Mobility and Road User Cost Technical Report

Final Environmental Impact Statement

US-95 Thorncreek Road to Moscow Project No. DHP-NH-4110(156);Key No 09294

ADDENDUM 1 US-95 THORNCREEK ROAD TO MOSCOW MOBILITY AND ROAD USER COST STUDY ON ALTERNATIVES CARRIED FORWARD DHP-NH-4110 (156) KEY # 09294 December 31, 2014

PREPARED BY DISTRICT 2 PROJECT DEVELOPMENT ENGINEER
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12/3//14 Date



DHP-NH-4110 (156); Key No. 9294; Thorncreek to Moscow

December 31, 2014

Introduction

Addendum 1 for the Mobility and Road User Cost Study for US-95 Thorncreek to Moscow documents the mobility and road user costs of Alternative Modified W4. The conclusions of the Mobility and Road User Cost Study dated March 12, 2014, did not change as a result of the alignment shift; however, some of the calculations changed slightly as a result of 0.04 mile length differential between Alternative W4 and Alternative Modified W4. Addendum 1 documents the revised calculations and shows that there is little significance in mobility and road user cost between Alternative W4 and Alternative Modified W4. In fact, many of the calculations for Alternative Modified W4 are not different than Alternative W4 due to the rounding of calculations.

Summary

The following are results for Alternative Modified W4 in Table 1:

Table 1: Total Travel Time in Hours (Mobility)*							
	Alternative	2017	2036	Total 20 Year			
	Modified W4	350,000	480,000	8,200,000			

* The total travel time refers to the total time required for all motorists making the entire trip from Thorncreek Road to Moscow. The total travel time does not include the travel time for motorists that have a destination between Thorncreek Road and Moscow.

The following are results for Alternative Modified W4 in Table 2:

Table 2: Total Cost of Travel Time, Cost of Time Related Vehicle Depreciation, and Vehicle								
	Operating Costs*							
Alternative 2017 2036 Total 20 Year Modified W4 \$14,300,000 \$19,500,000 \$336,000,000								

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

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Mobility

Capacity

All calculations on pages 8 through 11 and in the appendix of the Mobility and Road User Cost Study for Alternative Modified W4 are identical to Alternative W4 including the remaining US-95 Loop.

Travel Time

The following are results for Alternative Modified W4 in Table 10:

Alternative	Length (Miles)	Travel Time (Minutes)	Travel Time (Minutes:Seconds)
Modified W4	6.65	6.27	6:16

* A trip is defined as a course of travel between Thorncreek Road and Moscow without stopping.

The following are results for Alternative Modified W4 in Table 11:

Table 11: Total Travel Time (Hours)*							
Alternative	Total 20 Year						
Modified W4	350,000	480,000	8,200,000				

* The total travel time refers to the total time required for all motorists making the entire trip from Thorncreek Road to Moscow. The total travel time does not include the travel time for motorists that have a destination between Thorncreek Road and Moscow.

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Road User Costs

Cost of Travel Time

The following are results for Alternative Modified W4 in Table 9:

Alternative	2017	2036	Total 20 Year
Modified W4	\$5,200,000	\$7,200,000	\$123,000,000

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

Cost of Time Related Vehicle Depreciation

The following are results for Alternative Modified W4 in Table 10:

Table 10: Total Cost of Time Related Vehicle Depreciation*								
Alternative	2017	2036	Total 20 Year					
Modified W4 \$470,000 \$630,000 \$11,000,000								

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

Vehicle Operating Costs

The following are results for Alternative Modified W4 in Table 11:

Table 11: Total Vehicle Operating Cost*						
Alternative	2017	2036	Total 20 Year			
Modified W4	\$8,600,000	\$11,700,000	\$202,000,000			

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

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Total Cost of Travel Time, Cost of Time Related Vehicle Depreciation, and Vehicle Operating Costs*

The following are results for Alternative Modified W4 in Table 13:

Table 13: Total Cost of Travel Time, Cost of Time Related Vehicle Depreciation, and Vehicle									
Operating Costs*									
Alternative 2017 2036 Total 20 Year									
Modified W4	Modified W4 \$14,300,000 \$19,500,000 \$336,000,000								

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

Conclusion

The following are results for Alternative Modified W4 in Table 14:

Table 14: Total Travel Time in Hours (Mobility)*						
Alternative	2017	2036	Total 20 Year			
Modified W4	350,000	480,000	8,200,000			

* The total travel time refers to the total time required for all motorists making the entire trip from Thorncreek Road to Moscow. The total travel time does not include the travel time for motorists that have a destination between Thorncreek Road and Moscow.

The following are results for Alternative Modified W4 in Table 15:

Table 15: Total Cost of Travel Time, Cost of Time Related Vehicle Depreciation, and Vehicle									
Operating Costs*									
Alternative	Alternative 2017 2036 Total 20 Year								
Modified W4 \$14,300,000 \$19,500,000 \$336,000,000									

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

Length and Travel Time of Alternative Modified W4							
Length of Segment within Speed Zone Travel Time					e Per Trip		
Alternative	Length	35 MPH	45 MPH	57 MPH	65 MPH	Minutes	Min:Sec
Modified W4	6.65	0.03	0.27		6.35	6.27	6:16

Total Trave	el Time fo	r Alternati	ve Modifi	ied W4	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day
Passenger Cars on Personal Use	4757	1.67	7944	6.27	830.1
Passenger Cars on Business Use	320	1.24	397	6.27	41.5
Light Single Unit Trucks	382	1.05	401	6.27	41.9
Heavy Single Unit Trucks	67	1	67	6.27	7
Combination Trucks	395	1.12	442	6.27	46.2
		Travel Time (H	lours) Per C	alendar Day:	966.7
	Trav	el Time (Hou	urs) Per Cal	endar Year:	352845.5

2017

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

		2000			
Total Trav	el Time Fo	r Alternati	ve Modif	ied W4	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day
Passenger Cars on Personal Use	6329	1.67	10569	6.27	1104.5
Passenger Cars on Business Use	426	1.24	528	6.27	55.2
Light Single Unit Trucks	584	1.05	613	6.27	64.1
Heavy Single Unit Trucks	102	1	102	6.27	10.7
Combination Trucks	603	1.12	675	6.27	70.5
	•	Travel Time (I	Hours) Per C	alendar Day:	1305
	Trav	el Time (Hou	urs) Per Ca	lendar Year:	476325

2036

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

Total T	ravel Time Fo	r Alternati	ve Modif	ied W4	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time Per Trip (Minutes)	Total Hours
Passenger Cars on Personal Use	110187	1.67	184012	6.27	19229.3
Passenger Cars on Business Use	7409	1.24	9187	6.27	960
Light Single Unit Trucks	9523	1.05	9999	6.27	1044.9
Heavy Single Unit Trucks	1661	1	1661	6.27	173.6
Combination Trucks	9838	1.12	11019	6.27	1151.5
		Т	otal Travel 1	Time (Hours):	8234144.5

20 Year Period From 2017 Through 2036

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

Appendix B.1 Travel Time Cost Calculations

		201				
Trave	l Time Co	st for Alte	rnative	Modified \	N4	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Cost Per Day
Passenger Cars on Personal Use	4757	1.67	\$11.89	6.27	1.051	\$10,374.1
Passenger Cars on Business Use	320	1.24	\$29.75	6.27	1.051	\$1,296.5
Light Single Unit Trucks	382	1.05	\$23.06	6.27	1.051	\$1,015.8
Heavy Single Unit Trucks	67	1	\$29.65	6.27	1.051	\$218.1
Combination Trucks	395	1.12	\$29.65	6.27	1.051	\$1,440.6
					**Cost Per Day:	\$14,345.30
					**Cost Per Year:	\$5,236,035.4

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* Small Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All travel time costs were adjusted to July 1, 2013, using the Employment Cost Index.

Appendix B.1 Travel Time Cost Calculations

		2000				
Tra	avel Time Co	st f <mark>or Alte</mark>	rnative	Modified \	N4	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day
Passenger Cars on Personal Use	6329	1.67	\$11.89	6.27	1.051	\$13,802.3
Passenger Cars on Business Use	426	1.24	\$29.75	6.27	1.051	\$1,725.99
Light Single Unit Trucks	584	1.05	\$23.06	6.27	1.051	\$1,553.03
Heavy Single Unit Trucks	102	1	\$29.65	6.27	1.051	\$332.10
Combination Trucks	603	1.12	\$29.65	6.27	1.051	\$2,199.27
					**Cost Per Day:	\$19,612.78
					**Cost Per Year:	\$7,158,664.21
* Small Differences between the number of vehicles I	isted in the chart and	the actual traffic o	ount are due	to rounding.		

2036

** All travel time costs were adjusted to July 1, 2013, using the Employment Cost Index.

Appendix B.1 Travel Time Cost Calculations

Tra	vel Time C	ost for <u>Mo</u>	dified A	lternative '	W4	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs
Passenger Cars on Personal Use	110187	1.67	\$11.89	6.27	1.051	\$87,708,272.18
Passenger Cars on Business Use	7409	1.24	\$29.75	6.27	1.051	\$10,956,708.84
Light Single Unit Trucks	9523	1.05	\$23.06	6.27	1.051	\$9,243,453.43
Heavy Single Unit Trucks	1661	1	\$29.65	6.27	1.051	\$1,974,268.43
Combination Trucks	9838	1.12	\$29.65	6.27	1.051	\$13,096,685.83
					**Total Cost:	\$122,979,388.70

20 Year Period From 2017 Through 2036

* Small Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All travel time costs were adjusted to July 1, 2013, using the Employment Cost Index.

Appendix B.2 Time Related Vehicle Depreciation Cost Calculations

Time-Related Ve	hicle Depr	eciation fo	r Alterna	tive Modified	W4
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost
Small Autos	3721	6.27	\$1.05	1.019	\$416.04
Medium to Large Autos	1354	6.27	\$1.40	1.048	\$207.60
Four Tire SU	54	6.27	\$2.58	1.054	\$15.35
6 Tire Trucks	339	6.27	\$3.60	1.054	\$134.42
3 or 4 axles	65	6.27	\$9.06	1.069	\$65.79
5+ Axles	387	6.27	\$10.12	1.069	\$437.51
	-		:	Total Daily Cost: **Cost Per Year:	\$1,276.70 \$465,995.55

2017

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All costs were adjusted to July 1, 2013 using the appropriate Producer Price Index.

Appendix B.2 Time Related Vehicle Depreciation Cost Calculations

		2030			
Time-Related Ve	hicle Depr	eciation fo	<mark>r Altern</mark> a	tive Modified	W4
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost
Small Autos	5056	6.27	\$1.05	1.019	\$565.31
Medium to Large Autos	1840	6.27	\$1.40	1.048	\$282.11
Four Tire SU	73	6.27	\$2.58	1.054	\$20.74
6 Tire Trucks	461	6.27	\$3.60	1.054	\$182.79
3 or 4 axles	88	6.27	\$9.06	1.069	\$89.06
5+ Axles	526	6.27	\$10.12	1.069	\$594.65
				Total Daily Cost:	\$1,734.67
			3	**Cost Per Year:	\$633,156.02

2036

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All costs were adjusted to July 1, 2013 using the appropriate Producer Price Index.

Appendix B.2 Time Related Vehicle Depreciation Cost Calculations

Time-Related	d Vehicle De	epreciation	for Alter	native Modified	l W4
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Cost
Small Autos	87127	6.27	\$1.05	1.019	\$3,555,702.35
Medium to Large Autos	31704	6.27	\$1.40	1.048	\$1,774,240.68
Four Tire SU	1264	6.27	\$2.58	1.054	\$131,104.18
6 Tire Trucks	7938	6.27	\$3.60	1.054	\$1,148,850.09
3 or 4 axles	1522	6.27	\$9.06	1.069	\$562,250.32
5+ Axles	9062	6.27	\$10.12	1.069	\$3,739,309.65
	·			Total Cost:	\$10,911,457.27

20 Year Period From 2017 Through 2036

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All costs were adjusted to July 1, 2013 using the appropriate Producer Price Index.

Appendix B.3 Vehicle Operating Cost Calculations

		2017		
Vehicle Opera	ting Costs	on Alterr	ative Modifie	d W4
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost
Small Autos	3721	6.65	\$0.43	\$10,760.97
Medium to Large Autos	1354	6.65	\$0.56	\$5,084.51
Four Tire SU	54	6.65	\$0.94	\$337.05
6 Tire Trucks	339	6.65	\$1.23	\$2,768.63
3 or 4 axles	65	6.65	\$1.45	\$627.14
5+ Axles	387	6.65	\$1.59	\$4,094.43
		*	Total Daily Cost: *Cost Per Year:	\$23,672.72 \$8,640,544.09

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* Small differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All costs were adjusted to July 1, 2013 using the appropriate PPI and CPI Indexes.

Appendix B.3 Vehicle Operating Cost Calculations

		2030					
Vehicle Operating Costs on Alternative Modified W4							
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost			
Small Autos	5056	6.65	\$0.43	\$14,621.73			
Medium to Large Autos	1840	6.65	\$0.56	\$6,909.53			
Four Tire SU	73	6.65	\$0.94	\$455.64			
6 Tire Trucks	461	6.65	\$1.23	\$3,765.01			
3 or 4 axles	88	6.65	\$1.45	\$849.05			
5+ Axles	526	6.65	\$1.59	\$5,565.04			
	Total Daily Cost:						
**Cost Per Year: \$11,740,586.84							

203	6
203	U

* Small differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All costs were adjusted to July 1, 2013 using the appropriate PPI and CPI Indexes.

Appendix B.3 Vehicle Operating Cost Calculations

Vehicle Operating Costs on Alternative Modified W4							
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost			
Small Autos	87127	6.65	\$0.43	\$91,968,106.70			
Medium to Large Autos	31704	6.65	\$0.56	\$43,454,778.37			
Four Tire SU	1264	6.65	\$0.94	\$2,879,620.85			
6 Tire Trucks	7938	6.65	\$1.23	\$23,662,940.63			
3 or 4 axles	1522	6.65	\$1.45	\$5,359,928.39			
5+ Axles	9062	6.65	\$1.59	\$34,994,479.72			
			Total Cost:	\$202,319,854.66			

20 Year Period From 2017 Through 2036

* Small differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All costs were adjusted to July 1, 2013 using the appropriate PPI and CPI Indexes.

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US-95 THORNCREEK ROAD TO MOSCOW MOBILITY AND ROAD USER COST STUDY ON ALTERNATIVES CARRIED FORWARD

DHP-NH-4110 (156) KEY # 09294 March 12, 2014

PREPARED BY DISTRICT 2 PROJECT DEVELOPMENT ENGINEER Outly J. Armsen, P.E. 03/12/14

Date



Level of Service Calculations Prepared By District 2 Traffic Engineer, Jared Hopkins, P.E.



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Introduction

This Mobility and Road User Cost Study is a supporting document of the Final Environmental Impact Statement for US-95, Thorncreek to Moscow. It was written to address public comments received during the public comment period and to update Level of Service Calculations using an updated Highway Capacity Manual (HCM 2010). This study addresses the significance of travel time and travel length by calculating the travel time and road user cost of the alternatives for motorists traveling the entire distance between Thorncreek Road and Moscow entirely on the proposed alternatives.

Cost of travel time, cost of time related vehicle depreciation, and vehicle operating costs are components of road user cost that are calculated and presented in this report. Crash costs are also a component of road user cost and are presented in the AASHTO Highway Safety Manual Analysis on Alternatives Carried Forward. Calculations in this report are based on motorists traveling the entire trip between Thorncreek Road and Moscow. The crash costs presented in the safety analysis are for all traffic on Proposed US-95 and the portion of the existing US-95 that will remain if an action alternative is selected known as the "Remaining US-95 Loop".

The Idaho Transportation Department's (ITD) mission statement is, "Your Safety. Your Mobility. Your Economic Opportunity." Safety, mobility, and economics are considered by the ITD in all decisions relating to transportation including the selection of an Alternative on US-95 between Thorncreek Road and Moscow. Safety for Thorncreek to Moscow was addressed in a separate document titled the AASHTO Highway Safety Manual Analysis on Alternatives Carried Forward, while mobility and economics, in terms of cost of travel time, cost of time related vehicle depreciation, and vehicle operating costs, are addressed in this report.

One goal of the ITD's 2011 Strategic Plan is to, "Provide a mobility-focused transportation system that drives economic opportunity." Transportation networks that allow motorists to travel from one location to another quickly and efficiently will reduce road user costs for users of the highway and will contribute to economic growth and opportunity. Road users and the public depend on a network that provides safe, fast, and efficient service. The ITD's Strategic Plan states that Idaho's gross domestic product and the state's transportation system are linked and throughout Idaho's history, improvements to the mobility of the state's transportation network have preceded economic growth.

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Summary

Table 1 shows the projected travel times for motorists making the entire trip from Thorncreek Road to Moscow in 2017, 2036, and the total 20 year period. 2017 was selected because it is the first year after the project's scheduled completion. The 20 year prediction period was used because it is the normal practice to design a project using traffic volumes projected 20 years after completion of the project.

Table 1: Total Travel Time in Hours (Mobility)*						
Alternative	2017	2036	Total 20 Year			
No Action	380,000	520,000	9,000,000			
E2	310,000	420,000	7,200,000			
C3	340,000	460,000	8,000,000			
W4	360,000	480,000	8,300,000			

* The total travel time refers to the total time required for all motorists making the entire trip from Thorncreek Road to Moscow. The total travel time does not include the travel time for motorists that have a destination between Thorncreek Road and Moscow.

Table 2, shown below, displays the total cost of travel time, cost of time related vehicle depreciation, and vehicle operating costs for the alternatives in 2017, 2036, and the total 20 year period.

Table 2: Total Cost of Travel Time, Cost of Time Related Vehicle Depreciation, and Vehicle Operating Costs*						
Alternative	2017	2036	Total 20 Year			
No Action	\$14,600,000	\$19,700,000	\$339,000,000			
E2	\$12,600,000	\$17,200,000	\$295,000,000			
C3	\$13,300,000	\$18,000,000	\$311,000,000			
W4	\$14,500,000	\$19,700,000	\$338,000,000			

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

All action alternatives have less travel time than the No Action Alternative and Alternative E2 has the least travel time of all the alternatives. Alternative E2 also has the least total cost of travel time, cost of time related vehicle depreciation, and vehicle operating costs. In fact,

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Alternative E2 has over forty million dollars of savings over Alternatives W4 and the No Action Alternative and sixteen million dollars of savings over Alternative C3 in terms of these costs over the 20 year study period. As traffic volumes grow at an exponential rate in the future, total travel times and road user costs will continue to grow and the differences in total travel time and road user costs between the alternatives will become greater.

Mobility

Mobility refers to the efficiency and speed that motorists travel from one location to another and is defined by the AASHTO Policy on Geometric Design of Highways and Streets as "trip travel time." Mobility is considered by the ITD for every highway construction project, including US-95 Thorncreek to Moscow. Mobility reduces road user costs and will improve economic opportunity according to the 2011 ITD Strategic Plan. Mobility is reported in terms of travel times shown below in the section titled *Travel Times*.

Capacity

Capacity is an important component of mobility. It is defined by the HCM 2010 as "the maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions." Stated simply, capacity refers to the ability of a road to accommodate traffic volume.

Capacity is an important project consideration and, consequently, the Purpose and Need Statement references capacity. The purpose and need statement is the following:

- Purpose The purpose of this project is to improve public safety and increase highway capacity on US 95 between Thorncreek Road and Moscow.
- Need Within the project limits, US95 does not meet current American Association of State Highway and Transportation Officials (AASHTO) Standards (widths, clear-zones, grades, and sight distance). Additional concerns include high accident locations and insufficient highway capacity.

Level-of-Service (LOS) was calculated for the alternatives using the HCM 2010. The HCM 2010 defines LOS as "a quantitative stratification of a performance measure or measures that

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represent quality of service." The Level-of-Service is reported as six service measures using letters A through F. LOS for a two-way two-lane highway is measured by average travel speed and percent of time following. According to the HCM 2010 the LOS criteria for a Class I two-lane two-way highway such as the No Action Alternative on US-95 between Thorncreek Road and Moscow is the following:

- LOS A: Motorists experience high operating speeds and little difficulty in passing. Platoons of three or more motorists are rare.
- LOS B: Passing demand and passing capacity are balanced; however, the degree of platooning becomes noticeable and some speed reductions are present.
- LOS C: Most vehicles are traveling in platoons and speeds are noticeably slower.
- LOS D: Platooning increases significantly and passing demand is high.
- LOS E: The peak hour traffic demand is reaching its maximum capacity. Passing is nearly impossible.
- LOS F: The demand flow has exceeded the capacity of the segment. Operating conditions are unstable and heavy congestion exists.

LOS for the action alternatives is calculated differently than the No Action Alternative because the action alternatives are multilane highways and the No Action Alternative is a two-lane twoway highway. Two-lane two-way highways have more delay because passing opportunities are rarer. LOS for multilane highways is measured by highway density in passenger cars per mile per lane in terms of a category between A and F. LOS on a multi-lane highway is described in the HCM 2010 as the following:

- LOS A represents free flow operations: Free flow speed prevails on the highway and vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream. The effects of incidents or point breakdowns are easily absorbed.
- LOS B represents reasonably free-flow operations and the free flow speed on the highway is maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high. The effects of minor incidents and point breakdowns are still easily absorbed.
- LOS C provides for flow with speeds near the free flow speed of the highway. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more care and vigilance on the part of the driver. Minor incidents may still be absorbed,

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but the local deterioration in service quality will be significant. Queues may be expected to form behind any significant blockages.

- LOS D is the level at which speeds begin to decline with increasing flows with density
 increasing more quickly. Freedom to maneuver within the traffic stream is seriously
 limited and drivers experience reduced physical and psychological comfort levels. Even
 minor incidents can be expected to create queuing, because the traffic stream has little
 space to absorb disruptions.
- LOS E describes operation at capacity. Operations on the highway at this level are highly
 volatile because there are virtually no usable gaps within the traffic stream, leaving little
 room to maneuver within the traffic stream. Any disruption to the traffic stream, such
 as vehicles entering from an approach or a vehicle changing lanes, can establish a
 disruption wave that propagates throughout the upstream traffic flow. At capacity, the
 traffic stream has no ability to dissipate even the most minor disruption, and any
 incident can be expected to produce a serious breakdown and substantial queuing. The
 physical and psychological comfort afforded to drivers is poor.
- LOS F describes breakdown, or unstable flow. The existing demand of the highway exceeds the capacity of the highway.

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Capacity of Alternatives

ITD completed a LOS and capacity analysis for the No Action Alternative for the different segments and included it in Appendix A.1 and the results for the No Action Alternative and capacity analysis in 2017 and 2037 are the following:

Alternative	Average Travel Speed (mph)	Percent Time Spent Following	LOS	Directional Traffic Flow Volume (pcph*)	Total Directional Capacity (pcph*)	Volume to Capacity Ratio
No Action Rural	57.2	64.3	С	450	1400	.32
No Action Suburban	39.0	69.2	E	550	1500	.37

* Passenger Cars Per Hour Rounded to Nearest 50

Tab	le 4: LOS, \	/olume, and C	apacity For	No Action Alte	rnative in 2037	
Alternative	Average Travel Speed (mph)	Percent Time Spent Following	LOS	Directional Traffic Flow Volume (pcph*)	Total Directional Capacity (pcph*)	Volume to Capacity Ratio
No Action Rural	55.6	71.0	D	650	1500	0.43
No Action Suburban	37.0	76.9	E	750	1550	0.48

* Passenger Cars Per Hour Rounded to Nearest 50

The No Action Alternative does not satisfy the Purpose and Need Statement of the Thorncreek to Moscow Project because US-95 is not expanded to accommodate more capacity. Capacity increases slightly from 2017 to 2037 only because the grade factor and heavy vehicle factors in the capacity equations increase with traffic volume. Traffic volumes increase with time

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reducing the LOS and increasing the volume to capacity ratio. The traffic flow volumes increase much faster than the capacity of the No Action Alternative.

The LOS calculations show that the rural portion of US-95 currently operates at LOS C and the Level of Service is expected to deteriorate to LOS D by 2037. The suburban segment immediately south of Moscow operates at LOS E in 2017 and 2037. The Idaho Transportation Department's Design Manual and the AASHTO Green Book both recommend a LOS B for rural rolling terrain on a rural arterial such as US-95 between Thorncreek Road and Moscow and a LOS C for the suburban highway immediately south of Moscow.

Table 5, shown below, displays the combined LOS and volume of the No Action Alternative in 2017 and 2037 using a weighted average to merge the results of calculations within the rural and suburban portions the No Action Alternative. Because the rural portion of US-95 is much longer than the suburban portion, the results of the combined calculations are similar to the results of the rural calculations.

		d LOS and Volume of Alt 37 Using a Weighted Av		es
Alternative	Average Travel Speed (mph)	Percent Time Spent Following	LOS	Directional Traffic Flow Volume (pcph*)
No Action 2017	55.8	64.7	с	450
No Action 2037	54.2	71.4	D	650

* Passenger Cars Per Hour Rounded to Nearest 50

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The multilane LOS and capacity analysis for the action alternatives is shown in Appendix A.1. The results of the LOS and capacity analysis for the action alternatives are shown in Table 6 and 7 below:

Table 6: LOS, Volume, and Capacity For Action Alternatives in 2017							
Alternative	Density (pcpmpl*)	LOS	Directional Traffic Flow Volume (pcph**)	Directional Capacity (pcph**)	Volume to Capacity Ratio		
Alternative E2 - Rural	3.6	А	450	4700	0.10		
Alternative E2 - Suburban	6.1	А	600	4000	0.15		
Alternative C3 – Rural	3.6	A	450	4700	0.10		
Alternative C3 - Suburban	6.1	A	600	4000	0.15		
Alternative W4 - Rural	3.6	А	450	4700	0.10		
Alternative W4 - Suburban	6.1	А	600	4000	0.15		

* Passenger Cars Per Mile Per Lane

** Passenger Cars Per Hour Rounded to Nearest 50

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Table	Table 7: LOS, Volume, and Capacity For Action Alternatives in 2037				
Alternative	Density (pcpmpl*)	LOS	Directional Traffic Flow Volume (pcph**)	Directional Capacity (pcph**)	Volume to Capacity Ratio
Alternative E2 - Rural	5.0	A	650	4700	0.14
Alternative E2 - Suburban	8.3	A	850	4000	0.21
Alternative C3 – Rural	5.0	A	650	4700	0.14
Alternative C3 - Suburban	8.3	A	850	4000	0.21
Alternative W4 - Rural	5.0	A	650	4700	0.14
Alternative W4 - Suburban	8.3	A	850	4000	0.21

* Passenger Cars Per Mile Per Lane ** Passenger Cars Per Hour Rounded to Nearest 50

The action alternatives all satisfy the capacity component of the purpose and need statement and have about 3 times more capacity than the No Action Alternative. Capacities for the rural divided sections are identical and capacities for the suburban 5-Lane sections are identical. The 5-lane suburban section of each action alternative has less capacity than the rural divided 4lane section of each alternative.

All action alternatives have a LOS of A in 2017 through 2037 for both the rural divided US-95 highway segment and the suburban 5-Lane US-95 highway segment. LOS A represents a free flow condition where motorists are almost completely unimpeded in their ability to maneuver within the traffic stream. The directional density of traffic for the three action alternatives is identical within the rural divided sections and the directional density of traffic is identical within the suburban 5-Lane sections of all three action alternatives. The 5-lane suburban section of each action alternative has greater directional density than the rural divided 4-lane section. The 5-lane suburban section of Alternative C3 is longer and has a greater overall percentage of

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length than Alternatives E2 and W4; therefore, the directional density is the greatest for Alternative C3 and the least for Alternatives E2 and W4.

Tables 8 and 9, shown below, display the combined suburban and rural density, level-of-service and directional traffic flow volume using weighted averages based on the length of both the suburban and rural highways.

Table 8: Combined LOS, Density, and Volume of Alternatives in 2017 Using a Weighted Average			
Alternative	Density (pcpmpl*)	LOS	Directional Traffic Flow Volume (pcph**)
Alternative E2	3.7	A	450
Alternative C3	5.0	A	550
Alternative W4	3.7	A	450

* Passenger Cars Per Mile Per Lane

** Passenger Cars Per Hour Rounded to Nearest 50

Table 9: Combined LOS, Density, and Volume of Alternatives in 2037 Using a Weighted Average				
Alternative	Density (pcpmpl*)	LOS	Directional	
Alternative E2	5.1	A	650	
Alternative C3	6.9	A	750	
Alternative W4	5.1	A	650	

* Passenger Cars Per Mile Per Lane ** Passenger Cars Per Hour Rounded to Nearest 50

Alternatives E2 and W4 have lighter density and traffic flow volume than Alternative C3 because their suburban sections are much shorter than the suburban section of Alternative C3. In 2037, all Alternatives continue to operate at a free-flow condition, or LOS A; therefore, the lighter density and traffic flow volumes would not be noticeable to the typical motorist. However, as the traffic volumes grow in the future, Alternative C3 would have a reduction in LOS before Alternatives E2 and W4 and reach its capacity before Alternatives E2 and W4.

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Capacity of the Remaining US-95 Loop for Alternatives

If any action alternative is selected it will retain a portion of the Existing US-95 Alignment referred to as the "Remaining US-95 Loop". The traffic volume on the Remaining US-95 Loop will be greatly reduced and level of service will improve greatly because the majority of the traffic will use the new US-95 Alignment. The level of service calculations shows that the rural US-95 portion of the Remaining US-95 Loop for Alternatives E2, C3, and W4 will operate at a Level of Service A not only in 2017, but also in 2037. If the speed limit of the suburban portion of the Remaining US-95 Loop in Alternatives E2 and W4 is increased to 55 mph or greater, it will operate at a level of service of B in 2017 and 2037. With a posted speed limit of 45 mph in the suburban portion of the Remaining US-95 Loop, the level of service will be lowered in both Alternatives E2 and W4 to either C or D in 2017 and 2037. Alternative C3 does not have a suburban portion of the Remaining US-95 Loop.

Travel Time

The differences in length and travel time of the alternatives per trip between the alternatives are shown in Table 10 below:

Table 10: Length and Travel Time Per Trip*				
Alternative	Length (Miles)	Travel Time (Minutes)	Travel Time (Minutes:Seconds)	
No Action	6.34	6.82	6:49	
E2	5.85	5.51	5:31	
C3	5.94	6.08	6:05	
W4	6.69	6.31	6:19	

* A trip is defined as a course of travel between Thorncreek Road and Moscow without stopping.

Using the differences in length and travel time shown above and the projected traffic volumes shown in Appendix C.1, the total travel times for all motorists traveling the entire distance between Thorncreek Road and Moscow on the alternatives for 2017, 2036, and the 20 year period between 2017 and 2036 were calculated. Calculations of the travel times and assumptions used to calculate the travel times are shown in Appendix A.2 and results of the calculations are shown in Table 11 below.

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Table 11: Total Travel Time (Hours)*			
Alternative	2017	2036	Total 20 Year
No Action	380,000	520,000	9,000,000
E2	310,000	420,000	7,200,000
C3	340,000	460,000	8,000,000
W4	360,000	480,000	8,300,000

* The total travel time refers to the total time required for all motorists making the entire trip from Thorncreek Road to Moscow. The total travel time does not include the travel time for motorists that have a destination between Thorncreek Road and Moscow.

Of the proposed alternatives, Alternative E2 has the least travel time and the No Action Alternative has the most travel time of all the alternatives.

One of the two primary reasons the report was written is to address public comments regarding the length and travel time significance between the alternatives. The comments from the public hearing that discussed the significance of length and travel time between the alternatives were focused on motorists making the entire trip from Thorncreek Road to Moscow; therefore, this report focuses on addressing public comments by addressing the significance of length and travel time for motorists making the entire trip from Thorncreek Road to Moscow.

Travel times for motorists who are traveling to a destination within project limits either on the proposed alternative or on the portion of existing US-95 that will remain as a loop for commuter traffic (known as the Remaining US-95 Loop) are not captured in the total travel time listed in Tables 1, 11, and 14. The reasons local travel times are excluded from the total travel time calculations are the following:

 Total travel time for motorists making the entire trip from Thorncreek Road to Moscow is easily calculated with only one set of calculations and the travel time calculations use assumptions that are easy to support. Adding travel times for motorists that have a destination within project limits would require numerous calculations that rely on many assumptions. Calculating travel times for all motorists that have a destination within project limits would require two separate calculations (one for NB travel and one for SB

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travel) for every approach or county road within project limits. Every approach or county road would require detailed information regarding the volume and classification of daily traffic that uses the approach or county road. At this time approximately 50 commercial, industrial, and residential approaches and six county roads exist at a destination within project limits. Volume of traffic data and classification of traffic data would be required in both the northbound and southbound direction of travel from the approaches or county roads for a total of over 100 separate sets of calculations. In addition, the actual approach locations and the number of total approaches on Proposed US-95 of any of the action alternatives will change based on Right-of-Way negotiations after the environmental document is approved adding more uncertainty to the calculation of travel times.

Excluding local traffic that has a destination within project limits will not significantly skew the travel time results towards an alternative. Traffic traveling to a destination within project limits is light compared to the mainline traffic volumes. The majority of traffic that makes a trip on US-95 between Thorncreek Road and Moscow are commuters who travel the entire trip from Thorncreek Road to Moscow without stopping. In 2017, the AADT between Thorncreek Road and Moscow without stopping is estimated to be 5,920 vehicles per day. The traffic volume making the relatively short trip from Moscow to a destination within 1.4 miles south of Moscow is estimated to be 1,500 vehicles per day. On alternatives E2 and W4, the 1500 vehicles per day turn onto the northern Remaining US-95 loop to reach their destination. Delay time is expected with this move because vehicles decelerate and stop prior to the intersection, wait for a gap in traffic at the intersection, and accelerate to the speed limit on the Remaining US-95 loop after traveling through the intersection. On Alternative C3 and the No Action Alternative, the 1500 vehicles would access their business from US-95 and no delay time would be associated with turning onto the Remaining US-95 Loop. Calculations in Appendix A.3 show that between 12 and 28 seconds of delay time are associated with turning onto and off of the northern Remaining US-95 loop depending upon the turning move and the length of gaps associated with traffic volume. Alternative C3 and the No Action Alternative have a slight advantage in travel time length over alternatives E2 and W4 as a result of the intersection; however, the slight advantage of travel time for local traffic is small compared with the travel time advantage of all through traffic making the trip from Thorncreek Road to Moscow. To illustrate this point, the difference in total travel time between alternatives C3 and the No Action Alternative (local traffic uses US-

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95) and Alternatives E2 and W4 (local traffic turns on Remaining US-95 Loop) for 2017 is only about 2600 hours as shown in Appendix A.3. Since Table 11 uses only two significant figures and reports travel time to the nearest 10,000, the calculated delay difference is not significant enough to be captured in the results. The traffic volume making a trip with a destination between 1.4 miles south of Moscow and Thorncreek Road is nearly the same for all alternatives and only estimated to be about 200 to 300.

Road User Costs

A mobility-focused transportation system that efficiently moves motorists from one location to another will have positive economic implications. Highways that have shorter travel times and less length to travel from one location to another will have less road user costs. Road user costs are defined as costs borne by motorists and the community at large as a result of motorized travel. The components of road user cost for this study include travel time cost, time-related vehicle depreciation, and vehicle operating costs. The methods used to calculate these costs are found in an FHWA Report published in December 2011 titled, "Work Zone User Costs: Concepts and Applications." The report was primarily written to quantify additional road user costs as a result of highway construction; however, the concepts and applications can be applied to the estimation of road user costs for the different alternatives on this project.

In general, the manual is intended to address the road user costs associated with detours around a construction zone, or the road user costs of motorists traveling through a construction zone from a beginning point to an ending point. Delay costs for motorists making a destination within a work zone are typically not captured in procedures outlined in this manual.

Travel time costs, time-related vehicle depreciation costs, and vehicle operating costs reported in this study do not include costs for the motorists that are traveling to a destination within project limits. They include the costs of the motorists who are traveling the trip from Thorncreek Road to Moscow without stopping at a destination within the project limits. The costs are calculated using the travel times for the different alternatives calculated in this report.

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Cost of Travel Time

The total travel time cost is calculated by applying a monetary value to the travel time that was presented in Tables 1, 11, and 14: Total Travel Time. Time spent traveling in a vehicle is a resource with an economic value and time spent traveling in a vehicle would have otherwise been used productively, whether it was for work, recreation, or non-work activities.

Calculations for the cost of travel time and assumptions used to calculate the travel time costs are shown in Appendix B.1 and results of the calculations are shown in Table 9 below. The cost of travel time in Appendix B.1 is for the motorists who make the entire trip from Thorncreek Road to Moscow and does not include the cost of travel time for motorists that have a destination within project limits. Table 9 reports the total travel time costs.

Table 9: Total Travel Time Costs*				
Alternative	2017	2036	Total 20 Year	
No Action	\$5,700,000	\$7,800,000	\$134,000,000	
E2	\$4,600,000	\$6,300,000	\$108,000,000	
C3	\$5,100,000	\$6,900,000	\$119,000,000	
W4	\$5,300,000	\$7,200,000	\$124,000,000	

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

Of the proposed alternatives, Alternative E2 has the least travel time cost and the No Action Alternative has the most travel time cost.

Cost of Time Related Vehicle Depreciation

Vehicles depreciate as they age and time related vehicle depreciation costs are estimated from the annual ownership costs of vehicles. Time related vehicle depreciation applies a monetary value to travel times presented in Tables 1, 11, and 14 for different vehicle types. Mileagerelated depreciation costs are not included within the time related vehicle depreciation costs. Mileage related depreciation costs are included within the next section titled Vehicle Operating Costs.

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Calculations for time related vehicle depreciation and assumptions used to calculate the time related vehicle depreciation are shown in Appendix B.2 and results of the calculations are shown in Table 10 below. The cost of time related vehicle depreciation shown in Appendix B.2 is for the motorists who make the entire trip from Thorncreek Road to Moscow and does not include the cost of time related vehicle depreciation for motorists who have a destination within project limits. Table 10 reports the total time related vehicle depreciation cost.

Alternative	2017	2036	Total 20 Year
No Action	\$510,000	\$690,000	\$12,000,000
E2	\$410,000	\$560,000	\$10,000,000
C3	\$450,000	\$610,000	\$11,000,000
W4	\$470,000	\$640,000	\$11,000,000

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

Of the proposed alternatives, Alternative E2 has the least time related vehicle depreciation cost and the No Action Alternative has the most time related vehicle depreciation cost of all the alternatives.

Vehicle Operating Costs

Vehicle Operating Costs are mileage dependent costs incurred by road users and are used to analyze the significance of length difference between the alternatives. Vehicle operating costs are calculated by applying a monetary value for a specific vehicle type to the length of the alternative shown in Table 10. Consumption costs for the following components were included in this calculation: fuel, engine oil, tire wear, repair and maintenance, and mileage related depreciation.

Calculations for the vehicle operating costs and assumptions used to calculate the vehicle operating costs are shown in Appendix B.3 and results of the calculations are shown in Table 11 below. The vehicle operating costs are for the motorists who make the entire trip from

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Thorncreek Road to Moscow and do not include the vehicle operating costs for motorists who have a destination within project limits. Table 11 reports the total vehicle operating cost.

Table 11: Total Vehicle Operating Cost*						
Alternative 2017 2036 Total 20 Year						
No Action \$8,200,000 \$11,200,000 \$193,00						
E2 \$7,600,000 \$10,300,000 \$178,000,000						
C3	\$7,700,000	\$10,500,000	\$181,000,000			
W4	\$8,700,000	\$11,800,000	\$204,000,000			

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

Of the proposed alternatives, Alternative E2 has the least vehicle operating cost and Alternative W4 has the most vehicle operating cost of all the alternatives.

Adjustment for Inflation

All costs have been adjusted for inflation using the appropriate index to July 1, 2013. Appendix C.3 includes all appropriate Consumer Price Indices, Producer Price Indices, and Employment Price Indices for reference.

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Total Cost of Travel Time, Cost of Time Related Vehicle Depreciation, and Vehicle Operating Costs*

The total road user cost reported in this study is the total travel time cost, time-related vehicle depreciation cost, and vehicle operating cost. The total road user cost is shown in Table 13 below.

Table 13: Total Cost of Travel Time, Cost of Time Related Vehicle Depreciation, and Vehicle Operating Costs*							
Alternative 2017 2036 Total 20 Year							
No Action	\$14,600,000	\$19,700,000	\$339,000,000				
E2	\$12,600,000	\$17,200,000	\$295,000,000				
C3	\$13,300,000	\$18,000,000	\$311,000,000				
W4	\$14,500,000	\$19,700,000	\$338,000,000				

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

Alternative E2 has the lowest road user cost of all alternatives.

Conclusion

This Mobility and Road User Cost Study addresses comments regarding the significance of the difference in length and travel time between the alternatives by calculating travel time and road user cost for motorists traveling the entire distance between Thorncreek Road and Moscow entirely on the proposed alternatives. The distance, travel time, and road user costs between alternatives appear to be small to some individual motorists; however, the combined total of distances, travel times, and road user costs for all vehicle trips over time are much larger and are considered in this report. The significance of the difference in length and travel time between alternatives is reflected in the total road user cost for the alternatives. Tables 14 and 15, shown below, show the total travel time and the total road user costs for the alternatives.

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Table 14: Total Travel Time in Hours (Mobility)*					
Alternative	2017	2036	Total 20 Year		
No Action	380,000	520,000	9,000,000		
E2 310,000 420,000 7,200,00					
C3	340,000	460,000	8,000,000		
W4	360,000	480,000	8,300,000		

* The total travel time refers to the total time required for all motorists making the entire trip from Thorncreek Road to Moscow. The total travel time does not include the travel time for motorists that have a destination between Thorncreek Road and Moscow.

able 15: Total Cost of Travel Time, Cost of Time Related Vehicle Depreciation, and Vehicle						
Operating Costs*						
Alternative	2017	2036	Total 20 Year			
No Action	\$14,600,000	\$19,700,000	\$339,000,000			
E2	\$12,600,000	\$17,200,000	\$295,000,000			
C3	\$13,300,000	\$18,000,000	\$311,000,000			
W4	\$14,500,000	\$19,700,000	\$338,000,000			

* The costs are for all motorists making the entire trip from Thorncreek Road to Moscow. The costs are not for motorists that have a destination between Thorncreek Road and Moscow.

All action alternatives have less travel time than the No Action Alternative and Alternative E2 has the least travel time of all the alternatives. Alternative E2 also has the least total cost of travel time, cost of time related vehicle depreciation, and vehicle operating costs. In fact, Alternative E2 has over forty million dollars of savings over Alternatives W4 and the No Action Alternative and sixteen million dollars of savings over Alternative C3 in terms these costs over the 20 year study period. As traffic volumes grow at an exponential rate in the future, total travel times and road user costs will continue to grow and the differences in total travel time and road user costs between the alternatives will become greater.

Both mobility and road user costs are important components of ITD's Strategic Plan and mission statement and are considered on all highway construction projects. From a mobility and road user cost perspective, Alternative E2 is the preferred alternative. Selecting Alternative E2 will result in the shortest total travel time and lowest road user cost for motorists.

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APPENDIX A - MOBILITY

Appendix A.1

Level of Service Calculations and Summary

Level-Of-Service

Summary

Level of Service R	Level of Service Results for No Action Alternative in 2017							
Alternative	Beginning MP	Ending MP	Average Travel Speed (mph)	Percent Time Spent Following (%)	Level of Service			
2017 No Action NB1	337.668	342.93	55.8	71.5	D			
2017 No Action NB2	342.93	343.525	55.8	65.9	D			
2017 No Action NB3	343.525	344.004	39.0	72.2	E			
2017 No Action SB1	337.668	342.28	58.4	58.0	С			
2017 No Action SB2	342.28	342.93	62.3	41.0	В			
2017 No Action SB3	342.93	343.525	55.3	73.8	D			
2017 No Action SB4	343.525	344.004	39.0	66.2	E			
2017 No Action Rural Total	337.668	343.525	57.2	64.3	С			
2017 No Action Suburban Total	343.525	344.004	39.0	69.2	E			
2017 No Action Total	337.668	343.525	55.8	64.7	С			

Level of Service Results for No Action Alternative in 2037							
Alternative	Beginning MP	Ending MP	Average Travel Speed (mph)	Percent Time Spent Following (%)	Level of Service		
2037 No Action NB1	337.668	342.93	54.3	79.0	D		
2037 No Action NB2	342.93	343.525	53.5	75.2	D		
2037 No Action NB3	343.525	344.004	37.0	79.7	E		
2037 No Action SB1	337.668	342.28	57.0	63.9	С		
2037 No Action SB2	342.28	342.93	61.0	45.6	В		
2037 No Action SB3	342.93	343.525	53.2	79.4	D		
2037 No Action SB4	343.525	344.004	36.9	74.0	E		
2037 No Action Rural Total	337.668	343.525	55.6	71.0	D		
2037 No Action Suburban Total	343.525	344.004	37.0	76.9	E		
2037 No Action Total	337.668	343.525	54.2	71.5	D		

LOS SUMMARY

Multilane Level of Service Results for Action Alternatives in 2017						
Alternative	Average Travel Speed (mph)	Density (pc/ln/hr)	Level of Service			
2017 W4 Rural	65	3.6	Α			
2017 W4 Suburban	50	6.1	A			
2017 C3 Rural	65	3.6	A			
2017 C3 Suburban	50	6.1	A			
2017 E2 Rural	65	3.6	A			
2017 E2 Suburban	50	6.1	A			

Multilane Level of Service Results for Action Alternatives in 2037						
Alternative	Average Travel Speed (mph)	Density (pc/ln/hr)	Level of Service			
2037 W4 Rural	65	5.0	А			
2037 W4 Suburban	50	8.3	А			
2037 C3 Rural	65	5.0	А			
2037 C3 Suburban	50	8.3	А			
2037 E2 Rural	65	5.0	А			
2037 E2 Suburban	50	8.3	A			

AVERAGE TRAVEL SPEED, PERCENT OF TIME SPENT FOLLOWING, AND DIRECTIONAL TRAFFIC FLOW VOLUME WEIGHTED AVERAGES FOR NO ACTION ALTERNATIVE

Average Travel Speed for No Action Alternative						
Year	Rural Average Travel Speed (mph)	Rural Length (miles)	Suburban Average Travel Speed (mph)	Suburban Length (miles)	Weighted Average Travel Speed (mph)	
2017	57.2	5.86	39	0.48	55.8	
2037	55.6	5.86	37	0.48	54.2	

Perce	Percent Time Spent Following for No Action Alternative						
Year	Rural Average Travel Speed (mph)	Rural Length (miles)	Suburban Average Travel Speed (mph)	Suburban Length (miles)	Weighted Average Travel Speed (mph)		
2017	64.3	5.86	69.2	0.48	64.7		
2037	71	5.86	76.9	0.48	71.4		

Directi	Directional Traffic Flow Volume for No Action Alternative*						
Year	Rural Average Travel Speed (mph)	Rural Length (miles)	Suburban Average Travel Speed (mph)	Suburban Length (miles)	Weighted Average Travel Speed (mph)		
2017	450	5.86	550	0.48	450		
2037	650	5.86	750	0.48	650		

* Passenger Cars Per Hour Rounded to Nearest 50

DENSITY AND VOLUME WEIGHTED AVERAGES

2017 Directional Density for Action Alternatives					
Alternative	Rural Density (pcpmpl)	Rural Length (miles)	Suburban Density (pcpmpl)	Suburban Length (miles)	Density Weighted Average (pcpmpl)
E2	3.6	5.61	6.1	0.24	3.7
C3	3.6	4.52	6.1	5.94	5.0
W4	3.6	6.39	6.1	0.3	3.7

2017 Directional Volume for Action Alternatives						
Alternative	Rural Volume (pcph)*	Rural Length (miles)	Suburban Directional Volume (pcph)*	Suburban Length (miles)	Directional Volume Weighted Average (pcph)*	
E2	450	5.61	600	0.24	450	
C3	450	4.52	600	5.94	550	
W4	450	6.39	600	0.3	450	

* Passenger Cars Per Hour Rounded to Nearest 50

2037 Directional Density for Action Alternatives						
Alternative	Rural Density (pcpmpl)	Rural Length (miles)	Suburban Density (pcpmpl)	Suburban Length (miles)	Density Weighted Average (pcpmpl)	
E2	5.0	5.61	8.3	0.24	5.1	
C3	5.0	4.52	8.3	5.94	6.9	
W4	5.0	6.39	8.3	0.3	5.1	

2037 Directional Volume for Action Alternatives						
Alternative	Rural Volume (pcph)*	Rural Length (miles)	Suburban Directional Volume (pcph)*	Suburban Length (miles)	Directional Volume Weighted Average (pcph)*	
E2	650	5.61	850	0.24	650	
C3	650	4.52	850	5.94	750	
W4	650	6.39	850	0.3	650	

* Passenger Cars Per Hour Rounded to Nearest 50

Level-of-Service Calculations for Action Alternatives

Fax:

_Operational Planning Analysis_____

Analyst:	Jared Hopkins			
Agency or Company:	ITD District 2			
Date Performed:	10/9/2013			
Analysis Time Period:	2017			
Freeway/Direction:	N / S			
From/To:	337.668 - 342.747			
Jurisdiction:	ITD District 2			
Analysis Year:	2017			
Description: US-95 E-2	Rural 2017			
	Flow Inputs and	Adjustments		
Annual average daily tr	affic, AADT	5920	veh/day	
Peak-hour proportion of		0.11		
Peak-hour direction per		60	010	
Volume, DDHV		391	veh/h	
Peak Hour factor, PHF		0.93		
Trucks and buses		8	010	
Recreational vehicles		0	00	
Terrain type:		Rolling		
Grade		-	00	
Segment length		-	mi	
Trucks and buses PCE, H	T	2.5		
Recreational vehicles H		2.0		
Heavy Vehicle adjustmer	it, fHV	0.893		
Driver population facto		1.00		
Flow rate, vp		235	pc/h/ln	
	Speed Inputs and	l Adjustments		
Lane width		12.0	ft	
Right-side lateral clea	arance	6.0	ft	
Interchange density		3.00	ramps/mi	
Number of lanes, N		2		
Free-flow speed:		Base		
FFS or BFFS		75.4	mi/h	
Lane width adjustment,		0.0	mi/h	
Lateral clearance adjust		0.0	mi/h	
Interchange density ad	ustment, fID	8.1	mi/h	
Free-flow speed		67.3	mi/h	
	LOS and Performa	nce Measures		
Flow rate, vp		235	pc/h/ln	
Free-flow speed, FFS		67.3	mi/h	
Average passenger-car s	speed, S	65.0	mi/h	
Number of lanes, N		2		

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

Fax:

Operational Planning Analysis_____

Analyst:	Jared Hopkins			
Agency or Company:	ITD District 2			
Date Performed:	10/9/2013			
Analysis Time Period:	2037			
Freeway/Direction:	N/S			
From/To:	337.668 - 342.747			
Jurisdiction:	ITD District 2			
Analysis Year:	2037			
Description: US-95 E-2	Rural 2037			
	Flow Inputs and	Adjustments		
Annual average daily tr	affic, AADT	8175	veh/day	
Peak-hour proportion of	AADT, K	0.11		
Peak-hour direction per		60	20	
Volume, DDHV		540	veh/h	
Peak Hour factor, PHF		0.93		
Trucks and buses		8	8	
Recreational vehicles		0	20	
Terrain type:		Rolling		
Grade		-	8	
Segment length		-	mi	
Trucks and buses PCE, E	Т	2.5		
Recreational vehicles P		2.0		
Heavy Vehicle adjustmen		0.893		
Driver population facto		1.00		
Flow rate, vp	, 1	325	pc/h/ln	
	Speed Inputs and	Adjustments		
Lane width		12.0	ft	
Right-side lateral clea	rance	6.0	ft	
Interchange density		3.00	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 adjus		0.0	mi/h	
Interchange density adj		8.1	mi/h	
Free-flow speed		67.3	mi/h	
	LOS and Performa	nce Measures		
Flow rate up		325	pc/h/ln	
Flow rate, vp		67.3	mi/h	
Free-flow speed, FFS	peed S	65.0	mi/h	
Average passenger-car s Number of lanes, N	peed, b	2	,	

Density, D Level of Service, LOS

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

Fax:

_____OPERATIONAL ANALYSIS______

				·	
Jurisdiction: Analysis Year:	10/9/2013 2017 US-95 342.747 - 343.518 ITD District 2				
	FRE	E-FLOW SPEE	D		
	Direction	1		2	
Lane width	Direction	12.0	ft	12.0	ft
	. .	12 · V	τų	12 · V	- v
Lateral clearanc	e:	\mathcal{C}	<i>E</i> L	6.0	ft
Right edge		6.0	ft		
Left edge		6.0	ft	6.0	ft
	al clearance	12.0	ft	12.0	ft
Access points pe	r mile	29		21	
Median type		Divided		Divided	
Free-flow speed:		Base		Base	
FFS or BFFS		55.0	mph	55.0	mph
Lane width adjus	tment, FLW	0.0	mph	0.0	mph
	e adjustment, FLC		mph	0.0	mph
Median type adju		0.0	mph	0.0	mph
Access points ad		7.3	mph	5.3	mph
	justment, in	47.8	mph	49.8	mph
Free-flow speed		47.0	щрп	49.0	mpn
		VOLUME			
	Direction	1		2	
Volume, V	511000100	509	vph	509	vph
Peak-hour factor	DHF	0.93	. Б	0.93	- <u>1</u>
Peak 15-minute v		137		137	
		8	010	8	00
Trucks and buses					00 00
Recreational veh		0	olo	0	6
Terrain type		Rolling		Rolling	<u>^</u>
Grade		0.00	00	0.00	90
Segment leng	th	0.00	mi	0.00	mi
Number of lanes		2		2	
Driver populatio	n adjustment, fP	1.00		1.00	
Trucks and buses		2.5		2.5	
Recreational veh		2.0		2.0	
Heavy vehicle ad		0.893		0.893	
Flow rate, vp	,,,,	306	pcphpl	306	pcphpl
LTOW TACC, VP			I I - I -		

Direction Flow rate, vp Free-flow speed, FFS Avg. passenger-car travel speed, S Level of service, LOS Density, D	1 306 47.8 50.0 A 6.1	pcphpl mph mph pc/mi/ln	49.8 50.0 A	pcphpl mph mph pc/mi/ln
Bicycle	Level of Se	ervice		
Posted speed limit, Sp			45	
Percent of segment with occupied				
on-highway parking	0		0	
Pavement rating, P	3		3	
Flow rate in outside lane, vOL	273.7		273.7	
Effective width of outside lane, We	24.00		24.00	
Effective speed factor, St	4.42		4.42	
Bicycle LOS Score, BLOS	3.76		3.76	
Bicycle LOS	D		D	

Overall results are not computed when free-flow speed is less than 45 mph.

Fax:

_____OPERATIONAL ANALYSIS______

Analyst:	Jared Hopkins
Agency/Co:	ITD District 2
Date:	10/9/2013
Analysis Period:	2037
Highway:	US-95
From/To:	342.747 - 343.518
Jurisdiction:	ITD District 2
Analysis Year:	2037
Project ID:	US-95 E-2 Urban 2037
	FREE-FLOW SPEED

Direction	1	<u> </u>	2	C 1
Lane width	12.0	ft	12.0	ft
Lateral clearance:		C .	<u> </u>	<u> </u>
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	29		21	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	,
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC		mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	7.3	mph	5.3	mph
Free-flow speed	47.8	mph	49.8	mph
	VOLUME			
			2	
Direction	1	•••• h	∠ 689	unh
Volume, V	689 0.93	vph	0.93	vph
Peak-hour factor, PHF	185		185	
Peak 15-minute volume, v15	8	010	8	0
Trucks and buses	8	10 010	8 0	000
Recreational vehicles	•	6	Rolling	0
Terrain type	Rolling 0.00	00	0.00	0
Grade	0.00	mi	0.00	° mi
Segment length	2	TULT.	2	111-
Number of lanes	1.00		1.00	
Driver population adjustment, fP			2.5	
Trucks and buses PCE, ET	2.5		2.5	
Recreational vehicles PCE, ER	2.0		2.0 0.893	
Heavy vehicle adjustment, fHV	0.893 414	pcphpl		pcphpl
Flow rate, vp	414	рерирт	717	ЪсЪпЪт
	RESULTS			

Direction Flow rate, vp Free-flow speed, FFS Avg. passenger-car travel speed, S Level of service, LOS Density, D	1 414 47.8 50.0 A 8.3	pcphpl mph mph pc/mi/ln	49.8 50.0 A	pcphpl mph mph pc/mi/ln	
Bicycle Level of Service					
Posted speed limit, Sp			45		
Percent of segment with occupied on-highway parking	0		0		
Pavement rating, P Flow rate in outside lane, vOL	3 370.4		3 370.4		
Effective width of outside lane, We	24.00		24.00 4.42		
Effective speed factor, St Bicycle LOS Score, BLOS	4.42 3.92		4.42 3.92		
Bicycle LOS	D		D		

Overall results are not computed when free-flow speed is less than 45 mph.

