

**Alabama Department of Transportation**  
**Highway Safety Improvement Program (HSIP) Project Application Form** (10/2/2015)  
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FOR ALDOT USE ONLY

Logged in: \_\_\_\_\_  
 Project Mgr. \_\_\_\_\_  
 HSIP Ref. #: \_\_\_\_\_

1. Project Type:	Intersection	Yes	Road Segment	No	2. Sponsoring Agency:	Baldwin County			Review Date:	_____	(for ALDOT use only)		
3. Project to be Administered By:	Joey Nunnally			4. Contact Person:	Joey Nunnally	5. Phone Number:	251-295-8337		6. E-Mail Address:	<a href="mailto:jnunnally@baldwincountyal.gov">jnunnally@baldwincountyal.gov</a>			
7. Street Address:	Baldwin County Hwy Department Post Office Box 220 Silverhill, AL 36576			8. Fax: (optional)	251-937-0201	9. ALDOT Region:	Southwest		10. MPO/RPO Area:	Eastern Shore MPO			
11. City, State, Zip :	Baldwin County Alabama			12. Priority # (if submitting 2 or more forms):		1	13. Application submitted before?			No			
Note to Applicants: Each project must have a separate application form. Up to three (3) safety improvement actions may be included per application.	14. County	15. Route (including local name)		16. On State Hwy System?	17. Traffic Control	18. From (Cross Street, Milepost, Etc.):			19. To (Cross Street, Milepost, Etc.):				
	Baldwin	Old Hwy 31		No	One Way Stop	Pinyon Dr.			US-31/AL-3				
20. Functional Class Name (Federal):	J - Urban Local			21. Omitted		Omitted	22. Omitted		Omitted				
23. Risk Narrative - describe the safety problem(s) and the proposed project to address it.	Old Hwy 31 connects to US-31 at a 155 degree skewed angle. Drivers turning right from US-31 have to slow down considerably to turn and are frequently rear ended. Drivers turning left from Old Hwy 31 do not have adequate sight radius to see oncoming traffic due to the skew which results in severe injury angle crashes. This project, if approved, would re-align the intersection so that Old Hwy 31 is perpendicular to US-31 from the entrance of Pinyon Dr. The old roadbed would be removed.												
Crash Data (Items 24 - 34) - collision diagram is required for each application form	Crash Type \ Severity	24.	25.	26.	27.	28.	29.	30.	31.	32. Total Related Crashes	33. Total Unrelated Crashes	34. Total Crashes	
		Angle	Rear End	Backed Into									
	Fatal	K								0	0	0	
	Personal Injury (PI)	A	1								1	0	1
		B	1								1	0	1
		C									0	0	0
PDO	PDO	1	4	1						6	0	6	
Total		3	4	1						8		8	
Traffic Data (Intersection Project)	36. Total ADT Entering Intersection	37. NB Entering ADT	38. SB Entering ADT	39. EB Entering ADT	40. WB Entering ADT	41. Other Leg Enter ADT	42. # of Approaches	43. ALDOT Node No.	44. Traffic Annual Growth Rate	35. Number of Years of Crash Data Used:		4	
		0	0	0	0	0	3	8854	2.5%				
		Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Total/Average	Worksheet Color Legend:					

Traffic Data (Road Segment Project)	45. Seg. Length (mi)	0.250	0.250				0.500	Blue	Information to be input by Applicant
	46. Speed Limit	45	35				40.00	Green	Data Automatically Generated
	47. Average AADT	16350	778 WB				16350.00	Yellow	Drop-Down List (Choose Item)
	48. No. of Lanes	3	2				2.50	Orange	For ALDOT's Use
	49. Lane Width	40	20				30.00	Gray or White	No Information Required

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50. No. of Countermeasures or Improvement Actions	1	51. Discount Rate (X.X%)	3.0%
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Items 52 - 58: Potential Reduction of Crashes (by type) and Total

Proposed Countermeasures or Improvement Actions	Action No.	52. Proposed Countermeasure or Improvement Action	53. Service Life (in yrs)	54. Crash Reduction Factors (CRF)			55. K Crashes Reduced	56. A Crashes Reduced	57. B Crashes Reduced	58. C Crashes Reduced	59. PDO Crashes Reduced	60. Total Potentially Reduced Crashes	61. Annual Reduced Crashes by Countermeasure
				K	A, B, & C	PDO							
	1	Realignment Improvement - Redesign Intersection	25	0.25	0.25	0.25	0.00	0.25	0.25	0.00	1.50	2.00	0.50
	2	No Improvement	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3	No Improvement	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			25	0.25	0.25	0.25	0.00	0.25	0.25	0.00	1.50	2.00	0.50
			Max Service Life	Combined CRF			Potentially Reduced Crashes						

