	71		04.08			NO	E	E	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	07-22-2010
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	07-23-2010
55	70	71		04.08			NO	E	E	3	2		OTHER	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-05-2010
55	70	71		04.08			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	08-10-2010
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	08-21-2010
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-25-2010
55	70	71		04.08			NO	E	E	4			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-07-2010
55	70	71		04.08			NO	W	-	1			F-O UTIL-POLE	UNSAF-SPD	DYLGT	WET	PDO	09-08-2010
55	70	71		04.08			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	11-05-2010
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-18-2010
55	70	71		04.08			NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	11-18-2010
55	70	71		04.08			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	11-19-2010
55	70	71		04.08			NO	E	E	3	3		REAR-END	INATT	DYLGT	DRY	P INJ	11-30-2010
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-14-2011

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

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Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.08			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-16-2011
55	70	71		04.08			NO	E	E	5	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	03-28-2011
55	70	71		04.08			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	04-29-2011
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-19-2011
55	70	71		04.08			NO	E	E	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	09-30-2011
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	09-30-2011
55	70	71		04.08			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-03-2011
55	70	71		04.08			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	10-06-2011
55	70	71		04.08			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-21-2011
55	70	71		04.08			NO	E	E	2			REAR-END	F-YIELD	DARK	DRY	PDO	12-12-2011
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	01-16-2012
55	70	71		04.08			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	03-16-2012
55	70	71		04.08			NO	E	E	3	1		OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	03-28-2012
55	70	71		04.08			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	OTHER	PDO	04-18-2012
55	70	71		04.08			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-30-2012
55	70	71		04.08			NO	E	E	3	2		REAR-END	INATT	DYLGT	DRY	I INJ	05-17-2012
55	70	71		04.08			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	05-18-2012
55	70	71		04.08			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	06-06-2012
55	70	71		04.08			NO	E	E	2			ANGLE-OTHER	FOL-CLOSE	DYLGT	DRY	PDO	08-02-2012
55	70	71		04.08			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	08-30-2012
55	70	71		04.08			NO	E	E	3	1		OTHER	INATT	DYLGT	DRY	P INJ	08-31-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.09,					SHILEDS WB EXIT					
55	70	71		04.09	SHILEDS WB EXIT	RAMP	NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-25-2012
55	70	71		04.09	SHILEDS WB EXIT	M/L RAMP GOR	NO	W	-	1	2		ROLLOVER	UNSAF-SPD	DYLGT	DRY	N-I INJ	11-24-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.10,					00.01 after SHILEDS WB EXIT					
55	70	71		04.10			NO	E	E	3	3		REAR-END	INATT	DYLGT	DRY	N-I INJ	12-11-2008
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.12,					SHIELDS EB ENT					
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	05-05-2008
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	08-01-2008
55	70	71		04.12	SHIELDS EB ENT	RAMP	NO	E	-	1			F-O UTIL-POLE	NO-IMP-ACT	DYLGT	DRY	PDO	11-11-2008
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	3	2		OTHER	INATT	DYLGT	DRY	P INJ	12-05-2008
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	4			REAR-END	F-YIELD	DYLGT	DRY	PDO	03-19-2009
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2			REAR-END	UNSAF-SPD	DARK	WET	PDO	02-11-2010
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	04-30-2010
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	06-10-2010
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-14-2011
55	70	71		04.12	SHIELDS EB ENT	RAMP	NO	E	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	N-I INJ	07-29-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	W	-	1	1		F-O BARR-CONCRETE	UNSAF-SPD	DYLGT	WET	P INJ	09-22-2011
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	3	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-05-2012
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	04-06-2012
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2			REAR-END	F-YIELD	DARK	DRY	PDO	10-02-2012
55	70	71		04.12	SHIELDS EB ENT	M/L RAMP MRG	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-08-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.13,					00.01 after SHIELDS EB ENT					
55	70	71		04.13			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-05-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.15,					00.03 after SHIELDS EB ENT					
55	70	71		04.15			NO	E	E	3	3		REAR-END	INATT	DYLGT	DRY	N-I INJ	06-18-2008
55	70	71		04.15			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	12-06-2008
55	70	71		04.15			NO	E	E	3	1		OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	02-13-2009
55	70	71		04.15			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	04-12-2010
55	70	71		04.15			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-13-2010
55	70	71		04.15			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	08-30-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.18,					00.06 after SHIELDS EB ENT					
55	70	71		04.18			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	01-18-2008
55	70	71		04.18			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	I INJ	03-15-2008
55	70	71		04.18			NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	P INJ	04-18-2008
55	70	71		04.18			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-24-2008
55	70	71		04.18			NO	E	E	3	3		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	05-02-2008
55	70	71		04.18			NO	E	-	1			F-O UTIL-POLE	UNSAF-SPD	DYLGT	DRY	PDO	05-05-2008
55	70	71		04.18			NO	E	-	1			F-O RET-WALL	NO-IMP-ACT	DYLGT	DRY	PDO	05-08-2008
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-18-2008
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-01-2008
55	70	71		04.18			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	07-15-2008
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-16-2008
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-30-2008
55	70	71		04.18			NO	E	E	3	3		REAR-END	FOL-CLOSE	DARK	DRY	N-I INJ	08-01-2008
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-01-2008
55	70	71		04.18			NO	E	-	1			F-O BARR-CONCRETE	D-W-I	DARK	DRY	PDO	11-09-2008
55	70	71		04.18			NO	E	E	4	1		REAR-END	UNSAF-SPD	DARK	DRY	I INJ	01-02-2009
55	70	71		04.18			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	01-14-2009
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	02-11-2009
55	70	71		04.18			NO	E	E	3			OTHER	FOL-CLOSE	DARK	DRY	PDO	02-20-2009
55	70	71		04.18			NO	E	E	3			REAR-END	INATT	DYLGT	DRY	PDO	02-19-2010
55	70	71		04.18			NO	W	W	2	1		REAR-END	IMP-STOP	DYLGT	DRY	P INJ	02-23-2010

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.18			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-02-2010
55	70	71		04.18			NO	E	E	4	1		OTHER	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-06-2010
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-06-2010
55	70	71		04.18			NO	E	E	3	1		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	12-03-2010
55	70	71		04.18			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	12-03-2010
55	70	71		04.18			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-10-2010
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-12-2011
55	70	71		04.18			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	04-07-2011
55	70	71		04.18			NO	E	E	2	2		OTHER	NO-IMP-ACT	DYLGT	DRY	N-I INJ	05-25-2011
55	70	71		04.18			NO	E	E	2	2		REAR-END	INATT	DYLGT	DRY	N-I INJ	06-17-2011
55	70	71		04.18			NO	E	E	2			OTHER	IMP-LN-CHG	DAWN	DRY	PDO	10-05-2011
55	70	71		04.18			NO	E	E	2			REAR-END	INATT	DARK	DRY	PDO	12-10-2011
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	02-03-2012
55	70	71		04.18			NO	E	E	5			HEAD-ON	FOL-CLOSE	DYLGT	WET	PDO	02-13-2012
55	70	71		04.18			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-12-2012
55	70	71		04.18			NO	W	W	2		1	REAR-END	D-W-I	DYLGT	DRY	FAT	08-29-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-240			AT: MM 4.20,					00.08 after SHIELDS EB ENT					
55	70	71		04.20		WKZONE	NO	E	E	3			OTHER	UNSAF-SPD	DYLGT	DRY	PDO	10-08-2010
55	70	71		04.20			NO	W	-	1	1		ROLLOVER	OTHER	DYLGT	DRY	I INJ	04-03-2011
55	70	71		04.20			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	05-29-2011
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-240			AT: MM 4.24,					00.12 after SHIELDS EB ENT					
55	70	71		04.24			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	10-22-2010
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-240			AT: MM 4.25,					00.13 after SHIELDS EB ENT					
55	70	71		04.25			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	01-18-2008
55	70	71		04.25			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	03-12-2008
55	70	71		04.25			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-13-2008
55	70	71		04.25			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	06-19-2008
55	70	71		04.25			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-14-2008
55	70	71		04.25			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-26-2008
55	70	71		04.25			NO	E	-	1	1		F-O TRAFF-SIGNAL	UNSAF-SPD	DYLGT	DRY	P INJ	02-06-2009
55	70	71		04.25			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-06-2009
55	70	71		04.25			NO	E	E	2	1		SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	N-I INJ	04-04-2009
55	70	71		04.25			NO	E	E	4	1		OTHER	FOL-CLOSE	DARK	DRY	P INJ	12-16-2009
55	70	71		04.25			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	01-16-2010
55	70	71		04.25			NO	E	E	3			OTHER	UNSAF-SPD	DYLGT	DRY	PDO	06-08-2010
55	70	71		04.25			NO	E	E	4	3		OTHER	UNSAF-SPD	DYLGT	DRY	N-I INJ	08-27-2010
55	70	71		04.25			NO	E	-	1			F-O TRAFF-SIGN	FOL-CLOSE	DYLGT	WET	PDO	09-13-2010
55	70	71		04.25			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	07-28-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.25			NO	E	E	3	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	07-25-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 4.27,					00.11 before *20*						
55	70	71		04.27			NO	E	E	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	11-07-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 4.28,					00.10 before *20*						
55	70	71		04.28			NO	E	E	3			REAR-END	INATT	DYLGT	DRY	PDO	07-03-2008
55	70	71		04.28			NO	E	E	2	2		OTHER	IMP-LN-CHG	DYLGT	DRY	N-I INJ	06-20-2010
55	70	71		04.28			NO	E	E	4	3		REAR-END	INATT	DYLGT	DRY	N-I INJ	07-09-2010
55	70	71		04.28			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	N-I INJ	03-19-2011
55	70	71		04.28			NO	W	-	1			F-O UTIL-POLE	INATT	DYLGT	DRY	PDO	06-24-2011
55	70	71		04.28			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-19-2011
55	70	71		04.28			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-15-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 4.30,					00.08 before *20*						
55	70	71		04.30			NO	E	E	3			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	03-11-2011
55	70	71		04.30			NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	07-08-2011
55	70	71		04.30			NO	W	W	2	1		SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	P INJ	08-16-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 4.32,					00.06 before *20*						
55	70	71		04.32			NO	E	E	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	04-04-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 4.35,					00.03 before *20*						
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-17-2008
55	70	71		04.35			NO	E	E	2	5		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	01-28-2008
55	70	71		04.35			NO	E	E	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	N-I INJ	02-04-2008
55	70	71		04.35			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	02-26-2008
55	70	71		04.35			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	03-01-2008
55	70	71		04.35			NO	E	E	6	4		OTHER	UNSAF-SPD	DYLGT	DRY	N-I INJ	05-02-2008
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-11-2008
55	70	71		04.35			NO	E	E	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	05-29-2008
55	70	71		04.35		INCIDENT	NO	W	E	2			OTHER	INATT	DYLGT	OTHER	PDO	06-11-2008
55	70	71		04.35			NO	E	E	3			REAR-END	INATT	DYLGT	DRY	PDO	07-11-2008
55	70	71		04.35			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	WET	PDO	07-14-2008
55	70	71		04.35			NO	E	E	3	3		REAR-END	INATT	DYLGT	DRY	P INJ	07-18-2008
55	70	71		04.35			NO	W	W	2			REAR-END	IMP-PARK	DYLGT	DRY	PDO	08-04-2008
55	70	71		04.35			NO	E	E	3	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	08-06-2008
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-30-2008
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-02-2008
55	70	71		04.35			NO	E	E	4	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-01-2008
55	70	71		04.35			NO	E	E	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	10-02-2008
55	70	71		04.35			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	10-10-2008
55	70	71		04.35			NO	E	E	2			REAR-END	OTHER	DARK	DRY	PDO	11-13-2008

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Oklahoma Department of Transportation

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
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Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.35			NO	E	E	2	1		REAR-END	INATT	DARK	DRY	P INJ	11-19-2008
55	70	71		04.35			NO	W	W	2			REAR-END	IMP-LN-CHG	DARK	DRY	PDO	11-30-2008
55	70	71		04.35			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	12-18-2008
55	70	71		04.35			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	12-18-2008
55	70	71		04.35			NO	E	E	2			REAR-END	INATT	DARK	WET	PDO	12-18-2008
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-26-2008
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-20-2009
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-20-2009
55	70	71		04.35			NO	E	E	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	01-23-2009
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-11-2009
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	02-11-2009
55	70	71		04.35			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	02-17-2009
55	70	71		04.35			NO	E	E	3	2		OTHER	INATT	DYLGT	DRY	P INJ	04-04-2009
55	70	71		04.35			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	04-04-2009
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-02-2009
55	70	71		04.35			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	06-03-2009
55	70	71		04.35			NO	E	E	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	08-28-2009
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-29-2009
55	70	71		04.35			NO	E	E	3	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	11-13-2009
55	70	71		04.35			NO	W	W	2	1		ANGLE-OTHER	IMP-LN-CHG	DYLGT	WET	N-I INJ	01-16-2010
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	02-08-2010
55	70	71		04.35			NO	E	E	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	03-05-2010
55	70	71		04.35			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	03-12-2010
55	70	71		04.35			NO	E	E	2	1		OTHER	NO-IMP-ACT	DYLGT	DRY	P INJ	03-31-2010
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-24-2010
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-30-2010
55	70	71		04.35			NO	E	E	3			HEAD-ON	IMP-LN-CHG	DYLGT	DRY	PDO	05-20-2010
55	70	71		04.35			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-28-2010
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-26-2010
55	70	71		04.35			NO	E	E	5	4		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	08-07-2010
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-19-2010
55	70	71		04.35			NO	W	W	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	I INJ	09-30-2010
55	70	71		04.35			NO	E	-	1	1		F-O UTIL-POLE	SLEEPY	DARK	DRY	P INJ	10-03-2010
55	70	71		04.35			NO	E	E	3	1		OTHER	INATT	DYLGT	DRY	N-I INJ	10-11-2010
55	70	71		04.35			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	10-15-2010
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-23-2010
55	70	71		04.35			NO	E	E	3			OTHER	FOL-CLOSE	DARK	DRY	PDO	12-09-2010
55	70	71		04.35			NO	E	E	2	1		OTHER	INATT	DYLGT	DRY	N-I INJ	12-15-2010

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OLSSON® ASSOCIATES

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-21-2010
55	70	71		04.35			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-22-2010
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-08-2011
55	70	71		04.35			NO	E	E	4	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	01-18-2011
55	70	71		04.35			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	03-22-2011
55	70	71		04.35			NO	E	E	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	04-11-2011
55	70	71		04.35			NO	W	-	1	1		ROLLOVER	NO-IMP-ACT	DYLGT	DRY	I INJ	05-15-2011
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-20-2011
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	06-28-2011
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	07-21-2011
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-12-2011
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-17-2011
55	70	71		04.35			NO	E	E	3	2		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	09-01-2011
55	70	71		04.35			NO	W	W	2			HEAD-ON	UNSAF-SPD	DARK	WET	PDO	10-22-2011
55	70	71		04.35			NO	E	E	2			REAR-END	INATT	DYLGT	DRY	PDO	12-16-2011
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	12-19-2011
55	70	71		04.35			NO	E	E	2			REAR-END	UNSAF-SPD	DARK	DRY	PDO	02-17-2012
55	70	71		04.35			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	03-13-2012
55	70	71		04.35			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	04-19-2012
55	70	71		04.35			NO	E	E	2			REAR-END	NO-IMP-ACT	DYLGT	DRY	PDO	05-03-2012
55	70	71		04.35			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-07-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.36,				00.02 before *20*						
55	70	71		04.36			NO	E	E	4	2		OTHER	FOL-CLOSE	DYLGT	DRY	N-I INJ	07-25-2008
55	70	71		04.36			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	08-21-2008
55	70	71		04.36			NO	W	E	3			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	11-07-2008
55	70	71		04.36			NO	E	E	3	2		REAR-END	FOL-CLOSE	DYLGT	DRY	N-I INJ	02-15-2009
55	70	71		04.36			NO	E	E	2			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	07-02-2009
55	70	71		04.36			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-19-2009
55	70	71		04.36			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-12-2010
55	70	71		04.36			NO	E	E	3	1		OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	09-24-2010
55	70	71		04.36			NO	W	-	2	2		REAR-END	NEG-DRVING	DARK	DRY	P INJ	04-10-2011
55	70	71		04.36			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	WET	P INJ	12-07-2012
55	70	71		04.36			NO	E	-	1			F-O UTIL-POLE	INATT	DYLGT	DRY	PDO	12-21-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.37,				00.01 before *20*						
55	70	71		04.37			NO	W	-	1			F-O RET-WALL	UNSAF-SPD	DARK	DRY	PDO	02-04-2009
55	70	71		04.37			NO	E	E	2	1		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	09-27-2011
55	70	71		04.37			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	03-03-2012
55	70	71		04.37			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	05-29-2012

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.37			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	06-28-2012
55	70	71		04.37			NO	E	E	3	1		OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	07-05-2012
55	70	71		04.37			NO	W	-	1			F-O BARR-CONCRETE	UNSAF-SPD	DARK	DRY	PDO	08-18-2012
55	70	71		04.37			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	09-13-2012
55	70	71		04.37			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-16-2012
55	70	71		04.37			NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	11-13-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-240			AT: MM 4.72,					00.03 after *20*					
55	70	71		04.73			NO	E	E	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-19-2011
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-240			AT: MM 4.73,					00.04 after *20*					
55	70	71		04.74			NO	W	W	2			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	04-07-2012
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-240			AT: MM 4.74,					00.05 after *20*					
55	70	71		04.75			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	04-01-2008
55	70	71		04.75			NO	W	W	2			REAR-END	FOL-CLOSE	DUSK	DRY	PDO	05-22-2008
55	70	71		04.75			NO	W	W	3	2		OTHER	UNSAF-SPD	DYLGT	WET	P INJ	03-28-2009
55	70	71		04.75			NO	W	W	2	1		REAR-END	INATT	DYLGT	DRY	N-I INJ	05-03-2010
55	70	71		04.75			NO	W	W	2			OTHER	NO-IMP-ACT	DYLGT	DRY	PDO	11-05-2010
55	70	71		04.75			NO	W	W	2	1		REAR-END	FOL-CLOSE	DARK	DRY	N-I INJ	04-05-2011
55	70	71		04.75			NO	E	E	2	1		REAR-END	UNSAF-SPD	DYLGT	WET	P INJ	04-24-2011
55	70	71		04.75			NO	E	-	1	1		F-O GUARDRL-END	UNSAF-SPD	DYLGT	WET	P INJ	04-24-2011
55	70	71		04.75			NO	W	W	2	1		ANGLE-OTHER	UNSAF-SPD	DARK	DRY	P INJ	06-23-2011
55	70	71		04.75			NO	W	W	2			REAR-END	IMP-STOP	DYLGT	DRY	PDO	08-26-2011
55	70	71		04.75			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-14-2011
55	70	71		04.75			NO	E	E	2	1		REAR-END	FOL-CLOSE	DARK	DRY	P INJ	12-09-2011
(55) OKLAHOMA					(70) OKLA. CITY HWY: I-240			AT: MM 4.83,					00.10 before CROSSRD/POLUP					
55	70	71		04.84			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-14-2008
55	70	71		04.84			NO	E	E	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	07-17-2008
55	70	71		04.84			NO	W	W	2	1		REAR-END	IMP-LN-CHG	DYLGT	DRY	I INJ	09-22-2008
55	70	71		04.84		X-MEDIAN	NO	E	W	2	3	1	ANGLE-OTHER	NEG-DRVING	DYLGT	DRY	FAT	03-08-2009
55	70	71		04.84			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	06-12-2009
55	70	71		04.84			NO	E	E	2			HEAD-ON	UNSAF-SPD	DYLGT	SNOW	PDO	01-29-2010
55	70	71		04.84			NO	E	-	1	1		F-O GUARDRL-FACE	UNSAF-SPD	DARK	WET	N-I INJ	02-26-2010
55	70	71		04.84			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	05-11-2011
55	70	71		04.84			NO	W	W	2	1		OTHER	FOL-CLOSE	DYLGT	DRY	P INJ	08-09-2011
55	70	71		04.84			NO	W	-	1	1		F-O BARR-CONCRETE	INATT	DARK	DRY	N-I INJ	10-03-2011
55	70	71		04.84			NO	W	-	1			F-O BARR-CONCRETE	NO-IMP-ACT	DYLGT	WET	PDO	12-20-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.84			NO	W	W	2	2		SIDESWIPE-SAME	F-YIELD	DYLGT	DRY	N-I INJ	12-21-2011
55	70	71		04.84			NO	W	-	1			F-O BARR-CABLE	UNSAF-SPD	DARK	WET	PDO	03-11-2012
55	70	71		04.84			NO	W	W	2			OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	08-29-2012
55	70	71		04.84			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-15-2012
55	70	71		04.84			NO	E	E	2	1		SIDESWIPE-SAME	IMP-LN-CHG	DUSK	DRY	I INJ	10-16-2012
55	70	71		04.84			NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	12-10-2012
55	70	71		04.84			NO	E	-	1	1		ROLLOVER	FOL-CLOSE	DYLGT	DRY	P INJ	12-17-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240			AT: MM 4.84,				00.09 before CROSSRD/POLUP						
55	70	71		04.85			NO	W	-	1			F-O DITCH	UNSAF-SPD	DARK	DRY	PDO	10-02-2010
55	70	71		04.85			NO	E	E	2			REAR-END	D-W-I	DYLGT	DRY	PDO	03-17-2011
55	70	71		04.85			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-03-2011
55	70	71		04.85			NO	W	W	4	1		OTHER	UNSAF-SPD	DYLGT	WET	N-I INJ	09-29-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240			AT: MM 4.86,				00.07 before CROSSRD/POLUP						
55	70	71		04.87			NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	09-27-2008
55	70	71		04.87			NO	W	W	2	1		REAR-END	INATT	DYLGT	DRY	P INJ	07-17-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240			AT: MM 4.87,				00.06 before CROSSRD/POLUP						
55	70	71		04.88			NO	W	W	2	1		REAR-END	FOL-CLOSE	DAWN	DRY	P INJ	12-28-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240			AT: MM 4.91,				00.02 before CROSSRD/POLUP						
55	70	71		04.92			NO	E	E	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	09-06-2009
55	70	71		04.92			NO	E	-	1			F-O GUARDRL-FACE	INATT	DAWN	DRY	PDO	09-11-2009
55	70	71		04.92			NO	E	E	2	2		REAR-END	IMP-STOP	DYLGT	DRY	N-I INJ	08-14-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240			AT: MM 4.92,				00.01 before CROSSRD/POLUP						
55	70	71		04.93			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-19-2009
55	70	71		04.93			NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	04-22-2010
55	70	71		04.93			NO	W	W	2	2		REAR-END	FOL-CLOSE	DYLGT	DRY	P INJ	02-22-2012
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240			AT: MM 4.93,				CROSSRD/POLUP						
55	70	71		04.94	CROSSRD/POLUP	TERM LOC LFT	YES	-	-	2			ANGLE-TURNING	IMP-LN-CHG	DARK	OTHER	PDO	08-20-2008
55	70	71		04.94	CROSSRD/POLUP	TERM LOC LFT	YES	S	E	2			ANGLE-TURNING	IMP-TURN	DARK	DRY	PDO	01-03-2009
55	70	71		04.94	CROSSRD/POLUP	TERM LOC LFT	YES	E	S	2			ANGLE-TURNING	F-YIELD	DARK	WET	PDO	04-12-2009
55	70	71		04.94	CROSSRD/POLUP	BRIDGE	NO	W	-	1		1	ROLLOVER	OTHER	DYLGT	DRY	FAT	06-16-2009
55	70	71		04.94	CROSSRD/POLUP	TERM LOC LFT	YES	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-25-2011
(55) OKLAHOMA		(70) OKLA. CITY			HWY: I-240			AT: MM 4.94,				00.01 after CROSSRD/POLUP						
55	70	71		04.95			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	P INJ	07-28-2009
55	70	71		04.95			NO	W	-	1	1		F-O EMBANKMENT	NO-IMP-ACT	DYLGT	DRY	N-I INJ	07-14-2010
55	70	71		04.95			NO	E	-	1	1		F-O GUARDRL-FACE	D-W-I	DARK	DRY	N-I INJ	08-14-2010
55	70	71		04.95			NO	E	-	1	1		F-O GUARDRL-FACE	D-W-I	DARK	DRY	N-I INJ	09-04-2010
55	70	71		04.95			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-06-2010
55	70	71		04.95			NO	W	W	3			OTHER	FOL-CLOSE	DYLGT	DRY	PDO	01-18-2011