Fax:

Operational Planning Analysis_____ Analyst:Jared HopkinsAgency or Company:ITD District 2Date Performed:10/9/2013 Analysis Time Period: 2017 Freeway/Direction:N / SFrom/To:337.668 - 341.95Jurisdiction:ITD District 2Analysis Year:2017 Description: US-95 C-3 Rural 2017 _____Flow Inputs and Adjustments______ veh/day Annual average daily traffic, AADT 5920 Peak-hour proportion of AADT, K 0.11 8 60 Peak-hour direction percent, D 391 veh/h Volume, DDHV 0.93 Peak Hour factor, PHF 8 8 Trucks and buses Ŷ Recreational vehicles 0 Rolling Terrain type: ŝ _ Grade mi -Segment length Trucks and buses PCE, ET 2.5 Recreational vehicles PCE, ER 2.0 Heavy Vehicle adjustment, fHV 0.893 1.00 Driver population factor, fp 235 pc/h/ln Flow rate, vp _____Speed Inputs and Adjustments_____ ft 12.0 Lane width ft Right-side lateral clearance 6.0 ramps/mi 5.00 Interchange density 2 Number of lanes, N Base Free-flow speed: mi/h 75.4 FFS or BFFS mi/h 0.0 Lane width adjustment, fLW mi/h Lateral clearance adjustment, fLC 0.0 12.4 Interchange density adjustment, fID mi/h mi/h 63.0 Free-flow speed _____LOS and Performance Measures_____ pc/h/ln 235 Flow rate, vp mi/h 63.0 Free-flow speed, FFS mi/h 65.0 Average passenger-car speed, S 2 Number of lanes, N

Density, D Level of Service, LOS

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

Fax:

Operational Planning Analysis

	+			
Analyst:	Jared Hopkins			
Agency or Company:	ITD District 2			
Date Performed:	10/9/2013			
Analysis Time Period:	2037			
Freeway/Direction:	N/S			
From/To:	337.668 - 341.95			
Jurisdiction:	ITD District 2			
Analysis Year:	2037			
Description: US-95 C-3	Rural 2037			
	Flow Inputs and	l Adjustments		
Annual average daily tr	affic, AADT	8175	veh/day	
Peak-hour proportion of		0.11		
Peak-hour direction per		60	20	
Volume, DDHV		540	veh/h	
Peak Hour factor, PHF		0.93		
Trucks and buses		8	20	
Recreational vehicles		0	20	
Terrain type:		Rolling		
Grade		-	8	
Segment length		-	mi	
Trucks and buses PCE, E	T	2.5		
Recreational vehicles P	CE, ER	2.0		
Heavy Vehicle adjustmen	t, fHV	0.893		
Driver population facto		1.00		
Flow rate, vp		325	pc/h/ln	
	Speed Inputs ar	nd Adjustments		
Lane width		12.0	ft	
Right-side lateral clea	rance	6.0	ft	
Interchange density		5.00	ramps/mi	
Number of lanes, N		2		
Free-flow speed:		Base		
FFS or BFFS		75.4	mi/h	
Lane width adjustment,		0.0	mi/h	
Lateral clearance adjust		0.0	mi/h	
Interchange density adj	ustment, fID	12.4	mi/h	
Free-flow speed		63.0	mi/h	
	LOS and Perform	nance Measures		
Flow rate, vp		325	pc/h/ln	
Free-flow speed, FFS		63.0	mi/h	
Average passenger-car s	speed, S	65.0	mi/h	
Number of lanes, N		2		

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

Fax:

_____OPERATIONAL ANALYSIS______

Analyst: Agency/Co: Date: Analysis Period: Highway: From/To: Jurisdiction: Analysis Year: Droiget ID:	US-95 341.95 - 343.608 ITD District 2 2017
Project ID:	US-95 C-3 Urban 2017

_____FREE-FLOW SPEED_____

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				_
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	17		17	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	4.3	mph	4.3	mph
Free-flow speed	50.8	mph	50.8	mph
	VOLUME			
Direction	1		2	
Volume, V	509	vph	509	vph
Peak-hour factor, PHF	0.93		0.93	
Peak 15-minute volume, v15	137		137	
Trucks and buses	8	010	8	90 10
Recreational vehicles	0	0/0	0	010
Terrain type	Rolling		Rolling	
Grade	0.00	00	0.00	olo
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	2.5		2.5	
Recreational vehicles PCE, ER	2.0		2.0	
Heavy vehicle adjustment, fHV	0.893		0.893	
Flow rate, vp	306	pcphpl	306	pcphpl
·				
	RESULTS			

Direction Flow rate, vp Free-flow speed, FFS Avg. passenger-car travel speed, S Level of service, LOS Density, D	1 306 50.8 50.0 A 6.1	pcphpl mph mph pc/mi/ln	50.8 50.0 A	pcphpl mph mph pc/mi/ln
Bicycle	Level of S	ervice		
Posted speed limit, Sp Percent of segment with occupied			45	
on-highway parking	0		0	
Pavement rating, P	3		3	
Flow rate in outside lane, vOL	273.7		273.7	
Effective width of outside lane, We	e 24.00		24.00	
Effective speed factor, St	4.42		4.42	
Bicycle LOS Score, BLOS	3.76		3.76	
Bicycle LOS	D		D	

Overall results are not computed when free-flow speed is less than 45 mph.

Fax:

_____OPERATIONAL ANALYSIS______

Analyst:	Jared Hopkins
Agency/Co:	ITD District 2
Date:	10/9/2013
Analysis Period:	2037
Highway:	US-95
From/To:	341.95 - 343.608
Jurisdiction:	ITD District 2
Analysis Year:	2037
Project ID:	US-95 C-3 Urban 2037

FREE-FLOW SPEED_____

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	17		17	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	4.3	mph	4.3	mph
Free-flow speed	50.8	mph	50.8	mph
	VOLUME			
Direction	1		2	
Volume, V	689	vph	689	vph
Peak-hour factor, PHF	0.93	-	0.93	
Peak 15-minute volume, v15	185		185	
Trucks and buses	8	00	8	olo
Recreational vehicles	0	00	0	90 0
Terrain type	Rolling		Rolling	
Grade	0.00	olo	0.00	8
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	2.5		2.5	
Recreational vehicles PCE, ER	2.0		2.0	
Heavy vehicle adjustment, fHV	0.893		0.893	
Flow rate, vp	414	pcphpl	414	pcphpl
	RESULTS			

Direction Flow rate, vp Free-flow speed, FFS Avg. passenger-car travel speed, S Level of service, LOS Density, D	1 414 50.8 50.0 A 8.3	pcphpl mph mph pc/mi/ln	50.8 50.0 A	pcphpl mph mph pc/mi/ln
Bicycle	Level of Se	ervice	<u></u>	
Posted speed limit, Sp			45	
Percent of segment with occupied				
on-highway parking	0		0	
Pavement rating, P	3		3	
Flow rate in outside lane, vOL	370.4		370.4	
Effective width of outside lane, We	24.00		24.00	
Effective speed factor, St	4.42		4.42	
Bicycle LOS Score, BLOS	3.92		3.92	
Bicycle LOS	D		D	

Overall results are not computed when free-flow speed is less than 45 mph.

Number of lanes, N

Fax:

Operational Planning Analysis Jared Hopkins Analyst: Agency or Company: ITD District 2 Date Performed: 10/9/2013 Analysis Time Period: 2017 Freeway/Direction:N / SFrom/To:337.668 - 343.905Jurisdiction:ITD District 2Analysis Year:2017 Description: US-95 W-4 Rural 2017 Flow Inputs and Adjustments_____ veh/day 5920 Annual average daily traffic, AADT Peak-hour proportion of AADT, K 0.11 60 2 Peak-hour direction percent, D veh/h 391 Volume, DDHV 0.93 Peak Hour factor, PHF 8 Ŷ Trucks and buses 옹 0 Recreational vehicles Rolling Terrain type: ° Grade mi Segment length 2.5 Trucks and buses PCE, ET Recreational vehicles PCE, ER 2.0 Heavy Vehicle adjustment, fHV 0.893 Driver population factor, fp 1.00 pc/h/ln 235 Flow rate, vp Speed Inputs and Adjustments_____ ft 12.0 Lane width ft 6.0 Right-side lateral clearance ramps/mi 4.00 Interchange density 2 Number of lanes, N Base Free-flow speed: mi/h 75.4 FFS or BFFS mi/h Lane width adjustment, fLW 0.0 Lateral clearance adjustment, fLC mi/h 0.0 mi/h 10.3 Interchange density adjustment, fID mi/h 65.1 Free-flow speed ____LOS and Performance Measures____ pc/h/ln 235 Flow rate, vp 65.1 mi/h Free-flow speed, FFS mi/h Average passenger-car speed, S 65.0

2

Density, D Level of Service, LOS

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

Fax:

OPERATIO	NAL ANALYS	IS		
Analyst: Jared Hopkins				
Agency/Co: ITD District 2				
Date: 10/9/2013				
Analysis Period: 2017				
Highway: US-95				
From/To: 343.905 - 344.358				
Jurisdiction: ITD District 2				
Analysis Year: 2017				
Project ID: US-95 W-4 Urban 201	17			
$\frac{1}{2} = \frac{1}{2} = \frac{1}$	± /			
FREE	-FLOW SPEE	D		
Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:		_		
Right edge	6.0		6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	23		17	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	-		mph
Median type adjustment, FM	0.0	mph		mph
	5.8	mph		mph
Free-flow speed	49.3	mph		mph
	VOLUME			
Direction			2	
Volume, V	509	vph	509	vph
Peak-hour factor, PHF	0.93	* E ***	0.93	· [
Peak 15-minute volume, v15	137		137	
Trucks and buses	8	00	8	010
	0	00	0	00
Recreational vehicles	Rolling	U	Rolling	5
Terrain type	0.00	00	0.00	00
Grade	0.00	mi	0.00	mi
Segment length	2	111 ×	2	**L- L
Number of lanes			1.00	
Driver population adjustment, fP	1.00		2.5	
Trucks and buses PCE, ET	2.5		2.5	
Recreational vehicles PCE, ER	2.0			
Heavy vehicle adjustment, fHV	0.893		0.893	
Flow rate, vp	306	pcphpl	306	pcphpl

Direction	1		2	
Flow rate, vp	306	pcphpl	306	pcphpl
Free-flow speed, FFS	49.3	mph	50.8	mph
Avg. passenger-car travel speed, S	50.0	mph	50.0	mph
Level of service, LOS	А		А	
Density, D	6.1	pc/mi/ln	6.1	pc/mi/ln
Posted speed limit, Sp Percent of segment with occupied	Level of Se	ervice	45	
on-highway parking	0		0	
Pavement rating, P	3		3	
Flow rate in outside lane, vOL	273.7		273.7	
Effective width of outside lane, We	e 24.00		24.00	
Effective speed factor, St	4.42		4.42	
Bicycle LOS Score, BLOS	3.76		3.76	
Bicycle LOS	D		D	

Overall results are not computed when free-flow speed is less than 45 mph.

Number of lanes, N

Fax:

Operational Planning Analysis_____ Analyst:Jared HopkinsAgency or Company:ITD District 2Date Performed:10/9/2013 Date ferformed:10/9/2013Analysis Time Period:2037Freeway/Direction:N / SFrom/To:337.668 - 343.905Jurisdiction:ITD District 2Analysis Year:2037 Description: US-95 W-4 Rural 2037 _____Flow Inputs and Adjustments______ veh/day Annual average daily traffic, AADT 8175 0.11 Peak-hour proportion of AADT, K % Peak-hour direction percent, D 60 veh/h 540 Volume, DDHV 0.93 Peak Hour factor, PHF % Trucks and buses 8 8 Recreational vehicles 0 Rolling Terrain type: Ŷ Grade mi _ Segment length 2.5 Trucks and buses PCE, ET 2.0 Recreational vehicles PCE, ER Heavy Vehicle adjustment, fHV 0.893 1.00 Driver population factor, fp pc/h/ln 325 Flow rate, vp _____Speed Inputs and Adjustments______ ft 12.0 Lane width 6.0 ft Right-side lateral clearance 4.00 ramps/mi Interchange density 2 Number of lanes, N Base Free-flow speed: mi/h FFS or BFFS 75.4 mi/h Lane width adjustment, fLW 0.0 Lateral clearance adjustment, fLC mi/h 0.0 mi/h 10.3 Interchange density adjustment, fID mi/h 65.1 Free-flow speed _____LOS and Performance Measures_____ pc/h/ln 325 Flow rate, vp 65.1 mi/h Free-flow speed, FFS mi/h 65.0 Average passenger-car speed, S

2

Density, D Level of Service, LOS

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

Fax:

_____OPERATIONAL ANALYSIS______

Analyst: Agency/Co: Date: Analysis Period: Highway: From/To: Jurisdiction: Analysis Year: Project ID:	US-95 343.905 - 344.358 ITD District 2 2037
Project ID:	US-95 W-4 Urban 2037

_____FREE-FLOW SPEED______

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	23		17	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	55.0	mph	55.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	5.8	mph	4.3	mph
Free-flow speed	49.3	mph	50.8	mph
	VOLUME			
Direction	1		2	
Volume, V	689	vph	689	vph
Peak-hour factor, PHF	0.93	1	0.93	-
Peak 15-minute volume, v15	185		185	
Trucks and buses	8	010	8	010
Recreational vehicles	0	90	0	00
Terrain type	Rolling		Rolling	
Grade	0.00	010	0.00	010
Segment length	0.00	mi	0.00	mi
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	2.5		2.5	
Recreational vehicles PCE, ER	2.0		2.0	
Heavy vehicle adjustment, fHV	0.893		0.893	
Flow rate, vp	414	pcphpl	414	pcphpl
		pcphpl	414	pcphpl

Flow rate, vp Free-flow speed, FF Avg. passenger-car Level of service, L Density, D	travel speed, S	1 414 49.3 50.0 A 8.3	pcphpl mph mph pc/mi/ln	50.8 50.0 A	pcphpl mph mph pc/mi/ln
	Bicycle L	evel of Se	rvice		
Posted speed limit, Percent of segment	-			45	
on-highway parking		0		0	
Pavement rating, P		3		3	
Flow rate in outsid	e lane, vOL	370.4		370.4	
Effective width of	outside lane, We	24.00		24.00	
Effective speed fac	tor, St	4.42		4.42	
Bicycle LOS Score,	BLOS	3.92		3.92	
Bicycle LOS		D		D	

Overall results are not computed when free-flow speed is less than 45 mph.

Level-of-Service Calculations for No Action Alternative

Phone:

E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AmalystJared HopkinsAgency/Co.ITD District 2Date Performed10/1/2013Analysis Time Period2017HighwayUS-95From/To337.668 - 342Jurisdiction-From/To337.668 - 342.93JurisdictionITD District 2Analysis Year2017 Description No Action 2017 NB 1 _____Input Data_____ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length5.3miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones79%Up/down-%Access point density6/mi Analysis direction volume, Vd 407 veh/h Opposing direction volume, Vo 272 veh/h _____Average Travel Speed______ Analysis(d) Opposing (o) Direction 1.9 2.1 PCE for trucks, ET 1.1 1.1 PCE for RVs, ER Heavy-vehicle adj. factor, (note-5) fHV0.9330.919Grade adj. factor, (note-1) fg0.930.84Directional flow rate, (note-2) vi539pc/h Free-Flow Speed from Field Measurement: mi/h -Field measured speed,(note-3) S FM veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 Adj. for access point density, (note-3) fA 1.5 mi/h Adj. for access point density, (note-3) fA 1.5 mi/h 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp 2.8 mi/h 55.8 mi/h Average travel speed, ATSd Percent Free Flow Speed, PFFS 84.7 Ŷ

Direction	Analysis(d)	С	pposing	(o)
PCE for trucks, ET	1.4		1.6	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.969		0.954	
Grade adjustment factor, (note-1) fg	0.94		0.86	
		c/h	381	pc/h
Directional flow rate, (note-2) vi				pc/11
Base percent time-spent-following, (no	(le-4) brisru	49.0 %		
Adjustment for no-passing zones, fnp		37.7		
Percent time-spent-following, PTSFd		71.5 %		
Level of Service and	Other Perform	ance Meas	ures	
Level of service, LOS		D		
		0.32		
Volume to capacity ratio, v/c	<u> </u>		veh-mi	
Peak 15-min vehicle-miles of travel,			ven-mi	
Peak-hour vehicle-miles of travel, VM	1160			
Peak 15-min total travel time, TT15			veh-h	
Capacity from ATS, CdATS			veh/h	
Capacity from PTSF, CdPTSF			veh/h	
Directional Capacity		1401	veh/h	
Passing	Lane Analysis			
			F 2	
Total length of analysis segment, Lt	·		5.3	mi
Length of two-lane highway upstream of	of the passing	lane, Lu	L –	mi
Length of passing lane including tape			-	mi
Average travel speed, ATSd (from abov	re)		55.8	mi/h
Percent time-spent-following, PTSFd (from above)		71.5	
Level of service, LOSd (from above)			D	
Average Travel Spe	ed with Pass	ing Lane_		
Downstream length of two-lane highway	within effec	tive		
length of passing lane for average	e travel spee	d, Lde	-	mi
Length of two-lane highway downstream	ι of effective			
length of the passing lane for av	verage travel	speed, Ld	L –	mi
Adj. factor for the effect of passing				
on average speed, fpl			-	
Average travel speed including passir	g lane, ATSpl		-	
Percent free flow speed including pass	sing lane, PF	FSpl	0.0	00
Percent Time-Spent-Fo	STIONING WITH	rassing L	alle	
Downstream length of two-lane highway	within effec	tive leng	ſth	
of passing lane for percent time-	spent-followi	ng, Lde	-	mi
Length of two-lane highway downstream	of effective	length c	of.	
the passing lane for percent time	e-spent-follow	ing, Ld	-	mi
Adj. factor for the effect of passing		-		
on percent time-spent-following,			_	
Percent time-spent-following	- - -			
including passing lane, PTSFpl			-	9
• • •	· · · ·		Deeedate	
Level of Service and Other Perf	ormance Measu	res with	Passing .	Lane
Level of service including passing la	ane, LOSpl	Е		
Peak 15-min total travel time, TT15		-	veh-h	
Bicycle Le	evel of Servic	e		

Posted speed limit, Sp	60
	0
	3
Flow rate in outside lane, vOL	467.8
Effective width of outside lane, We	14.00
Effective speed factor, St	4.94
Bicycle LOS Score, BLOS	6.29
Bicycle LOS	F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
 If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
 For the analysis direction only and for v>200 veh/h.

- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail: Fax:

		Dame mrgmwa	y Segment	Analys	is	
	taural them					
Analyst	Jared Hop					
Agency/Co.	ITD Distr					
Date Performed	10/1/2013					
Analysis Time Peri						
Highway	US-95					
From/To	342.93 -					
Jurisdiction	ITD Distr	ict 2				
Analysis Year	2017					
Description No Ac	ction 2017 NB 2					
		_Input Data				
Highway class Cla	ass 1	Peak hou	ır factor,	PHF	0.87	
Shoulder width		% Trucks	and buses		8	00
Lane width	12.0 ft	% Trucks	crawling		0.0	00
Segment length			awl speed		0.0	mi/hr
	Rolling		tional veh		0	010
Grade: Length		% No-pas	sing zones		5	00
Up/down	- %	Access p	oint densi	ty	6	/mi
	Avera	ge Travel S	peed			
Direction		Analys	sis(d)	Opj	posing	(0)
Direction PCE for trucks, ET	C	Analys 1.	sis(d) 7	Opj	posing 2.0	(0)
PCE for trucks, ET	ſ		7	Opj		(0)
PCE for trucks, ET PCE for RVs, ER		1. 1.	7	Opj	2.0	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj.	. factor,(note-5	1. 1.) fHV 0.	7 1	Opj	2.0 1.1	
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r	. factor,(note-5 ,(note-1) fg	1. 1.) fHV 0. 0.	7 1 947		2.0 1.1 0.926	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r	. factor,(note-5 ,(note-1) fg rate,(note-2) vi	1. 1.) fHV 0. 0. 63	7 1 947 97		2.0 1.1 0.926 0.89	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr	. factor,(note-5 ,(note-1) fg rate,(note-2) vi rom Field Measur	1. 1.) fHV 0. 0. 63 ement:	7 1 947 97		2.0 1.1 0.926 0.89	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr Field measured spe	. factor,(note-5 ,(note-1) fg rate,(note-2) vi rom Field Measur eed,(note-3) S F	1. 1.) fHV 0. 0. 63 ement: M	7 1 947 97		2.0 1.1 0.926 0.89 473	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr Field measured spe Observed total dem	. factor,(note-5 ,(note-1) fg rate,(note-2) vi rom Field Measur eed,(note-3) S F nand,(note-3) V	1. 1.) fHV 0. 0. 63 ement: M	7 1 947 97	mi/h	2.0 1.1 0.926 0.89 473	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr Field measured spe Observed total dem Estimated Free-Flo	. factor,(note-5 ,(note-1) fg rate,(note-2) vi rom Field Measur eed,(note-3) S F mand,(note-3) V ow Speed:	1. 1. 0. 0. 63 ement: M	7 1 947 97	mi/h	2.0 1.1 0.926 0.89 473	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr Field measured spe Observed total dem Estimated Free-Flow Base free-flow spe	factor,(note-5, (note-1) fg rate,(note-2) vi rom Field Measur eed,(note-3) S F mand,(note-3) V ow Speed: eed,(note-3) BFF	1. 1.) fHV 0. 0. 63 ement: M	7 1 947 97 7 pc/h - - 70.0	mi/h veh/h	2.0 1.1 0.926 0.89 473	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr Field measured spe Observed total dem Estimated Free-Flo Base free-flow spe Adj. for lane and	. factor,(note-5 ,(note-1) fg rate,(note-2) vi rom Field Measur eed,(note-3) S F nand,(note-3) V ow Speed: eed,(note-3) BFF shoulder width,	1. 1. 1. 0. 0. 63 ement: M S (note-3) fI	7 1 947 97 7 pc/h - - 70.0	mi/h veh/h mi/h	2.0 1.1 0.926 0.89 473	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr Field measured spe Observed total dem Estimated Free-Flo Base free-flow spe Adj. for lane and Adj. for access po	. factor,(note-5 ,(note-1) fg rate,(note-2) vi rom Field Measur eed,(note-3) S F mand,(note-3) V ow Speed: eed,(note-3) BFF shoulder width, pint density,(no	1. 1. 1. 0. 0. 63 ement: M S (note-3) fI	7 1 947 97 7 pc/h - - 70.0 uS 2.6	mi/h veh/h mi/h mi/h	2.0 1.1 0.926 0.89 473	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr Field measured spe Observed total dem Estimated Free-Flo Base free-flow spe Adj. for lane and Adj. for access po Free-flow speed, H	factor,(note-5, (note-1) fg rate,(note-2) vi rom Field Measur eed,(note-3) S F mand,(note-3) V ow Speed: eed,(note-3) BFF shoulder width, pint density,(no	1. 1. 1. 0. 0. 63 ement: M S (note-3) fI te-3) fA	7 947 97 7 pc/h - - - 70.0 - S 2.6 1.5 65.9	mi/h veh/h mi/h mi/h mi/h mi/h	2.0 1.1 0.926 0.89 473	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr Field measured spe Observed total den Estimated Free-Flo Base free-flow spe Adj. for lane and Adj. for access po Free-flow speed, H Adjustment for no-	factor,(note-5, (note-1) fg rate,(note-2) vi rom Field Measur eed,(note-3) S F nand,(note-3) V ow Speed: eed,(note-3) BFF shoulder width, pint density,(no FFSd -passing zones,	1. 1. 1. 0. 0. 63 ement: M S (note-3) fI te-3) fA	7 947 97 7 pc/h - - - - - - - - - - - - - - - - - - -	mi/h veh/h mi/h mi/h mi/h mi/h mi/h	2.0 1.1 0.926 0.89 473	
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. Grade adj. factor, Directional flow r Free-Flow Speed fr	factor, (note-5, (note-1) fg rate, (note-2) vi rom Field Measur eed, (note-3) S F nand, (note-3) V ow Speed: eed, (note-3) BFF shoulder width, pint density, (no FFSd -passing zones, eed, ATSd	1. 1. 1. 0. 0. 63 ement: M S (note-3) fI te-3) fA	7 947 97 7 pc/h - - - 70.0 - S 2.6 1.5 65.9	mi/h veh/h mi/h mi/h mi/h mi/h	2.0 1.1 0.926 0.89 473	

Direction				
Difeooron	Analysis(d)		Opposing	(0)
PCE for trucks, ET	1.2		1.6	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment	factor, fHV 0.984		0.95	4
Grade adjustment factor, ((note-1) fg 0.97		0.89	
Directional flow rate, (no	ote-2) vi 613 p	c/h	459	pc/h
Base percent time-spent-f	following, (note-4) BPTSFd		00	
Adjustment for no-passing	zones, fnp	15.6		
Percent time-spent-follow	ving, PTSFd	65.9	\$	
	Service and Other Perform	ance Me	Pasures	
	Service and other rerior.			
Level of service, LOS		D		
Volume to capacity ratio,	v/c	0.37		
Peak 15-min vehicle-miles		88	veh-mi	
Peak-hour vehicle-miles o	of travel, VMT60	305	veh-mi	
Peak 15-min total travel	time, TT15	1.6	veh-h	
Capacity from ATS, CdATS		1475		
Capacity from PTSF, CdPTS	SF	1548		
Directional Capacity		1475	veh/h	
	Passing Lane Analysis			
Total length of analysis	segment, Lt	-	0.6	mi
Length of two-lane highwa	ay upstream of the passing	lane,	Lu -	mi
Length of passing lane ir	ncluding tapers, Lpl		-	mi
Average travel speed, ATS			55.8	mi/h
Percent time-spent-follow	wing, PTSFd (from above)		65.9	
Level of service, LOSd (1			D	
Avera	ge Travel Speed with Pass	ing Lar	ne	
	-			
Downstream length of two-	-lane highway within effec	tive		
length of passing lar	ne for average travel spee	d, Lde	-	mi
Length of two-lane highwa	ay downstream of effective		_	
longth of the pagging	g lane for average travel	speed,	Ld -	mi
Tengen or ene passing				
Adj. factor for the effect	ct of passing lane			
Adj. factor for the effection average speed, fpl			-	
Adj. factor for the effection on average speed, fp.	1		-	
Adj. factor for the effect on average speed, fp Average travel speed inc.	l luding passing lane, ATSpl	FSpl	- - 0.0	રુ
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed :	l luding passing lane, ATSpl including passing lane, PF	FSpl		જ
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : Percent f	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with	FSpl Passing	g Lane	a,
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : Percent ? Downstream length of two	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effec	FSpl Passing tive le	g Lane	
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : Percent f Downstream length of two of passing lane for p	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effec percent time-spent-followi	FSpl Passing tive leng, Lde	g Lane ength e -	%
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : 	l luding passing lane, ATSpl including passing lane, PF Time-Spent-Following with -lane highway within effec percent time-spent-followi ay downstream of effective	FSpl Passing tive leng, Lde lengtl	g Lane ength e - h of	
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : 	l luding passing lane, ATSpl including passing lane, PF Time-Spent-Following with -lane highway within effec percent time-spent-followi ay downstream of effective	FSpl Passing tive leng, Lde lengtl	g Lane ength e - h of	
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : Percent ? Downstream length of two of passing lane for p Length of two-lane highway the passing lane for	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effec percent time-spent-followi ay downstream of effective percent time-spent-follow	FSpl Passing tive leng, Lde lengtl	g Lane ength e - h of	mi
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : Percent 7 Downstream length of two- of passing lane for p Length of two-lane highwa the passing lane for Adj. factor for the effect	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effec percent time-spent-followi ay downstream of effective percent time-spent-follow ct of passing lane	FSpl Passing tive leng, Lde lengtl	g Lane ength e - h of	mi
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : Percent 7 Downstream length of two- of passing lane for p Length of two-lane highwa the passing lane for Adj. factor for the effect on percent time-spent	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effect percent time-spent-followi ay downstream of effective percent time-spent-follow ct of passing lane t-following, fpl	FSpl Passing tive leng, Lde lengtl	g Lane ength e - h of	mi
Adj. factor for the effect on average speed, fp Average travel speed inc Percent free flow speed : 	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effect percent time-spent-followi ay downstream of effective percent time-spent-follow ct of passing lane t-following, fpl wing	FSpl Passing tive leng, Lde lengtl	g Lane ength e - h of	mi
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : Percent 7 Downstream length of two- of passing lane for p Length of two-lane highwa the passing lane for Adj. factor for the effect on percent time-spent Percent time-spent-follow including passing lan	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effect percent time-spent-followi ay downstream of effective percent time-spent-follow ct of passing lane t-following, fpl wing	FSpl Passing tive leng, Lde lengtl ing, Lo	g Lane ength e - h of d - - -	mi mi %
Adj. factor for the effect on average speed, fp Average travel speed inc Percent free flow speed : Percent ? Downstream length of two of passing lane for p Length of two-lane highwa the passing lane for Adj. factor for the effect on percent time-spent Percent time-spent-follow including passing lan	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effec percent time-spent-followi ay downstream of effective percent time-spent-follow ct of passing lane t-following, fpl wing ne, PTSFpl nd Other Performance Measu	FSpl Passing tive leng, Lde lengtl ing, Le	g Lane ength e - h of d - - -	mi mi %
Adj. factor for the effect on average speed, fp Average travel speed inc. Percent free flow speed : Percent 7 Downstream length of two- of passing lane for p Length of two-lane highwa the passing lane for Adj. factor for the effect on percent time-spent Percent time-spent-follow including passing lan	l luding passing lane, ATSpl including passing lane, PF Fime-Spent-Following with -lane highway within effect percent time-spent-followi ay downstream of effective percent time-spent-follow ct of passing lane t-following, fpl wing ne, PTSFpl nd Other Performance Measu ng passing lane, LOSpl	FSpl Passing tive leng, Lde lengtl ing, Lo	g Lane ength e - h of d - - -	mi mi %

Posted speed limit, Sp	60
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	585.1
Effective width of outside lane, We	14.00
Effective speed factor, St	4.94
Bicycle LOS Score, BLOS	6.40
Bicycle LOS	F
-	

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
 3. For the analysis direction only and for v>200 veh/h.

- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ Jared Hopkins Analyst Analyst Agency/Co. ITD District 2 10/1/2013 Date Performed Analysis Time Period 2017 Highway US-95 US-95 Hiqhway 343.525 - 344.004 From/To ITD District 2 2017 Jurisdiction Analysis Year Description No Action 2017 NB 3 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones32%Up/down-%Access point density15/mi Analysis direction volume, Vd 509 veh/h Opposing direction volume, Vo 339 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 2.0 1.7 PCE for trucks, ET 1.11.1 PCE for RVs, ER PCE for RVS, EK Heavy-vehicle adj. factor, (note-5) fHV 0.947 0.926 Grade adj. factor, (note-1) fg0.970.89Directional flow rate, (note-2) vi637pc/h473pc/h Free-Flow Speed from Field Measurement: mi/h Field measured speed, (note-3) S FM veh/h Observed total demand, (note-3) V _ Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 3.8 mi/h mi/h 48.7 Free-flow speed, FFSd 1.0 mi/h 39.0 mi/h mi/h Adjustment for no-passing zones, fnp Percent Free Flow Speed, PFFS 80.2 %

Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (no Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd		c/h 57.0 26.5 72.2	Opposing 1.6 1.0 0.954 0.89 459 %	
Level of Service and	Other Perform	ance Me	asures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, Peak-hour vehicle-miles of travel, VM Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity		E 0.37 73 255 1.9 1475 1548 1475		
Passing	Lane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream o Length of passing lane including tape Average travel speed, ATSd (from abov Percent time-spent-following, PTSFd (Level of service, LOSd (from above)	rs, Lpl e)	lane,	0.5 Lu - - 39.0 72.2 E	mi mi mi/h
Average Travel Spe	ed with Pass	ing Lan	e	
Downstream length of two-lane highway length of passing lane for averag Length of two-lane highway downstream length of the passing lane for av	e travel spee of effective erage travel	d, Lde		mi mi
Adj. factor for the effect of passing on average speed, fpl Average travel speed including passin Percent free flow speed including pas	g lane, ATSpl	FSpl	- - 0.0	8
Percent Time-Spent-Fo			Lane	
Downstream length of two-lane highway of passing lane for percent time-	within effec	tive le	ngth	mi
Length of two-lane highway downstream the passing lane for percent time	of effective -spent-follow	length	of	mi
Adj. factor for the effect of passing on percent time-spent-following,	lane fpl		-	
Percent time-spent-following including passing lane, PTSFpl			-	ે
Level of Service and Other Perf	ormance Measu	res wit	h Passing	Lane
Level of service including passing la Peak 15-min total travel time, TT15	ne, LOSpl	E -	veh-h	
Bicycle Le	vel of Servic	e		

Posted speed limit, Sp	60
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	585.1
Effective width of outside lane, We	14.00
Effective speed factor, St	4.94
Bicycle LOS Score, BLOS	6.40
Bicycle LOS	F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
 3. For the analysis direction only and for v>200 veh/h.

- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone:

E-Mail:

_____Directional Two-Lane Highway Segment Analysis______ Analyst Jared Hopkins Agency/Co. ITD District 2 Date Performed 10/1/2013 Analysis Time Period 2017 Highway US-95 From/To 337.668 - 342.2 Jurisdiction From/To337.668 - 342.28JurisdictionITD District 2Analysis Year2017 Description No Action 2017 SB 1 _____Input Data_____ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length4.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones50%Up/down-%Access point density6/mi Analysis direction volume, Vd 407 veh/h Opposing direction volume, Vo 272 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 1.8 2.1 PCE for trucks, ET 1.1 1.1 PCE for RVs, ER Heavy-vehicle adj. factor, (note-5) fHV0.9400.919Grade adj. factor, (note-1) fg0.940.84Directional flow rate, (note-2) vi542pc/h Free-Flow Speed from Field Measurement: mi/h -Field measured speed,(note-3) S FM veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp 2.4 mi/h 56.0 mi/h Average travel speed, ATSd Percent Free Flow Speed, PFFS 85.0 %

Direction	Analysis(d)	C)pposing ((0)
PCE for trucks, ET	1.4		1.6	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.969		0.954	
Grade adjustment factor, (note-1) fg	0.95		0.86	
Binational flow rate (note 2) wi		c/h	390	pc/h
Directional flow rate, (note-2) vi			550	P 0 / 11
Base percent time-spent-following, (not	Le-4/ Bribru	33.8	0	
Adjustment for no-passing zones, fnp			».	
Percent time-spent-following, PTSFd		70.4 %	0	
Level of Service and (Other Perform	ance Meas	sures	
Level of service, LOS		D		
Volume to capacity ratio, v/c		0.32		
Peak 15-min vehicle-miles of travel, V	7Mm15	551	veh-mi	
Peak 15-min venicle-miles of claver,		1872	veh-mi	
Peak-hour vehicle-miles of travel, VM	160			
Peak 15-min total travel time, TT15		9.8	veh-h	
Capacity from ATS, CdATS		1401	veh/h	
Capacity from PTSF, CdPTSF		1444	veh/h	
Directional Capacity		1401	veh/h	
Passing D	Lane Analysis			
			4.6	mi
Total length of analysis segment, Lt				
Length of two-lane highway upstream of	E the passing	lane, Lu	1 2.5	mi
Length of passing lane including tape:			1.5	mi
Average travel speed, ATSd (from above	e)		56.0	mi/h
Percent time-spent-following, PTSFd (from above)		70.4	
Level of service, LOSd (from above)			D	
	d with Dogg	ing Iano		
Average Travel Spec	ed with Pass	Ing Lane_		
Downstream length of two-lane highway	within effec	tive		
length of passing lane for average	e travel spee	d, Lde	1.70	mi
Length of two-lane highway downstream	of effective			
length of the passing lane for ave	erage travel	speed, Lo	d -1.10	mi
Adj. factor for the effect of passing	lane	- F ,		
	ranc		1.10	
on average speed, fpl	~ ໄລກວ ໓ຫເກໄ		58.4	
Average travel speed including passing	g lane, Alspi	RCm]	88.5	%
Percent free flow speed including pas	sing lane, Pr	гарт	00.5	- o
Percent Time-Spent-Fo	llowing with	Passing 1	Lane	
Downstream length of two-lane highway	within effec	tive lend	ath	
of passing lane for percent time-	spent-followi	ng, Ide	7.14	mi
or passing tane for percent time-	of offortive	length		
Length of two-lane highway downstream	anont follor	ing th	-6.54	mi
the passing lane for percent time	-spenc-lollow	Ing, Du	-0.94	
Adj. factor for the effect of passing	lane		0 61	
on percent time-spent-following,	гр⊥		0.61	
Percent time-spent-following				0
including passing lane, PTSFpl			58.0	olo
Level of Service and Other Perf	ormance Measu	res with	Passing 1	Lane
timel of some including paging la	ne LOSni	С		
Level of service including passing la	ne, noobr	9.4	veh-h	
Peak 15-min total travel time, TT15		J.4	V (11 11	
Bicycle Le	vel of Servic	e		

Posted speed limit, Sp	60
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	478.8
Effective width of outside lane, We	14.00
Effective speed factor, St	4.94
Bicycle LOS Score, BLOS	6.30
Bicycle LOS	F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F. 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail: Fax:

Direc	tional Two-La	ne Highway	Segment	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description No Action	Jared Hopki ITD Distric 10/1/2013 2017 US-95 342.28 - 34 ITD Distric 2017 2017 SB 2	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
	I					
Lane width 1	.0 ft 2.0 ft .6 mi olling mi % ume, Vd 407 ume, Vo 272	veh/h	nd buses rawling l speed onal veh ng zones nt densi	icles	0.85 8 0.0 0.0 0 27 6	% % mi/hr % % /mi
<u></u>	Average	e Travel Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fac Grade adj. factor,(not Directional flow rate,	e-1) fg	0.94	0		posing 2.1 1.1 0.919 0.84 415	
Free-Flow Speed from F Field measured speed,(Observed total demand, Estimated Free-Flow Sp Base free-flow speed,(Adj. for lane and shou Adj. for access point	note-3) S FM (note-3) V eed: note-3) BFFS lder width,(r	note-3) fLS	- 70.0 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd			65.9	mi/h		
Adjustment for no-pass Average travel speed, Percent Free Flow Spee	ATSd	ıp	1.8 56.7 86.0	mi/h mi/h %		

Direction PCE for trucks, ET	Analysis(d) 1.4	C	pposing (1.6	(0)
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.969		0.954	
Grade adjustment factor, (note-1) fg	0.95		0.86	
		c/h	390	pc/h
Directional flow rate, (note-2) vi				pc/m
Base percent time-spent-following, (no	te-4) BPTSFa			
Adjustment for no-passing zones, fnp		28.2		
Percent time-spent-following, PTSFd		67.2 %		
Level of Service and	Other Perform	ance Meas	ures	
Level of service, LOS		D		
Volume to capacity ratio, v/c		0.32		
Peak 15-min vehicle-miles of travel,	VMT15		veh-mi	
			veh-mi	
Peak-hour vehicle-miles of travel, VM	160			
Peak 15-min total travel time, TT15			veh-h	
Capacity from ATS, CdATS			veh/h	
Capacity from PTSF, CdPTSF		1444	veh/h	
Directional Capacity		1401	veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt		_	0.6	mi
Length of two-lane highway upstream o	f the passing	lane, Lu	0.0	mi
Length of passing lane including tape	rs, Lpl		0.6	mi
Average travel speed, ATSd (from abov			56.7	mi/h
Percent time-spent-following, PTSFd (from above)		67.2	
	riom above,		D	
Level of service, LOSd (from above)			D	
Average Travel Spe	ed with Pass	ing Lane_		
Downstream length of two-lane highway	within effec	tive		
length of passing lane for averag	e travel spee	d, Lde	1.70	mi
Length of two-lane highway downstream	of effective	•		
length of the passing lane for av	or cricceive	anood Id	-1 70	mi
length of the passing lane for av	erage craver	speeu, ш	-1.70	111 1
Adj. factor for the effect of passing	lane			
on average speed, fpl			1.10	
Average travel speed including passin	g lane, ATSpl		62.3	
Percent free flow speed including pas			94.6	olo
Percent Time-Spent-Fo	llowing with	Passing L	ane	
Downstream length of two-lane highway	within effec	Live leng		
of passing lane for percent time-	spent-followi	ng, Lde	7.14	mi
Length of two-lane highway downstream	of effective	length c) Í	
the passing lane for percent time	-spent-follow	ing, Ld	-7.14	mi
Adj. factor for the effect of passing	lane			
on percent time-spent-following,	fpl		0.61	
	-r-			
Percent time-spent-following			41 0	0-
including passing lane, PTSFpl			41.0	00
Level of Service and Other Perf	ormance Measu	res with	Passing I	Lane
Level of service including passing la	ne LOgnl	В		
Peak 15-min total travel time, TT15	TC' TOOPT		veh-h	
Bicycle Le	vel of Servic	e		

Posted speed limit, Sp	60
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	478.8
Effective width of outside lane, We	14.00
Effective speed factor, St	4.94
Bicycle LOS Score, BLOS	6.30
Bicycle LOS	F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F. 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:

_____Directional Two-Lane Highway Segment Analysis_____ Jared Hopkins Analyst Anaryst Agency/Co. Agency/Co.ITD District 2Date Performed10/1/2013 Analysis Time Period 2017 Highway US-95 From/To 342.5 US-95 From/To342.93 - 343.525JurisdictionITD District 2Analysis Year2017 Description No Action 2017 SB 3 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones31%Up/down-%Access point density6/mi Analysis direction volume, Vd 509 veh/h Opposing direction volume, Vo 339 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 1.7 2.0 PCE for trucks, ET 1.1 PCE for RVs, ER 1.1 Heavy-vehicle adj. factor, (note-5) fHV0.9470.926Grade adj. factor, (note-1) fg0.970.90Directional flow rate, (note-2) vi652pc/h Free-Flow Speed from Field Measurement: mi/h Field measured speed, (note-3) S FM veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density,(note-3) fA 1.5 mi/h 65.9 mi/h Free-flow speed, FFSd

Adjustment for no-passing zones, fnp1.8mi/hAverage travel speed, ATSd55.3mi/hPercent Free Flow Speed, PFFS84.0%

Direction	Analysis(d)		Opposing	(0)
PCE for trucks, ET	1.2		1.6	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.984		0.954	
Grade adjustment factor, (note-1) fg	0.97		0.90	
5		oc/h	464	pc/h
Directional flow rate, (note-2) vi				perm
Base percent time-spent-following, (no	te-4) BPTSFa	58.9	010	
Adjustment for no-passing zones, fnp		26.0	_	
Percent time-spent-following, PTSFd		73.8	010	
Level of Service and	Other Perform	nance Mea	asures	
		7		
Level of service, LOS		D		
Volume to capacity ratio, v/c		0.38		
Peak 15-min vehicle-miles of travel,		90	veh-mi	
Peak-hour vehicle-miles of travel, VM	IT60	305	veh-mi	
Peak 15-min total travel time, TT15		1.6	veh-h	
Capacity from ATS, CdATS		1475	veh/h	
Capacity from PTSF, CdPTSF		1548		
Directional Capacity		1475		
Billoolonal saparry				
Passing	Lane Analysis	\$ <u></u>		
			0 6	mi
Total length of analysis segment, Lt	e		0.6	mi
Length of two-lane highway upstream o		f Lane, I	Lu -	mi
Length of passing lane including tape			-	mi
Average travel speed, ATSd (from abov	e)		55.3	mi/h
Percent time-spent-following, PTSFd (from above)		73.8	
Level of service, LOSd (from above)			D	
Average Travel Spe	ed with Pass	sing Lane	e	
Downstream length of two-lane highway	within effec	tive		
length of passing lane for averag	e travel spee	ed, Lde	-	mi
Length of two-lane highway downstream	of effective	,		
length of the passing lane for av	erage travel	aneed 1	Ld -	mi
length of the passing falle for av	lane	speed, i	bu	
Adj. factor for the effect of passing	Tane			
on average speed, fpl			-	
Average travel speed including passin	ıg lane, ATSpl	-	-	_
Percent free flow speed including pas	sing lane, PF	FSpl	0.0	010
Percent Time-Spent-Fo	llowing with	Passing	Lane	
Downstream length of two-lane highway	within effec	cive lei	ngth	
of passing lane for percent time-	spent-followi	.ng, Lde	-	mi
Length of two-lane highway downstream	n of effective	e length	of	
the passing lane for percent time	e-spent-follow	ving, Ld	-	mi
Adj. factor for the effect of passing				
on percent time-spent-following,	fpl		-	
Percent time-spent-following			_	00
including passing lane, PTSFpl				J
Level of Service and Other Perf	ormance Measu	ires wit	h Passing	Lane
		Е		
Level of service including passing la		E -	veh-h	
		E -	veh-h	
Level of service including passing la Peak 15-min total travel time, TT15		-	veh-h	

Posted speed limit, Sp	60
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	598.8
Effective width of outside lane, We	14.00
Effective speed factor, St	4.94
Bicycle LOS Score, BLOS	6.41
Bicycle LOS	F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F. 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed10/1/2013Analysis Time Period200 Analysis Time Period 2017 Usebuay US-95 Highway 343.525 - 344.004 From/To ITD District 2 Jurisdiction 2017 Analysis Year Description No Action 2017 SB 4 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones0%Up/down-%Access point density15/mi Analysis direction volume, Vd 509 veh/h Opposing direction volume, Vo 339 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 1.7 2.0 PCE for trucks, ET 1.1 1.1 PCE for RVs, ER Heavy-vehicle adj. factor, (note-5) fHV 0.947 Grade adj. factor, (note-1) fq 0.97 0.926 0.90 Grade adj. factor,(note-1) fg Directional flow rate, (note-2) vi 652 pc/h 479 pc/h Free-Flow Speed from Field Measurement: mi/h Field measured speed, (note-3) S FM Observed total demand,(note-3) V veh/h Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 Adj. for access point density, (note-3) fA 3.8 mi/h mi/h mi/h 48.7 Free-flow speed, FFSd 0.8 mi/h 39.0 mi/h mi/h Adjustment for no-passing zones, fnp Average travel speed, ATSd Percent Free Flow Speed, PFFS 80.2 ÷

Fax:

Phone:

Direction	Analysis(d)	(Opposing	(0)
PCE for trucks, ET	1.2		1.6	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.984		0.954	
Grade adjustment factor, (note-1) fg	0.97		0.90	
Directional flow rate, (note-2) vi		c/h	464	pc/h
			5	p0/11
Base percent time-spent-following, (no	DLE-4) BPISFU	10.7	ō	
Adjustment for no-passing zones, fnp		12.7	.	
Percent time-spent-following, PTSFd		66.2 5	00	
Level of Service and	Other Perform	ance Mea	sures	
Level of service, LOS		E		
Volume to capacity ratio, v/c		0.38		
Peak 15-min vehicle-miles of travel,		75	veh-mi	
Peak-hour vehicle-miles of travel, VM	IT60	255	veh-mi	
Peak 15-min total travel time, TT15		1.9	veh-h	
Capacity from ATS, CdATS		1475	veh/h	
Capacity from PTSF, CdPTSF		1548	veh/h	
Directional Capacity		1475	veh/h	
_				
Passing	Lane Analysis			
			о г	
Total length of analysis segment, Lt			0.5	mi
Length of two-lane highway upstream of	of the passing	lane, Lu	u -	mi
Length of passing lane including tape	ers, Lpl		-	mi
Average travel speed, ATSd (from abov	re)		39.0	mi/h
Percent time-spent-following, PTSFd	from above)		66.2	
Level of service, LOSd (from above)			Е	
	ad with Daga	ing Lone		
Average Travel Spe	ed with Pass	Ing hane		
Downstream length of two-lane highway	within effec	tive		
length of passing lane for average	e travel spee	d. Lde	_	mi
Length of two-lane highway downstream	of effective	-,		
length of the passing lane for av	orage travel	aneed L	- F	mi
		speed, D	u –	ш <i>.</i>
Adj. factor for the effect of passing	f lane			
on average speed, fpl			-	
Average travel speed including passir	ig lane, ATSpl	_	-	
Percent free flow speed including pas	sing lane, PF	FSpl	0.0	00
Percent Time-Spent-Fo	llowing with	Passing 3	Lane	
			at b	
Downstream length of two-lane highway	within effec	Live len	ycii	mi
of passing lane for percent time-	spent-followi	ng, Lae		mi
Length of two-lane highway downstream	n of effective	i length	01	
the passing lane for percent time	e-spent-follow	ing, Ld	-	mi
Adj. factor for the effect of passing	g lane			
on percent time-spent-following,			-	
Percent time-spent-following				
including passing lane, PTSFpl			-	00
Level of Service and Other Peri	ormance Measu	res with	Passing 1	Lane
			-	
Level of service including passing la	ane, LOSpl	Е		
Peak 15-min total travel time, TT15		-	veh-h	
	_			
Bicycle Le	evel of Servic	e		

Posted speed limit, Sp	60
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	598.8
Effective width of outside lane, We	14.00
Effective speed factor, St	4.94
Bicycle LOS Score, BLOS	6.41
Bicycle LOS	F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
 3. For the analysis direction only and for v>200 veh/h.

- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		F	ax:				
Direct	cional Two-La	ne Hig	nway S	Segment	Analysi	ls	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description No Action	US-95 337.668 - 3 ITD Distric 2037	t 2 42.93					
	I	nput D	ata				
Segment length 5 Terrain type Ro Grade: Length -	0 ft 2.0 ft .3 mi olling % ume, Vd 555	% Tru % Truck % Rec % No-j Acces	cks an cks cr craw reatio passin s poin h/h	rawling l speed onal veh	icles	8 0.0 0.0	mi/hr % %
opposing direction vol				1			
	Average	Travé	I Spee	ea			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fac Grade adj. factor,(note Directional flow rate,	e-1) fg	fHV	1.7 1.1 0.94 0.97			posing (1.9 1.1 0.933 0.91 501	o) pc/h
Free-Flow Speed from F Field measured speed, (Observed total demand, Estimated Free-Flow Spe Base free-flow speed, (Adj. for lane and shou Adj. for access point o	note-3) S FM (note-3) V eed: note-3) BFFS lder width,(n	ote-3)	flS	- - 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd				65.9	mi/h		
Adjustment for no-pass Average travel speed, A Percent Free Flow Speed	ATSd	р		2.3 54.3 82.4	mi/h mi/h %		

Percent Tim	e-Spent-Followin	.g		
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor,(note-1) fg Directional flow rate,(note-2) vi Base percent time-spent-following,(n	0.98 651 pc/ ote-4) BPTSFd 6	h 50.4 %)
Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd		9.0 %		
Level of Service and	Other Performan	ice Meas	ures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, Peak-hour vehicle-miles of travel, V Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	VMT15 8 MT60 2 1 1 1	.41	veh-h veh/h veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream Length of passing lane including tap Average travel speed, ATSd (from abo Percent time-spent-following, PTSFd Level of service, LOSd (from above)	of the passing l ers, Lpl ve)	.ane, Lu	5.3 - 54.3 79.0 D	mi mi mi/h
Average Travel Sp	eed with Passir	ng Lane_		
Downstream length of two-lane highwa length of passing lane for avera Length of two-lane highway downstrea	ge travel speed, m of effective	Lde	_	mi
length of the passing lane for a Adj. factor for the effect of passin on average speed, fpl	lg lane	beed, Ld	-	mi
Average travel speed including passi Percent free flow speed including pa	issing lane, PFFS	Spl	0.0	90
Percent Time-Spent-F	'ollowing with Pa	assing L	ane	
Downstream length of two-lane highwa of passing lane for percent time Length of two-lane highway downstrea	e-spent-following	, Lde	-	mi
the passing lane for percent tim Adj. factor for the effect of passin on percent time-spent-following,	ne-spent-followir ng lane	ng, Ld	-	mi
Percent time-spent-following including passing lane, PTSFpl			-	0
Level of Service and Other Per	formance Measure	es with	Passing	Lane
Level of service including passing l Peak 15-min total travel time, TT15	ane, LOSpl –	2	veh-h	
Bicycle I	evel of Service			

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 637.9 Flow rate in outside lane, vOL Effective width of outside lane, We 14.00 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 6.45 F Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fax:				
Direct	ional Two-Lar	ne Highway S	Segment .	Analys	is	
	2037 US-95 342.93 - 343 ITD District 2037	2 3.525				
	Ir	nput Data				
Highway class Class 1 Shoulder width 2 Lane width 12 Segment length 0 Terrain type Ro Grade: Length - Up/down - Analysis direction volu	0 ft 2.0 ft 6 mi olling mi % nme, Vd 689	<pre>% Trucks c. Truck craw % Recreation % No-passion Access point veh/h</pre>	nd buses rawling l speed onal veh ng zones	icles	8 0.0 0.0 0 5	% mi/hr % % /mi
	Average	Travel Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,	 tor,(note-5) f e-1) fg	Analysis 1.4 1.1 EHV 0.96 0.99	(d) 9	Opj	posing (1.8 1.1 0.940 0.96	
Free-Flow Speed from F: Field measured speed, (r Observed total demand, Estimated Free-Flow Spe Base free-flow speed, (r Adj. for lane and shou Adj. for access point of Free-flow speed, FFSd	note-3) S FM (note-3) V eed: note-3) BFFS Lder width,(no	ote-3) fLS	- 70.0 2.6 1.5 65.9	mi/h veh/h mi/h mi/h mi/h		
Adjustment for no-pass: Average travel speed, A Percent Free Flow Speed	ATSd	5	1.4 53.5 81.2	mi/h mi/h %		

Direction	Analysis(d))	Opposing	(0)
PCE for trucks, ET	1.0		1.2	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		0.984	ł
Grade adjustment factor, (note-1) fg	1.00	<i>i</i> .	0.96	1.
Directional flow rate,(note-2) vi	792	pc/h	558	pc/h
Base percent time-spent-following, (no	te-4) BPTSFo		010	
djustment for no-passing zones, fnp		13.9		
ercent time-spent-following, PTSFd		75.2	olo	
Level of Service and	Other Perfo	rmance Me	asures	
aval of corvice 108		D		
evel of service, LOS		0.49		
olume to capacity ratio, v/c	ህ አሰጣ 1 ይ	119	veh-mi	
eak 15-min vehicle-miles of travel,		413		
eak-hour vehicle-miles of travel, VM	160			
Peak 15-min total travel time, TT15		2.2		
apacity from ATS, CdATS		1546		
apacity from PTSF, CdPTSF		1623		
irectional Capacity		1546	veh/h	
Passing	Lane Analys:	is		
otal length of analysis segment, Lt			0.6	mi
ength of two-lane highway upstream o	f the nassi	ng lane		mi
ength of two-lane highway upstream of	re Inl	ng ranc,	- -	mi
ength of passing lane including tape	rs, rbr		53.5	mi/h
verage travel speed, ATSd (from abov	e, from showal		75.2	1((1)) 11
Percent time-spent-following, PTSFd (TTOM above)		, J . 2 D	
level of service, LOSd (from above)			D	
Average Travel Spe	ed with Pa	ssing Lar	ie	
a land har bight and high the land high the second				
Nownstream length of two-lane nighway	within eff	ective		
ownstream length of two-lane highway	e travel spe	ective eed, Lde	_	mi
length of passing lane for averag	e travel spe	eed, Lde	-	mi
length of passing lane for averag ength of two-lane highway downstream	e travel spe of effectiv	eed, Lde ve	- I.d	
length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av	e travel spo of effective erage trave	eed, Lde ve	- Ld -	mi mi
length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av dj. factor for the effect of passing	e travel spo of effective erage trave	eed, Lde ve	- Ld - -	
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl</pre>	e travel spo of effective erage trave lane	eed, Lde ve 1 speed,	- Ld - -	
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passing</pre>	e travel spo of effection erage traves lane g lane, ATS	eed, Lde ve 1 speed, pl	-	mi
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passing</pre>	e travel spo of effection erage traves lane g lane, ATS	eed, Lde ve 1 speed, pl	- Ld - - 0.0	
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av dj. factor for the effect of passing on average speed, fpl .verage travel speed including passin</pre>	e travel spe of effecti- erage trave lane g lane, ATS sing lane,	eed, Lde ve 1 speed, pl PFFSpl	- - 0.0	mi %
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passin Percent free flow speed including pas</pre>	e travel spe of effective erage trave lane g lane, ATS sing lane, t llowing with	eed, Lde ve 1 speed, pl PFFSpl h Passing	- - 0.0 g Lane	mi %
<pre>length of passing lane for averag length of two-lane highway downstream length of the passing lane for av Adj. factor for the effect of passing on average speed, fpl Average travel speed including passin Percent free flow speed including pas </pre>	e travel spe of effection erage traves lane g lane, ATS sing lane, llowing with	eed, Lde ve 1 speed, pl PFFSpl h Passing ective le	- 0.0 g Lane	mi %
<pre>length of passing lane for averag length of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passin Percent free flow speed including pas </pre>	e travel spe of effection erage traves lane g lane, ATS sing lane, llowing with within effects spent-following	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde	- 0.0 g Lane	mi %
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passin Percent free flow speed including pas </pre>	e travel spe of effection erage traves lane g lane, ATS sing lane, llowing with within effection of effection	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length	- 0.0 g Lane ength e - n of	mi %
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passin Percent free flow speed including pas </pre>	e travel spe of effecti- erage trave lane g lane, ATS sing lane, llowing with within eff spent-follo of effecti- -spent-follo	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length	- 0.0 g Lane ength e - n of	mi % mi
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av dj. factor for the effect of passing on average speed, fpl average travel speed including passin ercent free flow speed including pas </pre>	e travel spe of effective erage trave lane g lane, ATS sing lane, llowing with within eff spent-follo of effective -spent-follo lane	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length	- 0.0 g Lane ength e - n of	mi % mi
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passing ercent free flow speed including pas </pre>	e travel spe of effective erage trave lane g lane, ATS sing lane, llowing with within eff spent-follo of effective -spent-follo lane	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length	- 0.0 g Lane ength e - n of	mi % mi
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passin Percent free flow speed including pas </pre>	e travel spe of effective erage trave lane g lane, ATS sing lane, llowing with within eff spent-follo of effective -spent-follo lane	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length	- 0.0 g Lane ength e - n of	mi % mi
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passin Percent free flow speed including pass </pre>	e travel spe of effection erage traves lane g lane, ATS sing lane, llowing with within effection of effection lane fpl	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length owing, Ld	- 0.0 g Lane ength e - n of d - -	mi % mi %
Length of two-lane highway downstream length of the passing lane for av Adj. factor for the effect of passing on average speed, fpl Average travel speed including passin Percent free flow speed including pas Percent Time-Spent-Fo Downstream length of two-lane highway of passing lane for percent time- Length of two-lane highway downstream the passing lane for percent time Adj. factor for the effect of passing on percent time-spent-following, Percent time-spent-following including passing lane, PTSFpl Level of Service and Other Perf	e travel spe of effecti- erage trave lane g lane, ATS sing lane, llowing with within eff spent-follo of effecti- spent-follo lane fpl	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length owing, Ld sures wit	- 0.0 g Lane ength e - n of d - -	mi % mi %
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av adj. factor for the effect of passing on average speed, fpl average travel speed including passin Percent free flow speed including pass Percent Time-Spent-Fo Downstream length of two-lane highway of passing lane for percent time- length of two-lane highway downstream the passing lane for percent time dj. factor for the effect of passing on percent time-spent-following, Percent time-spent-following including passing lane, PTSFpl Level of Service and Other Perf Level of service including passing la</pre>	e travel spe of effecti- erage trave lane g lane, ATS sing lane, llowing with within eff spent-follo of effecti- spent-follo lane fpl	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length owing, Ld	- O.O g Lane ength - i of d - - - ch Passing	mi % mi %
<pre>length of passing lane for averag ength of two-lane highway downstream length of the passing lane for av dj. factor for the effect of passing on average speed, fpl verage travel speed including passin ercent free flow speed including pass </pre>	e travel spe of effecti- erage trave lane g lane, ATS sing lane, llowing with within eff spent-follo of effecti- spent-follo lane fpl	eed, Lde ve l speed, pl PFFSpl h Passing ective le wing, Lde ve length owing, Ld sures wit	- 0.0 g Lane ength e - n of d - -	mi % mi %

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 792.0 Effective width of outside lane, We 14.00 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 6.56 Bicycle LOS F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fa: E-Mail:	<:
Directional Two-Lane High	way Segment Analysis
AnalystJared HopkinsAgency/Co.ITD District 2Date Performed10/1/2013Analysis Time Period2037HighwayUS-95From/To343.525 - 344.004JurisdictionITD District 2Analysis Year2037DescriptionNo Action 2037 NB 3	
Input Da	ta
Shoulder width2.0ft% TruckLane width12.0ft% TruckSegment length0.5miTruckTerrain typeRolling% RecreationGrade:Length-mi	crawl speed 0.0 mi/hr eational vehicles 0 % assing zones 32 % point density 15 /mi
Direction Anal PCE for trucks, ET	0.99 0.96
Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS Adj. for lane and shoulder width, (note-3) Adj. for access point density, (note-3) fA Free-flow speed, FFSd Adjustment for no-passing zones, fnp Average travel speed, ATSd Percent Free Flow Speed, PFFS	- mi/h - veh/h 55.0 mi/h