Project Schedule (After STIP Approval)	62. Begin PE Date (MM/YYYY)	11/2019	63. Target Ad Date (MM/YYYY)	09/2020	64. Begin Construction Date (MM/YYYY)	01/2021	65. Estimated Project Complete Date (MM/YYYY)	05/2021
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Estimated Project Costs

Improvements	66. Design & Engineering Cost	67. R/W & Utility Cost	68. Construction and CE&I Cost	69. Maint. cost for service life of project	70. Total Project Cost	71. Annual Project Cost
Action No. 1	\$ 31,636.54	\$ 85,000.00	\$ 246,783.25	\$ -	\$ 363,420	\$ 20,870
Action No. 2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Action No. 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL</b>	<b>\$ 31,637</b>	<b>\$ 85,000</b>	<b>\$ 246,783</b>	<b>\$ -</b>	<b>\$ 363,420</b>	<b>\$ 20,870</b>

Estimated Project Benefits

Type of Crash	72. Annual Reduced Crashes by Type	73.* Cost per Crash (2015 \$)	74. Annual Benefit
K	0.00	\$ 1,571,053	\$ -
A	0.06	\$ 1,571,053	\$ 98,191
B	0.06	\$ 128,959	\$ 8,060
C	0.00	\$ 128,959	\$ -
PDO	0.38	\$ 9,624	\$ 3,609
75. Total Annual Reduction in Crashes	0.50	76. Total Annualized Benefit	\$ 109,860

Calculation of Benefit/Cost (B/C) Ratio	Benefit	76. Total Annualized Benefit	\$109,860	77. Traffic Growth Factor	1.40	78. Total Annual Benefit	\$153,855
	Cost	79. Annual Project Cost					
		\$	20,870				
80. Benefit/Cost Ratio:		7.37					

\* Cost data from the North Carolina Department of Transportation (NCDOT) adjusted by the Consumer Price Index (CPI)

Signature of Sponsor with Authority to Expend 10% Non-Federal Matching Funds

Name (Print): \_\_\_\_\_ Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Alabama Department of Transportation**  
**Highway Safety Improvement Program (HSIP) Project Application - Questions Form** (10/2/2015)  
**Add additional sheets as necessary**



**1. Please describe in detail the specific location of the proposed HSIP project. Please identify whether project relates to an INTERSECTION or a ROAD SEGMENT. Please attach at least ONE sketch or map of the project area and at least ONE labeled photo describing the project area.**

This project is located at the INTERSECTION of US-31/AL-3 and CR "Old Hwy 31" and will improve the intersection by realigning Old Hwy 31 perpendicularly to US-31.

**2. Please describe in detail the identified safety problems at this location and the need for the proposed improvement(s).**

Old Hwy 31 is connected to US-31 at a skewed angle of 155 degrees. This does not allow for adequate sight distance considering the ability of all users to turn their heads and especially the limitations of older user's age demographics or users with current injury limitations. Users turning left are at high risk of a severe angle crash if they do not adequately see and judge approaching vehicles and their speeds. Also, users traveling EB on US-31 have to slow down considerable to turn right onto Old Hwy 31 and cause frequent rear end collisions to occur. There has been significant development on Old Hwy 31 including a large new subdivision in close proximity to the intersection. The number of user complaints has increased dramatically in recent times due to the danger of the intersection.

**3. Please describe the proposed improvement action(s) or countermeasure(s) and document proposed improvements that do NOT have known crash reduction factors (CRFs), but are expected to reduce the risk of crashes.**

**4. Please describe the other alternative solutions that were considered, implemented, or eliminated at this location.**

Alternative 1: No Build was considered but discarded due to the dangerous conditions created and the relatively cheap solution available. Alternative 2: Modify the intersection geometry at its existing alignment and location (minor pavement and striping improvements) was considered but discarded as it did not achieve substantial improvements to sight distance or perceived danger.

**5. Please describe how the project cost was calculated and how you can ensure the project can be completed within the proposed budget and schedule.**

The project cost was calculated by using line items and current market prices established off of ALDOT's bid tabs and preliminary cost estimate chart. Conservative quantities were used and a 30% contingency was added. ROW costs were provided by ALDOT's ROW section and UT costs were provided by ALDOT's Utility Coordinator as estimates. The schedule was created taking into account current fiscal year funding restraints and ease of construction due to the small scope and low engineering impacts of the project. There are no expected items that would impact either the budget or the schedule.



