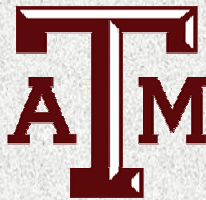


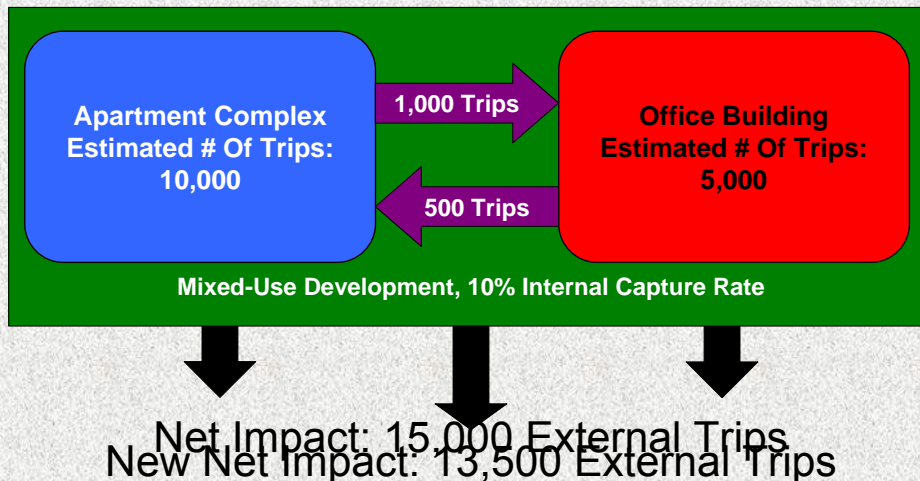
Internal Trip Capture For Mixed-Use Developments



Benjamin R. Sperry
Texas A&M University
February 3, 2007
2007 Winter TextITE Meeting



What is Internal Trip Capture?



Why Internal Trip Capture is Important

- Development Review Process
 - Engineering Study/Traffic Impact Analysis
 - Trip Generation/Demand Estimation
 - External Transportation Facility Needs
 - Access Management Requirements
 - Developer Fees/Penalties
- Design Implications
 - Diverse Land-Use Mix
 - Transit Oriented Development

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Past Internal Trip Capture Studies

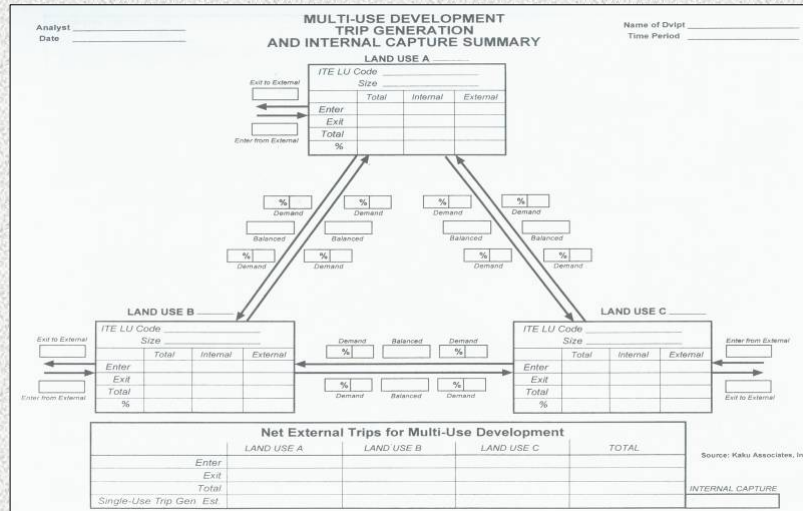
Study	Internal Capture Rate
JHK & Associates (1984)	50%
Colorado/Wyoming (1987)	2.5%
Tindale, Oliver, and Associates (1993)	30%
Walter H. Keller (1995)	40%
Ewing, et al (2001)	25%

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ITE Internal Trip Estimation Method



Source: *Trip Generation Handbook, Second Edition* ITE (2004)

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Research Motivation

- Limitations of ITE Methodology
 - Based on Limited Field Data
 - Limited Number of Land Uses
 - Does Not Account for Other Site Characteristics:
 - Transit Access
 - Development Type
 - Proximity
 - Connectivity
- Enhance Internal Trip Estimation Procedures
- Design Considerations