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		04.95		WKZONE	NO	E	-	1	2		ROLLOVER	UNSAF-SPD	DARK	DRY	I INJ	04-07-2011
55	70	71		04.95			NO	W	-	1			F-O GUARDRL-END	INATT	DYLGT	DRY	PDO	05-05-2011
55	70	71		04.95		INCIDENT	NO	E	E	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	08-02-2011
55	70	71		04.95			NO	E	E	3			REAR-END	UNSAF-SPD	DYLGT	WET	PDO	03-21-2012
55	70	71		04.95		FR BTN RMP/L	NO	W	-	1			F-O CURB	UNSAF-SPD	DARK	DRY	PDO	06-01-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.95,					00.01 before POLE/CROSS.EB EXIT					
55	70	71		04.96			NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DYLGT	DRY	PDO	09-26-2008
55	70	71		04.96			NO	W	-	1			F-O GUARDRL-FACE	INATT	DYLGT	DRY	PDO	10-16-2010
55	70	71		04.96		FR RD J LEFT	NO	N	E	2			ANGLE-TURNING	IMP-LN-CHG	DARK	DRY	PDO	09-01-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.96,					POLE/CROSS.EB EXIT					
55	70	71		04.97	POLE/CROSS.EB EXIT	M/L LOOP GOR	NO	E	-	1	3		F-O TRAFF-SIGN	UNSAF-SPD	DARK	DRY	N-I INJ	11-21-2008
55	70	71		04.97	POLE/CROSS.EB EXIT	LOOP	NO	E	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DARK	WET	PDO	03-30-2009
55	70	71		04.97	POLE/CROSS.EB EXIT	M/L LOOP GOR	NO	E	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DARK	WET	PDO	05-01-2009
55	70	71		04.97	POLE/CROSS.EB EXIT	M/L RAMP MRG	NO	E	-	1			F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	WET	PDO	11-29-2009
55	70	71		04.97	POLE/CROSS.EB EXIT	M/L LOOP GOR	NO	E	-	1	2		F-O TRAFF-SIGN	UNSAF-SPD	DYLGT	WET	N-I INJ	03-08-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.97,					00.01 after POLE/CROSS.EB EXIT					
55	70	71		04.98			NO	E	E	2			OTHER	OTHER	DYLGT	OTHER	PDO	11-03-2008
55	70	71		04.98			NO	W	-	1			F-O GUARDRL-FACE	DEF-VEH	DARK	DRY	PDO	12-28-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 4.99,					CROSSRDS WB ENT					
55	70	71		05.00	CROSSRDS WB ENT	M/L LOOP MRG	NO	W	W	2			REAR-END	IMP-STOP	DYLGT	DRY	PDO	10-10-2008
55	70	71		05.00	CROSSRDS WB ENT	M/L LOOP MRG	NO	W	W	2			REAR-END	IMP-LN-CHG	DYLGT	DRY	PDO	07-31-2011
55	70	71		05.00	CROSSRDS WB ENT	M/L LOOP MRG	NO	W	W	2			OTHER	F-YIELD	DARK	DRY	PDO	04-18-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.03,					00.03 after MM 5					
55	70	71		05.04			NO	W	-	1	1		F-O GUARDRL-END	NO-IMP-ACT	DYLGT	DRY	N-I INJ	06-10-2008
55	70	71		05.04			NO	E	E	2	2		HEAD-ON	D-W-I	DARK	DRY	P INJ	07-24-2009
55	70	71		05.04			NO	W	W	3			REAR-END	UNSAF-SPD	DYLGT	DRY	PDO	07-28-2009
55	70	71		05.04		X-MEDIAN	NO	E	E	2	2		REAR-END	IMP-LN-CHG	DYLGT	DRY	P INJ	07-23-2010
55	70	71		05.04			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-07-2011
55	70	71		05.04			NO	W	-	1			F-O BARR-OTHER	DEF-VEH	DYLGT	DRY	PDO	04-06-2011
55	70	71		05.04			NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	PDO	04-17-2011
55	70	71		05.04			NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	06-09-2011
55	70	71		05.04			NO	W	W	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	01-05-2012
55	70	71		05.04			NO	W	W	2	2		REAR-END	IMP-LN-CHG	DARK	WET	P INJ	02-17-2012
55	70	71		05.04		X-MEDIAN	NO	E	E	2			OTHER	NEG-DRVING	DARK	DRY	PDO	03-14-2012
55	70	71		05.04			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-07-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.04,					00.04 after MM 5					
55	70	71		05.05			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	WET	PDO	09-19-2009
55	70	71		05.05			NO	W	W	3			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	11-05-2010
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.06,					00.06 before ATSF RR UP					

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COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		05.07			NO	W	-	1	1		F-O GUARDRL-FACE	NO-IMP-ACT	DYLGT	DRY	P INJ	08-23-2008
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.07,					00.05 before ATSF RR UP					
55	70	71		05.08			NO	W	-	1	1		ROLLOVER	UNSAF-SPD	DYLGT	DRY	I INJ	05-14-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.13,					00.01 after ATSF RR UP					
55	70	71		05.14			NO	W	-	1			F-O GUARDRL-FACE	NO-IMP-ACT	DYLGT	WET	PDO	07-10-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.23,					00.09 before EASTRN EB EX.					
55	70	71		05.24		INCIDENT	NO	E	W	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	06-06-2009
55	70	71		05.24			NO	W	-	1			F-O GUARDRL-END	NEG-DRVING	DARK	DRY	PDO	09-29-2010
55	70	71		05.24			NO	E	-	1	2		ROLLOVER	NO-IMP-ACT	DYLGT	DRY	N-I INJ	04-22-2011
55	70	71		05.24			NO	E	E	2			SIDESWIPE-SAME	IMP-LN-CHG	DARK	DRY	PDO	07-27-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.32,					EASTRN EB EX.					
55	70	71		05.33	EASTRN EB EX.	M/L RAMP GOR	NO	E	E	2			REAR-END	DEF-VEH	DYLGT	DRY	PDO	12-02-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.33,					00.01 after EASTRN EB EX.					
55	70	71		05.34			NO	E	-	1	2		F-O DITCH	UNSAF-SPD	DYLGT	DRY	N-I INJ	03-21-2008
55	70	71		05.34			NO	E	-	1			F-O BARR-CABLE	D-W-I	DARK	DRY	PDO	11-26-2009
55	70	71		05.34			NO	W	W	2			HEAD-ON	FOL-CLOSE	DAWN	DRY	PDO	11-05-2010
55	70	71		05.34			NO	W	W	3	2		OTHER	IMP-LN-CHG	DYLGT	DRY	P INJ	11-27-2010
55	70	71		05.34			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	01-19-2011
55	70	71		05.34			NO	E	E	2	2		REAR-END	UNSAF-SPD	DYLGT	DRY	I INJ	04-06-2011
55	70	71		05.34			NO	W	-	1			F-O GUARDRL-END	OTHER	DYLGT	DRY	PDO	10-11-2011
55	70	71		05.34			NO	W	-	1			F-O GUARDRL-END	OTHER	DYLGT	DRY	PDO	10-11-2011
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.43,					00.05 after EASTERN WB ENT					
55	70	71		05.44			NO	W	-	1			ROLLOVER	UNSAF-SPD	DYLGT	DRY	PDO	04-18-2008
55	70	71		05.44			NO	W	-	1	1		F-O FENCE	INATT	DARK	DRY	I INJ	11-18-2009
55	70	71		05.44			NO	W	-	1	1		ROLLOVER		DARK	DRY	N-I INJ	03-15-2010
55	70	71		05.44			NO	E	E	2			OTHER	NEG-DRVING	DYLGT	DRY	PDO	04-07-2011
55	70	71		05.44			NO	W	W	2			ANGLE-OTHER	IMP-LN-CHG	DARK	DRY	PDO	08-12-2011
55	70	71		05.44			NO	W	W	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	10-11-2011
55	70	71		05.44		WKZONE	NO	E	E	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	12-01-2011
55	70	71		05.44			NO	E	-	1	1		ROLLOVER	SLEEPY	DARK	DRY	N-I INJ	01-01-2012
55	70	71		05.44			NO	W	W	2			OTHER	L-CENTER	DYLGT	DRY	PDO	11-23-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.51,					00.03 before EASTERN OP					
55	70	71		05.51		WKZONE	NO	E	E	3	1		OTHER	UNSAF-SPD	DYLGT	DRY	P INJ	10-02-2009
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.52,					00.02 before EASTERN OP					
55	70	71		05.52		FR RD J LEFT	NO	E	W	2	1		ANGLE-TURNING	F-YIELD	DYLGT	DRY	P INJ	06-12-2008
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240			AT: MM 5.53,					00.01 before EASTERN OP					
55	70	71		05.53			NO	W	W	2			REAR-END	FOL-CLOSE	DARK	DRY	PDO	06-21-2010
55	70	71		05.53			NO	W	W	2	2		SIDESWIPE-SAME	FOL-CLOSE	DYLGT	DRY	P INJ	06-22-2010

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Oklahoma Department of Transportation

COLLISION LISTING
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Highway System Collision Listing

Cnty	City	CS #	Int. #	Mile Post	Location	Features	Int. Related	Dir. 1	Dir. 2	# Veh.	# Inj.	# Fat.	Type of Collision	Unsafe Unlawful	Lighting Cond.	Roadway Cond.	Severity	Date
55	70	71		05.53			NO	W	W	2	1		REAR-END	D-W-I	DARK	DRY	P INJ	09-25-2010
55	70	71		05.53			NO	W	W	2	1		REAR-END	DEF-VEH	DARK	DRY	N-I INJ	09-08-2012
(55) OKLAHOMA				(70) OKLA. CITY	HWY: I-240		AT: MM 5.54,					EASTERN OP						
55	70	71		05.54	EASTERN OP		NO	E	-	1			F-O IMPACT-ATTEN	UNSAF-SPD	DARK	DRY	PDO	04-04-2008
55	70	71		05.54	EASTERN OP	BRIDGE	NO	E	-	1			F-O GUARDRL-END	DEF-VEH	DYLGT	DRY	PDO	04-15-2008
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	N	E	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	04-24-2008
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	N	W	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	05-29-2008
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	S	E	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	09-22-2008
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	-	1	1		F-O CURB	D-W-I	DYLGT	DRY	N-I INJ	10-07-2008
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	S	2			ANGLE-TURNING	OTHER	DYLGT	DRY	PDO	11-03-2008
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	S	2	2		RIGHT-ANGLE	F-STOP	DYLGT	DRY	N-I INJ	01-06-2009
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	N	W	2			RIGHT-ANGLE	NO-IMP-ACT	DYLGT	DRY	PDO	04-30-2009
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	W	W	2	1		SIDESWIPE-SAME	IMP-LN-CHG	DYLGT	DRY	P INJ	05-26-2009
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	N	E	2			RIGHT-ANGLE	D-W-I	DYLGT	DRY	PDO	05-28-2009
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	E	2	1		ANGLE-TURNING	FOL-CLOSE	DYLGT	DRY	P INJ	06-30-2009
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	S	-	1			F-O CURB	OTHER	DARK	DRY	PDO	01-04-2010
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	S	N	2			ANGLE-TURNING	F-YIELD	DARK	DRY	PDO	02-17-2010
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	S	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	06-23-2010
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	E	W	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	07-07-2010
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	S	2			ANGLE-TURNING	F-YIELD	DYLGT	DRY	PDO	07-23-2010
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	-	-	2	1		HEAD-ON	F-YIELD	DYLGT	DRY	N-I INJ	08-19-2010
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	N	N	2			REAR-END	NO-IMP-ACT	DYLGT	DRY	PDO	09-26-2010
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	N	N	2			ANGLE-TURNING	NO-IMP-ACT	DYLGT	WET	PDO	11-10-2010
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	N	N	2	1		REAR-END	OTHER	DYLGT	DRY	P INJ	11-12-2010
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	N	W	2			RIGHT-ANGLE	F-STOP	DYLGT	DRY	PDO	01-22-2011
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	S	W	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	02-25-2011
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	N	2	1		ANGLE-TURNING	F-YIELD	DYLGT	DRY	N-I INJ	07-22-2011
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	N	N	2			REAR-END	FOL-CLOSE	DYLGT	DRY	PDO	09-09-2011
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES			2			ANGLE-OTHER	OTHER	DYLGT	DRY	PDO	09-20-2011
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	S	W	2			RIGHT-ANGLE	F-YIELD	DYLGT	DRY	PDO	01-31-2012
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	E	S	2			RIGHT-ANGLE	F-STOP	DYLGT	WET	PDO	04-03-2012
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	E	2			ANGLE-TURNING	F-STOP	DYLGT	DRY	PDO	06-22-2012
55	70	71		05.54	EASTERN OP	TERM LOC RIT TURN LN MRGE	YES	E	E	2			ANGLE-TURNING	INATT	DYLGT	DRY	PDO	06-26-2012
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	N	W	2	1		ANGLE-TURNING	F-YIELD	DYLGT	DRY	N-I INJ	07-12-2012
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	S	2			ANGLE-TURNING	OTHER	DYLGT	DRY	PDO	09-04-2012
55	70	71		05.54	EASTERN OP	TERM LOC LFT	YES	S	W	2			RIGHT-ANGLE	F-YIELD	DAWN	DRY	PDO	09-04-2012
55	70	71		05.54	EASTERN OP	TERM LOC RIT	YES	E	N	2	2		RIGHT-ANGLE	F-YIELD	DYLGT	DRY	P INJ	10-24-2012

* Location Near But Not At Mile Point

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QUERY CRITERIA RAN
01-01-2008 Thru 12-31-2012
I-35 FROM 89 ST. S. TO 66 ST. S, AND I-240 FROM SHIELDS TO EASTERN, OKLAHOMA COUNTY

Program Provided by:
Traffic Engineering Division
Collision Analysis and Safety Branch
(405) 522-0985
Created: 06/07/2013 by Ken Hess

Query Number	Query on	Query By	Mileage Range	Date range
1	County : 55-OKLAHOMA	Control Section: 15 - I-35	00.00- to 1.48-66 ST. S UP *21*	01-01-2008 to 12-31-2012
2	County : 55-OKLAHOMA	Control Section: 71 - I-240	3.88-SHIELDS UP *86* to 5.54-EASTERN OP *89*	01-01-2008 to 12-31-2012

Incl. Hwy/Hwy Jct ID Colls	Checked
Terminal Locations Only Within Interchanges	Unchecked
Intersection Related Only	Unchecked
Excl. Intersection Related	Unchecked
CMV Collisions Only	Unchecked
Incl. Non-Highway Colls	Unchecked
FILTER DATA BY :	
Severity	All Selected
Special Feature	All Selected
Unsafe Unlawful	All Selected
Type of Collision	All Selected
Harmful Event for Collision	All Selected
Roadway Departure	All Selected
ROADWAY CRITERIA :	
Average Daily Traffic	All Selected
National Functional Class	All Selected
Number of Lanes	All Selected
Access Control	All Selected
Median Type	All Selected
Median Width	All Selected
Outer Shoulder Type	All Selected
Outer Shoulder Width	All Selected
Traffic Control	All Selected

UNIT CRITERIA :	
Unit Type	All Selected
Vehicle Type	All Selected
Vehicle Cond	All Selected
Vehicle Action	All Selected
Direction of Travel_1	All Selected
Direction of Travel_2	All Selected
PERSON CRITERIA :	
Restraint Used	All Selected
Person Conditions	All Selected
Age	All Selected
Sex	All Selected
ENVIROMENT CRITERIA :	
Manner of Coll.	All Selected
Agency	All Selected
Road Conditions	All Selected
Light	All Selected
Weather	All Selected
Relation Junction	All Selected
Hour	All Selected

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APPENDIX A

HCS Basic Freeway Segments

HCS 2010: Basic Freeway Segments Release 6.1

Reza Amini, PE
Olsson Associates
201 NW 63rd Street, Suite 130
Oklahoma City, OK 73116
Phone: (405) 242-6642
Fax: (405) 242-6601
E-mail: ramini@olssonassociates.com

________________________Operational Analysis________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	North of Off Ramp to I-35 Northbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments________________________

Volume, V	4587	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1246	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1720	pc/h/ln

________________________Speed Inputs and Adjustments________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures________________________

Flow rate, vp	1720	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.9	mi/h
Number of lanes, N	3	
Density, D	25.7	pc/mi/ln
Level of service, LOS	C	

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

HCS 2010: Basic Freeway Segments Release 6.1

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Oklahoma City, OK 73116
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Fax: (405) 242-6601
E-mail: ramini@olssonassociates.com

Operational Analysis

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	North of Off Ramp to I-35 Northbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Flow Inputs and Adjustments

Volume, V	3710	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1008	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1391	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

LOS and Performance Measures

Flow rate, vp	1391	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.6	mi/h
Number of lanes, N	3	
Density, D	20.0	pc/mi/ln
Level of service, LOS	C	

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

HCS 2010: Basic Freeway Segments Release 6.1

Reza Amini, PE
Olsson Associates
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Oklahoma City, OK 73116
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Fax: (405) 242-6601
E-mail: ramini@olssonassociates.com

________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5840	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1587	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2201	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2201	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	58.4	mi/h
Number of lanes, N	3	
Density, D	37.7	pc/mi/ln
Level of service, LOS	E	

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

HCS 2010: Basic Freeway Segments Release 6.1

Reza Amini, PE
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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4810	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1307	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1812	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1812	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	65.7	mi/h
Number of lanes, N	3	
Density, D	27.6	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 59th St. and North of Off Ramp to SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5640	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1533	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2125	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2125	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	60.1	mi/h
Number of lanes, N	3	
Density, D	35.4	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 59th St. and North of Off Ramp to SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4620	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1255	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1741	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1741	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.6	mi/h
Number of lanes, N	3	
Density, D	26.1	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 59th St. and North of On Ramp from SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4730	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1285	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1782	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	1782	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.1	mi/h
Number of lanes, N	3	
Density, D	27.0	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 59th St. and North of On Ramp from SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5870	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1595	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2212	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2212	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	3	
Density, D	38.1	pc/mi/ln
Level of service, LOS	E	

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

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______________Operational Analysis______________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 66th St. and North of On Ramp from SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

______________Flow Inputs and Adjustments______________

Volume, V	4680	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1272	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1763	pc/h/ln

______________Speed Inputs and Adjustments______________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

______________LOS and Performance Measures______________

Flow rate, vp	1763	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.3	mi/h
Number of lanes, N	3	
Density, D	26.6	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 66th St. and North of On Ramp from SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5830	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1584	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2197	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2197	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	58.5	mi/h
Number of lanes, N	3	
Density, D	37.6	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of I-35 Southbound Off Ramp to I-240 Westbound
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments________________________

Volume, V	3780	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1027	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1417	pc/h/ln

________________________Speed Inputs and Adjustments________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures________________________

Flow rate, vp	1417	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	69.5	mi/h
Number of lanes, N	3	
Density, D	20.4	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of I-35 Southbound Off Ramp to I-240 Westbound
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4680	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1272	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1755	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1755	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.4	mi/h
Number of lanes, N	3	
Density, D	26.4	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	North of I-35 Southbound Off Ramp to SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments_________________________

Volume, V	5330	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1448	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1506	pc/h/ln

________________________Speed Inputs and Adjustments_________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures________________________

Flow rate, vp	1506	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	68.9	mi/h
Number of lanes, N	4	
Density, D	21.9	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	North of I-35 Southbound Off Ramp to SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6550	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1780	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1851	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1851	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	65.1	mi/h
Number of lanes, N	4	
Density, D	28.4	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis______________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments_________________________

Volume, V	4450	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1209	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1661	pc/h/ln

________________________Speed Inputs and Adjustments_________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1661	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	67.5	mi/h
Number of lanes, N	3	
Density, D	24.6	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4700	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1277	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1754	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1754	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.4	mi/h
Number of lanes, N	3	
Density, D	26.4	pc/mi/ln
Level of service, LOS	D	

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

HCS 2010: Basic Freeway Segments Release 6.1

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	Between Pole Rd. & Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	3400	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	924	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1912	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1912	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	64.1	mi/h
Number of lanes, N	2	
Density, D	29.8	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	Between Pole Rd. & Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	3400	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	924	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1912	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1912	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	64.1	mi/h
Number of lanes, N	2	
Density, D	29.8	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments_________________________

Volume, V	3050	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	924	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1707	pc/h/ln

________________________Speed Inputs and Adjustments_________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1707	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	67.0	mi/h
Number of lanes, N	2	
Density, D	25.5	pc/mi/ln
Level of service, LOS	C	

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

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_________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_________________________Flow Inputs and Adjustments___________________________

Volume, V	3050	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	829	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1707	pc/h/ln

_________________________Speed Inputs and Adjustments___________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

_________________________LOS and Performance Measures_________________________

Flow rate, vp	1707	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	67.0	mi/h
Number of lanes, N	2	
Density, D	25.5	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	2250	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	611	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1260	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1260	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	18.0+	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	2670	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	726	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1495	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1495	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	69.0	mi/h
Number of lanes, N	2	
Density, D	21.7	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	Between Pole Rd. & Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	2650	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	720	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1491	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1491	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	69.0	mi/h
Number of lanes, N	2	
Density, D	21.6	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/18/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	Between Pole Rd. & Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	3020	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	821	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1699	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1699	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	67.1	mi/h
Number of lanes, N	2	
Density, D	25.3	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	3650	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	821	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1362	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1362	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	69.7	mi/h
Number of lanes, N	3	
Density, D	19.5	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4240	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1152	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1582	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1582	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	68.3	mi/h
Number of lanes, N	3	
Density, D	23.2	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	North of Off ramp to I-35 Northbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4401	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1196	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1650	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	1650	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	67.7	mi/h
Number of lanes, N	3	
Density, D	24.4	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	North of SE 82nd St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments_________________________

Volume, V	4598	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1249	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1724	pc/h/ln

________________________Speed Inputs and Adjustments_________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1724	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.8	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

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

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____________Operational Analysis____________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 66th St. and North of Off Ramp to SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____________Flow Inputs and Adjustments____________

Volume, V	6079	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1652	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2291	pc/h/ln

____________Speed Inputs and Adjustments____________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

____________LOS and Performance Measures____________

Flow rate, vp	2291	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	56.2	mi/h
Number of lanes, N	3	
Density, D	40.8	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 66th St. and North of Off Ramp to SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6109	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1660	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2302	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	2302	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	55.9	mi/h
Number of lanes, N	3	
Density, D	41.2	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 59th St. and North of Off Ramp to SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5825	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1583	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2195	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	2195	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	58.5	mi/h
Number of lanes, N	3	
Density, D	37.5	pc/mi/ln
Level of service, LOS	E	

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_________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 59th St. and North of Off Ramp to SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_________________________Flow Inputs and Adjustments___________________________

Volume, V	5868	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1595	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2211	pc/h/ln

_________________________Speed Inputs and Adjustments___________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

_________________________LOS and Performance Measures__________________________

Flow rate, vp	2211	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	3	
Density, D	38.0	pc/mi/ln
Level of service, LOS	E	

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

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_________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 59th St. and North of On Ramp from SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_________________________Flow Inputs and Adjustments__________________________

Volume, V	6008	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1633	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2264	pc/h/ln

_________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

_________________________LOS and Performance Measures_________________________

Flow rate, vp	2264	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	56.9	mi/h
Number of lanes, N	3	
Density, D	39.8	pc/mi/ln
Level of service, LOS	E	

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

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_________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 59th St. and North of On Ramp from SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_________________________Flow Inputs and Adjustments___________________________

Volume, V	6116	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1662	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2305	pc/h/ln

_________________________Speed Inputs and Adjustments___________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

_________________________LOS and Performance Measures__________________________

Flow rate, vp	2305	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	55.8	mi/h
Number of lanes, N	3	
Density, D	43.1	pc/mi/ln
Level of service, LOS	E	

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

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Operational Analysis

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 66th St. and North of On Ramp from SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Flow Inputs and Adjustments

Volume, V	5944	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1615	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2240	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

LOS and Performance Measures

Flow rate, vp	2240	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	57.5	mi/h
Number of lanes, N	3	
Density, D	39.0	pc/mi/ln
Level of service, LOS	E	

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

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____________Operational Analysis____________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 66th St. and North of On Ramp from SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____________Flow Inputs and Adjustments____________

Volume, V	6065	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1648	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2285	pc/h/ln

____________Speed Inputs and Adjustments____________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

____________LOS and Performance Measures____________

Flow rate, vp	2285	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	56.3	mi/h
Number of lanes, N	3	
Density, D	40.6	pc/mi/ln
Level of service, LOS	E	

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

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____________Operational Analysis____________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of I-35 Southbound Off Ramp to I-240 Westbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____________Flow Inputs and Adjustments____________

Volume, V	4801	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1305	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1800	pc/h/ln

____________Speed Inputs and Adjustments____________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

____________LOS and Performance Measures____________

Flow rate, vp	1800	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	65.8	mi/h
Number of lanes, N	3	
Density, D	27.3	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of I-35 Southbound Off Ramp to I-240 Westbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4604	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1251	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1726	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	1726	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.8	mi/h
Number of lanes, N	3	
Density, D	25.8	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Roadway-Geometric Design
Date Performed:	6/26/2013
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	North of I-35 Southbound Off Ramp to SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35/I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments_________________________

Volume, V	6770	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1840	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1913	pc/h/ln

________________________Speed Inputs and Adjustments_________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1913	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	64.1	mi/h
Number of lanes, N	4	
Density, D	29.8	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	North of I-35 Southbound Off Ramp to SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6979	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1896	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1972	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	1972	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	63.1	mi/h
Number of lanes, N	4	
Density, D	31.3	pc/mi/ln
Level of service, LOS	D	

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

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Operational Analysis

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Flow Inputs and Adjustments

Volume, V	5682	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1544	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2120	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

LOS and Performance Measures

Flow rate, vp	2120	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	60.2	mi/h
Number of lanes, N	3	
Density, D	35.2	pc/mi/ln
Level of service, LOS	E	

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

HCS 2010: Basic Freeway Segments Release 6.1

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______Operational Analysis______

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

______Flow Inputs and Adjustments______

Volume, V	5969	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1622	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2228	pc/h/ln

______Speed Inputs and Adjustments______

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

______LOS and Performance Measures______

Flow rate, vp	2228	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	57.7	mi/h
Number of lanes, N	3	
Density, D	38.6	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	Between Pole Rd. & Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4348	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1182	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	2446	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2446	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	52.0	mi/h
Number of lanes, N	2	
Density, D	47.0	pc/mi/ln
Level of service, LOS	F	