## Summary of Crashes at Proposed Improvement Location (Related, Unrelated, and Total Crashes)

10/2/2015)

RELATED CRASHES										
	AL Crash Report Number (DPS Case No.)	Date	Crash Severity (Check the most severe one)					DUI? (Y or N)	Crash Type	Comments
			Fatal (K)	Injury (A)	Injury (B)	Injury (C)	PDO			
1	1503070	3/24/2015					1		Backed Into	
2	1503077	3/25/2015					1		Rear End	
3	1605072	5/25/2016					1		Angle	
4	1803071	3/19/2018					1		Rear End	
5	1807099	7/29/2018					1		Rear End	
6	1809006	09/07/218		1					Angle	
7	1809071	9/20/2018					1		Rear End	
8	1904030	4/8/2019			1				Angle	
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
UNRELATED CRASHES										
	AL Crash Report Number (DPS Case No.)	Date	Crash Severity (Check the most severe one)					DUI? (Y or N)	Crash Type	Comments
			Fatal (K)	Injury (A)	Injury (B)	Injury (C)	PDO			
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
<b>TOTAL CRASH SUMMARY</b>										
			Fatal	Injury A	Injury B	Injury C	PDO	Total	Legend:	

Total RELATED Crashes:	0	1	1	0	6	8
Total UNRELATED Crashes:	0	0	0	0	0	0
Total Crashes:	0	1	1	0	6	8

<b>Legend:</b>
PDO - Property Damage Only
DUI - Driving Under the Influence

Definitions: "Related Crashes" are those that can be addressed by the proposed safety countermeasures or improvement actions.  
 "Unrelated Crashes" refer to crashes occurring at the proposed project location that cannot be addressed by the proposed countermeasure.  
 "Total Crashes" is the sum of related and unrelated crashes at a specific location.  
**Collision diagrams or maps should include all pertinent data related to the related crashes.**

<b>Worksheet Color Legend:</b>
Blue - Information to be input by Applicant
Green - Data Automatically Generated
Yellow - Drop-Down List (Choose One)

**TABLE OF HSIP IMPROVEMENT/COUNTERMEASURE TYPES**

 IMPROVEMENT OR COUNTERMEASURE TYPE	Service Life	Crash Reduction Factor (CRF)			Target Crashes												
		Fatal	Injury	PDO	All	Head On	Rear End	Right Angle	Side Swipe	Left Turn	Right Turn	Fixed Object	Pedestrian	Run Off Road	Overturn	Wet Pavement	Night
<b>Traffic Sign Improvement</b>																	
Warning sign																	
<i>Curve warning</i>	10	0.30	0.30	0.30		X									X	X	X
<i>School zone</i>	10	0.15	0.15	0.15	X												
Regulatory Signs	10																
<i>Stop sign (Two-way)</i>	10	0.30	0.30	0.30				X		X	X		X				
<i>Yield</i>	10	0.25	0.25	0.25				X	X								
<i>All-way stop</i>	10	0.50	0.50	0.50				X		X	X		X				
Guide sign	10	0.10	0.10	0.10	X												
Variable message sign	10	0.25	0.25	0.25	X												
Upgrade signs (Increase size, conspicuity)	10	0.10	0.10	0.10													
Flashing light on sign (Linked to signal)	10	0.25	0.25	0.25			X	X						X			
Flashing light on sign (Flashing all time)	10	0.10	0.10	0.10			X	X									
Intersection-related warning	10	0.25	0.25	0.25			X	X									
Pavement condition	10	0.05	0.05	0.05													X
Eliminate parking at intersection	10	0.35	0.35	0.35				X	X			X	X				
Prohibit turns	10									X	X		X				
<b>Traffic Signal Improvement</b>																	
Install a traffic signal	20								X								
<i>3 legs</i>		0.34	0.34	0.34													
<i>4 legs</i>		0.67	0.67	0.67				X									
Remove traffic signal and install 4-way stop	20	0.24	0.24	0.24	X												
Signal upgrading (hardware)	20	0.20	0.20	0.20	X												
Signal phasing																	
<i>Add all-red interval/increase yellow time</i>	50	0.30	0.30	0.30				X									
<i>Interconnect and optimize signals</i>	5	0.25	0.25	0.25	X												
<i>Add pedestrian phase</i>	20	0.50	0.50	0.50									X				
<i>Optimize signal timing</i>	5	0.10	0.10	0.10	X												
<i>Add exclusive left-turn phase</i>	20	0.25	0.25	0.25						X							
<i>Add protected/permissive left turn phase</i>	25	0.10	0.10	0.10						X							





