

FDOT ICE Tool Forms

Stage 1 – Standard Intersection

Florida Department of Transportation
Intersection Control Evaluation (ICE) Form
Stage 1: Screening

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms are to be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. **Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.**

Project Name				FDOT Project #			
Submitted By			Agency/Company			Date	
Email			FDOT District		County		
Project Locality (City/Town/Village)							
Intersection Type	At-Grade Intersection		FDOT Context Classification				
Project Funding Source		Federal		Project Type			
Project Purpose (What is the catalyst for this project and why is it being undertaken?)							
Project Setting Description (Describe the area surrounding the intersection)							
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)							

Major Street Information							
Route #:		Route Name(s)				Milepost	
Existing Control Type			Existing AADT			Design Year AADT	
Design Vehicle			Control Vehicle				
Primary Functional Classification						Design Speed (mph)	
Secondary Functional Classification (if app.)						Target Speed (mph) [if app.]	
Approach #1	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes
	Sidewalks along:		Left-Turn				
	Crosswalk on Approach?		Left-Through				
	On-Street Bike Facilities?		Through		Left		Left
	Multi-Use Path?		Left-Through-Right		Through		Through
	Scheduled Bus Service?		Through-Right		Right		Right
	Bus Stop on Approach?		Right-Turn		Daily Truck %		
Approach #2	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes
	Sidewalks along:		Left-Turn				
	Crosswalk on Approach?		Left-Through				
	On-Street Bike Facilities?		Through		Left		Left
	Multi-Use Path?		Left-Through-Right		Through		Through
	Scheduled Bus Service?		Through-Right		Right		Right
	Bus Stop on Approach?		Right-Turn		Daily Truck %		

Minor Street Information									
Route #:		Route Name(s)				Milepost (if app.)			
Existing Control Type			Existing AADT		Design Year AADT				
Design Vehicle		Control Vehicle							
Primary Functional Classification					Design Speed (mph)				
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]				
Approach #1	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:		Left-Turn						
	Crosswalk on Approach?		Left-Through						
	On-Street Bike Facilities?		Through		Left		Left		
	Multi-Use Path?		Left-Through-Right		Through		Through		
	Scheduled Bus Service?		Through-Right		Right		Right		
	Bus Stop on Approach?		Right-Turn		Daily Truck %				
Approach #2	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:		Left-Turn						
	Crosswalk on Approach?		Left-Through						
	On-Street Bike Facilities?		Through		Left		Left		
	Multi-Use Path?		Left-Through-Right		Through		Through		
	Scheduled Bus Service?		Through-Right		Right		Right		
	Bus Stop on Approach?		Right-Turn		Daily Truck %				
Approach #3	Direction		Number of Lanes		Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes		
	Sidewalks along:		Left-Turn						
	Crosswalk on Approach?		Left-Through						
	On-Street Bike Facilities?		Through		Left		Left		
	Multi-Use Path?		Left-Through-Right		Through		Through		
	Scheduled Bus Service?		Through-Right		Right		Right		
	Bus Stop on Approach?		Right-Turn		Daily Truck %				

Crash History (Existing Intersections Only)
Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:

Control Strategy Evaluation								
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.								
Control Strategy	CAP-X Outputs				SPICE Outputs		Strategy to be Advanced?	Justification
	V/C Ratio		Ped Accom.	Bike Accom.	Crash Prediction Rank	SSI Rank		
Two-Way Stop-Controlled								
All-Way Stop-Controlled								
Signalized Control								
Roundabout (1-lane)								
Roundabout (2-lane)								
Median U-Turn								
RCUT (Signalized)								
RCUT (Unsignalized)								
Jughandle								
Displaced Left-Turn								
Continuous Green Tee								
Quadrant Roadway								
Thru-Cut (Signalized)								
Thru-Cut (Unsignalized)								
Bowtie								
Other (Type)								

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination				
Comments				
DTOE Name		Signature		Date
DDE Name		Signature		Date

Stage 1 – Ramp Terminal

Florida Department of Transportation
Intersection Control Evaluation (ICE) Form
Stage 1: Screening

To fulfill the requirements of Stage 1 (Screening) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms are to be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval. **Selections must be made in the "Intersection Type" and "Project Funding Source" cells below for the appropriate Stage 1 and Stage 2 forms to fully populate.**

