

# TRAFFIC IMPACT STATEMENT

For

## **Courthouse Shadows PUD Amendment** (Airport Pulling Road & U.S. 41, Collier County, Florida)

January 30, 2019  
Revised April 22, 2019

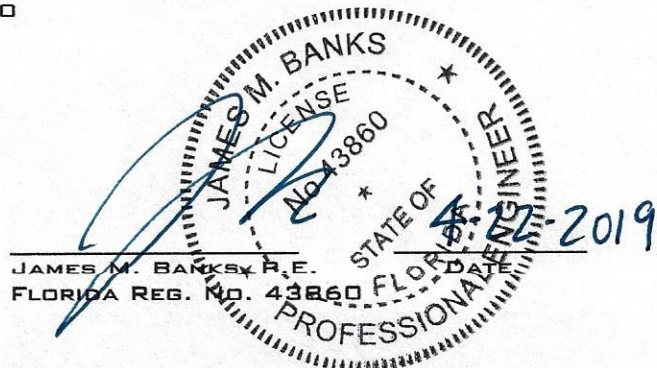
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CERTIFICATE OF AUTHORIZATION NO. 27830

(PROJECT NO. 171218)



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## **Conclusions**

It was determined that the proposed land use amendment to Courthouse Shadows PUD, which would allow the option of constructing 300 multi-family dwelling units, will not result in any additional trips than previously approved by the Collier County Planning Commission and Board of County Commissioners. If the proposed amendment is approved and multi-family is developed, then the PUD's total "new" site-generated trips will not exceed what was previously approved which was 662 new two-way PM peak hour trips. More specifically, if developed as proposed (300 multi-family units) by the applicant, then only 157 PM two-way new trips of the allowed 662 trips will be used by the residential use and the balance of the trip cap will remain available to the PUD, but the total number of trips will not exceed 662 PM trips. Because the project's trips will remain the same or less, it has been concluded that the PUD's off-site impacts will remain the same or less. However, prior to acquiring final development approval, an assessment of the project's off-site impacts will need to be performed in order to ensure that any transportation-related deficiencies caused by the project are mitigated.

The project is located in the South 41 TCEA area and is subject to the LDC and applicable TCEA requirements described in the Collier County Growth Management Plan Transportation Element, at the time of obtaining SDP approval.

## **Scope of Project**

Courthouse Shadows is an existing mixed-use commercial PUD that is approved for up to 165,000 square feet of various commercial uses (e.g., retail, office, gas-n-convenience, fast food, etc). A substantial portion of the site has been developed consisting of a few large commercial structures and several outparcels. Courthouse Shadows PUD is located on the southeast quadrant of the Airport Road @ U.S. 41 intersection, within Collier County, Florida. The commercial center has one signalized access on U.S. 41, which is aligned with the Espinal Blvd & U.S. 41 intersection. In addition, the site has a right in/out access on U.S. 41, which is located to the southeast of the main signalized access and a directional left-in access located to the northwest of the main entrance. The project also has a full access on Peters Street. Peters Street is a two-lane road that is aligned with the signalized intersection of Airport/U.S. 41.

It is being proposed to raze the site's large commercial structures and construct an apartment complex consisting of 300 dwelling units. The development of the 300 apartments would displace the potential to develop at least 100,000 square feet of commercial uses. The PUD has an approved trip cap of 662 new two-way PM peak hour trips. The amendment which would displace retail in order to construct 300 multi-family units will be limited to the previously approved maximum trips for the entire PUD of 662 new two-way PM peak hour trips.

**Table A**  
**Approved vs. Proposed/Anticipated Build-out Land Uses**

<b>Land Uses</b>	<b>Approved</b>	<b>Proposed/Anticipated</b>	<b>Net Change</b>
Multi-Family	0 d.u.'s	300 d.u.'s	<b>300 d.u.'s</b>
Retail/Office	165,000 s.f.	65,000 s.f.	<b>-100,000 s.f.</b> <i>(displaced by residential)</i>



### Project Generated Traffic

Trips that can be expected to be generated by Courthouse Shadows PUD's "approved" and "anticipated build-out" land uses were estimated based upon the guidelines established by the Institute of Transportation Engineers. That is, historical traffic data collected at similar land uses was relied upon in estimating the project's traffic. It was concluded that land use codes "Multi-Family" (LUC 220) and "Shopping Center" (LUC 820, *SIC Code cannot be determined at this time due to the wide variety of possible commercial land uses*) were most appropriate in estimating the anticipated land uses' trips. Trip generation computations for the approved land Uses vs. the proposed land uses are depicted in Table 1A and Table 1B, respectively.

As determined, the proposed amendment will not result in any additional PM peak hour trips above what was previously approved by the Collier County Planning Commission and Board of County Commissioners. More specifically, if the proposed amendment is approved, the project's total site-generated trips will not exceed the previously approved trip cap of 662 new two-way PM peak hour trips. Furthermore, it is concluded that the project's potential PM peak hour off-site impacts will remain the same or less. Therefore, no further analysis is needed at this time. However, at the time of acquiring final development approval, an assessment of the project's off-site impacts will need to be performed in order to ensure that any transportation-related deficiencies caused by the project are mitigated.