 IMPROVEMENT OR COUNTERMEASURE TYPE	Service Life	Crash Reduction Factor (CRF)			Target Crashes												
		Fatal	Injury	PDO	All	Head On	Rear End	Right Angle	Side Swipe	Left Turn	Right Turn	Fixed Object	Pedestrian	Run Off Road	Overturn	Wet Pavement	Night
Prohibit right turn on red at signalized intersection	10	0.25	0.25	0.25				X		X	X		X				
<b>Drainage</b>																	
Provide adequate drainage	10	0.50	0.50	0.50													X

Source: Virginia Department of Transportation

"O" under sideswipe crash type indicate opposite sideswipe crashes only.

Selection of proposed countermeasure selection should be based on sound engineering judgement and should confirm to applicable ALDOT and FHWA policies.

More information on safety countermeasures can be found at :

<http://safety.fhwa.dot.gov/provencountermeasures>

More information on Crash Modification Factors (CMFs) can be found at:

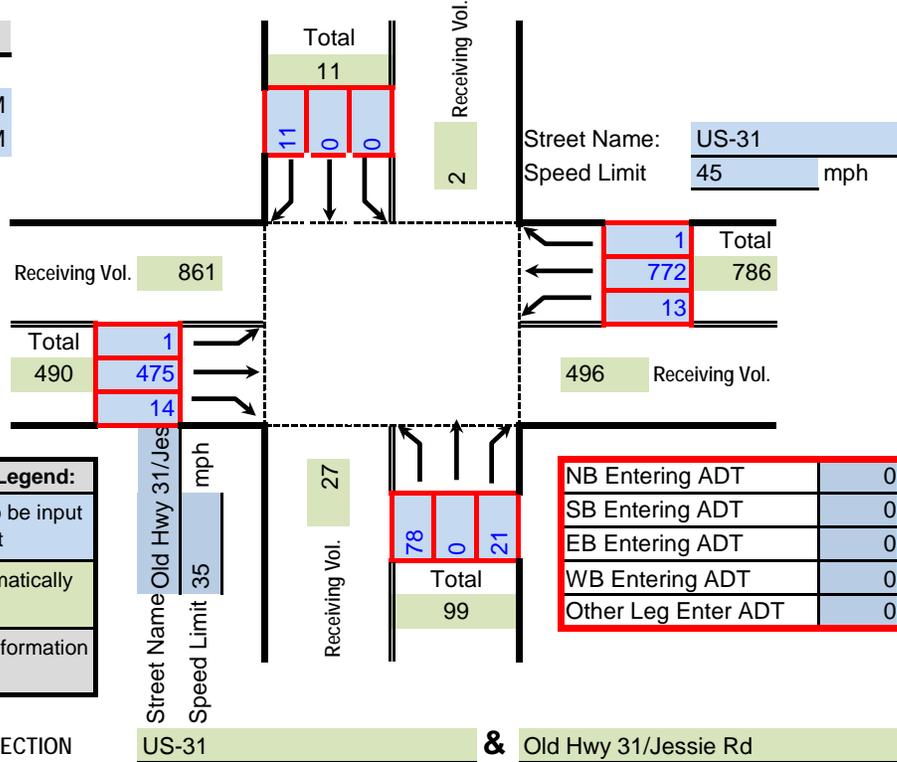
<http://www.cmfclearinghouse.org/>



INTERSECTION TURNING MOVEMENT COUNTS

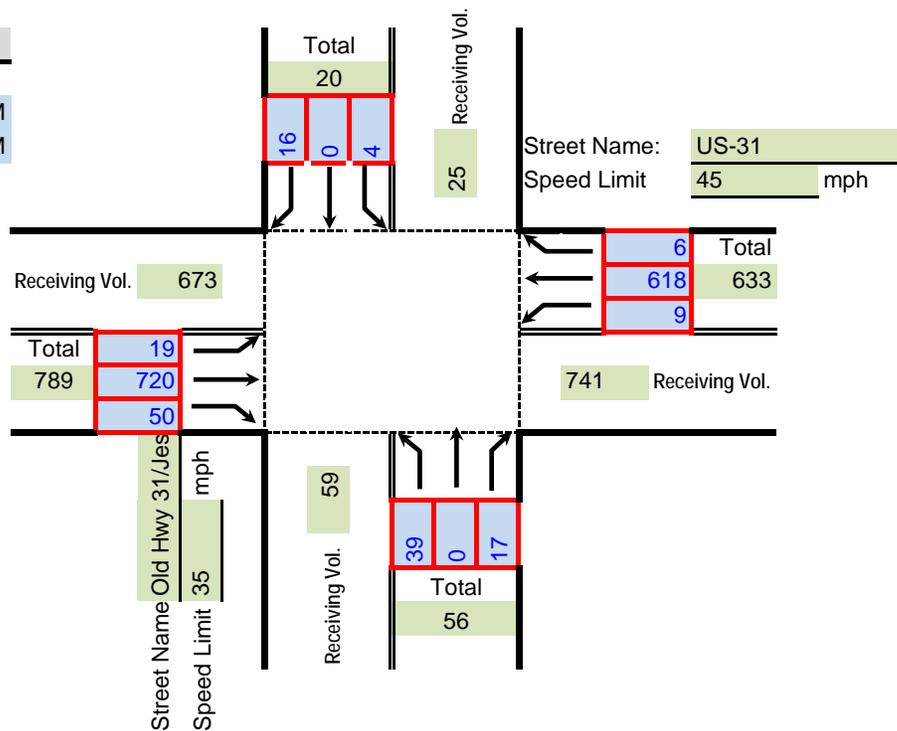
**Time of the Day:**

AM Peak  
 Start: 7:00 AM  
 End: 8:45 AM



**Time of the Day:**

PM Peak  
 Start: 4:00 PM  
 End: 5:45 PM



(10/2/2015)

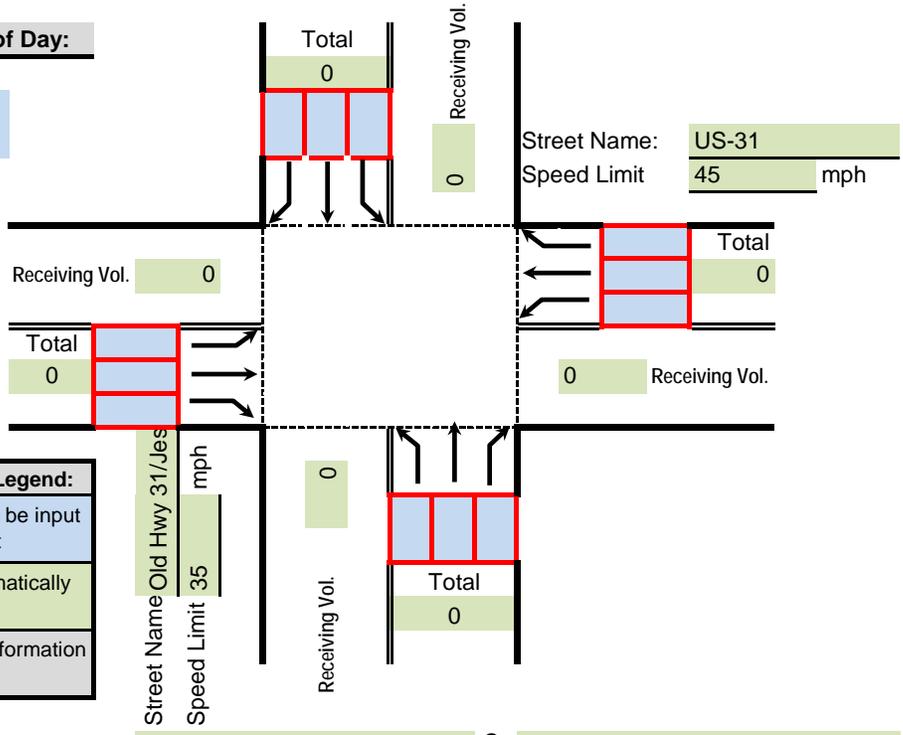
Please Complete for **Proposed Intersection Project Only**



INTERSECTION TURNING MOVEMENT COUNTS

Other Peak Time of Day:

Start:   
 End:



**Worksheet Color Legend:**

Blue - Information to be input by applicant
Green - Data automatically generated
Gray or White - no information required

INTERSECTION US-31 & Old Hwy 31/Jessie Rd