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Data Collection Process

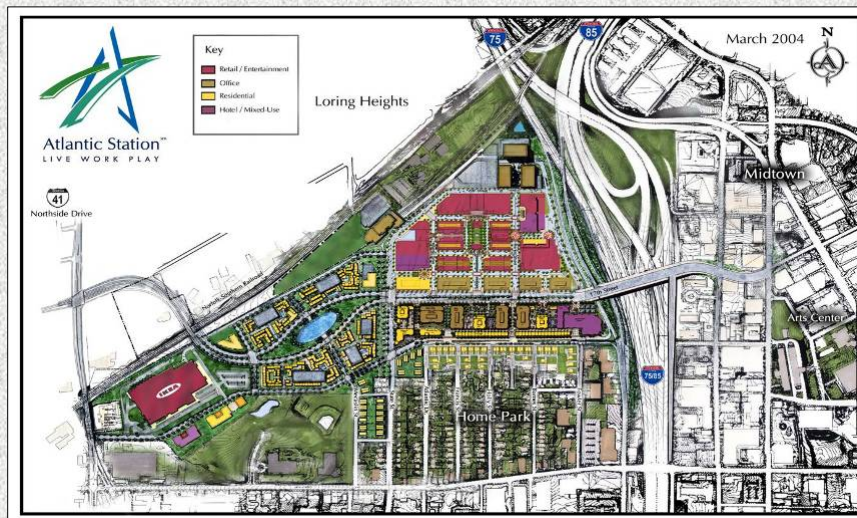
- Exit Surveys
 - Trip Information (Internal or External, Land Use)
 - Mode Information (Travel & Access to Site)
- Data Collection
 - AM & PM Peak Periods
 - Cordon Counts
 - Door Entrance/Exit Counts
- Data Modification
 - Factored Interview Results to Match Exit Counts

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Atlantic Station-Atlanta, Georgia



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Mockingbird Station-Dallas, Texas



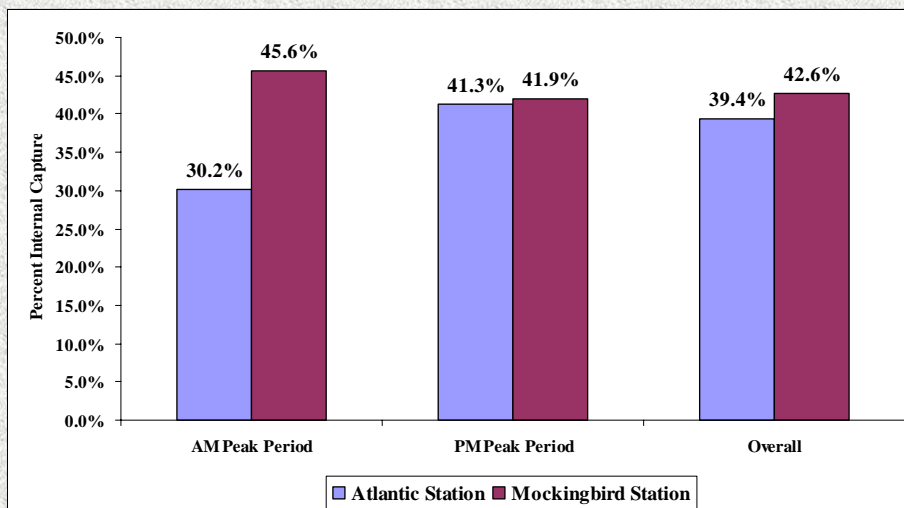
Source: www.mockingbirdstation.com

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Overall Internal Trip Capture