	Analysis(d)		Opposing	g (o)
PCE for trucks, ET	1.0		1.2	
PCE for RVs, ER	1.0		1.0	
leavy-vehicle adjustment factor, fHV			0.98	
Frade adjustment factor, (note-1) fg			0.90	
irectional flow rate, (note-2) vi	792 F		558	pc/h
ase percent time-spent-following, (not	e-4) BPTSFd		olo	
djustment for no-passing zones, fnp		21.7	<u>^</u>	
ercent time-spent-following, PTSFd		79.7	010	
Level of Service and C	ther Perform	nance Me	easures	
and of commiss 100		E		
evel of service, LOS		0.49		
olume to capacity ratio, v/c	MT 1 5	0.49 99	veh-mi	
eak 15-min vehicle-miles of travel, V				
eak-hour vehicle-miles of travel, VMT	UO	345		
eak 15-min total travel time, TT15		2.7		
apacity from ATS, CdATS		1546		
apacity from PTSF, CdPTSF		1623		
irectional Capacity		1546	veh/h	
Passing I	ane Analysis	3		
otal length of analysis segment, Lt			0.5	mi
ength of two-lane highway upstream of	the passing	r lang		mi
ength of two-lane highway upstream of	che passing	j lane,	<u>–</u>	mi
ength of passing lane including taper			37.0	
verage travel speed, ATSd (from above	/		79.7	III 1 / II
Percent time-spent-following, PTSFd (f	rom above)		у э. / Е	
evel of service, LOSd (from above)			E	
	1	the Tar		
Average Travel Spee	d with Pass	sing bar	le	
			16	
ownstream length of two-lane highway	within effec	ctive		
ownstream length of two-lane highway length of passing lane for average	within effec travel spec	ctive ed, Lde		
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream	within effec travel spec of effective	ctive ed, Lde e	-	
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for ave	within effect travel spece of effective rage travel	ctive ed, Lde e	-	mi
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for ave dj. factor for the effect of passing	within effect travel spece of effective rage travel	ctive ed, Lde e	-	mi
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for ave dj. factor for the effect of passing on average speed, fpl	within effect travel spector of effective rage travel lane	ctive ed, Lde e speed,	-	mi
ownstream length of two-lane highway length of passing lane for average length of two-lane highway downstream length of the passing lane for ave dj. factor for the effect of passing on average speed, fpl verage travel speed including passing	within effect travel spector of effective trage travel lane lane, ATSpl	ctive ed, Lde e speed, l	-	mi
wwnstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for ave dj. factor for the effect of passing on average speed, fpl werage travel speed including passing ercent free flow speed including pass	within effec travel spec of effective rage travel lane lane, ATSpl ing lane, PF	ctive ed, Lde speed, L FFSpl	- Ld - - 0.0	mi mi %
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for ave dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass	within effect travel spece of effective rage travel lane lane, ATSpl ing lane, PF lowing with	ctive ed, Lde speed, L FFSpl Passing	- Ld - - 0.0 g Lane	mi mi %
<pre>pownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass </pre>	within effect of effective rage travel lane lane, ATSpl ing lane, PH lowing with within effect	ctive ed, Lde speed, I FFSpl Passing ctive le	- Ld - - 0.0 g Lane	mi mi %
<pre>pownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average adj. factor for the effect of passing on average speed, fpl average travel speed including passing ercent free flow speed including pass </pre>	within effect of effective rage travel lane lane, ATSpl ing lane, PH lowing with within effect	ctive ed, Lde speed, I FFSpl Passing ctive le	- Ld - - 0.0 g Lane ength	mi mi %
<pre>pownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass Percent Time-Spent-Fol pownstream length of two-lane highway of passing lane for percent time-spent ength of two-lane highway downstream</pre>	within effect of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e lengt	- Ld - - 0.0 g Lane ength e - n of	mi mi % mi
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for aver dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass Percent Time-Spent-Fol ownstream length of two-lane highway of passing lane for percent time-s ength of two-lane highway downstream the passing lane for percent time-	within effect travel spee of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e lengt	- Ld - - 0.0 g Lane ength e - n of	mi mi %
<pre>bownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass Percent Time-Spent-Fol ownstream length of two-lane highway of passing lane for percent time-spent the passing lane for percent time- dj. factor for the effect of passing</pre>	within effect travel spee of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow lane	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e lengt	- Ld - - 0.0 g Lane ength e - n of	mi mi % mi
<pre>bownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass Percent Time-Spent-Fol ownstream length of two-lane highway of passing lane for percent time-s ength of two-lane highway downstream the passing lane for percent time-</pre>	within effect travel spee of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow lane	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e lengt	- Ld - - 0.0 g Lane ength e - n of	mi mi % mi
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass 	within effect travel spee of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow lane	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e lengt	- Ld - - 0.0 g Lane ength e - n of	mi mi % mi mi
<pre>bownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass Percent Time-Spent-Fol ownstream length of two-lane highway of passing lane for percent time-s ength of two-lane highway downstream the passing lane for percent time- dj. factor for the effect of passing on percent time-spent-following, for the passing lane for percent time- dy. factor for the effect of passing on percent time-spent-following, for</pre>	within effect travel spee of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow lane	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e lengt	- Ld - - 0.0 g Lane ength e - n of	mi mi % mi
<pre>pownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average adj. factor for the effect of passing on average speed, fpl average travel speed including passing ercent free flow speed including pass Percent Time-Spent-Fol ownstream length of two-lane highway of passing lane for percent time-s ength of two-lane highway downstream the passing lane for percent time- dj. factor for the effect of passing on percent time-spent-following, for percent time-spent-following</pre>	within effect of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow lane pl	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e lengtl wing, Lo	Ld - - 0.0 g Lane ength e - n of d - -	mi mi % mi mi
<pre>Downstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average adj. factor for the effect of passing on average speed, fpl average travel speed including passing percent free flow speed including passing percent free flow speed including pass </pre>	within effect travel spee of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow lane pl	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e length wing, Lo	Ld - - 0.0 g Lane ength e - n of d - -	mi mi % mi mi
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including pass 	within effect travel spee of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow lane pl	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e lengtl wing, Lo	Ld - - 0.0 g Lane ength e - h of d - - th Passing	mi mi % mi mi
ownstream length of two-lane highway length of passing lane for average ength of two-lane highway downstream length of the passing lane for average dj. factor for the effect of passing on average speed, fpl verage travel speed including passing ercent free flow speed including passing ercent free flow speed including pass 	within effect travel spee of effective rage travel lane lane, ATSpl ing lane, PF lowing with within effect of effective spent-follow lane pl	ctive ed, Lde speed, FFSpl Passing ctive le ing, Lde e length wing, Lo	Ld - - 0.0 g Lane ength e - n of d - -	mi mi % mi mi

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 Pavement rating, P 3 Flow rate in outside lane, vOL 792.0 Effective width of outside lane, We 14.00 4.94 Effective speed factor, St 6.56 Bicycle LOS Score, BLOS Bicycle LOS F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone:

E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed10/1/2013Analysis Time Period2037HighwayUS-95From/To337.668 - 342.28JurisdictionITD District 2Analysis Year2037DescriptionNo Action 2037 SB 1 Description No Action 2037 SB 1 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length4.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones50%Up/down-%Access point density6/mi Analysis direction volume, Vd 555 veh/h Opposing direction volume, Vo 370 veh/h veh/h _____Average Travel Speed______ Analysis(d) Opposing (o) 1.6 1.9 1.1 1.1 Direction PCE for trucks, ET

 PCE for RVs, ER
 1.1
 1.1

 Heavy-vehicle adj. factor, (note-5) fHV
 0.954
 0.933

 Grade adj. factor, (note-1) fg
 0.98
 0.92

 Directional flow rate, (note-2) vi
 698
 pc/h
 507
 pc/h

 Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM Observed total demand, (note-3) V Estimated Free-Flow Speed: - mi/h - veh/h Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp2.0mi/hAverage travel speed, ATSd54.5mi/hPercent Free Flow Speed, PFFS82.7%

irection	Analysis(d)		Opposing	(0)
CE for trucks, ET	1.0		1.4	(0)
CE for RVs, ER	1.0		1.0	
eavy-vehicle adjustment factor, fHV	1.000		0.969)
rade adjustment factor, (note-1) fg			0.92	
irectional flow rate, (note-2) vi		bc/h	488	pc/h
ase percent time-spent-following, (not	ce-4) BPTSFd		010	
djustment for no-passing zones, fnp		28.8		
ercent time-spent-following, PTSFd		77.5	010	
Level of Service and (Other Perform	nance Me	asures	
		5		
evel of service, LOS		D 0 41		
olume to capacity ratio, v/c	7N/m 1 E	0.41 751	ttoh-mi	
eak 15-min vehicle-miles of travel, N		2553	veh-mi veh-mi	
Peak-hour vehicle-miles of travel, VMD		2553	ven-mi veh-h	
eak 15-min total travel time, TT15		15.8		
Capacity from ATS, CdATS		1565	veh/h	
apacity from PTSF, CdPTSF Directional Capacity			veh/h	
	• •			
Passing 1	Lane Analysi:	5		
otal length of analysis segment, Lt			4.6	mi
ength of two-lane highway upstream of	f the passing	g lane,	Lu 2.5	mi
ength of passing lane including tape	rs, Lpl		1.5	mi
verage travel speed, ATSd (from above	e)		54.5	mi/h
Percent time-spent-following, PTSFd (:	from above)		77.5	
evel of service, LOSd (from above)			D	
Average Travel Spee	ed with Pas	sing Lan	le	
ownstream length of two-lane highway	within effe	ctive		
length of passing lane for average	e travel spe	ed, Lde	1.70	mi
Length of two-lane highway downstream	of effective	Э		
length of the passing lane for ave	erage travel	speed,	Ld -1.10	mi
Adj. factor for the effect of passing	lane	1 /		
on average speed, fpl			1.11	
Average travel speed including passing	g lane, ATSp	1	57.0	
Percent free flow speed including pass	sing lane, P	FFSpl	86.5	00
Percent Time-Spent-Fo.			Lane	
ownstream length of two-lane highway	within effe	ctive le	ength	
of passing lane for percent time-	spent-follow	ing, Lde	e 5.97	mi
ength of two-lane highway downstream	of effectiv	e length		mi
the passing lane for percent time	-spent-Iollo	wing, LC	-5.37	mi
dj. factor for the effect of passing	⊥ane fpl		0.61	
on percent time-spent-following,	грт		0.01	
Percent time-spent-following including passing lane, PTSFpl			63.9	00
Level of Service and Other Perf	ormance Meas	ures wit	ch Passing	Lane
		С		
Level of service including passing lat	ne, nosbr		veh-h	
Peak 15-min total travel time, TT15		13.2	ven-n	

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 652.9 Effective width of outside lane, We 14.00 4.94 Effective speed factor, St 6.46 Bicycle LOS Score, BLOS Bicycle LOS F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:

_____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed10/1/2013Analysis Time Period2037HighwayUS-95From/To342.28 - 342.93JurisdictionITD District 2Analysis Year2037DescriptionNo Action 2027 CD 2 Description No Action 2037 SB 2 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones27Up/down-%Access point density6/mi Analysis direction volume, Vd 555 veh/h Opposing direction volume, Vo 370 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 1.6 1.9 1.1 1.1 Direction PCE for trucks, ET PCE for RVs, ER PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.9540.933Grade adj. factor, (note-1) fg0.980.92Directional flow rate, (note-2) vi698pc/h Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM Observed total demand, (note-3) V Estimated Free-Flow Speed: - mi/h - veh/h Estimated Free-Flow Speed: Estimated Free-Flow Speed:Base free-flow speed, (note-3) BFFS70.0Adj. for lane and shoulder width, (note-3) fLS2.6Adj. for access point density, (note-3) fA1.5 65.9 mi/h Free-flow speed, FFSd

Adjustment for no-passing zones, fnp1.6mi/hAverage travel speed, ATSd54.9mi/hPercent Free Flow Speed, PFFS83.3%

Passing Lane Analysis otal length of analysis segment, Lt 0.6 mi ength of two-lane highway upstream of the passing lane, Lu 0.0 mi ength of passing lane including tapers, Lpl 0.6 mi verage travel speed, ATSd (from above) 54.9 mi/h ercent time-spent-following, PTSFd (from above) 74.8 evel of service, LOSd (from above) D	Percent Time	-Spent-Follow	ing		
CE for trucks, ET 1.0 1.4 CF for RVs, ER 1.0 1.0 eavy-vehicle adjustment factor, fHV 1.000 0.969 rade adjustment factor, (note-1) fg 0.98 0.92 irectional flow rate, (note-2) vi 666 pc/h 488 pc/h ase percent time-spent-following, (note-4) BFJFd 60.9 % diustment for no-passing zones, fnp 24.1 ercent time-spent-following, PTSPd 74.3 % diustment factor, NS 0 clume to capacity ratio, v/c 0.41 0.41 deak-hour vehicle-miles of travel, VMT05 9.8 veh-mi eak-hour vehicle-miles of travel, VMT05 1.65 veh/h pascity from MTS, CdTS 1.62 veh/h apacity from MTS, CdTS 1.65 veh/h 1.65 veh/h irectional Capacity Fassing Lane Analysis 0.6 mi cotal length of analysis segment, Lt 0.6 mi ne ength of two-lane highway upstream of the passing lane, Lu 0.0 mi ne ength of two-lane highway upstream of effective 1.0 mi/h ercent time-spent-following, FTSTG (from above) 74.8	Direction	Analysis(d)		Opposing	(0)
DE for RVS, ER 1.0 1.0 1.0 eavy-vehicle adjustment factor, fiv 1.00 0.969 eavy-vehicle adjustment factor, (note-1) fg 0.98 0.92 irectional flow rate, (note-2) vi 666 pc/h 488 pc/h ase percent time-spent-following, (note-4) BPTSPd 60.9 % djustment for no-passing zones, fip 24.1 ercent time-spent-following, FSFd 74.8 %		-			
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	Percent time-spent-following including passing lane, PTSFpl Level of Service and Other Perf Sevel of service including passing la		В	h Passin <u>c</u>	

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 Pavement rating, P 3 Flow rate in outside lane, vOL 652.9 Effective width of outside lane, We 14.00 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 6.46 Bicycle LOS F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fax	:			
Direc	tional Two-La	ne Highwa	ay Segment	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description No Action	US-95 342.93 - 34 ITD Distric 2037	t 2 3.525				
	I	nput Data	a			
Segment length0Terrain typeRGrade:Length	.0 ft 2.0 ft .6 mi olling mi % ume, Vd 689	<pre>% Truck; % Truck c; % Recrea % No-pa; Access j veh/;</pre>	s crawling rawl speed ational ve ssing zone point dens n	s hicles s	0.85 8 0.0 0.0 0 31 6	% mi/hr % % /mi
	Average	Travel	Speed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fac Grade adj. factor,(not Directional flow rate,	e-1) fg	1 1 fHV 0 0	sis(d) .4 .1 .969 .99 45 pc/		posing 1.8 1.1 0.940 0.96 598	(o) pc/h
Free-Flow Speed from F Field measured speed,(Observed total demand, Estimated Free-Flow Sp Base free-flow speed,(Adj. for lane and shou Adj. for access point	note-3) S FM (note-3) V eed: note-3) BFFS lder width,(n	ote-3) f	- - 70.0 LS 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd			65.9	mi/h		
Adjustment for no-pass Average travel speed, Percent Free Flow Spee	ATSd	ıp	1.5 53.2 80.8	mi/h mi/h %		

Direction	Analysis(d)	С	pposing ((0)
PCE for trucks, ET PCE for RVs, ER	1.0 1.0		1.2 1.0	
Heavy-vehicle adjustment factor, fHV			0.984	
Grade adjustment factor, (note-1) fg			0.96	
Directional flow rate,(note-2) vi	811 p		571	pc/h
Base percent time-spent-following, (no	te-4) BPTSFd			
Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd		21.0 79.4 %	:	
Percent time-spent-torrowing, risid		12.4 0		
Level of Service and	Other Perform	ance Meas	ures	
Level of service, LOS		D		
Volume to capacity ratio, v/c		0.50		
Peak 15-min vehicle-miles of travel,			veh-mi	
Peak-hour vehicle-miles of travel, VM	1.60		veh-mi veh-h	
Peak 15-min total travel time, TT15 Capacity from ATS, CdATS			veh/h	
Capacity from PTSF, CdPTSF		1623		
Directional Capacity		1546	veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt	f the manufacture	lono T-	0.6	mi mi
Length of two-lane highway upstream o Length of passing lane including tape	I the passing	lane, Lu		mi
Average travel speed, ATSd (from abov	с) гз, црт		53.2	mi/h
Percent time-spent-following, PTSFd (from above)		79.4	,
Level of service, LOSd (from above)	·		D	
Average Travel Spe	ed with Pass	ing Lane_		
Design length of two long highway	within offer	tivo		
Downstream length of two-lane highway length of passing lane for averag	e travel spee	d. Lde	_	mi
Length of two-lane highway downstream	of effective	.,		
length of the passing lane for av	erage travel	speed, Ld	1 –	mi
Adj. factor for the effect of passing	lane			
on average speed, fpl			-	
Average travel speed including passin	g lane, ATSpl	FGnl	- 0.0	0
Percent free flow speed including pas				
Percent Time-Spent-Fo	llowing with	Passing I	Jane	
Downstream length of two-lane highway	within effec	tive leng	ŋth	
of passing lane for percent time-	spent-followi	ng, Lde		mi
Length of two-lane highway downstream	of effective	length c)İ	mi
the passing lane for percent time	-spent-Iollow	ıng, La	-	mi
Adj. factor for the effect of passing on percent time-spent-following,	fpl		-	
Percent time-spent-following	- 17 -			
including passing lane, PTSFpl			-	00
Level of Service and Other Perf	ormance Measu	res with	Passing 1	Lane
Level of service including passing la	ne, LOSpl	E		
Peak 15-min total travel time, TT15	-,	-	veh-h	
Biovolo Je	vel of Servic	e		
Bicycle he	VCI OF DEFVIC	~		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 810.6 Effective width of outside lane, We 14.00 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 6.57 F Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:	Fax:				
Directional Two	-Lane Highway	Segment A	Analysis	;	
Jurisdiction ITD Dist Analysis Year 2037 Description No Action 2037 SB 4	rict 2 3 - 344.004 rict 2				
	Input Data_				
Highway class Class 1 Shoulder width 2.0 ft Lane width 12.0 ft Segment length 0.5 mi Terrain type Rolling Grade: Length - mi Up/down - % Analysis direction volume, Vd 6 Opposing direction volume, Vo 4	Access po 89 veh/h 59 veh/h	oint densi	ty 1	_ 5	% % mi/hr % % /mi
Aver	age Travel Sp	beed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor,(note- Grade adj. factor,(note-1) fg Directional flow rate,(note-2) v	1.4 1.3 5) fHV 0.9 0.9	L 969 99		osing (d 1.8 1.1 0.940 0.96 598	
Free-Flow Speed from Field Measu Field measured speed, (note-3) S Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BF Adj. for lane and shoulder width Adj. for access point density, (n	FM FS (note-3) fL	- 55.0 52.6 3.8	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd		48.7	mi/h		
Adjustment for no-passing zones, Average travel speed, ATSd Percent Free Flow Speed, PFFS	fnp	0.6 36.9 75.9	mi/h mi/h %		

Percent Time	-Spent-Follow	ing		
Direction	Analysis(d)		Opposing	(0)
PCE for trucks, ET	1.0		1.2	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	1.000		0.98	4
Grade adjustment factor, (note-1) fg	1.00		0.96	
Directional flow rate, (note-2) vi	811 p	c/h	571	pc/h
Base percent time-spent-following, (no	te-4) BPTSFd	67.1	olo	
Adjustment for no-passing zones, fnp		11.8		
Percent time-spent-following, PTSFd		74.0	010	
Level of Service and	Other Perform	ance Mea	asures	
Langl of convice LOS		E		
Level of service, LOS Volume to capacity ratio, v/c		0.50		
Peak 15-min vehicle-miles of travel,	VMT15	101	veh-mi	
Peak-hour vehicle-miles of travel, VM		345		
Peak 15-min total travel time, TT15	100	2.7		
Capacity from ATS, CdATS		1546		
Capacity from PTSF, CdPTSF		1623		
Directional Capacity		1546		
	Lane Analysis			
Total length of analysis segment, Lt		_	0.5	mi
Length of two-lane highway upstream o	f the passing	lane, 1		mi
Length of passing lane including tape			-	mi
Average travel speed, ATSd (from abov			36.9	mi/h
Percent time-spent-following, PTSFd (from above)		74.0	
Level of service, LOSd (from above)			E	
Average Travel Spe	ed with Pass	ing Lane	9	
Downstream length of two-lane highway	within effec	tive		
length of passing lane for averag	e travel spee	d. Lde	—	mi
Length of two-lane highway downstream	of effective	.,		
length of the passing lane for av	erage travel	speed, 1	Ld -	mi
Adj. factor for the effect of passing		,		
on average speed, fpl	-		-	
Average travel speed including passin	g lane, ATSpl		_	
Percent free flow speed including pas			0.0	00
Percent Time-Spent-Fo	llowing with	Passing	Lane	
Downstream length of two-lane highway	within effec	tive le	ngth	
of passing lane for percent time-	spent-followi	ng, Lde	- 	mi
Length of two-lane highway downstream	of effective	length	OI	mi
the passing lane for percent time	-spent-tollow	ing, Ld	-	mi
Adj. factor for the effect of passing				
on percent time-spent-following,	трт		-	
Percent time-spent-following including passing lane, PTSFpl			-	0
Level of Service and Other Perf	ormance Measu	res wit	h Passing	g Lane
The standard including proving la	no Ingni	Е		
Level of service including passing la Peak 15-min total travel time, TT15	пе, порт	-	veh-h	
Bicycle Le	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 Pavement rating, P 3 810.6 Flow rate in outside lane, vOL Effective width of outside lane, We 14.00 4.94 Effective speed factor, St 6.57 Bicycle LOS Score, BLOS Bicycle LOS F

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Level of Service Calculations for Remaining US-95 Loop

Phone: E-Mail:		F	ax:				
Direct	ional Two-La	ne Higl	hway	Segment	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2017 Old U	US-95 337.668 - 3 ITD Distric ⁻ 2017	t 2 42.93 t 2					
	I	nput Da	ata				
Lane width 12 Segment length 5. Terrain type Rc Grade: Length - Up/down - Analysis direction volu	2.0 ft 3 mi olling mi % ume, Vd 18	<pre>% True % Truck Truck % Rec: % No-] Acces: vel</pre>	cks an cks c craw reatio passin s poin h/h	factor, nd buses rawling l speed onal veh ng zones nt densi	icles	0.87 8 0.0 0.0 0 79 6	% % mi∕hr % % ∕mi
Opposing direction volu	ime, Vo 12	ve.	h/h				
	Average	Trave	l Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,(e-1) fg		lysis 2.7 1.1 0.88 0.67 35			2.7 1.1 0.880 0.67 23	(o) pc/h
Free-Flow Speed from Fi Field measured speed, (n Observed total demand, (Estimated Free-Flow Spe Base free-flow speed, (n Adj. for lane and shoul Adj. for access point o	ote-3) S FM note-3) V eed: lote-3) BFFS der width,(no	ote-3)		- 70.0 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd				65.9	mi/h		
Adjustment for no-passi Average travel speed, A Percent Free Flow Speed	TSd	þ		3.0 62.5 94.8	mi/h mi/h %		

Percent Time	-Spent-Follow	ing		
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg	0.73		Opposing 1.9 1.0 0.933 0.73	3
Directional flow rate, (note-2) vi Base percent time-spent-following, (no Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	30 p te-4) BPTSFd		20 % %	pc/h
Level of Service and	Other Perform	ance Me	asures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, Peak-hour vehicle-miles of travel, VM Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity		B 0.02 27 95 0.4 1002 1158 1002	veh-mi veh-mi veh-h veh/h veh/h veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream o Length of passing lane including tape Average travel speed, ATSd (from abov Percent time-spent-following, PTSFd (Level of service, LOSd (from above)	rs, Lpl e)	lane,	5.3 Lu - 62.5 35.1 B	mi mi mi/h
Average Travel Spe	ed with Pass	ing Lan	e	
Downstream length of two-lane highway length of passing lane for averag Length of two-lane highway downstream	e travel spee	d, Lde	_	mi
length of the passing lane for av Adj. factor for the effect of passing on average speed, fpl	erage travel lane	speed,	Ld -	mi
Average travel speed including passin Percent free flow speed including pas			0.0	0
Percent Time-Spent-Fo	llowing with	Passing	Lane	
Downstream length of two-lane highway of passing lane for percent time- Length of two-lane highway downstream	spent-followi:	ng, Lde		mi
Adj. factor for the effect of passing on percent time-spent-following,	-spent-follow lane	ing, Ld		mi
Percent time-spent-following including passing lane, PTSFpl	- F -		-	<u>9</u>
Level of Service and Other Perf	ormance Measu	res wit	h Passing	Lane
Level of service including passing la Peak 15-min total travel time, TT15	ne, LOSpl	E -	veh-h	
Bicycle Le	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 20.7 Flow rate in outside lane, vOL Effective width of outside lane, We 26.74 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.12 Bicycle LOS В

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax E-Mail:	:
Directional Two-Lane Highw	ay Segment Analysis
AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To342.93 - 343.525JurisdictionITD District 2Analysis Year2017Description2017 Old US-95 C3 Rural NB 2	
Input Dat	a
Shoulder width2.0ft% TruckLane width12.0ft% TruckSegment length0.6miTruck cTerrain typeRolling% RecreGrade:Length-mi	ur factor, PHF 0.87 s and buses 8 % s crawling 0.0 % rawl speed 0.0 mi/hr ational vehicles 0 % ssing zones 5 % point density 6 /mi h
	Speed
Direction Analy PCE for trucks, ET 2 PCE for RVs, ER 1 Heavy-vehicle adj. factor, (note-5) fHV 0 Grade adj. factor, (note-1) fg 0	rsis(d) Opposing (o) .7 2.7 .1 1.1
Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS Adj. for lane and shoulder width, (note-3) f Adj. for access point density, (note-3) fA Free-flow speed, FFSd Adjustment for no-passing zones, fnp Average travel speed, ATSd Percent Free Flow Speed, PFFS	- mi/h - veh/h TLS 70.0 mi/h 2.6 mi/h 1.5 mi/h 65.9 mi/h 1.1 mi/h 64.3 mi/h 97.6 %

Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (no Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	0.73 30 p	c/h		(0) pc/h
Level of Service and	Other Perform	ance Meas	ures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, Peak-hour vehicle-miles of travel, VN Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity		11 0.0 1002 1158	veh-mi veh-mi veh-h veh/h veh/h veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream of Length of passing lane including tape Average travel speed, ATSd (from above Percent time-spent-following, PTSFd Level of service, LOSd (from above)	ers, Lpl ve)	lane, Lu	0.6 - 64.3 13.3 A	mi mi mi/h
Average Travel Spe	eed with Pass	ing Lane_		
Downstream length of two-lane highway length of passing lane for averag Length of two-lane highway downstream length of the passing lane for av Adj. factor for the effect of passing	ge travel spee n of effective verage travel	d, Lde		mi mi
on average speed, fpl Average travel speed including passin	ng lane. ATSpl		-	
Percent free flow speed including passing			0.0	00
Percent Time-Spent-Fo	ollowing with	Passing I	lane	
Downstream length of two-lane highway of passing lane for percent time	-spent-followi	ng, Lde	-	mi
Length of two-lane highway downstream the passing lane for percent time Adj. factor for the effect of passing	e-spent-follow g lane	ing, Ld	- -	mi
on percent time-spent-following, Percent time-spent-following including passing lane, PTSFpl	трт		_	0
Level of Service and Other Per:	formance Measu	res with	Passing 2	Lane
Level of service including passing la Peak 15-min total travel time, TT15	ane, LOSpl	E -	veh-h	
Bicycle Le	evel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 20.7 Effective width of outside lane, We 26.74 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.12 Bicycle LOS В

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fa	IX:				
Direct	ional Two-La	ne High	way S	Segment	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2017 Old C	US-95 337.668 - 3 ITD Distric 2017 US-95 C3 Rura	et 2 42.28 et 2 1 SB 1					
	I	nput Da	ita				
Segment length 4. Terrain type Ro Grade: Length - Up/down -	0 ft 2.0 ft 6 mi olling %	<pre>% Truc % Truc Truck % Recr % No-p Access</pre>	craw craw craw craw ceation ceation coassing point	rawling	icles	0.85 8 0.0 0.0 0 50 6	% % mi/hr % % /mi
Analysis direction volu Opposing direction volu							
	Average	e Travel	Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,(e-1) fg	fHV	2.7 1.1 0.88 0.67	0		2.7 1.1 0.880 0.67 24	
Free-Flow Speed from Fi Field measured speed, (r Observed total demand, (Estimated Free-Flow Spe Base free-flow speed, (r Adj. for lane and shoul Adj. for access point o	note-3) S FM (note-3) V eed: note-3) BFFS .der width,(n	note-3)	fLS	- - 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd				65.9	mi/h		
Adjustment for no-passi Average travel speed, A Percent Free Flow Speed	ATSd	p		2.5 62.9 95.5	mi/h mi/h %		

Per	cent Time-Spent-Followi	a		
Direction PCE for trucks, ET PCE for RVs, ER	Analysis(d) 1.9 1.0	0	1.9 1.0	0)
Heavy-vehicle adjustment fac Grade adjustment factor, (not Directional flow rate, (note- Base percent time-spent-foll	e-1) fg 0.73 2) vi 31 pc		0.933 0.73 21	pc/h
Adjustment for no-passing zo Percent time-spent-following	nes, fnp	46.1 31.4 %		
Level of Ser	vice and Other Performa	ance Meas	ures	
Level of service, LOS Volume to capacity ratio, v/ Peak 15-min vehicle-miles of Peak-hour vehicle-miles of t Peak 15-min total travel tim Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	travel, VMT15 ravel, VMT60 e, TT15	83 0.4 1002 1158 1002	veh-mi veh-mi veh-h veh/h veh/h veh/h	
	Passing Lane Analysis			
Total length of analysis seg Length of two-lane highway u Length of passing lane inclu Average travel speed, ATSd (Percent time-spent-following Level of service, LOSd (from	pstream of the passing ding tapers, Lpl from above) , PTSFd (from above)	lane, Lu	4.6 2.5 1.5 62.9 31.4 A	mi mi mi∕h
Average T	ravel Speed with Passi	ing Lane_		
Downstream length of two-lan length of passing lane f Length of two-lane highway d	for average travel speed	cive d, Lde	1.70	mi
length of two-falle highway d length of the passing la Adj. factor for the effect o on average speed, fpl	ne for average travel s	speed, Ld	-1.10	mi
Average travel speed includi Percent free flow speed incl		FSpl	0.0	90
Percent Time	-Spent-Following with H	Passing L	ane	
Downstream length of two-lan of passing lane for perc Length of two-lane highway d	ent time-spent-followir:	ng, Lde	13.00	mi
the passing lane for per Adj. factor for the effect o on percent time-spent-fo Percent time-spent-following	ccent time-spent-follow: of passing lane ollowing, fpl	ing, Ld	-12.40	mi
including passing lane,				010
Level of Service and O	ther Performance Measu	res with	Passing I	ane
Level of service including p Peak 15-min total travel tim		E	veh-h	
В	Sicycle Level of Service	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 21.2 Flow rate in outside lane, vOL Effective width of outside lane, We 26.74 Effective speed factor, St 4.94 Bicycle LOS Score, BLOS 2.12 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fa	ax:				
Direct	ional Two-Lar	ne Higl	hway S	Segment	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2017 Old U	US-95 342.28 - 342 ITD District 2017 S-95 C3 Rura	t 2 2.93 t 2 1 SB 2					
	Ir	nput Da	ata				
Highway class Class 1 Shoulder width 2. Lane width 12 Segment length 0. Terrain type Ro Grade: Length - Up/down - Analysis direction volu	6 mi lling %	Truck % Rec % No-j Acces	craw reation passing s poing	factor, nd buses rawling l speed onal veh ng zones nt densi	PHF icles ty	0.85 8 0.0 0.0 0 27 6	% % mi/hr % % /mi
Opposing direction volu	ime, Vo 12	ve	h/h				
	Average	Trave	l Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,(e-1) fg	fHV	2.7 1.1 0.88 0.67			2.7 1.1 0.880 0.67	
Free-Flow Speed from Fi Field measured speed, (r Observed total demand, (Estimated Free-Flow Spe Base free-flow speed, (r Adj. for lane and shoul Adj. for access point o	ote-3) S FM note-3) V eed: note-3) BFFS der width, (no	ote-3)	fLS	- 70.0 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd				65.9	mi/h		
Adjustment for no-passi Average travel speed, A Percent Free Flow Speed	\TSd	p		1.5 63.9 97.0	mi/h mi/h %		

Percent Time-	Spent-Followi	.ng		
Direction	Analysis(d)	Op	posing	(0)
PCE for trucks, ET	1.9		1.9	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.933		0.933	
Grade adjustment factor, (note-1) fg	0.73		0.73	
Directional flow rate, (note-2) vi	31 pc	:/h		pc/h
Base percent time-spent-following, (not	e-4) BPTSFd	3.9 %		1
Adjustment for no-passing zones, fnp		34.2		
Percent time-spent-following, PTSFd		24.3 %		
Level of Service and C)ther Performa	ince Measu	res	
Level of service, LOS		А		
Volume to capacity ratio, v/c		0.02		
Peak 15-min vehicle-miles of travel, V	/MT15	3 v	eh-mi	
Peak-hour vehicle-miles of travel, VMT		11 v	eh-mi	
Peak 15-min total travel time, TT15		0.0 v	eh-h	
Capacity from ATS, CdATS		1002 v	eh/h	
Capacity from PTSF, CdPTSF		1158 v		
Directional Capacity		1002 v		
Passing I	ane Analysis_			
Total length of analysis segment, Lt			0.6	mi
Length of two-lane highway upstream of	the passing	lane, Lu	0.0	mi
Length of passing lane including taper			0.6	mi
Average travel speed, ATSd (from above			63.9	mi/h
Percent time-spent-following, PTSFd (f			24.3	
Level of service, LOSd (from above)	,		A	
Average Travel Spee	d with Passi	ng Lane		
Downstream length of two-lane highway	within effect	ive	1 0	
length of passing lane for average		l, Lde	1.70	mi
Length of two-lane highway downstream	of effective			
length of the passing lane for ave	erage travel s	speed, Ld	-1.70	mi
Adj. factor for the effect of passing				
on average speed, fpl				
Average travel speed including passing	g lane, ATSpl			
Percent free flow speed including pass		Spl	0.0	010
Percent Time-Spent-Fol			ne	
	-			
Downstream length of two-lane highway	within effect	.⊥ve ⊥engt		
of passing lane for percent time-s	spent-tollowin	ig, Lde	13.00	mi
Length of two-lane highway downstream	of effective	length of		
the passing lane for percent time-		ng, Ld	-13.00	mi
Adj. factor for the effect of passing				
on percent time-spent-following, f	fpl			
Percent time-spent-following				
including passing lane, PTSFpl				010
Level of Service and Other Perfo	ormance Measur	es with P	assing	Lane
Level of service including passing lar	ne, LOSpl	E	, ,	
Peak 15-min total travel time, TT15		v	eh-h	
Bicycle Lev	vel of Service	9		

_____ Bicycle Level of Service _____

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 21.2 Flow rate in outside lane, vOL Effective width of outside lane, We 26.74 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.12 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

_____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To342.93 - 343.525JurisdictionITD District 2Analysis Year2017Perceription2017 Jared Hopkins Description 2017 Old US-95 C3 Rural SB 3 _____Input Data_____ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones31%Up/down-%Access point density6/mi Analysis direction volume, Vd 18 veh/h Opposing direction volume, Vo 12 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.7 2.7 1.1 1.1 Direction PCE for trucks, ET

 PCE for RVs, ER
 1.1
 1.1

 Heavy-vehicle adj. factor, (note-5) fHV
 0.880
 0.880

 Grade adj. factor, (note-1) fg
 0.67
 0.67

 Directional flow rate, (note-2) vi
 36
 pc/h
 24
 pc/h

 Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.7mi/hAverage travel speed, ATSd63.7mi/hPercent Free Flow Speed, PFFS96.7%

Phone: E-Mail:

Percent Time-	Spent-Follow	ing		
Direction	Analysis(d)		Opposing	(0)
PCE for trucks, ET	1.9		1.9	(-)
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.933		0.933	3
Grade adjustment factor, (note-1) fg	0.73		0.73	-
Directional flow rate, (note-2) vi	31 p	c/h	21	pc/h
Base percent time-spent-following, (not	-		00	perm
Adjustment for no-passing zones, fnp	L 4) DIIDIQ	36.3	0	
Percent time-spent-following, PTSFd			0	
reicent time-spent-forfowing, fisha		23.3	0	
Level of Service and O	ther Perform	ance Mea	sures	
Level of service, LOS		A		
Volume to capacity ratio, v/c		0.02		
Peak 15-min vehicle-miles of travel, V	MT15	3	veh-mi	
Peak-hour vehicle-miles of travel, VMT		11	veh-mi	
Peak 15-min total travel time, TT15		0.0	veh-h	
Capacity from ATS, CdATS		1002	veh/h	
Capacity from PTSF, CdPTSF		1158	veh/h	
Directional Capacity		1002	veh/h	
Passing L	ane Analysis			
Total length of analysis segment, Lt			0.6	mi
Length of two-lane highway upstream of		lane, L	u -	mi
Length of passing lane including taper			-	mi
Average travel speed, ATSd (from above			63.7	mi/h
Percent time-spent-following, PTSFd (f	rom above)		25.5	
Level of service, LOSd (from above)			А	
Average Travel Spee	d with Pass	ing Lane		
Development of two long highway	within offer	+ i 170		
Downstream length of two-lane highway length of passing lane for average	travol spee	d Lde	_	mi
Length of two-lane highway downstream	or errective	anood T	d _	mi
length of the passing lane for ave		speed, ц	u –	111.7
Adj. factor for the effect of passing	Lane			
on average speed, fpl	1 1 1 1 1		-	
Average travel speed including passing	lane, ATSpl		-	00
Percent free flow speed including pass	ing lane, PF	FSPI	0.0	6
Percent Time-Spent-Fol	lowing with	Passing	Lane	
Downstream length of two-lane highway	within effec	tive len	gth	
of passing lane for percent time-s	oent-followi	ng, Lde		mi
Length of two-lane highway downstream	of effective	length	of	
the passing lane for percent time-	spent-follow	ing, Id	_	mi
Adj. factor for the effect of passing		,~		
on percent time-spent-following, f			_	
	~ +			
Percent time-spent-following including passing lane, PTSFpl			-	010
Level of Service and Other Perfo	rmance Measu	res with	Passing	Lane
		P		
Level of service including passing lan	e, LUSPI	Ε	rrah h	
Peak 15-min total travel time, TT15		-	veh-h	
Bicycle Lev	el of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 Pavement rating, P 3 Flow rate in outside lane, vOL 21.2 Effective width of outside lane, We 26.74 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.12 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fax:				
Direct	ional Two-La	ne Highway	Segment	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2017 Old U	US-95 337.668 - 3 ITD Distric 2017	t 2 42.93 t 2				
	I	nput Data_				
Highway class Class 1 Shoulder width 2. Lane width 12 Segment length 5. Terrain type Ro Grade: Length - Up/down - Analysis direction volu	0 ft 2.0 ft 3 mi olling mi % ume, Vd 24 ume, Vo 16	<pre>% Trucks Truck cra % Recreat % No-pass Access po veh/h</pre>	and buses crawling wl speed ional veh ing zones int densi	icles	0.87 8 0.0 0.0 0 79 6	% % % % ∕mi
	Average					
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,	e-1) fg	0.6	80		posing (2.7 1.1 0.880 0.67 31	pc/h
Free-Flow Speed from F: Field measured speed, (r Observed total demand, Estimated Free-Flow Spe Base free-flow speed, (r Adj. for lane and shou Adj. for access point o	note-3) S FM (note-3) V eed: note-3) BFFS Lder width,(n	ote-3) fLS	1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd			65.9	mi/h		
Adjustment for no-pass: Average travel speed, A Percent Free Flow Speed	ATSd	þ	3.0 62.3 94.5	mi/h mi/h %		

Percent Time	-Spent-Follow	ing		
Direction PCE for trucks, ET PCE for RVs, ER	Analysis(d) 1.9 1.0		1.9 1.0	
Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (no Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	0.73 41 pe		00	
Level of Service and			easures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, Peak-hour vehicle-miles of travel, VM Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF	VMT15 T60	0.6 1002 1158	veh-mi veh-mi veh-h veh/h veh/h	
Directional Capacity		1002	veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream o Length of passing lane including tape Average travel speed, ATSd (from abov Percent time-spent-following, PTSFd (Level of service, LOSd (from above)	rs, Lpl e)		5.3 Lu – 62.3 36.6 B	mi mi mi/h
Average Travel Spe	ed with Pass	ing Lar	ne	
Downstream length of two-lane highway length of passing lane for averag Length of two-lane highway downstream	e travel spee	d, Lde	-	mi
length of the passing lane for av Adj. factor for the effect of passing on average speed, fpl Average travel speed including passin	erage travel lane	speed,	Ld - - -	mi
Percent free flow speed including pas	sing lane, PF	FSpl	0.0	<u>0</u>
Percent Time-Spent-Fo	llowing with	Passing	g Lane	
Downstream length of two-lane highway of passing lane for percent time- Length of two-lane highway downstream	spent-followi	ng, Lde	e –	mi
the passing lane for percent time Adj. factor for the effect of passing on percent time-spent-following,	-spent-follow lane	ing, Lo	d – b	mi
Percent time-spent-following including passing lane, PTSFpl			-	0
Level of Service and Other Perf	ormance Measu	res wi	th Passin	g Lane
Level of service including passing la Peak 15-min total travel time, TT15		E 	veh-h	
Bicycle Le	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 27.6 Flow rate in outside lane, vOL Effective width of outside lane, We 26.32 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.38 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		F	ax:				
Direct	ional Two-La	ne Hig	ſhway	Segment	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2017 Old U	US-95 342.93 - 34 ITD Distric 2017	t 2 3.525 t 2	2				
	I:	nput D	ata				
Highway class Class 1 Shoulder width 2. Lane width 12 Segment length 0. Terrain type Ro Grade: Length - Up/down - Analysis direction volu	0 ft 0 ft 6 mi 1ling mi % me, Vd 24	% Tru % Tru % Rec % No- Acces ve	acks a acks c craw creati passi s poi	factor, nd buses rawling l speed onal veh ng zones nt densi	icles	0.87 8 0.0 0.0 0 5 6	% % mi/hr % % /mi
	Average	Trave	el Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,(-1) fg		lysis 2.7 1.1 0.88 0.67 47	0		posing 2.7 1.1 0.880 0.67 31	(o) pc/h
Free-Flow Speed from Fi Field measured speed, (m Observed total demand, (Estimated Free-Flow Spe Base free-flow speed, (m Adj. for lane and shoul Adj. for access point o	ote-3) S FM note-3) V ed: ote-3) BFFS der width,(no	ote-3)		- - 70.0 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd				65.9	mi/h		
Adjustment for no-passi Average travel speed, A Percent Free Flow Speed	TSd	þ		1.1 64.2 97.4	mi/h mi/h %		

Direction PCE for trucks, ET	Analysis(d) 1.9		Opposing 1.9	(0)
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.933		0.933	3
Grade adjustment factor,(note-1) fg	0.73		0.73	
Directional flow rate, (note-2) vi		c/h	27	pc/h
Base percent time-spent-following, (not	.e-4) BPTSFd		010	
Adjustment for no-passing zones, fnp		15.9 14.7	0	
Percent time-spent-following, PTSFd		14./	6	
Level of Service and C	ther Performa	ance Mea	asures	
Level of service, LOS		А		
Volume to capacity ratio, v/c		0.03		
Peak 15-min vehicle-miles of travel, V	'MT15	4	veh-mi	
Peak-hour vehicle-miles of travel, VMT	60	14	veh-mi	
Peak 15-min total travel time, TT15		0.1		
Capacity from ATS, CdATS		1002		
Capacity from PTSF, CdPTSF		1158		
Directional Capacity		1002	veh/h	
Passing I	ane Analysis			
Total length of analysis segment, Lt			0.6	mi
Length of two-lane highway upstream of	the passing	lane. 1		mi
Length of passing lane including taper			_	mi
Average travel speed, ATSd (from above			64.2	mi/h
Percent time-spent-following, PTSFd (f			14.7	
Level of service, LOSd (from above)			A	
Average Travel Spee	d with Pass:	ing Lane	Э	
		2		
Downstream length of two-lane highway	within effect	tive		
length of passing lane for average	e travel speed	d, Lde	-	mi
length of passing lane for average Length of two-lane highway downstream	e travel speed of effective	d, Lde		
length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave	e travel speed of effective erage travel s	d, Lde		mi mi
length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave Adj. factor for the effect of passing	e travel speed of effective erage travel s	d, Lde		
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave Adj. factor for the effect of passing on average speed, fpl</pre>	e travel speed of effective rage travel s lane	d, Lde		
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing</pre>	e travel speed of effective erage travel s lane lane, ATSpl	d, Lde speed, 1		
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass</pre>	e travel speed of effective erage travel s lane lane, ATSpl sing lane, PFI	d, Lde speed, 1 FSpl	Ld - - - 0.0	mi
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing</pre>	e travel speed of effective erage travel s lane lane, ATSpl sing lane, PFI	d, Lde speed, 1 FSpl	Ld - - - 0.0	mi
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass</pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI	d, Lde speed, ¹ FSpl Passing	Ld - - 0.0 Lane	mi
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl sing lane, PFI lowing with I within effect pent-following	d, Lde speed, 1 FSpl Passing tive len ng, Lde	Ld - - 0.0 Lane ngth -	mi
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass Percent Time-Spent-Fol Downstream length of two-lane highway of passing lane for percent time-s Length of two-lane highway downstream</pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with l within effect pent-followin of effective	d, Lde speed, 1 FSpl Passing tive len ng, Lde length	Ld - - 0.0 Lane ngth - of	mi %
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for aver Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect of effective spent-following	d, Lde speed, 1 FSpl Passing tive len ng, Lde length	Ld - - 0.0 Lane ngth - of	mi %
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for aver Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect pent-followin of effective spent-follow: lane	d, Lde speed, 1 FSpl Passing tive len ng, Lde length	Ld - - 0.0 Lane ngth - of	mi %
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for aver Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect pent-followin of effective spent-follow: lane	d, Lde speed, 1 FSpl Passing tive len ng, Lde length	Ld - - 0.0 Lane ngth - of	mi %
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for aver Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect pent-followin of effective spent-follow: lane	d, Lde speed, 1 FSpl Passing tive len ng, Lde length	Ld - - 0.0 Lane ngth - of	mi % mi mi
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for aver Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect pent-followin of effective spent-follow: lane	d, Lde speed, 1 FSpl Passing tive len ng, Lde length	Ld - - 0.0 Lane ngth - of	mi %
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for aver Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect pent-followin of effective spent-follow: lane pl	d, Lde speed, 1 FSpl Passing tive len ng, Lde length ing, Ld	Ld - - 0.0 Lane ngth - of - -	mi % mi %
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for average Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect spent-followin of effective spent-followin lane spl	d, Lde speed, 1 FSpl Passing tive len ng, Lde length ing, Ld	Ld - - 0.0 Lane ngth - of - -	mi % mi %
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for average Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect spent-followin of effective spent-followin lane spl	d, Lde speed, 1 FSpl Passing tive len ng, Lde length ing, Ld	Ld - - 0.0 Lane ngth - of - -	mi % mi %
<pre>length of passing lane for average Length of two-lane highway downstream length of the passing lane for average Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing Percent free flow speed including pass </pre>	e travel speed of effective rage travel s lane lane, ATSpl ing lane, PFI lowing with I within effect pent-followin of effective spent-follow: lane pl ormance Measur	d, Lde speed, 1 FSpl Passing tive len ng, Lde length ing, Ld res with E -	Ld - - - 0.0 Lane ngth - of - - h Passing veh-h	mi % mi % Lane

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 27.6 Flow rate in outside lane, vOL Effective width of outside lane, We 26.32 4.94 Effective speed factor, St 2.38 Bicycle LOS Score, BLOS В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fa	IX:				
Direct	cional Two-La	ne High	way S	Segment .	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2017 Old T	Jared Hopki ITD Distric 1-6-2014 2017 US-95 343.525 - 3 ITD Distric 2017 JS-95 E2 Rura	t 2 44.004 t 2					
	I	input Da	ita				
Segment length 0 Terrain type Ro Grade: Length - Up/down - Analysis direction volu	.0 ft 2.0 ft .5 mi olling % ume, Vd 123	<pre>% Truc % Truck % Recr % No-p Access veb</pre>	cks ar crawl crawl ceatic bassir poir h/h	actor, nd buses cawling speed onal veh ng zones nt densi	icles	0.87 8 0.0 0.0 0 32 15	% % mi/hr % % /mi
Opposing direction volu	ume, Vo 82	ver	n/h				
	Average	e Travel	Spee	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fac Grade adj. factor,(not Directional flow rate,	e-1) fg	fHV	0.70	3		posing (2.7 1.1 0.880 0.67 160	o) pc/h
Free-Flow Speed from F Field measured speed, (Observed total demand, Estimated Free-Flow Spe Base free-flow speed, (Adj. for lane and shou Adj. for access point (note-3) S FM (note-3) V eed: note-3) BFFS lder width,(n	note-3)	fLS	- 55.0 2.6 3.8	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd				48.7	mi/h		
Adjustment for no-pass Average travel speed, A Percent Free Flow Spee	ATSd	ıp		1.1 44.5 91.5	mi/h mi/h %		

Percent Time-	-Spent-Follow:	ing		
Direction	Analysis(d)	(Opposing	(0)
PCE for trucks, ET	1.8		1.9	, <i>,</i>
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV			0.933	}
Grade adjustment factor, (note-1) fg	0.76		0.73	
Directional flow rate, (note-2) vi	198 p	c/h	138	pc/h
Base percent time-spent-following, (not			5	•
Adjustment for no-passing zones, fnp		39.9		
Percent time-spent-following, PTSFd		44.9	Ď	
Level of Service and (Other Perform	ance Meas	sures	
Level of service, LOS		D		
Volume to capacity ratio, v/c		0.13		
Peak 15-min vehicle-miles of travel, V	/MT15	18	veh-mi	
Peak-hour vehicle-miles of travel, VMS		62	veh-mi	
Peak 15-min total travel time, TT15		0.4	veh-h	
Capacity from ATS, CdATS		1063	veh/h	
Capacity from PTSF, CdPTSF			veh/h	
Directional Capacity			veh/h	
Passing 1	Lane Analysis			
Total length of analysis segment, Lt			0.5	mi
Length of two-lane highway upstream of		lane, Lu	1 - I	mi
Length of passing lane including tape:	rs, Lpl		-	mi
Average travel speed, ATSd (from above	e)		44.5	mi/h
Percent time-spent-following, PTSFd (:	from above)		44.9	
Level of service, LOSd (from above)			D	
Average Travel Spee	ed with Pass	ing Lane _.		
Downstream length of two-lane highway	within effec	tive		
length of passing lane for average	e travel spee	d. Lde	_	mi
Length of two-lane highway downstream	of effective	u, 100		
length of the passing lane for ave	or criccule	speed L		mi
length of the passing falle for ave	lano	Specu, h	4	***
Adj. factor for the effect of passing	Talle		_	
on average speed, fpl				
Average travel speed including passing	g lane, Alopi sing lang PF	FSD	0.0	00
Percent free flow speed including pass	Sing lane, if	ropi	0.0	Ŭ
Percent Time-Spent-Fo	llowing with	Passing :	Lane	
Downstream length of two-lane highway	within effec	tive len	gth	
of passing lane for percent time-	spent-followi	ng, Lde	-	mi
Length of two-lane highway downstream	of effective	length (of	
the passing lane for percent time	-spent-follow	ing, Ld	_	mi
Adj. factor for the effect of passing		2.		
on percent time-spent-following,			-	
Percent time-spent-following	- <u>r</u>			
including passing lane, PTSFpl			-	00
Level of Service and Other Perf	ormance Measu	res with	Passing	Lane
		F		
Level of service including passing la	me, LOSPI	E _	veh-h	
Peak 15-min total travel time, TT15		-	veh-h	
Bicycle Le	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 141.4 Effective width of outside lane, We 19.39 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 4.78 Ε Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fax:				
Directional	Two-Lane Hi	ghway S	Segment	Analys	is	
Agency/Co.ITD DDate Performed1-6-2Analysis Time Period2017HighwayUS-95From/To337.6	668 - 342.28 District 2	1				
	Input	Data				
Lane width12.0Segment length4.6Terrain typeRolling	ft % Tr ft % Tr mi Truc % Re mi % No % Acce	ucks an ucks c: k crawi creatio -passin ss poin	factor, nd buses rawling l speed onal veh ng zones nt densi	icles	0.85 8 0.0 0.0 0 50 6	% mi/hr % % /mi
Opposing direction volume, Vo	o 16 v	eh/h				
A	werage Trav	el Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor,(no Grade adj. factor,(note-1) fg Directional flow rate,(note-2	ote-5) fHV	0.67	0		posing (2.7 1.1 0.880 0.67 32	o) pc/h
Free-Flow Speed from Field Me Field measured speed, (note-3) Observed total demand, (note-3 Estimated Free-Flow Speed: Base free-flow speed, (note-3) Adj. for lane and shoulder wi Adj. for access point density	S FM 3) V BFFS dth,(note-3) fLS A	- - 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd			65.9	mi/h		
Adjustment for no-passing zon Average travel speed, ATSd Percent Free Flow Speed, PFFS			2.5 62.8 95.3	mi/h mi/h %		

Percent Time-S	pent-Follow	ing			
Direction A PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV	nalysis(d) 1.9 1.0 0.933		Oppo	osing 1.9 1.0 0.933	(0)
Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (note Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	41 p	5.1	olo	0.73 28	pc/h
Level of Service and Ot	her Perform	ance Mea	asur	es	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, VM Peak-hour vehicle-miles of travel, VMT6 Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	0	A 0.03 32 110 0.5 1002 1158 1002	vel vel vel vel	h-mi h-mi h-h h/h h/h h/h	
Passing La	ne Analysis				
Total length of analysis segment, Lt Length of two-lane highway upstream of Length of passing lane including tapers Average travel speed, ATSd (from above) Percent time-spent-following, PTSFd (fr Level of service, LOSd (from above)	, Lpl	lane, 1	Lu :	4.6 2.5 1.5 62.8 32.5 A	mi mi mi/h
Average Travel Speed	with Pass	ing Lan	e		
Downstream length of two-lane highway w length of passing lane for average Length of two-lane highway downstream of	travel spee f effective	d, Lde		1.70	mi
length of the passing lane for aver Adj. factor for the effect of passing l on average speed, fpl Average travel speed including passing Percent free flow speed including passi	ane lane, ATSpl			0.0	mi %
Percent Time-Spent-Foll	owing with	Passing	Lan	e	
Downstream length of two-lane highway w of passing lane for percent time-sp	vithin effec ent-followi	tive le: ng, Lde	ngth	13.00	
Length of two-lane highway downstream of the passing lane for percent time-s Adj. factor for the effect of passing l on percent time-spent-following, fp Dercent time-spent-following	pent-follow ane	ing, Ld	01	-12.40	mi
Percent time-spent-following including passing lane, PTSFpl					0.0
Level of Service and Other Perfor	mance Measu	res wit	h Pa	ssing :	Lane
Level of service including passing lane Peak 15-min total travel time, TT15	e, LOSpl	E	ve	h-h	
Bicycle Leve	el of Servic	e			

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 Pavement rating, P 3 Flow rate in outside lane, vOL 28.2 Effective width of outside lane, We 26.32 4.94 Effective speed factor, St 2.38 Bicycle LOS Score, BLOS В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax:

Phone:

E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To342.28 - 342.93JurisdictionITD District 2Analysis Year2017Description2017 Description 2017 Old US-95 Rural SB 2 _____Input Data_____ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones27%Up/down-%Access point density6/mi Analysis direction volume, Vd 24 veh/h Opposing direction volume, Vo 16 veh/h _____Average Travel Speed_____ Analysis(d)Opposing (o)2.72.71.11.1 Direction PCE for trucks, ET PCE for trucks, ET2.7PCE for RVs, ER1.1Heavy-vehicle adj. factor, (note-5) fHV0.880Grade adj. factor, (note-1) fg0.67Directional flow rate, (note-2) vi48pc/h32 Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.5mi/hAverage travel speed, ATSd63.8mi/hPercent Free Flow Speed, PFFS96.8%

Percent Tin	me-Spent-Follow:	ing		
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fH Grade adjustment factor, (note-1) fg		C	pposing (1.9 1.0 0.933 0.73	0)
Directional flow rate, (note-2) vi Base percent time-spent-following, (Adjustment for no-passing zones, fn Percent time-spent-following, PTSFd	41 po note-4) BPTSFd p		28	pc/h
Level of Service and	d Other Performa	ance Meas	ures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel Peak-hour vehicle-miles of travel, Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	VMT 60	14 0.1 1002 1158 1002	veh-mi veh-mi veh-h veh/h veh/h veh/h	
Passing	g Lane Analysis			
Total length of analysis segment, L Length of two-lane highway upstream Length of passing lane including tap Average travel speed, ATSd (from ab Percent time-spent-following, PTSFd Level of service, LOSd (from above)	of the passing pers, Lpl ove) (from above)	lane, Lu	0.6 0.0 0.6 63.8 25.4 A	mi mi mi/h
Average Travel S	peed with Pass:	ing Lane_		
Downstream length of two-lane highw length of passing lane for aver Length of two-lane highway downstrea	age travel speed	tive d, Lde	1.70	mi
length of the passing lane for Adj. factor for the effect of passis on average speed, fpl Average travel speed including pass	average travel s ng lane	speed, Ld	-1.70	mi
Percent free flow speed including p		FSpl	0.0	010
Percent Time-Spent-	Following with 1	Passing L	ane	
Downstream length of two-lane highw of passing lane for percent time Length of two-lane highway downstread	e-spent-followi:	ng, Lde	13.00	mi
the passing lane for percent tin Adj. factor for the effect of passis on percent time-spent-following Percent time-spent-following	me-spent-follow: ng lane	ing, Ld	-13.00	mi
including passing lane, PTSFpl				0
Level of Service and Other Pe	rformance Measu:	res with	Passing I	ane
Level of service including passing Peak 15-min total travel time, TT15		E	veh-h	
Bicycle	Level of Service	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 28.2 Effective width of outside lane, We 26.32 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.38 Bicycle LOS В

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To342.93 - 343.525JurisdictionITD District 2Analysis Year2017Description2017 Description 2017 Old US-95 E2 Rural SB 3 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones31%Up/down-%Access point density6/mi Analysis direction volume, Vd 123 veh/h Opposing direction volume, Vo 82 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 2.5 1.1 2.7 PCE for trucks, ET PCE for trucks, ET2.52.7PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8930.880Grade adj. factor, (note-1) fg0.710.67Directional flow rate, (note-2) vi228pc/h Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp2.4mi/hAverage travel speed, ATSd60.4mi/hPercent Free Flow Speed, PFFS91.7%

Direction Analysis(d) Opport PCE for trucks, ET 1.8 PCE for RVs, ER 1.0 Heavy-vehicle adjustment factor, fHV 0.940 Grade adjustment factor, (note-1) fg 0.76 Directional flow rate, (note-2) vi 203 pc/h Base percent time-spent-following, (note-4) BPTSFd 21.8 Adjustment for no-passing zones, fnp 39.6 Percent time-spent-following, PTSFd 45.1 %	1.9 1.0 0.933 0.73 142 pc/h
Level of Service and Other Performance Measure	es
	ı/h ı/h
Passing Lane Analysis	
Length of two-lane highway upstream of the passing lane, Lu Length of passing lane including tapers, Lpl Average travel speed, ATSd (from above) Percent time-spent-following, PTSFd (from above)	D.6 mi - mi 50.4 mi/h 45.1 3
Average Travel Speed with Passing Lane	
Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld Adj. factor for the effect of passing lane on average speed, fpl	- mi
Average travel speed including passing lane, ATSpl -	-
Percent free flow speed including passing lane, PFFSpl ().0 %
Percent Time-Spent-Following with Passing Lane	9
Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde	- mi
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld	- mi
Adj. factor for the effect of passing lane	
on percent time-spent-following, fpl Percent time-spent-following including passing lane, PTSFpl	- %
Level of Service and Other Performance Measures with Pas	ssing Lane
Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh	n-h
Bicycle Level of Service	

