

Existing

# ARTPLAN 2012 Conceptual Planning Analysis

## Project Information

Analyst	BGE	Arterial Name	Lakes of Champions	Study Period	Standard K
Date Prepared	10/17/2018 6:04:11 PM	From		Modal Analysis	Multimodal
Agency	BGE	To		Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\browngay.net\gfs\Projects\City_of_Mont_Belvieu\6228-00_HGAC_TIP_Application_Support\04_ENGR\03_Documents\6. Lakes of Champions\LOSPLAN\Existing.xap				
User Notes	Existing				

## Arterial Data

K	0.09	PHF	1	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

## Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
	150	0.45	3	2	12	12	Yes	Protected	1	235	0.15	No

## Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to )	5000	7428	378	2	30	35	Restrictive	No	N/A

## Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to )	333	3172	0.233	25.38	C	0.19	27.43	C			
Arterial Length	0.9583	Weighted g/C	0.45	FFS Delay	28.39	Threshold Delay	0.00	Auto Speed	27.43	Auto LOS	C

Existing

### Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1					
2					
3					
4					
*					
Lanes	Hourly Volume In Both Directions				
2					
4					
6					
8					
*					
Lanes	Annual Average Daily Traffic				
2					
4					
6					
8					
*					

Existing

### Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to )	Typical	Desirable	No	No	N/A	Yes	Adjacent	No	0	0.8	Excellent	Typical

### Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to )	100			Yes			Adjacent				No	

### Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus						
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS			
1 (to )	3.20	C	N/A	N/A				2.45	B	0.00	F			
	Bicycle LOS	3.20	C					Pedestrian LOS	2.45	B		Bus LOS	0.00	F

Existing

### MultiModal Service Volume Tables

#### Bicycle

	A	B	C	D	E
<b>Lanes</b>	<b>Hourly Volume In Peak Direction</b>				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
<b>Lanes</b>	<b>Hourly Volume In Both Directions</b>				
2	0	0	0	0	0
4	0	0	0	0	0
6	0	0	0	0	0
8	0	0	0	0	0
*	0	0	0	0	0
<b>Lanes</b>	<b>Annual Average Daily Traffic</b>				
2	0	0	0	0	0
4	0	0	0	0	0
6	0	0	0	0	0
8	0	0	0	0	0
*	0	0	0	0	0

#### Pedestrian

	A	B	C	D	E
<b>Lanes</b>	<b>Hourly Volume In Peak Direction</b>				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
<b>Lanes</b>	<b>Hourly Volume In Both Directions</b>				
2	0	0	0	0	0
4	0	0	0	0	0
6	0	0	0	0	0
8	0	0	0	0	0
*	0	0	0	0	0
<b>Lanes</b>	<b>Annual Average Daily Traffic</b>				
2	0	0	0	0	0
4	0	0	0	0	0
6	0	0	0	0	0
8	0	0	0	0	0
*	0	0	0	0	0

#### Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

## Existing

\* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

\*\* Cannot be achieved based on input data provided.

\*\*\* Not applicable for that level of service letter grade. See generalized tables notes for more details.

# Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

## Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

### Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

# Proposed ARTPLAN 2012 Conceptual Planning Analysis

## Project Information

Analyst	BGE	Arterial Name	Lakes of Champions	Study Period	Standard K
Date Prepared	10/17/2018 6:04:11 PM	From		Modal Analysis	Multimodal
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Arterial Class	1				
File Name	\\browngay.net\gfs\Projects\City_of_Mont_Belvieu\6228-00_HGAC_TIP_Application_Support\04_ENGR\03_Documents\6. Lakes of Champions\LOSPLAN\Proposed.xap				
User Notes	Proposed				

## Arterial Data

K	0.09	PHF	1	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

## Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
	150	0.45	3	2	12	12	Yes	Protected	1	235	0.15	No

## Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to )	5000	7000	356	4	30	35	Restrictive	No	N/A

## Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to )	313	3168	0.220	25.21	C	0.18	27.66	C			
Arterial Length	0.9583	Weighted g/C	0.45	FFS Delay	27.35	Threshold Delay	0.00	Auto Speed	27.66	Auto LOS	C

## Automobile Service Volumes

Proposed

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
<b>Lanes</b>	<b>Hourly Volume In Peak Direction</b>				
1					
2					
3					
4					
*					
<b>Lanes</b>	<b>Hourly Volume In Both Directions</b>				
2					
4					
6					
8					
*					
<b>Lanes</b>	<b>Annual Average Daily Traffic</b>				
2					
4					
6					
8					
*					

Proposed

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr /Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to )	Typical	Desirable	Yes	Yes	10.00	Yes	Adjacent	No	0	0.8	Excellent	Typical

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to )	100			Yes			Adjacent				No	

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus						
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS			
1 (to )	1.07	A	2.27	B				2.01	B	0.00	F			
	Bicycle LOS	1.07	A					Pedestrian LOS	2.01	B		Bus LOS	0.00	F



MultiModal Service Volume Tables

Proposed

Bicycle

	A	B	C	D	E
<b>Lanes</b>	<b>Hourly Volume In Peak Direction</b>				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
<b>Lanes</b>	<b>Hourly Volume In Both Directions</b>				
2	0	0	0	0	0
4	0	0	0	0	0
6	0	0	0	0	0
8	0	0	0	0	0
*	0	0	0	0	0
<b>Lanes</b>	<b>Annual Average Daily Traffic</b>				
2	0	0	0	0	0
4	0	0	0	0	0
6	0	0	0	0	0
8	0	0	0	0	0
*	0	0	0	0	0

Pedestrian

	A	B	C	D	E
<b>Lanes</b>	<b>Hourly Volume In Peak Direction</b>				
1	0	0	0	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	0	0	0	0	0
*	0	0	0	0	0
<b>Lanes</b>	<b>Hourly Volume In Both Directions</b>				
2	0	0	0	0	0
4	0	0	0	0	0
6	0	0	0	0	0
8	0	0	0	0	0
*	0	0	0	0	0
<b>Lanes</b>	<b>Annual Average Daily Traffic</b>				
2	0	0	0	0	0
4	0	0	0	0	0
6	0	0	0	0	0
8	0	0	0	0	0
*	0	0	0	0	0

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
Buses in Study Hour in Peak Direction (Daily)				

## Proposed

- \* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.
- \*\* Cannot be achieved based on input data provided.
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- # Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
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- ### Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.