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

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____________Operational Analysis____________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	Between Pole Rd. & Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____________Flow Inputs and Adjustments____________

Volume, V	4318	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1173	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	2429	pc/h/ln

____________Speed Inputs and Adjustments____________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

____________LOS and Performance Measures____________

Flow rate, vp	2429	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	52.5	mi/h
Number of lanes, N	2	
Density, D	46.3	pc/mi/ln
Level of service, LOS	F	

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________________________Operational Analysis________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments________________________

Volume, V	4348	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1182	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2434	pc/h/ln

________________________Speed Inputs and Adjustments________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures________________________

Flow rate, vp	2434	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	52.3	mi/h
Number of lanes, N	2	
Density, D	46.5	pc/mi/ln
Level of service, LOS	F	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4494	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1221	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2516	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	2516	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	49.9	mi/h
Number of lanes, N	2	
Density, D	50.4	pc/mi/ln
Level of service, LOS	F	

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________________________Operational Analysis________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	6/26/2013
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments________________________

Volume, V	3304	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	898	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1850	pc/h/ln

________________________Speed Inputs and Adjustments________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures________________________

Flow rate, vp	1850	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	65.1	mi/h
Number of lanes, N	2	
Density, D	28.4	pc/mi/ln
Level of service, LOS	D	

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

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____________________Operational Analysis____________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____________________Flow Inputs and Adjustments____________________

Volume, V	4011	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1090	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2245	pc/h/ln

____________________Speed Inputs and Adjustments____________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

____________________LOS and Performance Measures____________________

Flow rate, vp	2245	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	57.3	mi/h
Number of lanes, N	2	
Density, D	39.2	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	Between Pole Rd. & Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	3367	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	915	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1894	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	1894	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	64.4	mi/h
Number of lanes, N	2	
Density, D	29.4	pc/mi/ln
Level of service, LOS	D	

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

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______________________Operational Analysis______________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	Between Pole Rd. & Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

______________________Flow Inputs and Adjustments______________________

Volume, V	3834	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1042	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	2157	pc/h/ln

______________________Speed Inputs and Adjustments______________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

______________________LOS and Performance Measures______________________

Flow rate, vp	2157	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	59.4	mi/h
Number of lanes, N	2	
Density, D	36.3	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4636	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1260	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1730	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	1730	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.7	mi/h
Number of lanes, N	3	
Density, D	25.9	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/8/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5384	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1463	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2009	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	2009	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	62.4	mi/h
Number of lanes, N	3	
Density, D	32.2	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments_________________________

Volume, V	6395	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1738	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	2398	pc/h/ln

________________________Speed Inputs and Adjustments_________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2398	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	53.4	mi/h
Number of lanes, N	3	
Density, D	44.9	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6335	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1721	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	2376	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2376	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	54.0	mi/h
Number of lanes, N	3	
Density, D	44.0	pc/mi/ln
Level of service, LOS	E	

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

HCS 2010: Basic Freeway Segments Release 6.1

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	North of SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	7221	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1962	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2041	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2041	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	61.8	mi/h
Number of lanes, N	4	
Density, D	33.0	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	North of SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	7161	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1946	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2024	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2024	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	62.1	mi/h
Number of lanes, N	4	
Density, D	32.6	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5764	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1566	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2172	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2172	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	59.0	mi/h
Number of lanes, N	3	
Density, D	36.8	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Northbound
From/To:	South of SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5676	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1542	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2139	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2139	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	59.8	mi/h
Number of lanes, N	3	
Density, D	35.8	pc/mi/ln
Level of service, LOS	E	

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6046	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1643	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2278	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2278	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	56.5	mi/h
Number of lanes, N	3	
Density, D	40.3	pc/mi/ln
Level of service, LOS	E	

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6233	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1694	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2349	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2349	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	54.7	mi/h
Number of lanes, N	3	
Density, D	43.0	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of Off Ramp to SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6290	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1709	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1778	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures__________________________

Flow rate, vp	1778	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	66.1	mi/h
Number of lanes, N	4	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of Off Ramp to SE 66th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6632	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1802	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1874	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1874	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	64.7	mi/h
Number of lanes, N	4	
Density, D	29.0	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	North of SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6935	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1885	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	1960	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1960	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	63.3	mi/h
Number of lanes, N	4	
Density, D	31.0	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
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Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	North of SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	7220	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1962	v
Trucks and buses	8	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.962	
Driver population factor, fp	1.00	
Flow rate, vp	2040	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2040	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	61.8	mi/h
Number of lanes, N	4	
Density, D	33.0	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6325	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1719	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	2372	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2372	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	54.1	mi/h
Number of lanes, N	3	
Density, D	43.9	pc/mi/ln
Level of service, LOS	E	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-35 Southbound
From/To:	South of SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	6395	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1738	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	2398	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	2398	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	53.4	mi/h
Number of lanes, N	3	
Density, D	44.9	pc/mi/ln
Level of service, LOS	E	

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

HCS 2010: Basic Freeway Segments Release 6.1

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_________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	West of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_________________________Flow Inputs and Adjustments___________________________

Volume, V	6097	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1657	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1706	pc/h/ln

_________________________Speed Inputs and Adjustments___________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

_________________________LOS and Performance Measures__________________________

Flow rate, vp	1706	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	67.0	mi/h
Number of lanes, N	4	
Density, D	25.5	pc/mi/ln
Level of service, LOS	C	

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

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________________________Operational Analysis________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	West of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments________________________

Volume, V	6539	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1777	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1830	pc/h/ln

________________________Speed Inputs and Adjustments________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures________________________

Flow rate, vp	1830	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	65.4	mi/h
Number of lanes, N	4	
Density, D	28.0	pc/mi/ln
Level of service, LOS	D	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Pole Road
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4478	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1217	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1259	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1259	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	4	
Density, D	18.0	pc/mi/ln
Level of service, LOS	B	

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

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________________________Operational Analysis_________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Eastbound
From/To:	East of Pole Road
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	4626	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1257	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1301	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1301	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	4	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

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

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_________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Pole Road
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_________________________Flow Inputs and Adjustments___________________________

Volume, V	3465	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	942	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1299	pc/h/ln

_________________________Speed Inputs and Adjustments___________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

_________________________LOS and Performance Measures__________________________

Flow rate, vp	1299	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	3	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

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

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______________________Operational Analysis____________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Pole Road
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

______________________Flow Inputs and Adjustments______________________

Volume, V	4081	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1109	v
Trucks and buses	7	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.966	
Driver population factor, fp	1.00	
Flow rate, vp	1530	pc/h/ln

______________________Speed Inputs and Adjustments______________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	3	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

______________________LOS and Performance Measures______________________

Flow rate, vp	1530	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	68.7	mi/h
Number of lanes, N	3	
Density, D	22.3	pc/mi/ln
Level of service, LOS	C	

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

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_________________________Operational Analysis__________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_________________________Flow Inputs and Adjustments___________________________

Volume, V	4880	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1326	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1366	pc/h/ln

_________________________Speed Inputs and Adjustments___________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

_________________________LOS and Performance Measures__________________________

Flow rate, vp	1366	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	69.7	mi/h
Number of lanes, N	4	
Density, D	19.6	pc/mi/ln
Level of service, LOS	C	

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

HCS 2010: Basic Freeway Segments Release 6.1

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________________________Operational Analysis________________________________

Analyst:	RA
Agency or Company:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Direction:	I-240 Westbound
From/To:	East of Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________________Flow Inputs and Adjustments__________________________

Volume, V	5734	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, V_{15}	1558	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1605	pc/h/ln

________________________Speed Inputs and Adjustments__________________________

Lane width	12.0	ft
Right-side lateral clearance	6.0	ft
Total ramp density, TRD	2.00	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	75.4	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
TRD adjustment	5.8	mi/h
Free-flow speed, FFS	69.6	mi/h

________________________LOS and Performance Measures_________________________

Flow rate, vp	1605	pc/h/ln
Free-flow speed, FFS	69.6	mi/h
Average passenger-car speed, S	68.1	mi/h
Number of lanes, N	4	
Density, D	23.6	pc/mi/ln
Level of service, LOS	C	

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

APPENDIX B

HCS Basic Freeway Merge and Diverge Segments

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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_______________Diverge Analysis_______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to I-35 Northbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_______________Freeway Data_______________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6590	vph

_______________Off Ramp Data_______________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2003	vph
Length of first accel/decel lane	1500	ft

_______________Adjacent Ramp Data (if one exists)_______________

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

_______________Conversion to pc/h Under Base Conditions_______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6590	2003	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1791	544		v
Trucks and buses	8	10	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.952	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7450	2286	0	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.469	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4706		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7450	7187	Yes
$V_{FO} = V_F - V_R$	5164	7187	No
V_R	2286	2100	Yes
V_3 or V_{av34}	2744 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		Yes
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	4750		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	4750	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 31.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: F

Speed Estimation

Intermediate speed variable,	D_S = 0.504	
Space mean speed in ramp influence area,	S_R = 55.7	mph
Space mean speed in outer lanes,	S_O = 69.7	mph
Space mean speed for all vehicles,	S = 60.1	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to I-35 Northbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5430	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1720	vph
Length of first accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5430	1720	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1476	467		v
Trucks and buses	8	10	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.952	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6138	1963	0	pcph

__________Estimation of V12 Diverge Areas__________

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.516	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4118		pc/h

__________Capacity Checks__________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	6138	7187	No
$V_{FO} = V_F - V_R$	4175	7187	No
V_R	1963	2100	No
V_3 or V_{av34}	2020 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	4118		(Equation 13-15, 13-16, 13-18, or 13-19)

__________Flow Entering Diverge Influence Area__________

	Actual	Max Desirable	Violation?
V_{12}	4118	4400	No

__________Level of Service Determination (if not F)__________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 26.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

__________Speed Estimation__________

Intermediate speed variable,	D_S = 0.475	
Space mean speed in ramp influence area,	S_R = 56.5	mph
Space mean speed in outer lanes,	S_O = 72.4	mph
Space mean speed for all vehicles,	S = 60.9	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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______________________________Diverge Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to SE 59th Street
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

______________________________Freeway Data______________________________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5840	vph

______________________________Off Ramp Data______________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	200	vph
Length of first accel/decel lane	0	ft

______________________Adjacent Ramp Data (if one exists)______________________

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

__________________Conversion to pc/h Under Base Conditions____________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5840	200	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1587	54		v
Trucks and buses	8	5	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6602	223	0	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.585	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3953		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	6602	7187	No
$V_{FO} = V_F - V_R$	6379	7187	No
V_R	223	2100	No
V_3 or V_{av34}	2649 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	3953		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3953	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 38.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

Speed Estimation

Intermediate speed variable,	D_S = 0.318	
Space mean speed in ramp influence area,	S_R = 60.8	mph
Space mean speed in outer lanes,	S_O = 69.9	mph
Space mean speed for all vehicles,	S = 64.2	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to SE 59th Street
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4810	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	190	vph
Length of first accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4810	190	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1307	52		v
Trucks and buses	8	5	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5437	212	0	pcph

__________________________Estimation of V12 Diverge Areas__________________________

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.614	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3422		pc/h

________________________________Capacity Checks__________________________________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	5437	7187	No
$V_{FO} = V_F - V_R$	5225	7187	No
V_R	212	2100	No
V_3 or V_{av34}	2015 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3422		(Equation 13-15, 13-16, 13-18, or 13-19)

______________________Flow Entering Diverge Influence Area__________________________

	Actual	Max Desirable	Violation?
V_{12}	3422	4400	No

_________________Level of Service Determination (if not F)____________________________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 33.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: D

_____________________________Speed Estimation___________________________________

Intermediate speed variable,	D_S = 0.317	
Space mean speed in ramp influence area,	S_R = 60.8	mph
Space mean speed in outer lanes,	S_O = 72.4	mph
Space mean speed for all vehicles,	S = 64.7	mph

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_____Diverge Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	AM Peak Hour
Freeway/Dir of Travel:	I-240 Eastbound
Junction:	Off Ramp to Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operational Analysis

_____Freeway Data_____

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5050	vph

_____Off Ramp Data_____

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	600	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	550	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1600	ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5050		600		550	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1372		163		149	v
Trucks and buses	7		5		5	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.976		0.976	
Driver population factor, fP	1.00		1.00		1.00	
Flow rate, vp	5681		668		613	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 5

$V_{12} = V_R + (V_F - V_R) P_{FD} = 3612$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	3681	7187	No
$V_{FO} = V_F - V_R$	5013	7187	No
V_R	668	2100	No
V_3 or V_{av34}	2069	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3612		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3612	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 32.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: D

Speed Estimation

Intermediate speed variable, $D_S = 0.488$

Space mean speed in ramp influence area, $S_R = 56.1$ mph

Space mean speed in outer lanes, $S_O = 72.2$ mph

Space mean speed for all vehicles, $S = 61.1$ mph

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______Diverge Analysis______

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	PM Peak Hour
Freeway/Dir of Travel:	I-240 Eastbound
Junction:	Off Ramp to Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operational Analysis

______Freeway Data______

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5430	vph

______Off Ramp Data______

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	730	vph
Length of first accel/decel lane	350	ft
Length of second accel/decel lane		ft

______Adjacent Ramp Data (if one exists)______

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	650	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1600	ft

______Conversion to pc/h Under Base Conditions______

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	5430		730		650	vph
Peak-hour factor, PHF	0.92		0.92		0.92	
Peak 15-min volume, v15	1508		203		181	v
Trucks and buses	7		5		5	%
Recreational vehicles	0		0		0	%
Terrain type:	Level		Level		Level	
Grade	0.00	%	0.00	%	0.00	%
Length	0.00	mi	0.00	mi	0.00	mi
Trucks and buses PCE, ET	1.5		1.5		1.5	
Recreational vehicle PCE, ER	1.2		1.2		1.2	
Heavy vehicle adjustment, fHV	0.966		0.976		0.976	
Driver population factor, fP	1.00		1.00		1.00	
Flow rate, vp	6109		813		724	pcph

____Estimation of V12 Diverge Areas____

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.570 Using Equation 5

$V_{12} = V_R + (V_F - V_R) P_{FD} = 3831$ pc/h

____Capacity Checks____

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	6109	7187	No
$V_{FO} = V_F - V_R$	5296	7187	No
V_R	813	2100	No
V_3 or V_{av34}	2278	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3831		(Equation 13-15, 13-16, 13-18, or 13-19)

____Flow Entering Diverge Influence Area____

	Actual	Max Desirable	Violation?
V_{12}	3831	4400	No

____Level of Service Determination (if not F)____

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D = 34.0$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence: D

____Speed Estimation____

Intermediate speed variable, $D_S = 0.501$

Space mean speed in ramp influence area, $S_R = 55.8$ mph

Space mean speed in outer lanes, $S_O = 71.4$ mph

Space mean speed for all vehicles, $S = 60.7$ mph

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3400	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	350	vph
Length of first accel/decel lane	230	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3400	350	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	924	95		v
Trucks and buses	7	5	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3825	390	0	pcph

________________________Estimation of V12 Diverge Areas________________________

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	1.000	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3825		pc/h

________________________Capacity Checks________________________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	3825	4791	No
$V_{FO} = V_F - V_R$	3435	4791	No
V_R	390	2100	No
V_3 or V_{av34}	0	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	3825		(Equation 13-15, 13-16, 13-18, or 13-19)

________________________Flow Entering Diverge Influence Area________________________

	Actual	Max Desirable	Violation?
V_{12}	3825	4400	No

________________________Level of Service Determination (if not F)________________________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 35.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

________________________Speed Estimation________________________

Intermediate speed variable,	D_S = 0.333
Space mean speed in ramp influence area,	S_R = 60.4 mph
Space mean speed in outer lanes,	S_O = N/A mph
Space mean speed for all vehicles,	S = 60.4 mph

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______________________________Diverge Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

______________________________Freeway Data______________________________

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3400	vph

______________________________Off Ramp Data______________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	350	vph
Length of first accel/decel lane	230	ft

______________________Adjacent Ramp Data (if one exists)______________________

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

__________________Conversion to pc/h Under Base Conditions__________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3400	350	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	924	95		v
Trucks and buses	7	5	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3825	390	0	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	1.000	Using Equation 5
$V_{12} = V_R + (V_F - V_R)\,P_{FD}$ = 3825		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	3825	4791	No
$V_{FO} = V_F - V_R$	2647	4791	No
V_R	390	2100	No
V_3 or V_{av34}	0	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3825		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3825	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 35.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

Speed Estimation

Intermediate speed variable,	D_S = 0.333
Space mean speed in ramp influence area,	S_R = 60.4 mph
Space mean speed in outer lanes,	S_O = N/A mph
Space mean speed for all vehicles,	S = 60.4 mph

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____________________Merge Analysis____________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Analysis

____________________Freeway Data____________________

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.6	mph
Volume on freeway	2250	vph

____________________On Ramp Data____________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	400	vph
Length of first accel/decel lane	500	ft

________________Adjacent Ramp Data (if one exists) ________________

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

______________Conversion to pc/h Under Base Conditions______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2250	400		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, V_{15}	611	109		v
Trucks and buses	7	5		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.966	0.976		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2531	446		pcph

____________Estimation of V_{12} Merge Areas____________

L_{EQ} =	(Equation 13-6 or 13-7)	
P_{FM} =	1.000	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	2531 pc/h	

____________Capacity Checks____________

	Actual	Maximum	LOS F?
V_{FO}	2977	4791	No
V_3 or V_{av34} 0 pc/h	(Equation 13-14 or 13-17)		
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 2531	(Equation 13-15, 13-16, 13-18, or 13-19)		

____________Flow Entering Merge Influence Area____________

	Actual	Max Desirable	Violation?
V_{R12}	2977	4600	No

____________Level of Service Determination (if not F) ____________

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 25.4 pc/mi/ln

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

____________Speed Estimation____________

Intermediate speed variable,	M_S = 0.353
Space mean speed in ramp influence area,	S_R = 59.9 mph
Space mean speed in outer lanes,	S_O = N/A mph
Space mean speed for all vehicles,	S = 59.9 mph

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______________________________Merge Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Analysis

______________________________Freeway Data______________________________

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.6	mph
Volume on freeway	2670	vph

______________________________On Ramp Data______________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	350	vph
Length of first accel/decel lane	500	ft

_______________________Adjacent Ramp Data (if one exists) _______________________

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

____________________Conversion to pc/h Under Base Conditions____________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2670	350		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, V_{15}	726	95		v
Trucks and buses	7	5		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.966	0.976		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3004	390		pcph

Estimation of V_{12} Merge Areas

L_{EQ} =	(Equation 13-6 or 13-7)
P_{FM} =	1.000 Using Equation 1
$V_{12} = V_F (P_{FM})$ =	3004 pc/h

Capacity Checks

		Actual	Maximum	LOS F?
V_{FO}		3394	4791	No
V_3 or V_{av34}	0 pc/h	(Equation 13-14 or 13-17)		
Is V_3 or V_{av34} > 2700 pc/h?		No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?		No		
If yes, V_{12A} = 3004		(Equation 13-15, 13-16, 13-18, or 13-19)		

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	3394	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 28.8 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.392
Space mean speed in ramp influence area,	S_R = 58.8 mph
Space mean speed in outer lanes,	S_O = N/A mph
Space mean speed for all vehicles,	S = 58.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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______________________________Merge Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	AM Peak Hour
Freeway/Dir of Travel:	I-240 Westbound
Junction:	On Ramp from Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operational Analysis

______________________________Freeway Data______________________________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3650	vph

______________________________On Ramp Data______________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	710	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

______________________Adjacent Ramp Data (if one exists)__________________

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	600	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

__________________Conversion to pc/h Under Base Conditions__________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3650	710	600	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	992	193	163	v
Trucks and buses	6	5	5	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.976	0.976	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4086	791	668	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =	(Equation 13-6 or 13-7)
P_{FM} =	0.594 Using Equation 1
$V_{12} = V_F (P_{FM})$ =	2428 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	4877	7187	No
V_3 or V_{av34}	1658 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 2428	(Equation 13-15, 13-16, 13-18, or 13-19)		

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	4877	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 26.5 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.377
Space mean speed in ramp influence area,	S_R = 59.2 mph
Space mean speed in outer lanes,	S_O = 65.4 mph
Space mean speed for all vehicles,	S = 61.2 mph

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_____Merge Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	PM Peak Hour
Freeway/Dir of Travel:	I-240 Westbound
Junction:	On Ramp from Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operational Analysis

_____Freeway Data_____

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4240	vph

_____On Ramp Data_____

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	700	vph
Length of first accel/decel lane	600	ft
Length of second accel/decel lane		ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	650	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4240	700	650	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1152	190	177	v
Trucks and buses	6	5	5	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.976	0.976	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4747	780	724	pcph

____Estimation of V_{12} Merge Areas____

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 0594 Using Equation 1

$V_{12} = V_F (P_{FM})$ = 2821 pc/h

____Capacity Checks____

	Actual	Maximum	LOS F?
V_{FO}	5527	7187	No

V_3 or V_{av34} 1926 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2700 pc/h? No

Is V_3 or V_{av34} > 1.5 V_{12} /2? No

If yes, V_{12A} = 2821 (Equation 13-15, 13-16, 13-18, or 13-19)

____Flow Entering Merge Influence Area____

	Actual	Max Desirable	Violation?
V_{R12}	5527	4600	No

____Level of Service Determination (if not F) ____

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 29.4 pc/mi/ln

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

____Speed Estimation____

Intermediate speed variable, $M_S = 0.422$

Space mean speed in ramp influence area, $S_R = 58.0$ mph

Space mean speed in outer lanes, $S_O = 64.5$ mph

Space mean speed for all vehicles, $S = 60.1$ mph

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__________Diverge Analysis__________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to I-35 Northbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

__________Freeway Data__________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	7030	vph

__________Off Ramp Data__________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2629	vph
Length of first accel/decel lane	1500	ft

__________Adjacent Ramp Data (if one exists)__________

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

__________Conversion to pc/h Under Base Conditions__________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7030	2629	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1910	714		v
Trucks and buses	8	10	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.952	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7947	3000	0	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.423	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 5094		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7947	7187	Yes
$V_{FO} = V_F - V_R$	4947	7187	No
V_R	3000	2100	Yes
V_3 or V_{av34}	2853 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		Yes
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	5247		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	5247	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 35.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: F

Speed Estimation

Intermediate speed variable,	D_S = 0.568
Space mean speed in ramp influence area,	S_R = 53.9 mph
Space mean speed in outer lanes,	S_O = 69.7 mph
Space mean speed for all vehicles,	S = 58.4 mph

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_____Diverge Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to I-35 Northbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Freeway Data_____

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6897	vph

_____Off Ramp Data_____

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2299	vph
Length of first accel/decel lane	1500	ft

_____Adjacent Ramp Data (if one exists)_____

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

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6897	2299	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1874	625		v
Trucks and buses	8	10	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.952	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7797	2624	0	pcph

________________________Estimation of V12 Diverge Areas________________________

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.444	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4923		pc/h

______________________________Capacity Checks______________________________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7797	7187	Yes
$V_{FO} = V_F - V_R$	5173	7187	No
V_R	2624	2100	Yes
V_3 or V_{av34}	2874 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		Yes
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	4097		(Equation 13-15, 13-16, 13-18, or 13-19)

_____________________Flow Entering Diverge Influence Area________________________

	Actual	Max Desirable	Violation?
V_{12}	5097	4400	Yes

________________Level of Service Determination (if not F)___________________________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 34.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: F

____________________________Speed Estimation__________________________________

Intermediate speed variable,	D_S = 0.534	
Space mean speed in ramp influence area,	S_R = 54.9	mph
Space mean speed in outer lanes,	S_O = 69.7	mph
Space mean speed for all vehicles,	S = 59.2	mph

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to SE 59th Street
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6079	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	254	vph
Length of first accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6079	254	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1652	69		v
Trucks and buses	8	5	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6872	283	0	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.575	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4073		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	6872	7187	No
$V_{FO} = V_F - V_R$	6589	7187	No
V_R	283	2100	No
V_3 or V_{av34}	2799 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	4172		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	4172	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 40.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

Speed Estimation

Intermediate speed variable,	D_S = 0.323	
Space mean speed in ramp influence area,	S_R = 60.7	mph
Space mean speed in outer lanes,	S_O = 69.7	mph
Space mean speed for all vehicles,	S = 63.9	mph

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_______________________________Diverge Analysis_______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to SE 59th Street
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_______________________________Freeway Data_______________________________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6109	vph

_______________________________Off Ramp Data_______________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	241	vph
Length of first accel/decel lane	0	ft

_______________________Adjacent Ramp Data (if one exists)_______________________

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

___________________Conversion to pc/h Under Base Conditions___________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6109	241	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1660	65		v
Trucks and buses	8	5	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6906	269	0	pcph

__________________________Estimation of V12 Diverge Areas__________________________

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.575	Using Equation 5
$V_{12} = V_R + (V_F - V_R)\ P_{FD}$ = 4085		pc/h

________________________________Capacity Checks__________________________________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	6906	7187	No
$V_{FO} = V_F - V_R$	6637	7187	No
V_R	269	2100	No
V_3 or V_{av34}	2821 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	4206		(Equation 13-15, 13-16, 13-18, or 13-19)

_______________________Flow Entering Diverge Influence Area__________________________

	Actual	Max Desirable	Violation?
V_{12}	4206	4400	No

__________________Level of Service Determination (if not F)_____________________________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 40.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

______________________________Speed Estimation____________________________________

Intermediate speed variable,	D_S = 0.322	
Space mean speed in ramp influence area,	S_R = 60.7	mph
Space mean speed in outer lanes,	S_O = 69.7	mph
Space mean speed for all vehicles,	S = 63.9	mph

