

### Using LED to Locate Parking Demand in Downtown Austin, TX

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#### Background

Since 1980, The Goodman Corporation (TGC) has assisted private and public entities plan, finance and implement various land use and mobility projects throughout the nation.

In 2009, a Texas regional mobility authority hired TGC to examine the viability of transit along proposed managed lanes operating on a major arterial from the suburbs to downtown Austin. As part of the study, TGC examined the availability of parking in downtown Austin.



### Agenda

- Why is parking supply, cost, access and policy in the urban core important?
- What is the demand for transit trips along the proposed managed lane? (Utilizing the LED program)
- What methodologies were used for the Parking Study? (Utilizing the LED program)
- What were the benefits and challenges of using LED in the Parking Study?



# Why is parking supply, cost, access and policy in the urban core important?

A city's parking policy will influence parking supply, price and availability, which in-turn will affect parking demand.

**Positive Incentives for SOV** 

- •Ample supply of parking
- •Low cost to park
- •Convenient access to parking

#### **Negative Incentives for SOV**

- •Low supply of parking
- •High cost to park
- •Poor access to parking



## What is the transit demand along the proposed managed lane?

To measure transit demand, TGC used home-to-work travel data from the U.S. Census Bureau's 2006 Local Employment Dynamics (LED) database.





#### Southbound HBW Trips

# What are the characteristics of the transit demand along the proposed managed lane?

F	Paired Work Area Profile Rep	oort			
Total Primary Jobs	Northbound HBW Trips		Southbound HBW trips		
	20	2006		2006	
	Count	Share	Count	Share	
Total Primary Jobs	159	100.0%	4,718	100.0%	
Jobs by Worker Age					
	20	2006		2006	
	Count	Share	Count	Share	
Age 30 or younger	61	38.4%	936	19.8%	
Age 31 to 54	77	48.4%	3,221	68.3%	
Age 55 or older	21	13.2%	561	11.9%	
Jobs by Earnings Paid					
	20	2006		2006	
	Count	Share	Count	Share	
\$1,200 per month or less	21	13.2%	439	9.3%	
\$1,201 to \$3,400 per month	48	30.2%	1,673	35.5%	
More than \$3,400 per month	90	56.6%	2,606	55.2%	
Jobs by Industry Type					
	20	2006		2006	
	Count	Share	Count	Share	
Goods Producing	39	24.5%	85	1.8%	
Trade, Transportation, and Utilities	42	26.4%	224	4.7%	
All Other Services	78	49.1%	4,409	93.5%	

#### Methodology Used to Estimate Parking Demand in Downtown Austin Using LED

- Estimate the employment of the urban core.
- Employment was calculated using LED for each census block.



#### Methodology Used to Estimate Parking Demand in Downtown Austin Using LED

- Adjustments were made to the LED data based on field work.
- These employment figures were compared to other estimates derived from the International Building Code and Institute of Transportation of Engineers.



#### Other Data Used to Estimate Parking Demand in Downtown Austin

- Utilizing tax records, each parcel was analyzed to determine square footage and usage.
- Employment was then calculated by industry standard employee per square foot factors and occupancy rate.
- Both IBC and TTI factors were applied.



#### Methodology of Parking Supply in Downtown Austin

- Examine previous parking studies.
- Review large scale projects from the last completed comprehensive study.
- Complete field work to determine accuracy.



#### Benefits and challenges of using LED in the Austin Downtown Parking Study

- Benefits The study area can be any polygon desired and employment data is useful in transit analyses.
- Challenges Payroll data does not necessarily correlate with employment location, which can be especially problematic when working within a small-scale.





#### Conclusion

- Parking supply, cost, access and policies
- Utilizing LED in transit demand analysis
- Utilizing LED for employment projection
- Comparing LED data to other sources
- Benefits and challenges of using LED in a parking study



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