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 144.7 Flow rate in outside lane, vOL Effective width of outside lane, We 19.39 Effective speed factor, St 4.94 Bicycle LOS Score, BLOS 4.79 E Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To343.525 - 344.004JurisdictionITD District 2Analysis Year2017Description2017 Description 2017 Old US-95 E2 Rural SB 4 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones0%Up/down-%Access point density15/mi Analysis direction volume, Vd 123 veh/h Opposing direction volume, Vo 82 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.5 2.7 1.1 1.1 Direction PCE for trucks, ET2.52.7PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8930.880Grade adj. factor, (note-1) fg0.710.67Directional flow rate, (note-2) vi228pc/h Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM Observed total demand, (note-3) V - mi/h - veh/h Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Mi/h Adj. for access point density, (note-3) fA 3.8 48.7 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp0.8mi/hAverage travel speed, ATSd44.8mi/hPercent Free Flow Speed, PFFS92.1%

PCE for trucks, ET1.81.9PCE for RVs, ER1.01.0Heavy-vehicle adjustment factor, fHV0.9400.933Grade adjustment factor, (note-1) fg0.760.73Directional flow rate, (note-2) vi203 pc/h142 pc/hBase percent time-spent-following, (note-4) BPTSFd21.8%Adjustment for no-passing zones, fnp13.6Percent time-spent-following, PTSFd29.8%	Pe	ercent Time-Spent-Follow.	ing		
PCE for RVs, ER 1.0 1.0 Heavy-vehicle adjustment factor, fHV 0.940 0.933 Srade adjustment factor, (note-1) vi 203 pc/h 142 pc/h Base percent time-spent-following, (note-4) BPTSFd 21.8 % Adjustment for no-passing zones, fnp 13.6 Percent time-spent-following, (note-4) BPTSFd 21.8 % Majustment for no-passing zones, fnp 13.6 Percent time-spent-following, (note-4) BPTSFd 21.8 % Mainter Spent-following, PTSFd 29.6 % Percent time-spent-following, Note-4) BPTSFd 142 pc/h Beak 15-min vehicle-miles of travel, VMT15 18 veh-mi Peeck-hour vehicle-miles of travel, VMT15 16 veh-mi Peak-hour vehicle-miles of travel, VMT15 16 veh-mi Peeck-hour vehicle Peeck-hour vehicle Passing Lane Zoney Veh-mi Peeck-hour vehicle Capacity from ATS, CdATS 1063 veh/h Directional Capacity No63 veh/h Capacity from ATS, CdATS 1063 veh/h Directional Capacity No63 veh/h Capacity from ATS, CdATS 1063 veh/h Directional	Direction	Analysis(d)	(Opposing	(0)
PCE for RVs, ER 1.0 1.0 Reavy-vehicle adjustment factor, fHV 0.940 0.933 Grade adjustment factor, (note-1) fg 0.76 0.73 Directional flow rate, (note-2) vi 203 pc/n 142 pc/h Base percent time-spent-following, (note-4) BFTSfd 21.8 8 Percent time-spent-following, PTSFd 29.8 8	PCE for trucks, ET	1.8		1.9	
Stadé adjustment factor, (note-1) fg 0.76 0.73 Directional flow rate, (note-2) vi 203 pc/h 142 pc/h Base percent time-spent-following, (note-4) BPTSFd 21.8 % Adjustment for no-passing zones, fnp 13.6 Percent time-spent-following, PTSFd 29.8 %	PCE for RVs, ER	1.0		1.0	
Grade adjustment factor, (note-1) fg 0.76 0.73 Directional flow rate, (note-2) vi 203 pc/h 142 pc/h Base percent time-spent-following, (note-4) BPTSrd 21.8 % Adjustment for no-passing zones, fnp 13.6 Percent time-spent-following, PTSFd 29.8 %	Heavy-vehicle adjustment fa	actor, fHV 0.940		0.933	3
Directional flow rate, (note-2) vi 203 pc/h 142 pc/h Base percent time-spent-following, (note-4) BPTSFd 21.8 % Adjustment for no-passing zones, fnp 13.6 Percent time-spent-following, PTSFd 29.8 % 				0.73	
Base percent time-spent-following, (note-4) BPTSFd 21.8 % Adjustment for no-passing zones, fnp 13.6 Percent time-spent-following, PTSFd 29.8 %Level of Service and Other Performance Measures Bevel of service, LOS D Volume to capacity ratio, v/C 0.13 Peak 15-min vehicle-miles of travel, VMT15 16 veh-mi Peak-hour vehicle-miles of travel, VMT15 0.4 veh-mi Peak-hour vehicle-miles of travel, VMT15 10.4 veh-h Capacity from ATS, CdATS 1063 veh/h Capacity from ATS, CdATS 1064 veh/h Capacit			c/h		pc/h
Adjustment for no-passing zones, fip 13.6 Percent time-spent-following, PTSFd 29.8 Level of Service and Other Performance Measures		· · ·			1
Percent time-spent-following, PTSFd 29.8 %				0	
Level of Service and Other Performance Measures Level of service, LOS D Volume to capacity ratio, v/c 0.13 Peak 15-min vehicle-miles of travel, VMT50 62 veh-mi Peak 15-min total travel time, TT15 0.4 veh-h Peak 15-min total travel time, TT15 0.4 veh-h Capacity from ATS, CdATS 1063 veh/h Capacity from PTSF, CdFTSF 1214 veh/h Directional Capacity 1063 veh/h Derectional Capacity 0.5 mi Mercerge travel speed, ATSG (from above) 44.8 mi/h Mercerge travel speed, ATSG (from above) 29.8 Derectent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D - mi Average Travel Speed with Passing Lane - mi Length of the passing lane for average travel speed, Ld - mi mi Level of two-lane highway downstream of effective - mi Level of two-lane highway downstream of effective - mi Levet of two speed including passing lane, ATSpl -				2	
Level of service, LOS D Volume to capacity ratio, v/c 0.13 Peak 15-min vehicle-miles of travel, VMT15 18 veh-mi Peak-hour vehicle-miles of travel, VMT15 18 veh-mi Peak 15-min total travel time, TT15 0.4 veh-h Capacity from ATS, CAPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CAPTSF 1214 veh/h Directional Capacity 1063 veh/h Passing Lane Analysis Total length of analysis segment, Lt 0.5 mi Length of two-lane highway upstream of the passing lane, Lu - mi Length of two-lane highway upstream of the passing Lane _ mi Length of service, LOSd (from above) 44.8 mi/h Percent time-spent-following, PTSFd (from above) D Mercage Travel Speed with Passing Lane Downstream length of two-lane highway within effective Length of two-lane highway downstream of effective Length of the passing lane for average travel speed, Ld - mi AdJ, factor for the effect of passing lane, ATSpl - Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane, ATSpl - Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane, ATSpl - Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane, ATSpl - Percent time-spent-following, Id - mi Length of two-lane highway downstream of effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane, ATSpl - Percent time-spent-following, Ld - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane (PFFSpl - Percent time-spent-following, Ld - mi Adj. factor for the effect of passing	-				
Volume to capacity ratio, v/c 0.13 Peak 15-min vehicle-miles of travel, VMT15 18 veh-mi Peak-hour vehicle-miles of travel, VMT60 62 veh.mi Peak 15-min total travel time, TT15 0.4 veh.h Capacity from ATS, CdATS 1063 veh/h Capacity from ATS, CdATS 1063 veh/h Capacity from ATS, CdATS 1063 veh/h Directional Capacity 1063 veh/h Directional Capacity 1063 veh/h Capacity from ATS, CdATS 1063 veh/h Directional Capacity 1063 veh/h Capacity from ATS, CdATS 1063 veh/h Capacity from ATS, CdATS 1063 veh/h Length of analysis segment, Lt 0.5 mi Length of two-lane highway upstream of the passing lane, Lu - mi Average travel speed, ATSG (from above) 29.8 - Level of service, LOSd (from abore) D - mi Adj. factor for the offect of passing lane - mi - Average travel speed including passing lane, ATSpl - - -	Level of Se	ervice and Other Performa	ance Meas	sures	
Peak 15-min vehicle-miles of travel, VMT15 18 veh-mi Peak 15-min total travel time, TT15 0.4 veh-h Capacity from ATS, CdATS 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CdPTSF 0.5 mi Length of analysis segment, Lt 0.5 mi Length of two-lane highway upstream of the passing lane, Lu - mi Percent time-spent-following, PTSFG (from above) 29.8 Evel of service, LOSd (from above) Percent time-spent-following, PTSFG (from above) D D Capacity of two-lane highway within effective - mi Length of passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane, ATSpl - - Average travel speed including passing lane, ATSpl - - Average travel speed including passing lane, PFFSpl 0.0 %	Level of service, LOS		D		
Peak 15-min vehicle-miles of travel, VMT15 18 veh-mi Peak-hour vehicle-miles of travel, VMT60 62 veh-mi Peak 15-min total travel time, TT15 0.4 veh-h Capacity from ATS, CdATS 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 0.5 mi Length of analysis segment, Lt 0.5 mi Length of two-lane highway upstream of the passing lane, Lu mi Percent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D	Volume to capacity ratio,	v/c	0.13		
Peak-hour vehicle-miles of travel, VMT60 62 veh-mi Peak 15-min total travel time, TT15 0.4 veh-h Capacity from ATS, CdATS 1063 veh/h Capacity from ATS, CdTSF 1214 veh/h Directional Capacity 1063 veh/h Passing Lane Analysis				veh-mi	
Peak 15-min total travel time, TT15 0.4 veh-h Capacity from ATS, CdATS 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Directional Capacity 1063 veh/h					
Capacity from ATS, CdATS 1063 veh/h Capacity from PTSF, CdFTSF 1214 veh/h Directional Capacity 1063 veh/h		•			
Dapacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h		Luc, 1110			
Directional Capacity 1063 veh/h Passing Lane Analysis Total length of analysis segment, Lt 0.5 mi Length of two-lane highway upstream of the passing lane, Lu - mi Average travel speed, ATSd (from above) 29.8 Level of service, LOSd (from above) D Average Travel Speed with Passing Lane Newrage Travel Speed with Passing Lane Newrage travel speed, Lde - mi Attended of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Average travel speed, fpl - mi Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Percent Time-spent-following, Ld - mi Adj. factor for the effect of passing lane, PFFSpl 0.0 % Percent time-spent-following, fpl - Percent time-spent-following, Ld - mi Length of two-lane highway within effective length of two-lane highway downstream of effective					
Passing Lane Analysis Passing Lane Analysis Passing Lane Analysis Percent length of analysis segment, Lt 0.5 mi Length of two-lane highway upstream of the passing lane, Lu - mi Average travel speed, ATSd (from above) 44.8 mi/h Percent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D Average Travel Speed with Passing Lane - Downstream length of two-lane highway within effective - length of passing lane for average travel speed, Lde - Ingth of two-lane highway downstream of effective - length of the passing lane for average travel speed, Ld - Average speed, fpl - Average speed, fpl - Average speed, fpl - Average speed including passing lane, ATSpl - Percent Time-Spent-Following with Passing Lane - Downstream length of two-lane highway within effective length - of passing lane for percent time-spent-following, Ld - Percent Time-Spent-Following, Ld - Mid, factor for the effect of passing lane - Ownstream length of two-lane highway downst				•	
Total length of analysis segment, Lt 0.5 mi Length of two-lane highway upstream of the passing lane, Lu mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 44.8 mi/h Percent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D Average Travel Speed with Passing Lane	Directional Capacity		T063	veh/h	
Length of two-lane highway upstream of the passing lane, Lu - mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 44.8 mi/h Percent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D 		Passing Lane Analysis			
Length of two-lane highway upstream of the passing lane, Lu - mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 44.8 mi/h Percent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D 	Total length of analysis se	eqment. It		0.5	mi
Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 44.8 mi/h Percent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Percent free flow speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on average speed. Following fell - mi Percent time-spent-following, Ld - mi Length of two-lane highway within effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, Fpl - Percent time-spent-following fpl - Percent time-spent-following fpl - Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E			lane Lu		
Average travel speed, ATSd (from above) 44.8 mi/h Percent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D			iune, in	_	
Percent time-spent-following, PTSFd (from above) 29.8 Level of service, LOSd (from above) D Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Ld - mi Length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following, fpl - Percent time-spent-following, fpl - Percent of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E				11 0	
Level of service, LOSd (from above) D					111 / 11
Average Travel Speed with Passing Lane					
Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % 	Level of service, LOSd (fro	om above)		D	
<pre>length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl</pre>	Average	Travel Speed with Pass	ing Lane_		
<pre>length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl</pre>	Downstream length of two-1a	ane highway within effec	tive		
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Percent Time-Spent-Following, Lde - mi Length of two-lane highway downstream of effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - Level of Service and Other Performance Measures with Passing Lane				_	mi
<pre>length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % </pre>					
Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following fpl - Percent time-spent-following fpl - Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E			speed. Lo	- F	mi
on average speed, fpl - Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane			Spece, De	<i>.</i>	1112
Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane		or passing rane		_	
Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane		ding proving long and -1		_	
Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane				-	0_
Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E	Percent free flow speed ind	cluding passing lane, PF	гарт	0.0	õ
of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E	Percent Tir	me-Spent-Following with	Passing I	Lane	
of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E	Downstream length of two-1;	ane highway within effec	tive lend	gth	
Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E				-	mi
<pre>the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E</pre>				of	
Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E	the presing lone for a	acount time-spont-follow	ing Id		mi
on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - %Level of Service and Other Performance Measures with Passing LaneLevel of service including passing lane, LOSpl E			тну, ца		****
Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E					
including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E		-		-	
Level of Service and Other Performance Measures with Passing Lane					
Level of service including passing lane, LOSpl E	including passing lane,	, PTSFpl		-	olo
	Level of Service and	Other Performance Measu	res with	Passing	Lane
	Level of service including	passing lane. LOSpl	Ē		
Leak to min colar craver crme, iiio			_	veh-h	
	reak 10-min lotai tiavel t.	inc, iiio		v 🗸 1 I II	
		Bicycle Level of Service			

_____ Bicycle Level of Service _____

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60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 Pavement rating, P 3 Flow rate in outside lane, vOL 144.7 Effective width of outside lane, We 19.39 4.94 Effective speed factor, St 4.79 Bicycle LOS Score, BLOS Bicycle LOS Е

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To337.668 - 342.93JurisdictionITD District 2Analysis Year2017Description2017 Description 2017 Old US-95 W4 Rural NB 1 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length5.3miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones79%Up/down-%Access point density6/mi Analysis direction volume, Vd 16 veh/h Opposing direction volume, Vo 11 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.7 2.7 1.1 1.1 Direction PCE for trucks, ET PCE for RVs, ER PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8800.880Grade adj. factor, (note-1) fg0.670.67Directional flow rate, (note-2) vi31pc/h21pc/h Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp3.0mi/hAverage travel speed, ATSd62.5mi/hPercent Free Flow Speed, PFFS94.9% Average travel speed, ATSd Percent Free Flow Speed, PFFS

Direction Analysis(d) PCE for trucks, ET 1.9 PCE for RVs, ER 1.0 Heavy-vehicle adjustment factor, fHV 0.933 Grade adjustment factor, (note-1) fg 0.73 Directional flow rate, (note-2) vi 27 p Base percent time-spent-following, (note-4) BPTSFd Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	oc/h	Opposing 1.9 1.0 0.933 0.73 19 %	
Level of Service and Other Perform	nance Mea	asures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, VMT15 Peak-hour vehicle-miles of travel, VMT60 Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	A 0.02 24 85 0.4 1002 1158 1002	veh-mi veh-mi veh-h veh/h veh/h veh/h	
Passing Lane Analysis	S		
Total length of analysis segment, Lt Length of two-lane highway upstream of the passing Length of passing lane including tapers, Lpl Average travel speed, ATSd (from above) Percent time-spent-following, PTSFd (from above) Level of service, LOSd (from above)	g lane, 1	5.3 Lu – 62.5 34.0 A	mi mi mi/h
Average Travel Speed with Pass	sing Lane	e	
Downstream length of two-lane highway within effect length of passing lane for average travel spece Length of two-lane highway downstream of effective length of the passing lane for average travel	ed, Lde e		mi mi
Adj. factor for the effect of passing lane on average speed, fpl		_	
Average travel speed including passing lane, ATSpl		-	0
Percent free flow speed including passing lane, PE	rspi	0.0	00
Percent Time-Spent-Following with	Passing	Lane	
Downstream length of two-lane highway within effect of passing lane for percent time-spent-following Length of two-lane highway downstream of effective	lng, Lde	-	mi
the passing lane for percent time-spent-follow			mi
Adj. factor for the effect of passing lane		_	
on percent time-spent-following, fpl Percent time-spent-following including passing lane, PTSFpl		-	8
Level of Service and Other Performance Measu	ures wit	h Passing	Lane
Level of service including passing lane, LOSpl Peak 15-min total travel time, TT15	E	veh-h	
Bicycle Level of Servic	ce		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 18.4 Effective width of outside lane, We 26.88 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.00 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
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- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fax	:			
Direct	ional Two-La	ne Highw	ay Segment	Analys	LS	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2017 Old U	US-95 342.93 - 34 ITD Distric 2017	t 2 3.525 t 2				
	I:	nput Dat	a			
Segment length 0. Terrain type Ro Grade: Length - Up/down - Analysis direction volu	0 ft 2.0 ft 6 mi olling mi % nme, Vd 16	<pre>% Truck % Truck c % Recre % No-pa Access veh/</pre>	s crawling rawl speed ational veh ssing zones point densi h	icles	0.87 8 0.0 0.0 0 5 6	% % mi/hr % % /mi
Opposing direction volu	ıme, Vo 11	veh/	h			
	Average	Travel	Speed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,	e−1) fg	2 1 fHV 0 0	sis(d) .7 .1 .880 .67 1 pc/h		cosing (2.7 1.1 0.880 0.67 21	pc/h
Free-Flow Speed from F Field measured speed, (Observed total demand, Estimated Free-Flow Spe Base free-flow speed, (Adj. for lane and shoul Adj. for access point o	note-3) S FM (note-3) V eed: note-3) BFFS der width,(n	ote-3) f	- - 70.0 LS 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd			65.9	mi/h		
Adjustment for no-pass Average travel speed, A Percent Free Flow Speed	ATSd	p	1.1 64.4 97.7	mi/h mi/h %		

Percent Time-Spent-Followi	ing			
Direction Analysis(d) PCE for trucks, ET 1.9 PCE for RVs, ER 1.0 Heavy-vehicle adjustment factor, fHV 0.933 Grade adjustment factor, (note-1) fg 0.73 Directional flow rate, (note-2) vi 27 pc Base percent time-spent-following, (note-4) BPTSFd	c/h		00sing 1.9 1.0 0.933 0.73 19	3
	12.7	010		
Level of Service and Other Performa	ance Me	easui	res	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, VMT15 Peak-hour vehicle-miles of travel, VMT60 Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	A 0.02 3 10 0.0 1002 1158 1002	Ve Ve Ve	eh-mi eh-mi eh-h eh/h eh/h eh/h	
Passing Lane Analysis_				
Total length of analysis segment, Lt Length of two-lane highway upstream of the passing Length of passing lane including tapers, Lpl Average travel speed, ATSd (from above) Percent time-spent-following, PTSFd (from above) Level of service, LOSd (from above)	lane,		0.6 - 64.4 12.7 A	mi mi mi/h
Average Travel Speed with Pass	ing Lar	ne		
Downstream length of two-lane highway within effect length of passing lane for average travel speed Length of two-lane highway downstream of effective length of the passing lane for average travel s Adj. factor for the effect of passing lane	d, Lde		-	mi mi
on average speed, fpl Average travel speed including passing lane, ATSpl			-	
Percent free flow speed including passing lane, PFI	FSpl		0.0	010
Percent Time-Spent-Following with H	Passing	g Lan	ne	
Downstream length of two-lane highway within effect of passing lane for percent time-spent-followin	ng, Lde	е	-	mi
Length of two-lane highway downstream of effective the passing lane for percent time-spent-follow: Adj. factor for the effect of passing lane on percent time-spent-following, fpl	ing, Lo	1 01 1	-	mi
Percent time-spent-following including passing lane, PTSFpl			-	0
Level of Service and Other Performance Measur	res wi	th Pa	assing	Lane
Level of service including passing lane, LOSpl Peak 15-min total travel time, TT15	E -		eh-h	
Bicycle Level of Service	e			

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 18.4 Flow rate in outside lane, vOL Effective width of outside lane, We 26.88 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.00 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To343.525 - 344.004JurisdictionITD District 2Analysis Year2017Description2017 Jared Hopkins Description 2017 Old US-95 W4 Rural NB 3 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones32%Up/down-%Access point density15/mi Analysis direction volume, Vd 123 veh/h Opposing direction volume, Vo 82 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.5 2.7 Direction PCE for trucks, ET 1.1 1.1

 PCE for RVs, ER
 1.1
 1.1

 Heavy-vehicle adj. factor, (note-5) fHV
 0.893
 0.880

 Grade adj. factor, (note-1) fg
 0.70
 0.67

 Directional flow rate, (note-2) vi
 226
 pc/h
 160
 pc/h

 PCE for RVs, ER Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for lane and shoulder width, (note-3) fA 3.8 mi/h Adj. for access point density, (note-3) fA 3.8 48.7 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.1mi/hAverage travel speed, ATSd44.5mi/hPercent Free Flow Speed, PFFS91.5% Average travel speed, ATSd Percent Free Flow Speed, PFFS

Percent Time	-Spent-Follow:	ing		
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV	Analysis(d) 1.8 1.0 0.940	(Opposing 1.9 1.0 0.933	
Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (nor Adjustment for no-passing zones, fnp	198 po te-4) BPTSFd	21.4 39.9	00	pc/h
Percent time-spent-following, PTSFd				
Level of Service and o	Juner Periorma	ance Mea	sures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, VM Peak-hour vehicle-miles of travel, VM Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity		D 0.13 18 62 0.4 1063 1214 1063	veh/h	
Passing	Lane Analysis _.			
Total length of analysis segment, Lt Length of two-lane highway upstream o Length of passing lane including tape Average travel speed, ATSd (from abov Percent time-spent-following, PTSFd (Level of service, LOSd (from above)	rs, Lpl e)	lane, L	0.5 u - 44.5 44.9 D	mi mi
Average Travel Spe	ed with Pass	ing Lane		
Downstream length of two-lane highway length of passing lane for averag Length of two-lane highway downstream	e travel speed	tive d, Lde	-	mi
length of two falle highway downsered length of the passing lane for av Adj. factor for the effect of passing on average speed, fpl	erage travel :	speed, L	d -	mi
Average travel speed including passin Percent free flow speed including pas	g lane, ATSpl sing lane, PF	FSpl	- 0.0	00
Percent Time-Spent-Fo	llowing with :	Passing	Lane	
Downstream length of two-lane highway of passing lane for percent time- Length of two-lane highway downstream	spent-followi:	ng, Lde	-	mi
the passing lane for percent time Adj. factor for the effect of passing	-spent-follow lane	ing, Ld	-	mi
on percent time-spent-following, Percent time-spent-following including passing lane, PTSFpl	гЪт		_	0 0
Level of Service and Other Perf	ormance Measu	res with	Passing	Lane
Level of service including passing la Peak 15-min total travel time, TT15		E -	veh-h	
Bicycle Le	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 141.4 Flow rate in outside lane, vOL Effective width of outside lane, We 19.39 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 4.78 Ε Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
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Phone: E-Mail:		Fax:				
Directio	nal Two-Lane Hi	lghway :	Segment	Analys	is	
Agency/Co. I Date Performed 1 Analysis Time Period 2 Highway U From/To 3 Jurisdiction I	ared Hopkins TD District 2 -6-2014 017 S-95 37.668 - 342.28 TD District 2 017 95 W4 Rural SB					
	Input	Data				
	ft % Tr ft % Tr mi Truc ing % Re mi % No % Acce , Vd 16 x	rucks an rucks ci ck craw ecreation p-passin ess poin veh/h veh/h	l speed onal veh ng zones nt densi	icles	0.85 8 0.0 0.0 0 50 6	% % mi/hr % % ∕mi
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor,(note-1 Directional flow rate,(no	,(note-5) fHV) fg	nalysis 2.7 1.1 0.88 0.67 32	0		posing 2.7 1.1 0.880 0.67 22	(o) pc/h
Free-Flow Speed from Fiel Field measured speed, (not Observed total demand, (no Estimated Free-Flow Speed Base free-flow speed, (not Adj. for lane and shoulde Adj. for access point dem	d Measurement: e-3) S FM te-3) V : e-3) BFFS r width,(note-3)	3) fLS	- - 70.0 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd			65.9	mi/h		
Adjustment for no-passing Average travel speed, ATS			2.5 63.0	mi/h mi/h		

	-			
Direction	Analysis(d)	Op	posing (0)
PCE for trucks, ET	1.9	-	1.9	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV			0.933	
Grade adjustment factor, (note-1) fg			0.73	
Directional flow rate, (note-2) vi		c/h	19	pc/h
Base percent time-spent-following, (no			19	p0, 11
		46.1		
Adjustment for no-passing zones, fnp		31.0 %		
Percent time-spent-following, PTSFd		51.0 %		
Level of Service and	Other Perform	ance Meası	ires	
Level of service, LOS		А		
Volume to capacity ratio, v/c		0.02		
Peak 15-min vehicle-miles of travel,	VMT15		veh-mi	
Peak-hour vehicle-miles of travel, V			veh-mi	
Peak 15-min total travel time, TT15			veh-h	
			veh/h	
Capacity from ATS, CdATS			veh/h	
Capacity from PTSF, CdPTSF			veh/h	
Directional Capacity		1002	/en/n	
Passing	Lane Analysis			
Total length of analysis segment, Lt			4.6	mi
Length of two-lane highway upstream	of the passing	lane. Lu		mi
Length of passing lane including tap	ors Inl	14.1.07 24	1.5	mi
			63.0	mi/h
Average travel speed, ATSd (from abo			31.0	III 1 / 11
Percent time-spent-following, PTSFd	(ITOM above)		A .	
Level of service, LOSd (from above)			A	
Average Travel Sp	eed with Pass	ing Lane		
Downstream length of two-lane highwa	v within effec	tive		
length of passing lane for avera	ge travel spee	d. Lde	1.70	mi
Length of two-lane highway downstream	m of effective	a, 240		
length of the passing lane for a	Merage travel	speed Id	-1.10	mi
Iength of the passing falle for a	a lano	Speca, Ia	1.10	
Adj. factor for the effect of passin	y Talle			
on average speed, fpl				
Average travel speed including passi	ng lane, Alspi	ECol	0.0	Q.
Percent free flow speed including pa	ssing lane, Pr	FSPI	0.0	õ
Percent Time-Spent-F	ollowing with	Passing La	ane	
Downstream length of two-lane highwa	v within effec	tive leng	zh	
of passing lane for percent time	-spent-followi	ng, Lde	13.00	mi
Length of two-lane highway downstrea	m of effective	length o		
the passing lane for percent tim	e-spent-follow	ing. Ld	-12.40	mi
Adj. factor for the effect of passin	g lane	11197 24		
on percent time-spent-following,	- Y -			
Percent time-spent-following				00
including passing lane, PTSFpl				U
Level of Service and Other Per	formance Measu	res with	Passing I	ane
Level of service including passing l	ane, LOSpl	E		
Peak 15-min total travel time, TT15			veh-h	
Bicycle L	evel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 18.8 Flow rate in outside lane, vOL Effective width of outside lane, We 26.88 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.03 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

E-Mail:						
Direct	ional Two-Lar	ne Highway	Segment A	Analvsi	LS	
		10				
Analyst	Jared Hopkin					
Agency/Co.	ITD District	z 2				
	1-6-2014					
Analysis Time Period						
Highway	US-95					
From/To	342.28 - 342	2.93				
Jurisdiction	ITD District					
4	2017 205 M4 Duma ¹					
Description 2017 Old US	5-95 W4 Rura.					
	Ir	nput Data				
Highway class Class 1		Peak hour	factor,	PHF	0.85	<u>^</u>
Shoulder width 2.0) ft	% Trucks a	nd buses		8	010
Lane width 12.	.0 ft	% Trucks o	rawling		0.0	00
Segment length 0.6	6 mi	Truck craw	l speed		0.0	mi/hr
Segment length 0.0 Terrain type Ro.	lling	% Recreati	onal veh:	icles	0	50 0
Shoulder width2.0Lane width12Segment length0.0Terrain typeRoiGrade: Length-Up/down-	mi	% No-passi	ng zones		27	ð / i
Up/down -	00	Access poi	nt densi	ty	6	/ m1
Analysis direction volum	ne, Vo 11	veh/h				
Opposing direction volu	ne, Vo 11	veh/h	ad			
Opposing direction volu	ne, Vo 11	veh/h Travel Spe				
Direction	ne, Vo 11	veh/h Travel Spe Analysis	;(d)	Opj	posing	
Opposing direction volur Direction PCE for trucks, ET	ne, Vo 11	veh/h Travel Spe Analysis 2.7	s(d)	Opj	posing 2.7	
Opposing direction volur Direction PCE for trucks, ET PCE for RVs, ER	ne, Vo 11 Average	veh/h Travel Spe Analysis 2.7 1.1	s(d)	Opj	posing 2.7 1.1	(0)
Opposing direction volur Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. facto	ne, Vo 11 Average or,(note-5) :	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88	; (d)	Opj	posing 2.7 1.1 0.880	(0)
Opposing direction volur Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note-	ne, Vo 11 Average or,(note-5) : -1) fg	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67	30	Opj	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volur Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. facto	ne, Vo 11 Average or,(note-5) : -1) fg	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67	30	Opj	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note- Directional flow rate, () Free-Flow Speed from Fig	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32	30	QD	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note- Directional flow rate, (note- Free-Flow Speed from Fie Field measured speed, (note-	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32	30	Op) mi/h	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note- Directional flow rate, (note- Free-Flow Speed from Fie Field measured speed, (note- Observed total demand, (note-	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM note-3) V	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32	30	QD	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note- Directional flow rate, (note- Free-Flow Speed from Fie Field measured speed, (note- Observed total demand, (note- Estimated Free-Flow Speed	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM note-3) V ed:	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32	;(d) ; pc/h _ _	Opp mi/h veh/h	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note- Directional flow rate, (note- Free-Flow Speed from Fie Field measured speed, (note- Observed total demand, (note- Estimated Free-Flow Speed Base free-flow speed, (note-	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM note-3) V ed: ote-3) BFFS	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32 ent:	;(d) ;; pc/h _ _ 70.0	Opp mi/h veh/h mi/h	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. facto Grade adj. factor, (note- Directional flow rate, (note- Field measured speed, (note- Observed total demand, (note- Estimated Free-Flow Speed Base free-flow speed, (note- Base flow sp	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM note-3) V ed: ote-3) BFFS der width,(no	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32 ent:	;(d) ; , , , , , , , , , , , , , , , , , ,	Opp mi/h veh/h mi/h mi/h	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note- Directional flow rate, (note- Free-Flow Speed from Fie Field measured speed, (note- Observed total demand, (note- Estimated Free-Flow Speed Base free-flow speed, (note-	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM note-3) V ed: ote-3) BFFS der width,(no	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32 ent:	;(d) ;; pc/h _ _ 70.0	Opp mi/h veh/h mi/h	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. facto Grade adj. factor, (note- Directional flow rate, (note- Field measured speed, (note- Observed total demand, (note- Estimated Free-Flow Speed Base free-flow speed, (note- Base flow sp	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM note-3) V ed: ote-3) BFFS der width,(no	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32 ent:	;(d) ; , , , , , , , , , , , , , , , , , ,	Opp mi/h veh/h mi/h mi/h	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note- Directional flow rate, (note- Free-Flow Speed from Fie Field measured speed, (note- Observed total demand, (note- Base free-flow speed, (note- Base free-flow speed, (note- Adj. for lane and should Adj. for access point de Free-flow speed, FFSd	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM note-3) V ed: ote-3) V ed: ote-3) BFFS der width,(note-	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32 ent: bte-3) fLS -3) fA	<pre>(d) 30 pc/h 70.0 2.6 1.5</pre>	Opp mi/h veh/h mi/h mi/h mi/h	posing 2.7 1.1 0.880 0.67	(0)
Opposing direction volum Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor Grade adj. factor, (note- Directional flow rate, (note- Field measured speed, (note- Observed total demand, (note- Estimated Free-Flow Speed Base free-flow speed, (note- Base free-flow speed, (note- Adj. for lane and should Adj. for access point details	ne, Vo 11 Average or,(note-5) : -1) fg note-2) vi eld Measureme ote-3) S FM note-3) V ed: ote-3) BFFS der width,(note- ensity,(note-	veh/h Travel Spe Analysis 2.7 1.1 fHV 0.88 0.67 32 ent: bte-3) fLS -3) fA	<pre>c/h</pre>	Opp mi/h veh/h mi/h mi/h mi/h mi/h	posing 2.7 1.1 0.880 0.67	(0)

Phone

Fax:

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Direction	Analysis(d)	0	pposing (\circ)
PCE for trucks, ET	1.9	0	1.9	07
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV			0.933	
Grade adjustment factor, (note-1) fg			0.73	
Directional flow rate, (note-2) vi		c/b	19	pc/h
Base percent time-spent-following, (no	4 02 ha 41 pmgrd			perm
	ble-4) brisru	3.5 °		
Adjustment for no-passing zones, fnp		23.9 %		
Percent time-spent-following, PTSFd		23.9 6		
Level of Service and	Other Perform	ance Meas	ures	
Level of service, LOS		A		
Volume to capacity ratio, v/c		0.02		
Peak 15-min vehicle-miles of travel,	VMT15		veh-mi	
Peak-hour vehicle-miles of travel, V		-	veh-mi	
	1100		veh-h	
Peak 15-min total travel time, TT15			veh/h	
Capacity from ATS, CdATS				
Capacity from PTSF, CdPTSF			veh/h	
Directional Capacity		1002	veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt			0.6	mi
Length of two-lane highway upstream of	of the passing	lane Lu		mi
		rane, na	0.6	mi
Length of passing lane including tap			64.0	mi/h
Average travel speed, ATSd (from abo			23.9	1112/11
Percent time-spent-following, PTSFd	(from above)		_	
Level of service, LOSd (from above)			A	
Average Travel Spe	eed with Pass	ing Lane_		
Downstream length of two-lane highway	wwithin effec	tive		
length of passing lane for average	y within tires	d. Ide	1.70	mi
Length of two-lane highway downstream	n of effective	u, hac	1.70	•••
length of the passing lane for a	arage travel	speed Id	-1 70	mi
		speed, шa	1.70	III L
Adj. factor for the effect of passing	j lane			
on average speed, fpl	1 N MO-1			
Average travel speed including passing	ng lane, ATSpl		0.0	0_
Percent free flow speed including pas	ssing lane, PF	FSPI	0.0	6
Percent Time-Spent-Fe	ollowing with	Passing L	ane	
Demotycom longth of two-long highway	w within offor	tive leng	th	
Downstream length of two-lane highway	- spont-folloui	na Ide	13.00	mi
of passing lane for percent time	-spenc-rorrowr	longth -	13.00	111-1
Length of two-lane highway downstream	n of effective	ing the		mi
the passing lane for percent time		тпд, La	-13.00	111 J.
Adj. factor for the effect of passing				
on percent time-spent-following,	гр⊥			
Percent time-spent-following				0
including passing lane, PTSFpl				00
Level of Service and Other Per	formance Measu	res with	Passing I	ane
Lovel of convice including presing 1	ang Ingni	Ē.		
Level of service including passing la	ане, порт	ц	veh-h	
Peak 15-min total travel time, TT15			,	
Bicycle L	evel of Servic	е		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 18.8 Effective width of outside lane, We 26.88 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.03 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To342.93 - 343.525JurisdictionITD District 2Analysis Year2017Description2017 Jared Hopkins Description 2017 Old US-95 W4 Rural SB 3 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones31%Up/down-%Access point density6/mi Analysis direction volume, Vd 123 veh/h Opposing direction volume, Vo 82 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.5 2.7 1.1 1.1 Direction PCE for trucks, ET

 PCE for RVs, ER
 1.1
 1.1

 Heavy-vehicle adj. factor, (note-5) fHV
 0.893
 0.880

 Grade adj. factor, (note-1) fg
 0.71
 0.67

 Directional flow rate, (note-2) vi
 228
 pc/h
 164
 pc/h

 Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for lane and shoulder width, (note-3) fA 1.5 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp2.4mi/hAverage travel speed, ATSd60.4mi/hPercent Free Flow Speed, PFFS91.7% Average travel speed, ATSd Percent Free Flow Speed, PFFS

PCS for trucks, ET 1.8 1.9 PCS for RYS, ER 1.0 1.0 Heavy-vehicle adjustment factor, (note-1) fg 0.76 0.73 Directional flow rate, (note-2) vi 203 pc/h 142 pc/h Base percent time-spent-following, (note-4) BFTSEd 21.8 % Adjustment for no-pässing zones, fnp 39.6 Percent time-spent-following, PTSFd 45.1 %		wing			
PCE for trucks, ET 1.8 1.9 PCE for XYS, ER 1.0 1.0 Heavy-rehicle adjustment factor, ffW 0.940 0.933 Grade adjustment factor, (note-1) fg 0.76 0.73 Directional flow rate, (note-2) vi 203 pc/h 142 pc/h Base percent time-spent-following, (note-4) BFTSFd 21.8 % Adjustment for no-passing zones, Enp 33.6 8 Verent for no-passing zones, Enp 35.6 8 Volume to capacity ratio, v/c 0.13 9 Peak-hour vehicle-miles of travel, VMT15 22 veh-mi Peak-hour vehicle-miles of travel, VMT15 0.4 veh-h Capacity from MTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity Passing Lane Analysis	Direction Analysis(d)		Opr	osinq	(0)
NCE for NYS ER 1.0 1.0 1.0 leavy-wehicle adjustment factor, fWV 0.940 0.933 irade adjustment factor, (note-1) fg 0.76 0.73 lirectional flow rate, (note-2) vi 203 pc/h asse percent time-spent-following, (note-4) BFTSFd 21.8 % dyistment for no-passing zones, fnp 39.6 vereent time-spent-following, (note-4) BFTSFd 45.1 %	-				
<pre>leavy-vehicle adjustment factor, fWV 0.940 0.333 irade adjustment factor, (note-1) fg 0.76 0.73 irrectional flow rate, (note-2) vi 203 pc/h 142 pc/h lase percent time-spent-following, (note-4) BFISFd 21.8 % djustment for no-passing zone, fnp 33.6 'ercent time-spent-following, PTSFd 45.1 %Level of Service and Other Performance Measures evel of service, LOS B 'olume to capacity ratio, v/c 0.13 'eak 15-min vehicle-miles of travel, VMT15 22 veh-mi 'eak 15-min vehicle-miles of travel, VMT15 22 veh-mi 'eak 15-min total travel time, TT15 0.4 veh-h 'lapacity from ATS, CdRTS 1063 veh/h 'level of analysis segment, Lt 0.6 mi 'ength of two-lane highway upstream of the passing lane, Lu - mi 'verage travel speed, ATSd (from above) 45.1 'evel of service, LOSd (from above) 45.1 'evel of service, LOSd (from above) BAverage Travel Speed with Passing Lane 'horage Travel Speed vith Passing Lane 'horage travel speed, for average travel speed, Ld - mi 'speared tfor tor lane highway within effective 'length of two-lane highway within effective length 'speared travel speed including passing lane, ATSpl - 'ercent free flow speed including passing lane, PFSpl 0.0 % ''ercent free flow speed including passing lane, PFSpl 0.0 % ''ercent free flow speed including passing lane, PFSpl 0.0 % ''ercent free flow speed including passing lane, PFSpl 0.0 % ''ercent free flow speed including passing lane, PFSpl 0.0 % ''ercent free flow speed including passing lane, PFSpl 0.0 % ''ercent free flow speed including passing lane, PFSpl 0.0 % ''ercent fr</pre>				1.0	
prade adjustment factor, (note-1) fg 0.76 0.73 lifectional flow rate, (note-2) vi 203 pc/h 142 pc/h lase percent time-spent-following, (note-4) BPTSFd 21.8 % ddjustment for no-passing zones, fnp 39.6 vecent time-spent-following, FSFd 45.1 %					3
Directional flow rate, (note-2) vi 203 pc/h 142 pc/h Base percent time-spent-following, (note-4) BFTSFG 21.8 % djustment for no-passing zones, fnp 39.6 Percent time-spent-following, FTSFG 45.1 % 	1 5 .				
Ass percent time-spent-following, (note-4) BPTSFd 21.8 % Adjustment for no-passing zones, fnp 39.6 Adjustment for no-passing zones, fnp 45.1 %		pc/h			
Adjustment for no-passing zones, fnp 39.6 Percent time-spent-following, PTSFd 45.1					F - ,
Percent time-spent-following, PTSFd 45.1 %			Ū		
Level of Service and Other Performance Measures			00		
Volume to capacity ratio, v/c 0.13 Peak 15-min vehicle-miles of travel, VMT15 22 veh-mi Peak-hour vehicle-miles of travel, VMT60 74 veh-mi Peak-hour vehicle-miles of travel, VMT60 74 veh-mi Peak-hour vehicle-miles of travel, VMT60 74 veh-mi Passing travel time, TT15 0.4 veh/h Capacity from ATS, CdATS 1063 veh/h Directional Capacity 1063 veh/h	-	mance Me	easur	es	
Volume to capacity ratio, v/c 0.13 Peak 15-min vehicle-miles of travel, VMT15 22 veh-mi Peak-hour vehicle-miles of travel, VMT60 74 veh-mi Peak-hour vehicle-miles of travel, VMT60 74 veh-mi Peak-hour vehicle-miles of travel, VMT60 74 veh-mi Passing travel time, TT15 0.4 veh/h Capacity from ATS, CdATS 1063 veh/h Directional Capacity 1063 veh/h		D			
Peak 15-min vehicle-miles of travel, VMT15 22 veh-mi Peak 15-min total travel time, TT15 0.4 veh-h Capacity from ATS, CdATS 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Capacity from PTSF, CdPTSF 0.6 mi Length of analysis segment, Lt 0.6 mi Length of two-lane highway upstream of the passing lane, Lu - mi Average travel speed, ATSG (from above) 45.1 E Devendt time-spent-following, PTSFG (from above) B -					
Peak-hour vehicle-miles of travel, VMT60 74 veh-mi Peak 15-min total travel time, TT15 0.4 veh-h Capacity from ATS, CdATS 1063 veh/h Capacity from ATS, CdATS 1063 veh/h Directional Capacity 1063 veh/h Directional Capacity 1063 veh/h Passing Lane Analysis 0.6 mi Length of analysis segment, Lt 0.6 mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSG (from above) 45.1 Evel of service, LOSG (from above) 45.1 Level of service, LOSd (from above) B - mi Downstream length of two-lane highway within effective - mi Length of passing lane for average travel speed, Ld - mi Addi, factor for the effect of passing lane, ATSpl - - Average speed, fpl - - - Average speed including passing lane, ATSpl - - Percent free flow speed including passing lane, PFSpl 0.0 % Constream length of two-lane highway within effective length - -				. I	
Peak 15-min total travel time, TT15 0.4 veh-h Capacity from MTS, CdATS 1063 veh/h Capacity from MTS, CdATS 1214 veh/h Directional Capacity 1063 veh/h Directional Capacity 1063 veh/h					
Dapacity from ATS, CdATS 1063 veh/h Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h					
Capacity from PTSF, CdPTSF 1214 veh/h Directional Capacity 1063 veh/h		0.4	ve		
Directional Capacity Passing Lane Analysis Passing Lane Analysis Total length of analysis segment, Lt Cotal length of analysis segment, Lt Length of two-lane highway upstream of the passing lane, Lu Average travel speed, ATSd (from above) Average travel speed, ATSd (from above) Average Travel Speed with Passing Lane Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde Adj. factor for the effect of passing lane, PFFSpl Downstream length of two-lane highway within effective length referent free flow speed including passing lane, PFFSpl Downstream length of two-lane highway within effective length referent free flow speed including passing lane, PFFSpl Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde mi Adj. factor for the effect of passing lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Ld mi Adj. factor for the effect of passing lane Downstream length of two-lane highway downstream of effective length of passing lane for percent time-spent-following, Ld mi Adj. factor for the effect of passing lane Downstream length of two-lane highway downstream of effective length of passing lane for percent time-spent-following, Ld mi Adj. factor for the effect of passing lane Devel of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSP1	• •	1063	Ve		
Passing Lane Analysis Total length of analysis segment, Lt 0.6 mi Length of two-lane highway upstream of the passing lane, Lu - mi Average travel speed, ATSd (from above) 60.4 mi/h Percent time-spent-following, PTSFd (from above) 45.1 Level of service, LOSd (from above) B Average Travel Speed with Passing Lane - Downstream length of two-lane highway within effective - length of passing lane for average travel speed, Lde - Neverage Speed, fpl - - Average speed including passing lane, ATSpl - - Percent Time-Spent-Following with Passing Lane - - Downstream length of two-lane highway within effective length - mi Average speed, fpl - - - Average speed including passing lane, PFFSpl 0.0 % - - Downstream length of two-lane highway within effective length - - -		1214	ve		
Total length of analysis segment, Lt 0.6 mi Length of two-lane highway upstream of the passing lane, Lu - mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 60.4 mi/h Percent time-spent-following, PTSFd (from above) 45.1 Level of service, LOSd (from above) B	Directional Capacity	1063	ve	eh/h	
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Percent time-spent-following, PTSFd (from above) 45.1 Level of service, LOSd (from above) B				60.4	
Level of service, LOSd (from above) B	Remain time-speed, Albu (110m above)				
Average Travel Speed with Passing Lane					
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including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E	Downstream length of two-lane highway within effe of passing lane for percent time-spent-follow Length of two-lane highway downstream of effectiv the passing lane for percent time-spent-follo Adj. factor for the effect of passing lane	ective le ving, Lde ve lengt	ength e h of	-	
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	Downstream length of two-lane highway within effe of passing lane for percent time-spent-follow Length of two-lane highway downstream of effectiv the passing lane for percent time-spent-follo Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following	ective le ving, Lde ve lengt	ength e h of	-	mi
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Peak 15-min total travel time, TTI5 - Ven-n	Downstream length of two-lane highway within effe of passing lane for percent time-spent-follow Length of two-lane highway downstream of effectiv the passing lane for percent time-spent-follo Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following including passing lane, PTSFpl Level of Service and Other Performance Meas	ective lo ving, Ld ve lengt owing, Lo sures wi	ength e h of d	-	mi %
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60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 144.7 Flow rate in outside lane, vOL 19.39 Effective width of outside lane, We 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 4.79 Е Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax:

Phone:

E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2017HighwayUS-95From/To343.525 - 344.004JurisdictionITD District 2Analysis Year2017Description2017 Description 2017 Old US-95 W4 Rural SB 4 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones0%Up/down-%Access point density15/mi Analysis direction volume, Vd 123 veh/h Opposing direction volume, Vo 82 veh/h _____Average Travel Speed______ Analysis(d) Opposing (o) 2.5 2.7 1.1 1.1 Direction PCE for trucks, ET PCE for RVs, ER PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8930.880Grade adj. factor, (note-1) fg0.710.67Directional flow rate, (note-2) vi228pc/h Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM Observed total demand, (note-3) V Estimated Free-Flow Speed: - mi/h - veh/h Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Mi/h Adj. for access point density, (note-3) fA 3.8 48.7 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp0.8mi/hAverage travel speed, ATSd44.8mi/hPercent Free Flow Speed, PFFS92.1%

Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg	0.76)pposing 1.9 1.0 0.933 0.73			
Directional flow rate, (note-2) vi Base percent time-spent-following, (no Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	203 p te-4) BPTSFd			pc/h		
Level of Service and Other Performance Measures						
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, V Peak-hour vehicle-miles of travel, VM Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity		62 0.4 1063 1214	veh-mi veh-mi veh-h veh/h veh/h veh/h			
Passing :	Lane Analysis					
Total length of analysis segment, Lt Length of two-lane highway upstream of Length of passing lane including tape Average travel speed, ATSd (from above Percent time-spent-following, PTSFd (Level of service, LOSd (from above)	rs, Lpl e)	lane, Lu	0.5 - 44.8 29.8 D	mi mi mi/h		
Average Travel Spe	ed with Pass	ing Lane_				
Downstream length of two-lane highway length of passing lane for average Length of two-lane highway downstream	e travel spee	d, Lde	_	mi		
Adj. factor for the effect of passing on average speed, fpl	erage travel		4 – –	mi		
Average travel speed including passing Percent free flow speed including pass			- 0.0	0		
Percent Time-Spent-Fol			ane			
Downstream length of two-lane highway						
of passing lane for percent time- Length of two-lane highway downstream	spent-followi:	ng, Lde	-	mi		
the passing lane for percent time Adj. factor for the effect of passing	-spent-follow		-	mi		
on percent time-spent-following,			-			
Percent time-spent-following including passing lane, PTSFpl			-	0		
Level of Service and Other Performance Measures with Passing Lane						
Level of service including passing lar Peak 15-min total travel time, TT15	ne, LOSpl	E -	veh-h			
Bicycle Level of Service						

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 144.7 Effective width of outside lane, We 19.39 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 4.79 Ε Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To337.668 - 342.93JurisdictionITD District 2Analysis Year2037Description2037 Description 2037 Old US-95 EC3 Rural NB 1 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length5.3miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones79%Up/down-%Access point density6/mi Analysis direction volume, Vd 18 veh/h Opposing direction volume, Vo 12 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction PCE for trucks, ET2.72.7PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8800.880Grade adj. factor, (note-1) fg0.670.67Directional flow rate, (note-2) vi35pc/h Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand,(note-3) V _ Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp3.0mi/hAverage travel speed, ATSd62.5mi/hPercent Free Flow Speed, PFFS94.8% Average travel speed, ATSd Percent Free Flow Speed, PFFS

Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV	Analysis(d) 1.9 1.0 0.933		Opposing 1.9 1.0 0.933	
Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (note Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	0.73 30 pc	52.2	0.73 20 %	
Level of Service and O	ther Performa	ance Mea	sures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, VM Peak-hour vehicle-miles of travel, VMT Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity Passing Le	60	B 0.02 27 95 0.4 1002 1158 1002	veh-mi veh-mi veh-h veh/h veh/h veh/h	
Total length of analysis segment, Lt Length of two-lane highway upstream of Length of passing lane including taper. Average travel speed, ATSd (from above Percent time-spent-following, PTSFd (f. Level of service, LOSd (from above)	s, Lpl)	lane, L	5.3 u - 62.5 35.1 B	mi mi mi/h
Average Travel Spee	d with Pass:	ing Lane		
Downstream length of two-lane highway length of passing lane for average Length of two-lane highway downstream	travel speed		_	mi
length of the passing lane for ave Adj. factor for the effect of passing	rage travel s	speed, L	d –	mi
on average speed, fpl Average travel speed including passing	lane ATSDI		-	
Percent free flow speed including passing		FSpl	0.0	00
Percent Time-Spent-Fol.	lowing with H	Passing	Lane	
Downstream length of two-lane highway	within effort	tive len	ath	
of passing lane for percent time-sp Length of two-lane highway downstream	pent-followin	ng, Lde	-	mi
the passing lane for percent time-	spent-follow:		-	mi
Adj. factor for the effect of passing on percent time-spent-following, f			_	
Percent time-spent-following including passing lane, PTSFpl			-	00
Level of Service and Other Perfo	rmance Measu	res with	Passing	Lane
Level of service including passing land Peak 15-min total travel time, TT15	e, LOSpl	E 	veh-h	
Bicycle Lev	el of Service	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 20.7 Effective width of outside lane, We 26.74 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.12 Bicycle LOS В

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To342.93 - 343.525JurisdictionITD District 2Analysis Year2037Description2027 Old US-95 C2 Pural NB Jared Hopkins Description 2037 Old US-95 C3 Rural NB 2 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones5%Up/down-%Access point density6/mi Analysis direction volume, Vd 18 veh/h Opposing direction volume, Vo 12 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 2.7 1.1 2.7 PCE for trucks, ET PCE for RVs, ER 1.1 PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8800.880Grade adj. factor, (note-1) fg0.670.67Directional flow rate, (note-2) vi35pc/h23pc/h Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 1.5 mi/h 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.1mi/hAverage travel speed, ATSd64.3mi/hPercent Free Flow Speed, PFFS97.6% Average travel speed, ATSd Percent Free Flow Speed, PFFS

	-						
Direction	-	O		(0)			
PCE for trucks, ET	1.9		1.9				
PCE for RVs, ER	1.0		1.0				
Heavy-vehicle adjustment factor, fHV	0.933		0.933				
Grade adjustment factor, (note-1) fg			0.73				
Directional flow rate, (note-2) vi		c/h	20	pc/h			
Base percent time-spent-following, (no				Τ			
Adjustment for no-passing zones, fnp	oce i, bribia	15.9					
Percent time-spent-following, PTSFd		13.3 %					
reicent time-spent-tottowing, rista		10.0 0					
Level of Service and Other Performance Measures							
Level of service, LOS		A					
Volume to capacity ratio, v/c		0.02					
Peak 15-min vehicle-miles of travel,	VMT15		veh-mi				
Peak-hour vehicle-miles of travel, VI			veh-mi				
Peak 15-min total travel time, TT15			veh-h				
Capacity from ATS, CdATS			veh/h				
Capacity from PTSF, CdPTSF			veh/h				
Directional Capacity		1002	veh/h				
Passing	Lane Analysis						
Total length of analysis segment, Lt			0.6	mi			
Length of two-lane highway upstream of	of the passing	lane. Lu		mi			
Length of passing lane including tap		rune, ru		mi			
			64.3	mi/h			
Average travel speed, ATSd (from abov			13.3	1((1)/11			
Percent time-spent-following, PTSFd	(irom above)						
Level of service, LOSd (from above)			A				
Average Travel Spe	eed with Pass	ing Lane_					
Downstream length of two-lane highway	wwithin effec	tive					
length of passing lane for average	y within travel snee	d Lde	_	mi			
Length of two-lane highway downstream							
Length of two-lane highway downstream	arage travel	anood Id	_	mi			
length of the passing lane for a				111-			
Adj. factor for the effect of passing	g lane						
on average speed, fpl			***				
Average travel speed including passing			_	0			
Percent free flow speed including pas	ssing lane, PF	FSpl	0.0	010			
Percent Time-Spent-Fo	ollowing with	Passing L	ane				
Deventroom longth of two-long highway	wwithin offor	tive leng	t h				
Downstream length of two-lane highway of passing lane for percent time	y within effective	na Ide		mi			
of passing fane for percent time-	-spenc-rorrowr	langth o	- -	1111			
Length of two-lane highway downstream	u or errective	ing Ta		mi			
the passing lane for percent time		ing, La		mi			
Adj. factor for the effect of passing							
on percent time-spent-following,	tp⊥		-				
Percent time-spent-following				<u>,</u>			
including passing lane, PTSFpl			-	010			
Level of Service and Other Per:	formance Measu	res with	Passing	Lane			
Lowel of corvice including presing 1	ang Ingni	E					
Level of service including passing la Peak 15-min total travel time, TT15	ане, порьт		veh-h				
reak 10-min local llavel lime, 1115							
Bicycle Level of Service							

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 20.7 Flow rate in outside lane, vOL Effective width of outside lane, We 26.74 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.12 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To337.668 - 342.28JurisdictionITD District 2Analysis Year2037Description2027 Old US 05 C2 Dural CD Description 2037 Old US-95 C3 Rural SB 1 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length4.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones50%Up/down-%Access point density6/mi Analysis direction volume, Vd 18 veh/h Opposing direction volume, Vo 12 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 2.7 1.1 2.7 PCE for trucks, ET PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8800.880Grade adj. factor, (note-1) fg0.670.67Directional flow rate, (note-2) vi36pc/h Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for lane and shoulder width, (note-3) fA 1.5 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp2.5mi/hAverage travel speed, ATSd62.9mi/hPercent Free Flow Speed, PFFS95.5% Average travel speed, ATSd Percent Free Flow Speed, PFFS

	_	-		
Direction	Analysis(d)	0	pposing (0)
PCE for trucks, ET	1.9	· · ·	1.9	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV			0.933	
Grade adjustment factor, (note-1) fg			0.73	
Directional flow rate, (note-2) vi		c/h	21	pc/h
Base percent time-spent-following, (no				P0/11
Adjustment for no-passing zones, fnp	JUE 4) DEIDEU	46.1		
		31.4 %		
Percent time-spent-following, PTSFd		JI.4 %		
Level of Service and	Other Perform	ance Meas	ures	
Level of service, LOS		А		
Volume to capacity ratio, v/c		0.02		
Peak 15-min vehicle-miles of travel,	VMT15		veh-mi	
Peak-hour vehicle-miles of travel, VN			veh-mi	
	1100		veh-h	
Peak 15-min total travel time, TT15			ven-n veh/h	
Capacity from ATS, CdATS			ven/n veh/h	
Capacity from PTSF, CdPTSF			ven/n veh/h	
Directional Capacity		1002	ven/n	
Passing	Lane Analysis			
metal longth of analyzic commont. It			4.6	mi
Total length of analysis segment, Lt	of the paceing	lano Iu		mi
Length of two-lane highway upstream (or the passing	Talle, Lu	1.5	mi
Length of passing lane including tape				
Average travel speed, ATSd (from abov			62.9	mi/h
Percent time-spent-following, PTSFd	(from above)		31.4	
Level of service, LOSd (from above)			A	
Average Travel Spe	eed with Pass	ing Lane_		
De la la sette de tare la participation	·	tivo		
Downstream length of two-lane highway	y within erret		1.70	mi
length of passing lane for average	je traver spee	а, цае	1.70	1111
Length of two-lane highway downstream	n of effective	anaad td	-1 10	mi
length of the passing lane for a	verage travel	speed, La	-1.10	mi
Adj. factor for the effect of passing	g lane			
on average speed, fpl				
Average travel speed including passing			<u> </u>	0
Percent free flow speed including pas	ssing lane, PF	FSpl	0.0	0
Percent Time-Spent-Fe	ollowing with	Passing L	ane	
Description locate of the love between	wwithin offor	tive long	·+ h	
Downstream length of two-lane highway	y within effec	na Ta		mi
of passing lane for percent time	-spenc-rorrowl	longth -	13.00	111-1
Length of two-lane highway downstream	n or errective	⊥ength o	_10 /0	mi
the passing lane for percent time		ıng, La	-12.40	mi
Adj. factor for the effect of passing				
on percent time-spent-following,	IDT			
Percent time-spent-following				0
including passing lane, PTSFpl				00
Level of Service and Other Per	formance Measu	res with	Passing I	ane
Terrel of convict including possing 1	and Ingni	F		
Level of service including passing la	ане, тозрт	<u>نا</u>	veh-h	
Peak 15-min total travel time, TT15			v C 11 11	
Bicycle L	evel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 21.2 Effective width of outside lane, We 26.74 Effective speed factor, St 4.94 Bicycle LOS Score, BLOS 2.12 Bicycle LOS В