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6444	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	762	vph
Length of first accel/decel lane	350	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	699	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1600	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6444	762	699	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1751	207	190	v
Trucks and buses	7	5	5	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.976	0.976	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7249	849	779	pcph

________________________Estimation of V12 Diverge Areas________________________

L_{EQ} =	3597.06	(Equation 13-12 or 13-13)
P_{FD} =	0.540	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4303		pc/h

______________________________Capacity Checks______________________________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7249	7187	Yes
$V_{FO} = V_F - V_R$	6400	7187	No
V_R	849	2000	No
V_3 or V_{av34}	2946	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		Yes
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	4549		(Equation 13-15, 13-16, 13-18, or 13-19)

_____________________Flow Entering Diverge Influence Area________________________

	Actual	Max Desirable	Violation?
V_{12}	4549	4400	Yes

________________Level of Service Determination (if not F)___________________________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 40.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: F

____________________________Speed Estimation__________________________________

Intermediate speed variable,	D_S = 0.504
Space mean speed in ramp influence area,	S_R = 55.7 mph
Space mean speed in outer lanes,	S_O = 69.7 mph
Space mean speed for all vehicles,	S = 60.2 mph

____

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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_________________________________Diverge Analysis_____________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

__________________________________Freeway Data_____________________________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6896	vph

_________________________________Off Ramp Data_____________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	927	vph
Length of first accel/decel lane	350	ft

_________________________Adjacent Ramp Data (if one exists)_______________________

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	826	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1600	ft

____________________Conversion to pc/h Under Base Conditions______________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6896	927	826	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1874	252	224	v
Trucks and buses	7	5	5	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7758	1033	920	pcph

Estimation of V12 Diverge Areas

L_{EQ} =	3597.06	(Equation 13-12 or 13-13)
P_{FD} =	0.519	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4520		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7758	7187	Yes
$V_{FO} = V_F - V_R$	6725	7187	No
V_R	1033	2100	No
V_3 or V_{av34}	3238	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		Yes
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	5058		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	5058	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 44.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: F

Speed Estimation

Intermediate speed variable,	D_S = 0.521
Space mean speed in ramp influence area,	S_R = 55.2 mph
Space mean speed in outer lanes,	S_O = 69.7 mph
Space mean speed for all vehicles,	S = 59.5 mph

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3532	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	445	vph
Length of first accel/decel lane	230	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3532	445	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	960	121		v
Trucks and buses	7	5	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3973	496	0	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 5

$V_{12} = V_R + (V_F - V_R)\, P_{FD} = 3973$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	3973	4791	No
$V_{FO} = V_F - V_R$	3477	4791	No
V_R	496	2100	No
V_3 or V_{av34}	0	pc/h (Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3973		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3973	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 36.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

Speed Estimation

Intermediate speed variable, $D_S = 0.343$

Space mean speed in ramp influence area, $S_R = 60.1$ mph

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

Space mean speed for all vehicles, $S = 60.1$ mph

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_______________Diverge Analysis_______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/8/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_______________Freeway Data_______________

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3475	vph

_______________Off Ramp Data_______________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	445	vph
Length of first accel/decel lane	230	ft

_______________Adjacent Ramp Data (if one exists)_______________

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

_______________Conversion to pc/h Under Base Conditions_______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3475	445	0	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	944	121		v
Trucks and buses	7	5	0	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level		
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.976	1.000	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3909	496	0	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 1.000 Using Equation 5

$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3909 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	3909	4791	No
$V_{FO} = V_F - V_R$	3413	4791	No
V_R	496	2100	No
V_3 or V_{av34}	0 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3909	(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3909	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 35.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

Speed Estimation

Intermediate speed variable, D_S = 0.343

Space mean speed in ramp influence area, S_R = 60.1 mph

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

Space mean speed for all vehicles, S = 60.1 mph

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Analysis

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.6	mph
Volume on freeway	2820	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	508	vph
Length of first accel/decel lane	500	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2820	508		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, V_{15}	766	138		v
Trucks and buses	7	5		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.966	0.976		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3172	566		pcph

____Estimation of V_{12} Merge Areas____

L_{EQ} =	(Equation 13-6 or 13-7)		
P_{FM} =	1.000 Using Equation 1		
$V_{12} = V_F (P_{FM})$ =	3172	pc/h	

____Capacity Checks____

	Actual	Maximum	LOS F?
V_{FO}	3738	4791	No
V_3 or V_{av34} 0 pc/h	(Equation 13-14 or 13-17)		
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 3172	(Equation 13-15, 13-16, 13-18, or 13-19)		

____Flow Entering Merge Influence Area____

	Actual	Max Desirable	Violation?
V_{R12}	3738	4600	No

____Level of Service Determination (if not F) ____

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 31.2 pc/mi/ln

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

____Speed Estimation____

Intermediate speed variable, M_S = 0.440

Space mean speed in ramp influence area, S_R = 57.5 mph

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

Space mean speed for all vehicles, S = 57.5 mph

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_____Merge Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Analysis

_____Freeway Data_____

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3348	vph

_____On Ramp Data_____

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	445	vph
Length of first accel/decel lane	500	ft

_____Adjacent Ramp Data (if one exists) _____

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

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3348	445		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, V_{15}	726	95		v
Trucks and buses	7	5		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.966	0.976		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3766	496		pcph

___________________________Estimation of V_{12} Merge Areas_____________________________

L_{EQ} = (Equation 13-6 or 13-7)

P_{FM} = 1.000 Using Equation 1

$V_{12} = V_F (P_{FM})$ = 3766 pc/h

_________________________________Capacity Checks__________________________________

	Actual	Maximum	LOS F?
V_{FO}	4262	4791	No

V_3 or V_{av34} 0 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2700 pc/h? No

Is V_3 or V_{av34} > 1.5 V_{12} /2? No

If yes, V_{12A} = 3766 (Equation 13-15, 13-16, 13-18, or 13-19)

_________________________Flow Entering Merge Influence Area_________________________

	Actual	Max Desirable	Violation?
V_{R12}	4262	4600	No

_____________________Level of Service Determination (if not F) _________________________

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 35.4 pc/mi/ln

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

______________________________Speed Estimation___________________________________

Intermediate speed variable, M_S = 0.553

Space mean speed in ramp influence area, S_R = 54.3 mph

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

Space mean speed for all vehicles, S = 54.3 mph

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4636	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	902	vph
Length of first accel/decel lane	600	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	762	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4636	902	762	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1260	245	207	v
Trucks and buses	7	5	5	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.976	0.976	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5190	1005	849	pcph

__________________________Estimation of V_{12} Merge Areas____________________________

L_{EQ} =	(Equation 13-6 or 13-7)		
P_{FM} =	0.594	Using Equation 1	
$V_{12} = V_F (P_{FM})$ =	3084	pc/h	

________________________________Capacity Checks_________________________________

	Actual	Maximum	LOS F?
V_{FO}	6195	7187	No

V_3 or V_{av34} 2106 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2700 pc/h? No

Is V_3 or V_{av34} > 1.5 V_{12} /2? No

If yes, V_{12A} = 3084 (Equation 13-15, 13-16, 13-18, or 13-19)

_________________________Flow Entering Merge Influence Area________________________

	Actual	Max Desirable	Violation?
V_{R12}	4089	4600	No

_____________________Level of Service Determination (if not F) _________________________

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 33.1 pc/mi/ln

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

______________________________Speed Estimation___________________________________

Intermediate speed variable,	M_S = 0.512
Space mean speed in ramp influence area,	S_R = 55.5 mph
Space mean speed in outer lanes,	S_O = 63.8 mph
Space mean speed for all vehicles,	S = 58.1 mph

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_________________________________Merge Analysis__________________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/11/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from Shields Blvd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_________________________________Freeway Data__________________________________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5384	vph

_________________________________On Ramp Data__________________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	889	vph
Length of first accel/decel lane	600	ft

_________________________Adjacent Ramp Data (if one exists) _________________________

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	826	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	2000	ft

_____________________Conversion to pc/h Under Base Conditions_____________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5384	889	826	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1463	242	224	v
Trucks and buses	7	5	5	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.976	0.976	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6028	990	920	pcph

___Estimation of V_{12} Merge Areas___

L_{EQ} =	(Equation 13-6 or 13-7)	
P_{FM} =	0.594	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	3582	pc/h

___Capacity Checks___

	Actual	Maximum	LOS F?
V_{FO}	7018	7187	No

V_3 or V_{av34} 2446 pc/h (Equation 13-14 or 13-17)

Is V_3 or V_{av34} > 2700 pc/h? No

Is V_3 or V_{av34} > 1.5 V_{12} /2? No

If yes, V_{12A} = 3582 (Equation 13-15, 13-16, 13-18, or 13-19)

___Flow Entering Merge Influence Area___

	Actual	Max Desirable	Violation?
V_{R12}	4572	4600	No

___Level of Service Determination (if not F)___

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 36.9 pc/mi/ln

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

___Speed Estimation___

Intermediate speed variable, M_S = 0.656

Space mean speed in ramp influence area, S_R = 51.5 mph

Space mean speed in outer lanes, S_O = 62.2 mph

Space mean speed for all vehicles, S = 54.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	On Ramp from SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6395	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	826	vph

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	6395	826	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	1738	224	v
Trucks and buses	7	10	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	%	%	
Length	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.952	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7194	943	pcph

This ramp is designed as a major merge and according to the Highway Capacity Manual 2010; there are no effective models of performance for a major merge area. Therefore, analysis is limited to checking capacities on the approaching legs and the downstream freeway segment. A merge failure would be indicated by a v/c ratio in excess of 1.00. LOS cannot be determined for major merge areas.

Freeway-upstream,	v/c = 7194/7050 = 1.02
Ramp	v/c = 943/2100 = 0.45
Freeway-downstream	v/c = 8163/9400 = 0.87

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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______________________Merge Analysis______________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	On Ramp from SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______________________Freeway Data______________________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6335	vph

______________________On Ramp Data______________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	826	vph

________________Adjacent Ramp Data (if one exists) ________________

Does adjacent ramp exist?	
Volume on adjacent Ramp	vph
Position of adjacent Ramp	
Type of adjacent Ramp	
Distance to adjacent Ramp	ft

______________Conversion to pc/h Under Base Conditions______________

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	6335	826	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	1721	224	v
Trucks and buses	7	10	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	%	%	
Length	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.952	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7127	943	pcph

This ramp is designed as a major merge and according to the Highway Capacity Manual 2010; there are no effective models of performance for a major merge area. Therefore, analysis is limited to checking capacities on the approaching legs and the downstream freeway segment. A merge failure would be indicated by a v/c ratio in excess of 1.00. LOS cannot be determined for major merge areas.

Freeway-upstream,	v/c = 7127/7050 = 1.01
Ramp	v/c = 943/2100 = 0.45
Freeway-downstream	v/c = 8056/9400 = 0.86

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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_____Diverge Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to I-240 Eastbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_____Freeway Data_____

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	69.6	mph
Volume on freeway	7221	vph

_____Off Ramp Data_____

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2844	vph
Length of first accel/decel lane	500	ft
Length of Second accel/decel lane	500	ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1207	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1300	ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7221	2844	1207	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1962	773	328	v
Trucks and buses	8	9	13	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.957	0.939	

Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8163	3230	1397	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 5

$V_{12} = V_R + (V_F - V_R) P_{FD} = 4513$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	8163	9583	No
$V_{FO} = V_F - V_R$	4933	9583	No
V_R	3230	4200	No
V_3 or V_{av34}	1825 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	4513	(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	4513	4400	Yes

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 29.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: D

Speed Estimation

Intermediate speed variable, $D_S = 0.589$

Space mean speed in ramp influence area, $S_R = 53.4$ mph

Space mean speed in outer lanes, $S_O = 73.1$ mph

Space mean speed for all vehicles, $S = 60.7$ mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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_____Diverge Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to I-240 Eastbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_____Freeway Data_____

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	69.6	mph
Volume on freeway	7161	vph

_____Off Ramp Data_____

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	2531	vph
Length of first accel/decel lane	500	ft
Length of Second accel/decel lane	500	ft

_____Adjacent Ramp Data (if one exists)_____

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1142	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1300	ft

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7161	2531	1142	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1946	688	310	v
Trucks and buses	8	9	13	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.957	0.939	

Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8095	2875	1322	pcph

________________________Estimation of V12 Diverge Areas________________________

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.260 Using Equation 5

$V_{12} = V_R + (V_F - V_R) P_{FD} = 4232$ pc/h

______________________________Capacity Checks________________________________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	8095	9583	No
$V_{FO} = V_F - V_R$	5220	9583	No
V_R	2875	4200	No
V_3 or V_{av34}	1931 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	4232		(Equation 13-15, 13-16, 13-18, or 13-19)

_____________________Flow Entering Diverge Influence Area________________________

	Actual	Max Desirable	Violation?
V_{12}	4232	4400	No

________________Level of Service Determination (if not F)___________________________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D = 27.1$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

____________________________Speed Estimation_________________________________

Intermediate speed variable, $D_S = 0.557$

Space mean speed in ramp influence area, $S_R = 54.2$ mph

Space mean speed in outer lanes, $S_O = 72.7$ mph

Space mean speed for all vehicles, $S = 62.7$ mph

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______Merge Analysis______

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	On Ramp from I-240 Eastbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______Freeway Data______

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4377	vph

______On Ramp Data______

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1207	vph
Length of first accel/decel lane	500	ft

______Adjacent Ramp Data (if one exists) ______

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	613	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1160	ft

______Conversion to pc/h Under Base Conditions______

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4377	1207	613	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1208	298	167	v
Trucks and buses	8	13	14	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.939	0.935	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4948	1397	713	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =		(Equation 13-6 or 13-7)
P_{FM} =	0.591	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	2972	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	6345	7187	No
V_3 or V_{av34}	2021	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 2927			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	3640	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 35.4 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.585
Space mean speed in ramp influence area,	S_R = 53.4 mph
Space mean speed in outer lanes,	S_O = 64.1 mph
Space mean speed for all vehicles,	S = 56.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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______________Merge Analysis______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	On Ramp from I-240 Eastbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______________Freeway Data______________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4630	vph

______________On Ramp Data______________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1142	vph
Length of first accel/decel lane	500	ft

______________Adjacent Ramp Data (if one exists) ______________

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	371	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1160	ft

______________Conversion to pc/h Under Base Conditions______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4630	1142	371	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1258	310	101	v
Trucks and buses	8	13	14	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.939	0.935	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5234	1322	431	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =		(Equation 13-6 or 13-7)
P_{FM} =	0.591	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	3096	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	6556	7187	No
V_3 or V_{av34}	2138	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 3096			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	3527	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 36.2 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.614
Space mean speed in ramp influence area,	S_R = 52.6 mph
Space mean speed in outer lanes,	S_O = 63.7 mph
Space mean speed for all vehicles,	S = 55.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	On Ramp from I-240 Eastbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4377	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1207	vph
Length of first accel/decel lane	500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2844	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1300	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4377	1207	2844	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1189	328	773	v
Trucks and buses	8	13	9	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.939	0.957	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4948	1397	3230	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =	746.43	(Equation 13-6 or 13-7)
P_{FM} =	0.591	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	2927	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	6345	7187	No
V_3 or V_{av34}	2021	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 2927			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	4329	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 35.4 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.585
Space mean speed in ramp influence area,	S_R = 53.4 mph
Space mean speed in outer lanes,	S_O = 64.1 mph
Space mean speed for all vehicles,	S = 56.4 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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______________Merge Analysis______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	On Ramp from I-240 Eastbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______________Freeway Data______________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4630	vph

______________On Ramp Data______________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	1142	vph
Length of first accel/decel lane	500	ft

__________Adjacent Ramp Data (if one exists) __________

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	2531	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1300	ft

_________Conversion to pc/h Under Base Conditions_________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4630	1142	2531	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1258	310	688	v
Trucks and buses	8	13	9	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.939	0.957	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5234	1322	2875	pcph

___Estimation of V_{12} Merge Areas___

L_{EQ} =	791.58	(Equation 13-6 or 13-7)
P_{FM} =	0.591	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	3096	pc/h

___Capacity Checks___

	Actual	Maximum	LOS F?
V_{FO}	6556	7200	No
V_3 or V_{av34}	2138	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 3096			(Equation 13-15, 13-16, 13-18, or 13-19)

___Flow Entering Merge Influence Area___

	Actual	Max Desirable	Violation?
V_{R12}	4418	4600	No

___Level of Service Determination (if not F) ___

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 36.2 pc/mi/ln

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

___Speed Estimation___

Intermediate speed variable,	M_S = 0.614
Space mean speed in ramp influence area,	S_R = 52.6 mph
Space mean speed in outer lanes,	S_O = 63.7 mph
Space mean speed for all vehicles,	S = 55.8 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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______Merge Analysis______

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	On Ramp from I-240 Westbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______Freeway Data______

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5584	vph

______On Ramp Data______

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	613	vph
Length of first accel/decel lane	1000	ft

______Adjacent Ramp Data (if one exists)______

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1207	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1200	ft

______Conversion to pc/h Under Base Conditions______

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5584	613	1207	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1517	167	328	v
Trucks and buses	8	13	9	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.939	0.957	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6312	710	1371	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =		(Equation 13-6 or 13-7)
P_{FM} =	0.605	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	3822	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	7022	7187	No
V_3 or V_{av34}	2490	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 3822			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	4532	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 34.2 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.593
Space mean speed in ramp influence area,	S_R = 53.2 mph
Space mean speed in outer lanes,	S_O = 61.9 mph
Space mean speed for all vehicles,	S = 56.0 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	On Ramp from I-240 Westbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5772	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	371	vph
Length of first accel/decel lane	1000	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1142	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5772	371	1142	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1568	101	310	v
Trucks and buses	8	13	9	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.939	0.957	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6525	367	1297	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =		(Equation 13-6 or 13-7)
P_{FM} =	0.605	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	3951	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	6892	7187	No
V_3 or V_{av34}	2574	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 3951			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	4318	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 32.7 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.524
Space mean speed in ramp influence area,	S_R = 55.1 mph
Space mean speed in outer lanes,	S_O = 61.4 mph
Space mean speed for all vehicles,	S = 57.3 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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_________________________________Diverge Analysis_____________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

__________________________________Freeway Data_______________________________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6197	vph

_________________________________Off Ramp Data_______________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	433	vph
Length of first accel/decel lane	1500	ft

_________________________Adjacent Ramp Data (if one exists)_______________________

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

____________________Conversion to pc/h Under Base Conditions______________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6197	433		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, V_{15}	1684	118		v
Trucks and buses	8	3		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00%	0.00%		
Length	0.00 mi	0.00 mi		
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.962	0.985		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	7005	478		pcph

_________________________Estimation of V12 Diverge Areas_________________________

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.563	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4152		pc/h

______________________________Capacity Checks______________________________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7005	7187	No
$V_{FO} = V_F - V_R$	6527	7187	No
V_R	478	2100	No
V_3 or V_{av34}	2853 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		Yes
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	4305	(Equation 13-15, 13-16, 13-18, or 13-19)	

______________________Flow Entering Diverge Influence Area_________________________

	Actual	Max Desirable	Violation?
V_{12}	4305	4400	No

_________________Level of Service Determination (if not F)___________________________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 27.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

_____________________________Speed Estimation__________________________________

Intermediate speed variable, $D_S = 0.341$

Space mean speed in ramp influence area, $S_R = 60.2$ mph

Space mean speed in outer lanes, $S_O = 69.7$ mph

Space mean speed for all vehicles, $S = 63.5$ mph

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_______________Diverge Analysis_______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Junction:	Off Ramp to SE 59th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_______________Freeway Data_______________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6143	vph

_______________Off Ramp Data_______________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	467	vph
Length of first accel/decel lane	1500	ft

_______________Adjacent Ramp Data (if one exists)_______________

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

_______________Conversion to pc/h Under Base Conditions_______________

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	6143	467	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	1669	127	v
Trucks and buses	8	3	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	0.00%	0.00%	
Length	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.985	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	6944	515	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.563	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4133		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	6944	7187	No
$V_{FO} = V_F - V_R$	6429	7187	No
V_R	515	2100	No
V_3 or V_{av34}	2211 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		Yes
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	4244		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	4244	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 27.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

Speed Estimation

Intermediate speed variable,	D_S = 0.344
Space mean speed in ramp influence area,	S_R = 60.1 mph
Space mean speed in outer lanes,	S_O = 69.7 mph
Space mean speed for all vehicles,	S = 63.5 mph

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Junction:	Off Ramp to I-240 Westbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6290	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1554	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	611	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6290	1554	611	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1709	422	166	v
Trucks and buses	8	13	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.939	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7110	1799	714	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.260	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3180		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7110	9583	No
$V_{FO} = V_F - V_R$	5311	9583	No
V_R	1799	4200	No
V_3 or V_{av34}	1965 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3180		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3180	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 22.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

Speed Estimation

Intermediate speed variable,	D_S = 0.460	
Space mean speed in ramp influence area,	S_R = 56.9	mph
Space mean speed in outer lanes,	S_O = 72.6	mph
Space mean speed for all vehicles,	S = 64.6	mph

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_______________Diverge Analysis_______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Junction:	Off Ramp to I-240 Westbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_______________Freeway Data_______________

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6632	vph

_______________Off Ramp Data_______________

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1940	vph
Length of first accel/decel lane	500	ft
Length of second accel/decel lane	0	ft

_______________Adjacent Ramp Data (if one exists)_______________

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	876	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	On	
Distance to adjacent ramp	1200	ft

_______________Conversion to pc/h Under Base Conditions_______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6632	1940	876	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1802	527	238	v
Trucks and buses	8	13	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.939	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7497	2246	1024	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.260	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3611		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7497	9583	No
$V_{FO} = V_F - V_R$	5251	9583	No
V_R	2246	4200	No
V_3 or V_{av34}	1943 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3611		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3611	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 26.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

Speed Estimation

Intermediate speed variable,	D_S = 0.500
Space mean speed in ramp influence area,	S_R = 55.8 mph
Space mean speed in outer lanes,	S_O = 72.7 mph
Space mean speed for all vehicles,	S = 63.4 mph

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Junction:	On Ramp from I-240 Westbound C-D Road
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4736	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	611	vph
Length of first accel/decel lane	1000	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1554	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4736	611	1554	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1287	166	422	v
Trucks and buses	7	15	13	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.930	0.939	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5328	714	1799	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =	903.59	(Equation 13-6 or 13-7)
P_{FM} =	0.605	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	3226	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	6042	7187	No
V_3 or V_{av34}	2102	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 3226			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	3940	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 29.6 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.462
Space mean speed in ramp influence area,	S_R = 56.9 mph
Space mean speed in outer lanes,	S_O = 63.8 mph
Space mean speed for all vehicles,	S = 59.1 mph

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Junction:	On Ramp from I-240 Westbound C-D Road
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4692	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	30.0	mph
Volume on ramp	876	vph
Length of first accel/decel lane	1000	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1940	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	1200	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4692	876	1940	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1275	238	527	v
Trucks and buses	7	15	13	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.930	0.939	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5278	1024	2246	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =	959.23	(Equation 13-6 or 13-7)
P_{FM} =	0.605	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	3196	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	6302	7187	No
V_3 or V_{av34}	2088	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 3196			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	4220	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 31.6 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.526
Space mean speed in ramp influence area,	S_R = 55.1 mph
Space mean speed in outer lanes,	S_O = 63.9 mph
Space mean speed for all vehicles,	S = 57.7 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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______Merge Analysis______

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Junction:	On Ramp from I-240 Eastbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______Freeway Data______

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5347	vph

______On Ramp Data______

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1588	vph

______Adjacent Ramp Data (if one exists) ______

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	611	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1300	ft

______Conversion to pc/h Under Base Conditions______

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5347	1579	611	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1453	432	166	v
Trucks and buses	8	6	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.971	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6044	1778	714	pcph

This ramp is designed as a major merge and according to the Highway Capacity Manual 2010; there are no effective models of performance for a major merge area. Therefore, analysis is limited to checking capacities on the approaching legs and the downstream freeway segment. A merge failure would be indicated by a v/c ratio in excess of 1.00. LOS cannot be determined for major merge areas.

Freeway-upstream,	v/c = 6044/7050 = 0.86
Ramp	v/c = 1778/4200 = 0.42
Freeway-downstream	v/c = 7840/9400 = 0.83

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______________Merge Analysis______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Junction:	On Ramp from I-240 Eastbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______________Freeway Data______________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5568	vph

______________On Ramp Data______________

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1652	vph

______________Adjacent Ramp Data (if one exists) ______________

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	876	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1300	ft

______________Conversion to pc/h Under Base Conditions______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5568	1652	876	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1513	449	238	v
Trucks and buses	8	6	15	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.971	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6294	1850	1024	pcph

This ramp is designed as a major merge and according to the Highway Capacity Manual 2010; there are no effective models of performance for a major merge area. Therefore, analysis is limited to checking capacities on the approaching legs and the downstream freeway segment. A merge failure would be indicated by a v/c ratio in excess of 1.00. LOS cannot be determined for major merge areas.