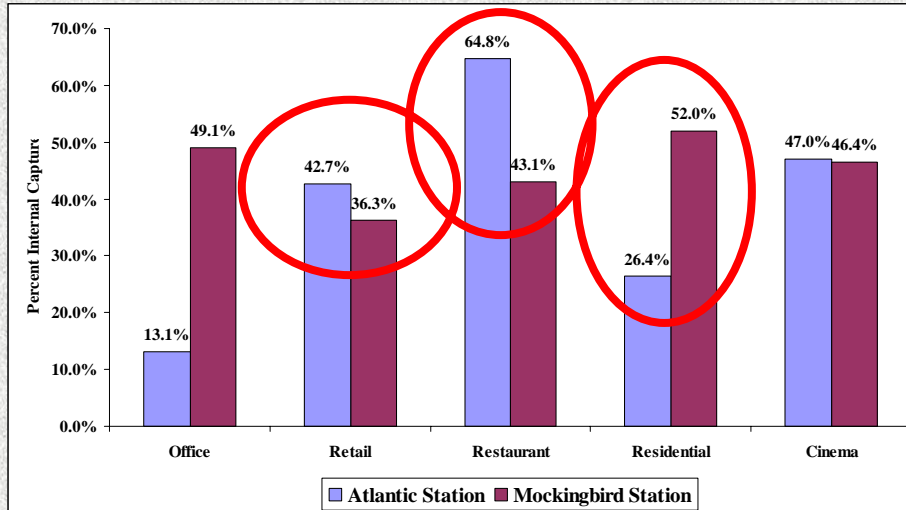


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Internal Trip Capture-Land Use

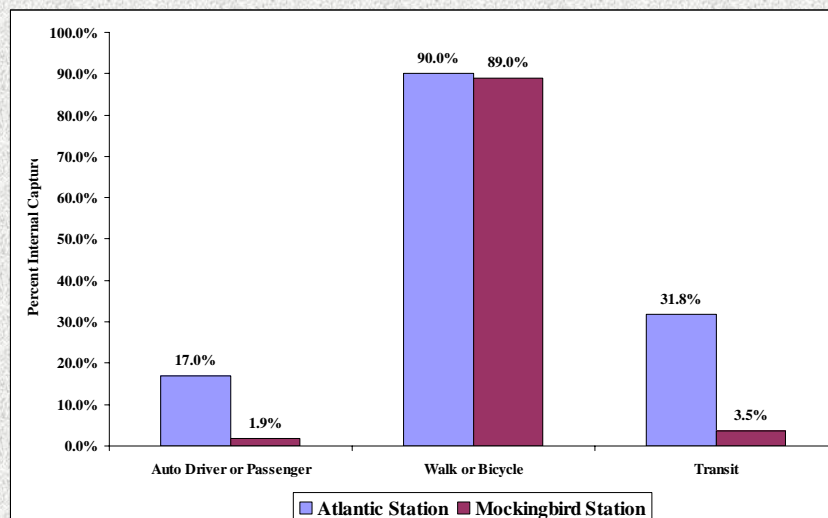


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Internal Trip Capture-Mode of Travel

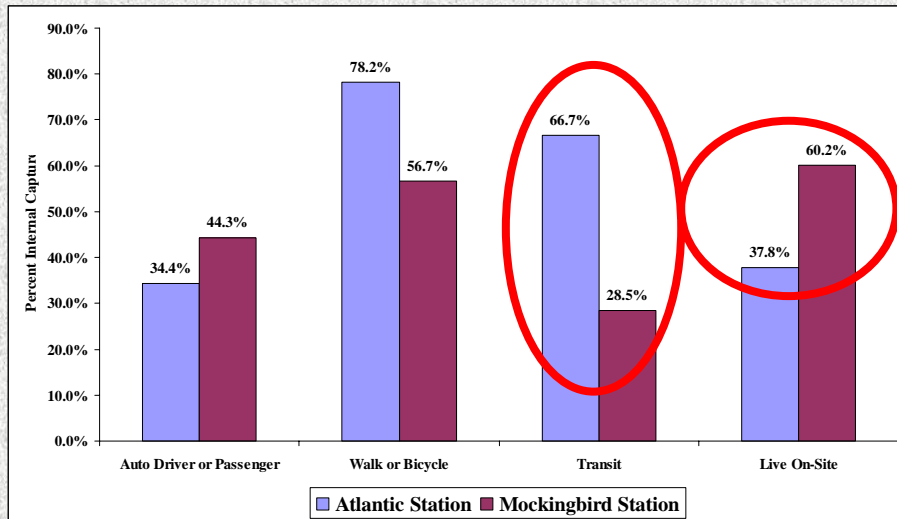


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Internal Trip Capture-Mode of Access



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Summary & Conclusions

- Overall Internal Trip Capture \approx 40%
- Planning Considerations:
 - Land-Use Mix
 - Development Size/Type
 - Proximity/Walkability Features
 - Transit Characteristics
- Potential Internal Trip Capture Correlations:
 - Land Use Square Footage
 - Housing Density
 - Retail Characteristics

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Questions?