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fa	x:				
Dir	ectional Two-Lar	ne High	way S	egment	Analys:	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2037 Ol	US-95 342.28 - 342 ITD District 2037	t 2 2.93 t 2					
	Ir	nput Da	ta				
Segment length Terrain type	2.0 ft 12.0 ft 0.6 mi Rolling - mi	% Truc % Truc Truck % Recr	ks an ks cr crawl eatic assin	awling speed nal veh g zones	icles	8 0.0	% mi/hr % % /mi
- Analysis direction v	volume, Vd 18	veh veh	/h /h			0	/ III L
Analysis direction w Opposing direction w Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. f Grade adj. factor,(r Directional flow rat	Average actor,(note-5) f	veh veh Travel Anal fHV	/h /h ysis(2.7 1.1 0.880 0.67	d d)	Opj	Dosing 2.7 1.1 0.880 0.67 24	
Analysis direction w Opposing direction w Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. f Grade adj. factor,(m	Factor, (note-5) factor, (note-5) factor, (note-5) factor, (note-2) vi a Field Measuremed, (note-3) S FM ad, (note-3) S FM ad, (note-3) V Speed: d, (note-3) BFFS houlder width, (note-3) at density, (note-3)	veh veh Travel Anal fHV ent:	/h /h Spee 2.7 1.1 0.880 0.67 36	d d)	Opj	posing 2.7 1.1 0.880 0.67	(0)

Percent Time-Spent-Follow:	ing		
Base percent time-spent-following, (note-4) BPTSFd Adjustment for no-passing zones, fnp	c/h	pposing (1.9 1.0 0.933 0.73 21	o) pc/h
Level of Service and Other Performa	ance Meas	ures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, VMT15 Peak-hour vehicle-miles of travel, VMT60 Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	11 0.0 1002	veh-mi veh-mi veh-h veh/h veh/h veh/h	
Passing Lane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream of the passing Length of passing lane including tapers, Lpl Average travel speed, ATSd (from above) Percent time-spent-following, PTSFd (from above) Level of service, LOSd (from above)	lane, Lu	0.6 0.0 0.6 63.9 24.3 A	mi mi mi/h
Average Travel Speed with Pass:	ing Lane_		
Downstream length of two-lane highway within effect length of passing lane for average travel speed Length of two-lane highway downstream of effective length of the passing lane for average travel s Adj. factor for the effect of passing lane on average speed, fpl Average travel speed including passing lane, ATSpl Percent free flow speed including passing lane, PFD	d, Lde speed, Ld		mi
Percent Time-Spent-Following with	Passing L	ane	
Downstream length of two-lane highway within effect of passing lane for percent time-spent-followin Length of two-lane highway downstream of effective the passing lane for percent time-spent-follow: Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following	tive leng ng, Lde length o	th 13.00 f	mi
including passing lane, PTSFpl			0. 0
Level of Service and Other Performance Measu	res with	Passing L	ane
Level of service including passing lane, LOSpl Peak 15-min total travel time, TT15	Ε	veh-h	
Bicycle Level of Service	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 21.2 Flow rate in outside lane, vOL Effective width of outside lane, We 26.74 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.12 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		Fax:				
Directional	Two-Lane Hi	ghway S	Segment .	Analys:	_s	
Agency/Co.ITDDate Performed1-6-Analysis Time Period2037HighwayUS-9From/To342.	5 93 - 343.525 District 2					
	Input	Data				
Highway class Class 1 Shoulder width 2.0 Lane width 12.0 Segment length 0.6 Terrain type Rolling Grade: Length - Up/down - Analysis direction volume, W Opposing direction volume, W	ft % Tr ft % Tr mi Truc % Re mi % No % Acce	ucks an ucks cr k crawl creatic -passin ss poin eh/h	awling speed nal veh	icles	0.85 8 0.0 0.0 0 31 6	% % % % /mi
	Average Trav	el Spee	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor,(n Grade adj. factor,(note-1) f Directional flow rate,(note-	ote-5) fHV g	0.67)		oosing (2.7 1.1 0.880 0.67 24	o) pc/h
Free-Flow Speed from Field M Field measured speed, (note-3 Observed total demand, (note- Estimated Free-Flow Speed: Base free-flow speed, (note-3 Adj. for lane and shoulder w Adj. for access point densit) S FM 3) V) BFFS ridth,(note-3		- - 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd			65.9	mi/h		
Adjustment for no-passing zo Average travel speed, ATSd Percent Free Flow Speed, PFF			1.7 63.7 96.7	mi/h mi/h %		

Percent Time-Spent-Fo	llowing		
Direction Analysis	s(d)	Opposing	(0)
PCE for trucks, ET 1.9	. ,	1.9	
PCE for RVs, ER 1.0		1.0	
Heavy-vehicle adjustment factor, fHV 0.93	33	0.933	5
Grade adjustment factor, (note-1) fg 0.73		0.73	
	pc/h	21	pc/h
Base percent time-spent-following, (note-4) BPI		0)0	1
Adjustment for no-passing zones, fnp	36.3	·	
Percent time-spent-following, PTSFd	25.5	00	
rereating, read			
Level of Service and Other Per	formance Me	easures	
Level of service, LOS	А		
Volume to capacity ratio, v/c	0.02		
Peak 15-min vehicle-miles of travel, VMT15	3	veh-mi	
Peak-hour vehicle-miles of travel, VMT60	11	veh-mi	
Peak 15-min total travel time, TT15	0.0	veh-h	
Capacity from ATS, CdATS	1002	veh/h	
Capacity from PTSF, CdPTSF	1158		
Directional Capacity	1002		
Passing Lane Anal	ysis		
Total length of analysis segment, Lt		0.6	mi
Length of two-lane highway upstream of the pas	ssing lane,	Lu -	mi
Length of passing lane including tapers, Lpl			mi
Average travel speed, ATSd (from above)		63.7	mi/h
Percent time-spent-following, PTSFd (from abov	ve)	25.5	
Level of service, LOSd (from above)		A	
Average Travel Speed with	Passing Lar	ne	
Downstream length of two-lane highway within e	errective		mi
length of passing lane for average travel	speed, Lde	_	mi
Length of two-lane highway downstream of effect	tive	т -1	
length of the passing lane for average tra	ivel speed,	Ld -	mi
Adj. factor for the effect of passing lane			
on average speed, fpl		-	
Average travel speed including passing lane, A		-	0
Percent free flow speed including passing lane	, PFFSpl	0.0	00
Percent Time-Spent-Following w	ith Passing	g Lane	
Downstream length of two-lane highway within e	effective le	ength	
of passing lane for percent time-spent-fol	lowing. Ide	· · · · · · · · · · · · · · · · · · ·	mi
Length of two-lane highway downstream of effect			
the passing lane for percent time-spent-for	llowing Ta		mi
Adj. factor for the effect of passing lane	TTOWING, DO	•	
		_	
on percent time-spent-following, fpl			
Percent time-spent-following including passing lane, PTSFpl		_	010
Level of Service and Other Performance M	leasures wit	ch Passing	Lane
Lovel of corvice including passing lane IOSpl	E		
Level of service including passing lane, LOSp Peak 15-min total travel time, TT15		veh-h	
Bicycle Level of Se	ervice		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 Pavement rating, P 3 Flow rate in outside lane, vOL 21.2 Effective width of outside lane, We 26.74 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.12 Bicycle LOS В

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone:

E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To337.668 - 342.93JurisdictionITD District 2Analysis Year2037Description2037 Description 2037 Old US-95 E2 Rural NB 1 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length5.3miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones79%Up/down-%Access point density6/mi Analysis direction volume, Vd 25 veh/h Opposing direction volume, Vo 17 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 2.7 2.7 PCE for trucks, ET PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8800.880Grade adj. factor, (note-1) fg0.670.67Directional flow rate, (note-2) vi49pc/h Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Hand State Stat Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp3.0mi/hAverage travel speed, ATSd62.3mi/hPercent Free Flow Speed, PFFS94.5% Average travel speed, ATSd Percent Free Flow Speed, PFFS

	s opene rorrow	·		
Direction	Analysis(d)		Opposing	(0)
	1.9		1.9	(0)
PCE for trucks, ET	1.0		1.0	
PCE for RVs, ER				2
Heavy-vehicle adjustment factor, fHV			0.933	
Grade adjustment factor, (note-1) fg		()	0.73	
Directional flow rate, (note-2) vi	42 p	oc/h	29	pc/h
Base percent time-spent-following, (no	ote-4) BPTSFd	5.2	90	
Adjustment for no-passing zones, fnp		52.2		
Percent time-spent-following, PTSFd		36.1	olo	
Level of Service and	Other Perform	nance Mea	sures	
		5		
Level of service, LOS		В		
Volume to capacity ratio, v/c		0.03		
Peak 15-min vehicle-miles of travel,		38	veh-mi	
Peak-hour vehicle-miles of travel, VM	4T60	133	veh-mi	
Peak 15-min total travel time, TT15		0.6	veh-h	
Capacity from ATS, CdATS			veh/h	
Capacity from PTSF, CdPTSF		1158	veh/h	
Directional Capacity		1002	veh/h	
Passing	Lane Analysis	;		
			F 0	
Total length of analysis segment, Lt		_	5.3	mi
Length of two-lane highway upstream of		f lane, L		mi
Length of passing lane including tape	ers, Lpl		-	mi
Average travel speed, ATSd (from above			62.3	mi/h
Percent time-spent-following, PTSFd	(from above)		36.1	
Level of service, LOSd (from above)			В	
Average Travel Spe	eed with Pass	ing Lane		
Downstream length of two-lane highway	y within effec	tive		
length of passing lane for average			-	mi
Length of two-lane highway downstream	n of effective			
length of the passing lane for a		speed, L	d –	mi
Adj. factor for the effect of passing	g lane			
on average speed, fpl			-	
Average travel speed including passing	ng lane, ATSpl	-	-	
Percent free flow speed including pas	ssing lane, PF	FSpl	0.0	00
Percent Time-Spent-Fo	ollowing with	Passing	Lane	
Downstream length of two-lane highway	y within effec	tive len	gth	
of passing lane for percent time-	-spent-followi	ng, Lde	_	mi
Length of two-lane highway downstream	n of effective	e length	of	
the passing lane for percent time	e-spent-follow	/ing, Ld	-	mi
Adj. factor for the effect of passing	g lane			
on percent time-spent-following,			_	
Percent time-spent-following				
including passing lane, PTSFpl			-	00
				-
Level of Service and Other Per:	formance Measu	res with	Passing	Lane
Level of service including passing la	ane. LOSpl	E		
Peak 15-min total travel time, TT15			veh-h	
ICAN ID MIN COLAI CIAVEI CIME, IIID				
Bicycle L	evel of Servic	ce		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 28.7 Flow rate in outside lane, vOL Effective width of outside lane, We 26.25 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.41 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:							
Direct	ional Two-La	ne Higl	hway S	Segment	Analys	is	
	2037 US-95 342.93 - 34 ITD Distric 2037 S-95 E2 Rura	t 2 3.525 t 2 1 NB 2					
	I	nput Da	ata				
Highway class Class 1 Shoulder width 2. Lane width 12 Segment length 0. Terrain type Ro Grade: Length - Up/down - Analysis direction volu	0 ft .0 ft 6 mi lling mi % me, Vd 25	<pre>% True % Truck Truck % Rec: % No-] Access vel</pre>	cks an cks c: craw: reatio passin s poin h/h	rawling l speed onal veh ng zones	icles	8 0.0 0.0 0 5	mi/hr % %
	Average	Trave	l Spee	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,(-1) fg	fHV	2.7 1.1 0.880 0.67			2.7 1.1 0.880 0.67	
Free-Flow Speed from Fi Field measured speed, (n Observed total demand, (Estimated Free-Flow Spe Base free-flow speed, (n Adj. for lane and shoul Adj. for access point d Free-flow speed, FFSd Adjustment for no-passi	ote-3) S FM note-3) V ed: ote-3) BFFS der width,(n ensity,(note ng zones, fn	ote-3) -3) fA		- 70.0 2.6 1.5 65.9 1.1	mi/h veh/h mi/h mi/h mi/h mi/h		
Average travel speed, A Percent Free Flow Speed				64.2 97.4	mi/h %		

DirectionAnalysis(d)Opposing (o)PCE for trucks, ET1.91.9PCE for RVs, ER1.01.0Heavy-vehicle adjustment factor, fHV0.9330.933Grade adjustment factor, (note-1) fg0.730.73Directional flow rate, (note-2) vi42pc/hPercent time-spent-following, (note-4)BPTSFd5.2Adjustment for no-passing zones, fnp15.8Percent time-spent-following, PTSFd14.5Level of Service and Other Performance MeasuresLevel of service, LOSAVolume to capacity ratio, v/c0.03Peak 15-min total travel time, TT150.1Veh-miPeak 15-min total travel time, TT15Capacity from PTSF, CdPTSF1158Directional Capacity1002veh/h1002Directional Capacity1002Veh/h-Capacity from PTSF, CdPTSF1158Neth/h1002Percent time-spent-following, PTSFd (from above)64.2
PCE for trucks, ET 1.9 1.9 PCE for RVS, ER 1.0 1.0 Heavy-vehicle adjustment factor, fHV 0.933 0.933 Grade adjustment factor, (note-1) fg 0.73 0.73 Directional flow rate, (note-2) vi 42 pc/h 29 pc/h Base percent time-spent-following, (note-4) BPTSFd 5.2 % Adjustment for no-passing zones, fnp 14.5 % Percent time-spent-following, PTSFd 14.5 %
PCE for RVs, ER 1.0 1.0 Heavy-vehicle adjustment factor, fHV 0.933 0.933 Grade adjustment factor, (note-1) fg 0.73 0.73 Directional flow rate, (note-2) vi 42 pc/h 29 pc/h Base percent time-spent-following, (note-4) BPTSFd 5.2 Adjustment for no-passing zones, fnp 15.8 Percent time-spent-following, PTSFd 14.5 Level of service, LOS A Volume to capacity ratio, v/c 0.03 Peak 15-min vehicle-miles of travel, VMT15 4 veh-mi Peak-hour vehicle-miles of travel, VMT60 15 veh-mi Peak 15-min total travel time, TT15 0.1 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from ATS, CdATS 1002 veh/h Directional Capacity 1002 veh/h Percent time-spent-following, PTSFd (from above) 64.2 mi/h Percent time-spent-following, PTSFd (from above) 14.5
Heavy-vehicle adjustment factor, fHV 0.933 0.933 Grade adjustment factor, (note-1) fg 0.73 0.73 Directional flow rate, (note-2) vi 42 pc/h 29 pc/h Base percent time-spent-following, (note-4) BPTSFd 5.2 Adjustment for no-passing zones, fnp 15.8 Percent time-spent-following, PTSFd 14.5 Level of Service and Other Performance Measures
Grade adjustment factor, (note-1) fg 0.73 0.73 Directional flow rate, (note-2) vi 42 pc/h 29 pc/h Base percent time-spent-following, (note-4) BPTSFd 5.2 % Adjustment for no-passing zones, fnp 15.8 Percent time-spent-following, PTSFd 14.5 % Level of Service and Other Performance Measures
Directional flow rate, (note-2) vi 42 pc/h 29 pc/h Base percent time-spent-following, (note-4) BPTSFd 5.2 % Adjustment for no-passing zones, fnp 15.8 Percent time-spent-following, PTSFd 14.5 % Level of Service and Other Performance Measures Level of service, LOS A Volume to capacity ratio, v/c 0.03 Peak 15-min vehicle-miles of travel, VMT15 4 veh-mi Peak 15-min total travel time, TT15 0.1 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from ATS, CdATS 1002 veh/h Directional Capacity 1002 veh/h Directional Capacity 1002 veh/h Length of analysis segment, Lt 0.6 mi Length of two-lane highway upstream of the passing lane, Lu - mi Average travel speed, ATSd (from above) 64.2 mi/h Percent time-spent-following, PTSFd (from above) 14.5 Level of service, LOSd (from above) A Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Ld - mi Average travel speed, fplAverage travel speed, Ld - mi Adj. factor for the effect of passing laneATSH Average travel speed, fpl Average travel speed, fpl Average travel speed, fpl
Base percent time-spent-following, (note-4) BPTSFd 5.2 % Adjustment for no-passing zones, fnp 15.8 Percent time-spent-following, PTSFd 14.5 %
Adjustment for no-passing zones, fnp 15.8 Percent time-spent-following, PTSFd 14.5
Percent time-spent-following, PTSFd 14.5 %
Level of Service and Other Performance Measures Level of Service, LOS A Volume to capacity ratio, v/c 0.03 Peak 15-min vehicle-miles of travel, VMT15 4 veh-mi Peak 15-min total travel time, TT15 0.1 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from ATS, CdATS 1002 veh/h Directional Capacity 1002 veh/h
Level of service, LOS A Volume to capacity ratio, v/c 0.03 Peak 15-min vehicle-miles of travel, VMT15 4 veh-mi Peak 15-min total travel time, TT15 0.1 veh-mi Peak 15-min total travel time, TT15 0.1 veh-mi Capacity from ATS, CdATS 1002 veh/h Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h
Volume to capacity ratio, v/c 0.03 Peak 15-min vehicle-miles of travel, VMT15 4 veh-mi Peak-hour vehicle-miles of travel, VMT60 15 veh-mi Peak 15-min total travel time, TT15 0.1 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h
Peak 15-min vehicle-miles of travel, VMT15 4 veh-mi Peak-hour vehicle-miles of travel, VMT60 15 veh-mi Peak 15-min total travel time, TT15 0.1 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h
Peak-hour vehicle-miles of travel, VMT60 15 veh-mi Peak 15-min total travel time, TT15 0.1 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h
Peak-hour vehicle-miles of travel, VMT60 15 veh-mi Peak 15-min total travel time, TT15 0.1 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h
Peak 15-min total travel time, TT15 0.1 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h
Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h
Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h
Directional Capacity 1002 veh/h
Total length of analysis segment, Lt 0.6 mi Length of two-lane highway upstream of the passing lane, Lu - mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 64.2 mi/h Percent time-spent-following, PTSFd (from above) 14.5 Level of service, LOSd (from above) A
Length of two-lane highway upstream of the passing lane, Lu - mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 64.2 mi/h Percent time-spent-following, PTSFd (from above) 14.5 Level of service, LOSd (from above) A Average Travel Speed with Passing Lane Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed - The
Length of two-lane highway upstream of the passing lane, Lu - mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 64.2 mi/h Percent time-spent-following, PTSFd (from above) 14.5 Level of service, LOSd (from above) A Average Travel Speed with Passing Lane Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Mi Average travel speed including passing lane, ATSpl -
Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 64.2 mi/h Percent time-spent-following, PTSFd (from above) 14.5 Level of service, LOSd (from above) A
Average travel speed, ATSd (from above) 64.2 mi/h Percent time-spent-following, PTSFd (from above) 14.5 Level of service, LOSd (from above) A
Percent time-spent-following, PTSFd (from above) Level of service, LOSd (from above) Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed including passing lane, ATSpl -
Level of service, LOSd (from above) A
Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed including passing lane, ATSpl -
Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed including passing lane, ATSpl -
<pre>length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl</pre>
<pre>length of passing lane for average travel speed, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl</pre>
Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl
<pre>length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl - Average travel speed including passing lane, ATSpl -</pre>
Adj. factor for the effect of passing lane-on average speed, fpl-Average travel speed including passing lane, ATSpl-
on average speed, fpl - Average travel speed including passing lane, ATSpl -
Average travel speed including passing lane, ATSpl -
Average claver speed including pussing fand, in provide a long and the second s
Percent free flow speed including passing lane, PFFSpl 0.0 %
refeend free free speed including passing , , , ,
Percent Time-Spent-Following with Passing Lane
Downstream length of two-lane highway within effective length
of passing lane for percent time-spent-following, Lde - mi
Length of two-lane highway downstream of effective length of
the passing lane for percent time-spent-following, Ld - mi
Adj. factor for the effect of passing lane
on percent time-spent-following, fpl -
Percent time-spent-following
including passing lane, PTSFpl - %
Level of Service and Other Performance Measures with Passing Lane
Level of convice including passing land LOCal F
Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h
Peak 15-min total travel time, TT15 - veh-h
Bicycle Level of Service

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 28.7 Flow rate in outside lane, vOL Effective width of outside lane, We 26.25 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.41 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone:

E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To343.525 - 344.004JurisdictionITD District 2Analysis Year2037Description2027 Old US-95 F2 Pural NR 3 Description 2037 Old US-95 E2 Rural NB 3 _____Input Data_____ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones32%Up/down-%Access point density15/mi Analysis direction volume, Vd 141 veh/h Opposing direction volume, Vo 94 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.5 2.7 1.1 1.1 Direction PCE for trucks, ET PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8930.880Grade adj. factor, (note-1) fg0.720.68Directional flow rate, (note-2) vi252pc/h Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 3.8 48.7 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.4mi/hAverage travel speed, ATSd43.9mi/hPercent Free Flow Speed, PFFS90.3% Average travel speed, ATSd Percent Free Flow Speed, PFFS

	I	J		
Direction	Analysis(d)	Oj	oposing	(0)
PCE for trucks, ET	1.8	- 1	1.8	(
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV			0.940	
			0.74	
Grade adjustment factor, (note-1) fg		- /1-		in a /h
Directional flow rate, (note-2) vi			100	pc/h
Base percent time-spent-following, (no	ote-4) BPTSFd			
Adjustment for no-passing zones, fnp		40.8		
Percent time-spent-following, PTSFd		47.8 %		
Level of Service and	Other Perform	ance Meas	ures	
Level of service, LOS		D		
Volume to capacity ratio, v/c		0.15		
Peak 15-min vehicle-miles of travel,	VMT15		veh-mi	
Peak-hour vehicle-miles of travel, VN			veh-mi	
	11.00		ven mi	
Peak 15-min total travel time, TT15				
Capacity from ATS, CdATS			veh/h	
Capacity from PTSF, CdPTSF			veh/h	
Directional Capacity		1078 .	veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt			0.5	mi
Length of two-lane highway upstream of	of the passing	lane Lu		mi
		iane, iu	_	mi
Length of passing lane including tape			43.9	mi/h
Average travel speed, ATSd (from abov				III I / II
Percent time-spent-following, PTSFd	(Irom above)		47.8	
Level of service, LOSd (from above)			D	
Average Travel Spe	eed with Pass	ing Lane		
Downstream length of two-lane highway	within effec	tive		
length of passing lane for average	no travol snee	d Lde	_	mi
Tength of passing take for average	je traver spee	u, nue		1112
Length of two-lane highway downstream	a of effective	anaad Td		mi
length of the passing lane for av			-	mi
Adj. factor for the effect of passing	g lane			
on average speed, fpl			-	
Average travel speed including passing	ng lane, ATSpl		-	0
Percent free flow speed including pas	ssing lane, PF	FSpl	0.0	010
Percent Time-Spent-Fo	ollowing with	Passing La	ane	
Downstream length of two-lane highway	within offor	tive leng	t h	
of passing lane for percent time-	enont-followi	na I.de	_	mi
of passing lane for percent time-	-spenc-rorrowr	longth of	F	111-
Length of two-lane highway downstream	a or errective	ing I-	L	mi
the passing lane for percent time		тпд, та		mi
Adj. factor for the effect of passing				
on percent time-spent-following,	tp⊥			
Percent time-spent-following				_
including passing lane, PTSFpl			-	010
Level of Service and Other Pert	formance Measu	res with	Passing	Lane
	no Ingol	F		
Level of service including passing la	Tdeor 'aus	E 	veh-h	
Peak 15-min total travel time, TT15		_	v = 11 - 11	
Bicycle Le	evel of Servic	е		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 162.1 Flow rate in outside lane, vOL Effective width of outside lane, We 18.13 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 5.09 Ε Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To337.668 - 342.28JurisdictionITD District 2Analysis Year2037Description2027 Old US-95 F2 Pural SB Description 2037 Old US-95 E2 Rural SB 1 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length4.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones50%Up/down-%Access point density6/mi Analysis direction volume, Vd 25 veh/h Opposing direction volume, Vo 17 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.7 2.7 Direction PCE for trucks, ET 1.1 PCE for RVs, ER 1.1 PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8800.880Grade adj. factor, (note-1) fg0.670.67Directional flow rate, (note-2) vi50pc/h Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp2.5mi/hAverage travel speed, ATSd62.7mi/hPercent Free Flow Speed, PFFS95.2%

		J		
Direction	Analysis(d)	C	Opposing (0)
PCE for trucks, ET	1.9		1.9	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV			0.933	
Grade adjustment factor, (note-1) fg			0.73	
Directional flow rate, (note-2) vi		~/h	29	pc/h
Base percent time-spent-following, (no				pe/11
Adjustment for no-passing zones, fnp	te 4/ bribru	46.1	0	
			5	
Percent time-spent-following, PTSFd		52.0 7	0	
Level of Service and	Other Performa	ance Meas	sures	
Level of service, LOS		A		
Volume to capacity ratio, v/c		0.03		
Peak 15-min vehicle-miles of travel,	VMT 1 5	34	veh-mi	
		115	ven mi veh-mi	
Peak-hour vehicle-miles of travel, VM	1100			
Peak 15-min total travel time, TT15		0.5	veh-h weh/h	
Capacity from ATS, CdATS		1002	veh/h	
Capacity from PTSF, CdPTSF			veh/h	
Directional Capacity		1002	veh/h	
Passing	Lane Analysis			
			A C	mi
Total length of analysis segment, Lt	C + 1	1 +	4.6	mi
Length of two-lane highway upstream o		lane, Lu		mi
Length of passing lane including tape			1.5	mi
Average travel speed, ATSd (from abov			62.7	mi/h
Percent time-spent-following, PTSFd (from above)		32.8	
Level of service, LOSd (from above)			A	
Average Travel Spe	ed with Pass.	ing Lane_		
Downstream length of two-lane highway	within effect	tive	1 20	,
length of passing lane for averag	e travel speed	d, Lde	1.70	mi
Length of two-lane highway downstream	of effective			
length of the passing lane for av	erage travel	speed, Lo	d -1.10	mi
Adj. factor for the effect of passing	lane			
on average speed, fpl				
Average travel speed including passin	g lane, ATSpl			
Percent free flow speed including pas		FSpl	0.0	010
Percent Time-Spent-Fo	llowing with	Passing 1	Lane	
Downstream length of two-lane highway	within effect	tive leng	gth	
of passing lane for percent time-	spent-followi	ng, Lde	13.00	mi
Length of two-lane highway downstream				
the passing lane for percent time	-spent-follow	ing, Ld	-12.40	mi
Adj. factor for the effect of passing		,		
on percent time-spent-following,				
Percent time-spent-following	- <u>-</u> -			
				00
including passing lane, PTSFpl				v
Level of Service and Other Perf	ormance Measu	res with	Passing L	ane
Level of service including passing la	ne LOSNI	E		
Peak 15-min total travel time, TT15	me, noobr	-	veh-h	
reak 10-min colar craver crme, 1115				
Bicycle Le	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 Pavement rating, P 3 Flow rate in outside lane, vOL 29.4 Effective width of outside lane, We 26.25 Effective speed factor, St 4.94 Bicycle LOS Score, BLOS 2.41 Bicycle LOS В

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

_____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To342.28 - 342.93JurisdictionITD District 2Analysis Year2037Description2027 Old US 05 Dural SP 2 Description 2037 Old US-95 Rural SB 2 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones27%Up/down-%Access point density6/mi Analysis direction volume, Vd 25 veh/h Opposing direction volume, Vo 17 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.7 2.7 1.1 1.1 Direction PCE for trucks, ET

 PCE for RVs, ER
 1.1
 1.1

 Heavy-vehicle adj. factor, (note-5) fHV
 0.880
 0.880

 Grade adj. factor, (note-1) fg
 0.67
 0.67

 Directional flow rate, (note-2) vi
 50
 pc/h
 34
 pc/h

 PCE for RVs, ER Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM - mi/h veh/h Observed total demand, (note-3) V ----Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.5mi/hAverage travel speed, ATSd63.8mi/hPercent Free Flow Speed, PFFS96.8% Average travel speed, ATSd Percent Free Flow Speed, PFFS

Phone: E-Mail: Fax:

Direction	Analysis(d)	Or	oposing (0)
PCE for trucks, ET	1.9	-10 1	1.9	0,
	1.0		1.0	
PCE for RVs, ER				
Heavy-vehicle adjustment factor, fHV			0.933	
Grade adjustment factor, (note-1) fg			0.73	4.5
Directional flow rate,(note-2) vi	43 p	c/h	29	pc/h
Base percent time-spent-following, (no	te-4) BPTSFd	5.3 %		
Adjustment for no-passing zones, fnp		34.2		
Percent time-spent-following, PTSFd		25.7 %		
rereent time spent forfowing, rista				
Level of Service and	Other Perform	ance Meası	ires	
Level of service, LOS		А		
Volume to capacity ratio, v/c		0.03		
			roh-mi	
Peak 15-min vehicle-miles of travel,			/eh-mi	
Peak-hour vehicle-miles of travel, VM	11.60		/eh-mi	
Peak 15-min total travel time, TT15			veh-h	
Capacity from ATS, CdATS		1002 v	/h	
Capacity from PTSF, CdPTSF		1158 1	/eh/h	
Directional Capacity		1002 1	/h	
	Lane Analysis			
Total length of analysis segment, Lt			0.6	mi
Length of two-lane highway upstream of	of the passing	lane. Lu	0.0	mi
Length of passing lane including tape		,	0.6	mi
			63.8	mi/h
Average travel speed, ATSd (from abov				1112/11
Percent time-spent-following, PTSFd	(from above)		25.7	
Level of service, LOSd (from above)			A	
Average Travel Spe	ed with Pass	ing Lane		
Downstream length of two-lane highway	within effec	tive	1 6 0	
length of passing lane for average	je travel spee	d, Lde	1.70	mi
Length of two-lane highway downstream	ι of effective			
length of the passing lane for av	verage travel	speed, Ld	-1.70	mi
Adj. factor for the effect of passing				
on average speed, fpl	,			
Average travel speed including passir			0.0	ojo
Percent free flow speed including pas	sing lane, Pr	FSPI	0.0	6
Percent Time-Spent-Fo	llowing with	Passing La	ane	
		+ + + + + - + + + + + + + + + + + + + +	- h	
Downstream length of two-lane highway	within effec	LIVE LENGT		mi
of passing lane for percent time-	-spent-follow1	ng, Lde	13.00	mi
Length of two-lane highway downstream	n of effective	length of	E	
the passing lane for percent time	e-spent-follow	ing, Ld	-13.00	mi
Adj. factor for the effect of passing				
on percent time-spent-following,				
Percent time-spent-following	- <u>r</u> -			
-				00
including passing lane, PTSFpl				~
Level of Service and Other Perf	formance Measu	res with 1	Passing I	ane
Taral of convice including presing 1-	ne IOSni	F		
Level of service including passing la	me, noopt	ىــ •	veh-h	
Peak 15-min total travel time, TT15		,	v = 11 11	
	and of Commin	0		
Bicycle Le	EVET OF SELVIC	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 29.4 Flow rate in outside lane, vOL Effective width of outside lane, We 26.25 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.41 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:		F	ax:				
Direct	ional Two-La	ne Hig	hway	Segment	Analys	is	
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2037 Old U	US-95 342.93 - 34 ITD Distric 2037 JS-95 E2 Rura	t 2 3.525 t 2 1 SB 3					
	I	nput D	ata				
Seament length 0.	0 ft 2.0 ft 6 mi olling mi % ume, Vd 141	% Tru % Tru Truck % Rec % No- Acces ve	cks a cks c craw reati passi s poi h/h	factor, nd buses rawling l speed onal veh ng zones nt densi	icles	0.85 8 0.0 0.0 0 31 6	% mi/hr % % /mi
	Average	Trave	l Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,(e-1) fg	fHV	0.72	9		posing (2.7 1.1 0.880 0.68 185	
Free-Flow Speed from Fi Field measured speed, (r Observed total demand, (Estimated Free-Flow Spe Base free-flow speed, (r Adj. for lane and shoul Adj. for access point o	ote-3) S FM note-3) V eed: ote-3) BFFS der width,(n	ote-3)		- - 70.0 2.6 1.5	mi/h veh/h mi/h mi/h mi/h		
Free-flow speed, FFSd				65.9	mi/h		
Adjustment for no-passi Average travel speed, A Percent Free Flow Speed	TSd	p		2.6 59.8 90.8	mi/h mi/h %		

Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (not Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	0.78 226 p	c/h 23.9 40.5	Opposing 1.8 1.0 0.940 0.74 159 %	(o) pc/h
Level of Service and C	ther Perform			
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, V Peak-hour vehicle-miles of travel, VMT Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	VMT 1 5	B 0.15 25 85 0.4 1093 1230 1093	veh-mi veh-mi veh-h veh/h veh/h veh/h	
Passing I	ane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream of Length of passing lane including taper Average travel speed, ATSd (from above Percent time-spent-following, PTSFd (f Level of service, LOSd (from above)	s, Lpl	lane, L	0.6 u - 59.8 47.7 B	mi mi mi/h
Average Travel Spee	ed with Pass	ing Lane		
Downstream length of two-lane highway length of passing lane for average Length of two-lane highway downstream length of the passing lane for ave	e travel spee of effective	d, Lde		mi mi
Adj. factor for the effect of passing on average speed, fpl Average travel speed including passing	lane lane, ATSpl		-	٥.
Percent free flow speed including pass			0.0	00
Percent Time-Spent-Fol	lowing with	Passing	Lane	
Downstream length of two-lane highway of passing lane for percent time-s Length of two-lane highway downstream	spent-followi	ng, Lde	_	mi
the passing lane for percent time- Adj. factor for the effect of passing	spent-follow lane		_	mi
on percent time-spent-following, f Percent time-spent-following including passing lane, PTSFpl	īp⊥		-	olo
Level of Service and Other Perfo	ormance Measu	res with	Passing	Lane
Level of service including passing lar Peak 15-min total travel time, TT15	ne, LOSpl	E -	veh-h	
Bicycle Lev	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 165.9 Effective width of outside lane, We 18.13 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 5.10 Ε Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone:

E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To343.525 - 344.004JurisdictionITD District 2Analysis Year2037Description2027 old US-95 F2 Pural SB 4 Jared Hopkins Description 2037 Old US-95 E2 Rural SB 4 _____Input Data_____ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones0%Up/down-%Access point density15/mi Analysis direction volume, Vd 141 veh/h Opposing direction volume, Vo 94 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 2.7 2.4 1.1 PCE for trucks, ET 1.1 PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8990.880Grade adj. factor, (note-1) fg0.720.68Directional flow rate, (note-2) vi256pc/h PCE for RVs, ER Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for lane and shoulder width, (note-3) fA 3.8 mi/h Adj. for access point density, (note-3) fA 3.8 48.7 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.0mi/hAverage travel speed, ATSd44.3mi/hPercent Free Flow Speed, PFFS91.0%

Percent	t Time-Spent-Follow	ing		
Direction	Analysis(d)	1	Opposing	(0)
PCE for trucks, ET	1.8		1.8	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor,			0.940)
Grade adjustment factor, (note-1)	·		0.74	
Directional flow rate, (note-2)		~/h	159	
Base percent time-spent-following			90 00	P 0 / 11
Adjustment for no-passing zones,			0	
Percent time-spent-following, P			0	
-				
Level of Service	e and Other Performa	ance Mea	sures	
Level of service, LOS		D		
Volume to capacity ratio, v/c		0.15		
Peak 15-min vehicle-miles of tra	avel, VMT15	21	veh-mi	
Peak-hour vehicle-miles of trave		71	veh-mi	
Peak 15-min total travel time, 5		0.5	veh-h	
Capacity from ATS, CdATS	1110	1093	veh/h	
Capacity from PTSF, CdPTSF		1230	veh/h veh/h	
		1093	ven/h veh/h	
Directional Capacity		1095	ven/n	
Pa:	ssing Lane Analysis_			
Total length of analysis segment	t, Lt		0.5	mi
Length of two-lane highway upst:		lane, L		mi
Length of passing lane including			_	mi
Average travel speed, ATSd (from			44.3	
Percent time-spent-following, P			32.3	
Level of service, LOSd (from abo			D	
			-	
Average Trave	el Speed with Pass:	ing Lane		
Downstream length of two-lane ha	ighway within effect	tive		
length of passing lane for a	average travel speed	d, Lde	-	mi
Length of two-lane highway downs				
length of the passing lane :		speed, L	d –	mi
Adj. factor for the effect of pa		1 ,		
on average speed, fpl			-	
Average travel speed including p	passing lane. ATSpl		_	
Percent free flow speed including		FSpl	0.0	00
_				-
Percent Time-Spe	ent-Following with I	Passing	Lane	
Downstream length of two-lane h:	ighway within effect	tive len	gth	
of passing lane for percent			-	mi
Length of two-lane highway down:	stream of effective	length	of	
the passing lane for percent	t time-spent-follow	ing. Ld	_	mi
Adj. factor for the effect of particular		y/ 10		
			_	
on percent time-spent-follow	MIIIA' THT			
Percent time-spent-following including passing lane, PTS:	Fpl		-	00
Level of Service and Othe		res with	Passing	Lane
	ing long IOG-1	E.		
Level of service including pass.		E	web-b	
Peak 15-min total travel time,	1.1.7.2	-	veh-h	
Ricy	cle Level of Service	e		
Bicy	CIC DEVEL OF DELVIC			

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 165.9 Flow rate in outside lane, vOL Effective width of outside lane, We 18.13 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 5.10 Е Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone:

E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To337.668 - 342.93JurisdictionITD District 2Analysis Year2037Description2037 Jared Hopkins Description 2037 Old US-95 W4 Rural NB 1 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length5.3miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones79%Up/down-%Access point density6/mi Analysis direction volume, Vd 17 veh/h Opposing direction volume, Vo 11 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.7 2.7 1.1 1.1 Direction PCE for trucks, ET PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8800.880Grade adj. factor, (note-1) fg0.670.67Directional flow rate, (note-2) vi33pc/h Free-Flow Speed from Field Measurement: Field measured speed,(note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for lane and shoulder width, (note-3) fA 1.5 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp3.0mi/hAverage travel speed, ATSd62.5mi/hPercent Free Flow Speed, PFFS94.8% Average travel speed, ATSd Percent Free Flow Speed, PFFS

Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (no Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	0.73 29 p	c/h 3.6 52.0	Opposing 1.9 1.0 0.933 0.73 19 %	(o) pc/h
Level of Service and	Other Perform	ance Mea	sures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, Peak-hour vehicle-miles of travel, VM Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity		A 0.02 26 90 0.4 1002 1158 1002		
Passing	Lane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream o Length of passing lane including tape Average travel speed, ATSd (from abov Percent time-spent-following, PTSFd (Level of service, LOSd (from above)	rs, Lpl e)	lane, L	5.3 - 62.5 35.0 A	mi mi mi/h
Average Travel Spe	ed with Pass	ing Lane		
Downstream length of two-lane highway length of passing lane for averag Length of two-lane highway downstream length of the passing lane for av Adj. factor for the effect of passing on average speed, fpl	within effec e travel spee of effective erage travel lane	tive d, Lde speed, L	_	mi mi
Average travel speed including passing lane, ATSpl Percent free flow speed including passing lane, PFFSpl			- 0.0	00
Percent Time-Spent-Fo	llowing with	rassing	Lane	
Downstream length of two-lane highway of passing lane for percent time- Length of two-lane highway downstream	spent-followi	ng, Lde	-	mi
the passing lane for percent time	-spent-follow	ing, Ld	-	mi
Adj. factor for the effect of passing on percent time-spent-following,			_	
Percent time-spent-following including passing lane, PTSFpl			-	9
Level of Service and Other Perf	ormance Measu	res with	Passing	Lane
Level of service including passing la Peak 15-min total travel time, TT15	ne, LOSpl	E 	veh-h	
Bicycle Le	evel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 19.5 Flow rate in outside lane, vOL Effective width of outside lane, We 26.81 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.08 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail:	Fax:				
Directional Two-	Lane Highway	Segment	Analys:	is	
AnalystJared HopAgency/Co.ITD Distr.Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To342.93 -JurisdictionITD Distr.Analysis Year2037Description2037 Old US-95 W4 Ru	ict 2 343.525 ict 2				
	_Input Data				
Segment length 0.6 mi Terrain type Rolling	% Trucks c Truck craw % Recreati % No-passi Access poi veh/h	nd buses rawling d speed onal veh	icles	0.87 8 0.0 0.0 0 5 6	% mi/hr % % ∕mi
Avera	ge Travel Spe	ed			
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor,(note-5 Grade adj. factor,(note-1) fg Directional flow rate,(note-2) vi	0.67	30		posing 2.7 1.1 0.880 0.67 21	(o) pc/h
Free-Flow Speed from Field Measur Field measured speed, (note-3) S F Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFF Adj. for lane and shoulder width, Adj. for access point density, (no Free-flow speed, FFSd Adjustment for no-passing zones, Average travel speed, ATSd Percent Free Flow Speed, PFFS	M S (note-3) fLS te-3) fA	- - 2.6 1.5 65.9 1.1 64.4 97.7	<pre>mi/h veh/h mi/h mi/h mi/h mi/h mi/h mi/h %</pre>		

Percent Time	-Spent-Follow	ing		
Direction	Analysis(d)	(Opposing	(0)
PCE for trucks, ET	1.9		1.9	
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV	0.933		0.933	3
Grade adjustment factor, (note-1) fg			0.73	
Directional flow rate, (note-2) vi		c/h	19	pc/h
Base percent time-spent-following, (no			010	
Adjustment for no-passing zones, fnp		15.8		
Percent time-spent-following, PTSFd		13.1	00	
Level of Service and	Other Perform	ance Mea	sures	
Level of service, LOS		A		
Volume to capacity ratio, v/c		0.02		
Peak 15-min vehicle-miles of travel,	VMT15	3	veh-mi	
Peak-hour vehicle-miles of travel, VM	r60	10	veh-mi	
Peak 15-min total travel time, TT15		0.0	veh-h	
Capacity from ATS, CdATS		1002	veh/h	
Capacity from PTSF, CdPTSF		1158	veh/h	
Directional Capacity		1002	veh/h	
Passing	Lane Analysis			
				mi
Total length of analysis segment, Lt		1 - m - T -	0.6	mi mi
Length of two-lane highway upstream o	t the passing	lane, L	u – –	mi mi
Length of passing lane including tape			- 64.4	mi/h
Average travel speed, ATSd (from abov	e) further a la cara (13.1	IUT / 11
Percent time-spent-following, PTSFd (from above)			
Level of service, LOSd (from above)			A	
Average Travel Spe	ed with Pass	ing Lane		
Downstream length of two-lane highway	within effec	tive		
length of passing lane for averag	e travel spee	d, Lde	-	mi
Length of two-lane highway downstream				
length of the passing lane for av	erage travel	speed, L	d –	mi
Adj. factor for the effect of passing	lane			
on average speed, fpl	10.00		_	
Average travel speed including passin	g lane, ATSpl		_	
Percent free flow speed including passing	sing lane, PF	FSpl	0.0	010
			Tana	
Percent Time-Spent-Fo	liowing with	Passing		
Downstream length of two-lane highway	within effec	tive len	gth	,
of passing lane for percent time-	spent-followi	ng, Lde	-	mi
Length of two-lane highway downstream	of effective	length	of	
the passing lane for percent time	-spent-follow	ing, Ld	-	mi
Adj. factor for the effect of passing				
on percent time-spent-following,			-	
Percent time-spent-following				
including passing lane, PTSFpl			-	0
Level of Service and Other Perf	ormance Measu	res with	Passing	Lane
Level of service including passing la	ne LOSpl	E		
Peak 15-min total travel time, TT15	пе, порт	- -	veh-h	
reak 15-min colar craver cime, 1115				
Bicycle Le	vel of Servic	:e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 19.5 Effective width of outside lane, We 26.81 4.94 Effective speed factor, St 2.08 Bicycle LOS Score, BLOS В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis______ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To343.525 - 344.004JurisdictionITD District 2Analysis Year2037 Description 2037 Old US-95 W4 Rural NB 3 _____Input Data_____ Highway class Class 1Peak hour factor, PHF0.87Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones32%Up/down-%Access point density15/mi Analysis direction volume, Vd 141 veh/h Opposing direction volume, Vo 94 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) Direction 2.7 2.5 PCE for trucks, ET 1.1 1.1 PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8930.880Grade adj. factor, (note-1) fg0.720.68Directional flow rate, (note-2) vi252pc/h PCE for RVs, ER Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM Observed total demand, (note-3) V - mi/h - veh/h Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for lane and shoulder width, (note-3) fA 3.8 mi/h Adj. for access point density, (note-3) fA 3.8 48.7 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.4mi/hAverage travel speed, ATSd43.9mi/hPercent Free Flow Speed, PFFS90.3% Average travel speed, ATSd Percent Free Flow Speed, PFFS

Percent Time-	-Spent-Follow:	ing		
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor,(note-1) fg	0.77		1.8 1.0 0.94 0.74	0
Directional flow rate, (note-2) vi Base percent time-spent-following, (not Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	ce-4) BPTSFd	c/h 23.7 40.8 47.8	155 % %	pc/h
Level of Service and (Other Performa	ance Mea	asures	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, V Peak-hour vehicle-miles of travel, VM Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity	260		veh/h	
Passing l	Lane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream of Length of passing lane including taper Average travel speed, ATSd (from above Percent time-spent-following, PTSFd (f Level of service, LOSd (from above)	cs, Lpl e)	lane, 3	0.5 Lu – 43.9 47.8 D	mi mi mi/h
Average Travel Spee	ed with Pass	ing Lan	e	
Downstream length of two-lane highway length of passing lane for average Length of two-lane highway downstream	e travel speed	d, Lde	_	mi
length of the passing lane for ave Adj. factor for the effect of passing	erage travel :	speed, 3	Ld -	mi
on average speed, fpl Average travel speed including passing Percent free flow speed including pass	g lane, ATSpl sing lane, PF	FSpl	- 0.0	<u>8</u>
Percent Time-Spent-Fol	llowing with	Passing	Lane	
Downstream length of two-lane highway of passing lane for percent time-s	spent-followi:	ng, Lde	-	mi
Length of two-lane highway downstream the passing lane for percent time Adj. factor for the effect of passing on percent time-spent-following, :	-spent-follow lane	ing, Ld		mi
Percent time-spent-following including passing lane, PTSFpl			-	0
Level of Service and Other Perfo	ormance Measu	res wit	h Passing	Lane
Level of service including passing lar Peak 15-min total travel time, TT15	ne, LOSpl	E -	veh-h	
Bicycle Lev	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 162.1 Flow rate in outside lane, vOL Effective width of outside lane, We 18.13 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 5.09 Е Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Phone: Fax: E-Mail:						
Directional Two-Lar	ne Highway	Segment	Analys	is		
AnalystJared HopkinAgency/Co.ITD DistrictDate Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To337.668 - 34JurisdictionITD DistrictAnalysis Year2037Description2037 Old US-95 W4 Rural	2 12.28 2					
Ir	nput Data					
Lane width12.0ftSegment length4.6miTerrain typeRollingGrade:Length-	Peak hour % Trucks a % Trucks c Truck craw % Recreati % No-passi Access poi veh/h veh/h	nd buses rawling vl speed onal veh	icles	0.85 8 0.0 0.0 0 50 6	% mi/hr % % /mi	
	Travel Spe	ed				
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. factor,(note-5) f Grade adj. factor,(note-1) fg Directional flow rate,(note-2) vi	Analysis 2.7 1.1 EHV 0.88 0.67	 ;(d) ;0	Op	posing 2.7 1.1 0.880 0.67	(0)	
Free-Flow Speed from Field Measureme Field measured speed, (note-3) S FM Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS Adj. for lane and shoulder width, (note- Adj. for access point density, (note-	ote-3) fLS	- - 70.0 2.6 1.5	mi/h veh/h mi/h mi/h mi/h			
Free-flow speed, FFSd		65.9	mi/h			
Adjustment for no-passing zones, fng Average travel speed, ATSd Percent Free Flow Speed, PFFS	>	2.5 63.0 95.5	mi∕h mi/h %			

Percent Time-	Spent-Follow	ing		
PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV		Oŗ	posing (1.9 1.0 0.933	0)
Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (not Adjustment for no-passing zones, fnp	29 p	3.6 %	0.73 19	pc/h
Percent time-spent-following, PTSFd		31.3 %		
Level of Service and C	ther Perform	ance Meası	ires	
Level of service, LOS Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, V Peak-hour vehicle-miles of travel, VMT Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF Directional Capacity		78 x 0.4 x 1002 x 1158 x	veh-mi veh-mi veh-h veh/h veh/h veh/h	
Passing I	ane Analysis			
Total length of analysis segment, Lt Length of two-lane highway upstream of Length of passing lane including taper Average travel speed, ATSd (from above Percent time-spent-following, PTSFd (f Level of service, LOSd (from above)	rs, Lpl e)	lane, Lu	4.6 2.5 1.5 63.0 31.3 A	mi mi mi/h
Average Travel Spee	ed with Pass	ing Lane		
Downstream length of two-lane highway length of passing lane for average Length of two-lane highway downstream	e travel spee	d, Lde	1.70	mi
Adj. factor for the effect of passing on average speed, fpl	erage travel	speed, Ld	-1.10	mi
Average travel speed including passing Percent free flow speed including pass			0.0	9 0
Percent Time-Spent-Fol	lowing with	Passing La	ine	
Downstream length of two-lane highway of passing lane for percent time-s	pent-followi	ng, Lde	13.00	mi
Length of two-lane highway downstream the passing lane for percent time- Adj. factor for the effect of passing on percent time-spent-following, f	spent-follow lane			mi
Percent time-spent-following including passing lane, PTSFpl				ojo
Level of Service and Other Perfo	ormance Measu	res with H	Passing L	ane
Level of service including passing lar Peak 15-min total travel time, TT15	ne, LOSpl	E	veh-h	
Bicycle Lev	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 20.0 Flow rate in outside lane, vOL Effective width of outside lane, We 26.81 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.08 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To342.28 - 342.93JurisdictionITD District 2Analysis Year2037Description2037 Description 2037 Old US-95 W4 Rural SB 2 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.6miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones27%Up/down-%Access point density6/mi Analysis direction volume, Vd 17 veh/h Opposing direction volume, Vo 11 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.7 2.7 1.1 1.1 Direction PCE for trucks, ET PCE for RVs, ER PCE for RVs, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8800.880Grade adj. factor, (note-1) fg0.670.67Directional flow rate, (note-2) vi34pc/h22pc/h Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM Observed total demand, (note-3) V - mi/h - veh/h Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 70.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for lane and shoulder width, (note-3) fA 1.5 mi/h Adj. for access point density, (note-3) fA 1.5 65.9 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.5mi/hAverage travel speed, ATSd64.0mi/hPercent Free Flow Speed, PFFS97.1%

Direction Analysis(d) Opposing (d) PCE for trucks, ET 1.9 1.0 PCE for trucks, ET 1.9 1.0 Reavy-vehicle adjustment factor, fHV 0.933 0.933 Grade adjustment factor, (ntot-1) fg 0.73 0.933 Directional flow rate, (note-2) vi 29 pc/h 19 pc/h Base percent time-spent-following, (note-4) BFPSH 3.6 % Adjustment for no-passing zones, fnp 34.0 Percent time-spent-following, PTSFE 24.1 % Level of Service and Other Performance Measures Level of service, LOS A Volume to capacity ratio, v/c 0.02 Peak 15-mit vehicle-miles of travel, VMT15 3 veh-mi Peak 15-mit vehicle-miles of travel, VMT15 3 veh-mi Peak 15-mit vehicle-miles of travel, VMT15 3 veh-mi Peak 15-mit vehicle-miles of travel, VMT15 1002 veh/h Capacity from ATS, CdATS 1002 veh/h Directional Capacity 1002 veh/h Passing Lane Analysis Zotal length of analysis segment, Lt 0.6 mi Length of passing lane including tapers, Lpl 0.6 mi Average travel speed, ATSd (from above) 24.1 Level of service, LOS (from above) 24.1 Level of two-lane highway uptream of the passing lane	Percent Tim	e-Spent-Follow	ing		
Level of service, LOS A Volume to capacity ratio, v/c 0.02 Peak 15-min vehicle-miles of travel, VMT15 3 veh-mi Peak-hour vehicle-miles of travel, VMT60 10 veh-mi Peak-hour vehicle-miles of travel, VMT60 10 veh-mi Peak-hour vehicle-miles of travel, VMT60 10 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from PTSF, CdPTSF 1158 veh/h Directional Capacity 1002 veh/h Passing Lane Analysis	PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor,(note-1) fg Directional flow rate,(note-2) vi Base percent time-spent-following,(n Adjustment for no-passing zones, fnp	1.9 1.0 0.933 0.73 29 p ote-4) BPTSFd	c/h 3.6 34.0	1.9 1.0 0.933 0.73 19 %	
Volume to capacity ratio, v/c 0.02 Peak 15-min vehicle-miles of travel, VMT15 3 veh-mi Peak-hour vehicle-miles of travel, VMT60 10 veh-mi Peak 15-min total travel time, TT15 0.0 veh-h Capacity from ATS, CdATS 1002 veh/h Capacity from ATS, CdATS 1002 veh/h Directional Capacity 1002 veh/h	Level of Service and	Other Perform	ance Mea	sures	
Total length of analysis segment, Lt 0.6 mi Length of two-lane highway upstream of the passing lane, Lu 0.0 mi Length of passing lane including tapers, Lpl 0.6 mi Average travel speed, ATSd (from above) 64.0 mi/h Percent time-spent-following, PTSFd (from above) 24.1 Level of service, LOSd (from above) A	Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, Peak-hour vehicle-miles of travel, V Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF		0.02 3 10 0.0 1002 1158	veh-mi veh-h veh/h veh/h	
Length of two-lane highway upstream of the passing lane, Lu 0.0 mi Length of passing lane including tapers, Lpl 0.6 mi Average travel speed, ATSd (from above) 64.0 mi/h Percent time-spent-following, PTSFd (from above) 24.1 Level of service, LOSd (from above) A 	Passing	Lane Analysis			
Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde 1.70 mi Length of the passing lane for average travel speed, Ld -1.70 mi Adj. factor for the effect of passing lane on average speed, fpl Average travel speed including passing lane, ATSpl Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde 13.00 mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld -13.00 mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following, fpl Percent time-spent-following including passing lane, PTSFpl % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 veh-h	Length of two-lane highway upstream Length of passing lane including tap Average travel speed, ATSd (from abo Percent time-spent-following, PTSFd	of the passing ers, Lpl ve)	lane, L	u 0.0 0.6 64.0 24.1	mi mi
<pre>length of passing lane for average travel speed, Lde 1.70 mi Length of two-lane highway downstream of effective length of the passing lane for average travel speed, Ld -1.70 mi Adj. factor for the effect of passing lane on average speed, fpl Average travel speed including passing lane, ATSpl Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde 13.00 mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld -13.00 mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following fpl Percent time-spent-following including passing lane, PTSFpl % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 veh-h</pre>	Average Travel Sp	eed with Pass	ing Lane		
Percent free flow speed including passing lane, PFFSpl 0.0 %Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde 13.00 mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld -13.00 mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following including passing lane, PTSFpl % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 veh-h	length of passing lane for avera Length of two-lane highway downstrea length of the passing lane for a Adj. factor for the effect of passin on average speed, fpl	ge travel spee m of effective verage travel g lane	d, Lde speed, L		
Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde 13.00 mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld -13.00 mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following including passing lane, PTSFpl % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 veh-h				0.0	0 0
of passing lane for percent time-spent-following, Lde 13.00 mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld -13.00 mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following including passing lane, PTSFpl % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 veh-h	Percent Time-Spent-F	ollowing with	Passing	Lane	
Adj. factor for the effect of passing lane on percent time-spent-following, fpl Percent time-spent-following including passing lane, PTSFpl % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 veh-h	of passing lane for percent time Length of two-lane highway downstrea	-spent-followi m of effective	ng, Lde length	13.00 of	
Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 veh-h	Adj. factor for the effect of passin on percent time-spent-following, Percent time-spent-following	g lane	THA' TH	13.00	
Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 veh-h					
Peak 15-min total travel time, TT15 veh-h	Level of Service and Other Per	formance Measu	res with	Passing I	Lane
Biquele Level of Service		ane, LOSpl	Е	veh-h	
	Bicycle L	evel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P 20.0 Flow rate in outside lane, vOL Effective width of outside lane, We 26.81 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 2.08 В Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
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- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
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Phone: E-Mail:	Fax:						
Direct	ional Two-La	ne Highway	Segment .	Analys	is		
Analyst Agency/Co. Date Performed Analysis Time Period Highway From/To Jurisdiction Analysis Year Description 2037 Old U	US-95 342.93 - 34 ITD Distric 2037 US-95 C3 Rura	t 2 3.525 t 2 1 SB 3					
	I:	nput Data					
Segment length 0. Terrain type Ro Grade: Length - Up/down -	0 ft 2.0 ft 6 mi olling 8	Peak hour % Trucks a % Trucks c Truck craw % Recreati % No-passi Access poi	nd buses rawling l speed onal veh ng zones	icles	0.85 8 0.0 0.0 0 31 6	% % mi/hr % % ∕mi	
Analysis direction volu Opposing direction volu	nme, Vo 94	veh/h					
	Average	Travel Spe	ed				
Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adj. fact Grade adj. factor,(note Directional flow rate,	e-1) fg	0.72	9		posing (2.7 1.1 0.880 0.68 185	o) pc/h	
Free-Flow Speed from Fi Field measured speed, (r Observed total demand, Estimated Free-Flow Spe Base free-flow speed, (r Adj. for lane and shoul Adj. for access point of Free-flow speed, FFSd Adjustment for no-pass	note-3) S FM (note-3) V eed: note-3) BFFS ider width,(n density,(note	ote-3) fLS -3) fA	- - 2.6 1.5 65.9 2.6	mi/h veh/h mi/h mi/h mi/h mi/h			
Average travel speed, A Percent Free Flow Speed	ATSd		59.8 90.8	mi/h %			