Freeway-upstream,	v/c = 6294/7050 = 0.89
Ramp	v/c = 1850/4200 = 0.44
Freeway-downstream	v/c = 8162/9400 = 0.87

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Junction:	Off Ramp to SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6935	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	610	vph
Length of first accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	6935	610	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	1882	166	v
Trucks and buses	8	11	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	0.00%	0.00%	
Length	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.948	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	7840	700	pcph

_________________________Estimation of V12 Diverge Areas_________________________

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.436	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3813		pc/h

_______________________________Capacity Checks_______________________________

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7840	9583	No
$V_{FO} = V_F - V_R$	7140	9583	No
V_R	700	2100	No
V_3 or V_{av34}	2013 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	3813		(Equation 13-15, 13-16, 13-18, or 13-19)

______________________Flow Entering Diverge Influence Area_______________________

	Actual	Max Desirable	Violation?
V_{12}	3813	4400	No

_________________Level of Service Determination (if not F)___________________________

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 37.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

_____________________________Speed Estimation_________________________________

Intermediate speed variable,	D_S = 0.361
Space mean speed in ramp influence area,	S_R = 59.6 mph
Space mean speed in outer lanes,	S_O = 72.4 mph
Space mean speed for all vehicles,	S = 65.6 mph

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Junction:	Off Ramp to SE 89th St.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	69.6	mph
Volume on freeway	7220	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	825	vph
Length of first accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7220	825		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, V_{15}	1962	224		v
Trucks and buses	8	11		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00%	0.00%		
Length	0.00 mi	0.00 mi		
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.962	0.948		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	8162	946		pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.436	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 4092		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	8162	9583	No
$V_{FO} = V_F - V_R$	7216	9583	No
V_R	946	2100	No
V_3 or V_{av34}	2035 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	4092		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	4092	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 39.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: E

Speed Estimation

Intermediate speed variable, D_S = 0.383

Space mean speed in ramp influence area, S_R = 59.0 mph

Space mean speed in outer lanes, S_O = 72.3 mph

Space mean speed for all vehicles, S = 65.0 mph

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__________Merge Analysis__________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	On Ramp from Santa Fe Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

__________Freeway Data__________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5652	vph

__________On Ramp Data__________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	445	vph

__________Adjacent Ramp Data (if one exists) __________

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1461	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1800	ft

__________Conversion to pc/h Under Base Conditions__________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5652	445	1461	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1536	121	397	v
Trucks and buses	6	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.971	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6328	489	1604	pcph

This ramp is designed as a major merge and according to the Highway Capacity Manual 2010; there are no effective models of performance for a major merge area. Therefore, analysis is limited to checking capacities on the approaching legs and the downstream freeway segment. A merge failure would be indicated by a v/c ratio in excess of 1.00. LOS cannot be determined for major merge areas.

Freeway-upstream,	v/c = 6328/7050 = 0.90
Ramp	v/c = 489/2100 = 0.23
Freeway-downstream	v/c = 6817/9400 = 0.73

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	On Ramp from Santa Fe Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5969	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	570	vph

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1753	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1800	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5969	570	1753	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1622	155	476	v
Trucks and buses	6	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.971	0.930	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6683	626	1924	pcph

This ramp is designed as a major merge and according to the Highway Capacity Manual 2010; there are no effective models of performance for a major merge area. Therefore, analysis is limited to checking capacities on the approaching legs and the downstream freeway segment. A merge failure would be indicated by a v/c ratio in excess of 1.00. LOS cannot be determined for major merge areas.

Freeway-upstream,	v/c = 6683/7050 = 0.95
Ramp	v/c = 626/2100 = 0.30
Freeway-downstream	v/c = 7309/9400 = 0.78

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to I-35 Southbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6097	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1588	vph
Length of first accel/decel lane	1160	ft
Length of Second accel/decel lane	0	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1207	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6097	1588	1207	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1657	432	328	v
Trucks and buses	6	6	13	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.971	0.939	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6826	1778	1397	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.260	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3090		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	6826	9583	No
$V_{FO} = V_F - V_R$	5048	9583	No
V_R	1778	4200	No
V_3 or V_{av34}	1868 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3090		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3090	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 9.9 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	D_S = 0.458	
Space mean speed in ramp influence area,	S_R = 57.0	mph
Space mean speed in outer lanes,	S_O = 73.0	mph
Space mean speed for all vehicles,	S = 64.7	mph

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_______________Diverge Analysis_______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to I-35 Southbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_______________Freeway Data_______________

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	69.6	mph
Volume on freeway	6539	vph

_______________Off Ramp Data_______________

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1652	vph
Length of first accel/decel lane	1160	ft
Length of Second accel/decel lane	0	ft

_______________Adjacent Ramp Data (if one exists)_______________

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1142	vph
Position of adjacent ramp	Downstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1250	ft

_______________Conversion to pc/h Under Base Conditions_______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6539	1652	1142	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1777	449	310	v
Trucks and buses	6	6	13	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.971	0.939	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7321	1850	1322	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.260	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3272		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	7321	9583	No
$V_{FO} = V_F - V_R$	5471	9583	No
V_R	1850	4200	No
V_3 or V_{av34}	2024 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3272	(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3272	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 11.5 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	D_S = 0.465	
Space mean speed in ramp influence area,	S_R = 56.8	mph
Space mean speed in outer lanes,	S_O = 72.4	mph
Space mean speed for all vehicles,	S = 64.5	mph

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to I-35 Northbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4509	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	1207	vph
Length of first accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1588	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4509	1207	1588	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1225	328	432	v
Trucks and buses	6	13	6	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.939	0.971	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5048	1397	1778	pcph

Estimation of V12 Diverge Areas

L_{EQ} =	2701.32	(Equation 13-12 or 13-13)
P_{FD} =	0.570	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3476		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	5048	7187	No
$V_{FO} = V_F - V_R$	3651	7187	No
V_R	1397	2000	No
V_3 or V_{av34}	1572 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3476		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3476	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 22.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

Speed Estimation

Intermediate speed variable,	D_S = 0.619	
Space mean speed in ramp influence area,	S_R = 52.5	mph
Space mean speed in outer lanes,	S_O = 74.1	mph
Space mean speed for all vehicles,	S = 57.8	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to I-35 Northbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4887	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	1142	vph
Length of first accel/decel lane	1250	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	1652	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1250	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4887	1142	1652	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1328	310	449	v
Trucks and buses	6	13	6	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.939	0.971	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5471	1322	1850	pcph

Estimation of V12 Diverge Areas

L_{EQ} =	2701.32	(Equation 13-12 or 13-13)
P_{FD} =	0.562	Using Equation 5
$V_{12} = V_R + (V_F - V_R)\,P_{FD}$ = 3655		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	5471	7187	No
$V_{FO} = V_F - V_R$	4149	7187	No
V_R	1322	2000	No
V_3 or V_{av34}	1816 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\,V_{12}/2$			No
If yes, V_{12A} =	3655		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3655	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\,V_{12} - 0.009\,L_D$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

Speed Estimation

Intermediate speed variable, D_S = 0.612

Space mean speed in ramp influence area, S_R = 52.7 mph

Space mean speed in outer lanes, S_O = 73.2 mph

Space mean speed for all vehicles, S = 58.1 mph

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______Merge Analysis______

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	On Ramp from I-35 Northbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______Freeway Data______

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3302	vph

______On Ramp Data______

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	1176	vph
Length of first accel/decel lane	1500	ft
Length of Second accel/decel lane	500	ft

______Adjacent Ramp Data (if one exists) ______

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1207	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	940	ft

______Conversion to pc/h Under Base Conditions______

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3302	1176	1207	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	897	320	328	v
Trucks and buses	4	20	13	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.980	0.909	0.939	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3661	1406	1397	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =		(Equation 13-6 or 13-7)
P_{FM} =	0.555	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	2032	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	5067	7187	No
V_3 or V_{av34}	1629	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	Yes		
If yes, V_{12A} = 2092			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	3498	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 10.2 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.135
Space mean speed in ramp influence area,	S_R = 65.9 mph
Space mean speed in outer lanes,	S_O = 65.8 mph
Space mean speed for all vehicles,	S = 65.8 mph

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______Merge Analysis______

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	On Ramp from I-35 Northbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______Freeway Data______

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3745	vph

______On Ramp Data______

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	880	vph
Length of first accel/decel lane	1500	ft
Length of Second accel/decel lane	500	ft

______Adjacent Ramp Data (if one exists) ______

Does adjacent ramp exist?	Yes	
Volume on adjacent Ramp	1142	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	Off	
Distance to adjacent Ramp	940	ft

______Conversion to pc/h Under Base Conditions______

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3745	880	1142	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1018	239	310	v
Trucks and buses	4	20	13	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.980	0.909	0.939	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4152	1052	1322	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =		(Equation 13-6 or 13-7)
P_{FM} =	0.555	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	2304	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	5204	7187	No
V_3 or V_{av34}	1848	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	Yes		
If yes, V_{12A} = 2372			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	3424	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 9.8 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.126
Space mean speed in ramp influence area,	S_R = 66.1 mph
Space mean speed in outer lanes,	S_O = 65.0 mph
Space mean speed for all vehicles,	S = 65.7 mph

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4478	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	558	vph
Length of first accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4478	558		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, V_{15}	1217	152		v
Trucks and buses	7	4		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00%	0.00%		
Length	0.00 mi	0.00 mi		
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.966	0.980		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	5038	619		pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.606	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3295		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	5038	7187	No
$V_{FO} = V_F - V_R$	4419	7187	No
V_R	619	2100	No
V_3 or V_{av34}	1743 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3295		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3295	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 19.1 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	D_S = 0.354
Space mean speed in ramp influence area,	S_R = 59.8 mph
Space mean speed in outer lanes,	S_O = 73.5 mph
Space mean speed for all vehicles,	S = 63.9 mph

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______________________________Diverge Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Junction:	Off Ramp to Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

______________________________Freeway Data______________________________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4626	vph

______________________________Off Ramp Data______________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	648	vph
Length of first accel/decel lane	1500	ft

______________________Adjacent Ramp Data (if one exists)______________________

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

__________________Conversion to pc/h Under Base Conditions__________________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4626	648		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, V_{15}	1257	176		v
Trucks and buses	7	4		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00%	0.00%		
Length	0.00 mi	0.00 mi		
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.966	0.980		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	5203	718		pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.597	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3395		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	5203	7187	No
$V_{FO} = V_F - V_R$	4485	7187	No
V_R	718	2100	No
V_3 or V_{av34}	1808 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3395	(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3395	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 19.9 pc/mi/ln

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

Speed Estimation

Intermediate speed variable, D_S = 0.363

Space mean speed in ramp influence area, S_R = 59.6 mph

Space mean speed in outer lanes, S_O = 73.2 mph

Space mean speed for all vehicles, S = 63.7 mph

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_____Merge Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

_____Freeway Data_____

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	2820	vph

_____On Ramp Data_____

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	645	vph
Length of first accel/decel lane	1500	ft

_____Adjacent Ramp Data (if one exists) _____

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

_____Conversion to pc/h Under Base Conditions_____

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	2820	645	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	766	175	v
Trucks and buses	7	4	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	%	%	
Length	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.980	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3172	715	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =	1451.57	(Equation 13-6 or 13-7)
P_{FM} =	0.619	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	1965	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	3887	7187	No
V_3 or V_{av34}	1207	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 1965			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	3887	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 16.6 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.243
Space mean speed in ramp influence area,	S_R = 62.9 mph
Space mean speed in outer lanes,	S_O = 67.1 mph
Space mean speed for all vehicles,	S = 64.1 mph

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Merge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from Eastern Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35/I-240 Interchange Traffic Analysis

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3348	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	45.0	mph
Volume on ramp	733	vph
Length of first accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	3348	733	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	910	199	v
Trucks and buses	7	4	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	%	%	
Length	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.980	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3766	813	pcph

___Estimation of V_{12} Merge Areas___

L_{EQ} =	1451.57	(Equation 13-6 or 13-7)
P_{FM} =	0.619	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	2333	pc/h

___Capacity Checks___

	Actual	Maximum	LOS F?
V_{FO}	4579	7187	No
V_3 or V_{av34}	1433	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	No		
If yes, V_{12A} = 2333			(Equation 13-15, 13-16, 13-18, or 13-19)

___Flow Entering Merge Influence Area___

	Actual	Max Desirable	Violation?
V_{R12}	4579	4600	No

___Level of Service Determination (if not F)___

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 20.2 pc/mi/ln

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

___Speed Estimation___

Intermediate speed variable,	M_S = 0.277
Space mean speed in ramp influence area,	S_R = 62.0 mph
Space mean speed in outer lanes,	S_O = 66.2 mph
Space mean speed for all vehicles,	S = 63.2 mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.1

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Diverge Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	Off Ramp to I-240 Westbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	3465	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1444	vph
Length of first accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

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

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	3465	1444	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	942	392	v
Trucks and buses	7	10	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	0.00%	0.00%	
Length	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.952	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	3898	1648	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.587 Using Equation 5

$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 2968 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	3898	7187	No
$V_{FO} = V_F - V_R$	2250	7187	No
V_R	1648	2100	No
V_3 or V_{av34}	930 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	2968		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	2968	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 16.3 pc/mi/ln

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

Speed Estimation

Intermediate speed variable, D_S = 0.446

Space mean speed in ramp influence area, S_R = 57.3 mph

Space mean speed in outer lanes, S_O = 76.4 mph

Space mean speed for all vehicles, S = 60.9 mph

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________________Diverge Analysis________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	Off Ramp to I-240 Westbound C-D Rd.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

________________Freeway Data________________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4081	vph

________________Off Ramp Data________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	1549	vph
Length of first accel/decel lane	1500	ft

____________Adjacent Ramp Data (if one exists)____________

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

__________Conversion to pc/h Under Base Conditions__________

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	4081	1549	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	1109	421	v
Trucks and buses	7	10	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	0.00%	0.00%	
Length	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.952	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4591	1768	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.564	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3360		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	4591	7187	No
$V_{FO} = V_F - V_R$	2823	7187	No
V_R	1768	2100	No
V_3 or V_{av34}	1231 pc/h	(Equation 13-14 or 13-17)	
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	3360	(Equation 13-15, 13-16, 13-18, or 13-19)	

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3360	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 19.6 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	D_S = 0.457
Space mean speed in ramp influence area,	S_R = 57.0 mph
Space mean speed in outer lanes,	S_O = 75.5 mph
Space mean speed for all vehicles,	S = 61.0 mph

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____________________Diverge Analysis____________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	Off Ramp from I-240 Westbound C-D Rd. to I-35 Southbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

____________________Freeway Data____________________

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	831	vph

____________________Off Ramp Data____________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	611	vph
Length of first accel/decel lane	0	ft

________________Adjacent Ramp Data (if one exists)________________

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	613	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1100	ft

______________Conversion to pc/h Under Base Conditions______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	831	611	613	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	226	166	167	v
Trucks and buses	11	15	14	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.948	0.930	0.935	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	953	714	713	pcph

_____Estimation of V12 Diverge Areas_____

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	1.000	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 953		pc/h

_____Capacity Checks_____

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	953	7187	No
$V_{FO} = V_F - V_R$	239	7187	No
V_R	714	2000	No
V_3 or V_{av34}	0	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	953		(Equation 13-15, 13-16, 13-18, or 13-19)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
V_{12}	953	4400	No

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 12.4 pc/mi/ln

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

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.557$

Space mean speed in ramp influence area, $S_R = 47.8$ mph

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

Space mean speed for all vehicles, S = 47.8 mph

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_______________Diverge Analysis_______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	Off Ramp from I-240 Westbound C-D Rd. to I-35 Southbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_______________Freeway Data_______________

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	55.0	mph
Volume on freeway	1178	vph

_______________Off Ramp Data_______________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	30.0	mph
Volume on ramp	876	vph
Length of first accel/decel lane	0	ft

_______________Adjacent Ramp Data (if one exists)_______________

Does adjacent ramp exist?	Yes	
Volume on adjacent ramp	371	vph
Position of adjacent ramp	Upstream	
Type of adjacent ramp	Off	
Distance to adjacent ramp	1100	ft

_______________Conversion to pc/h Under Base Conditions_______________

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1178	876	371	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	320	238	101	v
Trucks and buses	11	15	14	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	0.00%	0.00%	0.00%	
Length	0.00 mi	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.948	0.930	0.935	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	1351	1024	431	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	1.000	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 1351		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	1351	7187	No
$V_{FO} = V_F - V_R$	327	7187	No
V_R	1024	2000	No
V_3 or V_{av34}	0	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	1351		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	1351	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 15.9 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	D_S = 0.585
Space mean speed in ramp influence area,	S_R = 47.4 mph
Space mean speed in outer lanes,	S_O = N/A mph
Space mean speed for all vehicles,	S = 47.4 mph

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______________________________Merge Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from both I-35 South & Northbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

______________________________Freeway Data______________________________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	2021	vph

______________________________On Ramp Data______________________________

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	2859	vph
Length of first accel/decel lane	500	ft
Length of Second accel/decel lane	1500	ft

______________________Adjacent Ramp Data (if one exists) ______________________

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

____________________Conversion to pc/h Under Base Conditions____________________

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	2021	2859	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	549	777	v
Trucks and buses	5	8	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	%	%	
Length	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.976	0.962	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2252	3232	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =	1451.57	(Equation 13-6 or 13-7)
P_{FM} =	0.555	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	1250	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	5484	7187	No
V_3 or V_{av34}	1002	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	Yes		
If yes, V_{12A} = 1286			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	4518	4600	No

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 23.6 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.453
Space mean speed in ramp influence area,	S_R = 57.1 mph
Space mean speed in outer lanes,	S_O = 67.9 mph
Space mean speed for all vehicles,	S = 58.7 mph

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_______________Merge Analysis_______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	On Ramp from both I-35 South & Northbound
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Analysis

_______________Freeway Data_______________

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	2532	vph

_______________On Ramp Data_______________

Side of freeway	Right	
Number of lanes in ramp	2	
Free-flow speed on ramp	45.0	mph
Volume on ramp	3202	vph
Length of first accel/decel lane	500	ft
Length of Second accel/decel lane	1500	ft

_______________Adjacent Ramp Data (if one exists) _______________

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

_______________Conversion to pc/h Under Base Conditions_______________

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	2532	3202	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	688	870	v
Trucks and buses	5	8	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	%	%	
Length	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.976	0.962	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	2821	3620	pcph

Estimation of V_{12} Merge Areas

L_{EQ} =	1451.57	(Equation 13-6 or 13-7)
P_{FM} =	0.555	Using Equation 1
$V_{12} = V_F (P_{FM})$ =	1566	pc/h

Capacity Checks

	Actual	Maximum	LOS F?
V_{FO}	6441	7187	No
V_3 or V_{av34}	1255	pc/h	(Equation 13-14 or 13-17)
Is V_3 or V_{av34} > 2700 pc/h?	No		
Is V_3 or V_{av34} > 1.5 V_{12} /2?	Yes		
If yes, V_{12A} = 1612			(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
V_{R12}	5232	4600	Yes

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ V_R + 0.0078\ V_{12} - 0.00627\ L_A$ = 28.9 pc/mi/ln

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

Speed Estimation

Intermediate speed variable,	M_S = 0.826
Space mean speed in ramp influence area,	S_R = 46.8 mph
Space mean speed in outer lanes,	S_O = 67.0 mph
Space mean speed for all vehicles,	S = 49.6 mph

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_______________Diverge Analysis_______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	Off Ramp to Santa Fe Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_______________Freeway Data_______________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	4880	vph

_______________Off Ramp Data_______________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	245	vph
Length of first accel/decel lane	1500	ft

_______________Adjacent Ramp Data (if one exists)_______________

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

_______________Conversion to pc/h Under Base Conditions_______________

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	4880	245	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	1326	67	v
Trucks and buses	6	2	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	0.00%	0.00%	
Length	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	5463	269	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.611	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3443		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	5463	7187	No
$V_{FO} = V_F - V_R$	5194	7187	No
V_R	269	2100	No
V_3 or V_{av34}	2020 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or V_{av34} > 1.5 V_{12}/2			No
If yes, V_{12A} =	3443		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3443	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 20.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

Speed Estimation

Intermediate speed variable,	D_S = 0.322
Space mean speed in ramp influence area,	S_R = 60.7 mph
Space mean speed in outer lanes,	S_O = 72.4 mph
Space mean speed for all vehicles,	S = 64.6 mph

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____________________________Diverge Analysis____________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date performed:	5/12/2015
Analysis time period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Junction:	Off Ramp to Santa Fe Ave.
Jurisdiction:	Oklahoma County
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

____________________________Freeway Data____________________________

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	69.6	mph
Volume on freeway	5734	vph

____________________________Off Ramp Data____________________________

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	45.0	mph
Volume on ramp	350	vph
Length of first accel/decel lane	1500	ft

______________________Adjacent Ramp Data (if one exists)______________________

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

__________________Conversion to pc/h Under Base Conditions____________________

Junction Components	Freeway	Ramp	Adjacent Ramp
Volume, V (vph)	5734	350	vph
Peak-hour factor, PHF	0.92	0.92	
Peak 15-min volume, V_{15}	1558	95	v
Trucks and buses	6	2	%
Recreational vehicles	0	0	%
Terrain type:	Level	Level	
Grade	0.00%	0.00%	
Length	0.00 mi	0.00 mi	
Trucks and buses PCE, ET	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	6420	384	pcph

Estimation of V12 Diverge Areas

L_{EQ} =		(Equation 13-12 or 13-13)
P_{FD} =	0.582	Using Equation 5
$V_{12} = V_R + (V_F - V_R) P_{FD}$ = 3896		pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$V_{FI} = V_F$	6420	7187	No
$V_{FO} = V_F - V_R$	6036	7187	No
V_R	384	2100	No
V_3 or V_{av34}	2524 pc/h		(Equation 13-14 or 13-17)
Is V_3 or V_{av34} >	2700 pc/h?		No
Is V_3 or $V_{av34} > 1.5\ V_{12}/2$			No
If yes, V_{12A} =	3896		(Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
V_{12}	3896	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ V_{12} - 0.009\ L_D$ = 24.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence: C

Speed Estimation

Intermediate speed variable,	D_S = 0.333
Space mean speed in ramp influence area,	S_R = 60.4 mph
Space mean speed in outer lanes,	S_O = 70.4 mph
Space mean speed for all vehicles,	S = 64.0 mph

APPENDIX C

HCS Basic Freeway Weaving Segments

HCS 2010: Freeway Weaving Release 6.1

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____Operational Analysis____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Weaving Location:	Between On Ramp from 89th street to Off Ramp to Northbound I-35 C-D Rd.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____Inputs____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	2150	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

____Conversion to pc/h Under Base Conditions____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4087	500	2003	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1111	136	544	0	
Trucks and buses	8	9	10	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.957	0.952	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4620	568	2286	0	pc/h
Volume ratio, VR	0.382				

____Configuration Characteristics____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	832	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

________________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.189	
Weaving segment flow rate, v	7474	pc/h
Weaving segment capacity, C_W	6043	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6478	2150	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1192	c
		Max	Analyzed	
v/c ratio		1.00	1.189	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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______________Operational Analysis______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Weaving Location:	Between On Ramp from 89th street to Off Ramp to Northbound I-35 C-D Rd.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

______________Inputs______________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	2150	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

______________Conversion to pc/h Under Base Conditions______________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3260	450	1720	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	886	122	467	0	
Trucks and buses	8	9	10	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.957	0.952	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3685	511	1963	0	pc/h
Volume ratio, VR	0.402				

______________Configuration Characteristics______________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	832	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

______________________Weaving and Non-Weaving Speeds______________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

__________Weaving Segment Speed, Density, Level of Service and Capacity__________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.031	
Weaving segment flow rate, v	6159	pc/h
Weaving segment capacity, C_W	5745	veh/h

______________________Limitations on Weaving Segments______________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6700	2150	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2002	c
		Max	Analyzed	
v/c ratio		1.00	1.031	d

Notes:
a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Northbound
Weaving Location:	Between On Ramp from SE Service Rd. to Off Ramp to I-240 Eastbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35/I-240 Interchange Traffic Operation

___________________________________Inputs___________________________________

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	825	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions_______________________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	1233	120	770	30	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	335	33	209	8	
Trucks and buses	10	2	16	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.952	0.990	0.926	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1407	132	904	33	pc/h
Volume ratio, VR	0.418				

_________________________Configuration Characteristics____________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1036	lc/h
Weaving lane changes, LC_W	1122	lc/h
Non-weaving vehicle index, I_{NW}	238	
Non-weaving lane change, LC_{NW}	359	lc/h
Total lane changes, LC_{ALL}	1481	lc/h

____Weaving and Non-Weaving Speeds____

Weaving intensity factor, W	0.359	
Average weaving speed, S_W	29.7	mi/h
Average non-weaving speed, S_{NW}	21.6	mi/h

____Weaving Segment Speed, Density, Level of Service and Capacity____

Weaving segment speed, S	24.4	mi/h
Weaving segment density, D	50.8	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.693	
Weaving segment flow rate, v	2476	pc/h
Weaving segment capacity, C_W	3402	veh/h

____Limitations on Weaving Segments____

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6888	825	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1786	c
		Max	Analyzed	
v/c ratio		1.00	0.693	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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____Operational Analysis____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Northbound
Weaving Location:	Between On Ramp from SE Service Rd. to Off Ramp to I-240 Eastbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____Inputs____

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	825	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

____Conversion to pc/h Under Base Conditions____
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	1160	160	560	40	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	315	43	152	11	
Trucks and buses	10	2	16	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.952	0.990	0.926	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1324	176	657	44	pc/h
Volume ratio, VR	0.378				

____Configuration Characteristics____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	833	lc/h
Weaving lane changes, LC_W	919	lc/h
Non-weaving vehicle index, I_{NW}	226	
Non-weaving lane change, LC_{NW}	344	lc/h
Total lane changes, LC_{ALL}	1263	lc/h