Project Name				FDOT Project #			
Submitted By			Agency/Company			Date	
Email			FDOT District		County		
Project Locality (City/Town/Village)							
Intersection Type	Ramp Terminal Intersection		FDOT Context Classification				
Project Funding Source		Federal		Project Type			
Project Purpose (What is the catalyst for this project and why is it being undertaken?)							
Project Setting Description (Describe the area surrounding the intersection)							
Multimodal Context (Describe the pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development patterns)							

Cross-Street Information									
Route #:		Route Name(s)					Milepost		
Existing Ramp Control Type		Existing AADT			Design Year AADT				
Design Vehicle		Control Vehicle							
Primary Functional Classification					Design Speed (mph)				
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]				
Approach #1	Direction		Number of Lanes			Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:		Left-Turn						
	Crosswalk on Approach?		Left-Through						
	On-Street Bike Facilities?		Through			Left		Left	
	Multi-Use Path?		Left-Through-Right			Through		Through	
	Scheduled Bus Service?		Through-Right			Right		Right	
	Bus Stop on Approach?		Right-Turn			Daily Truck %			
Approach #2	Direction		Number of Lanes			Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:		Left-Turn						
	Crosswalk on Approach?		Left-Through						
	On-Street Bike Facilities?		Through			Left		Left	
	Multi-Use Path?		Left-Through-Right			Through		Through	
	Scheduled Bus Service?		Through-Right			Right		Right	
	Bus Stop on Approach?		Right-Turn			Daily Truck %			
Approach #3	Direction		Number of Lanes			Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Sidewalks along:		Left-Turn						
	Crosswalk on Approach?		Left-Through						
	On-Street Bike Facilities?		Through			Left		Left	
	Multi-Use Path?		Left-Through-Right			Through		Through	
	Scheduled Bus Service?		Through-Right			Right		Right	
	Bus Stop on Approach?		Right-Turn			Daily Truck %			
Exit Ramp Information									
Route #:		Route Name(s)					Milepost (if app.)		
Existing Ramp Control Type		Existing AADT			Design Year AADT				
Design Vehicle		Control Vehicle							
Primary Functional Classification					Design Speed (mph)				
Secondary Functional Classification (if app.)					Target Speed (mph) [if app.]				
Approach #1	Direction		Number of Lanes			Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Crosswalk on Approach?		Left-Turn						
			Left-Through						
			Through			Left		Left	
			Left-Through-Right			Through		Through	
			Through-Right			Right		Right	
			Right-Turn			Daily Truck %			
Approach #2	Direction		Number of Lanes			Study Period #1 Traffic Volumes		Study Period #2 Traffic Volumes	
	Crosswalk on Approach?		Left-Turn						
			Left-Through						
			Through			Left		Left	
			Left-Through-Right			Through		Through	
			Through-Right			Right		Right	
			Right-Turn			Daily Truck %			

Crash History (Existing Intersections Only)

Append the most recent five-years of crash data for the intersection from the CAR System. If the crash data evidences any issues relating to safety performance, discuss briefly here:

Ramp Terminal Control Strategy Evaluation

Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.

Ramp Terminal Control Strategy	CAP-X Outputs			SPICE Outputs		Strategy to be Advanced?	Justification	
	V/C Ratio		Ped Accom.	Bike Accom.	Crash Prediction Rank			SSI Rank
Signalized Diamond								
Signalized Diamond (Alt)								
Diverging Diamond								
Single-Point Diamond								
Unsignalized Diamond								
Signalized Tight Diamond								
Roundabout (1-lane)								
Roundabout (2-lane)								
Other 1 (Type)								
Other 2 (Type)								

Resolution					
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>					
Project Determination					
Comments					
DTOE Name		Signature		Date	
DDE Name		Signature		Date	

Stage 2 – Federal Funds

Florida Department of Transportation
Intersection Control Evaluation (ICE) Form
Stage 2: Initial Control Strategy Assessment

To fulfill the requirements of Stage 2 (Intersection Control Strategy) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms are to be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval.