Level of Service and Other Performance Measures Level of service, LOS B Volume to capacity ratio, w/c 0.15 Peak 15-min vehicle-miles of travel, VMT15 25 veh-mi Peak 15-min total travel time, TT15 0.4 veh-mi Peak 15-min total travel time, TT15 0.4 veh-mi Capacity from ATS, CdATS 1093 veh/h Capacity from FTSF, CdPTSF 1230 veh/h Directional Capacity 1093 veh/h Directional Capacity 0.6 mi Length of analysis segment, Lt 0.6 mi Length of two-lane highway upstream of the passing lane, Lu - mi Average travel speed, ATSG (from above) 47.7 - Percent time-spent-following, PTSFI (from above) 47.7 Level of service, LOSG (from above) - mi Length of two-lane highway within effective - mi Length of two-lane highway downstream of effective - mi Length of two-lane highway downstream of effective - mi Length of two-lane highway downstream of effective <th>Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (no Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd</th> <th>0.78 226 p te-4) BPTSFd</th> <th>c/h 23.9 40.5 47.7</th> <th>Dpposing 1.8 1.0 0.940 0.74 159 %</th> <th></th>	Direction PCE for trucks, ET PCE for RVs, ER Heavy-vehicle adjustment factor, fHV Grade adjustment factor, (note-1) fg Directional flow rate, (note-2) vi Base percent time-spent-following, (no Adjustment for no-passing zones, fnp Percent time-spent-following, PTSFd	0.78 226 p te-4) BPTSFd	c/h 23.9 40.5 47.7	Dpposing 1.8 1.0 0.940 0.74 159 %	
Volume to capacity ratio, v/c 0.15 Peak Is-min vehicle-miles of travel, VMT50 25 veh-mi Peak-hour vehicle-miles of travel, VMT60 85 veh-mi Peak Is-min total travel time, TT15 0.4 veh/h Capacity from ATS, CdATS 1093 veh/h Capacity from PTSF, CdPTSF 1230 veh/h Directional Capacity 1093 veh/h	Level of Service and	Other Perform	ance Mea:	sures	
Total length of analysis segment, Lt 0.6 mi Length of two-lane highway upstream of the passing lane, Lu - mi Average travel speed, ATSd (from above) 59.8 mi/h Percent time-spent-following, PTSFd (from above) 47.7 Level of service, LOSd (from above) B	Volume to capacity ratio, v/c Peak 15-min vehicle-miles of travel, Peak-hour vehicle-miles of travel, VM Peak 15-min total travel time, TT15 Capacity from ATS, CdATS Capacity from PTSF, CdPTSF		0.15 25 85 0.4 1093 1230	veh-mi veh-h veh/h veh/h	
Length of two-lane highway upstream of the passing lane, Lu - mi Length of passing lane including tapers, Lpl - mi Average travel speed, ATSd (from above) 59.8 mi/h Percent time-spent-following, PTSFd (from above) 47.7 Level of service, LOSd (from above) B Average Travel Speed with Passing Lane Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length on average speed, fpl - Average travel speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, Fpl - Percent time-spent-following, fpl - Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h	Passing	Lane Analysis			
Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl	Length of two-lane highway upstream o Length of passing lane including tape Average travel speed, ATSd (from abov Percent time-spent-following, PTSFd (rs, Lpl e)	lane, Lu	u – – 59.8 47.7	mi mi
Downstream length of two-lane highway within effective length of passing lane for average travel speed, Lde - mi Length of the passing lane for average travel speed, Ld - mi Adj. factor for the effect of passing lane on average speed, fpl	Average Travel Spe	ed with Pass	ing Lane		
on average speed, fpl - Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following, fpl - Percent time-spent-following fpl - Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h	Downstream length of two-lane highway length of passing lane for averag Length of two-lane highway downstream length of the passing lane for av	within effec e travel spee of effective erage travel	tive d, Lde	-	mi
Average travel speed including passing lane, ATSpl - Percent free flow speed including passing lane, PFFSpl 0.0 % Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h		lane		_	
Percent Time-Spent-Following with Passing Lane Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h		g lane, ATSpl		-	
Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h	Percent free flow speed including pas	sing lane, PF	FSpl	0.0	010
Downstream length of two-lane highway within effective length of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h	Percent Time-Spent-Fo	llowing with	Passing 3	Lane	
<pre>of passing lane for percent time-spent-following, Lde - mi Length of two-lane highway downstream of effective length of the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h</pre>		within offer	tivo lon	at b	
<pre>the passing lane for percent time-spent-following, Ld - mi Adj. factor for the effect of passing lane on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h</pre>	of passing lane for percent time-	spent-followi	ng, Lde	-	mi
on percent time-spent-following, fpl - Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h	the passing lane for percent time	-spent-follow	ing, Ld	-	mi
Percent time-spent-following including passing lane, PTSFpl - % Level of Service and Other Performance Measures with Passing Lane Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h				_	
Level of service including passing lane, LOSpl E Peak 15-min total travel time, TT15 - veh-h	Percent time-spent-following	• -		_	<u>0</u>
Peak 15-min total travel time, TT15 - veh-h	Level of Service and Other Perf	ormance Measu	res with	Passing 1	Lane
Bicycle Level of Service		ne, LOSpl	E -	veh-h	
	Bicycle Le	vel of Servic	e		

60 Posted speed limit, Sp Percent of segment with occupied on-highway parking 0 3 Pavement rating, P Flow rate in outside lane, vOL 165.9 Effective width of outside lane, We 18.13 4.94 Effective speed factor, St Bicycle LOS Score, BLOS 5.10 Е Bicycle LOS

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- 3. For the analysis direction only and for v>200 veh/h.
- 4. For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Fax: Phone: E-Mail: _____Directional Two-Lane Highway Segment Analysis_____ AnalystJared HopkinsAgency/Co.ITD District 2Date Performed1-6-2014Analysis Time Period2037HighwayUS-95From/To343.525 - 344.004JurisdictionITD District 2Analysis Year2037Description2027 Old US-95 Description 2037 Old US-95 W4 Rural SB 4 _____Input Data______ Highway class Class 1Peak hour factor, PHF0.85Shoulder width2.0ft% Trucks and buses8%Lane width12.0ft% Trucks crawling0.0%Segment length0.5miTruck crawl speed0.0mi/hrTerrain typeRolling% Recreational vehicles0%Grade:Length-mi% No-passing zones0%Up/down-%Access point density15/mi Analysis direction volume, Vd 141 veh/h Opposing direction volume, Vo 94 veh/h _____Average Travel Speed_____ Analysis(d) Opposing (o) 2.4 2.7 1.1 1.1 Direction PCE for trucks, ET PCE for RVs, ER PCE for RVS, ER1.11.1Heavy-vehicle adj. factor, (note-5) fHV0.8990.880Grade adj. factor, (note-1) fg0.720.68Directional flow rate, (note-2) vi256pc/h Free-Flow Speed from Field Measurement: Field measured speed, (note-3) S FM - mi/h - veh/h Observed total demand, (note-3) V Estimated Free-Flow Speed: Base free-flow speed, (note-3) BFFS 55.0 mi/h Adj. for lane and shoulder width, (note-3) fLS 2.6 mi/h Adj. for access point density, (note-3) fA 3.8 48.7 mi/h Free-flow speed, FFSd Adjustment for no-passing zones, fnp1.0mi/hAverage travel speed, ATSd44.3mi/hPercent Free Flow Speed, PFFS91.0%

Direction	Analysis(d)	0	nnosina	(0)
PCE for trucks, ET	1.8	Ŭ	1.8	(0)
PCE for RVs, ER	1.0		1.0	
Heavy-vehicle adjustment factor, fHV			0.940	
Grade adjustment factor, (note-1) fg		()	0.74	()
Directional flow rate, (note-2) vi	-		159	pc/h
Base percent time-spent-following, (no	ote-4) BPTSFd			
Adjustment for no-passing zones, fnp		14.3		
Percent time-spent-following, PTSFd		32.3 %		
Level of Service and	Other Perform	ance Meas	ures	
Level of service, LOS		D		
Volume to capacity ratio, v/c		0.15		
Peak 15-min vehicle-miles of travel,			veh-mi	
Peak-hour vehicle-miles of travel, VM	IT 60		veh-mi	
Peak 15-min total travel time, TT15			veh-h	
Capacity from ATS, CdATS		1093	veh/h	
Capacity from PTSF, CdPTSF		1230	veh/h	
Directional Capacity		1093	veh/h	
Passing	Lane Analysis			
Total length of analysis segment, Lt			0.5	mi
Length of two-lane highway upstream of	f the nassing	lang Iu		mi
		Iane, Lu		mi
Length of passing lane including tape			-	
Average travel speed, ATSd (from abov			44.3	mi/h
Percent time-spent-following, PTSFd (from above)		32.3	
Level of service, LOSd (from above)			D	
Average Travel Spe	ed with Pass	ing Lane		
Development langth of two lang highway		tino		
Downstream length of two-lane highway				
length of passing lane for average			-	mi
Length of two-lane highway downstream				
length of the passing lane for av		speea, La		mi
Adj. factor for the effect of passing	lane			
on average speed, fpl			-	
Average travel speed including passin			_	_
Percent free flow speed including pas	sing lane, PF	FSpl	0.0	010
Percent Time-Spent-Fo	llowing with	Passing L	ane	
		L 2	+ 1-	
Downstream length of two-lane highway			LU	
of passing lane for percent time-			-	mi
Length of two-lane highway downstream			Í	
the passing lane for percent time		ing, Ld	-	mi
Adj. factor for the effect of passing				
on percent time-spent-following,	fpl			
Percent time-spent-following				
including passing lane, PTSFpl			-	010
Level of Service and Other Perf	ormance Measu	res with 1	Passing :	Lane
		P		
Level of service including passing la	ne, LUSPI	E	veh-h	
Peak 15-min total travel time, TT15		~	ven-n	
Bicvcle Le	vel of Servic	e		
		<u> </u>		

Posted speed limit, Sp	60
Percent of segment with occupied on-highway parking	0
Pavement rating, P	3
Flow rate in outside lane, vOL	165.9
Effective width of outside lane, We	18.13
Effective speed factor, St	4.94
Bicycle LOS Score, BLOS	5.10
Bicycle LOS	E

- 1. Note that the adjustment factor for level terrain is 1.00, as level terrain is one of the base conditions. For the purpose of grade adjustment, specific dewngrade segments are treated as level terrain.
- 2. If vi (vd or vo) >= 1,700 pc/h, terminate analysis-the LOS is F.
- For the analysis direction only and for v>200 veh/h.
 For the analysis direction only.
- 5. Use alternative Exhibit 15-14 if some trucks operate at crawl speeds on a specific downgrade.

Appendix A.2

Travel Time Calculations

	Length and Travel Time of Alternative									
		Length	Length of Segment within Speed Zone Trave							
Alternative	Length	35 MPH	45 MPH	57 MPH	65 MPH	Minutes	Min:Sec			
Alternative E2	5.85	0.03	0.21		5.61	5.51	5:31			
Alternative C3	5.94	0.03	1.39		4.52	6.08	6:05			
Alternative W4	6.69	0.03	0.27		6.39	6.31	6:19			
No Action Alternative	6.34	0.03	0.45	5.86		6.82	6:49			

Total	Travel Time F	or No Acti	on Alterr	ative	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day
Passenger Cars on Personal Use	4757	1.67	7944	6.82	903
Passenger Cars on Business Use	320	1.24	397	6.82	45.1
Light Single Unit Trucks	382	1.05	401	6.82	45.6
Heavy Single Unit Trucks	67	1	67	6.82	7.6
Combination Trucks	395	1.12	442	6.82	50.2
		Travel Time (I	Hours) Per (Calendar Day:	1051.5

Travel Time (Hours) Per Calendar Year: 383797.5

Vehicle Type	Number of Vehicles*	of Vehicle		Travel Time (Minutes)	Hours Per Calendar Day
Passenger Cars on Personal Use	4757	1.67	7944	5.51	729.5
Passenger Cars on Business Use	320	1.24	397	5.51	36.5
Light Single Unit Trucks	382	1.05	401	5.51	36.8
Heavy Single Unit Trucks	67	1	67	5.51	6.2
Combination Trucks	395	1.12	442	5.51	40.6
Travel Time (Hours) Per Calendar Day:					

Travel Time (Hours) Per Calendar Year: 310104

Total Travel Time For Alternative C3								
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day			
Passenger Cars on Personal Use	4757	1.67	7944	6.08	805			
Passenger Cars on Business Use	320	1.24	397	6.08	40.2			
Light Single Unit Trucks	382	1.05	401	6.08	40.6			
Heavy Single Unit Trucks	67	1	67	6.08	6.8			
Combination Trucks	395	1.12	442	6.08	44.8			
	937.4							
	342151							

Trave	l Time Co	st for Alter	native W	4	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day
Passenger Cars on Personal Use	4757	1.67	7944	6.31	835.4
Passenger Cars on Business Use	320	1.24	397	6.31	41.8
Light Single Unit Trucks	382	1.05	401	6.31	42.2
Heavy Single Unit Trucks	67	1	67	6.31	7
Combination Trucks	395	1.12	442	6.31	46.5
		Travel Time (I	Hours) Per C	Calendar Day:	972.9
	Trav	el Time (Ho	urs) Per Ca	lendar Year:	355108.5

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

	2036			
vel Time F	or No Acti	on Alterr	ative	
Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day
6329	1.67	10569	6.82	1201.3
426	1.24	528	6.82	60
584	1.05	613	6.82	69.7
102	1	102	6.82	11.6
603	1.12	675	6.82	76.7
	Travel Time (I	lours) Per (alendar Day:	1419.3
	Number of Vehicles* 6329 426 584 102 603	Number Average of Vehicle Vehicles* Occupancy 6329 1.67 426 1.24 584 1.05 102 1 603 1.12	Number Average Number of Vehicle of Vehicles* Occupancy People 6329 1.67 10569 426 1.24 528 584 1.05 613 102 1 102 603 1.12 675	of Vehicle of Travel Time (Minutes) Vehicles* Occupancy People (Minutes) 6329 1.67 10569 6.82 426 1.24 528 6.82 584 1.05 613 6.82 102 1 102 6.82

Travel Time (Hours) Per Calendar Year: 518044.5

Tot	tal Travel Tir	ne For Alte	ernative E	2	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day
Passenger Cars on Personal Use	6329	1.67	10569	5.51	970.6
Passenger Cars on Business Use	426	1.24	528	5.51	48.5
Light Single Unit Trucks	584	1.05	613	5.51	56.3
Heavy Single Unit Trucks	102	1	102	5.51	9.4
Combination Trucks	603	1.12	675	5.51	62
		Travel Time (I	Hours) Per (Calendar Day:	1146.8

Travel Time (Hours) Per Calendar Year: 418582

Total	Travel Tir	ne For Alte	ernative C	3	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day
Passenger Cars on Personal Use	6329	1.67	10569	6.08	1071
Passenger Cars on Business Use	426	1.24	528	6.08	53.5
Light Single Unit Trucks	584	1.05	613	6.08	62.1
Heavy Single Unit Trucks	102	1	102	6.08	10.3
Combination Trucks	603	1.12	675	6.08	68.4
	·	Travel Time (Hours) Per C	Calendar Day:	1265.3
	Trav	el Time (Ho	urs) Per Cal	lendar Year:	461834.5

Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time (Minutes)	Hours Per Calendar Day
Passenger Cars on Personal Use	6329	1.67	10569	6.31	1111.5
Passenger Cars on Business Use	426	1.24	528	6.31	55.5
Light Single Unit Trucks	584	1.05	613	6.31	64.5
Heavy Single Unit Trucks	102	1	102	6.31	10.7
Combination Trucks	603	1.12	675	6.31	71
		Travel Time (I	Hours) Per C	Calendar Day:	1313.2
	Trav	el Time (Ho	urs) Per Ca	lendar Year:	479318

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

Total	Travel Time F	or No Acti	on Alterr	ative	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time Per Trip (Minutes)	Total Hours
Passenger Cars on Personal Use	110187	1.67	184012	6.82	20916
Passenger Cars on Business Use	7409	1.24	9187	6.82	1044.3
Light Single Unit Trucks	9523	1.05	9999	6.82	1136.6
Heavy Single Unit Trucks	1661	1	1661	6.82	188.8
Combination Trucks	9838	1.12	11019	6.82	1252.5
		т	otal Travel	Time (Hours):	8956443

20 Year Period From 2017 Through 2036

Το	tal Travel Tir	ne For Alt	ernative E	2	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time Per Trip (Minutes)	Total Hours
Passenger Cars on Personal Use	110187	1.67	184012	5.51	16898.4
Passenger Cars on Business Use	7409	1.24	9187	5.51	843.7
Light Single Unit Trucks	9523	1.05	9999	5.51	918.2
Heavy Single Unit Trucks	1661	1	1661	5.51	152.5
Combination Trucks	9838	1.12	11019	5.51	1011.9
		T	otal Travel	Time (Hours):	7236015.5

Τι	otal Travel Tir	ne For Alte	ernative C	3	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time Per Trip (Minutes)	Total Hours
Passenger Cars on Personal Use	110187	1.67	184012	6.08	18646.5
Passenger Cars on Business Use	7409	1.24	9187	6.08	930.9
Light Single Unit Trucks	9523	1.05	9999	6.08	1013.2
Heavy Single Unit Trucks	1661	1	1661	6.08	168.3
Combination Trucks	9838	1.12	11019	6.08	1116.6
		τ.	otal Travel	Time (Hours):	7984557.5

То	tal Travel Tin	ne For Alte	rnative V	/4	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Number of People	Travel Time Per Trip (Minutes)	Total Hours
Passenger Cars on Personal Use	110187	1.67	184012	6.31	19351.9
Passenger Cars on Business Use	7409	1.24	9187	6.31	966.2
Light Single Unit Trucks	9523	1.05	9999	6.31	1051.6
Heavy Single Unit Trucks	1661	1	1661	6.31	174.7
Combination Trucks	9838	1.12	11019	6.31	1158.8
		T	otal Travel	Time (Hours):	8286668

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

Travel Time Calculations

On the table titled "Length and Travel Time of Alternative", a free flow speed of the posted speed limit was assumed for all action alternatives. This is reasonable since the Level-of-Service is A. For the No Action Alternative, the speed is expected to be less than the action alternatives, because the two-way two-lane highway does not have nearly as many passing opportunities resulting in some delay due to slow moving vehicles and congestion in the rural section. The average speed of 57 miles per hour based on a speed study using traffic count data from 9/17/2012 through 9/20/12 was used for the rural segment. The posted speeds of 45mph and 35mph were used in the suburban segment.

On the three tables that calculate the travel time of the alternatives in 2017, 2036, and the 20 Year travel times, the percentage of different vehicle types was taken from the traffic count data from 9/17/12 through 9/20/12 shown in Appendix C.2. The total number of vehicles (AADT) and the number of trucks (CADT) were taken from the traffic volume projection reports. The average vehicle occupancy rate was taken from the FHWA manual titled, "Work Zone Road User Costs: Concepts and Applications."

Appendix A.3

Delay Calculations at

Northern Remaining US-95 Loop Intersection

Calculations for Delay at the Northern Remaining US-95 Intersection For Alternative E2 and Alternative W4

Calculated Delay to Slow from 45 mph to a Stop, Then Accelerate back to the 45 mph Speed Limit

Calculate time required to slow from 45mph to 0 45mph = 66 ft per second V = U + a*t (V = initial velocity, U = final velocity, a = acceleration, t = time) Given: U=0, V=66 ft per sec, a=11.2 ft per sec^2 (from AASHTO Green Book Section 3.3 for comfortable deceleration) t = 5.89 Sec

Calculate time required to accelerate from 0 to 45 mph Given: From 2-24 of Green Book a Car accelerates from 0 to 45mph in 600 feet From AASHTO Green Book Section 3.3 and assume uniform acceleration Distance = $1.075*(V(mph)^2/a)$ $600 \text{ ft} = 1.075*(45^2)/a$ $a=3.63 \text{ ft/sec}^2$

> V = U + a*t or 66 ft/sec= 0 + 3.63 ft/sec^2*t t = 18.18 Sec

Total Time to Decelerate and Accelerate = 18.18 + 5.89 = 24.07sec

Time Required to Travel the acceleration and deceleration area at 45 mph Distance required to slow from 45mph to 0 Distance = 1.075* (V(mph)^2/a) D=1.075*(45^2/(11.2 ft/sec^2)) = 194 feet

Total Distance of Acceleration and Deceleration Area = 600 feet+194 feet = 794 feet Time required to travel 794 feet at 45 mph = 794 feet/66 ft per sec = 12.03 Sec

Time Differential between Alternatives C3 and the No Action Alternative and Alternatives E2 and W4 as a Result of the Remaining US-95 Intersection = 24.07 sec – 12.03 sec = **12.04 sec**

Calculation for Delay of Vehicles from Southbound US-95 to the Southbound Remaining US-95 Loop

Assume 600 ADT Total Delay time in 2017 = 600 cars*365 days*12.04 seconds*(1 hour/3600 sec) = **732 Hours**

Calculation for Delay of Vehicles from Northbound US-95 to the Southbound Remaining US-95 Loop

Assume 150 ADT

and Acceleration Lane will be constructed from Remaining US-95 Loop to NB US-95. Total Delay time in 2017 = 150 cars*365 days*12.04 seconds*(1 hour/3600 sec)

= 183 Hours

Calculation for Delay of Vehicles from Northbound Remaining US-95 Loop to Northbound US-95

Assume 600 ADT and the average delay associated with traffic waiting for a gap to turn will be 75% of the Peak Hour Delay

Total Delay time in 2017 = 600 cars*365 days*(12.04 + 0.75*15.5) seconds*(1 hour/3600 sec)

= 1440 Hours

Calculation for Delay of Vehicles from Northbound Remaining US-95 Loop to Southbound US-95

Assume 150 ADT and the average delay associated with traffic waiting for a gap to turn will be 75% of the Peak Hour Delay

Total Delay time in 2017 = 150 cars*365 days*(12.04 + 0.75*8.7) seconds*(1 hour/3600 sec)

= 282 Hours

Total Delay Difference in 2017 Between Alternatives C3 and the No Action (Local Traffic Uses US-95) Alternative and Alternatives E2 and W4 (Local Traffic Turns on Remaining US-95 Loop) as a result of the Remaining US-95 Intersection

= 2637 Hours

TWO-WAY STOP CONTROL SUMMARY_

	TWO-1	WAY STO	JP CONTE	KOL SU	JMMARY		
7	Tamad	Iloniti					
Analyst:		Hopki	115				
Agency/Co.:	ITD	014					
Date Performed:	3/5/2						
Analysis Time Period:							
Intersection:		nd New	95				
Jurisdiction:	ITD						
Units: U. S. Customar	У						
Analysis Year:	Futur	е					
Project ID: Thorn Cr	to Mo	SCOW					
East/West Street:	01d 9	5					
North/South Street:	New 9	5					
Intersection Orientat	ion: N	S		2	Study per	ciod (hrs):	0.25
	Vehic	le Vol	umes and	d Adjı	ustments_		
Major Street: Approa	ch	No	rthbound	Ł		Southbound	l
Moveme	ent	1	2	3	4	5	6
		L	Т	R	L	Т	R
Volume		20	371			416	79
Peak-Hour Factor, PHE	ק	0.88	0.88			0.88	0.88
Hourly Flow Rate, HFF	ξ	22	421			472	89
Percent Heavy Vehicle		4					
Median Type/Storage		TWLTL			/ 1		
RT Channelized?						Nc)
Lanes		1	2			2 1	
Configuration		L	Т			TR	
Upstream Signal?			No			No	
Minor Street: Approa	ich	We	stbound			Eastbound	
Moveme	ent	7	8	9	10	11	12
		\mathbf{L}	Т	R	L	Т	R
		_					20
Volume					79		20
Peak Hour Factor, PHE					0.8	38	0.88
Hourly Flow Rate, HFF					89		22
Percent Heavy Vehicle	€S				2		2
Percent Grade (%)			2			2	1
Flared Approach: Exi	lsts?/S	torage			/		/
Lanes						1 1	_
Configuration						L R	
				· -	1 -		
	-				vel of Se	ervice	
t-t		SB		tbound		Easth	
Movement	L	4	7	8	9		1 12
Lane Config I	J	1				L	R
	22					89	22
C(m) (vph) 9	993					433	791
-, -	0.02					0.21	0.03
95% queue length (0.07					0.76	0.09
	3.7					15.5	9.7
LOS	А					С	A
Approach Delay						1	14.3
Approach LOS							В

Phone: E-Mail:				Fax:				
	TWO-WAY ST	OP CONT	ROL(TWS	C) ANAL	YSIS			
Analyst:	Jared Hopk	ıns						
Agency/Co.:	ITD							
Date Performed:	3/5/2014							
Analysis Time Period: Intersection:	Old and Nev	95						
Jurisdiction:	ITD	W 55						
Units: U. S. Customary								
Analysis Year:	, Future							
Project ID: Thorn Cr								
East/West Street:	01d 95							
North/South Street:	New 95							
Intersection Orientat:	ion: NS		S	tudy pe	riod (hrs):	0.25	
	Vehicle	Volumes	and Ad	iustmen	ts			
Major Street Movement		2	3	4	5	6		
5	L	Т	R	L	Т	R		
					416	79		
Volume	20 0.88	371 0.88			416 0.88		8	
Peak-Hour Factor, PHF	0.88	105			118	22	0	
Peak-15 Minute Volume Hourly Flow Rate, HFR	22	421			472	89		
Percent Heavy Vehicle								
Median Type/Storage	TWLT	L		/ 1				
RT Channelized?						No		
Lanes	1	2			2	1		
Configuration	\mathbf{L}	Т			Т	R		
Upstream Signal?		No			No			
Minor Street Movement.	s 7	8	9	10	11	12		
	L	Т	R	\mathbf{L}	Т	R		
Volume				79		20		
Peak Hour Factor, PHF				0.88		0.8	8	
Peak-15 Minute Volume				22		6		
Hourly Flow Rate, HFR				89		22		
Percent Heavy Vehicle	S			2		2		
Percent Grade (%)		2			2			,
Flared Approach: Exi	sts?/Storag	е		/				/
RT Channelized?				1		No		
Lanes				1		1		
Configuration				L		R		
	Dodoot				nte			
Movements	_Pedestrian 13	Volume 14	s and A 15	ajustme 16	nus			
			<u> </u>					
Flow (ped/hr)		0	0	0				

	lth (ft) Speed (ft Blockage	/sec)	4	1.0	12.0 4.0 0	12.0 4.0 0	12.0 4.0 0		
			 L	Jpstrea	m Signa	al Data			
		Prog. Flow vph	Sat Flow vph	Arri	val (e 1	Green	Cycle Length sec	Prog. Speed mph	Distance to Signal feet
Thro	-Turn								
Workshee	et 3-Data	for Co	omputing	g Effec	t of De	elay to	Major :	Street V	ehicles
						Moveme	nt 2	Moveme	nt 5
	of major s								
Workshee	= 1 = 0 = 1 = 1	LCAI G	ap and i	01101	up III		1001011		
Workshee Critical	Gap Calo								
Critical	. Gap Calc			 7 L	8 T	9 R	10 10 L	11 T	12 R
Critical Movement	Gap Calc	culatio 1	- on 4	7	8 T	9 R	10 L 7.5	T 	R 6.2
Critical Movement t(c,base t(c,hv)	Gap Calc	L 4.1 2.00	- on 4	7	8	9	10 L 7.5 2.00	T 	R 6.2 2.00
Critical Movement t(c,base t(c,hv) P(hv)	Gap Calc	L 4.1		7 L 2.00	8 T	9 R	10 L 7.5 2.00 2	T 	R 6.2
Critical Movement t(c,base t(c,hv) P(hv) t(c,g)	Gap Calc	L 4.1 2.00		7 L	8 T 2.00	9 R 2.00	10 L 7.5 2.00 2 0.20 2.00	T 2.00	R 6.2 2.00 2 0.10 2.00
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt)	Gap Calc	L 4.1 2.00 4	2.00	7 L 2.00 0.20 2.00	8 T 2.00 0.20 2.00	9 R 2.00 0.10 2.00	10 L 7.5 2.00 2 0.20 2.00 0.70	T 2.00 0.20 2.00	R 6.2 2.00 2 0.10 2.00 0.00
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt)	Gap Calc	Culation 1 L 4.1 2.00 4 0.00 0.00	2.00 0.00	7 L 2.00 0.20 2.00 0.00	8 T 2.00 0.20 2.00 0.00	9 R 2.00 0.10 2.00 0.00	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00	T 2.00 0.20 2.00 0.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T):	Gap Calc	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00	2.00	7 L 2.00 0.20 2.00	8 T 2.00 0.20 2.00	9 R 2.00 0.10 2.00	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2	T 2.00 0.20 2.00	R 6.2 2.00 2 0.10 2.00 0.00
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T):	Grade 1-stage 2-stage	Culatio 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2	2.00 0.00	7 L 2.00 0.20 2.00 0.00	8 T 2.00 0.20 2.00 0.00	9 R 2.00 0.10 2.00 0.00	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00	T 2.00 0.20 2.00 0.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 0.00
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T): t(c) Follow-U	Grade 1-stage 2-stage 2-stage 2-stage	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2 4.2 Alculation	on 4 L 2.00 0.00 0.00 0.00	7 L 2.00 0.20 2.00 0.00 1.00	8 T 2.00 0.20 2.00 0.00 1.00	9 R 2.00 0.10 2.00 0.00 0.00	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2 6.2	T 2.00 0.20 2.00 0.00 1.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 0.00
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T): t(c) Follow-U	Grade 1-stage 2-stage 2-stage 2-stage	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2 4.2	2.00 0.00 0.00	7 L 2.00 0.20 2.00 0.00	8 T 2.00 0.20 2.00 0.00	9 R 2.00 0.10 2.00 0.00	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2	T 2.00 0.20 2.00 0.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 0.00
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T): t(c) Follow-U Movement	Grade 1-stage 2-stage 2-stage Jp Time Ca	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2 4.2 A.2 alculation	on 4 L 2.00 0.00 0.00 0.00	7 L 2.00 0.20 2.00 0.00 1.00	8 T 2.00 0.20 2.00 0.00 1.00	9 R 2.00 0.10 2.00 0.00 0.00	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2 6.2	T 2.00 0.20 2.00 0.00 1.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 6.4 6.4 6.4 12 R 3.30
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T): t(c) Follow-U Movement t(f,base	Grade 1-stage 2-stage 2-stage Jp Time Ca	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2 4.2 4.2 alculat 1 L 2.20 1.00	on 4 L 2.00 0.00 0.00 0.00	7 L 2.00 0.20 2.00 0.00 1.00	8 T 2.00 0.20 2.00 0.00 1.00	9 R 2.00 0.10 2.00 0.00 0.00	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2 6.2 10 L 3.50 1.00	T 2.00 0.20 2.00 0.00 1.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 6.4 6.4 6.4 12 R 3.30 1.00
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T): t(c) Follow-U Movement t(f,base t(f,HV) P(HV)	Grade 1-stage 2-stage 2-stage Jp Time Ca	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2 4.2 Alculation 1 L 2.20 1.00 4	2.00 0.00 0.00 0.00 tions 4 L	7 L 2.00 0.20 2.00 0.00 1.00	8 T 2.00 0.20 2.00 0.00 1.00	9 R 2.00 0.10 2.00 0.00 0.00 9 R	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2 6.2 10 L 3.50	T 2.00 0.20 2.00 0.00 1.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 6.4 6.4 6.4 12 R 3.30
Critical Movement t(c, base t(c, hv) P(hv) t(c,g) Percent t(3,lt) t(c,T): t(c) Follow-U Movement t(f, base t(f, HV)	Grade 1-stage 2-stage 2-stage Jp Time Ca	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2 4.2 4.2 alculat 1 L 2.20 1.00	2.00 0.00 0.00 0.00 tions 4 L	7 L 2.00 0.20 2.00 0.00 1.00	8 T 2.00 0.20 2.00 0.00 1.00	9 R 2.00 0.10 2.00 0.00 0.00 9 R	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2 6.2 10 L 3.50 1.00 2	T 2.00 0.20 2.00 0.00 1.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 6.4 6.4 6.4 12 R 3.30 1.00 2
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T): t(c) Follow-U Movement t(f,base t(f,HV) P(HV) t(f)	Grade 1-stage 2-stage 2-stage Jp Time Ca	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2 4.2 4.2 alculat 1 L 2.20 1.00 4 2.2	Dn 4 L 2.00 0.00 0.00 0.00 tions 4 L 1.00	7 L 2.00 0.20 2.00 0.00 1.00 7 L 1.00	8 T 2.00 0.20 2.00 0.00 1.00 8 T 1.00	9 R 2.00 0.10 2.00 0.00 0.00 9 R	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2 6.2 10 L 3.50 1.00 2	T 2.00 0.20 2.00 0.00 1.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 6.4 6.4 6.4 12 R 3.30 1.00 2
Critical Movement t(c,base t(c,hv) P(hv) t(c,g) Percent t(3,lt) t(c,T): t(c) Follow-U Movement t(f,base t(f,HV) P(HV) t(f) Workshee	Grade 1-stage 2-stage 1-stage 2-stage Jp Time Ca	Culation 1 L 4.1 2.00 4 0.00 0.00 0.00 0.00 4.2 4.2 4.2 alculation 1 L 2.20 1.00 4 2.2 ct of 1	Dn 4 L 2.00 0.00 0.00 0.00 tions 4 L 1.00	7 L 2.00 0.20 2.00 0.00 1.00 7 L 1.00 n Signa	8 T 2.00 0.20 2.00 0.00 1.00 8 T 1.00	9 R 2.00 0.10 2.00 0.00 0.00 9 R 1.00	10 L 7.5 2.00 2 0.20 2.00 0.70 0.00 1.00 7.2 6.2 10 L 3.50 1.00 2 3.5	T 2.00 0.20 2.00 0.00 1.00	R 6.2 2.00 2 0.10 2.00 0.00 0.00 0.00 6.4 6.4 6.4 12 R 3.30 1.00 2

Total Saturation Flow Arrival Type Effective Green, g (se Cycle Length, C (sec) Rp (from Exhibit 16-11 Proportion vehicles ar g(q1) g(q2) g(q)	ec)		en P					
Computation 2-Proporti	on of 7	FWSC In		Movem	ent 2		lovement V(l,	
alpha beta Travel time, t(a) (sec Smoothing Factor, F Proportion of conflict Max platooned flow, V(Min platooned flow, V(Duration of blocked pe Proportion time blocked	cing flo (c,max) (c,min) eriod, t			0.0	00		0.000	
Computation 3-Platoon	Event 1	Periods	Re	sult				
p(2) p(5) p(dom) p(subo) Constrained or unconst	rained	?		000				
Proportion unblocked for minor movements, p(x)	Single	1) e-stage cess		(2) Two-S age I	tage Pr	(3) cocess Stage 1	Ī	
p(1) p(4) p(7) p(8) p(9) p(10) p(11) p(12)								
Computation 4 and 5 Single-Stage Process Movement	1 L	4 L	7 L	8 T	9 R	10 L	11 T	12 R
V c,x s Px V c,u,x	561					726		236
C r,x C plat,x								
Two-Stage Process	- 7		8		10		11	1

	Stage1	Stage2	Stagel	Stage2	Stage1	Stage2	Stage1	Stage2
V(c,x)		· 			472	254		
S						3000		
P(x) V(c,u,x)								
C(r,x) C(plat,x)						. <u></u> <u></u> <u></u>		
Worksheet 6-2	Impedance	and Cap	acity Eq	uations				
Step 1: RT fi	com Minor	St.			9		12	
Conflicting 1							236	
Potential Cap					1 0 0		791	
Pedestrian In	-	Factor			1.00		1.00	
Movement Capa		c			1 00		791 0.97	
Probability of	of Queue	free St.			1.00		0.97	
Step 2: LT f:	rom Major	st.			4		1	
Conflicting	Flows						561	
Potential Cap							993	
Pedestrian In		Factor			1.00		1.00	}
Movement Capa							993	
Probability (of Queue	free St.			1.00		0.98	8
Maj L-Shared	Prob Q f	ree St.						
Step 3: TH f	rom Minor	st.	· 		8		11	
Conflicting	Flows							
Potential Ca								
Pedestrian II		Factor			1.00		1.00)
Cap. Adj. fa			ling mvmr	nt	0.98		0.98	}
Movement Cap		1	2					
Probability		free St.			1.00		1.00)
Step 4: LT f	rom Minor	St			7		10)
рсер н. пт т	LOW LITIOT				·			
Conflicting	Flows						726	
Potential Ca	pacity						332	
Pedestrian In	mpedance	Factor			1.00		1.00)
Maj. L, Min'	r Impedar	nce facto	or		0.98			
Maj. L, Min	Г Adj. Im	np Factor	- •		0.98			
Cap. Adj. fa	ctor due	to Imped	ling mvmr	nt	0.96		0.98	3
Movement Cap	acity						325	
Worksheet 7-	Computati	on of th	ne Effect	: of Two-	-stage Ga	ap Accept		
Step 3: TH f	rom Minor	st.			8		11	L
Part 1 - Fir								
Conflicting					1		r o c	
Potential Ca					531		526	2
Pedestrian I	mpedance	Factor			1.00		1.00	
Cap. Adj. fa		to Impec	ding mvmr	nt	0.98		1.00	J
Movement Cap		_			519		526	٠ ١
Probability	of Queue	free St.			1.00		1.00	J

Part 2 - Second Stage						
Conflicting Flows						
Potential Capacity		4	75		531	
Pedestrian Impedance Factor			.00		1.00	
Cap. Adj. factor due to Impeding mvm	nt		.00		0.98	
Movement Capacity		4	75		519	
Part 3 - Single Stage						
Conflicting Flows						
Potential Capacity					1	
Pedestrian Impedance Factor	- +		.00 .98		1.00 0.98	
Cap. Adj. factor due to Impeding mvm Movement Capacity	nt	0.	.90		0.90	
Movement capacity						
Result for 2 stage process:						
a		0	.91		0.91	
У						
C t Drobability of Oueue free St		1	.00		1.00	
Probability of Queue free St.		Τ.	.00		1.00	
Step 4: LT from Minor St.			7		10	
Part 1 - First Stage						
Conflicting Flows			7.4		472	
Potential Capacity			74 .00		563 1.00	
Pedestrian Impedance Factor Cap. Adj. factor due to Impeding mvm	nt		. 98		1.00	
Movement Capacity	IIC		51		563	
Part 2 - Second Stage					054	
Conflicting Flows		7	67		254 744	
Potential Capacity Pedestrian Impedance Factor			.00		1.00	
Cap. Adj. factor due to Impeding mvm	nt		.97		0.98	
Movement Capacity		7.	46		728	
Part 3 - Single Stage					726	
Conflicting Flows Potential Capacity					332	
Pedestrian Impedance Factor		1	.00		1.00	
Maj. L, Min T Impedance factor			.98			
Maj. L, Min T Adj. Imp Factor.			.98			
Cap. Adj. factor due to Impeding mvm	nt	0	.96		0.98 325	
Movement Capacity					525	
Results for Two-stage process:						
a		0	.91		0.91	
У					0.59	
Ct					433	
Worksheet 8-Shared Lane Calculations						
Movement	7	8	9	10	11	12 R
	L	Т	R	L	Т	И
Volume (vph)				89		22
Movement Capacity (vph)				433		791
Shared Lane Capacity (vph)						

Movement 7 8 9 10 11 12 L T R L T R C sep 433 791 Volume 89 22 Delay 89 22 Q sep 1 10 11 12 T mmax 6 89 22 C sk SUM C sep 1 7 8 9 10 11 12 Lane Config 1 4 7 8 9 10 11 12 Lane Config 1 4 7 8 9 10 11 12 Lane Config 1 4 7 8 9 10 11 12 Lane Config 1 1 7 8 9 10 11 12 Lane Config 1 1 7 8 9 10 11 12 Lane Config 1 0.02 </th <th>1</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	1									
C sep 433 791 Volume B9 22 pelay g sep 22 Q sep (2 sep +1)	Movement					-				
Volume 89 22 Delay 989 22 Delay 989 22 Q sep +1 round (Qsep +1) 1 n max C sh SUM C sep C act]	Ĺ	Т	R	L	Т	R
n max C sh SUM C sep n n c act Worksheet 10-Delay, Queue Length, and Level of Service Movement 1 4 7 8 9 10 11 12 Lane Config L R I R R v (vph) 22 89 22 0.21 0.03 Stage use length 0.07 0.21 0.03 95% queue length 0.07 0.76 0.09 Control Delay 8.7 15.5 9.7 LOS A C A Approach LOS I4.3 B	Volume Delay Q sep Q sep +1									
Movement 1 4 7 8 9 10 11 12 Lane Config L R R R R \overline{v} (vph) 22 89 22 C(m) (vph) 993 433 791 v/c 0.02 0.21 0.03 0.55 9.7 0.09 Control Delay 8.7 15.5 9.7 2.5 A Approach Delay A C A Approach LOS I4.3 B	n max C sh SUM C sep n									
Lane Config L L R Lane Config L R $\overline{v (vph)}$ 22 C(m) (vph) 993 433 791 v/c 0.02 0.21 0.03 95% queue length 0.07 0.76 0.09 Control Delay 8.7 LOS A C A Approach Delay A. C A Approach LOS B Worksheet 11-Shared Major LT Impedance and Delay 14.3 $\overline{V (i1)}, Volume for stream 2 or 5$ v(i2), Volume for stream 3 or 6 $s(i1), Saturation flow rate for stream 2 or 5s(i2), Saturation flow rate for stream 3 or 6 P^*(oj) 8.7N, Number of major street through lanes 8.7$	Worksheet 10-Delay,	, Queue	Length,	and 1	Level	of Se	ervice			
C (m) (vph)993433791 v/c 0.020.210.0395% queue length0.070.760.09Control Delay8.715.59.7LOSACAApproach Delay14.3Approach LOSBMovement 2Worksheet 11-Shared Major LT Impedance and Delay $v(i1)$, Volume for stream 2 or 50.98 $v(i2)$, Volume for stream 3 or 60.98 $s(i1)$, Saturation flow rate for stream 2 or 50.98 $s(i2)$, Saturation flow rate for stream 3 or 68.7 $P(oj)$ 0.981.00 $v(i2)$, Number of major street through lanes8.7			4	7	8		9		11	
Movement 2Movement 5p(oj)0.981.00v(i1), Volume for stream 2 or 50.981.00v(i2), Volume for stream 3 or 60.981.00s(i1), Saturation flow rate for stream 2 or 50.981.00s(i2), Saturation flow rate for stream 3 or 60.981.00P*(oj)0.980.980.98d(M,LT), Delay for stream 1 or 48.7N, Number of major street through lanes8.7	C(m) (vph) v/c 95% queue length Control Delay LOS Approach Delay	993 0.02 0.07 8.7						433 0.21 0.76 15.5		791 0.03 0.09 9.7
p(oj)0.981.00v(i1), Volume for stream 2 or 50.981.00v(i2), Volume for stream 3 or 6s(i1), Saturation flow rate for stream 2 or 5s(i2), Saturation flow rate for stream 3 or 6P*(oj)d(M,LT), Delay for stream 1 or 48.7N, Number of major street through lanes8.7	Worksheet 11-Share	d Major	LT Impe	dance	and I)elay				
<pre>v(i1), Volume for stream 2 or 5 v(i2), Volume for stream 3 or 6 s(i1), Saturation flow rate for stream 2 or 5 s(i2), Saturation flow rate for stream 3 or 6 P*(oj) d(M,LT), Delay for stream 1 or 4 N, Number of major street through lanes</pre>							Moveme	nt 2	Moven	nent 5
d(M,LT), Delay for stream 1 or 4 8.7 N, Number of major street through lanes	<pre>v(i1), Volume for v(i2), Volume for s(i1), Saturation s(i2), Saturation</pre>	stream flow ra	3 or 6 te for s	tream tream	2 or 3 or	5 6	0.9	8	1.	00
	d(M,LT), Delay for N, Number of major	street	through	lane	s		8.7			

Worksheet 9-Computation of Effect of Flared Minor Street Approaches

APPENDIX B – ROAD USER COST (ECONOMICS)

Appendix B.1

Travel Time Cost Calculations

	2017 Travel Time Cost for No Action Alternative								
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day			
Passenger Cars on Personal Use	4757	1.67	\$11.89	6.82	1.051	\$11,284.11			
Passenger Cars on Business Use	320	1.24	\$29.75	6.82	1.051	\$1,410.24			
Light Single Unit Trucks	382	1.05	\$23.06	6.82	1.051	\$1,104.96			
Heavy Single Unit Trucks	67	1	\$29.65	6.82	1.051	\$237.32			
Combination Trucks	395	1.12	\$29.65	6.82	1.051	\$1,567.02			
					**Cost Per Day:	\$15,603.66			

**Cost Per Year: \$5,695,336.85

	Travel Time Cost for Alternative E2									
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day				
Passenger Cars on Personal Use	4757	1.67	\$11.89	5.51	1.051	\$9,116.63				
Passenger Cars on Business Use	320	1.24	\$29.75	5.51	1.051	\$1,139.36				
Light Single Unit Trucks	382	1.05	\$23.06	5.51	1.051	\$892.72				
Heavy Single Unit Trucks	67	1	\$29.65	5.51	1.051	\$191.74				
Combination Trucks	395	1.12	\$29.65	5.51	1.051	\$1,266.03				
					**Cost Per Day:	\$12,606.48				

**Cost Per Year: \$4,601,364.53

Travel Time Cost for Alternative C3									
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day			
Passenger Cars on Personal Use	4757	1.67	\$11.89	6.08	1.051	\$10,059.73			
Passenger Cars on Business Use	320	1.24	\$29.75	6.08	1.051	\$1,257.23			
Light Single Unit Trucks	382	1.05	\$23.06	6.08	1.051	\$985.07			
Heavy Single Unit Trucks	67	1	\$29.65	6.08	1.051	\$211.57			
Combination Trucks	395	1.12	\$29.65	6.08	1.051	\$1,397.00			
	······································				**Cost Per Day:	\$13,910.60			

**Cost Per Year: \$5,077,367.75

Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day
Passenger Cars on Personal Use	4757	1.67	\$11.89	6.31	1.051	\$10,440.28
Passenger Cars on Business Use	320	1.24	\$29.75	6.31	1.051	\$1,304.79
Light Single Unit Trucks	382	1.05	\$23.06	6.31	1.051	\$1,022.33
Heavy Single Unit Trucks	67	1	\$29.65	6.31	1.051	\$219.57
Combination Trucks	395	1.12	\$29.65	6.31	1.051	\$1,449.84
					**Cost Per Day:	\$14,436.82
					**Cost Per Year:	\$5,269,439.23

* Small Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All travel time costs were adjusted to July 1, 2013, using the Employment Cost Index.

2036

	Travel Time C	Cost for No	Action	Alternativ	/e	
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day
Passenger Cars on Personal Use	6329	1.67	\$11.89	6.82	1.051	\$15,013.06
Passenger Cars on Business Use	426	1.24	\$29.75	6.82	1.051	\$1,877.39
Light Single Unit Trucks	584	1.05	\$23.06	6.82	1.051	\$1,689.26
Heavy Single Unit Trucks	102	1	\$29.65	6.82	1.051	\$361.29
Combination Trucks	603	1.12	\$29.65	6.82	1.051	\$2,392.19
					**Cost Per Day:	\$21,333.20

**Cost Per Year: \$7,786,617.21

	Travel Time Cost for Alternative E2									
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel ⊺ime (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day				
Passenger Cars on Personal Use	6329	1.67	\$11.89	5.51	1.051	\$12,129.32				
Passenger Cars on Business Use	426	1.24	\$29.75	5.51	1.051	\$1,516.78				
Light Single Unit Trucks	584	1.05	\$23.06	5.51	1.051	\$1,364.79				
Heavy Single Unit Trucks	102	1	\$29.65	5.51	1.051	\$291.90				
Combination Trucks	603	1.12	\$29.65	5.51	1.051	\$1,932.69				
					**Cost Per Day:	\$17,235.47				

Cost Per Day: Ş17,

**Cost Per Year: \$6,290,947.34

	Travel Time Cost for Alternative C3									
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day				
Passenger Cars on Personal Use	6329	1.67	\$11.89	6.08	1.051	\$13,384.08				
Passenger Cars on Business Use	426	1.24	\$29.75	6.08	1.051	\$1,673.68				
Light Single Unit Trucks	584	1.05	\$23.06	6.08	1.051	\$1,505.97				
Heavy Single Unit Trucks	102	1	\$29.65	6.08	1.051	\$322.09				
Combination Trucks	603	1.12	\$29.65	6.08	1.051	\$2,132.63				
					**Cost Per Day:	\$19,018.45				

**Cost Per Year: \$6,941,734.99

	Travel Time Cost for Alternative W4										
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs Per Day					
Passenger Cars on Personal Use	6329	1.67	\$11.89	6.31	1.051	\$13,890.38					
Passenger Cars on Business Use	426	1.24	\$29.75	6.31	1.051	\$1,737.00					
Light Single Unit Trucks	584	1.05	\$23.06	6.31	1.051	\$1,562.94					
Heavy Single Unit Trucks	102	1	\$29.65	6.31	1.051	\$334.28					
Combination Trucks	603	1.12	\$29.65	6.31	1.051	\$2,213.30					
					**Cost Per Day:	\$19,737.90					
					**Cost Per Year:	\$7,204,333.52					

* Small Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All travel time costs were adjusted to July 1, 2013, using the Employment Cost Index.

Travel Time Cost for No Action Alternative							
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs	
Passenger Cars on Personal Use	110187	1.67	\$11.89	6.82	1.051	\$95,401,980.26	
Passenger Cars on Business Use	7409	1.24	\$29.75	6.82	1.051	\$11,917,823.65	
Light Single Unit Trucks	9523	1.05	\$23.06	6.82	1.051	\$10,054,282.67	
Heavy Single Unit Trucks	1661	1	\$29.65	6.82	1.051	\$2,147,449.87	
Combination Trucks	9838	1.12	\$29.65	6.82	1.051	\$14,245,517.92	
					**Total Cost:	\$133,767,054.37	

20 Year Period From 2017 Through 2036

Travel Time Cost for Alternative E2								
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs		
Passenger Cars on Personal Use	110187	1.67	\$11.89	5.51	1.051	\$77,076,966.46		
Passenger Cars on Business Use	7409	1.24	\$29.75	5.51	1.051	\$9,628,622.92		
Light Single Unit Trucks	9523	1.05	\$23.06	5.51	1.051	\$8,123,034.83		
Heavy Single Unit Trucks	1661	1	\$29.65	5.51	1.051	\$1,734,963.17		
Combination Trucks	9838	1.12	\$29.65	5.51	1.051	\$11,509,208.76		
		÷			**Total Cost:	\$108,072,796.13		

Travel Time Cost for Alternative C3								
Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECI Adjustment (July 1, 2013)	Travel Time Costs		
Passenger Cars on Personal Use	110187	1.67	\$11.89	6.08	1.051	\$85,050,445.7		
Passenger Cars on Business Use	7409	1.24	\$29.75	6.08	1.051	\$10,624,687.3		
Light Single Unit Trucks	9523	1.05	\$23.06	6.08	1.051	\$8,963,348.7		
Heavy Single Unit Trucks	1661	1	\$29.65	6.08	1.051	\$1,914,442.1		
Combination Trucks	9838	1.12	\$29.65	6.08	1.051	\$12,699,816.5		
		<i>i</i>		·	**Total Cost:	\$119,252,740.5		

Vehicle Type	Number of Vehicles*	Average Vehicle Occupancy	Hourly Cost	Travel Time (Minutes)	ECi Adjustment (July 1, 2013)	Travel Time Costs
Passenger Cars on Personal Use	110187	1.67	\$11.89	6.31	1.051	\$88,267,814.58
Passenger Cars on Business Use	7409	1.24	\$29.75	6.31	1.051	\$11,026,608.10
Light Single Unit Trucks	9523	1.05	\$23.06	6.31	1.051	\$9,302,422.83
Heavy Single Unit Trucks	1661	1	\$29.65	6.31	1.051	\$1,986,863.44
Combination Trucks	9838	1.12	\$29.65	6.31	1.051	\$13,180,237.25
	•				**Total Cost:	\$123,763,946.2

* Small Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.

** All travel time costs were adjusted to July 1, 2013, using the Employment Cost Index.

Travel Time Cost Calculations

On the tables that calculate travel time costs for the alternatives, the percentage of different vehicle types was taken from the traffic count data from 9/17/12 through 9/20/12 and the total number of vehicles (AADT) and the number of trucks (CADT) were taken from the traffic volume projection reports. The Average Vehicle Occupancy and the Hourly Cost for December 2010 were taken from the FHWA manual titled, "Work Zone Road User Costs: Concepts and Applications." A factor based on the Employment Cost Index was then applied to account for inflation to July 1, 2013.

Appendix B.2

Time Related Vehicle Depreciation Cost Calculations

		2017								
T	Time-Related Vehicle Depreciation Cost For No Action Alternative									
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost					
Small Autos	3721	6.82	\$1.05	1.019	\$452.54					
Medium to Large Autos	1354	6.82	\$1.40	1.048	\$225.81					
Four Tire SU	54	6.82	\$2.58	1.054	\$16.69					
6 Tire Trucks	339	6.82	\$3.60	1.054	\$146.21					
3 or 4 axles	65	6.82	\$9.06	1.069	\$71.56					
5+ Axles	387	6.82	\$10.12	1.069	\$475.89					
	•			Total Daily Cost:	\$1,388.69					
			;	**Cost Per Year:	\$506,872.35					

Time-Relat	Time-Related Vehicle Depreciation for Alternative E2									
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost					
Small Autos	3721	5.51	\$1.05	1.019	\$365.61					
Medium to Large Autos	1354	5.51	\$1.40	1.048	\$182.44					
Four Tire SU	54	5.51	\$2.58	1.054	\$13.49					
6 Tire Trucks	339	5.51	\$3.60	1.054	\$118.13					
3 or 4 axles	65	5.51	\$9.06	1.069	\$57.81					
5+ Axles	387	5.51	\$10.12	1.069	\$384.48					
				Total Daily Cost: **Cost Per Year:	\$1,121.95 \$409,511.24					

Time-Related Vehicle Depreciation for Alternative C3								
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost			
Small Autos	3721	6.08	\$1.05	1.019	\$403.44			
Medium to Large Autos	1354	6.08	\$1.40	1.048	\$201.31			
Four Tire SU	54	6.08	\$2.58	1.054	\$14.88			
6 Tire Trucks	339	6.08	\$3.60	1.054	\$130.35			
3 or 4 axles	65	6.08	\$9.06	1.069	\$63.79			
5+ Axles	387	6.08	\$10.12	1.069	\$424.25			
				Total Daily Cost:	\$1,238.01			
			:	**Cost Per Year:	\$451,874.47			

Time-Relat	Time-Related Vehicle Depreciation for Alternative W4								
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost				
Small Autos	3721	6.31	\$1.05	1.019	\$418.70				
Medium to Large Autos	1354	6.31	\$1.40	1.048	\$208.92				
Four Tire SU	54	6.31	\$2.58	1.054	\$15.44				
6 Tire Trucks	339	6.31	\$3.60	1.054	\$135.28				
3 or 4 axles	65	6.31	\$9.06	1.069	\$66.21				
5+ Axles	387	6.31	\$10.12	1.069	\$440.30				
				Total Daily Cost:	\$1,284.84				
				**Cost Per Year:	\$468,968.40				

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding. ** All costs were adjusted to July 1, 2013 using the appropriate Producer Price Index.

		2036								
Т	Time-Related Vehicle Depreciation Cost For No Action Alternative									
Vehicle TypeNumber of Vehicles*Travel Time (Minutes)Hourly CostPPI Adjustment 										
Small Autos	Autos 5056 6.82 \$1.05 1.019									
Medium to Large Autos	e Autos 1840 6.82 \$1.40 1.048									
Four Tire SU	73	6.82	\$2.58	1.054	\$22.56					
6 Tire Trucks	461	6.82	\$3.60	1.054	\$198.83					
3 or 4 axles	88	6.82	\$9.06	1.069	\$96.88					
5+ Axles	526	6.82	\$10.12	1.069	\$646.81					
		<u> </u>		Total Daily Cost: **Cost Per Year:	\$1,886.84 \$688,696.03					

Time-Related Vehicle Depreciation for Alternative E2								
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost			
Small Autos	5056	5.51	\$1.05	1.019	\$496.79			
Medium to Large Autos	1840	5.51	\$1.40	1.048	\$247.92			
Four Tire SU	73	5.51	\$2.58	1.054	\$18.23			
6 Tire Trucks	461	5.51	\$3.60	1.054	\$160.64			
3 or 4 axles	88	5.51	\$9.06	1.069	\$78.27			
5+ Axles	526	5.51	\$10.12	1.069	\$522.57			
	-			Total Daily Cost:	\$1,524.41			
				**Cost Per Year:	\$556,409.84			

Time-Rela	Time-Related Vehicle Depreciation for Alternative C3								
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost				
Small Autos	5056	6.08	\$1.05	1.019	\$548.18				
Medium to Large Autos	1840	6.08	\$1.40	1.048	\$273.56				
Four Tire SU	73	6.08	\$2.58	1.054	\$20.12				
6 Tire Trucks	461	6.08	\$3.60	1.054	\$177.25				
3 or 4 axles	88	6.08	\$9.06	1.069	\$86.37				
5+ Axles	526	6.08	\$10.12	1.069	\$576.63				
				Total Daily Cost:	\$1,682.11				
				**Cost Per Year:	\$613,969.48				

Time-Related Vehicle Depreciation for Alternative W4									
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Daily Cost				
Small Autos	5056	6.31	\$1.05	1.019	\$568.92				
Medium to Large Autos	1840	6.31	\$1.40	1.048	\$2 <mark>83.91</mark>				
Four Tire SU	73	6.31	\$2.58	1.054	\$20.88				
6 Tire Trucks	461	6.31	\$3.60	1.054	\$183.96				
3 or 4 axles	88	6.31	\$9.06	1.069	\$89.63				
5+ Axles	526	6.31	\$10.12	1.069	\$598.44				
	•			Total Daily Cost:	\$1,745.74				
				**Cost Per Year:	\$637,195.30				

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding. ** All costs were adjusted to July 1, 2013 using the appropriate Producer Price Index.

20 Year Period From 2017 Through 2036 Time-Related Vehicle Depreciation

Т

Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Cost
Small Autos	87127	6.82	\$1.05	1.019	\$3,867,606.0
Medium to Large Autos	31704	6.82	\$1.40	1.048	\$1,929,875.8
Four Tire SU	1264	6.82	\$2.58	1.054	\$142,604.5
6 Tire Trucks	7938	6.82	\$3.60	1.054	\$1,249,626.4
3 or 4 axles	1522	6.82	\$9.06	1.069	\$611,570.5
5+ Axles	9062	6.82	\$10.12	1.069	\$4,067,319.2
	1			Total Cost:	\$11,868,602.6

Time-Related Vehicle Depreciation for Alternative E2									
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Cost				
Small Autos	87127	5.51	\$1.05	1.019	\$3,124,708.12				
Medium to Large Autos	31704	5.51	\$1.40	1.048	\$1,559,181.20				
Four Tire SU	1264	5.51	\$2.58	1.054	\$115,212.77				
6 Tire Trucks	7938	5.51	\$3.60	1.054	\$1,009,595.53				
3 or 4 axles	1522	5.51	\$9.06	1.069	\$494,098.76				
5+ Axles	9062	5.51	\$10.12	1.069	\$3,286,060.00				
		•		Total Cost:	\$9,588,856.38				

Time-Related Vehicle Depreciation for Alternative C3									
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Cost				
Small Autos	87127	6.08	\$1.05	1.019	\$3,447,953.79				
Medium to Large Autos	31704	6.08	\$1.40	1.048	\$1,720,475.81				
Four Tire SU	1264	6.08	\$2.58	1.054	\$127,131.33				
6 Tire Trucks	7938	6.08	\$3.60	1.054	\$1,114,036.45				
3 or 4 axles	1522	6.08	\$9.06	1.069	\$545,212.43				
5+ Axles	9062	6.08	\$10.12	1.069	\$3,625,997.24				
		· · · · · · · · · · · · · · · · · · ·		Total Cost:	\$10,580,807.05				

Time-Related Vehicle Depreciation for Alternative W4									
Vehicle Type	Number of Vehicles*	Travel Time (Minutes)	Hourly Cost	PPI Adjustment (July 1, 2013)	Cost				
Small Autos	87127	6.31	\$1.05	1.019	\$3,578,386.2				
Medium to Large Autos	31704	6.31	\$1.40	1.048	\$1,785,559.6				
Four Tire SU	1264	6.31	\$2.58	1.054	\$131,940.5				
6 Tire Trucks	7938	6.31	\$3.60	1.054	\$1,156,179.2				
3 or 4 axles	1522	6.31	\$9.06	1.069	\$565,837.2				
5+ Axles	9062	6.31	\$10.12	1.069	\$3,763,164.9				
				Total Cost:	\$10,981,067.8				

* Differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding. ** All costs were adjusted to July 1, 2013 using the appropriate Producer Price Index.