______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.316	
Average weaving speed, S_W	30.2	mi/h
Average non-weaving speed, S_{NW}	23.7	mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S	25.8	mi/h
Weaving segment density, D	42.6	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.605	
Weaving segment flow rate, v	2201	pc/h
Weaving segment capacity, C_W	3467	veh/h

______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6441	825	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1820	c
		Max	Analyzed	
v/c ratio		1.00	0.605	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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____________Operational Analysis____________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Northbound
Weaving Location:	Between On Ramp from I-240 Eastbound to Off Ramp to I-240 Westbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____________Inputs____________

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	440	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

____________Conversion to pc/h Under Base Conditions____________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	53	950	1300	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	14	258	353	0	
Trucks and buses	6	11	6	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.948	0.971	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	59	1089	1455	0	pc/h
Volume ratio, VR	0.977				

____________Configuration Characteristics____________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	9	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.068	
Weaving segment flow rate, v	2603	pc/h
Weaving segment capacity, C_W	2367	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	13918	440	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1219	c
		Max	Analyzed	
v/c ratio		1.00	1.068	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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___Operational Analysis___

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Northbound
Weaving Location:	Between On Ramp from I-240 Eastbound to Off Ramp to I-240 Westbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___Inputs___

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	440	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___Conversion to pc/h Under Base Conditions___
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	70	900	1250	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	19	245	340	0	
Trucks and buses	6	11	6	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.948	0.971	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	78	1032	1399	0	pc/h
Volume ratio, VR	0.969				

___Configuration Characteristics___

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	9	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.022	
Weaving segment flow rate, v	2509	pc/h
Weaving segment capacity, C_W	2384	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	13802	440	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1228	c
		Max	Analyzed	
v/c ratio		1.00	1.022	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Weaving Location:	Between On Ramp from I-240 Westbound to Off Ramp to SE 66th Street
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	400	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4407	1433	180	120	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1198	389	49	33	
Trucks and buses	7	11	1	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.948	0.995	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4958	1643	197	131	pc/h
Volume ratio, VR	0.266				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1840	lc/h
Weaving lane changes, LC_W	1990	lc/h
Non-weaving vehicle index, I_{NW}	407	
Non-weaving lane change, LC_{NW}	495	lc/h
Total lane changes, LC_{ALL}	2485	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.955	
Average weaving speed, S_W	40.6	mi/h
Average non-weaving speed, S_{NW}	43.4	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	42.6	mi/h
Weaving segment density, D	40.6	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.874	
Weaving segment flow rate, v	6929	pc/h
Weaving segment capacity, C_W	7656	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5217	400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1981	c
		Max	Analyzed	
v/c ratio		1.00	0.874	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Weaving Location:	Between On Ramp from I-240 Westbound to Off Ramp to SE 66th Street
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	400	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3560	1250	150	100	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	967	340	41	27	
Trucks and buses	7	11	1	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.948	0.995	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4005	1433	164	109	pc/h
Volume ratio, VR	0.280				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1597	lc/h
Weaving lane changes, LC_W	1747	lc/h
Non-weaving vehicle index, I_{NW}	329	
Non-weaving lane change, LC_{NW}	294	lc/h
Total lane changes, LC_{ALL}	2041	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.818	
Average weaving speed, S_W	42.5	mi/h
Average non-weaving speed, S_{NW}	46.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	45.4	mi/h
Weaving segment density, D	31.4	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.725	
Weaving segment flow rate, v	5711	pc/h
Weaving segment capacity, C_W	7614	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5366	400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1970	c
		Max	Analyzed	
v/c ratio		1.00	0.725	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 59th Street to Off Ramp to SE 66th Street
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	900	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions_______________________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4480	200	250	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1217	54	68	0	
Trucks and buses	8	5	1	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	0.995	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5064	223	273	0	pc/h
Volume ratio, VR	0.089				

________________________Configuration Characteristics___________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	496	lc/h
Weaving lane changes, LC_W	864	lc/h
Non-weaving vehicle index, I_{NW}	912	
Non-weaving lane change, LC_{NW}	761	lc/h
Total lane changes, LC_{ALL}	1625	lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.360	
Average weaving speed, S_W	51.8	mi/h
Average non-weaving speed, S_{NW}	54.8	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	54.5	mi/h
Weaving segment density, D	25.5	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.645	
Weaving segment flow rate, v	5560	pc/h
Weaving segment capacity, C_W	8292	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	3435	900	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2156	c
		Max	Analyzed	
v/c ratio		1.00	0.645	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 59th Street to Off Ramp to SE 66th Street
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	900	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions_______________________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	5570	260	300	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1514	71	82	0	
Trucks and buses	8	5	1	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	0.995	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6297	290	328	0	pc/h
Volume ratio, VR	0.089				

_________________________Configuration Characteristics___________________________

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	1	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	618	lc/h	
Weaving lane changes, LC_W	986	lc/h	
Non-weaving vehicle index, I_{NW}	1133		
Non-weaving lane change, LC_{NW}	1015		lc/h
Total lane changes, LC_{ALL}	2001	lc/h	

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.425	
Average weaving speed, S_W	50.1	mi/h
Average non-weaving speed, S_{NW}	52.3	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	52.1	mi/h
Weaving segment density, D	33.2	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.802	
Weaving segment flow rate, v	6915	pc/h
Weaving segment capacity, C_W	8292	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	3437	900	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2156	c
		Max	Analyzed	
v/c ratio		1.00	0.802	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________________________Operational Analysis_______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 66th Street to Off Ramp to I-240 Westbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	565	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions________________________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3680	100	1000	150	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1000	27	272	41	
Trucks and buses	7	1	12	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.995	0.943	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4140	109	1152	164	pc/h
Volume ratio, VR	0.227				

_________________________Configuration Characteristics____________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1261	lc/h
Weaving lane changes, LC_W	1506	lc/h
Non-weaving vehicle index, I_{NW}	486	
Non-weaving lane change, LC_{NW}	422	lc/h
Total lane changes, LC_{ALL}	1928	lc/h

______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.595	
Average weaving speed, S_W	46.3	mi/h
Average non-weaving speed, S_{NW}	49.2	mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S	48.6	mi/h
Weaving segment density, D	28.7	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.687	
Weaving segment flow rate, v	5565	pc/h
Weaving segment capacity, C_W	7826	veh/h

______________________Limitations on Weaving Segments__________________________
If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4810	565	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2025	c
		Max	Analyzed	
v/c ratio		1.00	0.687	d

Notes:
a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 66th Street to Off Ramp to I-240 Westbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	565	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4560	120	1270	180	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1239	33	345	49	
Trucks and buses	7	1	12	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.995	0.943	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5130	131	1463	197	pc/h
Volume ratio, VR	0.227				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1594	lc/h
Weaving lane changes, LC_W	1839	lc/h
Non-weaving vehicle index, I_{NW}	602	
Non-weaving lane change, LC_{NW}	633	lc/h
Total lane changes, LC_{ALL}	2472	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.724	
Average weaving speed, S_W	44.0	mi/h
Average non-weaving speed, S_{NW}	45.2	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	44.9	mi/h
Weaving segment density, D	38.5	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.856	
Weaving segment flow rate, v	6921	pc/h
Weaving segment capacity, C_W	7814	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4848	565	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2022	c
		Max	Analyzed	
v/c ratio		1.00	0.856	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Southbound
Weaving Location:	Between On Ramp from I-240 Westbound to Off Ramp to I-240 Eastbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	400	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	0	500	250	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	0	136	68	0	
Trucks and buses	0	14	22	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	0.935	0.901	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	0	582	302	0	pc/h
Volume ratio, VR	1.000				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	884	lc/h
Weaving lane changes, LC_W	922	lc/h
Non-weaving vehicle index, I_{NW}	0	
Non-weaving lane change, LC_{NW}	0	lc/h
Total lane changes, LC_{ALL}	922	lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.437	
Average weaving speed, S_W	28.9	mi/h
Average non-weaving speed, S_{NW}	26.5	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	28.9	mi/h
Weaving segment density, D	15.3	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.371	
Weaving segment flow rate, v	884	pc/h
Weaving segment capacity, C_W	2384	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	14232	400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1192	c
		Max	Analyzed	
v/c ratio		1.00	0.371	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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__________Operational Analysis__________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Southbound
Weaving Location:	Between On Ramp from I-240 Westbound to Off Ramp to I-240 Eastbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

__________Inputs__________

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	400	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

__________Conversion to pc/h Under Base Conditions__________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	0	750	300	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	0	204	82	0	
Trucks and buses	0	14	22	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	0.935	0.901	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	0	872	362	0	pc/h
Volume ratio, VR	1.000				

__________Configuration Characteristics__________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1234	lc/h
Weaving lane changes, LC_W	1272	lc/h
Non-weaving vehicle index, I_{NW}	0	
Non-weaving lane change, LC_{NW}	0	lc/h
Total lane changes, LC_{ALL}	1272	lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.563	
Average weaving speed, S_W	27.8	mi/h
Average non-weaving speed, S_{NW}	23.2	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	27.8	mi/h
Weaving segment density, D	22.2	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.518	
Weaving segment flow rate, v	1234	pc/h
Weaving segment capacity, C_W	2384	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	14232	400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1192	c
		Max	Analyzed	
v/c ratio		1.00	0.518	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

____

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from I-240 Eastbound to Off Ramp to SE 82nd Street
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	675	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3710	1620	70	130	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1008	440	19	35	
Trucks and buses	7	9	3	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.957	0.985	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4174	1840	77	143	pc/h
Volume ratio, VR	0.308				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1917	lc/h
Weaving lane changes, LC_W	2208	lc/h
Non-weaving vehicle index, I_{NW}	583	
Non-weaving lane change, LC_{NW}	485	lc/h
Total lane changes, LC_{ALL}	2693	lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.673	
Average weaving speed, S_W	44.9	mi/h
Average non-weaving speed, S_{NW}	43.7	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	44.1	mi/h
Weaving segment density, D	35.4	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.799	
Weaving segment flow rate, v	6234	pc/h
Weaving segment capacity, C_W	7541	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5665	675	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1968	c
		Max	Analyzed	
v/c ratio		1.00	0.799	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from I-240 Eastbound to Off Ramp to SE 82nd Street
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	675	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4617	1933	63	117	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1255	525	17	32	
Trucks and buses	7	9	3	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.957	0.985	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5194	2196	70	128	pc/h
Volume ratio, VR	0.299				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	2266	lc/h
Weaving lane changes, LC_W	2557	lc/h
Non-weaving vehicle index, I_{NW}	718	
Non-weaving lane change, LC_{NW}	692	lc/h
Total lane changes, LC_{ALL}	3249	lc/h

__________Weaving and Non-Weaving Speeds__________

Weaving intensity factor, W	0.781	
Average weaving speed, S_W	43.1	mi/h
Average non-weaving speed, S_{NW}	39.6	mi/h

__________Weaving Segment Speed, Density, Level of Service and Capacity__________

Weaving segment speed, S	40.6	mi/h
Weaving segment density, D	46.8	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.960	
Weaving segment flow rate, v	7588	pc/h
Weaving segment capacity, C_W	7637	veh/h

__________Limitations on Weaving Segments__________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5569	675	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1976	c
		Max	Analyzed	
v/c ratio		1.00	0.960	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between Walker Ave. to Santa Fe Ave.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4600	450	550	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1250	122	149	0	
Trucks and buses	6	2	2	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5150	494	604	0	pc/h
Volume ratio, VR	0.176				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1098	lc/h
Weaving lane changes, LC_W	1311	lc/h
Non-weaving vehicle index, I_{NW}	515	
Non-weaving lane change, LC_{NW}	562	lc/h
Total lane changes, LC_{ALL}	1873	lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.641	
Average weaving speed, S_W	42.4	mi/h
Average non-weaving speed, S_{NW}	44.6	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	44.2	mi/h
Weaving segment density, D	35.3	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.777	
Weaving segment flow rate, v	6248	pc/h
Weaving segment capacity, C_W	7806	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4290	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2010	c
		Max	Analyzed	
v/c ratio		1.00	0.777	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between Walker Ave. to Santa Fe Ave.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4930	500	650	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1340	136	177	0	
Trucks and buses	6	2	2	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5519	549	714	0	pc/h
Volume ratio, VR	0.176				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1263	lc/h
Weaving lane changes, LC_W	1476	lc/h
Non-weaving vehicle index, I_{NW}	552	
Non-weaving lane change, LC_{NW}	638	lc/h
Total lane changes, LC_{ALL}	2114	lc/h

________________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.705	
Average weaving speed, S_W	41.4	mi/h
Average non-weaving speed, S_{NW}	42.8	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	442.5	mi/h
Weaving segment density, D	39.9	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.847	
Weaving segment flow rate, v	6782	pc/h
Weaving segment capacity, C_W	7775	veh/h

________________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4396	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2002	c
		Max	Analyzed	
v/c ratio		1.00	0.847	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from Shields Blvd. to Off Ramp to I-35 Southbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1400	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3270	280	1180	70	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	889	76	321	19	
Trucks and buses	6	1	6	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.995	0.971	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3661	306	1321	76	pc/h
Volume ratio, VR	0.303				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	306	lc/h
Weaving lane changes, LC_W	586	lc/h
Non-weaving vehicle index, I_{NW}	1046	
Non-weaving lane change, LC_{NW}	951	lc/h
Total lane changes, LC_{ALL}	1537	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.243	
Average weaving speed, S_W	55.2	mi/h
Average non-weaving speed, S_{NW}	54.2	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	54.5	mi/h
Weaving segment density, D	32.8	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.882	
Weaving segment flow rate, v	5364	pc/h
Weaving segment capacity, C_W	5904	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5620	1400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2027	c
		Max	Analyzed	
v/c ratio		1.00	0.882	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from Shields Blvd. to Off Ramp to I-35 Southbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1400	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3490	360	1210	90	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	948	98	329	24	
Trucks and buses	6	1	6	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.995	0.971	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3907	393	1355	98	pc/h
Volume ratio, VR	0.304				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	1	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	393	lc/h	
Weaving lane changes, LC_W	673	lc/h	
Non-weaving vehicle index, I_{NW}	1121		
Non-weaving lane change, LC_{NW}	1006		lc/h
Total lane changes, LC_{ALL}	1679	lc/h	

_____Weaving and Non-Weaving Speeds_____

Weaving intensity factor, W	0.261	
Average weaving speed, S_W	54.7	mi/h
Average non-weaving speed, S_{NW}	53.0	mi/h

_____Weaving Segment Speed, Density, Level of Service and Capacity_____

Weaving segment speed, S	53.5	mi/h
Weaving segment density, D	35.9	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.946	
Weaving segment flow rate, v	5753	pc/h
Weaving segment capacity, C_W	5904	veh/h

_____Limitations on Weaving Segments_____

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5625	1400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2027	c
		Max	Analyzed	
v/c ratio		1.00	0.946	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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______________________________Operational Analysis_______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from I-35 Southbound to Off Ramp to I-35 Northbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions_______________________

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2600	250	950	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	707	68	258	0	
Trucks and buses	6	22	11	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.901	0.948	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2911	302	1089	0	pc/h
Volume ratio, VR	0.323				

________________________Configuration Characteristics____________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1391	lc/h
Weaving lane changes, LC_W	1511	lc/h
Non-weaving vehicle index, I_{NW}	291	
Non-weaving lane change, LC_{NW}	293	lc/h
Total lane changes, LC_{ALL}	1804	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.622	
Average weaving speed, S_W	45.8	mi/h
Average non-weaving speed, S_{NW}	48.1	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	47.3	mi/h
Weaving segment density, D	30.3	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.738	
Weaving segment flow rate, v	4302	pc/h
Weaving segment capacity, C_W	5656	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5836	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1942	c
		Max	Analyzed	
v/c ratio		1.00	0.738	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from I-35 Southbound to Off Ramp to I-35 Northbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2950	300	900	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	802	82	245	0	
Trucks and buses	6	22	11	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.901	0.948	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3303	362	1032	0	pc/h
Volume ratio, VR	0.323				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1394	lc/h
Weaving lane changes, LC_W	1514	lc/h
Non-weaving vehicle index, I_{NW}	330	
Non-weaving lane change, LC_{NW}	374	lc/h
Total lane changes, LC_{ALL}	1888	lc/h

________________Weaving and Non-Weaving Speeds________________

Weaving intensity factor, W	0.645	
Average weaving speed, S_W	45.4	mi/h
Average non-weaving speed, S_{NW}	47.4	mi/h

________Weaving Segment Speed, Density, Level of Service and Capacity________

Weaving segment speed, S	46.8	mi/h
Weaving segment density, D	33.4	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.797	
Weaving segment flow rate, v	4697	pc/h
Weaving segment capacity, C_W	5720	veh/h

________________Limitations on Weaving Segments________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5549	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1964	c
		Max	Analyzed	
v/c ratio		1.00	0.797	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from I-35 Northbound to Off Ramp to Pole Rd.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1500	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2688	712	162	88	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	730	193	44	24	
Trucks and buses	6	16	2	7	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.926	0.990	0.966	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3009	836	178	99	pc/h
Volume ratio, VR	0.246				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1014	lc/h
Weaving lane changes, LC_W	1307	lc/h
Non-weaving vehicle index, I_{NW}	932	
Non-weaving lane change, LC_{NW}	875	lc/h
Total lane changes, LC_{ALL}	2182	lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.304	
Average weaving speed, S_W	53.4	mi/h
Average non-weaving speed, S_{NW}	51.1	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	51.6	mi/h
Weaving segment density, D	26.6	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.660	
Weaving segment flow rate, v	4122	pc/h
Weaving segment capacity, C_W	6061	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5012	1500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2081	c
		Max	Analyzed	
v/c ratio		1.00	0.660	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from I-35 Northbound to Off Ramp to Pole Rd.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1500	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3250	442	292	158	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	883	120	79	43	
Trucks and buses	6	16	2	7	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.926	0.990	0.966	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3639	519	321	178	pc/h
Volume ratio, VR	0.180				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	840	lc/h
Weaving lane changes, LC_W	1133	lc/h
Non-weaving vehicle index, I_{NW}	1145	
Non-weaving lane change, LC_{NW}	1022	lc/h
Total lane changes, LC_{ALL}	2155	lc/h

_______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.301	
Average weaving speed, S_W	53.4	mi/h
Average non-weaving speed, S_{NW}	51.5	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	51.8	mi/h
Weaving segment density, D	29.9	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.728	
Weaving segment flow rate, v	4657	pc/h
Weaving segment capacity, C_W	6213	veh/h

_______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4337	1500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2133	c
		Max	Analyzed	
v/c ratio		1.00	0.728	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from Pole Rd. to Off Ramp to I-35 C-D Rd. Northbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1700	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2130	170	520	30	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	579	46	141	8	
Trucks and buses	7	2	11	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.990	0.948	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2396	187	596	33	pc/h
Volume ratio, VR	0.244				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	783	lc/h
Weaving lane changes, LC_W	1099	lc/h
Non-weaving vehicle index, I_{NW}	826	
Non-weaving lane change, LC_{NW}	844	lc/h
Total lane changes, LC_{ALL}	1943	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.251	
Average weaving speed, S_W	55.0	mi/h
Average non-weaving speed, S_{NW}	54.2	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	54.4	mi/h
Weaving segment density, D	19.7	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.510	
Weaving segment flow rate, v	3212	pc/h
Weaving segment capacity, C_W	6081	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4989	1700	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2098	c
		Max	Analyzed	
v/c ratio		1.00	0.510	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from Pole Rd. to Off Ramp to I-35 C-D Rd. Northbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1700	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2707	383	313	67	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	736	104	85	18	
Trucks and buses	7	2	11	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.990	0.948	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3045	420	359	74	pc/h
Volume ratio, VR	0.200				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	779	lc/h
Weaving lane changes, LC_W	1095	lc/h
Non-weaving vehicle index, I_{NW}	1060	
Non-weaving lane change, LC_{NW}	986	lc/h
Total lane changes, LC_{ALL}	2081	lc/h

_____Weaving and Non-Weaving Speeds_____

Weaving intensity factor, W	0.265	
Average weaving speed, S_W	54.5	mi/h
Average non-weaving speed, S_{NW}	53.2	mi/h

_____Weaving Segment Speed, Density, Level of Service and Capacity_____

Weaving segment speed, S	53.4	mi/h
Weaving segment density, D	24.3	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.609	
Weaving segment flow rate, v	3898	pc/h
Weaving segment capacity, C_W	6183	veh/h

_____Limitations on Weaving Segments_____

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4535	1700	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2133	c
		Max	Analyzed	
v/c ratio		1.00	0.609	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from I-35 C-D Rd. Northbound to Off Ramp to I-35 C-D Rd. Southbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	540	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____
Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	1800	1300	500	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	489	353	136	0	
Trucks and buses	7	6	14	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.971	0.935	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2025	1455	582	0	pc/h
Volume ratio, VR	0.501				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	582	lc/h
Weaving lane changes, LC_W	713	lc/h
Non-weaving vehicle index, I_{NW}	219	
Non-weaving lane change, LC_{NW}	132	lc/h
Total lane changes, LC_{ALL}	845	lc/h

______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.322	
Average weaving speed, S_W	52.8	mi/h
Average non-weaving speed, S_{NW}	54.3	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	53.6	mi/h
Weaving segment density, D	25.3	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.849	
Weaving segment flow rate, v	3925	pc/h
Weaving segment capacity, C_W	4624	veh/h

______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	7844	540	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1791	c
		Max	Analyzed	
v/c ratio		1.00	0.849	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from I-35 C-D Rd. Northbound to Off Ramp to I-35 C-D Rd. Southbound
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	540	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2340	1250	750	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	636	340	204	0	
Trucks and buses	7	6	14	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.971	0.935	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2632	1399	872	0	pc/h
Volume ratio, VR	0.463				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	872	lc/h
Weaving lane changes, LC_W	1003	lc/h
Non-weaving vehicle index, I_{NW}	284	
Non-weaving lane change, LC_{NW}	257	lc/h
Total lane changes, LC_{ALL}	1260	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.441	
Average weaving speed, S_W	49.7	mi/h
Average non-weaving speed, S_{NW}	50.9	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	50.3	mi/h
Weaving segment density, D	32.5	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.946	
Weaving segment flow rate, v	4738	pc/h
Weaving segment capacity, C_W	5006	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	7399	540	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1825	c
		Max	Analyzed	
v/c ratio		1.00	0.946	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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___Operational Analysis___

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from I-35 Southbound to Off Ramp to Shields Blvd.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___Inputs___

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1560	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___Conversion to pc/h Under Base Conditions___

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2872	778	228	122	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	780	211	62	33	
Trucks and buses	7	10	1	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.952	0.995	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3231	888	249	133	pc/h
Volume ratio, VR	0.253				

___Configuration Characteristics___

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	0	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	0	lc/h
Weaving lane changes, LC_W	300	lc/h
Non-weaving vehicle index, I_{NW}	1050	
Non-weaving lane change, LC_{NW}	961	lc/h
Total lane changes, LC_{ALL}	1261	lc/h

________________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.191	
Average weaving speed, S_W	57.0	mi/h
Average non-weaving speed, S_{NW}	57.8	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	57.6	mi/h
Weaving segment density, D	26.1	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.721	
Weaving segment flow rate, v	4349	pc/h
Weaving segment capacity, C_W	6032	veh/h

________________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5081	1560	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2081	c
		Max	Analyzed	
v/c ratio		1.00	0.721	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________________________Operational Analysis_______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from I-35 Southbound to Off Ramp to Shields Blvd.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1560	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions________________________

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3265	975	325	175	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	887	265	88	48	
Trucks and buses	7	10	1	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.952	0.995	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3673	1113	355	191	pc/h
Volume ratio, VR	0.275				

_________________________Configuration Characteristics_____________________________

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	0	lc/pc	
Minimum FR lane changes, LC_{FR}	0	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	0	lc/h	
Weaving lane changes, LC_W	300	lc/h	
Non-weaving vehicle index, I_{NW}	1206		
Non-weaving lane change, LC_{NW}	1064		lc/h
Total lane changes, LC_{ALL}	1364	lc/h	

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.203	
Average weaving speed, S_W	56.6	mi/h
Average non-weaving speed, S_{NW}	56.5	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	56.5	mi/h
Weaving segment density, D	31.5	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.862	
Weaving segment flow rate, v	5152	pc/h
Weaving segment capacity, C_W	5977	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5321	1560	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2062	c
		Max	Analyzed	
v/c ratio		1.00	0.862	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between Santa Fe Ave. to Walker Ave.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	450	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3850	600	510	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1046	163	139	0	
Trucks and buses	6	2	2	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4310	659	560	0	pc/h
Volume ratio, VR	0.220				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1219	lc/h
Weaving lane changes, LC_W	1403	lc/h
Non-weaving vehicle index, I_{NW}	388	
Non-weaving lane change, LC_{NW}	361	lc/h
Total lane changes, LC_{ALL}	1764	lc/h

______________________Weaving and Non-Weaving Speeds________________________

Weaving intensity factor, W	0.664	
Average weaving speed, S_W	42.0	mi/h
Average non-weaving speed, S_{NW}	44.6	mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S	44.0	mi/h
Weaving segment density, D	31.4	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.701	
Weaving segment flow rate, v	5529	pc/h
Weaving segment capacity, C_W	7654	veh/h

______________________Limitations on Weaving Segments_________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4747	450	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1971	c
		Max	Analyzed	
v/c ratio		1.00	0.701	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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____Operational Analysis____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/6/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between Santa Fe Ave. to Walker Ave.
Analysis Year:	2013 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____Inputs____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	450	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