Project Name		FDOT Project #		Date	
Submitted By		Agency/Company		Email	
List all viable intersection control strategies identified in Stage 1 (Screening):					

Operational Analyses										
Summarize the results of the peak hour analysis performed for each control strategy. Select analysis year based on guidance in the ICE procedures document. Refer to Exhibit 19-8 of the <i>Highway Capacity Manual, 6th Edition (HCM6)</i> to determine the appropriate LOS based on intersection delay (<i>hover over this cell for Exhibit 19-8</i>).										
Design Vehicle						Control Vehicle				
Opening Year										
Control Strategy	Peak Hour			Peak Hour			Peak Hour			
	LOS	Delay (sec.)	All Queues Accommodated?	LOS	Delay (sec.)	All Queues Accommodated?	LOS	Delay (sec.)	All Queues Accommodated?	
Design Year										
Control Strategy	Peak Hour			Peak Hour			Peak Hour			
	LOS	Delay (sec.)	All Queues Accommodated?	LOS	Delay (sec.)	All Queues Accommodated?	LOS	Delay (sec.)	All Queues Accommodated?	
Provide any additional discussion necessary regarding the results of the operational analysis:										

Safety Performance						
Enter the most recent five (5) years of crash data from the CAR System.				Most recent year of crash data available		
Crash Type						Total
Combined	Total					
	Fatal/Injury					
	PDO					
Single-Vehicle	Total					
	Fatal/Injury					
	PDO					
Multi-Vehicle	Total					
	Fatal/Injury					
	PDO					
Vehicle-Pedestrian	Fatal/Injury					
Vehicle-Bicycle	Fatal/Injury					
Total	All					

Apply the FDOT SPICE Tool to model anticipated safety performance of each control strategy. For intersection types not accommodated in the tool, manually apply crash modification factors detailed in the ICE procedures document or qualitatively describe anticipated safety impacts.

Control Strategy	Anticipated Impact on Safety Performance	Opening Year			Design Year		
		Predicted Total Crashes	Predicted Fatal+Injury Crashes	SSI Score	Predicted Total Crashes	Predicted Fatal+Injury Crashes	SSI Score

Costs and Benefit/Cost Ratios						
Remaining cognizant of the current level of detail of each control strategy's conceptual design, provide a cost estimate for each. You may want to include costs for preliminary engineering, required right-of-way acquisitions, construction, and a contingency. Apply the FDOT ICE Tool to determine the delay benefit-cost ratio (B/C), safety B/C, overall B/C, and net-present value for each control strategy.						
Control Strategy	ROW Costs (\$)	Construction Costs (\$)	FDOT ICE Tool Outputs			
			Delay B/C	Safety B/C	Overall B/C	Net Present Value

Multimodal Accommodations								
Note the existing/anticipated level of pedestrian/bicyclist activity at the study intersection during the peak hours of the typical day. See ICE procedures document for activity level thresholds:								
Peak Hour:							Activity Level	
	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Ped.	Bicyclists
# of peds. crossing (both approaches, if app.):								
# of bicyclists (both approaches, if app.):								
Summarize the ability of each viable control strategy to accommodate the existing/anticipated level of:								
Control Strategy	Pedestrians and Bicyclists		Transit Services			Freight Needs		

Environmental, Utility, and Right-of-Way Impacts	
Summarize any issues related to environmental, utility, or right-of-way (including relocation) impacts specific to each control strategy. Be sure to consider the NEPA requirements for each control type.	

Public Input/Feedback (if appropriate)
Summarize any agency or public input regarding the control strategies:

Control Strategy Evaluation		
Provide a brief justification as to why each of the following is either viable or not viable. If a single control strategy is recommended, select it as the only strategy to be advanced.		
Control Strategy	Strategy to be Advanced?	Justification

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination				
Comments				
DTOE Name		Signature		Date
DDE Name		Signature		Date

Stage 2 – No Federal Funds

Florida Department of Transportation
Intersection Control Evaluation (ICE) Form
Stage 2: Initial Control Strategy Assessment

To fulfill the requirements of Stage 2 (Intersection Control Strategy) of FDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms are to be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval.