Time-Related Vehicle Depreciation Cost Calculations

On the tables that calculate time-related vehicle depreciation for the alternatives, the percentage of different vehicle types was taken from the traffic count data from 9/17/12 through 9/20/12 and the total number of vehicles (AADT) and the number of trucks (CADT) were taken from the traffic volume projection reports. The hourly costs were taken from the FHWA manual titled, "Work Zone Road User Costs: Concepts and Applications." A factor based on different Producer Price Indexes was then applied to account for inflation to July 1, 2013.

Appendix B.3

Vehicle Operating Cost Calculations

2017					
Vehicle Operating Costs on No Action Alternative					
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost	
Small Autos	3721	6.34	\$0.43	\$10,259.33	
Medium to Large Autos	1354	6.34	\$0.56	\$4,847.49	
Four Tire SU	54	6.34	\$0.94	\$321.33	
6 Tire Trucks	339	6.34	\$1.23	\$2,639.56	
3 or 4 axles	65	6.34	\$1.45	\$597.91	
5+ Axles	387	6.34	\$1.59	\$3,903.56	
			Total Daily Cost:	\$22,569.18	
			**Cost Per Year:	\$8,237,751.81	

Vehicle Operating Costs on Alternative E2					
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost	
Small Autos	3721	5.85	\$0.43	\$9,466.41	
Medium to Large Autos	1354	5.85	\$0.56	\$4,472.84	
Four Tire SU	54	5.85	\$0.94	\$296.50	
6 Tire Trucks	339	5.85	\$1.23	\$2,435.56	
3 or 4 axles	65	5.85	\$1.45	\$551.70	
5+ Axles	387	5.85	\$1.59	\$3,601.87	
			Total Daily Cost:	\$20,824.88	
			**Cost Per Year:	\$7,601,080.14	

Vehicle (Vehicle Operating Costs on Alternative C3					
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost		
Small Autos	3721	5.94	\$0.43	\$9,612.05		
Medium to Large Autos	1354	5.94	\$0.56	\$4,541.65		
Four Tire SU	54	5.94	\$0.94	\$301.06		
6 Tire Trucks	339	5.94	\$1.23	\$2,473.03		
3 or 4 axles	65	5.94	\$1.45	\$560.18		
5+ Axles	387	5.94	\$1.59	\$3,657.28		
	· · · · · · · · · · · · · · · · · · ·		Total Daily Cost:	\$21,145.26		
	**Cost Per Year: \$7,718,019.8					

Vehicle C	Vehicle Operating Costs on Alternative W4					
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost		
Small Autos	3721	6.69	\$0.43	\$10,825.69		
Medium to Large Autos	1354	6.69	\$0.56	\$5,115.10		
Four Tire SU	54	6.69	\$0.94	\$339.07		
6 Tire Trucks	339	6.69	\$1.23	\$2,785.28		
3 or 4 axles	65	6.69	\$1.45	\$630.91		
5+ Axles	387	6.69	\$1.59	\$4,119.06		
			Total Daily Cost:	\$23,815.12		
			**Cost Per Year:	\$8,692,517.29		

* Small differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding. ** All costs were adjusted to July 1, 2013 using the appropriate PPI and CPI Indexes.

2036					
Vehicle Operating Costs on No Action Alternative					
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost	
Small Autos	5056	6.34	\$0.43	\$13,940.11	
Medium to Large Autos	1840	6.34	\$0.56	\$6,587.43	
Four Tire SU	73	6.34	\$0.94	\$434.40	
6 Tire Trucks	461	6.34	\$1.23	\$3,589.49	
3 or 4 axles	88	6.34	\$1.45	\$809.47	
5+ Axles	526	6.34	\$1.59	\$5,305.62	
			Total Daily Cost:	\$30,666.52	
		*	*Cost Per Year:	\$11,193,281.29	

Vehicle Operating Costs on Alternative E2					
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost	
Small Autos	5056	5.85	\$0.43	\$12,862.72	
Medium to Large Autos	1840	5.85	\$0.56	\$6,078.31	
Four Tire SU	73	5.85	\$0.94	\$400.82	
6 Tire Trucks	461	5.85	\$1.23	\$3,312.07	
3 or 4 axles	88	5.85	\$1.45	\$746.91	
5+ Axles	526	5.85	\$1.59	\$4,895.56	
			Total Daily Cost:	\$28,296.40	
			**Cost Per Year:	\$10,328,185.42	

Vehicle Operating Costs on Alternative C3				
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost
Small Autos	5056	5.94	\$0.43	\$13,060.61
Medium to Large Autos	1840	5.94	\$0.56	\$6,171.82
Four Tire SU	73	5.94	\$0.94	\$406.99
6 Tire Trucks	461	5.94	\$1.23	\$3,363.03
3 or 4 axles	88	5.94	\$1.45	\$758.40
5+ Axles	526	5.94	\$1.59	\$4,970.88
			Total Daily Cost:	\$28,731.73
		:	**Cost Per Year:	\$10,487,080.58

Vehicle Operating Costs on Alternative W4					
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost	
Small Autos	5056	6.69	\$0.43	\$14,709.68	
Medium to Large Autos	1840	6.69	\$0.56	\$6,951.09	
Four Tire SU	73	6.69	\$0.94	\$458.38	
6 Tire Trucks	461	6.69	\$1.23	\$3,787.65	
3 or 4 axles	88	6.69	\$1.45	\$854.16	
5+ Axles	526	6.69	\$1.59	\$5,598.51	
	\$32,359.47				
	**Cost Per Year:				

* Small differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding.
 ** All costs were adjusted to July 1, 2013 using the appropriate PPI and CPI Indexes.

	sts on No	Action Altern	ative					
			Vehicle Operating Costs on No Action Alternative					
Number		Vehicle						
	Milage	Operating	Daily VOC					
	MinoBe	Cost (VOC)	Cost					
venicies		Per Mile						
87127	6.34	\$0.43	\$87,680,871.65					
31704	6.34	\$0.56	\$41,429,066.90					
1264	6.34	\$0.94	\$2,745,382.89					
7938	6.34	\$1.23	\$22,559,856.18					
1522	6.34	\$1.45	\$5,110,067.07					
9062	6.34	\$1.59	\$33,363,158.11					
		Total Cost:	\$192,888,402.79					
	31704 1264 7938 1522	of Milage Vehicles* - 87127 6.34 31704 6.34 1264 6.34 7938 6.34 1522 6.34	of Milage Operating Cost (VOC) Vehicles* Per Mile 87127 6.34 \$0.43 31704 6.34 \$0.56 1264 6.34 \$0.94 7938 6.34 \$1.23 1522 6.34 \$1.45					

20 Year Period From 2017 Through 2036

Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost
Small Autos	87127	5.85	\$0.43	\$80,904,274.31
Medium to Large Autos	31704	5.85	\$0.56	\$38,227,135.8
Four Tire SU	1264	5.85	\$0.94	\$2,533,200.30
6 Tire Trucks	7938	5.85	\$1.23	\$20,816,271.0
3 or 4 axles	1522	5.85	\$1.45	\$4,715,124.9
5+ Axles	9062	5.85	\$1.59	\$30,784,617.4
			Total Cost:	\$177,980,624.0

Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost
Small Autos	87127	5.94	\$0.43	\$82,148,955.4
Medium to Large Autos	31704	5.94	\$0.56	\$38,815,245.6
Four Tire SU	1264	5.94	\$0.94	\$2,572,172.6
6 Tire Trucks	7938	5.94	\$1.23	\$21,136,521.4
3 or 4 axles	1522	5.94	\$1.45	\$4,787,665.3
5+ Axles	9062	5. 9 4	\$1.59	\$31,258,226.9
			Total Cost:	\$180,718,787.4

Vehicle Operating Costs on Alternative W4				
Vehicle Type	Number of Vehicles*	Milage	Vehicle Operating Cost (VOC) Per Mile	Daily VOC Cost
Small Autos	87127	6.69	\$0.43	\$92,521,298.31
Medium to Large Autos	31704	6.69	\$0.56	\$43,716,160.50
Four Tire SU	1264	6.69	\$0.94	\$2,896,941.88
6 Tire Trucks	7938	6.69	\$1.23	\$23,805,274.11
3 or 4 axles	1522	6.69	\$1.45	\$5,392,168.56
5+ Axles	9062	6.69	\$1.59	\$35,204,972.83
			Total Cost:	\$203,536,816.19

* Small differences between the number of vehicles listed in the chart and the actual traffic count are due to rounding. ** All costs were adjusted to July 1, 2013 using the appropriate PPI and CPI Indexes.

	HERS-ST Ur	nit Costs of VOC Resou	rce Compone	nts in Decem	ber 2010 Dollars	
Cost Component	Small Autos	Medium/Large Auto	4 Tire Truck	6 Tire Truck	3-4 Axle Combination	5+ Axle Combination
Fuel	\$2.89	\$2.89	\$2.89	\$2.89	\$2.84	\$2.84
Oil	\$8.27	\$8.27	\$8.27	\$3.31	\$3.31	\$3.31
Tire (single)	\$55.70	\$88.07	\$97.06	\$234.28	\$580.11	\$580.11
Maintenance and Repair	\$128.21	\$155.59	\$197.71	\$370.03	\$542.09	\$542.09
Depreciation	\$19,303.00	\$23,569.00	\$25,399.00	\$47,069.00	\$116,979.00	\$127,196.00

		Adjustment fo	or Inflation (Ju	ily 1, 2013)		
Cost Component	Small Autos	Medium/Large Auto	4 Tire Truck	6 Tire Truck	3-4 Axle Combination	5+ Axle Combination
Fuel	1.223	1.223	1.223	1.223	1.188	1.188
Oil	1.153	1.153	1.153	1.153	1.153	1.153
Tire (single)	1.038	1.038	1.038	1.038	1.038	1.038
Maintenance and Repair	1.045	1.045	1.045	1.045	1.045	1.045
Depreciation	1.019	1.048	1.054	1.054	1.069	1.069

		Adjustment fo	r Inflation (Ju	ily 1, 2013)		
Cost Component	Small Autos	Medium/Large Auto	4 Tire Truck	6 Tire Truck	3-4 Axle Combination	5+ Axle Combination
Fuel	\$3.53	\$3.53	\$3.53	\$3.53	\$3.37	\$3.37
Oil	\$9.54	\$9.54	\$9.54	\$3.82	\$3.82	\$3.82
Tire (single)	\$57.82	\$91.42	\$100.75	\$243.18	\$602.15	\$602.15
Maintenance and Repair	\$133.98	\$162.59	\$206.61	\$386.68	\$566.48	\$566.48
Depreciation	\$19,669.76	\$24,700.31	\$26,770.55	\$49,610.73	\$125,050.55	\$135,972.52

	Freque	ncy of Consumption F	or Vehicle Op	erating Cost	Components	
Cost Component	Small Autos	Medium/Large Auto	4 Tire Truck	6 Tire Truck	3-4 Axle Combination	5+ Axle Combination
Fuel (Miles Per Gallon)	24	17	6	6	5	4.5
Oil (Miles Per Change)	3000	3000	7000	7000	10000	10000
Tire (single) (Miles Per Change)	35000	35000	40000	40000	100000	100000
Maintenance and Repair (Per 1000 Miles)	1000	1000	1000	1000	1000	1000
Depreciation (Miles for Life Expectancy)	150000	150000	300000	250000	1000000	1000000

		Vehicle Op	erating Cost I	Per Mile		
Cost Component	Small Autos	Medium/Large Auto	4 Tire Truck	6 Tire Truck	3-4 Axle Combination	5+ Axle Combination
Fuel	\$0.15	\$0.21	\$0.59	\$0.59	\$0.67	\$0.75
Oil	\$0.02	\$0.02	\$0.04	\$0.02	\$0.02	\$0.02
Tire	\$0.01	\$0.01	\$0.01	\$0.04	\$0.07	\$0.12
Maintenance and Repair	\$0.13	\$0.16	\$0.21	\$0.39	\$0.57	\$0.57
Depreciation	\$0.13	\$0.16	\$0.09	\$0.20	\$0.13	\$0.14
Total:	\$0.43	\$0.56	\$0.94	\$1.23	\$1.45	\$1.59

Vehicle Operating Cost Calculations

The HERS-ST Method was used to calculate vehicle operating costs. On the tables that calculate vehicle operating costs for the alternatives, the percentage of different vehicle types was taken from the traffic count data from 9/17/12 through 9/20/12 and the total number of vehicles (AADT) and the number of trucks (CADT) were taken from the traffic volume projection reports. Table 23 in the FHWA manual titled, "Work Zone Road User Costs: Concepts and Applications" was used as a basis for unit costs for the different components of vehicle operating costs. The unit costs were then adjusted for inflation to July 1, 2013 using the appropriate PPI or CPI indices. Fuel, oil, tires, maintenance and repairs, and mileage related depreciation are the components used to calculate vehicle operating costs.

The FHWA manual did not provide consumption rates of the different Vehicle Operating Costs. To find consumption rates, I interviewed experts in the trucking and tire industry and acquired information online.

Jim Marker, Owner of Idaho Truck Sales Company in Lewiston, Idaho, sells and services large trucks that fall into the 3 to 4 axle and 5+ axle configurations. He indicated that fuel efficiency for the trucks could be estimated at 4.5 to 5 miles per gallon and that the trucks typically have about 48 quarts of oil and they recommend oil changes every 10,000 miles. He indicated that larger trucks that haul on rural high-speed highways will typically on average last 1,000,000 miles.

Rich Muro, the service writer of Rush Trucking in Lewiston, Idaho, services smaller trucks that fit into the four tire truck and 6 tire truck classification. He indicated that 4 and 6 tire trucks were very similar and had about 6 miles per gallon fuel efficiency and typically last 250,000 – 300,000 miles. He indicated the trucks have about 32 quarts of oil and they last 7000 miles between oil changes. He estimates that tires last about 40,000 miles.

Eric Lustig, a tire professional at Les Schwab Tire in Lewiston Idaho indicated that large semi-truck tires last about 100,000 miles on average, smaller 4 and 6 tire truck tires last about 40,000 miles on average, and passenger car and pickup tires last about 35,000 miles on average.

Small auto and medium to large auto fuel efficiency was estimated using consumption rates listed on the Bureau of Transportation Statistic's web site.

Overall estimates of Vehicle Operating Cost per mile appear to be reasonable when compared with the vehicle operating costs listed in Table 14 of the FHWA manual. Numbers listed in the manual do not account for inflation to July 1, 2013 and they were developed for an assumed roadway grade of 1%. Actual grades will be larger leading to more costs. Inflation for fuel was significant over this time period.

APPENDIX C – SUPPORTING INFORMATION

Appendix C.1

Twenty Year Traffic Projections

			80 7.87	80	11.2	1,148	10,221 1,011 1,148 11.2	10,221	ages	Weighted averages	Wei	2037	
PALOUSE RIVER DR	60/40% CLYDE RD	60/40%	80 7.865	80	11.2	1,148 11.2	1,011	10,221	342.933 344.116 10,221	342.933	001540		2037
			51 7.95	51	11.3	848	647	7,465	ages	Weighted averages	Wei	2017	
PALOUSE RIVER DR	60/40% CLYDE RD	60/40%	51 7.947	51	11.3	848	647	7,465	342.933 344.116	342.933	001540		2017
			42 7.99	42	742 11.4	742	520	6,500	ages	Weighted averages	Wei	2010	
PALOUSE RIVER DR	CLYDE RD	60/40%	42 7.992	42	11.4	742	520	6,500.	344.116	342.933	001540	001540	2010
To Description	From Description	DIR	CDHV	CDHV	DHV %	DHV	CAADT	AADT	ost To	Milepost From	Segment om To	Seg From	Year
			n 2037	End Projection 2037	End F		344.11	ost To 3	Milepost To	540	Segment To 1540	Segm	
			n 2017	Start Projection 2017	Start F		342.93	From 3	Milepost From	540	Segment From 1540	Segmen	
			a 2010	Traffic Data 2010	Tra					S095	Route US095		
								Ā	Repo	ADT Volume Projection Report	e Proje	olume/	ADTV

June 16, 2011

Page 1 of 1

			2037				2017		-		2010	Year					
2037		001540	001539	2017		001540	001539	2010		001540 001540	001539 001539	From	Seg	Segment To	Segment From		ADI VOIUNE Projection Report
		001540	001539			001540	001539			001540	001539	10	Segment			Route t	
Weig	339.620	337.668	337.180	Weighted	339.620	337.668	337.180	Weighted	339.620	337.668	337.180	From	Mile	1540	1539	US095	u o Je c
Weighted	342.930	339.620	337.180 337.668	Inted	339.620 342.930	339.620	337.668	hted	342.930	339.620	337.668	To	Milepost	Milep	Milepost From		
8,175	8,437	7,821	7,809	5,920	6,113	5,657	5,654	5,130	5,300	4,900	4,900	AADT		Milepost To	From		Nepo
1,318	1,323	1,323	1,264	843	847	847	608	677	680	680	650	CAADT		342.930	337.180		
925	954	886	885	679	700	650	650	593	611	567	567	DHV					
11.30	11.3	11.3	11.3	11.40	11.4	11.4	11.4	11.50	11.5	11.5	11.5	DHV %		End F	Start F	Tn	
104	105	105	100	89	89	89	65	55	55	55	53	CDHV		End Projection	Start Projection	Traffic Data	
7.91	7.912	7.933	7.934	8.01	8.014	8.044	8.044	8.07	8.071	8.106	8.106	CDHV %			n 2017	a 2010	
	60/40%	60/40%	60/40%		60/40%	60/40%	60/40%		60/40%	60/40%	60/40%	DIR					
	eid Rd	END NEW ALIGNMENT	THORN CREEK RD		EID RD	END NEW ALIGNMENT	THORN CREEK RD		EID RD	END NEW ALIGNMENT	THORN CREEK RD	From Description					
		EID RD	END NEW ALIGNMENT			EID RD	END NEW ALIGNMENT			EID RD	END NEW ALIGNMENT	To Description					

•

Year	AADT	CADT
2017	5920	843
2018	6016	862
2019	6114	882
2020	6214	901
2021	6315	922
2022	6418	943
2023	6522	964
2024	6628	986
2025	6736	1008
2026	6845	1031
2027	6957	1054
2028	7070	1078
2029	7185	1102
2030	7302	1127
2031	7421	1153
2032	7542	1179
2033	7664	1205
2034	7789	1233
2035	7916	1260
2036	8044	1289
Total:	138617	21021

20 Year Traffic Projections - (2017 - 2036)

Appendix C.2

Speed Study and Vehicle Classification Data For US-95, MP 340

			Idaho
Lewiston, ID 83501 (208) 799-5090	2600 Frontage Road	District 2	Transportation Department

		16:00 527	13:00 1	14:00 3	15:00 15	16:00 216	16:00	16:00	14:00	14:00	15:00	15:00	16:00	13:00	15:00	13:00	PM Peak
																	AM Peak Vol.
			0.1%	0.2%	3.1%	37.7%	41.0%	11.2%	2.5%	0.2%	0.2%	0.0%	0.0%	0.1%	0.0%	3.6%	Percent
		2993	2	6	93	1129	1226	336	75	7	б		-	2	-	108	Total
10	56-65	27	0	0	2	13	6	ω	2	0	0	0	0	0	0	-	23:00
3	56-65	49	0	0	ω	17	19	6	-	0	-	0	0	0	0	2	22:00
7	54-63	109	0	0	ω	23	48	22	6	4	0	0	0	0	0	6	21:00
113	56-65	145	0	0	ŋ	46	67	19	4	0	-	0	0	0	0	ω	20:00
13	56-65	206	0	0	00	63	75	40	13	2	0	0	0	0	0	сл	19:00
22	56-65	285	0	-	9	86	128	32	7	0	2	0	0	0	0	00	18:00
38	56-65	461	0	0	11	206	178	42	00	0	0	0	0	0	0	16	17:00
43	56-65	527	0	-	14	216	219	58	4	0	0	0	1	0	0	14	16:00
33	56-65	418	0	0	15	152	185	43	ъ	0	N	1	0	0	1	14	15:00
30	56-65	399	-	ω	12	155	154	42	14	ω	0	0	0	0	0	15	14:00
28	56-65	367	-	-	11	140	147	29	11	-	0	0	0	2	0	24	13:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12 PM
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	11:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	09:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	08:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	07:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	06:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	05:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	04:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	03:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	02:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	01:00
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	9/17/12
in Pace	Speed	Total	666	75	70	65	60	55	50	45	40	35	30	25	20	15	Time
Number	Pace		76	71	66	61	56	51	46	41	36	31	26	21		-	Start 1

				Idaho
(208) 799-5090	Lewiston, ID 83501	2600 Frontage Road	District 2	Transportation Department

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Sout	000	2011	

	16:00 562	17:00	14:00 2	14:00 19	16:00 217	16:00	14:00 54	16:00	16:00 ج	14:00 1	13:00 1	19:00 1	13:00 1	15:00 1	14:00 36	Vol 36
	526	2	4	16	204	205	60	23	14	-			-		32	Vol.
	07:00	07:00	09:00	07:00	07:00	07:00	11:00	09:00	07:00	00:00			06:00		08:00	AM Peak
		0.2%	0.2%	3.5%	35.2%	40.5%	11.2%	2.9%	0.7%	0.1%	0.0%	0.0%	0.0%		5.4%	Percent
	6369	10	15	226	2242	2579	712	182	42	თ	-	-	ω		345	Total
-65		0	0	0	15	12	4	-	0	0	0	0	0	0	0	23:00
5-64		-	0	4	14	24	9	2	-	0	0	0	0	0	0	22:00
-65		0	0	υ	43	47	11	ω	0	0	0	0	0		ი	21:00
-65		0	0	6	57	73	32	9	ω	0	0	0	-		G	20:00
-65		0	0	7	70	68	42	17	ω	-1	0	-	0		11	19:00
-65		0	0	9	86	165	37	ъ	2	0	0	0	0		13	18:00
-65		ω	0	18	162	231	38	1	0	0	0	0	0		20	17:00
-65		0	0	13	217	245	48	18	01	0	0	0	0		16	16:00
-65		4	0	15	191	196	46	11	4	0	0	0	0		20	15:00
5-65		-	2	19	185	196	54	ω	0	-	0	0	0		36	14:00
-65		2	0	14	125	172	52	14	4	0	1	0	4		18	13:00
-65		0	-	17	117	150	40	15	2	0	0	0	0		17	12 PM
-65		0	0	8	117	145	60	9	0	0	0	0	0		28	11:00
-65		0	ω	16	113	137	47	16	4	0	0	0	0		22	10:00
-65		0	4	15	112	146	51	23	сл	0	0	0	0		25	09:00
56-65	361 56	0	0	13	141	126	37	11	0	0	0	0	0	-	32	08:00
-65		2	ω	16	204	205	41	10	14	0	0	0	0		31	07:00
-65		0	0	12	148	122	30	7	0	-	0	0	-		23	06:00
-65		0	0	9	58	59	13	-	0	-	0	0	0		ი	05:00
-65		0	0	01	28	31	7	2	0	-	0	0	0		თ	04:00
-65		0	0	1	16	9	σ	2	-	0	0	0	0		4	03:00
-64		0	1	ω	9	6	6	0	0	0	0	0	0		0	02:00
-63		0	1	0	6	7	2	0	0	0	0	0	0		ω	01:00
-65		0	0	-	00	7	0	2	0	-	0	0	0		ω	9/18/12
eed		666	75	70	65	60	55	50	45	40	35	30	25		15	Time
ace		76	71	66	61	56	51	46	41	36	31	26	21		_	Start

				Idaho
(208) 799-5090	Lewiston, ID 83501	2600 Frontage Road	District 2	Transportation Department

		545	Ν	2	21	219	259	68	15	თ	ω			-	2	33	Vol.
		16:00	15:00	12:00	14:00	16:00	17:00	12:00	14:00	20:00	12:00			13:00	15:00	13:00	PM Peak
		514	2	4	17	226	172	53	15	4	2	-	-	_	-	37	Vol.
		07:00	06:00	10:00	00:00	07:00	07:00	07:00	10:00	08:00	10:00	10:00	07:00	06:00	10:00	07:00	AM Peak
			0.1%	0.4%	3.5%	33.6%	41.7%	11.6%	2.7%	0.5%	0.3%	0.0%	0.0%	0.0%	0.1%	5.3%	Percent
	×	6499	9	27	230	2182	2711	754	175	34	21	2	_	2	4	347	Total
	51-60	49	0	-	2	9	20	10	ω	-	0	0	0	0	0	ω	23:00
	56-65	66	0	0	ω	19	27	10	2	4	0	0	0	0	0	4	22:00
	56-65	109	-	0	00	31	42	15	5	2	0	0	0	0	0	თ	21:00
123	56-65	179	0	-	ω	51	72	26	11	6	ω	0	0	0	0	6	20:00
	56-65	214	0	-	ω	56	94	41	7	4	0	0	0	0	0	00	19:00
	56-65	323	-1	-	14	85	155	45	9	0	0	0	0	0	0	13	18:00
	56-65	517	0	0	11	176	259	45	14	-	-	0	0	0	0	10	17:00
	56-65	545	0	2	15	219	240	39	12	0	-	0	0	0	0	17	16:00
	56-65	483	2	-	21	171	205	49	7	0	ω	0	0	0	2	22	15:00
	56-65	442	-	_	21	143	194	41	15	-1	2	0	0	0	0	23	14:00
	56-65	488	0	-	20	137	225	63	сл	2	-	0	0	-	0	33	13:00
	56-65	375	0	2	13	108	156	68	9	-	ω	0	0	0	-	14	12 PM
	56-65	325	0	ω	14	109	123	47	7	-	-	-	0	0	0	19	11:00
	56-65	359	-	4	12	105	152	45	15	2	2	-	0	0	-	19	10:00
	56-65	365	0	-	17	108	152	51	6	2	0	0	0	0	0	28	09:00
	56-65	384	0	-	13	145	142	41	7	4	-	0	0	0	0	30	08:00
	56-65	514	-	0	9	226	172	53	12	ω	0	0	-	0	0	37	07:00
	56-65	398	2	2	11	159	149	33	13	0	-	0	0	4	0	27	06:00
	56-65	173	0	0	9	65	65	15	G	-	-	0	0	0	0	12	05:00
	56-65	88	0	-	4	30	34	G	4	0	0	0	0	0	0	10	04:00
	56-65	41	0	2	2	12	13	თ	-	2	0	0	0	0	0	4	03:00
	53-62	20	0	0	2	Сл	7	ω	-	0	0	0	0	0	0	2	02:00
	55-64	21	0	-	0	00	5	-	ъ	0	0	0	0	0	0	-	01:00
	53-62	21	0	-	ω	თ	00	ω	0	0	1	0	0	0	0	0	9/19/12
	Speed	Total	666	75	70	65	60	55	50	45	40	35	30	25	20	15	Time
	Pace		76	71	66	61	56	51	46	41	36	31	26	21	16	-	Start

Stats		Percent 5.3%			AM Peak 08.00			22:00	21:00	20:00	19:00	18:00	17:00	16:00	15.00	14.00	13.00	12 PM	11.00	10:00							03:00	02:00	01:00	9/20/12		Start	Northbound, Southbound
10 MPH Pace Speed : Number in Pace : Percent in Pace : Number of Vehicles > 60 MPH : Percent of Vehicles > 60 MPH :			0				*	*	*	*	*	*	*	*	*	*	*	*	*	*	18	39	32	30	17	10	7	-	1	2	15	-	bound
10 MPH Pace Speed : Number in Pace : Percent in Pace : of Vehicles > 60 MPH : of Vehicles > 60 MPH :	15th 50th 95th	0.1%			0.0%	- 1	*	*	*	*	*	*	*	*	*	*	*	*	*	* '	ο.		0	0	0	0	0	0	0	0	20	16	
MPH Pace Speed Number in Pace Percent in Pace ehicles > 60 MPH ehicles > 60 MPH	15th Percentile 50th Percentile 85th Percentile 95th Percentile	0.1%	5	2	0.1%	3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	01	0	0	0	-	0	0	0	0	0	25	21	
	0000	0.0%	n	1	04.00	2	*	*	*	*	*	*	*	*	*	*	*	*	*	* 1	0.		0	0	0	-	0	0	0	0	30	26	
56-65 MPH 13620 75.8% 7017 39.1%	53 MPH 59 MPH 65 MPH	0.0%	n	1	04.0%	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0 0	5	0	0	0	-	0	0	0	0	35	31	
		42 0.2%	5	2	02.00	9	*	*	*	*	*	*	*	*	*	*	*	*	*	* 1	N	0	2	0	0	0	-	2	0	0	40	36	
		96 0.5%	8	5	0.07%	13	*	*	*	*	*	*	*	*	*	*	*	*	*	*		ית	0	0	2	4	Ν	0	2	0	45	41	
		479 2.7%	770	12	08.00	47	*	*	*	*	*	*	*	*	*	*	*	*	*	* 1	თ i	12	11	ი	2	ω	0	2	4	_	50	46	
		2046 11.4%	2000	68	08.00	244	*	*	*	*	*	*	*	*	*	*	*	*	*	*	57	68	49	32	14	6	6	-	4	7	55	51	
		40.6%	4000	194	07.0%	776	*	*	*	*	*	*	*	*	*	*	*	*	*	*	138	177	194	130	63	28	18	4	7	17	60	56	
		5.2%	222	215	07.00	775	*	*	*	*	*	*	*	*	*	*	*	*	*	*	111	136	215	179	69	31	19	Сī	ъ	თ	65	61	
		512 3.4%	20	14	07.00	63	*	*	*	*	*	*	*	*	*	*	*	*	*	*	о i	10	14	13	9	сл	4	-	0	-	70	66	
		0.3%	1	3	04.00	7	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0.	-	0	-	-	3	0	0	0	-	75	71	
		0.1%	3	1	05.00	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0 0	0	0	0	-	0	0	0	0	0	666	76	
		UG671	47000	517	07.00	2099	*	*	*	*	*	*	*	*	*	*	*	*	*	*	339	454	517	391	179	89	57	16	23	34	Total		
							*	*	*	*	*	*	*	*	*	*	*	*	*	*	56-65	56-65	56-65	56-65	56-65	56-65	56-65	57-66	52-61	51-60	Speed	Pace	-
							*	*	*	*	*	*	*	*	*	*	*	*	*	*	249	313	409	309	132	59	37	10	12	24	in Pace	Number	1

Idaho Transportation Department District 2 2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

		Idaho
2600 Frontage Ro	District 2	Transportation
ad		Department

Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

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		223	10.00	3	9	99	81	27		4.00	10.00			10.00	10.00	13.00	Vol
		16.00	13.00	14.00	15.00	18.00	16.00	18:00	17.00	14.00	15.00			13.00	15.00	13.00	AM Peak Vol.
			0.1%	0.4%	4.1%	42.5%	37.6%	9.1%	1.5%	0.1%	0.2%	0.0%	0.0%	0.1%	0.1%	4.0%	Percent
		1359	2	6	56	578	511	124	21	2	ω	0	0	-	-	54	Total
	57-66	14	0	0	-	10	1	1	0	0	0	0	0	0	0	-	23:00
	56-65	31	0	0	2	14	10	ω	0	0	-	0	0	0	0	-	22:00
	54-63	45	0	0	ω	12	19	7	2	-	0	0	0	0	0	-	21:00
63	56-65	76	0	0	ω	28	35	თ	2	0	4	0	0	0	0	2	20:00
	56-65	103	0	0	7	43	35	12	4	0	0	0	0	0	0	2	19:00
-	56-65	133	0	-	0	56	56	10	1	0	0	0	0	0	0	ω	18:00
16	56-65	207	0	0	თ	87	81	20	6	0	0	0	0	0	0	7	17:00
1	69-99	223	0	-	6	99	81	27	2	0	0	0	0	0	0	7	16:00
1	56-65	181	0	0	9	83	69	9	4	0	-	0	0	0	1	00	15:00
1	56-65	192		6	0	77	73	21	-	-	0	0	0	0	0	9	14:00
-	50-05	154			1	69	51	9	2	0	0	0	0	-	0	13	13:00
			* *	*	1 *	*	*	*	*	*	*	*	*	*	*	*	12 PM
		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	11:00
			×	×	×	*	*	*	*	*	*	*	*	*	*	*	10:00
				*	*	*	*	*	*	*	*	*	*	*	*	*	09:00
		• *	. *	*	*	*	*	*	*	*	*	*	*	*	*	*	08:00
			a		*	*	*	*	*	*	*	*	*	*	*	*	07:00
			* *	*	*	*	*	*	*	*	*	*	*	*	*	*	06:00
			*	*	*	*	*	*	*	*	*	*	*	*	*	*	05:00
				×	*	*	*	*	*	*	*	*	*	*	*	*	04:00
					×	*	*	*	*	*	*	*	*	*	*	*	03:00
						* *	*	*	*	*	*	*	*	*	*	*	02:00
	• •		. ,					*	*	*	*	*	*	*	*	*	01:00
	• :	• •	. ,	• •	+ ×		, x	* *	*	*	*	*	*	*	*	*	9/17/12
In Pace	speed	Iotal	666	6/	70	65	60	55	50	45	40	35	30	25	20	15	Time
NULIDE	race	1	10	11	00	61	99	51	46	41	36	31	26	21	16	-	Start

			Idaho
Lewiston, ID 83501 (208) 799-5090	2600 Frontage Road	District 2	Transportation Department

Latitude: 0' 0.000 South

		14:00	14:00 17:00	14:00 17:00	14:00 17:00
07:00 07:00 10:00 09 117 148 14	07:00 148	07:00 10:00 09:00 148 14 4	07:00 10:00 09:00 07:00 148 14 4 2	07:00 10:00 09:00 148 14 4	07:00 10:00 09:00 07:00 148 14 4 2
41.7% 4.9%	41.7% 4.9%	41.7% 4.9% 0.4%	41.7% 4.9% 0.4% 0.2%	41.7% 4.9% 0.4% 0.2%	41.7% 4.9% 0.4% 0.2%
1336 156	1336 156	1336 156 14	1336 156 14 5	1336 156 14 5 3205	1336 156 14 5 3205
7 0	7 0	7 0	7 0 0 0	7 0 0 0 18	7 0 0 0 18
11	11	11 4 0	11 4 0 1	11 4 0 1 28	11 4 0 1 28
23	23	23 3 0	23 3 0 0	23 3 0 0 60	23 3 0 0 60
31	31	31 4 0	31 4 0 0	31 4 0 0 76	31 4 0 0 76
49	49	49 5 0	49 5 0 0	49 5 0 0 107	49 5 0 0 107
55	55	55 4 0	55 4 0 0	55 4 0 0 152	55 4 0 0 152
74	74	74 9 0	74 9 0 2	74 9 0 2 227	74 9 0 2 227
92	92	92 5 0	92 5 0 0	92 5 0 0 221	92 5 0 0 221
100 8	100 8	100 8 0	100 8 0 0	100 8 0 0 233	100 8 0 0
102 12	102 12	102 12 2	102 12 2 0	102 12 2 0 221	102 12 2 0 221
65 10	65 10	65 10 0	65 10 0 0	65 10 0 0 193	65 10 0 0 193
62 9	62 9	62 9 1	62 9 1 0	62 9 1 0 164	62 9 1 0 164
78 8	78 8	78 8 0	78 8 0 0	78 8 0 0 176	78 8 0 0 176
68 14	68 14	68 14 2	68 14 2 0	68 14 2 0 179	68 14 2 0 179
78 10	78 10	78 10 4	78 10 4 0	78 10 4 0 195	78 10 4 0 195
96 13	96	96 13 0	96 13 0 0	96 13 0 0 212	96 13 0 0 212
148 10	148 10	148 10 3	148 10 3 2	148 10 3 2 328	148 10 3 2 328
113 10	113 10	113 10 0	113 10 0 0	113 10 0 0 217	113 10 0 0 217
38 9	38 9	38 9 0	38 9 0 0	38 9 0 0 92	38 9 0 0 92
18	18	18 5 0	18 5 0 0	18 5 0 0 45	18 5 0 0 45
10	10	10 1 0	10 1 0 0	10 1 0 0 20	10 1 0 0 20
ъ	ъ	5 2 1	5 2 1 0	5 2 1 0 12	5 2 1 0 12
6	6	6 0 1	6 0 1 0	6 0 1 0 14	6 0 1 0 14
7	7	7 1 0	7 1 0 0	7 1 0 0 15	7 1 0 0 15
65	65	65 70 75	65 70 75 999	65 70 75 999 Total	65 70 75 999 Total
61	0	0	0/ 1/ 00 10	01 00 11	01 00 11

(208) 799-50	Lewiston, ID 8	2600 Frontage I	District	Idaho Transportatio
06	3501	Road	2	1 Department

Latitude:
0
0.000
South

Start 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <th1< th=""> 1 1 1</th1<>			245	-	2	15	111	113	31	ת	5	2					10	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			13:00	14:00	12:00	13:00	16:00	13:00	18:00	18:00	13:00	15:00				15:00	13:00	PM Peak
11 10 21 26 30 31 40 41 60 51 60 61 70 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 500 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71 71			318	2	ω	14	177	66	15	4	ω	-	-	-	-	-	25	Vol.
11 10 21 26 31 36 44 450 51 500 651 700 71 990 Total Speed 1 10 1 1 1 3 6 1 3 6 1 3 6 1 1 3 6 1 1 3 6 1 1 3 6 1 1 3 6 1 1 1 5 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 546 547 547 546			07:00	06:00	11:00	09:00	07:00	07:00	09:00	09:00	08:00	05:00	11:00	07:00	06:00	10:00	07:00	AM Peak
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				0.1%	0.5%	4.8%	41.1%	37.3%	7.2%	1.4%	0.5%	0.4%	0.0%	0.0%	0.0%	0.1%	6.5%	Percent
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			3270	ω	17	156	1345	1220	236	45	16	14	-	-	-	2	213	Total
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	16		24	0	0	2	7	9	ω	-	0	0	0	0	0	0	2	23:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	30		38	0	0	2	13	17	ω	0	-1	0	0	0	0	0	2	22:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	36		52	0	0	7	19	17	4	0	2	0	0	0	0	0	ω	21:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	74		94	0	0	-	37	37	7	ъ	0	ω	0	0	0	0	4	20:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	68		119	0	1	2	37	52	18	2	-	0	0	0	0	0	თ	19:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	123		180	0	0	12	55	68	31	6	0	0	0	0	0	0	00	18:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	193		227	0	0	J	97	96	20	4	0	0	0	0	0	0	ъ	17:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	194		226	0	4	7	111	83	13	4	0	0	0	0	0	0	7	16:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	163		213	0	0	12	80	83	18	2	0	ω	0	0	0	4	14	15:00
15 20 25 30 35 40 45 50 55 60 65 700 75 999 Total Speed 1 0 0 0 0 0 0 0 1 3 5 1 0 0 1 3 5 1 0 0 1 3 5 1 0 0 1 1 3 5 1 0 0 1 1 3 5 1 0 0 0 1 3 5 1 0 0 0 1 1 3 5 1 0 0 1 1 1 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td>137</td> <td></td> <td>181</td> <td>-</td> <td>-</td> <td>12</td> <td>66</td> <td>71</td> <td>00</td> <td>თ</td> <td>-</td> <td>2</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>14</td> <td>14:00</td>	137		181	-	-	12	66	71	00	თ	-	2	0	0	0	0	14	14:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	184		245	0	0	15	71	113	25	0	2	0	0	0	0	0	19	13:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	138		181	0	2	00	65	73	16	4	-	2	0	0	0	0	10	12 PM
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	123		163	0	ω	9	73	50	13	0	0	4	4	0	0	0	13	11:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	127		161	0	2	00	63	64	9	-	0	-	0	0	0	-	12	10:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	142		194	0	4	14	69	73	15	4	1	0	0	0	0	0	17	09:00
15 20 25 30 35 40 45 50 55 60 61 30 71 999 Total Speed 1 0 0 0 0 0 0 1 3 4 30 5 6 6 70 7 999 Total Speed 1 0 0 0 0 0 0 1 3 5 1 0 0 1 55 66 61 60 7 999 Total Speed 1 3 6 0 1 0 0 1 1 55 66 61 60 7 7 999 Total Speed 1 0 0 1 1 1 1 1 1 55 66 61 60 7 1 1 1 1 1 1 1 1 1 1 1 1 <td< td=""><td>174</td><td></td><td>219</td><td>0</td><td>-</td><td>12</td><td>96</td><td>78</td><td>10</td><td>0</td><td>ω</td><td>-</td><td>0</td><td>0</td><td>0</td><td>0</td><td>18</td><td>08:00</td></td<>	174		219	0	-	12	96	78	10	0	ω	-	0	0	0	0	18	08:00
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15 20 21 26 31 36 41 46 35 60 65 70 75 999 Total Speed 1 0 0 0 0 0 0 1 3 45 50 55 60 65 70 75 999 Total Speed 2 0 0 0 0 0 1 3 5 1 0 0 10 57-66 1 0 0 0 0 0 1 3 6 1 0 0 10 57-66 4 0 0 0 0 1 0 2 3 3 1 0 1 15 55-64 10 0 0 0 1 1 2 3 36 47 7 0 11 56-65 10 0 0 1 1 2<	194		229	2	2	00	121	73	6	0	0	0	0	0	-	0	16	06:00
15 20 21 26 21 26 21 26 21 26 21 26 21 26 23 36 41 46 30 35 40 45 50 55 60 65 70 75 999 Total Speed 2 0 0 0 0 0 1 3 5 1 0 0 10 57-66 4 0 0 0 0 0 1 3 5 1 0 0 10 57-66 4 0 0 0 0 0 1 3 5 1 0 0 10 57-66 4 0 0 0 0 1 0 2 3 3 1 0 11 54-63 4 0 0 0 0 0 2 1 15 20 2 1 0 45 56-65	83		107	0	0	7	47	36	ω	2	-	-	0	0	0	0	10	05:00
1 16 21 26 31 36 41 46 51 20 25 30 35 40 41 30 30 35 40 41 46 51 50 55 60 65 70 71 20 0 0 0 0 1 3 5 1 0 0 10 57-66 56 60 65 70 71 2 1 0 11 54-63 56 56 1 0 11 54-63 57-66 56 60 65 70 71 10 11 54-63 55-64 60 65 70 71 10 18 57-66 55-64 60 65 70 71 10 18 57-66 55-64 60 65 70 71 10 18 57-66 60 65 70 71 10 18 57-66 55-64 60 65 70 71 10 18 57-66 66 65 70 71 10 18	35		45	0	-	2	20	15	-	2	0	0	0	0	0	0	4	04:00
1 16 21 26 31 36 41 46 51 20 25 30 35 40 41 46 51 20 26 31 36 41 46 51 20 0 0 0 0 0 1 3 5 1 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<	12		18	0	-	2	7	4	2	0	1	0	0	0	0	0	-	03:00
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1 16 21 26 31 36 41 46 51 50 60 65 70 75 999 Total Speed 15 20 25 30 35 40 45 50 55 60 65 70 75 999 Total Speed 0 0 0 0 0 1 3 5 1 0 0 10 57-66	9		15	0	-	0	6	ω	-	ω	0	0	0	0	0	0	-	01:00
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1 16 21 26 31 36 41 46 51 56 61 66 /1 /0 race	in Pace	1	Total	666	75	70	65	60	55	50	45	40	35	30	25	20	15	Time
	Number			76	71	66	61	56	51	46	41	36	31	26	21	16	1	Start

Stats 1 Number of Percent of M		Percent 6.3% 0	1.1.1	26	8.1%	Total 101	23:00 *	22:00 *	21:00 *	20:00 *	19:00 *	18:00 *	17:00 *	10:00	14:00	13:00	12 PM *	11:00 *	10:00 *			07:00 26					02:00 1		2	_	Otalt
10 MPH Pace Speed : Number in Pace : Percent in Pace : Number of Vehicles > 60 MPH : Percent of Vehicles > 60 MPH : Mean Speed(Average) :	15th Percentile 50th Percentile 85th Percentile 95th Percentile	0.1% 0.1%		1 1		1 2	*	*	*	*	*	*	*	*	* :		• •	*	*	0	1	0	0	0 1	0				0 0	20 25	
		0.0%		1		1	*	*	*	*	*	*	*	*	* :		• •	*	*	0	0	0	0	0		0				ω	
56-65 MPH 7131 78.6% 4304 47.4% 57 MPH	55 MPH 60 MPH 66 MPH	0.0%)	1	0.1%	-	*	*	*	*	*	*	*	*	* :		• •	*	*	0	0	0	0	0	-	0	0	0	0	35	0
		28 0.3%	8	2	0.6%	8	*	*	*	*	*	*	*	*	* :		+ +	*	*	2	2	2	0	0	0	-	4	0	0	40	00
		43 0.5%	5	2	0.6%	7	*	*	*	*	*	*	*	*	* :		* *	*	*	1	2	0	0	1	-	-	0	1	0	45	4
		125 1.4%	2	7	1.3%	16	*	*	*	*	*	*	*	*	* :		* *	*	*	-	7	ω	2	0	-	0	-	1	0	50	40
		683 7.5%		21			*	*	*	*	*	*	*	*	*		* *	*	*	15	21	17	თ	თ	-	2	0	2	-	55	0
		3300 36.4%		112			*	*	*	*	*	*	*	*	*		* *	*	*	78	84	112	59	40	13	7	ω	2	თ	60	00
		3831 42.2%		163	46.1%	572	*	*	*	*	*	*	*	*	*		* *	*	*	77	93	163	138	51	26	13	4	ω	4	65	0
		421 4.6%	2	12	4.3%	53	*	*	*	*	*	*	*	*	*		* *	*	*	ω	9	10	12	9	ъ	ω	-	0	1	70	00
		42 0.5%	5	3	0.4%	ъ	*	*	*	*	*	*	*	*	*	•	* *	*	*	0	0	0	-	-	ω	0	0	0	0	75	11
		10 0.1%	5		0.0%	0	*	*	*	*	*	*	*	*	*	•	* *	*	*	0	0	0	0	0	0	0	0	0	0	666	01
		9074	001	333	07-00	1240	*	*	*	*	*	*	*	*	*	•	* *	*	*	187	243	333	238	118	57	33	11	9	11	Total	
							*	*	*	*	*	*	*	*	*	•	* *	*	*	56-65	56-65	56-65	56-65	56-65	56-65	56-65	57-66	54-63	55-64		Face
							*	*	*	*	*	*	*	*	*	•	* *	*	*	155	177	275	197	91	39	20	00	7	10	in Pace	Number

Idaho Transportation Department District 2 2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

	Idaho
District 2	Transportation Department

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

		304			16:00 8	17:00	16:00	15:00	14:00	14:00	18:00	15:00	16:00	13:00		13:00	PM Peak
																	AM Peak Vol.
			0.0%	0.0%	2.3%	33.7%	43.8%	13.0%	3.3%	0.3%	0.2%	0.1%	0.1%	0.1%	0.0%	3.3%	Percent
		1634	0	0	37		715	212	54	տ	ω	-1	-1	1	0	54	Total
10	54-63	13	0	0	-		ъ	2	2	0	0	0	0	0	0	0	23:00
14	53-62	18	0	0	4		9	ω	-1	0	0	0	0	0	0	-	22:00
44	51-60	64	0	0	0		29	15	4	0	0	0	0	0	0	J	21:00
50	54-63	69	0	0	2		32	14	2	0	0	0	0	0	0	-	20:00
68	51-60	103	0	0	-	20	40	28	9	2	0	0	0	0	0	ω	19:00
114	56-65	152	0	0	ω		72	22	6	0	2	0	0	0	0	თ	18:00
216	56-65	254	0	0	J		97	22	2	0	0	0	0	0	0	9	17:00
255	56-65	304	0	0	8		138	31	2	0	0	0	-	0	0	7	16:00
185	56-65	237	0	0	0		116	34	4	0	-	-	0	0	0	6	15:00
159	56-65	207	0	0	0		81	21	13	2	0	0	0	0	0	6	14:00
167	56-65	213	0	0	4		96	20	9	-	0	0	0	1	0	11	13:00
*	*	*	*	*	*		*	*	*	*	*	*	*	*	*	*	12 PM
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	11:00
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	10:00
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	09:00
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	08:00
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	07:00
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	06:00
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	05:00
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	04:00
		*	×	*	*	*	*	*	*	*	*	*	*	*	*	*	03:00
- ×	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	02:00
		*	×	*	*	*	*	*	*	*	*	*	*	*	*	*	01:00
			. *	*	*	*	*	*	*	*	*	*	*	*	*	*	9/17/12
In Pace	Speed	Total	666	75	70		60	55	50	45	40	35	30	25	20	15	Time
INULIDE	Pace		76	17	66	61	56	51	46	41	36	31	26	21	16	-	Start

(208) 799-5090	Lewiston, ID 83501	2600 Frontage Road	District 2	Idaho Transportation Departme
				ment

Latitude: 0' 0.000 South

Total Speed 7 52-61 5 49-58 13 51-60 18 52-61 35 56-65 198 56-65 186 55-65 192 51-60 192 51-60 192 51-60 193 56-65 249 56-65 249 56-65 246 56-65 246 56-65 246 56-65 56-65 56-65 56-65 2113 51-60 110 56-65 56-65 56-65 56-65 51-60 1198 56-65			341	Ν		9	125	151	38	18	л	4	4		4	-	16	Vol
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			16:00	13:00		17:00	16:00	16:00	14:00	16:00	16:00	14:00	13:00		13:00	21:00	14:00	PM Peak
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			198		-	6	56	88	49	22	ъ	-			-	-	15	Vol.
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			07:00		10:00	07:00	07:00	07:00	11:00	00:00	00:00	00:00			06:00	08:00	11:00	AM Peak
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$				0.2%	0.0%	2.2%	28.6%	44.7%	14.5%	4.4%	0.8%	0.1%	0.0%		0.1%	0.1%	4.4%	Percent
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			3164	ъ	-	70	906	1413	459	139	24	ω	-		2	2	138	Total
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	13	56-65	14	0	0	0	8	ъ	0	-	0	0	0	0	0	0	0	23:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	21	51-60	27	0	0	0	ω	13	00	2	-	0	0	0	0	0	0	22:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	43	56-65	56	0	0	2	20	23	7	2	0	0	0	0	0	1	-	21:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	80	56-65	110	0	0	2	26	54	16	00	ω	0	0	0	0	0	-	20:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	66	51-60	113	0	0	2	21	34	32	13	-	1	0	4	0	0	00	19:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	132	56-65	165	0	0	G	31	101	20	ω	0	0	0	0	0	0	ъ	18:00
20 25 30 35 40 45 50 65 60 66 70 75 999 Total Spead Nur 0 0 0 0 1 0 0 0 0 0 7 52.61 Nur Spead	212	56-65	246	4	0	9	88	124	16	-	0	0	0	0	0	0	7	17:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	276	56-65	341	0	0	00	125	151	31	16	01	0	0	0	0	0	ъ	16:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	208	56-65	249	-	0	7	91	117	22	4	-	0	0	0	0	0	6	15:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	212	56-65	276	-	0	7	83	129	38	-	0	-	0	0	0	0	16	14:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	151	56-65	207	2	0	4	60	91	32	9	0	0	1	0	1	0	7	13:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	138	56-65	195	0	0	00	55	83	29	10	-	0	0	0	0	0	9	12 PM
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	131	51-60	192	0	0	0	39	82	49	7	0	0	0	0	0	0	15	11:00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	119	56-65	180	0	-	2	45	74	34	12	4	0	0	0	0	0	00	10:00
16 21 26 31 36 41 46 51 60 61 70 75 99 Total Pace Nun 1 0 0 0 0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	112	53-62	186	0	0	J	34	77	33	22	5	0	0	0	0	0	10	09:00
16 21 26 31 36 41 46 51 66 61 66 71 76 Yace Nur 0 0 0 0 0 0 0 1 0 55 66 61 66 71 76 Yace Nur 0 0 0 0 0 0 0 55 61 66 71 76 Yace Nur 0 0 0 0 0 0 0 55 1 0 0 7 52.61 1 1 0 0 5 49.5 1 1 0 0 5 49.58 1 0 0 1 3 4 1 0 0 1 3 5 49.58 1 1 0 0 1 3 5 49.58 1 0 0 1 3 5 49.58 1 1 </td <td>103</td> <td>56-65</td> <td>149</td> <td>0</td> <td>0</td> <td>0</td> <td>45</td> <td>58</td> <td>22</td> <td>11</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>-</td> <td>12</td> <td>08:00</td>	103	56-65	149	0	0	0	45	58	22	11	0	0	0	0	0	-	12	08:00
16 21 26 31 36 41 46 51 36 31 36 41 46 51 36 31 36 41 46 51 36 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 66 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 61 <td< td=""><td>144</td><td>56-65</td><td>198</td><td>0</td><td>0</td><td>6</td><td>56</td><td>88</td><td>26</td><td>7</td><td>ω</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>12</td><td>07:00</td></td<>	144	56-65	198	0	0	6	56	88	26	7	ω	0	0	0	0	0	12	07:00
16 21 26 31 36 41 46 51 56 61 66 71 76 72 73 20 25 30 35 40 45 50 55 60 65 70 75 99 Total Speed in F 0 0 0 0 0 0 55 60 65 70 75 99 Total Speed in F 0 0 0 0 0 55 3 4 1 0 0 7 52-61 in F 0 0 0 0 0 0 0 0 1 49-88 1 10 0 0 13 51-60 0 0 0 0 0 0 1 4 16 10 0 0 13 51-60 0 0 0 0 1 4 16 10 0 0 35 56-65 0 0 0 0	86	56-65	127	0	0	2	35	51	22	6	0	0	0	0	-	0	10	06:00
16 21 26 31 36 41 46 51 56 61 66 71 76 720 73 20 25 30 35 40 45 50 55 60 65 70 75 999 Total Speed in F 0 0 0 0 0 0 55 30 35 49.8 1 10 10 11 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10	45	56-65	55	0	0	0	20	25	9	1	0	0	0	0	0	0	0	05:00
16 21 26 31 36 41 46 51 56 61 66 71 76 72 73 20 25 30 35 40 45 50 55 60 65 70 75 999 Total Speed in F 0 0 0 0 0 0 55 30 35 49.8 51 56 66 71 76 72.61 Speed in F 0 0 0 0 0 5 3 4 1 0 0 5 49.8 0 0 0 0 2 4 6 6 0 0 1 52.61	26	56-65	35	0	0	0	10	16	4	_	0	0	0	0	0	0	4	04:00
16 21 26 31 36 41 46 51 56 61 66 71 76 Pace Nun 20 25 30 35 40 45 50 55 60 65 70 75 999 Total Speed in F 0 0 0 0 0 55 3 4 1 0 0 7 52-61 in F 0 0 0 0 5 3 4 1 0 0 13 51-60	12	52-61	18	0	0	0	6	0	4	2	0	0	0	0	0	0	0	03:00
16 21 26 31 36 41 46 51 56 61 66 71 76 Pace Nun 20 25 30 35 40 45 50 55 60 65 70 75 999 Total Speed in F 0 0 0 0 0 0 5 1 0 0 7 52-61 0 0 0 0 0 3 0 0 0 5 49-58	0	51-60	13	0	0	-	4	ω	ъ	0	0	0	0	0	0	0	0	02:00
16 21 26 31 36 41 46 51 56 61 66 71 76 Pace Nun 20 25 30 35 40 45 50 55 60 65 70 75 999 Total Speed in F 0 0 0 1 0 0 5 1 0 0 7 52-61	ω	49-58	J	0	0	0	0	ω	0	0	0	0	0	0	0	0	2	01:00
16 21 26 31 36 41 46 51 56 61 66 71 76 Pace 20 25 30 35 40 45 50 55 60 65 70 75 999 Total Speed	0	52-61	7	0	0	0	-	ъ	0	0	0	-	0	0	0	0	0	9/18/12
16 21 26 31 36 41 46 51 56 61 66 71 76 Pace	in Pace	Speed	Total	666	75	70	65	60	55	50	45	40	35	30	25	20	15	Time
	Number	Pace		76	71	66	61	56	51	46	41	36	31	26	21	16	-	Start

Idaho Transportation Department District 2 2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

Latitude: 0' 0.000 South

		319	2	_	9	108	163	52	10	6	-1			-		14	Vol.
		16:00	15:00	13:00	14:00	16:00	17:00	12:00	14:00	20:00	12:00			13:00	12:00	13:00	PM Peak
		198	-	2	5	49	88	46	14	2	-					12	Vol.
		10:00	07:00	10:00	11:00	07:00	10:00	07:00	10:00	10:00	00:00	10:00				07:00	AM Peak
			0.2%	0.3%	2.3%	25.9%	46.2%	16.0%	4.0%	0.6%	0.2%	0.0%	0.0%	0.0%	0.1%	4.1%	Percent
		3229	თ	10	74	837	1491	518	130	18	7		0	-	2	134	Total
18	51-60	25	0	1	0	2	11	7	2	-	0	0	0	0	0	-	23:00
18	52-61	28	0	0	-	6	10	7	2	0	0	0	0	0	0	2	22:00
38	53-62	57	-	0	-	12	25	11	ъ	0	0	0	0	0	0	2	21:00
54	51-60	85	0	-	2	14	35	19	6	6	0	0	0	0	0	2	20:00
65	51-60	95	0	0	-	19	42	23	ъ	ω	0	0	0	0	0	2	19:00
117	56-65	143	-	-	2	30	87	14	ω	0	0	0	0	0	0	G	18:00
242	56-65	290	0	0	6	79	163	25	10	-	1	0	0	0	0	G	17:00
265	56-65	319	0	4	00	108	157	26	00	0	-1	0	0	0	0	10	16:00
213	56-65	270	2	1	9	91	122	31	5	0	0	0	0	0	-1	00	15:00
200	56-65	261	0	0	9	77	123	33	10	0	0	0	0	0	0	9	14:00
178	56-65	243	0	-	J	66	112	38	ъ	0	1	0	0	-	0	14	13:00
135	51-60	194	0	0	თ	43	83	52	Сī	0	-	0	0	0	-	4	12 PM
109	52-61	162	0	0	сл	36	73	34	7	-	0	0	0	0	0	თ	11:00
130	55-64	198	-	2	4	42	88	36	14	2	-	-	0	0	0	7	10:00
119	55-64	171	0	0	ω	39	79	36	2	-	0	0	0	0	0	11	09:00
113	56-65	165	0	0	-	49	64	31	7	4	0	0	0	0	0	12	08:00
123	55-64	196	-	0	2	49	73	46	12	-	0	0	0	0	0	12	07:00
114	56-65	169	0	0	ω	38	76	27	13	0	-	0	0	0	0	11	06:00
47	54-63	66	0	0	2	18	29	12	ω	0	0	0	0	0	0	2	05:00
29	56-65	43	0	0	2	10	19	4	2	0	0	0	0	0	0	6	04:00
14	53-62	23	0	-	0	G	9	ω	-	-	0	0	0	0	0	ω	03:00
1	53-62	9	0	0	-	2	4	-	-	0	0	0	0	0	0	0	02:00
4	53-62	0	0	0	0	2	2	0	2	0	0	0	0	0	0	0	01:00
7	51-60	11	0	-	2	0	ъ	2	0	0	4	0	0	0	0	0	9/19/12
in Pace	Speed	Total	666	75	70	65	60	55	50	45	40	35	30	25	20	15	Time
Number	Pace		76	71	66	61	56	51	46	41	36	31	26	21	16	-1	Start
																	Southbound