**Table C**  
**Net New Trips Generated**  
**(Approved Land Use Trips vs. Proposed/Anticipated Land Use Trips)**

	Net New Daily (ADT)	Net New AM Peak Hour (vph)	Net New PM Peak Hour (vph)
Approved Land Uses 165,000 Retail (See Table 1A)	7,457	185	662
Proposed Land Uses 65,000 Retail & 300 Apartments (See Table 1B)	5,591	274	453
<b>Net New Trips</b>	<b>-1,866</b>	<b>89</b>	<b>-209</b>

**TABLE 1A**  
**TRIP GENERATION COMPUTATIONS**  
Courthouse Shadows

**APPROVED LAND USE**

Land Use		Proposed Land Uses	
Code	Land Use Description		
820	Shopping Center	165,000 s.f.	
944	Gasoline/Service Station	24 Fueling Positions	
<b>LUC 820</b>	Daily Traffic (ADT) =	$\text{Ln}(T) = 0.65\text{Ln}(X) + 5.83 =$	<b>9,404 ADT</b>
	AM Peak Hour (vph) =	$\text{Ln}(T) = 0.61\text{Ln}(X) + 2.24 =$	<b>212 vph</b> 131 / 80 vph
		62% Enter/ 38% Exit =	
	PM Peak Hour (vph) =	$\text{Ln}(T) = 0.67\text{Ln}(X) + 3.31 =$	<b>838 vph</b> 402 / 436 vph
		48% Enter/ 52% Exit =	
<i>Pass-by Trips per ITE= <math>\text{Ln}(T) = -0.29\text{Ln}(X) + 5.00 =</math></i>		<b>25% Pass-by Rate per Collier County</b>	
New Daily Traffic (ADT) =		(ADT) x (% of New Trips)	<b>7,053 ADT</b>
New AM Peak Hour (vph) =		(AM) x (% of New Trips)	<b>159 vph</b> 98 / 60 vph
		62% Enter/ 38% Exit =	
New PM Peak Hour (vph) =		(PM) x (% of New Trips)	<b>628 vph</b> 301 / 327 vph
		48% Enter/ 52% Exit =	
*****			
<u>Trip Period</u>		<u>(Based upon Fuel Positions)</u>	<u>Total Trips</u> <u>Trips Enter/Exit</u>
<b>LUC 944</b>	Daily Traffic (ADT) =	$T = 168.56(X) =$	<b>4,045 ADT</b>
	AM Peak Hour (vph) =	$T = 10.27(X) + 13.89 =$	<b>261 vph</b> 133 / 128 vph
		51% Enter/ 49% Exit =	
	PM Peak Hour (vph) =	$T = 13.87(X) =$	<b>333 vph</b> 166 / 166 vph
		50% Enter/ 50% Exit =	
*****			
<b>Net New Trips = 10%</b>			
New Daily Traffic (ADT) =		(ADT) x (% of New Trips)	<b>405 ADT</b>
New AM Peak Hour (vph) =		(AM) x (% of New Trips)	<b>26 vph</b> 13 / 13 vph
		51% Enter/ 49% Exit =	
New PM Peak Hour (vph) =		(PM) x (% of New Trips)	<b>33 vph</b> 17 / 17 vph
		51% Enter/ 49% Exit =	
*****			
<b>NET NEW TRIPS GENERATED</b>			
Daily Traffic (ADT) =		<b>7,457 ADT</b>	
AM Peak Hour (vph) =		<b>185 vph</b>	112 / 73 vph
PM Peak Hour (vph) =		<b>662 vph</b>	318 / 344 vph



**TABLE 1B**  
**TRIP GENERATION COMPUTATIONS**  
Courthouse Shadows PUD - Apartments

**PROPOSED LAND USES**

Land Use

<u>Code</u>	<u>Land Use Description</u>
<b>220</b>	<b>Multi-Family (Low Rise)</b>
<b>820</b>	<b>Shopping Center</b>

<u>Build Schedule</u>
300 Units
65,000 s.f.

<u>Code</u>	<u>Trip Period</u>	<u>Trip Generation Equation</u>	<u>Total Trips</u>	<u>Trips Enter/Exit</u>
<b>LUC 220</b>	Daily Traffic (ADT) =	$T = 7.56(X) - 40.86 =$	<b>2,227 ADT</b>	
	AM Peak Hour (vph) =	$\ln(T) = 0.95\ln(X) - 0.51 =$	<b>135 vph</b>	31 / 104 vph
		23% Enter/ 77% Exit =		
	PM Peak Hour (vph) =	$\ln(T) = 0.89\ln(X) - 0.02 =$	<b>157 vph</b>	99 / 58 vph
		63% Enter/ 37% Exit =		
*****				
<b>LUC 820</b>	Daily Traffic (ADT) =	$\ln(T) = 0.68\ln(X) + 5.57 =$	<b>4,485 ADT</b>	
	AM Peak Hour (vph) =	$T = 0.5(X) + 151.78 =$	<b>184 vph</b>	114 / 70 vph
		62% Enter/ 38% Exit =		
	PM Peak Hour (vph) =	$\ln(T) = 0.74\ln(X) + 2.89 =$	<b>395 vph</b>	190 / 205 vph
		48% Enter/ 52% Exit =		

<i>Pass-by Trips per ITE=</i>		$\ln(T) = -0.29\ln(X) + 5.00 = 30\%$	<b>25% Pass-by Rate per Collier County</b>	
New Daily Traffic (ADT) =	(ADT) x (% of New Trips)		<b>3,364 ADT</b>	
New AM Peak Hour (vph) =	(AM) x (% of New Trips)		<b>138 vph</b>	86 / 53 vph
	62% Enter/ 38% Exit =			
New PM Peak Hour (vph) =	(PM) x (% of New Trips)		<b>296 vph</b>	142 / 154 vph
	48% Enter/ 52% Exit =			

**Total Trips**

Daily Traffic (ADT) =	<b>5,591 ADT</b>	
AM Peak Hour (vph) =	<b>274 vph</b>	117 / 157 vph
PM Peak Hour (vph) =	<b>453 vph</b>	241 / 212 vph