____Conversion to pc/h Under Base Conditions____
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4320	650	620	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1174	177	168	0	
Trucks and buses	6	2	2	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4837	714	681	0	pc/h
Volume ratio, VR	0.224				

____Configuration Characteristics____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1395	lc/h
Weaving lane changes, LC_W	1579	lc/h
Non-weaving vehicle index, I_{NW}	435	
Non-weaving lane change, LC_{NW}	470	lc/h
Total lane changes, LC_{ALL}	2049	lc/h

_______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.747	
Average weaving speed, S_W	40.8	mi/h
Average non-weaving speed, S_{NW}	42.5	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	42.1	mi/h
Weaving segment density, D	37.0	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.791	
Weaving segment flow rate, v	6232	pc/h
Weaving segment capacity, C_W	7647	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4781	450	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1969	c
		Max	Analyzed	
v/c ratio		1.00	0.791	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Weaving Location:	Between On Ramp from 89th street to Off Ramp Northbound I-35 C-D Rd.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	2150	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2150	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3766	635	2629	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1023	173	714	0	
Trucks and buses	8	9	10	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.957	0.952	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4257	721	3000	0	pc/h
Volume ratio, VR	0.466				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	1926	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

________________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.550	
Weaving segment flow rate, v	7672	pc/h
Weaving segment capacity, C_W	4948	veh/h

________________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	7436	2150	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1946	c
		Max	Analyzed	
v/c ratio		1.00	1.550	d

Notes:
a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Weaving Location:	Between On Ramp from 89th street to Off Ramp Northbound I-35 C-D Rd.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	2150	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3911	572	2299	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1063	155	625	0	
Trucks and buses	8	9	10	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.957	0.952	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4421	650	2624	0	pc/h
Volume ratio, VR	0.425				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	1926	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

_______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.364	
Weaving segment flow rate, v	7400	pc/h
Weaving segment capacity, C_W	5424	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6968	2150	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1981	c
		Max	Analyzed	
v/c ratio		1.00	1.364	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Northbound
Weaving Location:	Between On Ramp from SE Service Rd. to Off Ramp to I-240 Eastbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	825	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	1651	153	978	38	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	449	42	266	10	
Trucks and buses	10	2	16	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.952	0.990	0.926	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1884	168	1148	42	pc/h
Volume ratio, VR	0.406				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1316	lc/h
Weaving lane changes, LC_W	1402	lc/h
Non-weaving vehicle index, I_{NW}	318	
Non-weaving lane change, LC_{NW}	459	lc/h
Total lane changes, LC_{ALL}	1861	lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.429	
Average weaving speed, S_W	29.0	mi/h
Average non-weaving speed, S_{NW}	17.7	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	21.1	mi/h
Weaving segment density, D	77.0	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.902	
Weaving segment flow rate, v	3088	pc/h
Weaving segment capacity, C_W	3423	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6748	825	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1797	c
		Max	Analyzed	
v/c ratio		1.00	0.902	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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__________Operational Analysis__________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Northbound
Weaving Location:	Between On Ramp from SE Service Rd. to Off Ramp to I-240 Eastbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

__________Inputs__________

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	825	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

__________Conversion to pc/h Under Base Conditions__________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	1588	203	711	51	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	432	55	193	14	
Trucks and buses	10	2	16	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.952	0.990	0.926	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	1812	223	835	56	pc/h
Volume ratio, VR	0.362				

__________Configuration Characteristics__________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1058	lc/h
Weaving lane changes, LC_W	1144	lc/h
Non-weaving vehicle index, I_{NW}	308	
Non-weaving lane change, LC_{NW}	447	lc/h
Total lane changes, LC_{ALL}	1591	lc/h

______________________Weaving and Non-Weaving Speeds________________________

Weaving intensity factor, W	0.379	
Average weaving speed, S_W	29.5	mi/h
Average non-weaving speed, S_{NW}	20.4	mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S	22.9	mi/h
Weaving segment density, D	63.8	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.797	
Weaving segment flow rate, v	2787	pc/h
Weaving segment capacity, C_W	3495	veh/h

______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6254	825	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1835	c
		Max	Analyzed	
v/c ratio		1.00	0.797	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Northbound
Weaving Location:	Between On Ramp from I-240 Eastbound to Off Ramp to I-240 Westbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs___________________________________

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	440	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions___________________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	153	1207	1651	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	42	328	449	0	
Trucks and buses	6	11	6	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.948	0.971	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	171	1384	1848	0	pc/h
Volume ratio, VR	0.950				

________________________Configuration Characteristics________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	20	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.364	
Weaving segment flow rate, v	3304	pc/h
Weaving segment capacity, C_W	2423	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	13539	440	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1248	c
		Max	Analyzed	
v/c ratio		1.00	1.364	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Northbound
Weaving Location:	Between On Ramp from I-240 Eastbound to Off Ramp to I-240 Westbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	440	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	203	1143	1588	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	55	311	432	0	
Trucks and buses	6	11	6	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.948	0.971	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	227	1311	1778	0	pc/h
Volume ratio, VR	0.932				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	20	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.309	
Weaving segment flow rate, v	3220	pc/h
Weaving segment capacity, C_W	2460	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	13291	440	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1267	c
		Max	Analyzed	
v/c ratio		1.00	1.309	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________Operational Analysis______________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Weaving Location:	Between On Ramp from I-240 Westbound to Off Ramp to SE 66th Street
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

______________Inputs______________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	400	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

______________Conversion to pc/h Under Base Conditions______________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4172	1821	229	152	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1134	495	62	41	
Trucks and buses	7	11	1	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.948	0.995	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4694	2088	250	166	pc/h
Volume ratio, VR	0.325				

______________Configuration Characteristics______________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	2338	lc/h
Weaving lane changes, LC_W	2488	lc/h
Non-weaving vehicle index, I_{NW}	389	
Non-weaving lane change, LC_{NW}	448	lc/h
Total lane changes, LC_{ALL}	2936	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	1.089	
Average weaving speed, S_W	38.9	mi/h
Average non-weaving speed, S_{NW}	39.5	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	39.3	mi/h
Weaving segment density, D	45.8	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.974	
Weaving segment flow rate, v	6955	pc/h
Weaving segment capacity, C_W	7139	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5852	400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1933	c
		Max	Analyzed	
v/c ratio		1.00	0.974	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Northbound
Weaving Location:	Between On Ramp from I-240 Westbound to Off Ramp to SE 66th Street
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	400	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4292	1588	191	127	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1166	432	52	35	
Trucks and buses	7	11	1	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.948	0.995	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4829	1821	209	139	pc/h
Volume ratio, VR	0.290				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	2030	lc/h
Weaving lane changes, LC_W	2180	lc/h
Non-weaving vehicle index, I_{NW}	397	
Non-weaving lane change, LC_{NW}	470	lc/h
Total lane changes, LC_{ALL}	2650	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	1.005	
Average weaving speed, S_W	39.9	mi/h
Average non-weaving speed, S_{NW}	42.0	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	41.4	mi/h
Weaving segment density, D	42.3	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.892	
Weaving segment flow rate, v	6762	pc/h
Weaving segment capacity, C_W	7583	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5478	400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1962	c
		Max	Analyzed	
v/c ratio		1.00	0.892	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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__________Operational Analysis__________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 59th Street to Off Ramp to SE 66th Street
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

__________Inputs__________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	900	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

__________Conversion to pc/h Under Base Conditions__________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	5728	254	318	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1557	69	86	0	
Trucks and buses	8	5	1	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	0.995	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6475	283	347	0	pc/h
Volume ratio, VR	0.089				

__________Configuration Characteristics__________

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	1	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	630	lc/h	
Weaving lane changes, LC_W	998	lc/h	
Non-weaving vehicle index, I_{NW}	1166		
Non-weaving lane change, LC_{NW}	1051		lc/h
Total lane changes, LC_{ALL}	2049	lc/h	

_______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.433	
Average weaving speed, S_W	49.9	mi/h
Average non-weaving speed, S_{NW}	51.9	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	51.8	mi/h
Weaving segment density, D	34.3	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.824	
Weaving segment flow rate, v	6832	pc/h
Weaving segment capacity, C_W	8292	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	3430	900	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2156	c
		Max	Analyzed	
v/c ratio		1.00	0.824	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 59th Street to Off Ramp to SE 66th Street
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	900	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	5875	330	381	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1596	90	104	0	
Trucks and buses	8	5	1	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	0.995	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6641	368	416	0	pc/h
Volume ratio, VR	0.106				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	1	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	784	lc/h	
Weaving lane changes, LC_W	1152	lc/h	
Non-weaving vehicle index, I_{NW}	1195		
Non-weaving lane change, LC_{NW}	1085		lc/h
Total lane changes, LC_{ALL}	2237	lc/h	

______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.464	
Average weaving speed, S_W	49.2	mi/h
Average non-weaving speed, S_{NW}	50.4	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	50.3	mi/h
Weaving segment density, D	36.9	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.866	
Weaving segment flow rate, v	7140	pc/h
Weaving segment capacity, C_W	8246	veh/h

______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	3594	900	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2144	c
		Max	Analyzed	
v/c ratio		1.00	0.866	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 66th Street to Off Ramp to I-240 Westbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	565	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4712	127	1270	191	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1280	35	345	52	
Trucks and buses	7	1	12	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.995	0.943	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5301	139	1463	209	pc/h
Volume ratio, VR	0.225				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1602	lc/h
Weaving lane changes, LC_W	1847	lc/h
Non-weaving vehicle index, I_{NW}	623	
Non-weaving lane change, LC_{NW}	671	lc/h
Total lane changes, LC_{ALL}	2518	lc/h

__________Weaving and Non-Weaving Speeds__________

Weaving intensity factor, W	0.735	
Average weaving speed, S_W	43.8	mi/h
Average non-weaving speed, S_{NW}	44.9	mi/h

__________Weaving Segment Speed, Density, Level of Service and Capacity__________

Weaving segment speed, S	44.7	mi/h
Weaving segment density, D	39.8	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.878	
Weaving segment flow rate, v	6872	pc/h
Weaving segment capacity, C_W	7830	veh/h

__________Limitations on Weaving Segments__________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4796	565	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2026	c
		Max	Analyzed	
v/c ratio		1.00	0.878	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 66th Street to Off Ramp to I-240 Westbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs_____________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	565	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions_______________________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4592	152	1602	229	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1248	41	435	62	
Trucks and buses	7	1	12	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.995	0.943	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5166	166	1846	250	pc/h
Volume ratio, VR	0.271				

________________________Configuration Characteristics___________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	2012	lc/h
Weaving lane changes, LC_W	2257	lc/h
Non-weaving vehicle index, I_{NW}	612	
Non-weaving lane change, LC_{NW}	652	lc/h
Total lane changes, LC_{ALL}	2909	lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W	0.823	
Average weaving speed, S_W	42.4	mi/h
Average non-weaving speed, S_{NW}	41.6	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	41.8	mi/h
Weaving segment density, D	44.4	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.933	
Weaving segment flow rate, v	7177	pc/h
Weaving segment capacity, C_W	7691	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5273	565	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1990	c
		Max	Analyzed	
v/c ratio		1.00	0.933	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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__________Operational Analysis__________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Southbound
Weaving Location:	Between On Ramp from I-240 Westbound to Off Ramp to I-240 Eastbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

__________Inputs__________

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	400	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

__________Conversion to pc/h Under Base Conditions__________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	0	635	318	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	0	173	86	0	
Trucks and buses	0	14	22	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	0.935	0.901	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	0	739	384	0	pc/h
Volume ratio, VR	1.000				

__________Configuration Characteristics__________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1123	lc/h
Weaving lane changes, LC_W	1161	lc/h
Non-weaving vehicle index, I_{NW}	0	
Non-weaving lane change, LC_{NW}	0	lc/h
Total lane changes, LC_{ALL}	1161	lc/h

______________________Weaving and Non-Weaving Speeds________________________

Weaving intensity factor, W	0.524	
Average weaving speed, S_W	28.1	mi/h
Average non-weaving speed, S_{NW}	24.2	mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S	28.1	mi/h
Weaving segment density, D	20.0	pc/mi/ln
Level of service, LOS	B	
Weaving segment v/c ratio	0.471	
Weaving segment flow rate, v	1123	pc/h
Weaving segment capacity, C_W	2384	veh/h

______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	14232	400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1192	c
		Max	Analyzed	
v/c ratio		1.00	0.471	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 C-D Rd. Southbound
Weaving Location:	Between On Ramp from I-240 Westbound to Off Ramp to I-240 Eastbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	C-D Roadway / Multilane Highways	
Weaving configuration	One-Sided	
Number of lanes, N	2	ln
Weaving segment length, L_S	400	ft
Freeway free-flow speed, FFS	35	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2250	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	0	953	381	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	0	259	104	0	
Trucks and buses	0	14	22	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	1.000	0.935	0.901	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	0	1108	460	0	pc/h
Volume ratio, VR	1.000				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1568	lc/h
Weaving lane changes, LC_W	1606	lc/h
Non-weaving vehicle index, I_{NW}	0	
Non-weaving lane change, LC_{NW}	0	lc/h
Total lane changes, LC_{ALL}	1606	lc/h

________________________Weaving and Non-Weaving Speeds___________________________

Weaving intensity factor, W	0.677	
Average weaving speed, S_W	26.9	mi/h
Average non-weaving speed, S_{NW}	19.9	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	26.9	mi/h
Weaving segment density, D	29.1	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.658	
Weaving segment flow rate, v	1568	pc/h
Weaving segment capacity, C_W	2384	veh/h

________________________Limitations on Weaving Segments____________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	14232	400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2250	1192	c
		Max	Analyzed	
v/c ratio		1.00	0.658	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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___Operational Analysis___

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from I-240 Eastbound to Off Ramp to SE 82nd Street
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___Inputs___

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	675	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___Conversion to pc/h Under Base Conditions___

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4750	2058	89	165	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1291	559	24	45	
Trucks and buses	7	9	3	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.957	0.985	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5344	2338	98	181	pc/h
Volume ratio, VR	0.306				

___Configuration Characteristics___

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	697	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

_______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.015	
Weaving segment flow rate, v	7692	pc/h
Weaving segment capacity, C_W	7578	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5648	675	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1970	c
		Max	Analyzed	
v/c ratio		1.00	1.015	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

____

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from I-240 Eastbound to Off Ramp to SE 82nd Street
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	675	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4664	2455	80	149	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1267	667	22	40	
Trucks and buses	7	9	3	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.957	0.985	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5247	2789	88	164	pc/h
Volume ratio, VR	0.347				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	697	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

______________________Weaving and Non-Weaving Speeds________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.199	
Weaving segment flow rate, v	8008	pc/h
Weaving segment capacity, C_W	6680	veh/h

______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6095	675	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1935	c
		Max	Analyzed	
v/c ratio		1.00	1.199	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from Walker Ave. to Off Ramp to Santa Fe Ave.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	5872	573	699	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1596	155	190	0	
Trucks and buses	6	2	2	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6574	628	767	0	pc/h
Volume ratio, VR	0.175				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1395	lc/h
Weaving lane changes, LC_W	1608	lc/h
Non-weaving vehicle index, I_{NW}	657	
Non-weaving lane change, LC_{NW}	855	lc/h
Total lane changes, LC_{ALL}	2463	lc/h

______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.795	
Average weaving speed, S_W	40.1	mi/h
Average non-weaving speed, S_{NW}	40.4	mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S	40.3	mi/h
Weaving segment density, D	49.4	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.991	
Weaving segment flow rate, v	7969	pc/h
Weaving segment capacity, C_W	7810	veh/h

______________________Limitations on Weaving Segments__________________________
If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4283	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2011	c
		Max	Analyzed	
v/c ratio		1.00	0.991	d

Notes:
a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from Walker Ave. to Off Ramp to Santa Fe Ave.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions
Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	6261	635	826		veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1701	173	224	0	
Trucks and buses	6	2	2	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	7010	697	907	0	pc/h
Volume ratio, VR	0.186				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}		
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

__________Weaving and Non-Weaving Speeds__________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

__________Weaving Segment Speed, Density, Level of Service and Capacity__________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.076	
Weaving segment flow rate, v	8614	pc/h
Weaving segment capacity, C_W	7775	veh/h

__________Limitations on Weaving Segments__________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4396	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2002	c
		Max	Analyzed	
v/c ratio		1.00	1.076	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from Shields Blvd. to Off Ramp to I-35 Southbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1400	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4200	356	1499	89	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1141	97	407	24	
Trucks and buses	6	1	6	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.995	0.971	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4702	389	1678	97	pc/h
Volume ratio, VR	0.303				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	1369	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

_______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.128	
Weaving segment flow rate, v	6667	pc/h
Weaving segment capacity, C_W	5910	veh/h

_______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5595	1400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2029	c
		Max	Analyzed	
v/c ratio		1.00	1.128	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from Shields Blvd. to Off Ramp to I-35 Southbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1400	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	4536	458	1537	114	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1233	124	418	31	
Trucks and buses	6	1	6	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.995	0.971	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5078	500	1721	125	pc/h
Volume ratio, VR	0.299				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	1369	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.218	
Weaving segment flow rate, v	7208	pc/h
Weaving segment capacity, C_W	5916	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5575	1400	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2031	c
		Max	Analyzed	
v/c ratio		1.00	1.218	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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______Operational Analysis______

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from I-35 Southbound to Off Ramp to I-35 Northbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

______Inputs______

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

______Conversion to pc/h Under Base Conditions______

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3349	318	1207	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	910	86	328	0	
Trucks and buses	6	22	11	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.901	0.948	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3749	384	1384	0	pc/h
Volume ratio, VR	0.320				

______Configuration Characteristics______

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1768	lc/h
Weaving lane changes, LC_W	1888	lc/h
Non-weaving vehicle index, I_{NW}	375	
Non-weaving lane change, LC_{NW}	465	lc/h
Total lane changes, LC_{ALL}	2353	lc/h

_______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W	0.767	
Average weaving speed, S_W	43.3	mi/h
Average non-weaving speed, S_{NW}	43.4	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	43.4	mi/h
Weaving segment density, D	42.4	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.946	
Weaving segment flow rate, v	5357	pc/h
Weaving segment capacity, C_W	5662	veh/h

_______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5804	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1944	c
		Max	Analyzed	
v/c ratio		1.00	0.946	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

____

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______________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from I-35 Southbound to Off Ramp to I-35 Northbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions_______________________

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3851	381	1143	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1046	104	311	0	
Trucks and buses	6	22	11	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.901	0.948	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4311	460	1311	0	pc/h
Volume ratio, VR	0.291				

_________________________Configuration Characteristics____________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	375	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

_______________________Weaving and Non-Weaving Speeds_________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.030	
Weaving segment flow rate, v	5905	pc/h
Weaving segment capacity, C_W	5732	veh/h

_______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5549	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1968	c
		Max	Analyzed	
v/c ratio		1.00	1.030	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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____Operational Analysis____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from I-35 Northbound to Off Ramp to Pole Rd.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

____Inputs____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1500	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

____Conversion to pc/h Under Base Conditions____

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3461	904	206	112	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	940	246	56	30	
Trucks and buses	6	16	2	7	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.926	0.990	0.966	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3875	1061	226	126	pc/h
Volume ratio, VR	0.243				

____Configuration Characteristics____

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	1	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	1287	lc/h	
Weaving lane changes, LC_W	1580	lc/h	
Non-weaving vehicle index, I_{NW}	1200		
Non-weaving lane change, LC_{NW}	1059		lc/h
Total lane changes, LC_{ALL}	2639	lc/h	

________________________Weaving and Non-Weaving Speeds___________________________

Weaving intensity factor, W	0.353	
Average weaving speed, S_W	52.0	mi/h
Average non-weaving speed, S_{NW}	47.3	mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S	48.3	mi/h
Weaving segment density, D	36.5	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.846	
Weaving segment flow rate, v	5134	pc/h
Weaving segment capacity, C_W	6067	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4985	1500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2083	c
		Max	Analyzed	
v/c ratio		1.00	0.846	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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______________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from I-35 Northbound to Off Ramp to Pole Rd.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1500	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions______________________

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3861	561	371	201	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1049	152	101	55	
Trucks and buses	6	16	2	7	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.926	0.990	0.966	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4323	659	407	226	pc/h
Volume ratio, VR	0.190				

________________________Configuration Characteristics___________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	1066	lc/h
Weaving lane changes, LC_W	1359	lc/h
Non-weaving vehicle index, I_{NW}	1365	
Non-weaving lane change, LC_{NW}	1325	lc/h
Total lane changes, LC_{ALL}	2684	lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.358	
Average weaving speed, S_W	51.8	mi/h
Average non-weaving speed, S_{NW}	48.3	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	49.0	mi/h
Weaving segment density, D	38.2	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.880	
Weaving segment flow rate, v	5452	pc/h
Weaving segment capacity, C_W	6192	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4433	1500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2126	c
		Max	Analyzed	
v/c ratio		1.00	0.880	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from Pole Rd. to Off Ramp to I-35 C-D Rd. Northbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1700	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2667	216	661	38	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	725	59	180	10	
Trucks and buses	7	2	11	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.990	0.948	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3000	237	758	42	pc/h
Volume ratio, VR	0.246				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	1	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}	995	lc/h
Weaving lane changes, LC_W	1311	lc/h
Non-weaving vehicle index, I_{NW}	1034	
Non-weaving lane change, LC_{NW}	970	lc/h
Total lane changes, LC_{ALL}	2281	lc/h

______________________Weaving and Non-Weaving Speeds______________________

Weaving intensity factor, W	0.285	
Average weaving speed, S_W	53.9	mi/h
Average non-weaving speed, S_{NW}	51.4	mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity___________

Weaving segment speed, S	52.0	mi/h
Weaving segment density, D	25.9	pc/mi/ln
Level of service, LOS	C	
Weaving segment v/c ratio	0.642	
Weaving segment flow rate, v	3901	pc/h
Weaving segment capacity, C_W	6075	veh/h

______________________Limitations on Weaving Segments______________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5017	1700	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2096	c
		Max	Analyzed	
v/c ratio		1.00	0.642	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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______________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from Pole Rd. to Off Ramp to I-35 C-D Rd. Northbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1700	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions______________________

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3395	487	398	85	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	923	132	108	23	
Trucks and buses	7	2	11	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.990	0.948	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3819	535	456	93	pc/h
Volume ratio, VR	0.202				

_________________________Configuration Characteristics___________________________

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	1	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	991	lc/h	
Weaving lane changes, LC_W	1307	lc/h	
Non-weaving vehicle index, I_{NW}	1330		
Non-weaving lane change, LC_{NW}	1215		lc/h
Total lane changes, LC_{ALL}	2522	lc/h	

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.309	
Average weaving speed, S_W	53.2	mi/h
Average non-weaving speed, S_{NW}	50.0	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	50.6	mi/h
Weaving segment density, D	32.3	pc/mi/ln
Level of service, LOS	D	
Weaving segment v/c ratio	0.767	
Weaving segment flow rate, v	4738	pc/h
Weaving segment capacity, C_W	6177	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4558	1700	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2131	c
		Max	Analyzed	
v/c ratio		1.00	0.767	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____________________________Operational Analysis______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from I-35 C-D Rd. Northbound to Off Ramp to I-35 C-D Rd. Southbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

__________________________________Inputs_____________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	540	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

__________________Conversion to pc/h Under Base Conditions_______________________

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2248	1651	635	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	611	449	173	0	
Trucks and buses	7	6	14	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.971	0.935	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	2529	1848	739	0	pc/h
Volume ratio, VR	0.506				

________________________Configuration Characteristics___________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	283	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.078	
Weaving segment flow rate, v	4943	pc/h
Weaving segment capacity, C_W	4586	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	7893	540	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	1787	c
		Max	Analyzed	
v/c ratio		1.00	1.078	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from I-35 C-D Rd. Northbound to Off Ramp to I-35 C-D Rd. Southbound
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	540	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions
Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	2929	1588	953	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	796	432	259	0	
Trucks and buses	7	6	14	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.971	0.935	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	3295	1778	1108	0	pc/h
Volume ratio, VR	0.467				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	283	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.203	
Weaving segment flow rate, v	5972	pc/h
Weaving segment capacity, C_W	4966	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	7442	540	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2300	1822	c
		Max	Analyzed	
v/c ratio		1.00	1.203	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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________Operational Analysis________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from I-35 Southbound to Off Ramp to Shields Blvd.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

________Inputs________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1560	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

________Conversion to pc/h Under Base Conditions________

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	3609	988	290	155	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	981	268	79	42	
Trucks and buses	7	10	1	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.952	0.995	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4060	1128	317	169	pc/h
Volume ratio, VR	0.255				

________Configuration Characteristics________

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	0	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	317	lc/h	
Weaving lane changes, LC_W	617	lc/h	
Non-weaving vehicle index, I_{NW}	1319		
Non-weaving lane change, LC_{NW}	1184		lc/h
Total lane changes, LC_{ALL}	1801	lc/h	

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.253	
Average weaving speed, S_W	54.9	mi/h
Average non-weaving speed, S_{NW}	53.6	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	54.0	mi/h
Weaving segment density, D	35.1+	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.910	
Weaving segment flow rate, v	5483	pc/h
Weaving segment capacity, C_W	6026	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5103	1560	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2079	c
		Max	Analyzed	
v/c ratio		1.00	0.910	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

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______________________________Operational Analysis_______________________________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from I-35 Southbound to Off Ramp to Shields Blvd.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___________________________________Inputs______________________________________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	3	ln
Weaving segment length, L_S	1560	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___________________Conversion to pc/h Under Base Conditions_______________________