Stats		l otal Percent 4			AM Deak 0		23:00	22:00	21:00	20:00	19:00	18:00	17:00	16:00	15:00	14.00	13.00	12 PM	11.00	10.00	00.00	00.00	07-00	06.00	05.00	04:00	03:00	02.00	01:00	9/20/12	Time	Start
Number Percent		4.3%	2	16	6.5%	56	*	*	*	*	*	*	*	*	*	*	*	*	*	* 0	~ ē	10 0	ה ה	10	7	5		0		2	15	-
10 MPH Nu Pe of Vehicl of Vehicl	<u>о</u> ол –	40.0%			0.0%	0	*	*	*	*	*	*	*	*	*	*	*	*	*	* 0			0	0 0	0	0	0	0	0	0	20	16
10 MPH Pace Speed Number in Pace Percent in Pace Percent of Vehicles > 60 MPH Percent of Vehicles > 60 MPH	15th Percentile 50th Percentile 85th Percentile 95th Percentile	0.1%		1	0.1%	-	*	*	*	*	*	*	*	*	*	*	*	*	*	* 0		<u>م</u>	0	0 0	0	0	0	0	0	0	25	21
		0.0%	2	1	0.1%	-	*	*	*	*	*	*	*	*	*	*	*	*	*	* (- c	ь (0	0	0	0	0	0	0	0	30	26
56-65 MPH 6489 73.0% 2713 30.5% 56 MPH	52 MPH 58 MPH 63 MPH 65 MPH	0.0%	2		0.0%	0	*	*	*	*	*	*	*	*	*	*	*	*	*	* (0 0		0	0	0	0	0	0	0	0	35	31
		.14 0.2%		-	0.1%	1	*	*	*	*	*	*	*	*	*	*	*	*	*	* (5 0	0	0	0	0	0	0	-	0	0	40	36
		0.6%	n S	ω	0.7%	6	*	*	*	*	*	*	*	*	*	*	*	*	*	* (0 0		0	0	1	0	-	0	4	0	45	41
		4.0%	07.4	00	3.6%	31	*	*	*	*	*	*	*	*	*	*	*	*	*	* (ט רט	л	00	4	2	2	0	-	ω	1	50	46
		15.3%	1000	47	20.3%	174	*	*	*	*	*	*	*	*	*	*	*	*	*	* i	42	47	32	26	9	IJ.	4	1	2	6	55	51
		3992 44.9%	2002	93	43.4%	373	*	*	*	*	*	*	*	*	*	*	*	*	*	*	60	93	82	71	23	15	11	1	сл	12	60	56
		2497 28.1%	20402	52	07:00	203	*	*	*	*	*	*	*	*	*	*	*	*	*	*	34	43	52	41	18	G	6	-	2	-1	65	61
		2.1%	2	4	07:00	10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	ω.	-	4	-	0	0	4	0	0	0	70	66
		0.1%	3	1	00:00	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	-	0	0	0	0	0	0	0	1	75	71
		0.1%	\$	-	05:00	1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	0	0	0	1	0	0	0	0	0	666	76
		0000	2000	211	08:00	859	*	*	*	*	*	*	*	*	*	*	*	*	*	*	152	211	184	153	61	32	24	ъ	14	23	Total	
														*	*	*	*	×	*	*	51-60	51-60	56-65	56-65	56-65	51-60	52-61	52-61	53-62	51-60	Speed	Pace
							*	*	*	*	*	*	*	*	*	*	*	*	*						41	20	17	з	9	18		

Idaho Transportation Department District 2 2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

	d, Southt													de: 0' 0.00	JU Sou
Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axi	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Tota
9/17/12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
01:00	•	*	*	*	*	*	*	*	*	*	*	*	*	*	
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
07:00	*	*	*	•	*	*	*	*	*	*	*	*	*	*	
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
11:00	*	*	*	*		*	*	•	*						
12 PM	*	*		-		*		•			*		*		
13:00	6	172	93	6	29	4	0	7	13	8	0	1	2	26	36
14:00	9	220	81	1	34	4	0	19	5	5	0	0	3	18	39
15:00	9	248	87	6	25	9	0	7	5	2	0	0	3	17	41
16:00	6	355	111	2	20	0	0	3	5	8	0	0	2	15	52
17:00	4	292	97	4	27	3	0	5	2	5	0	0	3	19	46
18:00	3	181	63	1	14	1	0	0	2	6	1	1	1	11	28
19:00	4	127	50	2	8	0	0	2	4	2	0	0	1	6	20
20:00	1	99	20	0	9	1	0	5	1	1	0	0	2	6	14
21:00	0	69	19	0	6	1	0	2	0	2	0	0	3	7	10
22:00	1	31	7	1	2	0	0	1	1	1	0	0	1	3	4
23:00	0	10	7	1	0	0	0	1	2	4	0	0	0	2	2
Total	43	1804	635	24	174	23	0	52	40	44	1	2	21	130	299
Percent	1.4%	60.3%	21.2%	0.8%	5.8%	0.8%	0.0%	1.7%	1.3%	1.5%	0.0%	0.1%	0.7%	4.3%	
AM															
Peak															
Vol.															
PM	14:00	16:00	16:00	13:00	14:00	15:00		14:00	13:00	13:00	18:00	13:00	14:00	13:00	16:0
Peak Vol.	9	355	111	6	34	9		19	13	8	1	1	3	26	52

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Tota
9/18/12	1	12	2	0	0	0	0	0	1	2	0	0	0	4	22
01:00	1	6	0	0	1	1	0	0	2	2	0	0	0	6	19
02:00	1	11	2	2	1	1	0	0	1	2	0	0	2	2	2
03:00	1	18	2	0	1	0	0	2	1	7	0	0	0	6	3
04:00	1	39	10	0	1	1	0	0	8	6	0	0	4	10	8
05:00	5	75	37	1	6	0	0	2	4	4	0	0	2	11	14
06:00	3	205	61	4	23	4	0	5	5	9	0	0	0	25	34
07:00	9	332	93	5	21	3	0	7	9	6	0	1	4	36	520
08:00	10	176	79	3	19	5	0	9	9	8	0	0	6	37	36
09:00	3	177	93	5	32	3	1	11	11	6	0	0	7	32	38
10:00	11	191	68	4	29	3	1	7	6	5	0	1	6	27	35
11:00	6	183	79	2	21	4	0	21	8	7	1	0	5	31	36
12 PM	2	181	99	4	22	0	1	10	14	3	0	0	4	19	35
13:00	7	219	91	4	21	5	0	12	10	8	0	0	3	20	40
14:00	9	271	96	7	28	9	0	12	4	11	0	1	6	43	49
15:00	9	279	115	4	23	5	1	4	7	8	õ	Ó	5	22	48
16:00	7	351	121	3	36	6	0	9	4	4	0	0	1	20	56
17:00	8	314	92	0 0	22	1	õ	7	2	2	Ő	0	2	23	47
18:00	4	198	71	0	17	1	0	2	6	3	1	0	1	13	31
19:00	7	127	51	3	6	4	õ	3	4	õ	0 0	Ō	Ó	15	22
20:00	3	130	34	1	7	0 0	0	1	0	1	Ō	0	3	6	18
21:00	3	77	19	1	5	1	0	0	0	1	0	0	1	8	11
22:00	0	38	10	0	2	1	0	0	1	1	0	0	1	1	5
23:00	0	20	5	0	1	0	0	2	1	2	0	0	0	1	3
Total	111	3630	1330	53	345	58	4	126	118	108	2	3	63	418	636
Percent	1.7%	57.0%	20.9%	0.8%	5.4%	0.9%	0.1%	2.0%	1.9%	1.7%	0.0%	0.0%	1.0%	6.6%	
AM	40.00	07.00	07:00	07:00	09:00	08:00	09:00	11:00	09:00	06:00	11:00	07:00	09:00	08:00	07:0
Peak	10:00	07:00					09.00				11.00				
Vol.	11	332	93	5	32	5	1	21	11	9	1	1	7	37	52
PM Peak	14:00	16:00	16:00	14:00	16:00	14:00	12:00	13:00	12:00	14:00	18:00	14:00	14:00	14:00	16:0
Vol.	9	351	121	7	36	9	1	12	14	11	1	1	6	43	56

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Start		bound Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Ax	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Tota
9/19/12	0	13	3	0	0	1	0	1	2	0	0	0	0	1	21
01:00	2	6	4	1	3	0	0	2	0	1	0	0	0	2	21
02:00	0	9	2	1	0	1	0	0	0	3	0	0	0	4	20
03:00	0	11	5	1	3	0	0	2	5	4	0	0	4	6	41
04:00	2	42	13	2	1	0	0	5	3	4	0	0	1	15	88
05:00	5	91	35	2	5	0	0	3	6	7	0	0	3	16	173
06:00	11	224	60	7	31	7	2	8	5	8	0	0	2	33	398
07:00	7	295	110	4	26	7	0	9	4	7	0	0	4	41	514
08:00	9	201	71	2	28	3	0	11	6	10	0	0	3	40	384
09:00	3	193	77	5	25	4	0	8	4	3	0	0	8	35	365
10:00	11	171	94	4	21	3	0	12	6	8	0	0	4	25	359
11:00	3	155	91	2	20	2	Ō	9	5	8	0	0	4	26	325
12 PM	4	201	85	4	25	2	0	10	5	13	0	0	4	22	37
13:00	9	262	99	9	28	5	2	16	9	6	0	0	4	39	488
14:00	9	244	84	7	32	9	0	12	8	7	0	1	2	27	442
15:00	10	273	98	3	27	5	1	19	7	8	0	2	4	26	483
16:00	6	331	135	1	29	6	Ō	10	2	3	0	0	4	18	545
17:00	15	350	94	. 4	28	2	0	5	4	0	0	0	1	14	517
18:00	7	203	68	4	11	- 1	1	8	2	1	0	1	0 0	16	323
19:00	4	135	40	1	15	2	0	3	2	2	0	0	0	10	214
20:00	3	117	31	1	10	2	0	0	1	2	0	0	2	10	179
21:00	1	70	21	1	3	0	0	2	3	2	0	0	0	6	109
22:00	0	39	12	0	3	1	0	1	1	4	0	0	0	5	60
23:00	0	28	8	0	1	0	0	2	1	2	0	0	2	5	4
Total	121	3664	1340	66	375	63	6	158	91	113	0	4	56	442	6499
Percent	1.9%	56.4%	20.6%	1.0%	5.8%	1.0%	0.1%	2.4%	1.4%	1.7%	0.0%	0.1%	0.9%	6.8%	
AM	06:00	07:00	07:00	06:00	06:00	06:00	06:00	10:00	05:00	08:00			09:00	07:00	07:0
Peak															
Vol.	11	295	110	7	31	7	2	12	6	10			8	41	51
PM Peak	17:00	17:00	16:00	13:00	14:00	14:00	13:00	15:00	13:00	12:00		15:00	12:00	13:00	16:0
Vol.	15	350	135	9	32	9	2	19	9	13		2	4	39	54

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

Start	d, South	Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer		Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Tota
/20/12	Dikes	21	Long 6	Duses 0	01110			2	2	0	0	0	0	3	3
01:00	0	14	2	0	1	1	0	0		3	0	õ	ő	1	2
02:00	1	8	0	1	Ö	0	0	õ	. 1	3	õ	õ	õ	2	-
02:00	1	14	9	2	3	0	õ	1	7	8	ō	õ	1	11	5
04:00	3	35	12	1	4	2	Ō	2	3	6	Ō	Ō	4	17	8
05:00	4	88	38	0	6	2	0	3	8	7	0	0	0	23	17
06:00	10	224	65	1	21	7	0	4	5	11	0	0	6	37	39
	10	303	98	1	31	6	0	12	8	3	õ	ů 0	3	39	51
07:00				7			-		-	8	0	1	9	50	4
08:00	23	199	97	•	28	18	0	6	8		-	,			
09:00	4	169	69	6	34	5	0	11	4	11	0	0	4	22	3
10:00	*	*						•		*	*	*	*	*	
11:00							*	*	*		*	*	*	*	
12 PM	*	*	*			*	*	*		*	*	•	*	•	
13:00 14:00	*	*	•		*	*	*	*	*	*	*	*	*	*	
15:00	*	*	*	*	*	*	*	*	*	•	*	*	•	*	
16:00	*	*	•	*	*	*	*	*	*	*	*	*	*	*	
17:00	*	*	*	*	+	*	*	*	*	•	*	•	*	*	
18:00	*	*	*	*	*	*	*	•	•	*	*	*	*	*	
19:00	*	*	*	*	*	*	*	*	*	*	*	•	٠	•	
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
21:00	*	•	*	*	*	*	*	٠	*	•	*	*	*	*	
22:00	*	*	*	*	*	*	*	*	•	*	*	*	*	*	
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Total	59	1075	396	19	128	41	0	41	47	60	0	1	27	205	20
ercent	2.8%	51.2%	18.9%	0.9%	6.1%	2.0%	0.0%	2.0%	2.2%	2.9%	0.0%	0.0%	1.3%	9.8%	
AM	08:00	07:00	07:00	08:00	09:00	08:00		07:00	05:00	06:00		08:00	08:00	08:00	07:
Peak				7		18		12	8	11		1	9	50	5
Vol.	23	303	98	(34	18		12	0						
PM Peak															
Vol.															
Grand				105	4000	105	40	377	296	325	3	10	167	1195	179
Total	334	10173	3701	162	1022	185	10	3/1	296						175
ercent	1.9%	56.6%	20.6%	0.9%	5.7%	1.0%	0.1%	2.1%	1.6%	1.8%	0.0%	0.1%	0.9%	6.7%	

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

Start 17 Time	7-Sep-12 Mon Northbound	Southboun	Tota
12:00 AM	*	*	
12:15	*	*	
12:30	*	*	
12:45	*	*	
01:00	*	*	
01:15	*	*	
01:30	*	*	
01:45	*	*	
02:00	*	*	
02:15	*	*	
02:30	*	*	
02:45	*	*	
03:00	*	*	
03:15	*	*	
03:30	*	*	
03:45	*	*	
03:45	*	*	
04:00	*	*	
04:15	*	*	
04:30	*	*	
04:45	*	*	
05:00		*	
05:15	*	*	
05:30	*	*	
05:45	*	*	
06:00	*	*	
06:15	*	*	
06:30		*	
06:45	*	*	
07:00	*	*	
07:15	*	*	
07:30	*		
07:45	*	*	
08:00	*	*	
08:15	*	*	
08:30	*	*	
08:45	*	*	
09:00	*	*	
09:15	*	*	
09:30	*	*	
09:45	*	*	
10:00	*	*	
10:15	*	*	
10:30	*	*	
10:45	*	*	
10:45 11:00	*	*	
11:15	*	*	
11:30	*	*	
11:45	*	*	
Total	0	0	
Percent	0.0%	0.0%	
Peak			

Peak Vol. P.H.F.

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Start	17-Sep-12			Total
Time	Mon	Northbound	Southboun	*
12:00 PM		*	*	
12:15		42	55	97
12:30		47	42	89
12:45		50	43	93
01:00		50	49	99
01:15		39	54	93
01:30		38	50	88
01:45		27	60	87
02:00		42	63	105
02:15		50	52	102
02:30		48	46	94
02:45		52	46	98
03:00		38	48	86
03:15		47	64	111
03:30		50	55	105
03:45		46	70	116
04:00		49	50	99
04:15		58	77	135
04:30		56	69	125
04:45		60	108	168
05:00		60	70	130
05:15		63	78	141
05:30		48	48	96
05:45		36	58	94
06:00		36	39	75
06:15		34	47	81
06:30		32	32	64
06:45		31	34	65
07:00		26	27	53
07:15		26	29	55
07:30		27	21	48
07:45		24	26	50
08:00		24	25	49
08:15		16	12	28
08:30		18	13	31
08:45		18	19	37
09:00		19	18	37
09:15		16	21	37
09:30		6	13	19
09:45		4	12	16
10:00		7	4	11
10:15		7	5	12
		8	5	13
10:30		9	4	13
10:45			6	12
11:00		6 4	3	7
11:15				6
11:30		4	2 2	2
11:45			1774	3272
Total		1498	54.2%	0212
Percent		45.8%	16:30	16:30
Peak		16:30		564
Vol.		239	325	0.839
P.H.F.		0.948	0.752	5.000

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Start	18-Sep-12		Ocuthbarr	Total
Time	Tue	Northbound		9
12:00 AM		7	2	
12:15		4	2	6 3 4
12:30		1	2	5
12:45		3	1	4
01:00		5	1	6 5 4 4
01:15		4	1	5
01:30		4	0	4
01:45		1	3	
02:00		2	2	4
02:15		1	3	4
02:30		4	3	7
02:45		5	5	10
03:00		4	3	7 15
03:15		8	7	15
03:30		2	3	5
03:45		2 6	5	11
04:00		9	10	19
04:15		9	9	18
04:30		11	6	17
04:45		16	10	26
05:00		19	6	25 35
05:15		25	10	35
05:30		22	10	32 55
05:45		26	29	55
06:00		36	26	62
06:15		54	30	84
06:30		59	34	93
06:45		68	37	105
07:00		92	56	148
07:15		100	46	146
07:30		74	46	120
07:45		62	50	112
08:00		60	45	105
08:15		62	38	100
08:30		56	25	81
08:45		34	41	75
09:00		49	48	97
09:15		47	46	93
09:30		54	52	106
09:45		45	40	85
10:00		50	45	95
10:15		40	44	84
10:30		44	49	93
10:45		45	42	87
11:00		44	54	98
11:15		42	36	78
11:30		42	41	83
11:45		48	61	109
Total		1505	1165	2670
Percent		56.4%	43.6%	07:00
Peak		06:45	07:00	526
Vol.		334	198	0.889
P.H.F.		0.835	0.884	0.009

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Start Time	18-Sep-12 Tue	Northbound	Southboun	Тс	otal
12:00 PM	Tue	43	55		98
12:15		37	53		90
12:30		38	42		80
12:45		46	45		91
01:00		52	50		102
01:15		42	46		88
01:30		54	46		100
01:45		45	65		110
01.45		51	65		116
		60	70		130
02:15		52	70		123
02:30		52	70		128
02:45					101
03:00		46	55		108
03:15		63	45		116
03:30		48	68		157
03:45		76	81		131
04:00		52	79		134
04:15		57	77		136
04:30		56	80		161
04:45		56	105		146
05:00		68	78		130
05:15		56	74		110
05:30		60	50		87
05:45		43	44		93
06:00		44	49		93
06:15		38	41		79
06:30		36	46		82 63
06:45		34	29		03
07:00		31	40		71
07:15		28	31		59
07:30		25	21		46
07:45		23	21		44
08:00		22	28		50
08:15		23	17		40
08:30		11	26		37
08:45		20	39		59
09:00		29	22		51
09:15		12	11		23
09:30		9	15		24
09:45		10	8		18
10:00		12	8		20
10:15		7	6		13
10:30		3	7		10
10:45		6	6		12
11:00		5	4		9
11:15		2	3		5
11:30		5	4		9
11:45		6	3		9
Total		1700	1999		3699
Percent		46.0%	54.0%		
Peak		15:45	16:00		16:15
Vol.		241	341		577
PHF					0.896
P.H.F.		0.793	0.812		0.89

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Start Time	19-Sep-12 Wed	Northbound	Southboun	Total
12:00 AM		1	4	5
12:15		3	2	5
12:30		2	1	5 3 9 5 6 1
12:45		4	4	8
01:00		7	2	9
01:15		5	0	5
01:30		3	3	6
01:45		0	1	1
02:00		2	3	5 3 9 3 6 8 13
02:15		2 2	1	3
02:30		6	3	9
02:45		1	2	3
03:00			3	6
03:15		3 2	6	8
03:30		7	6	13
03:45		6	8	14
04:00		12	7	19 18
04:15		8	10	18
04:30		11	8	19
04:45		14	18	19 32
04.45		27	13	40
05:15		27	12	39
05:30		29	13	42
		29	28	52
05:45		34	31	65
06:00 06:15		69	42	111
		72	36	108
06:30		54	60	114
06:45 07:00		82	63	145
		93	40	133
07:15		93 87	40	128
07:30			52	108
07:45		56	52	89
08:00		39	45	113
08:15		68		90
08:30		61	29	92
08:45		51	41	82
09:00		41	41	102
09:15		56	46	85
09:30		44	41	96
09:45		53	43	88
10:00		42	46	82
10:15		42	40	92
10:30		36	56	97
10:45		41	56	77
11:00		37	40	78
11:15		36	42	90
11:30		47	43	80
11:45		43	37	2709
Total		1490	1219	2109
Percent		55.0%	45.0%	06:45
Peak		07:00	06:45	520
Vol.		318	204	0.897
P.H.F.		0.855	0.810	0.897

Idaho Transportation Department

District 2 2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

Start 19 Time	-Sep-12 Wed Northbound	Southboun	Total
12:00 PM	48	50	98
12:15	46	45	9
12:30	37	55	92
12:45	50	44	94
01:00	75	63	13
01:15	55	64	11!
01:30	64	57	12
01:45	51	59	11
	45	55	90
02:00	45 52	64	110
02:15		61	10
02:30	46		12
02:45	38	85	10
03:00	49	51	12
03:15	53	69	
03:30	54	69	12
03:45	57	81	13
04:00	52	58	11
04:15	57	75	13
04:30	63	95	15
04:45	54	91	14
05:00	66	88	15
05:15	58	79	13
05:30	49	51	10
05:45	54	72	12
05.45	46	48	9
06:00	40		9
06:15	63	29	7
06:30	41	34	6
06:45	30	32	0
07:00	39	26	6
07:15	32	25	5
07:30	26	30	5
07:45	22	14	3
08:00	18	18	3
08:15	27	33	6
08:30	27	15	4
08:45	22	19	4
09:00	23	18	4
09:15	16	16	3
	6	17	2
09:30	7	6	1
09:45			1
10:00	7	7	2
10:15	11	9	1
10:30	10	6	1
10:45	10	6	
11:00	7	5	1
11:15	6	8	1
11:30	4	7	1
11:45	7	5	1
Total	1780	2010	379
Percent	47.0%	53.0%	
Peak	13:00	16:30	16:3
Vol.	245	353	59
	0.817	0.929	0.94
P.H.F.	0.017	0.020	0.01

Idaho Transportation Department District 2

2600 Frontage Road Lewiston, ID 83501 (208) 799-5090

Site Code: US 95 MP 340 Station ID:

Start Time	20-Sep-12 Thu	Northbound	Southboun		Total
2:00 AM		2	3		5
12:15		4	4		8
12:30		2	11		13
12:45		3	5		8
		2	6		8
01:00		6	2		8
01:15		6			4
01:30		1	3		
01:45		0	3		3
02:00		4	3		7
02:15		3	1		4
02:30		3	0		3
02:45		1	1		2
03:00		6	9		15
03:15		10	4		14
					17
03:30		9	8		11
03:45		8	3		
04:00		12	8		20
04:15		13	10		23
04:30		20	5		25
04:45		12	9		21
05:00		24	16		40
05:15		23	10		33
05.15			14		45
05:30		31			61
05:45		40	21		68
06:00		37	31		
06:15		55	29		84
06:30		61	42		103
06:45		85	51		136
07:00		87	55		142
07:15		89	29		118
07:30		82	48		130
		75	52		127
07:45					114
08:00		53	61		142
08:15		82	60		142
08:30		58	39		97
08:45		50	51		101
09:00		54	36		90
09:15		39	36		75
09:30		51	37		88
09:45		43	43		86
		37	34		71
10:00		37	34 *		*
10:15					*
10:30		*			*
10:45		*	*		
11:00		*	*		*
11:15		*	*		*
11:30		*	*		*
11:45		*	*		*
Total		1277	893		2170
		58.8%	41.2%		
Percent			07:20		06:45
Peak		06:45	07:30		526
Vol.		343	221		0.926
P.H.F.		0.963	0.906		0.926
Grand Total		92	50 9060		183
Percent		50.5	6% 49.5%		
			6,434	AADT 6,434	

Appendix C.3

Consumer Price Indices, Producer Price Indices, and Employment Price Indices

9-17-2013

U.S. Department Of Labor Bureau of Labor Statistics Washington, D.C. 20212

Consumer Price Index

All Urban Consumers - (CPI-U)

U.S. city average

All items

1982-84=100

Year	Jan.	Feb.	Mar.	Apr.	Мау	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual Avg.	Percent chang Dec- Avg- Dec Avg
1913 1914 1915	9.8 10.0 10.1	9.8 9.9 10.0	9.8 9.9 9.9	9.8 9.8 10.0	9.7 9.9 10.1	9.8 9.9 10.1	9.9 10.0 10.1	9.9 10.2 10.1	10.0 10.2 10.1	10.0 10.1 10.2	10.1 10.2 10.3	10.0 10.1 10.3	9.9 10.0 10.1	1.0 1.0 2.0 1.0
1916	10.4	10.4	10.5	10.6	10.7	10.8	10.8	10.9	11.1	11.3	11.5	11.6	10.9	12.6 7.9
1917	11.7	12.0	12.0	12.6	12.8	13.0	12.8	13.0	13.3	13.5	13.5	13.7	12.8	18.1 17.4
1918	14.0	14.1	14.0	14.2	14.5	14.7	15.1	15.4	15.7	16.0	16.3	16.5	15.1	20.4 18.0
1919	16.5	16.2	16.4	16.7	16.9	16.9	17.4	17.7	17.8	18.1	18.5	18.9	17.3	14.5 14.6
1920	19.3	19.5	19.7	20.3	20.6	20.9	20.8	20.3	20.0	19.9	19.8	19.4	20.0	2.6 15.6
1921	19.0	18.4	18.3	18.1	17.7	17.6	17.7	17.7	17.5	17.5	17.4	17.3	17.9	$\begin{array}{cccc} -10.8 & -10.5 \\ -2.3 & -6.1 \\ 2.4 & 1.8 \\ 0.0 & 0.0 \\ 3.5 & 2.3 \end{array}$
1922	16.9	16.9	16.7	16.7	16.7	16.7	16.8	16.6	16.6	16.7	16.8	16.9	16.8	
1923	16.8	16.8	16.8	16.9	16.9	17.0	17.2	17.1	17.2	17.3	17.3	17.3	17.1	
1924	17.3	17.2	17.1	17.0	17.0	17.0	17.1	17.0	17.1	17.2	17.2	17.3	17.1	
1925	17.3	17.2	17.3	17.2	17.3	17.5	17.7	17.7	17.7	17.7	18.0	17.9	17.5	
1926	17.9	17.9	17.8	17.9	17.8	17.7	17.5	17.4	17.5	17.6	17.7	17.7	17.7	$\begin{array}{cccc} -1.1 & 1.1 \\ -2.3 & -1.7 \\ -1.2 & -1.7 \\ 0.6 & 0.0 \\ -6.4 & -2.3 \end{array}$
1927	17.5	17.4	17.3	17.3	17.4	17.6	17.3	17.2	17.3	17.4	17.3	17.3	17.4	
1928	17.3	17.1	17.1	17.1	17.2	17.1	17.1	17.1	17.3	17.2	17.2	17.1	17.1	
1929	17.1	17.1	17.0	16.9	17.0	17.1	17.3	17.3	17.3	17.3	17.3	17.2	17.1	
1930	17.1	17.0	16.9	17.0	16.9	16.8	16.6	16.5	16.6	16.5	16.4	16.1	16.7	
1931	15.9	15.7	15.6	15.5	15.3	15.1	15.1	15.1	15.0	14.9	14.7	14.6	15.2	$\begin{array}{cccc} -9.3 & -9.0 \\ -10.3 & -9.9 \\ 0.8 & -5.1 \\ 1.5 & 3.1 \\ 3.0 & 2.2 \end{array}$
1932	14.3	14.1	14.0	13.9	13.7	13.6	13.6	13.5	13.4	13.3	13.2	13.1	13.7	
1933	12.9	12.7	12.6	12.6	12.6	12.7	13.1	13.2	13.2	13.2	13.2	13.2	13.0	
1934	13.2	13.3	13.3	13.3	13.3	13.4	13.4	13.4	13.6	13.5	13.5	13.4	13.4	
1935	13.6	13.7	13.7	13.8	13.8	13.7	13.7	13.7	13.7	13.7	13.8	13.8	13.7	
1936 1937 1938 1939 1940	13.8 14.1 14.2 14.0 13.9	13.8 14.1 14.1 13.9 14.0	13.7 14.2 14.1 13.9 14.0	13.7 14.3 14.2 13.8 14.0	13.7 14.4 14.1 13.8 14.0	13.8 14.4 14.1 13.8 14.1	13.9 14.5 14.1 13.8 14.0	14.0 14.5 14.1 13.8 14.0	14.0 14.6 14.1 14.1 14.0	14.0 14.6 14.0 14.0 14.0 14.0	14.0 14.5 14.0 14.0 14.0	14.0 14.4 14.0 14.0 14.1	13.9 14.4 14.1 13.9 14.0	$\begin{array}{rrrr} 1.4 & 1.5 \\ 2.9 & 3.6 \\ -2.8 & -2.1 \\ 0.0 & -1.4 \\ 0.7 & 0.7 \end{array}$
1941	14.1	14.1	14.2	14.3	14.4	14.7	14.7	14.9	15.1	15.3	15.4	15.5	14.7	$\begin{array}{cccc} 9.9 & 5.0 \\ 9.0 & 10.9 \\ 3.0 & 6.1 \\ 2.3 & 1.7 \\ 2.2 & 2.3 \end{array}$
1942	15.7	15.8	16.0	16.1	16.3	16.3	16.4	16.5	16.5	16.7	16.8	16.9	16.3	
1943	16.9	16.9	17.2	17.4	17.5	17.5	17.4	17.3	17.4	17.4	17.4	17.4	17.3	
1944	17.4	17.4	17.4	17.5	17.5	17.6	17.7	17.7	17.7	17.7	17.7	17.8	17.6	
1945	17.8	17.8	17.8	17.8	17.9	18.1	18.1	18.1	18.1	18.1	18.1	18.2	18.0	
1946	18.2	18.1	18.3	18.4	18.5	18.7	19.8	20.2	20.4	20.8	21.3	21.5	19.5	$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
1947	21.5	21.5	21.9	21.9	21.9	22.0	22.2	22.5	23.0	23.0	23.1	23.4	22.3	
1948	23.7	23.5	23.4	23.8	23.9	24.1	24.4	24.5	24.5	24.4	24.2	24.1	24.1	
1949	24.0	23.8	23.8	23.9	23.8	23.9	23.7	23.8	23.9	23.7	23.8	23.6	23.8	
1950	23.5	23.5	23.6	23.6	23.7	23.8	24.1	24.3	24.4	24.6	24.7	25.0	24.1	
1951	25.4	25.7	25.8	25.8	25.9	25.9	25.9	25.9	26.1	26.2	26.4	26.5	26.0	6.0 7.9
1952	26.5	26.3	26.3	26.4	26.4	26.5	26.7	26.7	26.7	26.7	26.7	26.7	26.5	0.8 1.9
1953	26.6	26.5	26.6	26.6	26.7	26.8	26.8	26.9	26.9	27.0	26.9	26.9	26.7	0.7 0.8
1954	26.9	26.9	26.9	26.8	26.9	26.9	26.9	26.9	26.8	26.8	26.8	26.7	26.9	-0.7 0.7
1955	26.7	26.7	26.7	26.7	26.7	26.7	26.8	26.8	26.9	26.9	26.9	26.8	26.8	0.4 -0.4
1956	26.8	26.8	26.8	26.9	27.0	27.2	27.4	27.3	27.4	27.5	27.5	27.6	27.2	$\begin{array}{cccc} 3.0 & 1.5 \\ 2.9 & 3.3 \\ 1.8 & 2.8 \\ 1.7 & 0.7 \\ 1.4 & 1.7 \end{array}$
1957	27.6	27.7	27.8	27.9	28.0	28.1	28.3	28.3	28.3	28.3	28.4	28.4	28.1	
1958	28.6	28.6	28.8	28.9	28.9	28.9	29.0	28.9	28.9	28.9	29.0	28.9	28.9	
1959	29.0	28.9	28.9	29.0	29.0	29.1	29.2	29.2	29.3	29.4	29.4	29.4	29.1	
1960	29.3	29.4	29.4	29.5	29.5	29.6	29.6	29.6	29.6	29.8	29.8	29.8	29.6	
1961	29.8	29.8	29.8	29.8	29.8	29.8	30.0	29.9	30.0	30.0	30.0	30.0	29.9	$\begin{array}{cccc} 0.7 & 1.0 \\ 1.3 & 1.0 \\ 1.6 & 1.3 \\ 1.0 & 1.3 \\ 1.9 & 1.6 \end{array}$
1962	30.0	30.1	30.1	30.2	30.2	30.2	30.3	30.3	30.4	30.4	30.4	30.4	30.2	
1963	30.4	30.4	30.5	30.5	30.5	30.6	30.7	30.7	30.7	30.8	30.8	30.9	30.6	
1964	30.9	30.9	30.9	30.9	30.9	31.0	31.1	31.0	31.1	31.1	31.2	31.2	31.0	
1965	31.2	31.2	31.3	31.4	31.4	31.6	31.6	31.6	31.6	31.7	31.7	31.8	31.5	
1966	31.8	32.0	32.1	32.3	32.3	32.4	32.5	32.7	32.7	32.9	32.9	32.9	32.4	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$
1967	32.9	32.9	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	33.4	
1968	34.1	34.2	34.3	34.4	34.5	34.7	34.9	35.0	35.1	35.3	35.4	35.5	34.8	
1969	35.6	35.8	36.1	36.3	36.4	36.6	36.8	37.0	37.1	37.3	37.5	37.7	36.7	
1970	37.8	38.0	38.2	38.5	38.6	38.8	39.0	39.0	39.2	39.4	39.6	39.8	38.8	
1971	39.8	39.9	40.0	40.1	40.3	40.6	40.7	40.8	40.8	40.9	40.9	41.1	40.5	3.3 4.4 3.4 3.2 8.7 6.2 12.3 11.0 6.9 9.1
1972	41.1	41.3	41.4	41.5	41.6	41.7	41.9	42.0	42.1	42.3	42.4	42.5	41.8	
1973	42.6	42.9	43.3	43.6	43.9	44.2	44.3	45.1	45.2	45.6	45.9	46.2	44.4	
1974	46.6	47.2	47.8	48.0	48.6	49.0	49.4	50.0	50.6	51.1	51.5	51.9	49.3	
1975	52.1	52.5	52.7	52.9	53.2	53.6	54.2	54.3	54.6	54.9	55.3	55.5	53.8	
1976	55.6	55.8	55.9	56.1	56.5	56.8	57.1	57.4	57.6	57.9	58.0	58.2	56.9	4.9 5.8
1977	58.5	59.1	59.5	60.0	60.3	60.7	61.0	61.2	61.4	61.6	61.9	62.1	60.6	6.7 6.5
1978	62.5	62.9	63.4	63.9	64.5	65.2	65.7	66.0	66.5	67.1	67.4	67.7	65.2	9.0 7.6
1979	68.3	69.1	69.8	70.6	71.5	72.3	73.1	73.8	74.6	75.2	75.9	76.7	72.6	13.3 11.3

1980	77.8	78.9	80.1	81.0	81.8	82.7	82.7	83.3	84.0	84.8	85.5	86.3	82.4	12.5	13.5
1981	87.0	87.9	88.5	89.1	89.8	90.6	91.6	92.3	93.2	93.4	93.7	94.0	90.9		10.3
1982	94.3	94.6	94.5	94.9	95.8	97.0	97.5	97.7	97.9	98.2	98.0	97.6	96.5	3.8	6.2
1983	97.8	97.9	97.9	98.6	99.2	99.5	99.9	100.2	100.7	101.0	101.2	101.3	99.6	3.8	3.2
1984	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3	103.9	3.9	4.3
1985	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3	107.6	3.8	3.6
1986	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5	109.6	1.1	1.9
1987	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4	113.6	4.4	3.6
1988	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5	118.3	4.4	4.1
1989	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1	124.0	4.6	4.8
1990	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8	130.7	6.1	5.4
1991	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6	137.2	137.4	137.8	137.9	136.2	3.1	4.2
1992	138.1	138.6	139.3	139.5	139.7	140.2	140.5	140.9	141.3	141.8	142.0	141.9	140.3	2.9	3.0
1993	142.6	143.1	143.6	144.0	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	144.5	2.7	3.0
1994	146.2	146.7	147.2	147.4	147.5	148.0	148.4	149.0	149.4	149.5	149.7	149.7	148.2	2.7	2.6
1995	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9	153.2	153.7	153.6	153.5	152.4	2.5	2.8
1996	154.4	154.9	155.7	156.3	156.6	156.7	157.0	157.3	157.8	158.3	158.6	158.6	156.9	3.3	3.0
1997	159.1	159.6	160.0	160.2	160.1	160.3	160.5	160,8	161.2	161.6	161.5	161.3	160.5	1.7	2.3
1998	161.6	161.9	162.2	162.5	162.8	163.0	163.2	163.4	163.6	164.0	164.0	163.9	163.0	1.6	1.6
1999	164.3	164.5	165.0	166.2	166.2	166.2	166.7	167.1	167.9	168.2	168.3	168.3	166.6	2.7	2.2
2000	168.8	169.8	171.2	171.3	171.5	172.4	172.8	172.8	173.7	174.0	174.1	174.0	172.2	3.4	3.4
2001	175.1	175.8	176.2	176.9	177.7	178.0	177.5	177.5	178.3	177.7	177.4	176.7	177.1	1.6	2.8
2002	177.1	177.8	178.8	179.8	179.8	179.9	180.1	180.7	181.0	181.3	181.3	180.9	179.9	2.4	1.6
2003	181.7	183.1	184.2	183.8	183.5	183.7	183.9	184.6	185.2	185.0	184.5	184.3	184.0	1.9	2.3
2004	185.2	186.2	187.4	188.0	189.1	189.7	189.4	189.5	189.9	190.9	191.0	190.3	188.9	3.3	2.7
2005	190.7	191.8	193.3	194.6	194.4	194.5	195.4	196.4	198.8	199.2	197.6	196.8	195.3	3.4	3.4
2006	198.3	198.7	199.8	201.5	202.5	202.9	203.5	203.9	202.9	201.8	201.5	201.8	201.6	2.5	3.2
2007	202.416	203.499	205.352	206.686	207.949	208.352	208.299	207.917	208.490	208,936	210.177	210.036	207.342	4.1	2.8
2008	211.080	211.693	213.528	214.823	216.632	218.815	219.964	219.086	218.783	216.573	212,425	210.228	215.303	0.1	3.8
2009	211.143	212.193	212.709	213.240	213,856	215.693	215.351	215.834	215.969	216.177	216.330	215.949	214.537	2.7	-0.4
2010	216.687	216.741	217.631	218.009	218.178	217.965	218.011	218.312	218.439	218.711	218.803	219.179	218.056	1.5	1.6
2011	220.223	221.309	223.467	224.906	225.964	225.722	225.922	226.545	226.889	226.421	226.230	225.672	224.939	3.0	3.2
2012	226.665	227.663	229.392	230.085	229.815	229.478	229.104	230.379	231.407	231.317	230,221	229.601	229.594	1.7	2.1
2013	230.280	232.166	232.773	232.531	232.945	233.504	233.596	233.877							

2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003		Years	Base	Item:	Area:	Not St	Series Id:
											Year		Base Period:			Not Seasonally Adjusted	šld:
																Adjuste	
286.417	290.762	264.979	233.727	154.488	259.338	192.806	198.2	155.6	136.1	125.7	Jan	2003 to 2013	1982-84=100	Gasoline (all types)	U.S. city average	ď.	CUUR0000SETB0
315.243	305.076	270.822	227.198	166.118	257.845	194.282	197.0	163.4	142.5	139.7	Feb)13	100	all types)	verage		OSETB01
319.523	329.780	302.574	237.356	167.826	276.497	219.473	204.7	175.0	149.8	147.4	Mar						
307.814	335.742	325.282	244.347	176.704	291.910	241.897	234.4	192.9	155.3	139.9	Apr						
310.352	323.604	336.999	246.080	193.727	319.787	264.830	249.8	187.3	169.8	130.6	May						
312.212	303.747	317.543	234.214	225.526	344.981	259.686	247.3	184.6	172.7	129.5	Jun						
310.886	295.498	312.760	234.091	217.945	347.357	251.883	254.6	196.5	164.5	130.0	Jul						
309.355	316.859	311.269	235.110	225.179	321.511	237.108	253.2	211.7	161.2	138.4	Aug						
	329.898	309.018	231.819	220.542	313.535	237.993	219.0	248.5	160.5	146.5	Sep						
	322.934	295.877	239.527	218.683	266.382	237.819		235.9		136.0	Oct						
	298.131	292.486	244.345	227.665	184.235	260.943	190.3	198.6	171.0	130.6	Nov						
	285.606	280.713	255.319	224.260	146.102	256.790	198.1	186.2	160.4	127.2	Dec						
	311.470	301.694	238.594	201.555	277.457	237.959	219.9	194.7	159.7	135.1	Annual						
308.594	314.785	303.033				228.829	221.9	176.5	154.4	135.5	HALF1						
	308.154	300.354	240.035	222.379	263.187	247.089	218.0	212.9	165.0	134.8	HALF2						

2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003		Years:	Base Period:	Item:	Area:	Not Se	Series Id:
											Year		Period:			Not Seasonally Adjusted	ld:
282.202	279.509	243.656	209.270	175.245	247.519	195.110	190.0	148.4	118.6	116.7	Jan	2003 to 2013	DECEMB	Other motor fuels	U.S. city average	usted	CUUR00
295.581	285.431	255.144	205.752	168.740	250.390	195.863	190.6	156.0	124.8	126.2	Feb	013	DECEMBER 1997=100	tor fuels	iverage		CUUR0000SETB02
295.602	299.338	281.801	210.988	156.438	283.174		194.3	170.9	127.7	138.7	Mar		100				
286.555	300.666	295.895	220.024	163.928	299.239	212.646	206.1	178.5	136.2	131.9	Apr						
281.192	292.307	297.680	224.497	165.115	322.484	213.502	219.5	172.4	146.2	122.4	May						
279.029	275.104	288.317	215.674	184.984	346.227	212.957	217.9	173.4	140.6	119.0	Jun						
278.645	269.923	284.830	213.310	186.698	347.027	215.040	217.2	181.1	139.4	119.6	Jul						
281.009	285.486	282.793	214.813	192.872	323.451	214.288	224.8	195.0	143.4	122.1	Aug						
	298.597			193.553			212.3	214.7	147.1	119.7	Sep						
	297.848		222.900		272.717		193.4	226.8	160.8	115.4	Oct						
	290.447			204.371				201.2	161.8	116.2	Nov						
	284.725	280.326	234.947	203.092			200.1	186.4	152.6	115.8	Dec						
	288.282	279.608	217.895	182.549	283.092	217.145	205.0	183.7	141.6	122.0	Annual HALF1 HALF2						
											HALF1						
										:	HALF2						

2011 2012 2013	2009	2008	2007	2006	2005	2004	2003		Years:	Base F	Item:	Area:	Not Se	Series Id:
								Year		Base Period:			Not Seasonally Adjusted	Īd
	N) (1		N						20	10	Z	U	Adjusted	0
	300.173 293.027			197.3	172.6	161.1	154.4	Jan	2003 to 2013	1982-84=100	otor oil, c	U.S. city average		UUR000
310.128 353.098 362.728	301.126 297.676	247.513	228.067	201.3	174.4	161.0	154.8	Feb	13	8	Motor oil, coolant, and fluids	verage		CUUR0000SS4702
312.123 359.590 359.250	295.967	255.024	227.535	203.2	176.9	161.9	155.7	Mar			nd fluids			-
320.313 361.203 364.244	302.688	254.904	229.302			163.3	156.0	Apr						
328.105 361.495 361.383	295.582	256.548		211.4	179.4	163.0	155.3	May						
330.973 362.507 358.579	291.012 307.184		226.598	211.4	179.6	164.8	156.6	Jun						
342.125 360.690 356.817	291.074 307.786	268.075	231.636	213.3	182.0	165.4	156.9	Jul						
349.534 356.493 359.943	289.936 306.414	275.952	230.655	216.6	186.8	166.1	157.2	Aug						
353.597 364.439	290.958	276.947	232.787	221.4	186.1	167.4	158.1	Sep						
	291.506 312.831						159.6	Oct						
	291.339 312.242							Nov						
354.170 364.251	292.337	298.121	240.510	224.4	195.1	170.3	160.2	Dec						
	294.293 305.384				182.8		157.1	Annual						
								Annual HALF1 HALF2						
								HALF2						

Original Data Value Consumer Price Index - All Urban Consumers

2003 2004 2005 2006 2007 2008 2010 2011 2011 2011 2012	Series Id: Not Seasona Area: Item: Base Period: Years: Years:
	Series Id: C Not Seasonally Adjusted Area: N Item: N Base Period: 1 Years: 2
193.7 193.7 204.0 211.2 219.262 227.732 241.076 245.567 250.726 255.405 259.752	CUUR0000SE Jjusted U.S. city aven Motor vehicle 1982-84=100 2003 to 2013
NNNNNN	CUUR0000SETD d U.S. city average Motor vehicle main 1982-84=100 2003 to 2013
<u> </u>	CUUR0000SETD d U.S. city average U.S. city average Motor vehicle maintenance and repair 1982-84=100 2003 to 2013
205.0 194.6 205.0 213.9 221.508 221.508 2247.355 247.355 251.458 256.544 260.341	nd repair
194.9 199.0 205.6 214.9 221.999 221.999 221.730 242.488 247.311 252.376 257.372 261.065	M 24
60 50 50 50 50 50 50 50 50 50 50 50 50 50	5
20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<u>-</u>
990 97 97 97	A Lia
244 24 24	N P D
196.9 201.7 209.8 218.5 224.939 238.227 245.393 249.824 255.774 258.578	Oct
43 43	Z
444 45 44 45 45 45 45	Dec
195.6 200.2 206.9 215.6 222.963 223.859 243.337 247.954 253.099 257.582	Annual HALF1 HALF2
	HALF1
	HALF2

120.203 121.199 121.687 121.848 121.435 121.408 120.638 120.108 119.865 120.181 120.833 121.348	112.738 113.859 114.836 114.496 115.395 116.371 117.775 118.533 119.195 119.378 119.590 119.796	104.0 103.5 103.5 103.8 104.4 104.6 105.0 105.3 105.8 106.2 106.9 107.1 107.1 108.1 107.9 108.9 109.0 109.4 109.4 110.0 110.0 110.716 110.747 111.102 111.179 111.417 111.268 112.841 113.088 113.060	101.1 101.6 100.6 100.5 101.0 102.0 102.4 102.8 103.2 103.2	Year Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec	Years: 2003 to 2013	Base Period: 1982-84=100	Item: Tires	Area: U.S. city average	Not Seasonally Adjusted	Series Id: CUUR0000SETC01
さいじ たじき	116.830 120.896 123.521	104.5 108.4 111.649	101.8	Annual HALF1 HALF2						

2013

133.582 133.143 133.288 132.290 131.648 131.032 130.539 129.876

Employment Cost Index Original Data Value

2013 118.4	2012 116.2	114.0	111.8	109.9	107.6	104.2	100.7	2005 98.0	2004 94.6	2003 91.2	Year Qtr1 Qtr2	Years: 2003 to 2013	Industryocc: All workers	periodicity: Index number	Sector: All Civilian	compensation: Total compensatior	Not Seasonally Adjusted	Series Id: CIU101000000000	
119.0	116.8 117.4	114.8 115.2	112.3 112.9	110.2 110.8	108.3 109.2	105.0 106.1	101.6 102.7	98.6 99.4	95.5 96.5	92.0 93.0	Qtr3					ă		100	
	117.7	115.5	113.2	111.0	109.5	106.7	103.3	100.0	97.0	93.5	Qtr4 Annual								

Generated on: September 27, 2013 (01:32:50 PM)

Original Data Value Producer Price Index-Commodities

Not Seasonally Adjusted

Series Id:

WPU141101

Jp: Transportation equipment : Passenger cars • Date: 198200 S: 2003 to 2013 Year Jan Feb Mar Apr May Jun Jul Apr 130.0 129.7 132.8 129.4 129.1 127.4 126.8	130.0 129.7 132.8 129.4 129.1 127.4 126.8	131.7 131.8 131.8 131.5 132.4 132.4 128.6	i 135.3 133.8 133.1 133.6 133.3 130.6 130.8	130.7 130.2 130.0 129.2 128.7 127.9 123.0	7 129.0 126.8 126.9 125.2 125.2 125.4 124.4	128.6 128.3 127.5 128.1 126.8 127.2 127.3		132.3 131.1 130.4 130.4 129.7 131.0 128.9	132.3 131.1 130.4 130.4 129.7 131.6 128.9 131.5 131.1 129.2 129.0 128.8 128.2 127.6	132.3 131.1 130.4 130.4 129.7 131.6 128.9 131.5 131.1 129.2 129.0 128.8 128.2 127.6 129.1 129.3 128.9 129.6 129.5 129.9 129.5	130.4 130.4 129.7 131.6 128.9 129.2 129.0 128.8 128.2 127.6 128.9 129.6 129.5 129.9 129.5 130.8 131.0 130.7 130.8 131.5
	iviar Apr way	1.7 132.8 129.4 129.1	.8 131.8 131.5 132.4 .8 131.8 131.5 132.4	War Apr way way <thway< th=""> <thway< th=""> <thway< th=""></thway<></thway<></thway<>	War Apr way way <thway< th=""> <thway< th=""> <thway< th=""></thway<></thway<></thway<>	War Apr way way <thway< th=""> <thway< th=""> <thway< th=""></thway<></thway<></thway<>	War Apr way way <thway< th=""> way <thway< th=""></thway<></thway<>	War Apr way way <thway< th=""> way <thway< th=""></thway<></thway<>	War Apr way way <thway< th=""> way <thway< th=""></thway<></thway<>	War Apr way way <thway< th=""> way <thway< th=""></thway<></thway<>	Mar Apr May 1.7 132.8 129.4 129.1 .8 131.8 131.5 132.4 1.8 133.1 133.6 133.3 1.2 130.0 129.2 128.7 1.8 127.5 128.1 125.2 1.3 127.5 128.1 126.8 .1 130.4 130.4 129.7 .1 130.4 130.4 129.7 .1 129.2 129.0 128.8 .1 129.2 129.0 128.8 .3 128.9 129.6 129.5 .3 128.9 129.6 129.5 .0 130.8 131.0 130.7
		Jul A 7.4 126.8	Jul <i>A</i> 7.4 126.8 2.4 128.6	Jul / 7.4 126.8 2.4 128.6 0.6 130.8	Jul 7.4 126.8 2.4 128.6 1.6 130.8 7.9 123.0	Jul 7.4 126.8 2.4 128.6 1.9 123.0 5.4 124.4	Jul 7.4 126.8 1.4 128.6 1.9 123.0 7.9 123.0 5.4 124.4 7.2 127.3	Jul 7.4 126.8 2.4 128.6 0.6 130.8 7.9 123.0 5.4 124.4 1.6 128.9	Jul 7.4 126.8 2.4 128.6 0.6 130.8 7.9 123.0 5.4 124.4 1.6 127.3 1.6 128.9 8.2 127.6	Jul 7.4 126.8 0.6 130.8 7.9 123.0 1.6 124.4 1.6 127.3 1.6 128.9 1.6 128.9 1.6 128.9 1.6 128.9	Jul 7.4 126.8 2.4 128.6 1.9 123.0 5.4 124.4 1.6 128.9 1.6 128.9 1.6 128.9 1.8 127.3 1.6 128.9 1.9 129.5 0.8 131.5
Sep	107 0	7.071	123.2	123.2 128.6 129.4	123.2 128.6 125.5	123.4 128.6 125.5 121.9	123.2 128.6 125.5 121.9 127.7	123.2 129.4 121.9 127.7 127.7	129.2 129.2 127.7 129.2	129.4 129.4 129.4 125.5 127.7 127.5 127.5	120.6 123.2 128.6 128.6 129.0 129.4 123.6 125.5 124.5 121.9 128.8 127.7 129.3 129.2 129.3 129.2 127.8 127.5 127.8 127.5 129.3 128.3 131.4 130.3
											135.2 134.4 132.5 130.5 128.6 129.9 129.1 129.0 133.1 131.4 134.2 132.0 129.8 129.2 132.0 132.0 132.1 131.4 132.0 132.2 132.1 131.8
≥	.7										134.0 131.7 129.5 131.8 129.1 128.0 127.2 126.2 131.9 128.9 131.2 130.9 131.4 129.0 131.4 129.2 131.4 129.2 131.4 129.2 131.4 129.2

Original Data Value Producer Price Index-Commodities

Series Id: W Not Seasonally Adjusted

WPU141105

2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	Y	Group: Item: Base Date: Years:
											Year	
163.7	159.9	154.0	156.2	151.0	148.0	146.6	146.8	154.9	153.3	151.0	Jan	Transportation equipment Trucks, 14,000 lbs. and under 198200 2003 to 2013
163.5	159.0	153.9	155.8	151.7	147.9	147.7	147.3	151.1	152.0	151.6	Feb	tion equip ,000 lbs. a 13
162.4	158.7	153.4	154.9	150.6	145.9	146.4	146.8	150.6	152.6	155.0	Mar	ment ind under
162.1	159.0	154.3	153.9	152.0	147.1	145.1	145.3	149.5	150.4	147.5	Apr	
161.7	157.6	153.0	154.2	151.5	146.5	144.3	145.2	148.2	150.1	147.1	May	
161.0	158.1	153.1	151.1	153.2	141.2	143.6	143.1	144.2	150.0	145.0	Jun	
160.1	159.2	152.9	150.3	149.5	138.3	143.1	133.2	144.4	146.7	145.0	Jul	
159.7	159.1	152.7	150.5	152.0	138.5	141.2	136.9	144.0	145.7	146.0	Aug	
	157.6	151.9	150.0	147.5	138.7	140.0	136.7	143.9	143.9	143.7	Sep	
	164.1	158.7	154.9	152.3	154.5	148.5	139.9	153.7	159.6	158.9	Oct	
	164.7	158.6	154.0	156.4	152.9	149.9	150.4	149.4	156.0	157.1	Nov	
	163.7	158.5	153.6	154.1	152.7	147.5	148.6	146.4	155.5	153.9	Dec /	
	160.1	154.6	153.3	151.8	146.0	145.3	143.3	148.4	151.3	150.2	Annual	

Original Data Value Producer Price Index-Commodities

Group:

Transportation equipment

Series Id:

WPU141106

Not Seasonally Adjusted

Item: Base Date: Years:	Trucks, over 14,000 lbs. GVW 198200 2003 to 2013	er 14,000)13	Ibs. GVW			5	E		0 0 0	D t	Nov		
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	_	Dec
2003	155.4	155.4	154.5	155.3	154.0	155.1	153.8	154.2	154.2	154.5	152.1		152.2
2004	154.1	154.3	154.4	154.7	154.7	155.3	155.2	156.1	157.1	157.8	157.1		157.4
2005	158.7	159.3	159.3	161.0	161.4	161.3	162.9	164.5	164.0	165.7	165.7		165.7
2006	165.7	166.1	166.4	168.8	168.8	168.8	168.8	169.3	169.0	170.6	173.5		173.5
2007	173.6	173.6	173.6	178.4	178.4	178.4	178.2	178.3	178.3	178.3	178.5		178.5
2008	180.6	180.6	180.7	181.1	181.1	181.8	181.9	181.9	182.3	184.7	184.8		184.8
2009	188.5	188.6	188.7	188.7	189.7	189.9	189.9	191.4	191.4	192.1	191.4		192.8
2010	192.8	192.9	192.9	192.9	192.9	197.8	197.9	197.4	197.7	197.7	197.9		198.1
2011	198.9	198.5	198.5	198.5	199.0	199.1	200.2	200.2	200.3	202.2	202.6		202.5
2012	203.9	204.4	204.5	205.2	205.5	205.9	206.3	206.3	206.3	206.2	207.2		207.7
2013	208.6	208.1	207.8	207.2	207.9	208.7	209.1	209.2					

Producer Price Index-Commodities Original Data Value

Series Id: W Not Seasonally Adjusted

WPU141406

2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003		Years:	Base Date:	Item:	Group:	
											Year		ate:			
188.5	188.2	181.3	174.7	172.7	166.3	162.6	154.9	149.0	137.3	133.0	Jan	2003 to 2(198612	Truck trail	Transport	
188.6	189.6	181.8	174.7	171.8	166.5	162.2	156.1	149.3	137.5	133.0	Feb	013		ers	Transportation equipmen	
188.7	190.3	183.0	175.4	171.9	167.5	162.8	156.1	150.4	140.1	133.0	Mar				oment	
188.9	191.2	183.2	175.9	171.5	168.2	162.9	157.7	151.7	141.9	135.4	Apr					
189.4	191.4	184.3	176.1	171.5	170.3	162.8	158.3	151.8	143.4	135.4	May					
189.4	191.2	186.0	176.0	172.4	172.3	164.5	159.5	151.8	143.9	135.4	Jun					
189.5	190.7	184.5	175.8	171.7	173.6	165.1	160.4	152.6	144.7	135.4	Jul					
189.4	189.1	184.5	175.8	172.7	174.2	165.4	161.5	153.6	144.6	135.4	Aug					
	189.1	185.5	176.0	172.6	175.2	165.5	161.7	153.9	145.4	135.4	Sep					
	189.1	185.9	177.0	172.6	176.3	165.7	162.2	154.1	146.4	135.4	Oct					
	188.7	185.6	176.5	172.5	174.9	165.7	162.5	154.4	148.7	135.4	Nov					
	188.7	185.5	177.2	172.7	173.8	165.7	162.1	154.9	148.5	135.4						
	189.8	184.2	175.9	172.2	171.6	164.2	159.4	152.3	143.5	134.8	Annual					

Producer Price Index-Commodities Original Data Value

2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003		Years	Base	Item:	Group	Not S	Series Id:
											Year		Base Date:		ë	Not Seasonally Adjusted	s ld:
																Adjuste	
1/1./	169.0	164.7	163.7	162.8	157.5	155.0	152.1	151.9	147.8	145.3	Jan	2003 to 2013	198200	Transportation equipmen	Transportation equipment	ğ	WPU14
171.8	168.8	164.9	163.6	162.7	157.5	155.0	152.4	151.0	147.7	145.5	Feb	13 13		tion equip	tion equip		
171.6	168.9	165.0	163.1	162.2	156.8	154.6	152.7	151.0	148.0	146.9	Mar			ment	ment		
171.5	169.1	165.5	163.4	162.3	157.6	154.3	152.8	151.0	147.7	144.9	Apr						
171.2	168.9	165.3	163.4	161.8	157.5	154.2	152.8	151.0	148.0	144.8	May						
171.3	169.1	165.6	162.9	162.3	156.7	154.4	152.5	149.7	148.4	144.3	Jun						
170.8	169.8	165.8	162.5	160.9	156.7	154.4	149.9	150.1	147.2	144.3	Jul						
170.8	169.9	166.1	162.9	161.6	157.6	154.2	150.9	150.0	147.4	144.6	Aug						
	169.5	165.7	162.8	160.7	157.8	153.7	151.4	150.2	147.3	144.1	Sep						
	171.5	168.3	164.4	162.9	162.8	156.9	153.0	152.9	151.8	148.7	Oct						
	171.8	168.4	164.2	163.5	162.4	157.3	155.5	151.8	151.1	147.9	Nov						
	171.5	168.3	164.0	163.0	162.8	156.6	155.1	151.2	151.3	147.4	Dec						
	169.8	166.1	163.4	162.2	158.6	155.0	152.6	151.0	148.6	145.7	Annual						