Project Name		FDOT Project #		Date	
Submitted By		Agency/Company		Email	
List all viable intersection control strategies identified in Stage 1 (Screening):					

Operational Analyses							
Summarize the results of the peak hour analysis performed for each control strategy. Select analysis year based on guidance in the ICE procedures document. Refer to Exhibit 19-8 of the <i>Highway Capacity Manual, 6th Edition</i> (HCM6) to determine the appropriate LOS based on intersection delay (<i>hover over this cell for Exhibit 19-8</i>).							
Design Vehicle				Control Vehicle			
Design Year							
Control Strategy	Critical Peak Hour		All Queues Accommodated?				
	LOS	Delay (sec.)					
Provide any additional discussion necessary regarding the results of the operational analysis:							

Safety Performance						
Enter the most recent five (5) years of crash data from the CAR System.				Most recent year of crash data available		
Crash Type						Total
Combined	Total					
	Fatal/Injury					
	PDO					
Single-Vehicle	Total					
	Fatal/Injury					
	PDO					
Multi-Vehicle	Total					
	Fatal/Injury					
	PDO					
Vehicle-Pedestrian	Fatal/Injury					
Vehicle-Bicycle	Fatal/Injury					
Total	All					

Apply the FDOT SPICE Tool to model anticipated safety performance of each control strategy. For intersection types not accommodated in the tool, manually apply crash modification factors detailed in the ICE procedures document or qualitatively describe anticipated safety impacts.

Control Strategy	Anticipated Impact on Safety Performance	Opening Year			Design Year		
		Predicted Total Crashes	Predicted Fatal+Injury Crashes	SSI Score	Predicted Total Crashes	Predicted Fatal+Injury Crashes	SSI Score

Multimodal Accommodations								
Note the existing/anticipated level of pedestrian/bicyclist activity at the study intersection during the peak hours of the typical day. See ICE procedures document for activity level thresholds:								
Peak Hour:						Activity Level		
	Major Street	Minor Street	Major Street	Minor Street	Major Street	Minor Street	Ped.	Bicyclists
# of peds. crossing (both approaches, if app.):								
# of bicyclists (both approaches, if app.):								
Summarize the ability of each viable control strategy to accommodate the existing/anticipated level of:								
Control Strategy	Pedestrians and Bicyclists		Transit Services		Freight Needs			

Environmental, Utility, and Right-of-Way Impacts	
Summarize any issues related to environmental, utility, or right-of-way (including relocation) impacts specific to each control strategy. Be sure to consider the NEPA requirements for each control type.	

Public Input/Feedback (if appropriate)
Summarize any agency or public input regarding the control strategies:

Control Strategy Evaluation		
Provide a brief justification as to why each of the following is either viable or not viable. If a single control strategy is recommended, select it as the only strategy to be advanced.		
Control Strategy	Strategy to be Advanced?	Justification

Resolution				
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>				
Project Determination				
Comments				
DTOE Name		Signature		Date
DDE Name		Signature		Date

Stage 3

Florida Department of Transportation
Intersection Control Evaluation (ICE) Form

Intersection Control Evaluation Form 750-010-30

Stage 3: Detailed Control Strategy Assessment

To fulfill the requirements of Stage 3 (Detailed Control Strategy Assessment) of FDOT's ICE procedures, complete the following form and append all supporting documentation, which may include detailed design plans of each control strategy analyzed. Completed forms are to be submitted to the District Traffic Operations Engineer (DTOE) and District Design Engineer (DDE) for the project's approval.

Project Name		FDOT Project #		Date	
Submitted By		Agency/Company		Email	
List all viable intersection control strategies identified in Stage 2 (Initial Control Strategy Assessment):					

Additional Analysis	
What issues and/or findings to date have led to a control strategy NOT being selected in Stage 2?	
Category	Description of Issues/Findings
Describe specific evaluation activities undertaken in Stage 3 analysis to identify a preferred control strategy and discuss the findings:	
Category	Description of Issues/Findings

Public Input/Feedback
If not discussed as a part of the preceding section, summarize public input received or stakeholder considerations regarding the control strategies:

Control Strategy Evaluation		
Provide a brief justification as to why each of the following was either selected or not selected after conducting the additional analysis. ICE Stage 3 activities should result in a single control strategy being selected.		
Control Strategy	Control Strategy Selected?	Justification

Resolution					
<i>To be filled out by FDOT District Traffic Operations Engineer and District Design Engineer</i>					
Project Determination					
Comments					
DTOE Name		Signature		Date	
DDE Name		Signature		Date	