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	4104	1239	413	222	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1115	337	112	60	
Trucks and buses	7	10	1	1	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.966	0.952	0.995	0.995	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4617	1414	451	243	pc/h
Volume ratio, VR	0.277				

________________________Configuration Characteristics____________________________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	0	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}	1493	
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

___Weaving and Non-Weaving Speeds___

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

___Weaving Segment Speed, Density, Level of Service and Capacity___

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.088	
Weaving segment flow rate, v	6498	pc/h
Weaving segment capacity, C_W	5974	veh/h

___Limitations on Weaving Segments___

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5342	1560	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2061	c
		Max	Analyzed	
v/c ratio		1.00	1.088	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from Santa Fe Ave. to Off Ramp to Walker Ave.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	450	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	4890	762	648	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1329	207	176	0	
Trucks and buses	6	2	2	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5475	837	711	0	pc/h
Volume ratio, VR	0.220				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	0	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	1548	lc/h	
Weaving lane changes, LC_W	1732	lc/h	
Non-weaving vehicle index, I_{NW}	493		
Non-weaving lane change, LC_{NW}	601		lc/h
Total lane changes, LC_{ALL}	2333	lc/h	

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.828	
Average weaving speed, S_W	39.6	mi/h
Average non-weaving speed, S_{NW}	40.4	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	40.2	mi/h
Weaving segment density, D	43.6	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.891	
Weaving segment flow rate, v	7023	pc/h
Weaving segment capacity, C_W	7654	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4746	450	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2300	1971	c
		Max	Analyzed	
v/c ratio		1.00	0.891	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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___Operational Analysis___

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/11/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from Santa Fe Ave. to Off Ramp to Walker Ave.
Analysis Year:	2040 [EXISTING CONFIGURATION]
Description:	I-35_I-240 Interchange Traffic Operation

___Inputs___

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	450	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

___Conversion to pc/h Under Base Conditions___

Volume Components

	V_{FF}	V_{RF}	V_{21}	V_{RR}	
Volume, V	5486	826	787	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1491	224	214	0	
Trucks and buses	6	2	2	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6142	907	864	0	pc/h
Volume ratio, VR	0.224				

___Configuration Characteristics___

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}		
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

______________________Weaving and Non-Weaving Speeds________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.005	
Weaving segment flow rate, v	7913	pc/h
Weaving segment capacity, C_W	7647	veh/h

______________________Limitations on Weaving Segments__________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4781	450	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2300	1969	c
		Max	Analyzed	
v/c ratio		1.00	1.005	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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______Operational Analysis______

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 59th Street to Off Ramp to SE 66th Street
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

______Inputs______

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	900	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

______Conversion to pc/h Under Base Conditions______

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	5691	599	355	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1546	163	96	0	
Trucks and buses	8	5	1	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	0.995	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6433	667	388	0	pc/h
Volume ratio, VR	0.141				

______Configuration Characteristics______

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	0	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	1055	lc/h	
Weaving lane changes, LC_W	1423	lc/h	
Non-weaving vehicle index, I_{NW}	1158		
Non-weaving lane change, LC_{NW}	1043		lc/h
Total lane changes, LC_{ALL}	2466	lc/h	

Weaving and Non-Weaving Speeds

Weaving intensity factor, W	0.501	
Average weaving speed, S_W	48.3	mi/h
Average non-weaving speed, S_{NW}	48.4	mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S	48.4	mi/h
Weaving segment density, D	38.7	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.884	
Weaving segment flow rate, v	7488	pc/h
Weaving segment capacity, C_W	8142	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	3941	900	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2117	c
		Max	Analyzed	
v/c ratio		1.00	0.884	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-35 Southbound
Weaving Location:	Between On Ramp from SE 59th Street to Off Ramp to SE 66th Street
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	900	ft
Freeway free-flow speed, FFS	65	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2350	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	5773	859	460	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1569	233	125	0	
Trucks and buses	8	5	1	0	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.962	0.976	0.995	1.000	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	6526	957	503	0	pc/h
Volume ratio, VR	0.183				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln	
Interchange density, ID	2.00	int/mi	
Minimum RF lane changes, LC_{RF}	0	lc/pc	
Minimum FR lane changes, LC_{FR}	1	lc/pc	
Minimum RR lane changes, LC_{RR}		lc/pc	
Minimum weaving lane changes, LC_{MIN}	1460	lc/h	
Weaving lane changes, LC_W	1828	lc/h	
Non-weaving vehicle index, I_{NW}	1175		
Non-weaving lane change, LC_{NW}	1062		lc/h
Total lane changes, LC_{ALL}	2890	lc/h	

______________________Weaving and Non-Weaving Speeds______________________

Weaving intensity factor, W	0.567	
Average weaving speed, S_W	46.9	mi/h
Average non-weaving speed, S_{NW}	44.9	mi/h

___________Weaving Segment Speed, Density, Level of Service and Capacity___________

Weaving segment speed, S	45.3	mi/h
Weaving segment density, D	44.1	pc/mi/ln
Level of service, LOS	E	
Weaving segment v/c ratio	0.958	
Weaving segment flow rate, v	7986	pc/h
Weaving segment capacity, C_W	8019	veh/h

______________________Limitations on Weaving Segments______________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	4361	900	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2350	2085	c
		Max	Analyzed	
v/c ratio		1.00	0.958	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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__________Operational Analysis__________

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from Walker Ave. to Off Ramp to Santa Fe Ave.
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

__________Inputs__________

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

__________Conversion to pc/h Under Base Conditions__________

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	5080	572	1461	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1380	155	397	0	
Trucks and buses	6	2	2	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5687	628	1604	0	pc/h
Volume ratio, VR	0.282				

__________Configuration Characteristics__________

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}		
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

Weaving and Non-Weaving Speeds

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

Weaving Segment Speed, Density, Level of Service and Capacity

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.028	
Weaving segment flow rate, v	7919	pc/h
Weaving segment capacity, C_W	7480	veh/h

Limitations on Weaving Segments

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5390	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2300	1926	c
		Max	Analyzed	
v/c ratio		1.00	1.028	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

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_____Operational Analysis_____

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Eastbound
Weaving Location:	Between On Ramp from Walker Ave. to Off Ramp to Santa Fe Ave.
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

_____Inputs_____

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	500	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

_____Conversion to pc/h Under Base Conditions_____

Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	5334	635	1753	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1449	173	476	0	
Trucks and buses	6	2	2	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5972	697	1924	0	pc/h
Volume ratio, VR	0.305				

_____Configuration Characteristics_____

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}		
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

____________Weaving and Non-Weaving Speeds____________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.126	
Weaving segment flow rate, v	8593	pc/h
Weaving segment capacity, C_W	7406	veh/h

____________Limitations on Weaving Segments____________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	5638	500	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2300	1907	c
		Max	Analyzed	
v/c ratio		1.00	1.126	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.
b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."
c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.
d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Reza Amini, PE
Olsson Associates
201 NW 63rd Street, Suite 130
Oklahoma City, OK 73116
Phone: (405) 242-6642
Fax: (405) 242-6601
E-mail: ramini@olssonassociates.com

Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	AM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from Santa Fe Ave. to Off Ramp to Walker Ave.
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	450	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	3987	1665	648	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1083	452	176	0	
Trucks and buses	6	2	2	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	4464	1828	711	0	pc/h
Volume ratio, VR	0.363				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}		
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

_______________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.058	
Weaving segment flow rate, v	7003	pc/h
Weaving segment capacity, C_W	6427	veh/h

_______________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6265	450	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2300	1855	c
		Max	Analyzed	
v/c ratio		1.00	1.058	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

HCS 2010: Freeway Weaving Release 6.1

Reza Amini, PE
Olsson Associates
201 NW 63rd Street, Suite 130
Oklahoma City, OK 73116
Phone: (405) 242-6642
Fax: (405) 242-6601
E-mail: ramini@olssonassociates.com

Operational Analysis

Analyst:	RA
Agency/Co.:	Olsson Associates
Date Performed:	5/12/2015
Analysis Time Period:	PM Peak Hour
Freeway/Dir. of Travel:	I-240 Westbound
Weaving Location:	Between On Ramp from Santa Fe Ave. to Off Ramp to Walker Ave.
Analysis Year:	2040 [PROPOSED DESIGN]
Description:	I-35_I-240 Interchange Traffic Operation

Inputs

Segment Type	Freeway	
Weaving configuration	One-Sided	
Number of lanes, N	4	ln
Weaving segment length, L_S	450	ft
Freeway free-flow speed, FFS	60	mi/h
Minimum segment speed, S_{MIN}	15	mi/h
Freeway maximum capacity, C_{IFL}	2300	pc/h/ln
Terrain type	Level	
Grade	0.00	%
Length	0.00	mi

Conversion to pc/h Under Base Conditions
Volume Components

	V_{FF}	V_{RF}	V_{FR}	V_{RR}	
Volume, V	4597	1715	787	0	veh/h
Peak hour factor, PHF	0.92	0.92	0.92	0.92	
Peak 15-min volume, V_{15}	1249	466	214	0	
Trucks and buses	6	2	2	2	%
Recreational vehicles	0	0	0	0	%
Trucks and buses PCE, ET	1.5	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.971	0.990	0.990	0.990	
Driver population adjustment, fP	1.00	1.00	1.00	1.00	
Flow rate, v	5147	1883	864	0	pc/h
Volume ratio, VR	0.348				

Configuration Characteristics

Number of maneuver lanes, NWL	2	ln
Interchange density, ID	2.00	int/mi
Minimum RF lane changes, LC_{RF}	0	lc/pc
Minimum FR lane changes, LC_{FR}	1	lc/pc
Minimum RR lane changes, LC_{RR}		lc/pc
Minimum weaving lane changes, LC_{MIN}		lc/h
Weaving lane changes, LC_W		lc/h
Non-weaving vehicle index, I_{NW}		
Non-weaving lane change, LC_{NW}		lc/h
Total lane changes, LC_{ALL}		lc/h

________________________Weaving and Non-Weaving Speeds__________________________

Weaving intensity factor, W		
Average weaving speed, S_W		mi/h
Average non-weaving speed, S_{NW}		mi/h

____________Weaving Segment Speed, Density, Level of Service and Capacity_____________

Weaving segment speed, S		mi/h
Weaving segment density, D		pc/mi/ln
Level of service, LOS	F	
Weaving segment v/c ratio	1.145	
Weaving segment flow rate, v	7894	pc/h
Weaving segment capacity, C_W	6696	veh/h

________________________Limitations on Weaving Segments___________________________

If limit reached, see note.

	Min	Max	Actual	Note
Weaving length (ft)	300	6104	450	a, b
		Max	Analyzed	
Density-based capacity, C_{IWL} (pc/h/ln)		2300	1867	c
		Max	Analyzed	
v/c ratio		1.00	1.145	d

Notes:

a. In weaving segments shorter than 300 ft, weaving vehicles are assumed to make only necessary lane changes.

b. Weaving segments longer than the calculated maximum length should be treated as isolated merge and diverge areas using the procedures of Chapter 13, "Freeway Merge and Diverge Segments."

c. The density-based capacity exceeds the capacity of a basic freeway segment, under equivalent ideal conditions.

d. Volumes exceed the weaving segment capacity. The level of service is F.

APPENDIX D

Solicitation Responses and Written Comments from the Public Meeting

MARY FALLIN
GOVERNOR

TODD LAMB
LIEUTENANT GOVERNOR

OKLAHOMA CONSERVATION COMMISSION

Our Land • Our Heritage • Our Future

TREY LAM
EXECUTIVE DIRECTOR

LISA KNAUF OWEN
ASSISTANT DIRECTOR

RECEIVED
JUN 10 2015
ENVIRONMENTAL PROGRAMS DIV.

June 8, 2015

Dawn Sullivan
Environmental Programs Division Engineer
Oklahoma Department of Transportation
200 NE 21st Street
Oklahoma City, OK 73105-3204

RE: Solicitation for input for the I-35/I-240 Interchange Reconstruction in Oklahoma County, Oklahoma

Dear Ms. Sullivan:

Thank you for the opportunity to review this proposed project area as described in your letter of May 20, 2015. The project area includes the I-35/I-240 interchange.

The project area has been reviewed using the Soil Survey of Oklahoma County. Hydric soils are not indicated on the soil survey map, indicating that these areas most likely do not contain wetland ecosystems and that your project should not significantly impact wetland resources in the area. If you believe this determination to be inaccurate, an on-site investigation may be needed. This investigation needs to be coordinated with the U.S. Army Corps of Engineers, Regulatory Branch, in Tulsa. Their address and phone number is:

U.S. Army Corps of Engineers
Mr. Andy Commer
Chief of Regulatory Branch
1645 South 101st East Avenue
Tulsa, OK 74128-4629
918/669-7400

Based on our wetlands determination criteria there should be no significant impact on wetland resources in the area described. If you have any further questions or concerns, please contact me at 405/522-6908.

Sincerely,

Brooks K Tramell

Brooks Tramell
Wetlands Program Coordinator
Water Quality Division

cc: Wetlands file

J. D. STRONG
EXECUTIVE DIRECTOR

MARY FALLIN
GOVERNOR

STATE OF OKLAHOMA
WATER RESOURCES BOARD
www.owrb.ok.gov

RECEIVED
JUN 10 2015
ENVIRONMENTAL
PROGRAMS DIV.

OKLAHOMA WATER RESOURCES BOARD
Planning & Management Division
Oklahoma City, OK

PUBLIC NOTICE REVIEW

___ We have no comments to offer. _X_ We offer the following comments.

WE RECOMMEND THAT YOU CONTACT THE LOCAL FLOODPLAIN ADMINISTRATOR FOR POSSIBLE PERMIT REQUIREMENTS FOR THIS PROJECT. THE OWRB WEB SITE, www.owrb.ok.gov, contains a directory of floodplain administrators and is located under forms/floodplain management/floodplain administrators, listed alphabetically by name of community. **If this development would fall on STATE OWNED or operated property, a floodplain development permit is required from OWRB.** The Chapter 55 Rules and permit application for this requirement can be found on the OWRB web site listed above. If this project is proposed in a non-participating community, try to ensure that this project is completed so that it is reasonably safe from flooding and so that it does not flood adjacent property if at all possible.

Reviewer: Cathy Poage, CFM **Date:** 06/04/2015

Project Name: Proposed I-35/I-240 Interchange Reconstruction, Located in Oklahoma City, OK

FIRM Name: ODOT, Dawn R Sullivan, PE
CC: Eric Wenger, FPA, OKC

* Oklahoma City participates in the NFIP and has a floodplain development permitting system. Please see paragraph above.

State of Oklahoma
OWRB
WATER RESOURCES BOARD
the water agency

3800 N. CLASSEN BOULEVARD • OKLAHOMA CITY, OKLAHOMA 73118
TELEPHONE (405) 530-8800 • FAX (405) 530-8900

David Saulsberry

From: Siv Sundaram
Sent: Tuesday, July 14, 2015 10:52 AM
To: David Saulsberry
Subject: FW: Input for the I-35/I240 Interchange Reconstruction in Oklahoma County, Ok

Siv

-----Original Message-----
From: Dawn Sullivan
Sent: Sunday, July 05, 2015 07:57 PM Central Standard Time
To: Siv Sundaram
Subject: FW: Input for the I-35/I240 Interchange Reconstruction in Oklahoma County, Ok

Sent with Good (www.good.com)

-----Original Message-----
From: Eve Atkinson
Sent: Friday, June 26, 2015 04:54 PM Central Standard Time
To: Dawn Sullivan
Subject: Input for the I-35/I240 Interchange Reconstruction in Oklahoma County, Ok

Ms. Sullivan,

There are no LWCF projects in this area according to our data base.
Thank you for the opportunity to review this project.

Eve L. Atkinson, Planner ll
Oklahoma Tourism and Recreation Department
120 North Robinson, Suite 600
Oklahoma City, OK 73102

405.230.8483.
405.230.8683 fax
Eve.Atkinson@travelok.com

ODOT

COMMENT FORM

HTTP://WWW.ODOT.ORG/PUBLICMEETINGS

PROPOSED I-35/I-240 IMPROVEMENTS

06/11/2015
Oklahoma County, OK

We would like to thank you for taking the time to attend this meeting and providing us with written comments. Putting your comments in writing is one of the most effective ways to have your concerns addressed.

PLEASE SUBMIT YOUR COMMENTS BY: 06/26/2015

Name: John W Meek	*Business / Organization:* CROSSROADS INDUSTRIAL PARK AMC/Hotels/Restaurant		
Address: 3719 N Portland Ave	*City:* OKC	*State:* OK	*Zip Code:* 73112
Phone Number: 405)630-8155 // 405)842-3599	*Email Address:* John@fcmiokc.com		

"I have the following comment(s) or question(s) about the proposed improvement project which includes the reconstruction of the existing I-35/I-240 Interchange to a multi-level interchange in Oklahoma County, OK."

The overall project is a good design. Hard work very appreciated. S. EASTERN (ON-OFF RAMPS). THE south side flow works well. The north side RAMPS are to shape or stop & go type; the turning radius for TRACTOR TRAILERS, pick-ups with trailers are way to tight.

The increased two way traffic conjestion at these northside Ramp on & off points at the service road junction will be a nightmare. TRAFFIC east bound from the MALL and traffic west bound from the eastern light intersection will both be in "holding pattern" at these Ramps points.

The public uses the closest (on & off) Ramps for the MALL, AMC Theather, college, Restaurants, Regal Theather which will become S. Eastern & NOT the SE 59th turn-around. FUTURE Plans for vacant land around the Mall circle & pad sites within the Mall parking will generate another 1000+ Autos during Noon, Evening and late night on top of current levels and MALL expansion. At least the west Bound on RAMP should be included within the Phase 1B construction Pattern upgrades

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:
OKLAHOMA DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL PROGRAMS DIVISION
200 N.E. 21ST ST.
Oklahoma City, OK 73105-3204

By Fax:
Fax: (405) 522-5193

By Email:
environment@odot.org

On the Web:
www.odot.org/publicmeetings

Please be aware that all information that you submit on this form is subject to public disclosure under the Oklahoma Public Information Act.

COMMENT FORM

HTTP://WWW.ODOT.ORG/PUBLICMEETINGS

PROPOSED I-35/I-240 IMPROVEMENTS

06/11/2015
Oklahoma County, OK

We would like to thank you for taking the time to attend this meeting and providing us with written comments. Putting your comments in writing is one of the most effective ways to have your concerns addressed.

PLEASE SUBMIT YOUR COMMENTS BY: 06/26/2015

Name: Elaine Lyons	*Business / Organization:* South Oklahoma City Chamber of Commerce		
Address: 701 Southwest 74 Street	*City:* Oklahoma City	*State:* OK	*Zip Code:* 73139
Phone Number: (405) 634-1436	*Email Address:* info@southokc.com		

"I have the following comment(s) or question(s) about the proposed improvement project which includes the reconstruction of the existing I-35/I-240 Interchange to a multi-level interchange in Oklahoma County, OK."

Please see the letter attached to the email for all comments about the proposed reconstruction of the I-35/I-240 interchange.

Comments on this project can be submitted in several ways, including but not limited to:

By US Mail or Dropoff:
OKLAHOMA DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL PROGRAMS DIVISION
200 N.E. 21ST ST.
Oklahoma City, OK 73105-3204

By Fax:
Fax: (405) 522-5193

By Email:
environment@odot.org

On the Web:
www.odot.org/publicmeetings

Please be aware that all information that you submit on this form is subject to public disclosure under the Oklahoma Public Information Act.

SOUTH OKC CHAMBER
Powering the Economy

June 25, 2015

Mr. Mike Patterson
Executive Director
Oklahoma Department of Transportation
200 Northeast 21 Street
Oklahoma City, OK 73105

Dear Mr. Patterson:

The South Oklahoma City Chamber of Commerce has the following concerns about the proposed changes to the I-35/I-240 interchange:

- For businesses and residents to the southeast of the I-35/I-240 interchange, emergency services in the area will be strained because of the permanent closures.
- We are highly disappointed in ODOT's level of communication with area businesses on how the changes to the intersection will affect them. The Chamber is concerned with the economic impact on local businesses, and so far, through communication and lack thereof from ODOT, it does not appear that ODOT has the same concerns as those in our business community and our residents.
- The current plans take the interchange to a D-level interchange. By the time these plans are implemented, the interchange will again be degraded, simply because the plans will be outdated and traffic will increase through the area. We need a plan that will take us up to a better interchange level.
- We strongly recommend that ODOT revisit the plans for the access from eastbound I-240 to southbound I-35. The current intersection is dangerous, but the revised plans do nothing to address the issue of the danger, congestion, and backup in the area.
- ODOT has not addressed concerns of the lack of funding for de-icing the planned fly-over bridges in the new plans for the

South Oklahoma City
Chamber of Commerce
701 Southwest 74 Street
Oklahoma City, OK 73139-4599
Office: 405.634.1436
Fax: 405.634.1462
southokc.com

- There will be an increase in traffic volume on Santa Fe, Walker and Eastern. We are concerned that this will be hard on the existing roads, along with backup on I-240.
- The proposed access points to Plaza Mayor at the Crossroads are acceptable.

It is of the opinion of the South Oklahoma City Chamber of Commerce that the interchange of I-35 and I-240 need changes and upgrades. However, the current plans of ODOT not only endanger the safety of those who use these roads, but they also endanger the health and wellbeing of businesses and residents in the area. We ask ODOT to reconsider their plans, keeping in mind the above points.

Sincerely,

Elaine Lyons

Paul Urquhart
Chairman of the Board

Elaine Lyons
President

PC:
Senator Kyle Loveless
Senator Kay Floyd
Senator Jack Fry
Senator Ralph Shortey
Senator Rob Standridge
Senator Anthony Sykes
Representative Mike Christian
Representative Jon Echols
Representative Chris Kannady
Representative Mark McBride
Representative Richard Morrissette
Representative Shane Stone
Representative Paul Wesselhoft
Oklahoma City Councilman David Greenwell
Oklahoma City Councilman Pete White

David Saulsberry

From: Daniel Nguyen
Sent: Thursday, June 04, 2015 10:36 AM
To: David Saulsberry
Subject: FW: I-35/I-240 interchange ODOT Meeting

Here's your first comment

From: Vince Howie [mailto:vince.howie@yahoo.com]
Sent: Wednesday, June 03, 2015 7:54 PM
To: Chip Carter; Brenda Jones Barwick; Mike Rapella; Randy Kamp; Troy Humphrey; Pat Downes; Tom Gray; Robert Ruiz; John Griffin; Daniel Nguyen; Mark Vondrak; Myles Davidson; Pat Lewis; Debi Martin; Kristi Cole; Cathy O'Connor; Anna Fresonke; Joseph Echelle; Kevin Calabrese; Jim Blanchard; J Russell; Chris Goldsby; Kim Cooper-Hart; Paul Odom Jr; Brian Maughan; Walt Morris; Brian Griffin; Brad Smicklas; Peter Evans; Calib Hill; Paul David Odom; Lealon Taylor; Steve Bloomberg; David Greenwell; Jim Parrack; Joi Marcum; Frank Eskridge; John Mesa; Paul B. Odom III; Melissa Brodt; David Rudkin; Randy Entz; Mike Voorhees; Darrell McCallister; Brandi Johnson; Terry Howell; Nathaniel Harding; Rick Lowry; Rick Johnson; Harry Wilson; Sean Chillers; John Meek; Jonathan Heusel; Pete White; Rick Moore; Micah Campbell; George Dunlap; bkrieger@arvest.com; Mike Milligan; Marci Puckett; elsocc@coxinet.net; vanessarottmayer@southokc.com; Frakes Bob; Vince Howie; Brian Taylor; Brantley Hendrex; Johnson Brandi; Jon Dodson; Mark McKee; Kim Adkins; Fries Silver - Silver; Craig Smith
Subject: I-35/I-240 interchange ODOT Meeting

All,

We received a letter from ODOT stating that a meeting has been set to discuss the proposed changes to the I-35/I-240 interchange. The meeting is set for 6 p.m., Thursday, June 11, in the sanctuary of Wilmont Place Baptist Church, 6440 South Santa Fe, 73139. It is important that we have everyone attend this meeting, as we need all the support we can get to let ODOT know that this plan will be detrimental to many businesses along I-240, specifically those along Shields Boulevard.

The full letter is attached for your review.

If you have any questions, please let me know. I can be reached at (405) 634-1436.

For South OKC Chamber Facebook:

We need your help, Chamber members. ODOT has set a meeting to discuss proposed changes to the I-35/I-240 interchange. This change will be detrimental to many people and businesses in South Oklahoma City, specifically those who use or do business along the Shields Boulevard exit on I-240, which will close with the planned changes. We need you to attend this meeting to help us let ODOT know that this plan will not work for the residents and business owners of South Oklahoma City. Join us at 6 p.m., Thursday, June 11, in the sanctuary of Ailment Place Baptist Church, 6440 South Santa Fe, 73139.

Everyone's voice counts! Please joins us and help us prevent the damage from happening.

For Live South OKC Facebook:

We need your help, South Oklahoma City residents. ODOT has set a meeting to discuss proposed changes to the I-35/I-240 interchange. This change will be detrimental to many people in South Oklahoma City, specifically those who use the Shields Boulevard exit on I-240, which will close with the planned changes. We need you to attend this meeting to help us let ODOT know that this plan will not work for the residents and business owners of South Oklahoma City. Join us at 6 p.m., Thursday, June 11, in the sanctuary of Ailment Place Baptist Church, 6440 South Santa Fe, 73139.

Everyone’s voice counts! Please joins us and help us prevent the damage from happening.

Elaine Lyons
SOKC Chamber President